CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

PLANNING COMMISSION STAFF REPORT
MAJOR SUBDIVISION SMP2023 0001
HEARING DATE: MARCH 26TH, 2024

(907) 586-0715
CDD_Admin@juneau.gov
www.juneau.org/community-development
155 Heritage Way • Juneau, AK 99801

DATE: March 20, 2024

TO: Mandy Cole, Chair, Planning Commission

BY: David Matthew Peterson, Planner II

THROUGH: Jill Lawhorne, Director, AICP

PROPOSAL: Request of a preliminary plat review for the subdivision of Tract A2, Chilkat Vistas Subdivision Phase 3, which will result in 19 single-family lots, and two large tracts.

APPLICANTS: Michael Heumann and William Heumann

STAFF RECOMMENDATION: Approval with conditions

KEY CONSIDERATIONS FOR REVIEW:

- Phase 3 of Chilkat Vistas. Phased Development approved with SMP2019 0004 (Phase 1).
- Tract A2 was used as bonding collateral toward the CBJ required improvement for Phase 2. Phase 2 improvements have been accepted by CBJ.
- ROW standards established during SMP2019 0004 (Phase 1).

GENERAL INFORMATION	
Property Owner	William Heumann; Michael Heumann
Applicant	Michael Heumann
Property Address	Hillcrest Avenue
Legal Description	CHILKAT VISTAS PHASE 2,TR A2
Parcel Number	7B1001160013
Zoning	D15- Multifamily
Lot Size	955,767 square feet/21.94 acres
Water/Sewer	CBJ/CBJ
Access	Mountainside Dr./Hillcrest Ave.
Existing Land Use	Vacant
Associated Applications	SMP2019-0004; SMF20200001; SMP2021 0004; SMF2022 0003

ALTERNATIVE ACTIONS:

1. **Amend:** require additional conditions or delete or modify the recommended conditions.
2. **Deny:** deny the permit and adopt new findings for items 1-6 below that support the denial.
3. **Continue:** to a future meeting date if determined that additional information or analysis is needed to make a decision, or if additional testimony is warranted.

ASSEMBLY ACTION REQUIRED:

Assembly action is not required for this permit.

STANDARD OF REVIEW:

- Quasi-judicial decision
- Requires five (5) affirmative votes for approval
- Code Provisions:
  - CBJ 49.15.402
  - CBJ 49.15.411
  - CBJ 49.25.300
  - CBJ 49.25.400
  - CBJ 49.25.500
  - CBJ 49.25.510
  - CBJ 49.35.140
  - CBJ 49.35
  - CBJ 49.55.010
  - CBJ 49.70.210
  - CBJ 49.80

The Commission shall hear and decide the case per CBJ 49.15.400(a) – Purpose and applicability. *The purpose of this article is to facilitate the subdivision of land to promote the public health, safety, and general welfare of the citizens of the CBJ in accordance with the Comprehensive Plan of the City and Borough of Juneau, Alaska.*

And per CBJ 49.15.402(a) - A *major subdivision permit is required for subdivisions resulting in 14 or more*

SITE FEATURES AND ZONING



SURROUNDING ZONING AND LAND USES	
North (D18)	Vacant Land
South (D5)	Residential
East (D15)	Residential
West (RR)	Vacant Land

SITE FEATURES	
Anadromous	N/A
Flood Zone	N/A
Hazard	N/A
Hillside	Present
Wetlands	Present
Parking District	N/A
Historic District	N/A
Overlay Districts	Mining & Exploration Surface Activities Exclusion District.

BACKGROUND INFORMATION

Project Description – The applicants are proposing the development of Phase 3 of Chilkat Vistas (Phase 3) Tract A2 in to 19 single-family lots, and two (2) large tracts. Proposed Tract A2A, situated to the north of the property, spans 751,006 square feet (17.24 acres) and could be accessed via Hooter Lane for potential future development. Tract A2B encompasses 57,055 square feet (1.31 acres) and is designated to remain as open space.

Background –

The site was originally platted through US Survey 4807, and further subdivided into Mountainside Estates Subdivision, Vanderbilt Hill Subdivision, and the remaining Tract A2 was designated Richland Manor. While the original plan intended the site to be developed with the Mountainside Estates Subdivision; it has since become the Chilkat Vistas Phases 1 and 2.

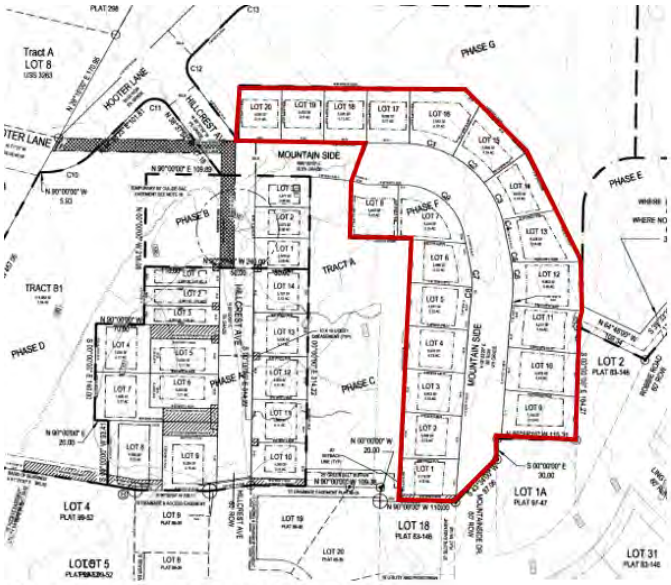
In 2018, the applicants acquired the site with the intention of subdividing into a phased major development for single- and multi-family dwellings. Phases 1 and 2 have been completed. Phase 1 consisted of 14 single-family lots,

and Phase 2 consisted of 15 single-family lots. . Phase 3 will consist of 19 single family lots, two tracts, and connect Mountainside Drive with Hillcrest Avenue.

Item	Summary
SMP2019 0004/SMF2020 0001	Phase 1 of Chilkat Vistas subdivision (**Attachment D & E**).
SMP20210004/SMF2022 0003	Phase 2 of Chilkat Vistas subdivision (**Attachment F & G**).
PAC2023 0006	Pre-Application Notes (**Attachment B**).

ANALYSIS

Phasing – A sketch plat was submitted as part of SMP2019 0004. The current version proposed for this subdivision differs from the proposed sketch plat (**See Attachment D**). The proposed sketch plat (Below; Left), indicates narrower frontages along the Northeast side of Mountain Side Drive with an additional lot; the design for Phase 3 (Below; Right) has slightly wider frontages along the Northeast side of Mountain Side Drive and one less lot.



Sketch Plat – SMP2019-0004



Phase 3 Plat – SMP2023-0001

Minimum Lot Dimensions – The proposed lots as shown on the preliminary plat meet or exceed the dimensional standards listed in CBJ 49.25.400. The CBJ 49.25.400 Dimensional Standards are listed below.

Dimensional Standard	Requirement	Met?
Minimum Lot Size, Square Feet	5,000	☒Meets/Exceeds ☐Not met
Minimum Lot Width, Linear Feet	50	☒Meets/Exceeds ☐Not met

Density – The table below demonstrates how many dwelling units each lot can accommodate after the proposed subdivision has been completed. Per: 49.25.500 table, & 49.25.510(k)(2)

Lot Number	Square Feet	Lot Width	Maximum Number of Dwelling Units
28	6,844	86.00	1 Single-family detached dwelling per lot with an accessory apartment not to exceed 600 square feet.
29	6,831	87.03	
30	7,795	60.69	
31	7,794	65.06	
32	7,832	76.35	
33	8,993	55.43	
34	6,272	59.43	
35	5,167	51.09	
36	5,173	50.78	
37	5,362	51.09	
38	5,530	51.12	
39	5,026	64.29	
40	5,159	63.11	
41	5,396	63.11	
42	5,633	63.11	
43	5,866	63.10	
44	5,609	64.23	
45	5,739	135.90	
46	5,186	69.00	
Tract A2A	751,006	50.00	15 units per acre in D15 zone: 17.24 acres (17 acres); 255 dwelling units
Tract A2B	57,055	59.64	Per ALP2019-0003, Settlement Agreement, Item 2, there will be greenbelt separation between Richland Manor and Mountainside Estates. (**Attachment E**)

Habitat - There are no mapped anadromous resources on Tract A2. The applicant should verify with the United States Department of Fish and Game on the presence of eagle nests in the area.

Attachment M indicates Conifer and Alder Wetlands are present per August 2020 wetland delineation.

Attachment N is a wetland fill permit from the Alaska District of the Army Corps of Engineers.

Condition: None**.**

Plat Note: WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. (Note 8 on the draft plat).

Hazard Zones – The lots are located outside of mapped hazard areas.

A Hillside Endorsement will be required for excavation or creation of 18 percent slopes [CBJ 49.70.210]. Topography provided in CBJ's Parcel Viewer indicates that some lots may have slopes of 18 percent or more.

The Hillside Endorsement requires a soils analysis, and CDD has granted grading permits in order to collect this data. A subsequent building permit will be required to meet the standards of the Hillside Endorsement if applicable. Hillside Endorsements include engineered plans, a geotechnical memo, and explicit direction on landscaping.

A construction plan will be submitted before final plat approval and will provide more information on slopes.

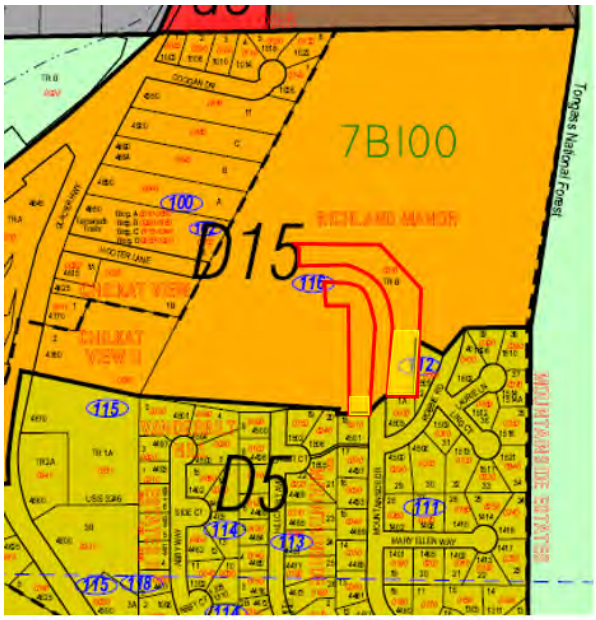
Condition: None.

Plat Note: None.

LOT DESIGN

Lots: 35, 36, 37, 38, and 39 adhere to D5 Zoning standards.

Per 49.25.400 Note 3, where one district abuts another, the greater of the two setbacks is required for both uses on the common lot line.



2006 Zoning Map



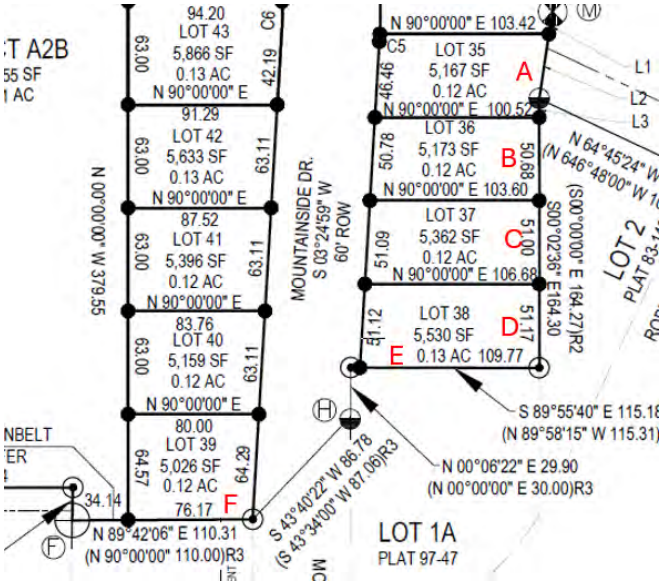
Phase 3 Properties abutting D5 zoning.

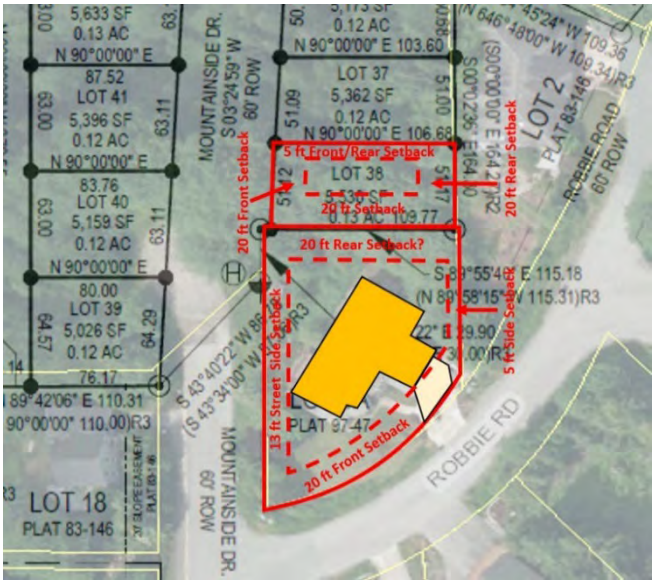
The table below shows how the setback requirements of the D15 zoned lots of Chilkat Vistas Phase 3 are affected by the abutting D5 zone. Per Note 3 of the table of dimensional standards, where one district abuts another, the greater of the two setbacks is required for both uses on the common property line.

The resulting impact of this, the side lot line of Lot 38 would have been 5 feet. However, since it abuts the rear lot line of a D5 zoned lot, Lot 38's side lot line of 5 feet is considered a rear lot line for a D5 zone, necessitating a 20-foot setback.

Lots 35, 36, 37, and 38, zoned D15, have a shared property boundary with the side lot line of a D5 zoned lot. In this scenario, the D15 lots will maintain the required 15-foot rear yard setback, as it represents the greater setback requirement among the two zones.

Phase 3 Lot #s	**Lot 35**	**Lot 36**	**Lot 37**	**Lot 38**	**Lot 38**	**Lot 39**
Lot line in diagram below	A	B	C	D	E	F
Lot Line	East	East	East	East	South	South
D15 setback, type	Rear	Rear	Rear	Rear	Side	Side
D15 setback, feet	15	15	15	15	5	5
Abutting D5 setback, type	Side	Side	Side	Side	Rear	Side
Abutting D5 setback, feet	5	5	5	5	20	5
SETBACK REQUIRED FOR Ph 3 LOT	**15**	**15**	**15**	**15**	**20**	**5**





TRAFFIC

Traffic – Although no Traffic Impact Analysis (TIA) is required for Phase 3, a TIA was submitted in 2020 for the overall development of up to 47 single family homes and 356 multifamily homes. The applicant submitted a TIA with Phase 1 of the Chilkat Vistas that encompasses the development of Chilkat Vistas Phase 3. (**See Attachment K**).

Phase 1 Lot Number	Total # of Dwellings per lot	Total Trips
1, 2, AND 3 (Bungalow Lots)	1 Single Family	9.52 x 3 = 28.56
4, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14 (Regular Lots)	1 Single Family and 1 accessory Apartment	16.17 x 11 = 177.87
		Total: 206.43 ADTs

Phase 2 Lot Number	Total # of Dwellings per lot	Total Trips
15, 16, 17, 20, 21, 22, 23, 24, and 26 (Bungalow Lots)	1 Single Family	9.52 x 9 = 85.68
18, 19, 25, and 27 (Regular Lots)	1 Single Family and 1 accessory Apartment	16.17 x 4 = 64.68
		Total: 105.36 ADTs

Phase 3 Lot Number	Total # of Dwellings per lot	Total Trips
28, 29,30,31,32,33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, and 46 (Regular Lots)	1 Single Family and 1 accessory Apartment	16.17 x 19 = 64.68
		Total: 307.23 ADTs

Condition: None.

Plat Note: None.

ACCESS AND PUBLIC IMPROVEMENTS

Access – Per CBJ 49.35.250(a), staff has determined that the primary access to the subdivision is Mountainside Drive. The applicant has demonstrated that each lot will have direct and practical access to a public right-of-way through the frontage of the lot, as required by CBJ 49.35.250(b).

Lot Number	Primary access
28 to 46	Mountainside Drive

CBJ 49.35.240 Table of Roadway Construction Standards – Phase 3 will maintain a 60 foot width, consistent with Mountainside Drive. Under Phase 1, right-of-way width was reduced from 60 feet in width to 50 feet.

Condition:

1. Prior to final plat approval, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.

2. Prior to final plat approval , the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the director of Engineering & Public Works for compliance with CBJ 49.35.140.
3. Prior to final plat approval of the , the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.
4. Prior to final plat approval of the, the developer shall submit a final drainage plan to be approved by CBJ General Engineering. This drainage plan must be prepared by an engineer licensed in Alaska in accordance with CBJ 49.35.510.

Plat Note: None.

Street Lighting – Street lights have been installed at the intersection of Mountainside Drive and Hillcrest Avenue per phase 2 bonding requirement. No additional streetlights will be required.

Condition: None.

Plat Note: None.

Pedestrian Access – Phase 3 development would not generate enough ADT to require sidewalks. However, considering eventual development, the table from 49.35.240 between 212 and 499 ADT would require sidewalks along one side of the street, a 24 foot travel way width, street lights at intersections, and have a 60 foot platted right of way.

Condition: None.

Plat Note: None.

Drainage – General Engineering will conduct a formal review of the proposed drainage plan after approval of the preliminary plat. A drainage plan has been submitted.

Condition: None.

Plat Note: None.

Fire Code Improvements – Construction plans will be reviewed when they are submitted after the Preliminary Plat approval. Mountainside Drive will connect with Hillcrest Avenue, this will provide access to Hooter Lane, Glacier Highway and Vanderbilt Hill Drive. Capital City Fire and Rescue had no revisions to the proposed plan. See **Attachment H**.

Condition: None.

Plat Note: None.

AGENCY REVIEW

CDD conducted an agency review comment period between August 8, 2023 – March 22, 2024. Agency review comments can be found in **Attachment H**.

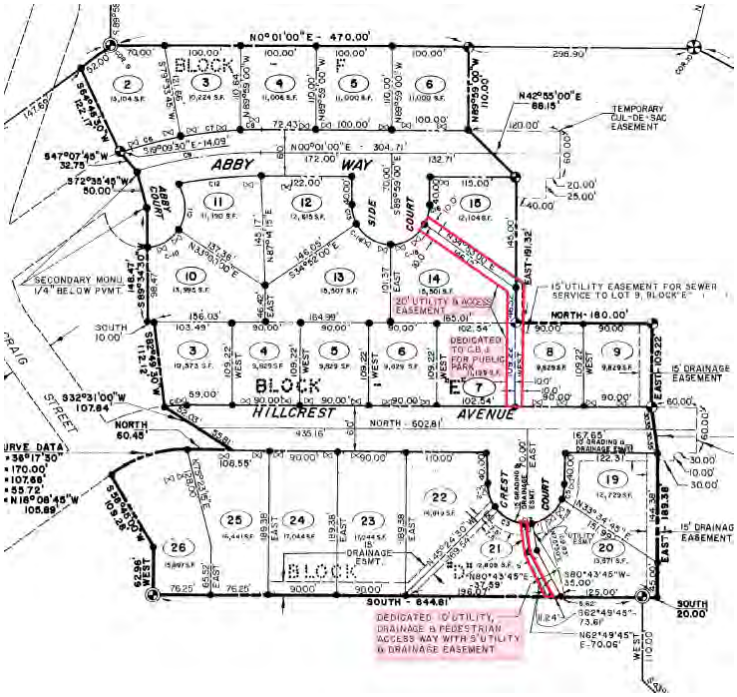
Agency	Summary
Zoning	**Agency comments were addressed through the initial plat review process. (Attachment H).**
General Engineering	
Cartography	
Capital City Fire and Rescue	
Department of Transportation & Public Facilities	

PUBLIC COMMENTS

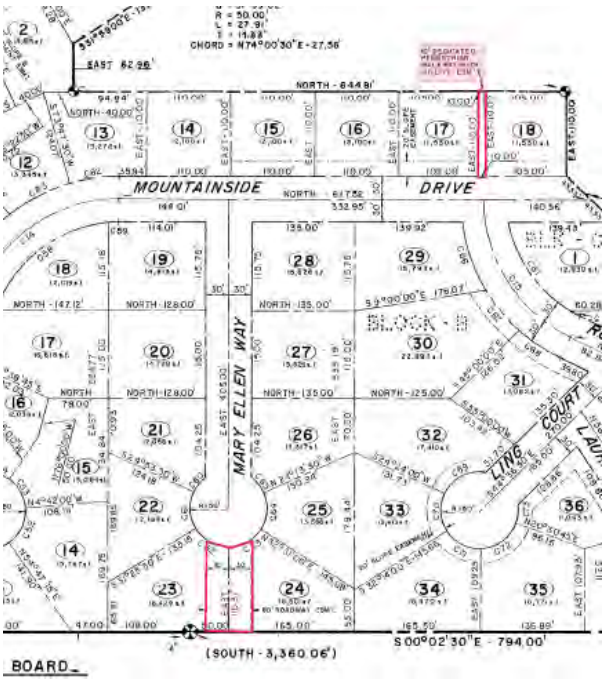
CDD conducted a public comment period between March 5 – March 22. Public notice was mailed to property owners within 500 feet of the subject parcel (**Attachment I**). A public notice sign was also posted on-site two weeks prior to the scheduled hearing. Public comments submitted at time of writing this staff report can be found in **Attachment N**. The primary concerns voiced by the neighbors revolve around drainage and the preservation of a walking trail that grants access to the Blackerby trail through the developer's property.

It should be noted that there are existing easements within the neighborhood that facilitate pedestrian access. As outlined in Plats 83-146 and 88-39, there are several dedicated pedestrian access ways through the neighborhood to the Blackerby Trail. (**See Attachment O**)

Plat 88-39



Plat 88-146



Name	Summary
Sarah Holzman	Expressing concerns over ramifications of tree removal; Smoke from burning trash; Impacts of Hooter Lane (i.e. Landslide impacts.)
Teresa Kriletich Bruce	Requested that consideration be given to their view when building the home across the way, and that greenbelt space is included between phase 3.
Michele Elfers	Consideration of the additional noise, traffic, and construction impacts. Preservation of public created hiking trail. Request for public easement to preserve trail.
Nickie Romine	Concerns over how drainage and possibility of land/mudslides will affect the school.
Robert Trousil	Concerns over drainage management and an easement
Sheila Box	Request to consider preserving a public created walking/hiking trail.

FINDINGS

Major Subdivision Preliminary Plat Approval Criteria - Per CBJ 49.15.402(c)(4), the Director makes the following findings on the proposed development:

1. ***Does the preliminary plat comply with CBJ 49.15.411?***

   Analysis: No additional analysis needed.

   Finding: Yes. With recommended conditions, the preliminary plat complies with preliminary platting requirements listed in CBJ 49.15.411.

2. ***Will applicable subdivision development standards be met, or can reasonably be met with conditions?***

   Analysis: The applicant is required to install lighting, sidewalks, and a 22 foot wide traveled way.

   Finding: Yes. With recommended conditions, all applicable subdivision development standards can be reasonably met.

3. ***Will the proposed subdivision provide suitable building sites for the zoning district?***

   Analysis: Lots created through this subdivision meet minimum dimensional requirements for the D15 zoning district; these lots can reasonably meet setback and other dimensional requirements.

   Finding: Yes. The proposed subdivision provides building sites suitable for the D15 zoning district.

4. ***Will the proposed street names be unique or continuations of existing streets?***

   Analysis: None required.

Finding: Yes. The street is an extension of Mountainside Drive.

5. Has the director of Engineering and Public Works reviewed the application and determined that:

(i) The subdivision can be constructed to conform to applicable drainage and water quality requirements;

(ii) The streets, pioneer paths, and pedestrian ways as proposed accommodate anticipated traffic, align with, and, where appropriate, connect with streets and pedestrian ways serving adjacent properties;

(iii) Any proposed improvements conform to the requirements of this Title 49 and can be feasibly constructed; and,

(iv) Where public sewer is not required, the applicant has shown that soils are suitable for individual on-lot wastewater treatments and disposal or has shown the feasibility of alternative methods of wastewater disposal and treatment.

Analysis: The drainage plan and construction plan will be reviewed after preliminary plat approval.

Finding: Yes. Engineering and Public Works has reviewed the proposed subdivision application and supplemental materials and believes the above criteria can be met.

RECOMMENDATION

Staff recommends the Planning Commission adopt the Director's analysis and findings and APPROVE the requested preliminary plat for the Chilkat Subdivision Phase 3: Proposing subdivision of tract A2 into nineteen (19) lots and two (2) tracts and completion of Mountainside Drive right-of-way to connect to Hillcrest Avenue. This permit would allow the applicant to submit for the final plat application.

This approval is subject to the following conditions:

1. Prior to final plat approval, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.
2. Prior to final plat approval , the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the director of Engineering & Public Works for compliance with CBJ 49.35.140.
3. Prior to final plat approval of the , the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.
4. Prior to final plat approval of the, the developer shall submit a final drainage plan to be approved by CBJ General Engineering. This drainage plan must be prepared by an engineer licensed in Alaska in accordance with CBJ 49.35.510.

STAFF REPORT ATTACHMENTS

Item	Description
Attachment A	Application Packet
Attachment B	Pre Application Notes
Attachment C	Preliminary Draft Plat for phase 3
Attachment D	SMP19-04 – Sketch Plat
Attachment E	SMF20-01 – Phase 1 Plat
Attachment F	SMP21-04 – Phase 2
Attachment G	SMF22-03 – Phase 2 Report and Final Plat
Attachment H	Plat Review Comment Bundle
Attachment I	Public Notice
Attachment J	Construction Plans
Attachment K	Final Traffic Impact Analysis
Attachment L	Wetland Maps
Attachment M	Wetland Fill Permit
Attachment N	Public Comment Bundle
Attachment O	Plats 88-39 and 99-146 showing existing pedestrian access.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

DEVELOPMENT PERMIT APPLICATION

NOTE: Development Permit Application forms must accompany all other Community Development Department land use applications. This form and all documents associated with it are public record once submitted.

To be completed by Applicant

PROPERTY LOCATION

Physical Address: Hillcrest Ave, Juneau AK

Legal Description(s) (Subdivision, Survey, Block, Tract, Lot): CHILKAT VISTAS TR A2

Parcel Number(s): 7B1001160013

☐ This property is located in the downtown historic district
☐ This property is located in a mapped hazard area, if so, which _____

LANDOWNER/ LESSEE

Property Owner: Michael Heumann
Contact Person: Michael Heumann
Mailing Address: PO BOX 34024, Juneau AK 99803
Phone Number(s): 971-261-8014
E-mail Address: chilkatvistas@gmail.com

LANDOWNER/ LESSEE CONSENT

Required for Planning Permits, not needed on Building/ Engineering Permits.

Consent is required of all landowners/ lessees. If submitted with the application, alternative written approval may be sufficient. Written approval must include the property location, landowner/ lessee's printed name, signature, and the applicant's name.

I am (we are) the owner(s)or lessee(s) of the property subject to this application and I (we) consent as follows:
A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission.
B. I (we) grant permission for the City and Borough of Juneau officials/employees to inspect my property as needed for purposes of this application.

Michael Heumann — Landowner/Lessee (Printed Name)
Owner — Title (e.g.: Landowner, Lessee)

X _____ Landowner/Lessee (Signature)
7/21/23 — Date

_____ Landowner/Lessee (Printed Name)
Title (e.g.: Landowner, Lessee)

X _____ Landowner/Lessee (Signature)
Date

NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours. We will make every effort to contact you in advance, but may need to access the property in your absence and in accordance with the consent above. Also, members of the Planning Commission may visit the property before a scheduled public hearing date.

APPLICANT If same as LANDOWNER, write "SAME"

Applicant (Printed Name): Chilkat Vistas LLC
Contact Person: Michael Heumann
Mailing Address: PO BOX 34024, Juneau AK 99803
Phone Number(s): 917-261-8014
E-mail Address: chilkatvistas@gmail.com

X _____ Applicant's Signature
7/21/23 — Date of Application

----------DEPARTMENT USE ONLY BELOW THIS LINE----------

Intake Initials	
ER	
Case Number	Date Received
SMP23-001	7/26/2023

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

SUBDIVISION AND DEVELOPMENT PLAN APPLICATION

See subdivision hand-outs for more information regarding the permitting process and the materials required for a complete application.
NOTE: Must be accompanied by a DEVELOPMENT PERMIT APPLICATION form.

To be completed by Applicant

PROJECT SUMMARY

Number of Existing Parcels 1 Total Land Area 22 acres Number of Resulting Parcels 21

HAS THE PARCEL BEEN CREATED BY A MINOR SUBDIVISION IN THE PRECEDING 24 MONTHS

○ NO ○ YES Case Number _____

TYPE OF SUBDIVISION OR PLATTING APPROVAL REQUESTED

MINOR DEVELOPMENT
(changing or creating 13 or fewer lots)

- ○ Preliminary Plat (MIP)
- ○ Final Plat (MIF)
- ○ Panhandle Subdivision
- ○ Accretion Survey
- ○ Boundary Adjustment
- ○ Lot Consolidation (SLC)
- ○ Bungalow Lot Subdivision
- ○ Common Wall/Zero Lot Subdivision
- ○ Other _____

MAJOR DEVELOPMENT
(changing or creating 14 or more lots)

- ● Preliminary Plat (SMP)
- ○ Final Plat (SMF)
- ○ Preliminary Development Plan – PUD (PDP)
- ○ Final Development Plan – PUD (PDF) Preliminary
- ○ Development Plan – ARS (ARP) Final
- ○ Development Plan – ARS (ARF)
- ○ Bungalow Lot Subdivision
- ○ Common Wall/Zero Lot Subdivision
- ○ Other _____

ALL REQUIRED DOCUMENTS ATTACHED

- ☑ **Pre-application conference notes**
- ☐ **Narrative including:**
  - ☑ Legal description(s) of property to be subdivided
  - ☑ Existing structures on the land
  - ☑ Zoning district
  - ☑ Density
  - ☑ Access
  - ☑ Current and proposed use of any structures
  - ☑ Utilities available
  - ☑ Unique characteristics of the land or structure(s)
- ☑ **Preliminary Plat checklist**

---DEPARTMENT USE ONLY BELOW THIS LINE---

SUBDIVISION/PLATTING FEES	Fees	Check No.	Receipt	Date
Application Fees	$ ~~2,310~~ 2,310.00			
Admin. ~~of Guarantee~~ Sign	$ 150.00			
Adjustment	$ (110 x 21 lots)			
Total Fee	$ ~~2,310.00~~ 2,460.00			

For assistance filling out this form, contact the Permit Center at 586-0770.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

Case Number	Date Received
SMP23.001	7/26/23

I:\FORMS\PLANFORM\Subdivision Application.docx

Attachment A - Application Packet

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/community-development
155 S. Seward Street • Juneau, AK 99801

Chilkat Vistas Phase III

Case Number:	PAC2022 0006
Applicant:	William Heumann
Property Owner:	William Heumann
Property Address:	N/A
Parcel Code Number:	TBD
Site Size:	955,767 Square Feet/21.94 Acres
Zoning:	D15 Multifamily
Existing Land Use:	Vacant

Conference Date:	March 22, 2023
Report Issued:	June 26, 2023

DISCLAIMER: Pre-application conferences are conducted for the purpose of providing applicants with a preliminary review of a project and timeline. Pre-application conferences are not based on a complete application and are not a guarantee of final project approval.

List of Attendees

Note: Copies of the Pre-Application Conference Report will be emailed, instead of mailed, to participants who have provided their email address below.

Name	Title	Email address
Michael Heumann	Applicant	Chilkatvistas@gmail.com
David Peterson	Planning	David.Peterson@juneau.gov
Joseph Meyers	Planning	Joseph.Meyers@juneau.gov
David Sevdy	Building	David.Sevdy@juneau.gov
Eric Vogel	General Engineering	Eric.Vogel@juneau.gov

Conference Summary

Questions/issues/agreements identified at the conference that weren't identified in the attached reports.
The following is a list of issues, comments and proposed actions, and requested technical submittal items that were discussed at the pre-application conference.

Project Overview
Applicant is proposing the phase three development of Chilkat Vistas, Tract A. The subdivision will consist of 18 standard single-family lots and one large tract. The lots will front on the newly dedicated ROW that will be extended from the existing dead-end of Mountainside Drive to the newly created intersection at Hillcrest Avenue. Part of Phase 3's benefits are that it will provide a secondary access to the upper reaches of Mountainside Estates and will also loop the waterline that is connected to the high pressure water system and provide enhanced fire hydrant flow rates. Both of these outcomes have long been identified as desirable life safety improvements by CBJ's numerous regulatory departments. In general the subdivision will be a continuation in similar style to the first two phases of Chilkat Vistas. As this is a continuation of a phased development, much of the engineering has already been done although we do expect to make some refinements as we move into detailed design work.

Planning Division

1. **Zoning** – D15 zone. 15 units per acre. Minimum lot size is 5,000 square feet, 3,000 square feet for a bungalow lot, and 3,500 square feet for a common wall dwelling.

   Minimum lot width = 50'. Bungalow Lot Width = 25'. Common Wall Dwelling = 30'. Lot widths on scratch plat vary. Curve table lengths do not seem to match plan.

   Maximum number of dwelling units allowable on 3.39 acres is (3.39 acres * 15 allowable units/acre = 50.85 = 51 units).

2. **Subdivision** – Chilkat Vistas Subdivision, Phase II – Tract A3.
3. **Setbacks** –
   a. Front = 20 ft.
   b. Rear = 20 ft.
   c. Side = 5 ft.
   d. Street side = 13 ft.
4. **Height** – Maximum = 35 ft.; Accessory/Bungalow = 25 ft. (Reference 49.25.420)
5. **Access** – Lots created will have direct and practical access through their frontages on to Mountainside Drive.
6. **Parking & Circulation** – Per the table in 49.40.210, each dwelling unit requires 2 parking spaces. Accessory apartments require 1 additional parking space.
7. **Lot Coverage –** Lot Coverage means the percentage of horizontal lot area that is occupied by all buildings on the lot, each measured at the outside of those exterior walls of the floor having the greatest horizontal dimensions. Maximum/Permissible/Conditional Lot Coverage = 50%.
8. **Vegetative Coverage** – 49.50.300 – Percentage of required vegetative coverage is 30% in D15 zoning.

9. **Lighting** – Must be in compliance with 04 CBJAC 080.530.
10. **Noise** – Community Development has no zoning related code to contest noise. Per 42.20.095(c), It is unlawful to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or similar heavy construction equipment, before 7:00 a.m. or after 10:00 p.m., Monday through Friday, or before 9:00 a.m. or after 10:00 p.m., Saturday and Sunday, unless a permit shall first be obtained from the City and Borough building official. Such permit shall be issued by the building official only upon a determination that such operation during hours not otherwise permitted under this section is necessary and will not result in unreasonable disturbance to surrounding residents. The building official may revoke any *noise* permit after making written findings that the construction activity has resulted in unreasonable disturbance to surrounding residents or that operation during hours not otherwise permitted is not necessary.
11. **Flood** – Per CBJ Flood maps, site is not located in a mapped flood zone.
12. **Hazard/Mass Wasting/Avalanche/Hillside Endorsement** –
    a. Hazard/Mas Wasting/Avalanche– No recorded hazards present on the site.
    b. Hillside Endorsement – 49.70.210, Excavation or creation of any slope in excess of 18%, will require a Hillside Endorsement. All hillside endorsement applications shall be reviewed by the planning commission, accept minor development (ref 49.70.210(b)(1-8). **Note that the hillside endorsement must be completed before this project goes before the Planning Commission.**
13. **Wetlands** – No recorded wetlands present in CBJ records. If wetlands are discovered on parts of the proposed development, special regulations may apply.

NOTE: SMP2021 0004, Condition 1. Provide a "wetlands fill permit" from the United States Army Corps of Engineers.

14. **Habitat** – Check with the U.S. Fish and Wildlife on the presence of eagle nests in the area. The presence of eagle nests may impact construction scheduling. No anadromous waterbodies are on the subject parcel, or within 50 feet.
15. **Plat or Covenant Restrictions** – None are applicable. The Applicant has a Stipulated Settlement Agreement with the Mountainside Estates Neighborhood Association (MENA). Under the agreement, the CBJ's responsibility is limited to access development requirements. While other elements of the agreement are between the Applicant and MENA, a cursory review does not indicate this development would conflict with that agreement. Contact your attorney for confirmation.
16. **Traffic** – Applicants have submitted a Traffic Impact Analysis for a build-out of 403 dwelling units. This was reviewed with the major subdivision applications SMP2021 0004 and SMP2019 0004. The analysis included 47 single-family homes and 356 multifamily homes. To date, 27 single-family lots have been platted, with 18 additional proposed under Phase 3. This development would be the first multi-family development.
17. **Nonconforming situations** – N/A

Building Division

18. **Building** – N/A
19. **Outstanding Permits** – N/A

General Engineering/Public Works

20. **Engineering** –

a. At the time of preliminary plat submittal, submit an erosion control report explaining the method by which the applicant proposes to control erosion and manage runoff, and potential impacts to adjacent properties or water bodies. The report shall include a plan for preservation of ground cover in areas where runoff and resulting erosion need to be minimized.

b. Construction plans to be submitted after the approval of the preliminary plat and before final plat submission. Construction plans must adhere to 49.35.140 and must be signed and stamped by Alaskan licensed engineers for each discipline. Construction plans for this layout of development does not need to include all phases of full buildout of development. For specific requirements, please refer to CBJ code by visiting: https://library.municode.com/ak/juneau/codes/code_of_ordinances and referencing chapter 49.35 – Public and Private Improvements.

c. Prior to final plat, an Engineer's estimate for the installation of public improvements must be submitted. Once this is received, a performance bond amount will be determined and must be paid/posted prior to recording of the final plat. Further discussion regarding the bond can take place once the project phasing is determined. For all options regarding the financial guarantee please refer to 49.55 – Financial Responsibility.

d. Dependent on the construction plan and schedule an inspection deposit will be required and a private inspector may be hired.

e. Street lighting is required and shall not exceed 250' between poles.

f. Easements: Site plan and plat shall include all existing and proposed easements for drainage, utility lines including plumbing lines, access, snow storage, trash (dumpster) storage, or any other shared use that requires crossing the property line.

g. Permits required will determined by the subdivision process you follow. They may include Right-of-way permit, grading permit, water utility permit, and sewer utility permit.

21. **Drainage** –

a. Drainage report with the submittal of the preliminary plat does not need to be engineered. At time of construction plan submittals a drainage plan with calculations must be submitted and must be signed and stamped by an Alaskan licensed engineer.

b. Preliminary plat requirements do need to be followed see 49.15.411 - Preliminary plat requirements for full listing. Please do note that topographic information shall be shown as outlined under 48.15.411, (6) – Topographic information.

22. **Utilities** – (water, power, sewer, etc.)

a. At time of preliminary plat, a draft plan for the proposed water and sewer lines shall be submitted showing existing installed utilities including line sizing and connection points with elevations.

b. A report by a registered engineer or geologist that clearly supports the legal and physical availability of adequate water. Methods for proof of water availability and the standards for quantity are listed in CBJ 49.35, article III. Specifically for your project, it may require additional upgrades to the existing water system.

Fire Marshal

23. **Fire Items/Access** – N/A

Other Applicable Agency Review

24.

List of required applications

Based upon the information submitted for pre-application review, the following list of applications must be submitted in order for the project to receive a thorough and speedy review.

1. Development Permit Application – (DPA)
2. Subdivision Application

Additional Submittal Requirements

Submittal of additional information, given the specifics of the development proposal and site, are listed below. These items will be required in order for the application to be determined Counter Complete.

1. A copy of this pre-application conference report.
2. Narrative
3. Preliminary Plat – (PDF)
4. Construction Plans – (PDF)

Exceptions to Submittal Requirements

Submittal requirements staff has determined **not** to be applicable or **not** required, given the specifics of the development proposal, are listed below. These items will **not** be required in order for the application to be reviewed.

1. N/A

Fee Estimates

The preliminary plan review fees listed below can be found in the CBJ code section 49.85.

Based upon the project plan submitted for pre-application review, staff has attempted to provide an accurate estimate for the permits and permit fees which will be triggered by your proposal.

1. Bonding for improvements will need to be established prior to final plat recording.
2. Fees will depend on Class of use per 49.85.100(3)

For informational handouts with submittal requirements for development applications, please visit our website at www.juneau.org/community-development.

Submit your Completed Application

You may submit your application(s) online via email to permits@juneau.org
OR in person with payment made to:

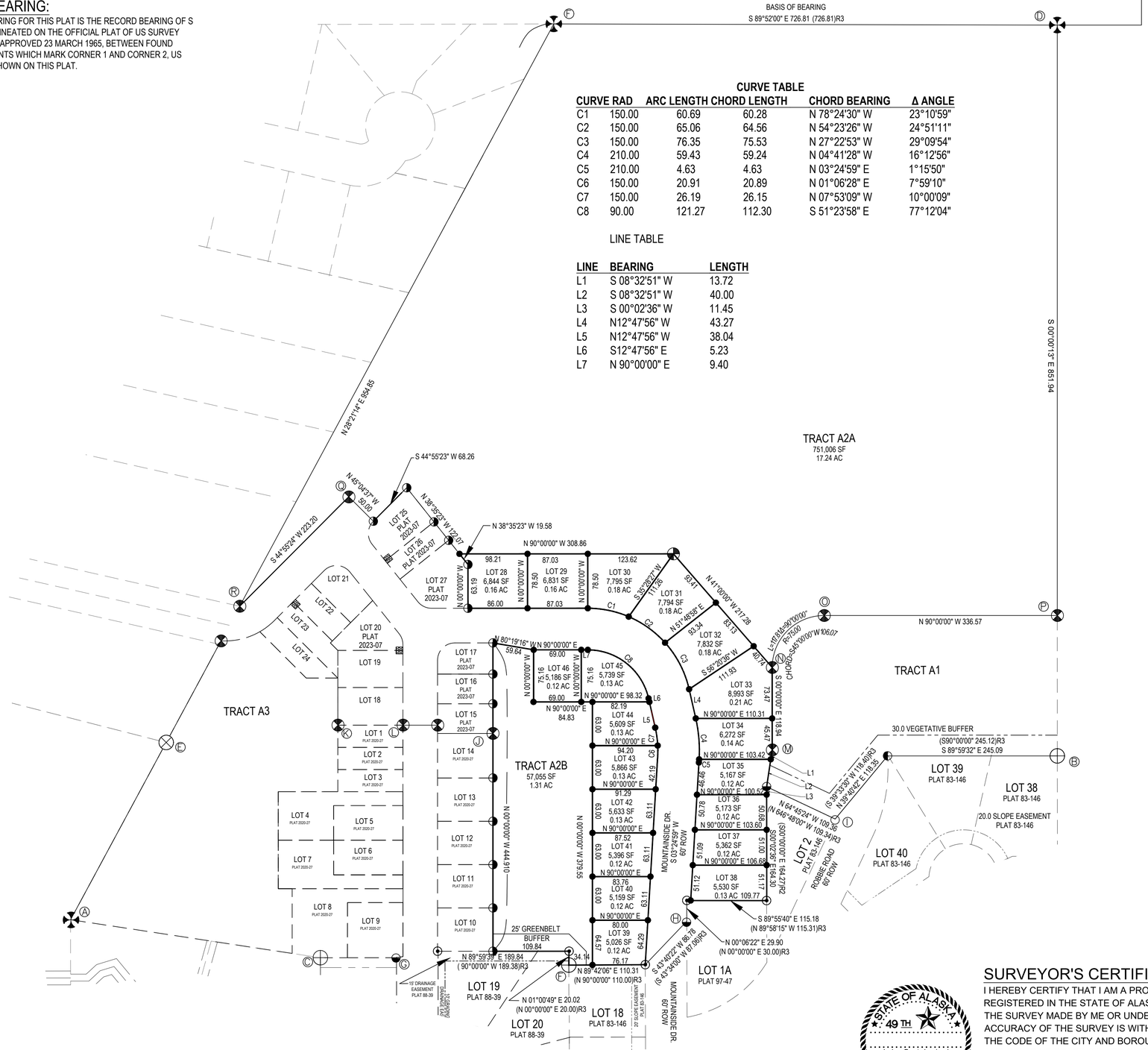
City & Borough of Juneau, Permit Center
230 South Franklin Street
Fourth Floor Marine View Center
Juneau, AK 99801

Phone: (907) 586-0715
Web: www.juneau.org/community-development

Attachments:
49.15.220_Minor and Major Development
49.15.402_ Major Subdivisions
49.15.421 – Cul-de-sac lots
49.25.300 – Table of permissible uses
49.25.400 – Dimensional Standards
49.25.420 – Measuring building height
49.25.510 – Special Density Consideration
49.35.240 – Improvement Standards
49.35.250 – Access
49.40.200 – Parking
49.40.210b – ADA Parking
Article II – Hillside Development
Article III – Traffic
Chapter 49.85 – Fees
Zoning Addendum
69.10.023 – Property Tax Incentives
Housing Programs Final

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF S 89° 52'00" E AS DELINEATED ON THE OFFICIAL PLAT OF US SURVEY 4807 SUBDIVISION, APPROVED 23 MARCH 1965, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK CORNER 1 AND CORNER 2, US SURVEY 4807 AS SHOWN ON THIS PLAT.

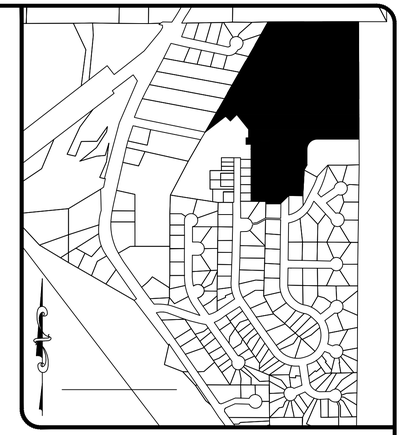


CURVE TABLE

CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	150.00	60.69	60.28	N 78°24'30" W	23°10'59"
C2	150.00	65.06	64.56	N 54°23'26" W	24°51'11"
C3	150.00	76.35	75.53	N 27°22'53" W	29°09'54"
C4	210.00	59.43	59.24	N 04°41'28" W	16°12'56"
C5	210.00	4.63	4.63	N 03°24'59" E	1°15'50"
C6	150.00	20.91	20.89	N 01°06'28" E	7°59'10"
C7	150.00	26.19	26.15	N 07°53'09" W	10°00'09"
C8	90.00	121.27	112.30	S 51°23'58" E	77°12'04"

LINE TABLE

LINE	BEARING	LENGTH
L1	S 08°32'51" W	13.72
L2	S 08°32'51" W	40.00
L3	S 00°02'36" W	11.45
L4	N12°47'56" W	43.27
L5	N12°47'56" W	38.04
L6	S12°47'56" E	5.23
L7	N 90°00'00" E	9.40



- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 12314-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R4 RECORD INFORMATION FROM PLAT No. 2020-27
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

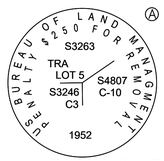
DATED: 21 JULY 2023

STATE OF ALASKA 49TH
Joshua Frantz Ivaniszek
21 JULY 2023
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

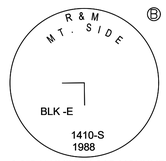
SMF: 2023-XX

RECOVERED MONUMENT DESCRIPTIONS:

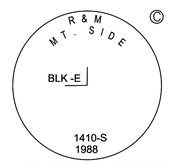
N.T.S.

Ⓐ


2.5" BRASS CAP MONUMENT

Ⓑ


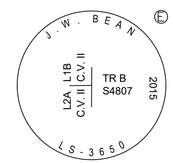
3.25" ALUMINUM CAP MONUMENT

Ⓒ


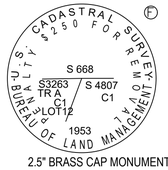
3.25" ALUMINUM CAP MONUMENT

Ⓓ


2.5" BRASS CAP MONUMENT

Ⓔ


3.25" ALUMINUM CAP MONUMENT
FOUND J.W. BEAN MONUMENT
S 61°38'46" E 0.37 FROM
US SURVEY 4807 BOUNDARY
MONUMENT NOT ACCEPTED

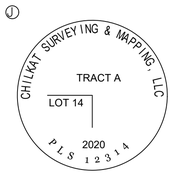
Ⓕ


2.5" BRASS CAP MONUMENT

Ⓖ
FOUND J.W. BEAN REBAR MONUMENT
S 01°34'23" W0.62 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE WITH
ALASKA DNR

Ⓗ
FOUND JW BEAN REBAR
S 11°57'46"W 1.60 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

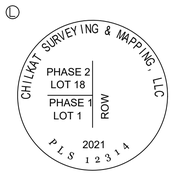
Ⓘ
FOUND #5 REBAR
S 04°55'56"W 1.29 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓙ


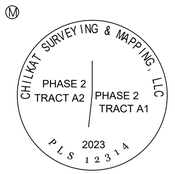
PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓚ

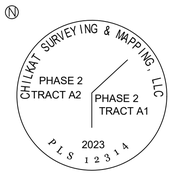

PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓛ


PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓜ


PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓝ


PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓞ


PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓟ


PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓠ

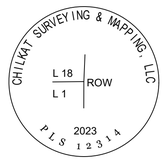

PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓡ


PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP



5/8" x 36" REBAR WITH
RED PLASTIC CAP



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP WITH CLEAR
DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015; RAVENWOOD SUBDIVISION PLAT NO. 2019-3 RECORDED 28 JANUARY 2019; CHILKAT VISTAS SUBDIVISION PHASE 1 PLAT NO. 2020-27 RECORDED 11 AUGUST 2020; CHILKAT VISTAS SUBDIVISION PHASE 2 PLAT NO. 2023-7 RECORDED 13 MARCH 2023 ON FILE WITH THE ALASKA DEPARTMENT OF NATURAL RESOURCES RECORDERS OFFICE IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER CHILKAT VISTAS SUBDIVISION PHASE 3 DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET. ALL REQUIRED CHILKAT VISTAS SUBDIVISION PHASE 3 PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12.120 BEST MANAGEMENT PRACTICES.

8) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY.
WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

9) OTHER THAN SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10 FEET IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____ , DATED _____ , 2023, AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, ANCHORAGE, ALASKA.

_____DATED _____ , 2023
CHAIRMAN OF THE PLANNING COMMISSION
CITY AND BOROUGH OF JUNEAU

ATTEST:

_____
MUNICIPAL CLERK
CITY AND BOROUGH OF JUNEAU

OWNERSHIP CERTIFICATE:

WE, HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____ _____

_____ _____
WILLIAM C. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA

STATE OF ALASKA

THIS IS TO CERTIFY THAT ON THIS___ _____
UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED:



SMF:
2023-xx

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Date: 21 JULY 2023

To: CBJ COMMUNITY DEVELPOMENT DEPARTMENT
155 SOUTH SEWARD ST.
Juneau, Alaska 99801

Subject: Lot closure reports

Remarks: The lot closure reflects the proposed subdivision of Chilkat Vistas Phase 3

Lot 28

Northing	Easting	Bearing	Distance
2379759.312	2527812.564		
		N 90°00'00" E	98.213
2379759.312	2527910.777		
		S 00°00'00" E	78.495
2379680.817	2527910.777		
		N 90°00'00" W	86.000
2379680.817	2527824.777		
		N 00°00'00" W	63.190
2379744.007	2527824.777		
		N 38°35'23" W	19.581
2379759.312	2527812.564		

Closure Error Distance> 0.00000
Total Distance> 345.479
Polyline Area: 6844 sq ft, 0.1571 acres

Lot 29

Northing	Easting	Bearing	Distance
2379680.817	2527997.803		
		N 90°00'00" W	87.026
2379680.817	2527910.777		
		N 00°00'00" W	78.495
2379759.312	2527910.777		
		N 90°00'00" E	87.026
2379759.312	2527997.803		
		S 00°00'00" E	78.495
2379680.817	2527997.803		

Closure Error Distance> 0.00000
Total Distance> 331.041
Polyline Area: 6831 sq ft, 0.1568 acres

Lot 30

Northing	Easting	Bearing	Distance
2379668.705	2528056.853		

Radius: 150.000 Chord: 60.280 Degree: 38°11'50" Dir: Left
Length: 60.693 Delta: 23°10'59" Tangent: 30.768

```
  Chord BRG: N 78°24'30" W  Rad-In: S 23°10'59" W  Rad-Out: S 00°00'00"
W
  Radius Point: 2379530.817,2527997.803
2379680.817   2527997.803
                            N 00°00'00" W 78.495
2379759.312   2527997.803
                            N 90°00'00" E 123.618
2379759.312   2528121.421
                            S 35°28'27" W 111.259
2379668.705   2528056.853

Closure Error Distance> 0.00000
Total Distance> 374.066
Polyline Area: 7795 sq ft, 0.1789 acres

Lot 31
Northing      Easting       Bearing       Distance
2379631.117   2528109.337
  Radius: 150.000   Chord: 64.556     Degree: 38°11'50"  Dir: Left
  Length: 65.065    Delta: 24°51'11"  Tangent: 33.052
  Chord BRG: N 54°23'26" W  Rad-In: S 48°02'10" W  Rad-Out: S 23°10'59"
W
  Radius Point: 2379530.817,2527997.803
2379668.705   2528056.853
                            N 35°28'27" E 111.259
2379759.312   2528121.421
                            S 41°00'00" E 93.409
2379688.816   2528182.702
                            S 51°48'58" W 93.336
2379631.117   2528109.337

Closure Error Distance> 0.00000
Total Distance> 363.069
Polyline Area: 7794 sq ft, 0.1789 acres
```

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

```
Lot 32
Northing      Easting       Bearing       Distance
2379564.047   2528144.076
  Radius: 150.000   Chord: 75.532     Degree: 38°11'50"  Dir: Left
  Length: 76.354    Delta: 29°09'54"  Tangent: 39.023
  Chord BRG: N 27°22'53" W  Rad-In: S 77°12'04" W  Rad-Out: S 48°02'10"
W
  Radius Point: 2379530.817,2527997.803
2379631.117   2528109.337
                            N 51°48'58" E 93.336
2379688.816   2528182.702
                            S 41°00'00" E 83.129
2379626.078   2528237.240
                            S 56°20'36" W 111.926
2379564.047   2528144.076

Closure Error Distance> 0.00000
Total Distance> 364.745
Polyline Area: 7832 sq ft, 0.1798 acres

Lot 33
Northing      Easting       Bearing       Distance
2379564.047   2528144.076
                            S 12°47'56" E 43.266
2379521.856   2528153.660
                            N 90°00'00" E 110.308
2379521.856   2528263.969
                            N 00°00'00" W 73.474
2379595.330   2528263.969
                            N 41°00'00" W 40.741
2379626.078   2528237.240
                            S 56°20'36" W 111.926
2379564.047   2528144.076

Closure Error Distance> 0.00000
Total Distance> 379.715
Polyline Area: 8993 sq ft, 0.2064 acres
```

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

```
Lot 34
Northing      Easting       Bearing       Distance
2379462.820   2528158.505
  Radius: 210.000   Chord: 59.235     Degree: 27°17'01"  Dir: Left
  Length: 59.433    Delta: 16°12'56"  Tangent: 29.916
  Chord BRG: N 04°41'28" W  Rad-In: N 86°35'01" W  Rad-Out: S 77°12'04"
W
  Radius Point: 2379475.335,2527948.878
2379521.856   2528153.660
                            N 90°00'00" E 110.308
2379521.856   2528263.969
                            S 00°00'00" E 45.471
2379476.385   2528263.969
                            S 08°32'51" W 13.717
2379462.820   2528261.930
                            N 90°00'00" W 103.425
2379462.820   2528158.505

Closure Error Distance> 0.00000
Total Distance> 332.355
Polyline Area: 6272 sq ft, 0.1440 acres

LOT 35
Northing      Easting       Bearing       Distance
2379462.820   2528158.505
                            N 90°00'00" E 103.425
2379462.820   2528261.930
                            S 08°32'51" W 39.996
2379423.268   2528255.985
                            S 00°02'36" W 11.448
2379411.820   2528255.977
                            N 90°00'00" W 100.517
2379411.820   2528155.460
                            N 03°24'59" E 46.459
2379458.196   2528158.229
  Radius: 210.000   Chord: 4.632      Degree: 27°17'01"  Dir: Left
  Length: 4.632     Delta: 1°15'50"   Tangent: 2.316
  Chord BRG: N 03°24'59" E  Rad-In: N 85°57'06" W  Rad-Out: N 87°12'55"
W
  Radius Point: 2379473.022,2527948.753
2379462.820   2528158.505

Closure Error Distance> 0.00000
Total Distance> 306.477
Polyline Area: 5167 sq ft, 0.1186 acres
```

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

LOT 36

Northing	Easting	Bearing	Distance
2379361.135	2528256.032		
		N 90°00'00" W	103.598
2379361.135	2528152.434		
		N 03°24'59" E	50.775
2379411.820	2528155.460		
		N 90°00'00" E	100.534
2379411.820	2528255.994		
		S 00°02'36" E	50.685
2379361.135	2528256.032		

Closure Error Distance> 0.00000
Total Distance> 305.593
Polyline Area: 5173 sq ft, 0.1188 acres

Lot 37

Northing	Easting	Bearing	Distance
2379310.138	2528256.071		
		N 90°00'00" W	106.681
2379310.138	2528149.390		
		N 03°24'59" E	51.087
2379361.135	2528152.434		
		N 90°00'00" E	103.598
2379361.135	2528256.032		
		S 00°02'36" E	50.996
2379310.138	2528256.071		

Closure Error Distance> 0.00000
Total Distance> 312.363
Polyline Area: 5362 sq ft, 0.1231 acres

Lot 38

Northing	Easting	Bearing	Distance
2379259.107	2528146.343		
		S 89°55'40" E	109.767
2379258.969	2528256.110		
		N 00°02'36" W	51.170
2379310.138	2528256.071		
		N 90°00'00" W	106.681
2379310.138	2528149.390		
		S 03°24'59" W	51.122
2379259.107	2528146.343		

Closure Error Distance> 0.00000
Total Distance> 318.740
Polyline Area: 5530 sq ft, 0.1270 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Lot 39

Northing	Easting	Bearing	Distance
2379166.484	2528080.708		
		S 89°42'06" W	76.170
2379166.088	2528004.539		
		N 00°00'00" W	64.570
2379230.658	2528004.539		
		N 90°00'00" E	80.000
2379230.658	2528084.539		
		S 03°24'59" W	64.288
2379166.484	2528080.708		

Closure Error Distance> 0.00000
Total Distance> 285.028
Polyline Area: 5026 sq ft, 0.1154 acres

Lot 40

Northing	Easting	Bearing	Distance
2379293.658	2528088.299		
		N 90°00'00" W	83.763
2379293.658	2528004.536		
		S 00°00'00" E	63.000
2379230.658	2528004.536		
		N 90°00'00" E	80.002
2379230.658	2528084.538		
		N 03°24'59" E	63.112
2379293.658	2528088.299		

Closure Error Distance> 0.00000
Total Distance> 289.878
Polyline Area: 5159 sq ft, 0.1184 acres

Lot 41

Northing	Easting	Bearing	Distance
2379356.658	2528092.060		
		N 90°00'00" W	87.525
2379356.658	2528004.536		
		S 00°00'00" E	63.000
2379293.658	2528004.536		
		N 90°00'00" E	83.763
2379293.658	2528088.299		
		N 03°24'59" E	63.112
2379356.658	2528092.060		

Closure Error Distance> 0.00000
Total Distance> 297.400
Polyline Area: 5396 sq ft, 0.1239 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

```
Lot 42
Northing      Easting       Bearing       Distance
2379419.658   2528095.821
                            S 03°24'59" W 63.112
2379356.658   2528092.060
                            N 90°00'00" W 87.525
2379356.658   2528004.536
                            N 00°00'00" W 63.000
2379419.658   2528004.536
                            N 90°00'00" E 91.286
2379419.658   2528095.821

Closure Error Distance> 0.00000
Total Distance> 304.922
Polyline Area: 5633 sq ft, 0.1293 acres

Lot 43
Northing      Easting       Bearing       Distance
2379482.658   2528098.739
                            N 90°00'00" W 94.204
2379482.658   2528004.536
                            S 00°00'00" E 63.000
2379419.658   2528004.536
                            N 90°00'00" E 91.286
2379419.658   2528095.821
                            N 03°24'59" E 42.188
2379461.772   2528098.335
  Radius: 150.000   Chord: 20.890     Degree: 38°11'50"  Dir: Left
  Length: 20.907    Delta: 7°59'10"   Tangent: 10.471
  Chord BRG: N 01°06'28" E  Rad-In: N 84°53'57" W  Rad-Out: S 87°06'54"
W
  Radius Point: 2379475.108,2527948.929
2379482.658   2528098.739

Closure Error Distance> 0.00000
Total Distance> 311.585
Polyline Area: 5866 sq ft, 0.1347 acres
```

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Lot 44

Northing	Easting	Bearing	Distance
2379508.564	2528095.151		
		N 12°47'56" W	38.039
2379545.658	2528086.724		
		N 90°00'00" W	82.189
2379545.658	2528004.536		
		S 00°00'00" E	63.000
2379482.658	2528004.536		
		N 90°00'00" E	94.204
2379482.658	2528098.739		

Radius: 150.000 Chord: 26.153 Degree: 38°11'50" Dir: Left
Length: 26.186 Delta: 10°00'09" Tangent: 13.127
Chord BRG: N 07°53'09" W Rad-In: S 87°06'55" W Rad-Out: S 77°06'46" W
Radius Point: 2379475.109,2527948.929

2379508.564 2528095.151

Closure Error Distance> 0.00000
Total Distance> 303.618
Polyline Area: 5609 sq ft, 0.1288 acres

LOT 45

Northing	Easting	Bearing	Distance
2379620.817	2527988.407		
		N 90°00'00" E	9.396
2379620.817	2527997.803		

Radius: 90.000 Chord: 112.300 Degree: 63°39'43" Dir: Right
Length: 121.267 Delta: 77°12'04" Tangent: 71.847
Chord BRG: S 51°23'58" E Rad-In: S 00°00'00" E Rad-Out: S 77°12'04" W
Radius Point: 2379530.817,2527997.803

2379550.755	2528085.566		
		S 12°47'56" E	5.226
2379545.658	2528086.724		
		N 90°00'00" W	98.320
2379545.658	2527988.404		
		N 00°00'00" W	75.160
2379620.818	2527988.404		

Closure Error Distance> 0.00277 Error Bearing> S 61°57'16" E
Closure Precision> 1 in 111589.9 Total Distance> 309.369
Polyline Area: 5739 sq ft, 0.1317 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Lot 46

Northing	Easting	Bearing	Distance
2379620.817	2527919.407		
		N 90°00'00" E	69.000
2379620.817	2527988.407		
		S 00°00'00" E	75.159
2379545.658	2527988.407		
		N 90°00'00" W	69.000
2379545.658	2527919.407		
		N 00°00'00" W	75.159
2379620.817	2527919.407		

Closure Error Distance> 0.00000
Total Distance> 288.317
Polyline Area: 5186 sq ft, 0.1191 acres

TRACT A2B

Northing	Easting	Bearing	Distance
2379165.908	2527970.383		
		N 89°42'06" E	34.140
2379166.086	2528004.523		
		N 00°00'00" W	379.550
2379545.636	2528004.523		
		N 90°00'00" W	84.830
2379545.636	2527919.693		
		N 00°00'00" W	75.160
2379620.796	2527919.693		
		N 80°19'16" W	59.644
2379630.824	2527860.897		
		S 00°00'00" E	444.910
2379185.914	2527860.897		
		N 89°59'39" E	109.840
2379185.925	2527970.737		
		S 01°00'49" W	20.020
2379165.908	2527970.383		

Closure Error Distance> 0.00000
Total Distance> 1208.094
Polyline Area: 57055 sq ft, 1.3098 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Tract A2A

Northing	Easting	Bearing	Distance
2379595.330	2528263.969		
		N 41°00'00" W	217.279
2379759.312	2528121.421		
		N 90°00'00" W	308.857
2379759.312	2527812.564		
		N 38°35'23" W	122.069
2379854.725	2527736.425		
		S 44°55'23" W	68.262
2379806.392	2527688.221		
		N 45°04'36" W	50.000
2379841.700	2527652.818		
		S 44°55'24" W	223.202
2379683.661	2527495.202		
		N 28°21'14" E	954.853
2380523.961	2527948.677		
		S 89°52'00" E	726.810
2380522.270	2528675.485		
		S 00°00'13" E	851.940
2379670.330	2528675.539		
		N 90°00'00" W	336.570
2379670.330	2528338.969		

Radius: 75.000 Chord: 106.066 Degree: 76°23'40" Dir: Left
Length: 117.810 Delta: 90°00'00" Tangent: 75.000
Chord BRG: S45°00'00" W Rad-In: S00°00'00" E Rad-Out: N 90°00'00" E
Radius Point: 2379595.330,2528338.969

2379595.330 2528263.969

Closure Error Distance> 0.00000
Total Distance> 3977.651
Polyline Area: 751006 sq ft, 17.2407 acres

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

DATE: November 4, 2019

TO: Planning Commission

FROM: Laurel Christian, Planner I
Community Development Department

FILE NO.: SMP2019 0004

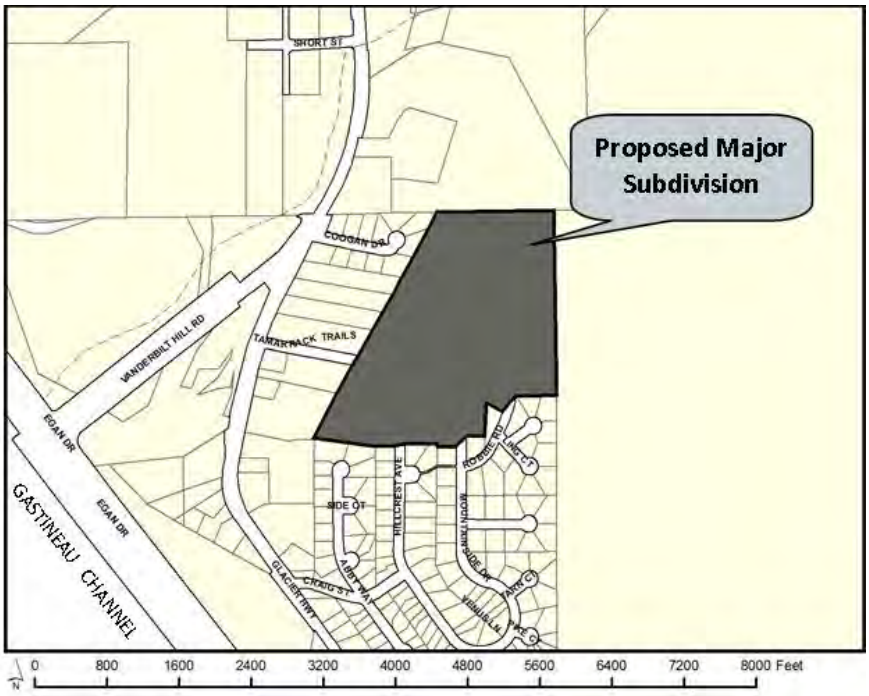
PROPOSAL: Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels)

GENERAL INFORMATION

Applicant:	Michael & William Heumann
Property Owner:	Michael & William Heumann
Legal Description:	Richland Manor Tract B
Parcel Code No.:	7B1001160010
Site Size:	30.67 Acres (1,335,985 square feet)
Comprehensive Plan Future Land Use Designation:	Medium Density Residential (MDR)
Zoning:	D15
Utilities:	Public Water & Sewer Proposed
Access:	Mountainside Drive, Hillcrest Avenue, and Robbie Road through Craig Street
Existing Land Use:	Vacant

Surrounding Land Use:
North – D18 Multi-family
South – Mountainside Estates Subdivision (D5 Single-family Residential)
East – Vacant forested RR
West – D5 and D15 Single-family Residential and Multi-family

VICINITY MAP



ATTACHMENTS

Attachment A – Application
Attachment B – Preliminary Plat
Attachment C – Sketch Plat
Attachment D – Zoning Map and Comprehensive Plan Future Land Use Designation Map
Attachment E – Preliminary Construction Drawings
Attachment F – Agency Comments
Attachment G – Public Comments
Attachment H – Preliminary Plat Corrections MEMO Dated November 1, 2019
Attachment I – Preliminary Drainage Plan
Attachment J – Water Report
Attachment K – Wetlands Delineation
Attachment L – APL20190003 Settlement Agreement

BACKGROUND

The subject parcel was originally platted through US Survey 4807. Over time, US Survey 4807 was subdivided into the Mountainside Estates Subdivision, Vanderbilt Hill Subdivision, and the remaining tract was called Richland Manor. The parcel was originally planned to be developed with the Mountainside Estates Subdivision, however no development has been completed on the parcel and it has remained vacant.

In 2018, the applicants purchased the subject parcel intending to subdivide and develop the parcel in multiple phases for single-family homes and multifamily developments. The applicants applied, and received approval, for a preliminary plat for a phased major subdivision to include 12 single-family lots and 1 large tract (13 lots total) in February of 2019 for the Richland Manor subdivision (SMP20180002). The approved preliminary plat was appealed to the CBJ Assembly (APL20190003). As a result of this appeal, the appellants and the applicants came to a settlement agreement, which resulted in the submittal of a new preliminary plat application. The applicants submitted a new preliminary plat application on September 19, 2019 (Attachment A), preliminary plat (Attachment B) and sketch plat (Attachment C).

It should be noted that the applicants have chosen to change the subdivision name from Richland Manor 2 to Chilkat Vistas.

APL20190003 SETTLEMENT

As stated above, the applicants received preliminary plat approval in February of 2019 for SMP20180002. This Planning Commission decision was appealed to the CBJ Assembly (APL20190003). The applicants, Mountainside Estates Neighborhood Association (MENA), and the CBJ worked developed a settlement agreement, which would suit all parties. This settlement agreement may be found in Attachment L. This settlement agreement resulted in this preliminary plat application (SMP20190004). The settlement agreement is provided as certain aspects of the agreement have guided subdivision development.

Please note that the Planning Commission is not reviewing this settlement agreement and must review the preliminary plat according to CBJ 49.15.400.

PROPOSAL

The applicant requests preliminary plat approval for Phase 1 of the Chilkat Vistas Subdivision (formerly known as the Richland Manor 2 Subdivision). Phase 1 consists of 14 lots for single-family development and one (1) large tract for future development (15 lots total). Phase 1 includes the extension of Hillcrest Avenue and the installation of public water and sewer. For Phase 1, the applicant proposes a mix of bungalow lots, panhandle lots, and standard D15 lots. Future phases

may include a mix of single-family and multi-family development.

ANALYSIS

Phasing – The proposed subdivision is creating 15 total parcels (14 lots for single-family development and one (1) large tract for future development). Phasing is allowed through the major subdivision process, as long as the infrastructure provided accommodates future phases. A sketch plat has been provided to demonstrate the future potential for the remaining tract of land (Attachment C).

According to CBJ 49.15.410(a), the sketch plat serves the following purposes:

> *(1) To inform the applicant of the City and Borough's subdivision requirements, public improvement requirements, and platting procedures before substantial costs are incurred by the developer in preparation of a subdivision application;*
>
> *(2) To inform the department of the applicant's development plans; and*
>
> *(3) To identify issues with the proposed subdivision, such as issues with the subdivision layout, the extent and nature of required improvements, the location and protection of sensitive areas, impacts to adjoining properties, and traffic, platting, drainage, and utilities requirements.*

The settlement agreement (APL2019 0003) resulted in a revised sketch plat, which contains the following features:

- The extension of Hooter Lane;
- Robbie Road terminates and is not to be a point of access to Chilkat Vistas subdivision. Robbie Road may serve as an emergency service access, but not a public through street;
- Hillcrest Avenue terminates at Hooter Lane; and
- Greenbelt buffers are depicted along the property lines shared by the Mountainside Estates and Chilkat Vistas subdivisions.

Zoning – The subject parcel is located in the D15 zoning district, which allows up to 15 dwelling units per acre. The subject parcel is currently 30.67 acres and the total density for the parcel, un-subdivided, is 460 dwelling units. This density does not take into account any land required for roads, utilities, setbacks, parking or other dimensional standard requirements.

A current zoning map zoning map may be found in Attachment D. The subject parcel is zoned D15, and is surrounded by other zoning districts. The Tamarack Trails Condominiums parcel to the west

is zoned D15, while the neighboring parcels to the south, within the Mountainside Estates subdivision, are zoned D5. To the north, parcels are zoned D18 and General Commercial.

Table of Dimensional Standard Excerpts:

Dimensional Standard		D5	**D15**	D18
Min. Lot Size				
	Single-Family	7,000	**5,000**	5,000
	Bungalow	3,500	**3,000**	2,500
	Duplex	10,500	**5808***	4840*
	Commonwall	7,000	**3,500**	2,500
Min. Lot Width				
	Single-family	70’	**50’**	50’
	Bungalow	35’	**25’**	25’
	Commonwall	60’	**30’**	30’
Min. Lot Depth				
	All Uses	85’	**80’**	80’
Setbacks**				
	Front	20’	**20’**	20’
	Rear	20’	**15’**	10’
	Side	5’	**5’**	5’
	Street Side	13’	**13’**	13’

Table Notes: *Minimum lot size for duplex calculated by allowable density. 1 Acre = 43,560 sq. ft. Minimum lot size required for a duplex in D15 is 5,808sq. ft. (43,560 / 15 = 2,904 X 2). **Per CBJ 49.25.400 Table of Dimensional Standards Note 3, *when one zoning district abuts another, the greater of the two setbacks is required for both uses on the common property line*.

All lots created in Phase 1 meet the required dimensional standards for the D15 zoning district. Future phases are required to meet the dimensional standards for the zoning district. The sketch plat shows future phases may feasibly be developed.

The D15 multifamily zoning district allows for residential construction with densities up to 15 units per acre. A lot that measures 5,000 square feet in the D15 zoning district may have one single-family dwelling. Additionally, per CBJ 49.25.510(k)(2)(G)(i) if a lot in the multifamily zoning district is used primarily for a single-family dwelling, that lot may be permitted to have one accessory apartment under certain conditions.

For multifamily development in the D15 zoning district, 2,904 sq. ft. are required per dwelling unit, as density is measured based on 15 units per acre (43,560 sq. ft. / 15 DU per acre = 2,904 sq. ft.

per DU). The following table demonstrates the dwelling units allowed on each lot created through phase 1:

Phase 1 Lot Number	Lot Size	Total # of Dwellings per lot
1, 2, 3	3,080 sq. ft.	1 dwelling unit
5, 6, 10, 11, 12, 13	5,000 sq. ft.	1 Single-family and 1 accessory apartment
14	5,137 sq. ft.	1 Single-family and 1 accessory apartment
4, 7	7,600 sq. ft.	2 dwelling units
8	9,438 sq. ft.	3 dwelling units
9	6,355 sq. ft.	2 dwelling units
Tract B1	28.80 acres	421 dwelling units**

**Note: this does not take into account any land required for roads, utilities, setbacks, parking or other dimensional standard requirements; this count is strictly based on 15 units per acre x 28.80 acres.

Lot Design

Bungalow Lots – CBJ 49.65 Article IV establishes standards for bungalow lots and bungalow lot subdivisions. These standards include the requirement for public utilities and roads, ratios of bungalow to standard lots, and the process for creating a bungalow lot subdivision. Staff finds all conditions of this chapter can be reasonably met. A standard plat note identifying the proposed bungalow lots and the specified use requirements has been added:

> LOTS 1, 2, AND 3 ARE BUNGALOW LOTS. AT TIME OF PLAT RECORDING, STRUCTURES ON LOTS 1, 2, AND 3 BLOCK B WERE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT; OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

Note: Block information may be removed from this plat note. The note may be revised to include lot and phases information.

Panhandle Lots – CBJ 49.15.423 establishes requirements for panhandle lots; through this chapter, panhandle lots may be created through the subdivision process. Dimensional standards, setbacks, and access and parking standards specific to panhandle lots are established in this section. Staff finds all conditions of this chapter can be reasonably met. Two standard plat notes identifying the

panhandle lots have been added:

> LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B ARE PANHANDLE LOTS. AT TIME OF PLAT RECORDING, FURTHER SUBDIVISION OF LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B IS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. SEE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.
>
> ACCESS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. ACCESS TO PANHANDLE LOTS CREATED THIS SUBDIVISION SHALL BE RESTRICTED TO A SINGLE DRIVEWAY APRON IN THE RIGHT OF WAY UNLESS A SECOND DRIVEWAY IS APPROVED BY CBJ. USE OF THE ACCESS EASEMENT DELINEATED ON THIS PLAT IS SUBJECT TO THE REQUIREMENTS SET FORTH IIN THE COMMON DRIVEWAY ACCESS, JOINT USE AND HOLD HARMLESS AGREEMENT RECORDED WITH THIS SUBDIVISION.

Note: Block information may be removed from these plat notes. The notes may be revised to include lot and phase information.

Drainage – CBJ Engineering and Public Works Department (E&PW) has reviewed the preliminary drainage plan and found that the plan is not complete though the plan appears to be feasible (Attachment F). E&PW would like to review a final drainage plan prior to the approval of construction plans. The preliminary drainage plan and report may be found in Attachment I.

The following are recommended conditions of approval:

1. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.
2. The developer shall utilize Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.
3. The developer shall submit a final drainage plan to be approved by CBJ Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

Water – The applicant has submitted a water report completed by Jim Dorn of Carson Dorn, Inc. (Attachment J). The purpose of the technical memorandum was to evaluate the water booster pump station at the corner of Craig Street and Hillcrest Avenue and determine if there would be adequate pressure with the addition of the proposed homes. It was determined that an additional 80 residential units could be constructed without significantly reducing water pressures.

E&PW has reviewed this report and believes that there is adequate water pressure for Phase I of development using the above referenced pump station (Attachment F).

Wetlands – The 2008 and 2016 Juneau Wetlands Management Plans did not include the subject

parcel in the study area. The applicant has performed wetlands delineation for Phase 1 and found that there are approximately 3.61 total acres of wetlands (Attachment K). The need for a wetlands delineation will be determined at the pre-application conference for each future phase of development. Additionally a standard plat note has been added:

> WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. WETLANDS DELINEATED BY KAREN BOSWORTH NOVEMBER 2018.

The previous preliminary plat approval application (SMP20180002) was taken to the Wetlands Review Board on February 21, 2019. Phase 1 of the proposed subdivision has not significantly changed, so staff does not recommend an additional review by the Wetlands Review Board. Future phases may require additional review. The Wetlands Review Board made the following recommendation on the previous preliminary plat:

> "The applicant use control measures or storm water best management practices that cause the runoff from the development to infiltrate the ground on-site. Conventional storm water systems transport water into impervious surfaces like streets and driveways which concentrates flow of water and pollutants. On-site infiltration treats water naturally."

Under the drainage section of this report, staff recommends conditions that speak to storm water best management practices. The applicant may need an Army Corps of Engineers (ACOE) permit to fill wetlands on the subject parcel. The applicant is aware of this and is working directly with ACOE.

Habitat – There are no known habitat concerns on the subject parcel. The Alaska Department of Fish and Game (ADF&G) was invited to review the proposed subdivision. ADF&G found no issues with the proposed development (Attachment F).

Access – The subject parcel abuts four CBJ rights-of-way: Hillcrest Avenue, Mountainside Drive, Robbie Road, and Hooter Lane. Phase 1 of the proposed subdivision extends Hillcrest Avenue. Future phases of development extend Hillcrest Avenue and Mountainside Drive to form a connected loop, which then connects to Hooter Lane and feeds out onto Glacier Highway. All lots created through Phase 1 have access and frontage on the extension of Hillcrest Avenue.

The applicants request that the right-of-way width be reduced by 10 feet for the extension of Hillcrest Avenue. Per CBJ 49.35.240(a)(3) streets other than arterials and collectors are required to have a minimum right-of-way width of 60 feet; the applicant proposes 50 feet. This right-of-way width may be reduced in accordance with CBJ 49.35.240(b). According to E&PW, this is an acceptable request and *remaining phases shall also be constructed at a width of 50' unless further engineering indicates this is not feasible* (Attachment F).

In Phase 1, the applicants will construct Hillcrest Avenue to standards that are acceptable for public acceptance and maintenance, as required by CBJ 49.250(a). Preliminary construction drawings may

be found in Attachment E. According to E&PW, *the proposed improvements conform to the requirements of this title and can be feasibly constructed in accordance with Title 49* (Attachment F). Preliminary construction drawings for the extension of Hillcrest Avenue show a 50' wide right-of-way containing a 26' wide travel way with sidewalk on one side of the street. Based on the Average Daily Trips (ADTs) generated by the entire development shown on the sketch plat, sidewalks on two sides of the streets should be required.

Per CBJ 49.35.130(b) the Director of E&PW may prescribe different construction standards than those required in the Table of Roadway Construction Standards. E&PW has reviewed the request for sidewalk on one side of the street and approves this request due to the following:

> *"This request is consistent with the other recent local subdivision determinations of similar size developments and is also consistent with the infrastructure within the Mountainside Subdivision, with sidewalk only constructed on one side of the two main access roads, Mountainside Drive and Craig Street (and no sidewalks on the side streets). The previously platted Hooter Lane right-of-way (ROW), which will provide pedestrian connection from the development to Glacier Highway, is only required to have one sidewalk, making the requirement of two sidewalks within the new development an unnecessary redundancy."*(Attachment F)

Prior to final plat approval, the applicant is required to submit construction drawings to be approved by E&PW for all required improvements, this has been added as a condition of approval.

Traffic Analysis – CBJ 49.40.300 states that a traffic impact analysis is required for developments that are projected to generate 500 or more average daily trips. The proposed development for Phase 1 includes 14 single-family homes and one (1) tract for future development. A single-family home generates 9.52 average daily trips and an accessory apartment generates 6.65 average daily trips.

The below table demonstrates the ADTs generated:

Phase 1 Lot Number	**Total # of Dwellings per lot**	**ADTs**
1, 2, 3 (Bungalow Lots)	1 Single-family	9.52 x 3 = 28.56
4, 5, 6, 7, 8, 9 10, 11, 12, 13, 14	1 Single-family and 1 accessory apartment	16.17 x 11 = 177.87
		TOTAL: 206.43 ADTs

The 14 single-family homes and potential accessory apartments would generate 206 ADTs, so

no traffic impact analysis is required for Phase 1. The potential ADTs generated by the large remaining tract (for future development) is not taken into consideration at this time, because future development of that parcel has not been applied for. All existing phases of the Chilkat Vistas subdivision should be taken into consideration when calculating the ADTs generated by the project as each phase is applied for.

Non-motorized Access – As discussed above, the developer is required to install sidewalks within the subdivision. Sidewalk on one side of the street for Phase 1 of development is required. CBJ 49.35.610(b)(1) requires a minimum width of 5 feet for sidewalks. Dimensional standards for sidewalks will be reviewed with construction drawings after preliminary plat approval.

Street Lighting – E&PW Standard Detail 118 requires street lighting at all intersections with spacing between lights not to exceed 250 feet. This is reviewed as part of the construction drawings, after preliminary plat approval.

Hillside Development – The subject parcel contains slopes that are greater than 18%. According to CBJ 49.70.210 (a), *this article applies to all development on hillsides in the City and Borough that involves the following:*

> *(1) Removal of vegetative cover;*
> *(2) Excavation of any slope in excess of 18 percent;*
> *(3) Creation of new slope in excess of 18 percent for a vertical distance of at least five feet; or*
> *(4) Any hazard area identified on the landslide and avalanche maps dated September 9, 1987…*

At this time, final construction plans have not been submitted. A Hillside Development Permit may be required if any of the above listed activities occur within slopes in excess of 18%. CBJ 49.70.220(b) states that, "*The developer shall apply for and obtain a hillside development endorsement prior to any site work other than land and engineering surveys and soils exploration."* The requirement for a Hillside Development Permit will be reviewed with construction plans for roads and utilities, and again upon submittal of building plans for the single-family dwellings.

AGENCY REVIEW

The proposed subdivision application was sent for review to Capital City Fire & Rescue; Building Division, Assessors Office, Parks and Recreation, Lands and Resources Division, E&PW; the Alaska Department of Transportation and Public Facilities; the Alaska Department of Fish and Game; Army Corps of Engineers; and AEL&P. Agency review comments may be found in Attachment F and are summarized below.

CBJ Assessors Office – Does not anticipate a negative effect on neighboring property values.

Capital City Fire & Rescue (CCFR) – Due to the number of dwellings accessed by a single point (Craig Street) CCFR requires that all homes constructed through Phase 1 be sprinkled. Once there are 200 dwelling units accessed by Craig Street, a second access is required. The requirement for sprinkling has been added as a condition of approval.

CBJ Engineering and Public Works – Comments received from E&PW have been discussed throughout this report.

Alaska Department of Fish and Game (ADF&G) – Found no issues with the proposed development, but recommends employing best management practices for managing waste. Additionally, ADF&G recommends the applicants maintain existing hydrology and drainage channels. No anadromous waterbodies were found on the subject parcel during site visits performed by ADF&G.

Alaska Department of Transportation and Public Facilities (DOT) – No issues at this time. A Traffic Impact Analysis may be required in the future.

PUBLIC COMMENTS

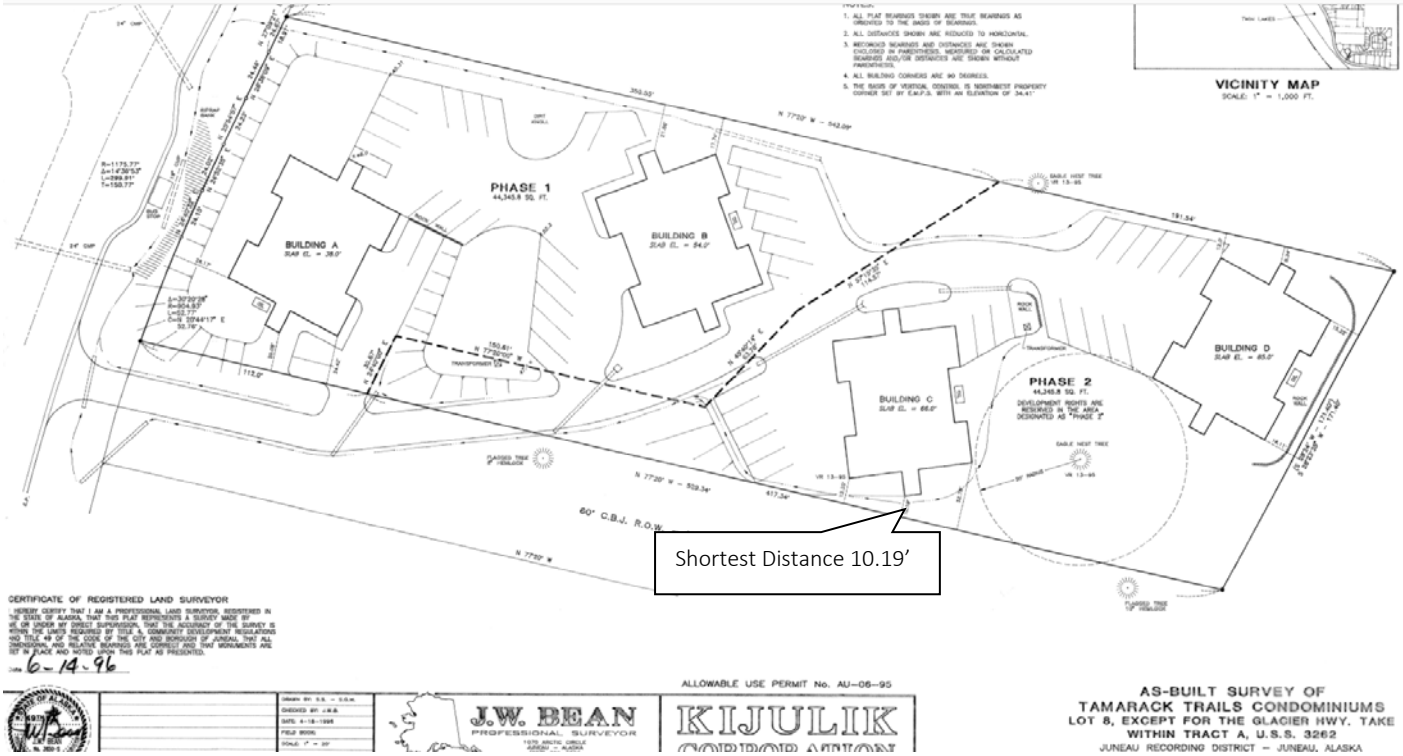
At time of writing this staff report, staff received two (2) public comments (Attachment G).

> *Joan Shorey 10/21/2019* – Ms. Shorey raised concerns over the use of the Hooter Lane right-of-way as an access point for the subdivision. Specific concerns included the loss of parking for the condominium complex and the close proximity of a roadway to buildings within the condominium complex and the potential for impacts on the residents.
>
> *Mountainside Estates Neighborhood Association (MENA) 10/25/2019* – A letter of support for the proposed subdivision was submitted through Paul Grant, representing MENA, in response to the settlement agreement reached between the Applicant and MENA.

Hooter Lane Right-of-Way

The Hooter Lane right-of-way was originally platted in 1971 and re-platted in 1980. The Tamarack Trails Condominiums were permitted in 1995. The undeveloped Hooter Lane right-of-way currently contains the driveway for the Tamarack Trails Condominiums.

According to CDD records, when the Tamarack Trails Condos were constructed, a surveying error was made and one of the buildings was built into the required setback from the Hooter Lane right-of-way (VR-06-96). A variance was approved for this encroachment (VR-06-96). The as-built survey on file for Tamarack Trails Condos shows one building to be within the required setback from Hooter Lane right-of-way and it shows that no structure and no parking are within the Hooter Lane right-of-way. Parking is directly adjacent to the Hooter Lane right-of-way. The following image is a clip from the 1996 as-built survey CDD has on file for Tamarack Trails Condos:



It should be noted that the construction of a public street in the Hooter Lane right-of-way is not proposed in Phase 1 of this subdivision. Hooter Lane is planned to be used as a future second access to the development. During Phase 1, the applicant plans to run a sewer line in the Hooter Lane right-of-way, and use it for construction purposes, but not to construct a full city street at this time.

FINDINGS

CBJ 49.15.402(4) Major Subdivisions, the Director shall prepare and submit a report to the Planning Commission noting any conditions of approval or plat notes recommended, and addressing the following criteria:

(A) Does the preliminary plat comply with CBJ 49.15.411?

Yes. With the conditions listed below, and the plat revisions required, staff finds that the preliminary can comply with CBJ 49.15.411. Required plat corrections can be found in Attachment H, these corrections are required as a condition of approval.

(B) The applicable subdivision development standards of this title are met, or can reasonably be met with conditions?

Yes. Staff finds that applicable subdivision development standards can be reasonably met with conditions.

(C) Will the proposed subdivision will provide building sites suitable for the zoning district?

Yes. Staff finds the proposed subdivision can, with conditions, provide building sites suitable to the D15 zoning district.

(D) Are the proposed street names unique in the City and Borough or are continuations of existing streets and are otherwise acceptable?

Yes. Hillcrest Avenue, platted through Phase 1 of the proposed subdivision is an extension of an existing street.

(E) Has the director of Engineering and Public Works (E&PW) reviewed the application and determined that:

(i) The subdivision can be constructed to conform to applicable drainage and water quality requirements;

Yes. E&PW found drainage and water quality requirements can reasonably be met with conditions (Attachment F).

(ii) The streets, pioneer paths, and pedestrian ways as proposed accommodate anticipated traffic, align, and, where appropriate, connect with streets and pedestrian ways serving adjacent properties;

Yes. E&PW finds the proposed improvements conform to the requirements of this title and can be feasibly constructed in accordance with Title 49 (Attachment F).

(iii) Any proposed improvements conform to the requirements of this title and can feasibly be constructed in accordance with this title; and

Yes. E&PW finds improvements can reasonably be constructed in accordance with this title (Attachment F).

(iv) Where public sewer is not required, the applicant has shown that soils are suitable for individual on-lot wastewater treatment and disposal or has shown the feasibility of alternative methods for wastewater treatment and disposal.

Not Applicable.

CBJ 49.35.240(b)(5) The director shall make written findings supporting right-of-way minimum width reductions granted under this section. The director's findings shall state that:

(A) The applicant has provided room for electric utility features and demonstrates that if the road is upgraded in the future to include additional sidewalks that there is sufficient right-of-way for construction of the sidewalks without need for retaining walls over two feet in height.

(B) There is sufficient right-of-way or easements to allow for drainage improvements required by construction of the sidewalks.

(C) That any driveways shall be constructed to accommodate the elevations of future sidewalks.

(D) No additional right-of-way width will be required in order to provide for sufficient access to abutting lands.

(E) There is sufficient room for snow storage**.**

The Director approves the right-of-way reduction request and finds the above listed conditions can be reasonably met. Additionally, E&PW agrees to this request (Attachment F).

CBJ 49.15.402(5) Major Subdivisions, in issuing its notice of decision on a preliminary plat, the commission may accept, amend, or reject the director's proposed recommendations. The decision of the commission approving or denying a preliminary plat application will be set forth in a notice of decision, and will specify any conditions or plat notes required for final plat approval. If the preliminary plat is denied, the applicant may submit a revised plat application, without paying additional application fees, within 180 days from the date of the notice of decision.

RECOMMENDATION

Staff recommends that the Planning Commission adopt the Director's analysis and findings and **APPROVE** the Preliminary Plat for Phase 1 of the Chilkat Vistas Subdivision. This approval would allow the applicant to submit for the Final Plat Application. The approval is subject to the following conditions:

1. Prior to approval of the final plat, all required plat corrections listed in the MEMO from CDD to Michael Heumann (Applicant), dated November 1, 2019 shall be completed (Attachment H).

2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing

that all real property taxes and special assessments levied against the property for the year of recording have been paid.

3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the director of Engineering and Public Works for compliance with CBJ 49.35.140.

4. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to the Community Development Department (CDD) and reviewed and approved by CDD and Engineering and Public Works.

5. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.

6. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.

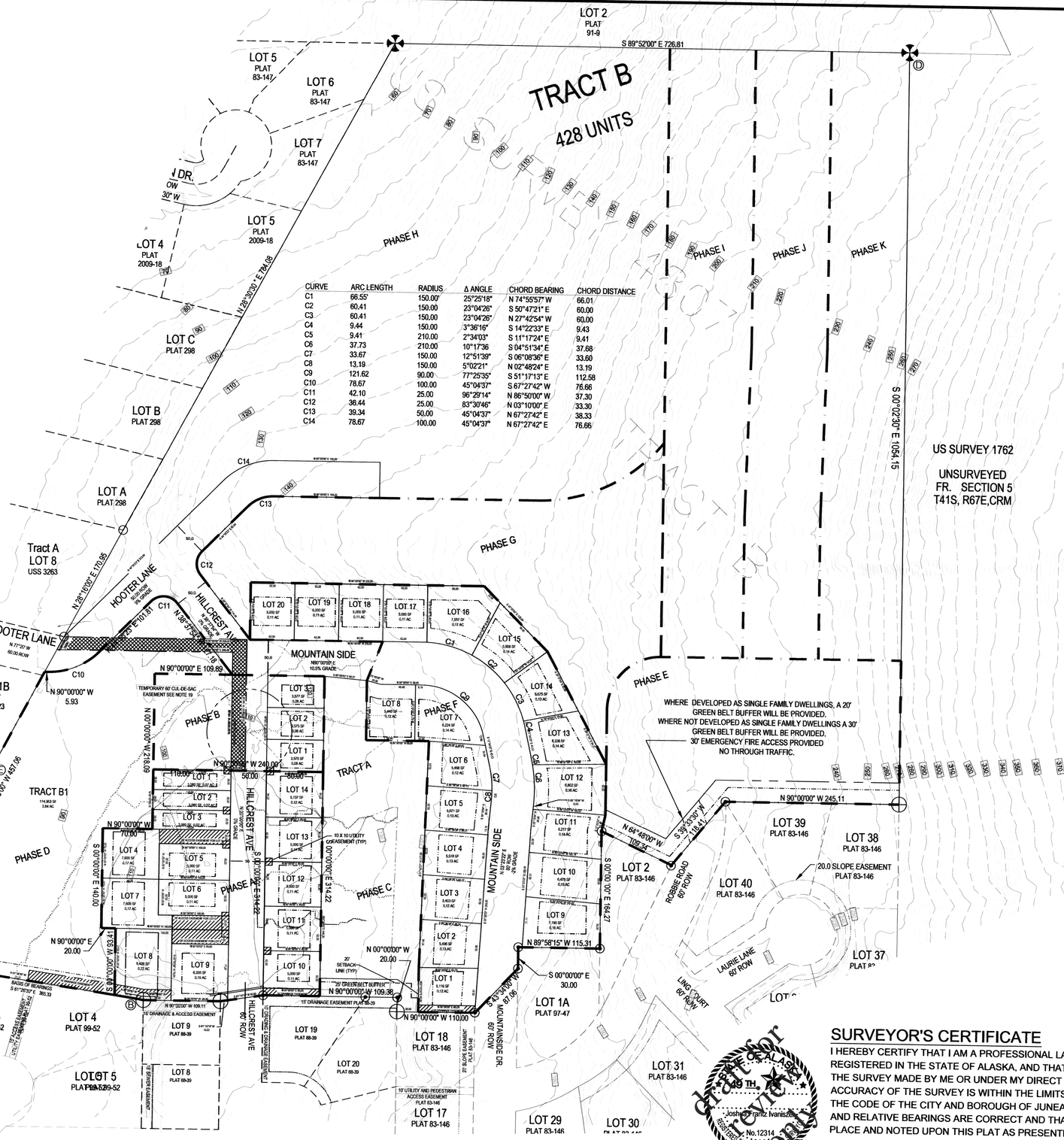
7. The developer shall utilize Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.

8. The developer shall submit a final drainage plan to be approved by Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

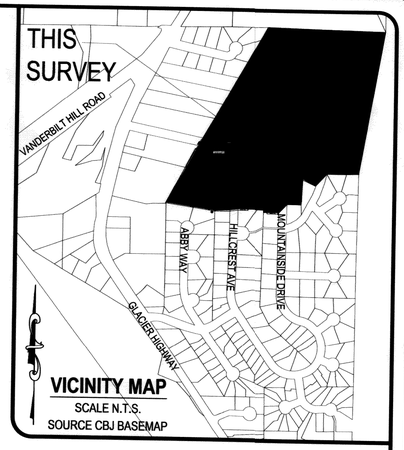
9. The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway, whichever length is greater, for all panhandle lots created with this subdivision.

10. Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.

11. The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue requirements in each dwelling unit constructed through Phase 1 of this subdivision.



CURVE	ARC LENGTH	RADIUS	Δ ANGLE	CHORD BEARING	CHORD DISTANCE
C1	66.55'	150.00'	25°25'18"	N 74°55'57" W	66.01
C2	60.41	150.00	23°04'26"	S 50°47'21" E	60.00
C3	60.41	150.00	23°04'26"	N 27°42'54" W	60.00
C4	9.44	150.00	3°36'16"	S 14°22'33" E	9.43
C5	9.41	210.00	2°34'03"	S 11°17'24" E	9.41
C6	37.73	210.00	10°17'36	S 04°51'34" E	37.68
C7	33.67	150.00	12°51'39"	S 06°08'36" E	33.60
C8	13.19	150.00	5°02'21"	N 02°48'24" E	13.19
C9	121.62	90.00	77°25'35"	S 51°17'13" E	112.58
C10	78.67	100.00	45°04'37"	S 67°27'42" W	76.66
C11	42.10	25.00	96°29'14"	N 86°50'00" W	37.30
C12	36.44	25.00	83°30'46"	N 03°10'00" E	33.30
C13	39.34	50.00	45°04'37"	N 67°27'42" E	38.33
C14	78.67	100.00	45°04'37"	N 67°27'42" E	76.66



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- WETLANDS BOUNDARY
- DRAINAGE
- EASEMENT BOUNDARY
- SETBACK LINES
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- EASEMENT CREATED THIS PLAT
- SEWER AND DRAINAGE EASEMENT CREATED THIS PLAT

REVIEWED BY STAFF
PERMIT CENTER/CDD

1"=80'

0 80 160 240 320

SKETCH PLAT OF
CHILKAT VISTAS
A FUTURE SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20190004	1" = 80'	10/06/2019	1 OF 1

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

STATE OF ALASKA
49 TH.
Joshua Franz Ivanisze
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

Attachment C - Sketch Plat
Attachment D - SMP19-04 – Sketch Plat

Existing 18" CPP Discharge Capacity		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Gladsjo	

The following equations were used to calculate the existing 18" CPP culvert that drains into the existing Glacier Highway ditch system at the location where the new subdivision access will tie into the shoulder of the Highway and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table 5-3, Page 5-5, of the CBJ Stormwater Manual
A = cross sectional area in ft^2, from survey basemap
R = hydraulic radius, from survey basemap
S = slope, from survey basemap

Existing 18" Ditch Culvert; Inlet Invert =30.0 ', Outlet Invert =29.0', Length =40 ', n = 0.014. The Manning's n value of 0.014 was determined by the pipe type (CPP-smooth interior) Table 5-3.

	K	n	A	R	S		
Q (cfs)	1.486	0.014	1.77	0.42446	0.025	=	16.72958

Existing Driveway Ditch Discharge Capacity			
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054		
Owner:	Michael and William Heumann		
Date:	1/20/2020		
Prepared By:	L. Chambers		
Checked By:	G. Gladsjo		

The following equations were used to calculate the capacity of the driveway ditch leading into the 18" CPP at the bottom of the ditch run and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table D-10, Page D-19, of the CBJ Stormwater Manual
A = cross sectional area in ft^2, from survey basemap
R = hydraulic radius, from survey basemap
S = slope, from survey basemap

Existing driveway ditch; Top Elev. = 37.0', Bottom Elev. = 30.0', Length = 80', n = 0.03. The Manning's n value of 0.03 comes from Table D-10 (grass, some weeds), elevation and length data are from survey basemap.

	K	n	A	R	S		
Q (cfs)	1.486	0.03	1.55	0.319588	0.0875	=	10.57569

Proposed 12" CPP Discharge Capacity			
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054		
Owner:	Michael and William Heumann		
Date:	1/20/2020		
Prepared By:	L. Chambers		
Checked By:	G. Gladsjo		

The following equations were used to calculate the capacity of the proposed 12" CPP being installed to maintain existing a proposed ditch flow along Tamarak Condos driveway at the begining of the proposed Hooter Lane Phase I ROW improvements and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table 5-3, Page 5-5, of the CBJ Stormwater Manual
A = cross sectional area in ft^2, from construciton plans
R = hydraulic radius, from construction plans
S = slope, from construction plans

Proposed 12" CPP; Top Invert Elev. = 46.25', Bottom Invert Elev. = 39.70', Length = 63', n = 0.014. The Manning's n value of 0.014 comes from Table 5-3 (CPP, smooth), elevation and length data are from construction plans.

	K	n	A	R	S		
Q (cfs)	1.486	0.014	0.79	0.25	0.104	=	10.68204

Proposed Roadway Ditch Left Discharge Capacity		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Gladsjo	

The following equations were used to calculate the capacity of a proposed roadway ditch left side where it ties into the existing Tamarack Condo driveway and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table D-10, Page D-19, of the CBJ Stormwater Manual
A = cross sectional area in ft^2, from construciton plans
R = hydraulic radius, from construction plans
S = slope, from construction plans

Proposed Roadway Ditch; Slope matches roadway slope 12.0%, n = 0.04. The Manning's n value of 0.040 comes from Table D-10 (Rock lined, jagged), slope from construction plans.

	K	n	A	R	S		
Q (cfs)	1.486	0.04	2.06	0.36983842	0.12	=	13.61397

Proposed Roadway Ditch Right Discharge Capacity		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Gladsjo	

The following equations were used to calculate the capacity of a proposed roadway ditch right side where it ties into the existing Tamarack Condo driveway and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table D-10, Page D-19, of the CBJ Stormwater Manual
A = cross sectional area in ft^2, from construciton plans
R = hydraulic radius, from construction plans
S = slope, from construction plans

Proposed Roadway Ditch; Slope matches roadway slope 12.0%, n = 0.04. The Manning's n value of 0.040 comes from Table D-10 (Rock lined, jagged), slope from construction plans.

	K	n	A	R	S		
Q (cfs)	1.486	0.04	1.16	0.33429395	0.12	=	7.164296

Appendix G

Richland Manor Subdivision – Drainage Report dated 10/31/19

proHNS LLC
1945 Alex Holden Way #101 | Juneau, AK 99801 | 907-780-4004 | solutions@proHNS.com
219 Main Street #13 | Haines, AK 99827 | 907-419-6070 | www.proHNS.com

October 31, 2019

Michael and William Heumann
6000 Thane Rd
Juneau, AK 99801
mpheumann@hotmail.com
(971) 261-8014

RE: Richland Manor Subdivision - Drainage Report

To Whom It May Concern,

The following Drainage Plan has been prepared for the Richland Manor Subdivision in Juneau, AK, a proposed multi-phase major subdivision on a 30-acre site at 4506, 4508, and 4510 Hillcrest Avenue. This drainage report addresses the first phase of the project referred to as Phase A that includes the development of 14 Lots and the construction of a gravel access road up the Hooter Lane right-of-way. Runoff from Phase A will be directed to an existing 24" CMP that crosses Glacier Hwy at the bottom of Hooter Lane. The 2010 CBJ Manual of Stormwater Best Management Practices and the AKDOT&PF Highway Drainage Manual requires that the existing 24" CMP culvert can handle the 25-year storm event flows and will be the standard used for this analysis.

Attached sheets depict survey data, proposed Phase A development, as-built information, calculations and rainfall data used for the proposed drainage analysis for this subdivision.

NOTE The intent of this report is to show that the increased runoff due to Phase A of the development and the initial gravel access road up the Hooter Lane right-of-way of the site can be handled by the existing drainage system on Glacier Highway. This report will be revised and updated as necessary during the design and layout of the roadway and conveyance system.

Site Runoff Calculation Method:

A total of three catchment areas were analyzed as part of this report. The first was the area currently contributing to the existing 24" CMP culvert crossing glacier Hwy at the bottom of Hooter Lane. The second was the predeveloped area of the proposed Phase A of the subdivision and the last was the post developed area of the proposed Phase A of the Subdivision. The three catchment areas we determined using Lidar data and aerial photos in AutoCAD C3D and were verify by several site visits. A delineation of the catchment areas can be found in Appendix A.

To calculate the site runoff through existing drainage structure on Glacier Hwy, we have elected to use the Rational Method. The Rational Method is most appropriate for evaluating drainage basins less than 10 acres. Appendix D of the "2010 CBJ Manual of Stormwater Best Management Practices" was utilized as a guide[1]. The calculations can be found in Appendix B of this Report.

To calculate site runoff for the pre and post developed area of Phase A, we have elected to use the SCS Unit Hydrograph method. The SCS Unit Hydrograph method is appropriate for evaluating drainage basins greater than 10 acres and less than 1,300 acres. Appendix D of the "2010 CBJ Manual of Stormwater Best Management Practices" was utilized as a guide. Per the Guide, "The SCS method is based on a 24-hour storm event with a 10-minute temporal distribution. The Type IA storm distribution is a "typical" time distribution that the SCS has prepared from rainfall records for the Pacific maritime climate." The Hydraflow Hydrographs Extension for Autodesk was utilized to develop the Hydrographs for determining peak discharge. The Hydrographs can be found in Appendix F of this Report.

Anticipated Site Runoff (Q):

Using the Rational Method and SCS Unit Hydrograph, the amount of stormwater runoff during the 25-year storm event per catchment area was determined:

Catchment Area	Q (cfs)
Existing 24" CMP Culvert	2.30
Phase A Predeveloped	6.31
Proposed Phase A Subdivision	8.24

Conveyance/Discharge Structure Capacities:

The capacity of the existing 24" CMP culvert was calculated to determine if proposed 25-year storm event flows could be handled without making modifications. The analysis found that the culvert can handle 8.87 cfs, the calculations can be found in Appendix G.

[1] There are no current municipal code requirements dictating adherence with the "2010 CBJ Manual of Stormwater Best Management Practices" when preparing a drainage plan that complies with 49.35.510. Regardless, we have elected to utilize portions of this Manual as a guide in the preparation of this Drainage Plan for the proposed development.

Summary:

Drainage Basin	Post Development Runoff Q (cfs)	Capacity Check	24" CMP Flow Capacity Q (cfs)
Proposed Subdivision	**8.24**	**<**	**8.87**

The proposed Phase A of the development will redirect a significant amount of the water currently exiting the lower southwest corner of the property and will redirect them down Hooter Lane and into the existing 24" CMP culvert crossing Glacier Hwy. Our analysis shows that there is enough capacity in the existing Glacier Hwy. drainage system to handle increased flows during the 25 year storm event from the proposed development.

Respectfully,



Lucas Chambers, P.E.
Principal Engineer – proHNS LLC Juneau

Appendixes:

A – Catchment Areas
B – Rational Method
C – SCS Hydrograph
D – Runoff Coefficient
E – Time of Concentration
F – Rainfall Intensity
G – Existing 24" CMP Culvert Capacity
H - Existing 24" CMP Culvert As-builts

Appendix A
Catchment Areas

RICHLAND MANOR SUBDIVISION PHASE A DRAINAGE MAP

JUNEAU, AK

PREPARED FOR:

MICHAEL HUEMANN

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	EXISTING 24 CMP CATCHMENT AREA
3	PHASE A PREDEVELOPMENT CATCHMENT AREA
4	PROPOSED PHASE A SUBDIVISION CATCHMENT AREA



PROJECT LOCATION MAP

NTS



ALASKA

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	S. MOLLER
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

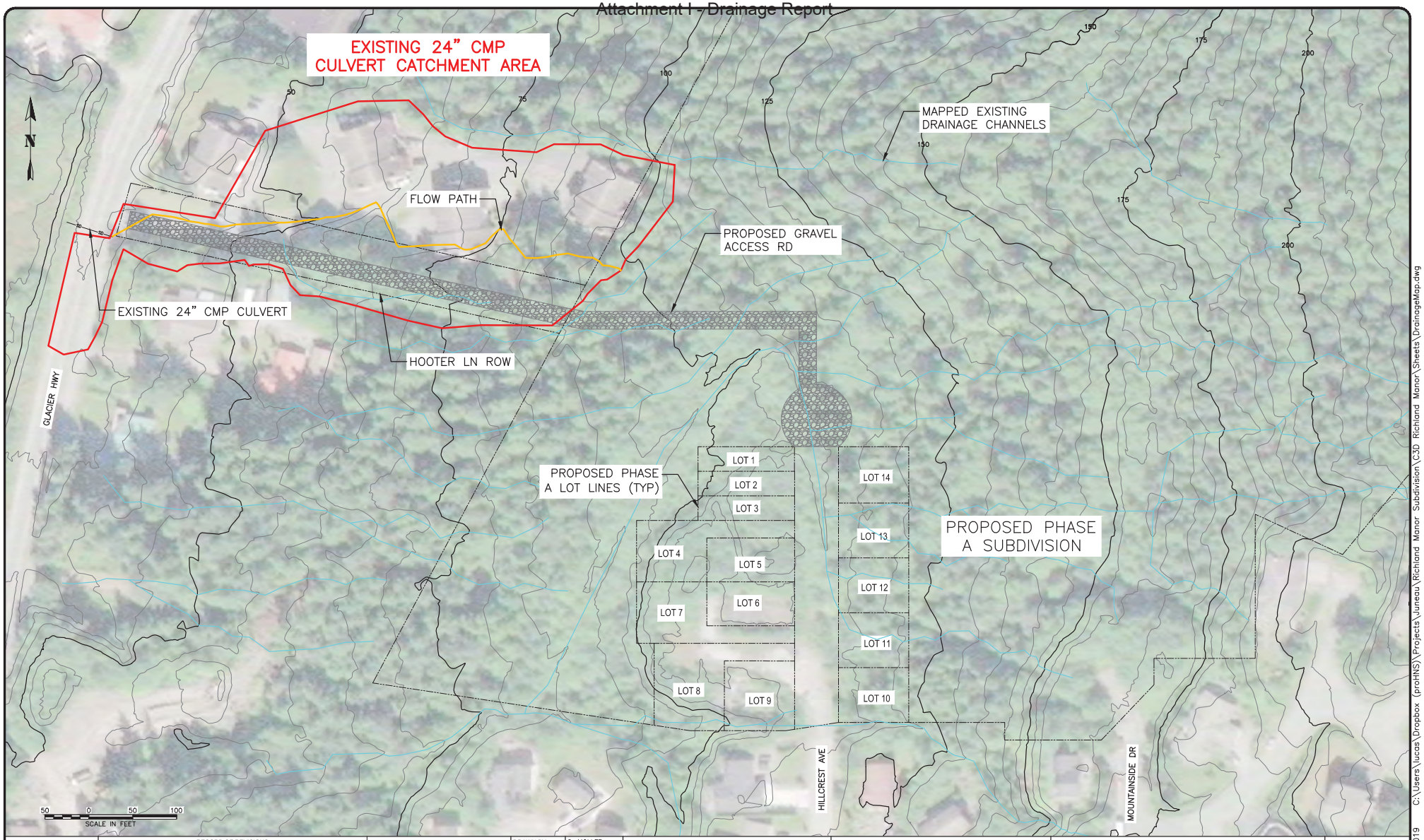
RICHLAND MANOR SUBDIVISION

WILLIAM & MICHAEL HUMEAN

COVER SHEET

SHEET NUMBER 1 OF 4

November 1, 2019 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\DrainageMap_TITLE.dwg



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	S. MOLLER
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

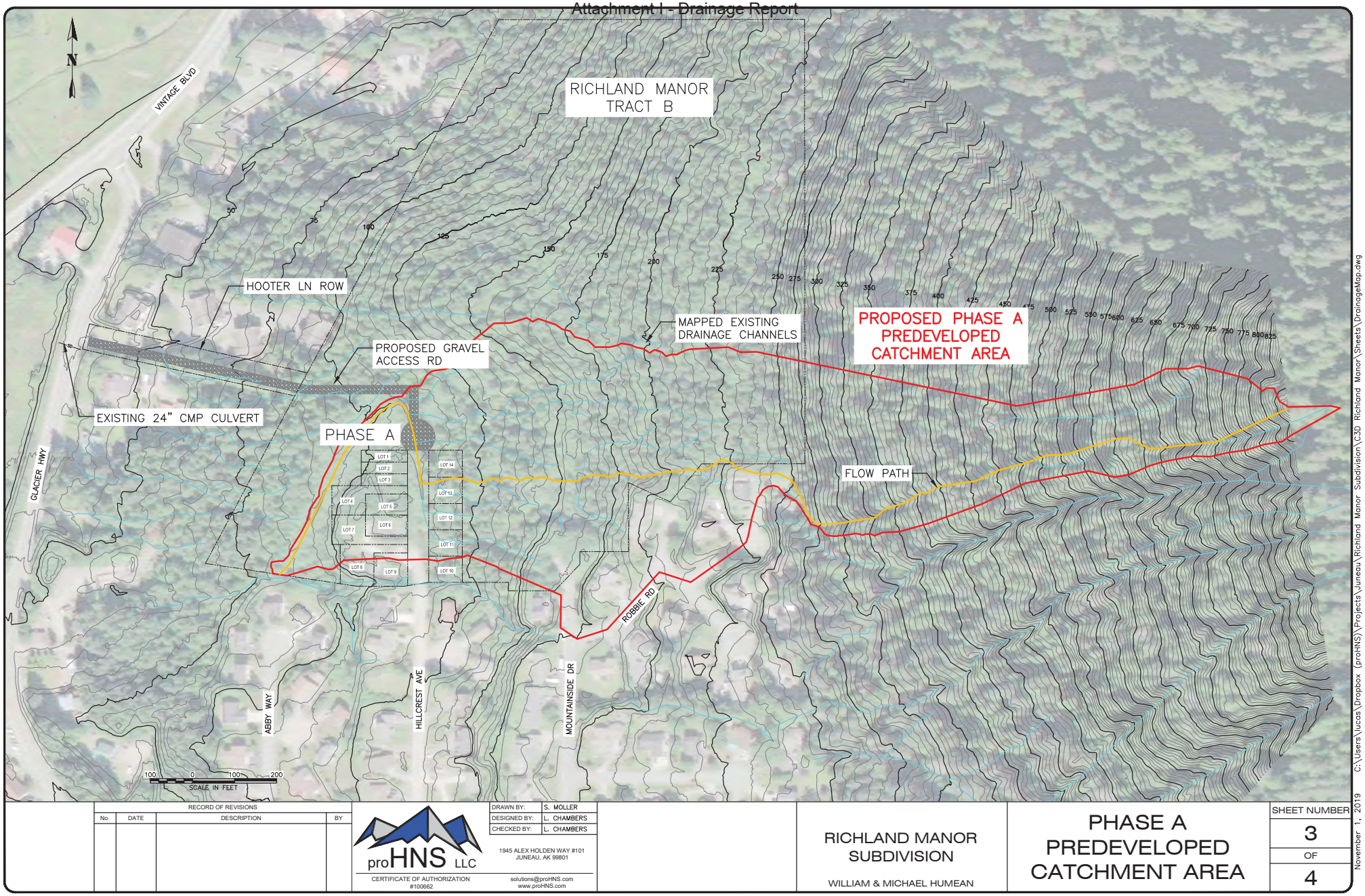
RICHLAND MANOR SUBDIVISION

WILLIAM & MICHAEL HUMEAN

EXISTING 24" CMP CATCHMENT AREA

SHEET NUMBER 2 OF 4

November 1, 2019 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\DrainageMap.dwg



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	S. MOLLER
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

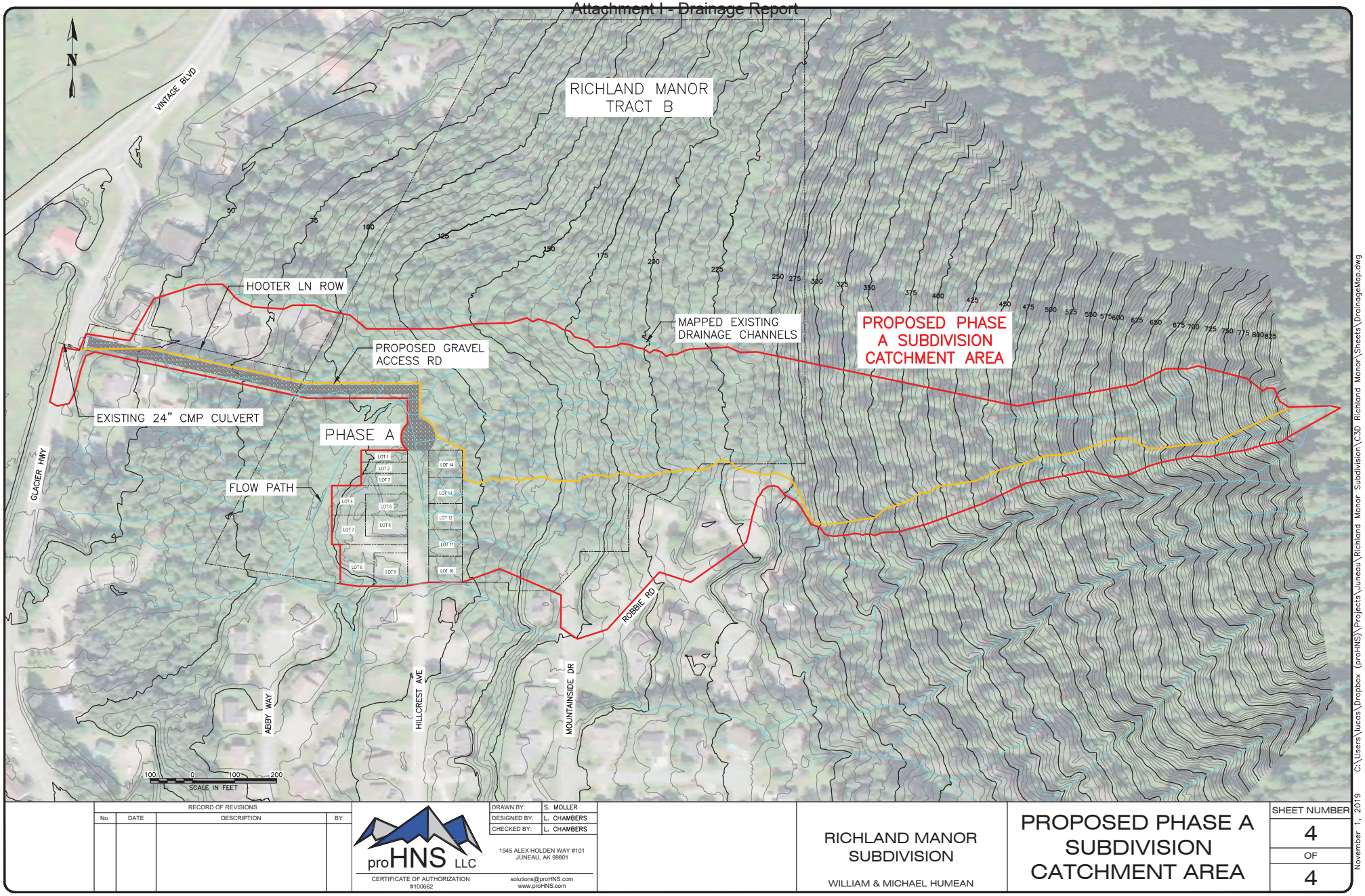
RICHLAND MANOR SUBDIVISION

WILLIAM & MICHAEL HUMEAN

PHASE A PREDEVELOPED CATCHMENT AREA

SHEET NUMBER 3 OF 4

November 1, 2019 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\DrainageMap.dwg



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	S. MOLLER
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

RICHLAND MANOR SUBDIVISION

WILLIAM & MICHAEL HUMEAN

PROPOSED PHASE A SUBDIVISION CATCHMENT AREA

SHEET NUMBER 4 OF 4

November 1, 2019 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\DrainageMap.dwg

Appendix B
Rational Method

Rational Method Site Runoff Existing 24" CMP		
Project:	Richland Manor Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	10/30/2019	
Prepared By:	S. Moller	
Checked By:	L. Chambers	

$$Q = CIA$$

Q = peak flow in cubic feet per second (cfs)
C = runoff coefficient
I = rainfall intensity (inches per hour)
A = catchment area (acres)

$$C_c = (C_1A_1 + C_2A_2)/A_t$$

C_c = composite runoff coefficient
$C_{1,2}$ = runoff coefficient for each area land cover type
A_t = total area (acres)
$A_{1,2}$ = areas of land cover types (acres)
***Cc = 0.45**, See Appendix D for calculation*

$$T_c = T_1 + T_2 + \cdots + T_n$$

T_c = time of concentration (min)
$T_{1,2}$ = travel time across separate flow path segments (min)
***Tc = 8.71 min.**, See Appendix E for calculation*

$$T_t = L/60V$$

T_t = travel time (min)
L= the distance of flow across a given segment (feet)
$V=k_R Sqrt(S_0)$=average velocity (feet/sec) across land cover
k_R = time of concentration velocity factor (CBJ Manual of Storm Water BMP 2010, Table D-5, PG. D-10)
S_0 = slope of flow path (feet/feet)

Per CBJ Manual of Storm Water BMP 2010, Table 5-1, page. 5-1, design event frequencies are specified. For storm sewer feeder lines, a 25-year storm event is the required design return period. We will base our analysis on a 25-year design return period for all drainage structures and catchment areas. Per CBJ Manual of Storm Water BMP 2010, page. D-9, Basins with a time and concentration 10 minutes or less shall use the 10 minunte intensity. Rainfall intensity for the site was sourced from the NOAA Atlas 14, Point Precipitation Frequency Estimates, see Appendix F, and is summarized as follows:

	Design Return Period
Tc 10(min)	25-year
Intensity (in/hr) =	**2.07**

There is an existing 24" CMP culvert that crosses Glacier Highway at the location where the new subdivision access will tie into the shoulder of the Highway. The area currently contributing runoff to this culvert was delinated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ, see Appendix A.

A = 107513 sqft / 43,560 **= 2.47 acres**

	Cc	**I**	**A**		
Q (cfs)=	0.45	2.07	2.47	**=**	**2.30**

Appendix C
SCS Hydrograph

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v12 — Friday, 11 / 1 / 2019

Hyd. No. 1

Phase A Predeveloped

Hydrograph type	= SCS Runoff	Peak discharge	= 6.311 cfs
Storm frequency	25 yrs	Time to peak	= 8.33 hrs
Time interval	10 min	Hyd. volume	= 143,272 cuft
Drainage area	= 19.920 ac	Curve number	= 71*
Basin Slope	= 0.0 %	Hydraulic length	0 ft
Tc method	= User	Time of conc. (Tc)	= 41.57 min
Total precip.	= 4.82 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.540 x 89) + (0.320 x 98) + (0.250 x 89) + (0.330 x 74) + (18.480 x 70)] / 19.920



Hydrograph Report

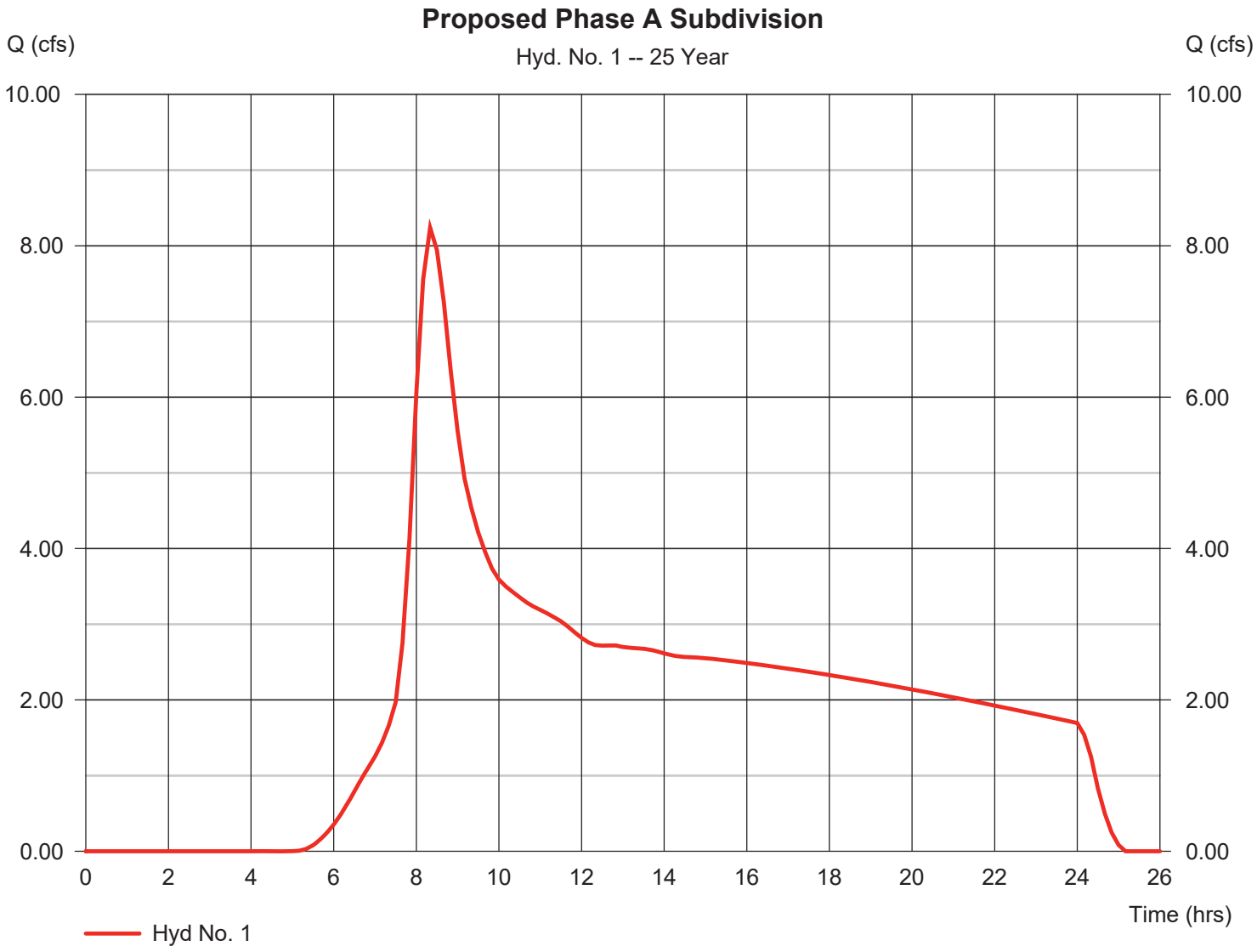
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v12 — Friday, 11 / 1 / 2019

Hyd. No. 1

Proposed Phase A Subdivision

Hydrograph type	= SCS Runoff	Peak discharge	8.239 cfs
Storm frequency	25 yrs	Time to peak	= 8.33 hrs
Time interval	10 min	Hyd. volume	= 179,151 cuft
Drainage area	= 23.060 ac	Curve number	= 73*
Basin Slope	= 26.0 %	Hydraulic length	3231 ft
Tc method	= User	Time of conc. (Tc)	= 39.30 min
Total precip.	= 4.82 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.610 x 89) + (1.080 x 98) + (0.720 x 89) + (1.480 x 74) + (18.170 x 70)] / 23.060



Appendix D
Runoff Coefficient

Runoff Coefficient Existing 24" CMP		
Project:	Richland Manor Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	10/25/2019	
Prepared By:	Chris Bydlon	
Checked By:	Lucas Chambers	

Total Basin Area(SQFT)=	**107513**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Runoff Coefficient**
Pavement	Tamarack Trails Condos	24950				
	Glacier Hwy	5587				
			30537	0.701033058	28.40%	0.9
Building Roofs	Tamarack Trail Condos	15130				
			15130	0.347337006	14.07%	0.9
Lawns	Tamarack Trails	6690				
			6690	0.153581267	6.22%	0.25
Woods	Every where else	55156				
			55156	1.26620753	51.30%	0.1
		Total=	107513	2.468158861	100.00%	**0.45**

SCS Curve Number Phase A Predeveloped		
Project:	Richland Manor Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	10/25/2019	
Prepared By:	Chris Bydlon	
Checked By:	Lucas Chambers	

Total Basin Area(SQFT)=	**867827**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Unit Hydrograph CN***
Pavement	Mountianside/ Robbie Rd	23565				
			23565	0.540977961	2.72%	89
Building Roofs	Robbie Rd Homes	14048				
			14048	0.322497704	1.62%	98
Gravel	Existing Hillcrest Pads	10824				
			10824	0.248484848	1.25%	89
Lawns	Robbie Rd Homes	14230				
			14230	0.326675849	1.64%	74
Woods	Every where else	805160				
			805160	18.48393021	92.78%	70
		Total=	867827	19.92256657	100.00%	**71.27**

*Unit Hydrograph curve numbers were developed from Table D-6 & D-7 of the CBJ Manual of Stormwater BMP Manual. NRCS's online GIS database does not have data for the project location. I looked at adjacent areas with similar slopes and ground cover and the hydraulic soil group was C or D. For this analysis I am assuming the project location falls under soil group C.

SCS Curve Number Proposed Phase A Subdivision		
Project:	Richland Manor Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	10/25/2019	
Prepared By:	Chris Bydlon	
Checked By:	Lucas Chambers	

Total Basin Area(SQFT)=	**1004005**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Unit Hydrograph CN***
Pavement	Tamarack Trails Condos	24950				
	Glacier Hwy	5587				
	Proposed Hillcrest Phase I	15920				
	Mountianside/ Robbie Rd	23565				
			70022	1.60748393	6.97%	89
Building Roofs	Tamarack Trail Condos	15130				
*Areas from Developer	Lot 1 Roof +Deck	988				
	Lot 2 Roof +Deck	988				
	Lot 3 Roof +Deck	988				
	Lot 4 Roof +Deck	1350				
	Lot 5 Roof +Deck	1350				
	Lot 6 Roof +Deck	1350				
	Lot 7 Roof +Deck	1350				
	Lot 8 Roof +Deck	1350				
	Lot 9 Roof +Deck	1350				
	Lot 10 Roof +Deck	1350				
	Lot 11 Roof+Deck	1350				
	Lot 12 Roof+Deck	1350				
	Lot 13 Roof+Deck	1350				
	Lot 14 Roof+Deck	1350				
	Robbie Rd Homes	14048				
			46992	1.078787879	4.68%	98
Gravel	Hooter Access Rd	21940				
*Areas from Developer	Lot 1 Drive	400				
	Lot 2 Drive	400				
	Lot 3 Drive	400				
	Lot 4 Drive	1600				
	Lot 5 Drive	500				
	Lot 6 Drive	400				
	Lot 7 Drive	1600				
	Lot 8 Drive	1600				
	Lot 9 Drive	400				
	Lot 10 Drive	400				
	Lot 11 Drive	400				
	Lot 12 Drive	400				
	Lot 13 Drive	400				
	Lot 14 Drive	400				
			31240	0.717171717	3.11%	89
Lawns	Tamarack Trails	6690				
	Robbie Rd Homes	14230				
*Areas from Developer	Lot 1	1692				
	Lot 2	1692				
	Lot 3	1692				
	Lot 4	4650				
	Lot 5	3150				
	Lot 6	3250				
	Lot 7	4650				
	Lot 8	1738				
	Lot 9	4605				
	Lot 10 Lawn	3250				
	Lot 11 Lawn	3250				
	Lot 12 Lawn	3250				
	Lot 13 Lawn	3250				
	Lot 14 Lawn	3250				
			64289	1.47587236	6.40%	74
Woods	Every where else	791462				
			791462	18.1694674	78.83%	70
		Total=	1004005	23.04878329	100.00%	**73.48**

*Unit Hydrograph curve numbers were developed from Table D-6 & D-7 of the CBJ Manual of Stormwater BMP Manual. NRCS's online GIS database does not have data for the project location. I looked at adjacent areas with similar slopes and ground cover and the hydraulic soil group was C or D. For this analysis I am assuming the project location falls under soil group C.

Appendix E
Time of Concentration

Existing 24" CMP

SCS TR-55 Time of Concentration Computations Report
==========

Sheet Flow Equation

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))
= Manning's Roughness
Where:
= 2 yr, 24 hr Rainfall (inches)
Tc = Time of Concentration (hrs)

n
Shallow Concentrated Flow Equation
Lf = Flow Length (ft)

P
Sf = Slope (ft/ft)
= 16.1345 * (Sf^0.5) (unpaved surface)
= 20.3282 * (Sf^0.5) (paved surface)
= 15.0 * (Sf^0.5) (grassed waterway surface)
= 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
V
V
V
V
V
Tc = (Lf / V) / (3600 sec/hr)
Where: = Velocity (ft/sec)

Tc = Time of Concentration (hrs)
Channel Flow Equation
Lf = Flow Length (ft)

V
Sf = Slope (ft/ft)
= (1.49 * (R^(2/3)) * (Sf^0.5)) / n
= Aq / Wp

V

R
Tc = (Lf / V) / (3600 sec/hr)
Where:

Tc = Time of Concentration (hrs)

Autodesk Storm and Sanitary Analysis

Existing 24" CMP

= Hydraulic Radius (ft)

= Velocity (ft/sec)

Lf = Flow Length (ft)
R
= Manning's Roughness
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V
Subbasin existing24cmp
Sl = Slope (ft/ft)
n

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
	341.5	0.00	0.00
	12.3	0.00	0.00
	Forest	Unpaved	Unpaved
-	0.88	0.00	0.00
Flow Length (ft):	6.47	0.00	0.00
Slope (%):			
Surface Type:			

Channel Flow Computations

Computed Flow Time (minutes):	Subarea A	Subarea B	Subarea C
	.1	0.00	0.00
	312	0.00	0.00
	8.33	0.00	0.00
-	1.5	0.00	0.00
Manning's Roughness:	3.8	0.00	0.00
Flow Length (ft):	2.31	0.00	0.00
Channel Slope (%):	2.25	0.00	0.00
Cross Section Area (ft²):			
Wetted Perimeter (ft):			
Velocity (ft/sec):			
Computed Flow Time (minutes):			

Total TOC (minutes): 8.71

Autodesk Storm and Sanitary Analysis

Phase A Predeveloped

SCS TR-55 Time of Concentration Computations Report
==========

Sheet Flow Equation

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))
= Manning's Roughness
Where:
= 2 yr, 24 hr Rainfall (inches)
Tc = Time of Concentration (hrs)

n
Shallow Concentrated Flow Equation
Lf = Flow Length (ft)

P
Sf = Slope (ft/ft)
= 16.1345 * (Sf^0.5) (unpaved surface)
= 20.3282 * (Sf^0.5) (paved surface)
= 15.0 * (Sf^0.5) (grassed waterway surface)
= 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
V
V
V
V
V
Tc = (Lf / V) / (3600 sec/hr)
Where: = Velocity (ft/sec)

Tc = Time of Concentration (hrs)
Channel Flow Equation
Lf = Flow Length (ft)

V
Sf = Slope (ft/ft)
= (1.49 * (R^(2/3)) * (Sf^0.5)) / n
= Aq / Wp

V

R
Tc = (Lf / V) / (3600 sec/hr)
Where:

Tc = Time of Concentration (hrs)

Autodesk Storm and Sanitary Analysis

= Hydraulic Radius (ft)

= Velocity (ft/sec)

Lf = Flow Length (ft)

R = Manning's Roughness

Aq = Flow Area (ft²)

Wp = Wetted Perimeter (ft)

V

Subbasin PhaseAPreDevelop

Sl = Slope (ft/ft)

n

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
	.8	0.00	0.00
	188	0.00	0.00
	79.80	0.00	0.00
-	2.97	0.00	0.00
Manning's Roughness:	0.21	0.00	0.00
Flow Length (ft):	14.72	0.00	0.00
Slope (%):			

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Computed Flow Time (minutes):	2046	0.00	0.00
	29.86	0.00	0.00
	Forest	Unpaved	Unpaved
-	1.37	0.00	0.00
Flow Length (ft):	24.89	0.00	0.00
Slope (%):			

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Computed Flow Time (minutes):	.05	0.00	0.00
	715	0.00	0.00
	3.48	0.00	0.00
-	13	0.00	0.00
Manning's Roughness:	11.4	0.00	0.00
Flow Length (ft):	6.07	0.00	0.00
Channel Slope (%):	1.96	0.00	0.00
Cross Section Area (ft²):			
Wetted Perimeter (ft):			
Velocity (ft/sec):			
Computed Flow Time (minutes):			

Total TOC (minutes): 41.57

Autodesk Storm and Sanitary Analysis

SCS TR-55 Time of Concentration Computations Report
==========

Sheet Flow Equation

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))
= Manning's Roughness
Where:
= 2 yr, 24 hr Rainfall (inches)
Tc = Time of Concentration (hrs)

n
Shallow Concentrated Flow Equation
Lf = Flow Length (ft)

P
Sf = Slope (ft/ft)
= 16.1345 * (Sf^0.5) (unpaved surface)
= 20.3282 * (Sf^0.5) (paved surface)
= 15.0 * (Sf^0.5) (grassed waterway surface)
= 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
V
V
V
V
V
Tc = (Lf / V) / (3600 sec/hr)

Where: = Velocity (ft/sec)

Tc = Time of Concentration (hrs)

Channel Flow Equation
Lf = Flow Length (ft)

V
Sf = Slope (ft/ft)
= (1.49 * (R^(2/3)) * (Sf^0.5)) / n
= Aq / Wp

V

R
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)

Autodesk Storm and Sanitary Analysis

= Hydraulic Radius (ft)

= Velocity (ft/sec)

Lf = Flow Length (ft)

R = Manning's Roughness

Aq = Flow Area (ft²)

Wp = Wetted Perimeter (ft)

V

Subbasin HooterLane

Sl = Slope (ft/ft)

n

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
	0.8	0.00	0.00
	187.94741751	0.00	0.00
	79.8	0.00	0.00
-	2.97	0.00	0.00
Manning's Roughness:	0.21	0.00	0.00
Flow Length (ft):	14.72	0.00	0.00
Slope (%):			

2 yr 24 hr Rainfall (in)

Shallow Concentrated Flow Computations

Velocity (ft/sec):

	Subarea A	Subarea B	Subarea C
Computed Flow Time (minutes):	1943.03879748	0.00	0.00
	30.8	0.00	0.00
	Forest	Paved	Paved
-	1.39	0.00	0.00
Flow Length (ft):	23.34	0.00	0.00
Slope (%):			

Surface Type:

Channel Flow Computations

Velocity (ft/sec):

	Subarea A	Subarea B	Subarea C
Computed Flow Time (minutes):	0.040	0.00	0.00
	1100.21245053	0.00	0.00
	8.18	0.00	0.00
-	24	0.00	0.00
Manning's Roughness:	15.42	0.00	0.00
Flow Length (ft):	14.31	0.00	0.00
Channel Slope (%):	1.28	0.00	0.00
Cross Section Area (ft²):			
Wetted Perimeter (ft):			
Velocity (ft/sec):			
Computed Flow Time (minutes):			

Total TOC (minutes): 39.34

==========

==========

Autodesk Storm and Sanitary Analysis

Appendix F
Rainfall Intensity

Attachment F - Drainage Report

NOAA Atlas 14, Volume 7, Version 2
Location name: Juneau, Alaska, USA*
Latitude: 58.3454°, Longitude: -134.4896°
Elevation: 120.33 ft**
source: ESRI Maps
source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Douglas Kane, Sarah Dietz, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Svetlana Stuefer, Amy Tidwell, Carl Trypaluk, Dale Unruh, Michael Yekta, Erica Betts, Geoffrey Bonnin, Sarah Heim, Lillian Hiner, Elizabeth Lilly, Jayashree Narayanan, Fenglin Yan, Tan Zhao

NOAA, National Weather Service, Silver Spring, Maryland
and
University of Alaska Fairbanks, Water and Environmental Research Center

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.131 (0.106 -0.166)	0.153 (0.122 -0.197)	0.187 (0.146 -0.246)	0.215 (0.165 -0.287)	0.253 (0.189 -0.346)	0.282 (0.207 -0.393)	0.312 (0.225 -0.442)	0.350 (0.248 -0.505)	0.400 (0.277 -0.590)	0.438 (0.299 -0.657)
10-min	0.176 (0.142 -0.223)	0.206 (0.164 -0.265)	0.251 (0.195 -0.330)	0.288 (0.220 -0.385)	0.339 (0.253 -0.464)	0.379 (0.278 -0.528)	0.418 (0.302 -0.592)	0.470 (0.333 -0.678)	0.537 (0.372 -0.792)	0.588 (0.401 -0.882)
15-min	0.206 (0.166 -0.261)	0.241 (0.192 -0.310)	0.293 (0.228 -0.385)	0.337 (0.258 -0.450)	0.397 (0.297 -0.543)	0.443 (0.325 -0.617)	0.490 (0.353 -0.694)	0.549 (0.389 -0.791)	0.629 (0.436 -0.927)	0.689 (0.470 -1.03)
30-min	0.273 (0.220 -0.346)	0.320 (0.255 -0.411)	0.389 (0.303 -0.511)	0.447 (0.342 -0.597)	0.527 (0.394 -0.721)	0.588 (0.432 -0.819)	0.650 (0.469 -0.921)	0.729 (0.517 -1.05)	0.834 (0.578 -1.23)	0.914 (0.623 -1.37)
60-min	0.374 (0.302 -0.474)	0.438 (0.349 -0.563)	0.533 (0.415 -0.700)	0.613 (0.469 -0.819)	0.722 (0.539 -0.988)	0.806 (0.592 -1.12)	0.890 (0.642 -1.26)	0.999 (0.708 -1.44)	1.14 (0.792 -1.69)	1.25 (0.853 -1.88)
2-hr	0.552 (0.445 -0.700)	0.647 (0.515 -0.832)	0.789 (0.614 -1.04)	0.906 (0.693 -1.21)	1.07 (0.798 -1.46)	1.19 (0.875 -1.66)	1.32 (0.949 -1.86)	1.48 (1.05 -2.13)	1.69 (1.17 -2.49)	1.85 (1.26 -2.77)
3-hr	0.729 (0.588 -0.925)	0.854 (0.680 -1.10)	1.04 (0.811-1.37)	1.20 (0.915 -1.60)	1.41 (1.05 -1.93)	1.57 (1.15 -2.19)	1.73 (1.25 -2.46)	1.95 (1.38 -2.81)	2.23 (1.54 -3.29)	2.44 (1.66 -3.66)
6-hr	1.17 (0.944 -1.48)	1.37 (1.09 -1.76)	1.67 (1.30 -2.19)	1.92 (1.47 -2.56)	2.26 (1.69 -3.09)	2.52 (1.85 -3.51)	2.78 (2.01 -3.94)	3.13 (2.22 -4.51)	3.58 (2.48 -5.27)	3.92 (2.67 -5.88)
12-hr	1.76 (1.42 -2.23)	2.06 (1.64 -2.65)	2.50 (1.95 -3.29)	2.87 (2.19 -3.83)	3.38 (2.53 -4.62)	3.79 (2.78 -5.27)	4.21 (3.04 -5.96)	4.73 (3.35 -6.82)	5.42 (3.76 -7.99)	5.94 (4.05 -8.91)
24-hr	2.54 (2.30 -2.84)	2.97 (2.65-3.37)	3.59 (3.14 -4.16)	4.10 (3.52 -4.83)	4.82 (4.05 5.81)	5.41 (4.46 -6.64)	6.04 (4.90 -7.54)	6.78 (5.41 -8.61)	7.76 (6.05 -10.1)	8.51 (6.52 -11.2
2-day	3.45 (3.12 -3.87)	4.01 (3.58 -4.55)	4.79 (4.19 -5.55)	5.42 (4.65 -6.38)	6.29 (5.28 -7.59)	7.00 (5.77 -8.59)	7.74 (6.28 -9.66)	8.59 (6.85 -10.9)	9.72 (7.57 -12.6)	10.6 (8.10 -13.9)
3-day	4.10 (3.70 -4.58)	4.73 (4.22 -5.36)	5.61 (4.90 -6.49)	6.30 (5.41 -7.42)	7.26 (6.09 -8.75)	8.03 (6.62 -9.85)	8.82 (7.15 -11.0	9.72 (7.75 -12.3)	10.9 (8.51 -14.2)	11.8 (9.06 -15.6)
4-day	4.63 (4.18 -5.18)	5.32 (4.75 -6.04)	6.28 (5.49 -7.27)	7.03 (6.04 -8.28)	8.07 (6.77 -9.72)	8.88 (7.33 -10.9)	9.73 (7.89 -12.1)	10.7 (8.51 -13.6)	11.9 (9.30 -15.5)	12.9 (9.87 -17.0)
7-day	5.98 (5.40 -6.69)	6.84 (6.10 -7.75)	8.02 (7.00 -9.28)	8.94 (7.68 -10.5)	10.2 (8.57 -12.3)	11.2 (9.25 -13.8)	12.3 (9.93 -15.3)	13.4 (10.7 -17.0)	15.0 (11.7-19.4)	16.1 (12.4 -21.3)
10-day	7.07 (6.39 -7.92)	8.07 (7.20 -9.15)	9.44 (8.24 -10.9)	10.5 (9.02 -12.4)	12.0 (10.0 -14.4)	13.1 (10.8 -16.1)	14.3 (11.6-17.8)	15.6 (12.5 -19.8)	17.4 (13.6 -22.6)	18.7 (14.4 -24.7)
20-day	10.6 (9.59 -11.9	12.1 (10.8 -13.7)	14.1 (12.3 -16.3)	15.6 (13.4 -18.3)	17.6 (14.8 -21.2)	19.2 (15.8 -23.5)	20.7 (16.8 -25.9)	22.4 (17.9 -28.5)	24.7 (19.3 -32.1)	26.4 (20.2 -34.8)
30-day	14.0 (12.6 -15.6)	15.9 (14.2 -18.1)	18.5 (16.2 -21.4)	20.4 (17.5 -24.0)	22.9 (19.3 -27.7)	24.9 (20.5 -30.5)	26.8 (21.7 -33.4)	28.8 (23.0 -36.6)	31.5 (24.6 -40.9)	33.5 (25.7 -44.2)
45-day	18.5 (16.7 -20.7)	21.1 (18.8 -23.9)	24.5 (21.4 -28.4)	27.0 (23.2 -31.8)	30.1 (25.3 -36.3)	32.5 (26.8 -39.8)	34.8 (28.2 -43.4)	37.1 (29.5 -47.1)	40.1 (31.3 -52.0)	42.4 (32.5 -55.9)
60-day	22.1 (19.9 -24.7)	25.4 (22.6 -28.8)	29.5 (25.7 -34.1)	32.3 (27.8 -38.1)	35.9 (30.1 -43.3)	38.4 (31.7 -47.1)	40.8 (33.1 -50.9)	43.0 (34.2 -54.5)	45.8 (35.7 -59.5)	48.0 (36.8 -63.4)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

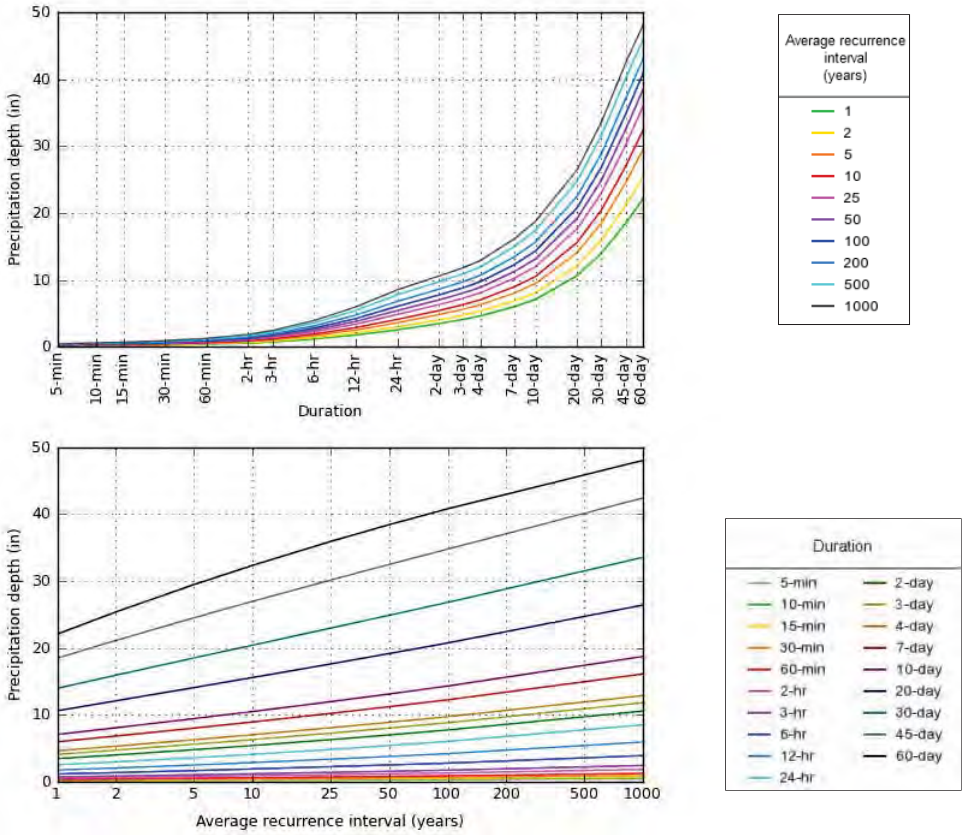
Back to Top

PF graphical

Attachment E - SMF20-01 – Phase 1 Plat

Attachment F - Drainage Report

PDS-based depth-duration-frequency (DDF) curves
Latitude: 58.3454°, Longitude: -134.4896°



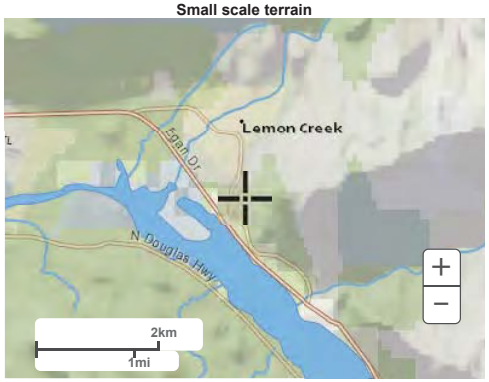
NOAA Atlas 14, Volume 7, Version 2

Created (GMT): Fri Oct 18 00:03:14 2019

Back to Top

Maps & aerials

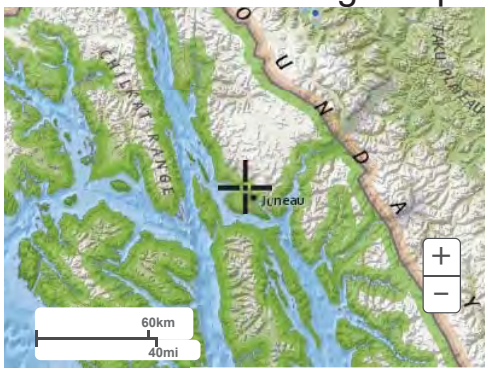
Small scale terrain



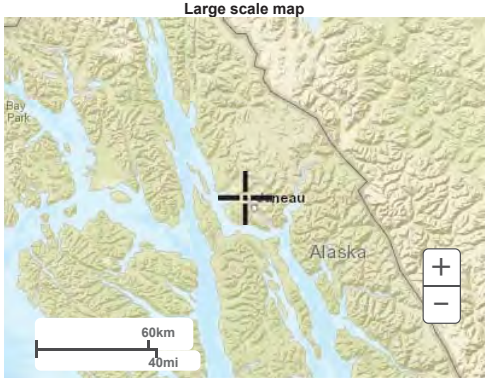
Large scale terrain

Attachment E - SMF20-01 – Phase 1 Plat

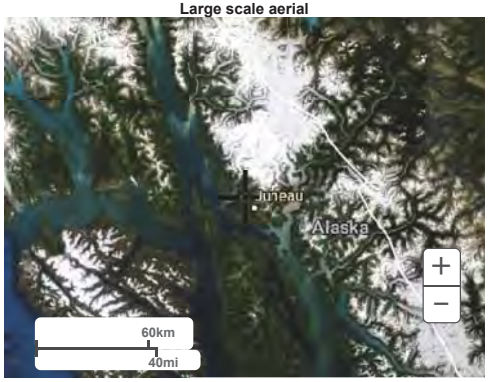
Attachment F - Drainage Report



Large scale map



Large scale aerial



Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Attachment E - SMF20-01 – Phase 1 Plat

Attachment I - Drainage Report

NOAA Atlas 14, Volume 7, Version 2 _
Location name: Juneau, Alaska, USA* _
Latitude: 58.346°, Longitude: -134.4904° _
Elevation: 101.4 ft** _
* sour e: ESRI Ma s _
** sour e: USGS _

POINT PRECIPITATION FREQUENCY ESTIMATES _

S nj Per _, Dougl s K ne, S r h D e z, K zungu Ma _r , Debor h Mar n, S ndr P vlov , Ish n _
Roy, Sve l n S uefer, Amy T dwell, C rl Try luk, D le Unruh, Mi h_el Yek _, Er _ Be s, Geoffrey _
Bonn n, S r h He m, L ll n H ner, El z be h L lly, J y shree N r y n n, Fengl n Y n, T n Zh o _

NOAA, N _ on l We _her Serv e, S lver S rng, Mary nd _
nd _
Un vers y of Al sk F rb nks, Wa er nd Env ronmen l Rese r h Cen er _

PF bul r | PF gr h l | Ma s & er ls _

PF tabular _

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1] _

Duration	Average recurrence interval (years) _									
	1 _	2 _	5 _	10 _	25 _	50 _	100 _	200 _	500 _	1000 _
5-min _	1.58 _ (1.27-2.02)	1.86 _ (1.48-2.40)	2.27 _ (1.75-3.00)	2.62 _ (1.99-3.52)	3.08 _ (2.29-4.25)	3.44 _ (2.51-4.82)	3.80 _ (2.72-5.42)	4.30 _ (3.02-6.23)	4.94 _ (3.41-7.33)	5.42 _ (3.67-8.17)
10-min _	1.06 _ (0.852-1.36)	1.25 _ (0.984-1.61)	1.52 _ (1.18-2.02)	1.75 _ (1.33-2.35)	2.07 _ (1.54-2.85)	2.31 _ (1.69-3.23)	2.56 _ (1.83-3.64)	2.89 _ (2.03-4.18)	3.32 _ (2.29-4.92)	3.64 _ (2.47-5.49)
15-min _	0.828 _ (0.664-1.06)	0.972 _ (0.768-1.26)	1.19 _ (0.920-1.57)	1.37 _ (1.04-1.84)	1.62 _ (1.20-2.22)	1.80 _ (1.32-2.53)	2.00 _ (1.43-2.84)	2.25 _ (1.59-3.26)	2.59 _ (1.78-3.84)	2.84 _ (1.93-4.29)
30-min _	0.550 _ (0.440-0.702)	0.646 _ (0.510-0.836)	0.788 _ (0.610-1.04)	0.908 _ (0.690-1.22)	1.07 _ (0.796-1.47)	1.20 _ (0.874-1.68)	1.32 _ (0.950-1.89)	1.49 _ (1.05-2.17)	1.72 _ (1.18-2.54)	1.89 _ (1.28-2.84)
60-min _	0.377 _ (0.302-0.481)	0.442 _ (0.349-0.571)	0.540 _ (0.418-0.713)	0.622 _ (0.473-0.836)	0.734 _ (0.545-1.01)	0.820 _ (0.598-1.15)	0.907 _ (0.650-1.29)	1.02 _ (0.721-1.48)	1.18 _ (0.810-1.74)	1.29 _ (0.875-1.95)
2-hr _	0.278 _ (0.223-0.356)	0.326 _ (0.258-0.422)	0.399 _ (0.308-0.527)	0.460 _ (0.350-0.618)	0.543 _ (0.403-0.747)	0.606 _ (0.442-0.850)	0.670 _ (0.480-0.954)	0.756 _ (0.532-1.10)	0.869 _ (0.598-1.29)	0.954 _ (0.646-1.44)
3-hr _	0.245 _ (0.196-0.312)	0.286 _ (0.226-0.370)	0.351 _ (0.271-0.463)	0.404 _ (0.307-0.543)	0.477 _ (0.354-0.657)	0.533 _ (0.389-0.746)	0.588 _ (0.422-0.838)	0.664 _ (0.468-0.962)	0.763 _ (0.525-1.13)	0.838 _ (0.568-1.26)
6-hr _	0.197 _ (0.158-0.251)	0.231 _ (0.182-0.298)	0.282 _ (0.218-0.372)	0.324 _ (0.247-0.436)	0.383 _ (0.284-0.527)	0.428 _ (0.312-0.600)	0.473 _ (0.339-0.675)	0.534 _ (0.376-0.774)	0.614 _ (0.423-0.910)	0.675 _ (0.457-1.02)
12-hr _	0.147 _ (0.118-0.188)	0.172 _ (0.136-0.223)	0.210 _ (0.162-0.277)	0.241 _ (0.183-0.323)	0.284 _ (0.211-0.391)	0.319 _ (0.233-0.447)	0.356 _ (0.255-0.507)	0.402 _ (0.283-0.582)	0.462 _ (0.318-0.686)	0.508 _ (0.344-0.767)
24-hr _	0.107 _ (0.096-0.119)	0.125 _ (0.111-0.142)	0.151 _ (0.132-0.175)	0.172 _ (0.148-0.203)	0.203 _ (0.171-0.245)	0.229 _ (0.189-0.281)	0.256 _ (0.208-0.320)	0.289 _ (0.230-0.367)	0.332 _ (0.259-0.431)	0.365 _ (0.280-0.482)
2-day _	0.073 _ (0.066-0.081)	0.084 _ (0.075-0.096)	0.101 _ (0.088-0.117)	0.114 _ (0.098-0.134)	0.133 _ (0.111-0.160)	0.148 _ (0.122-0.182)	0.164 _ (0.133-0.205)	0.183 _ (0.146-0.233)	0.209 _ (0.162-0.271)	0.227 _ (0.174-0.300)
3-day _	0.057 _ (0.052-0.064)	0.066 _ (0.059-0.075)	0.079 _ (0.069-0.091)	0.088 _ (0.076-0.104)	0.102 _ (0.086-0.123)	0.113 _ (0.094-0.139)	0.125 _ (0.101-0.156)	0.139 _ (0.110-0.176)	0.156 _ (0.122-0.203)	0.170 _ (0.130-0.224)
4-day _	0.049 _ (0.044-0.054)	0.056 _ (0.050-0.063)	0.066 _ (0.058-0.076)	0.074 _ (0.063-0.087)	0.085 _ (0.071-0.103)	0.094 _ (0.078-0.115)	0.103 _ (0.084-0.129)	0.114 _ (0.091-0.145)	0.128 _ (0.100-0.166)	0.139 _ (0.106-0.183)
7-day _	0.035 _ (0.032-0.040)	0.040 _ (0.036-0.046)	0.047 _ (0.041-0.055)	0.053 _ (0.046-0.062)	0.061 _ (0.051-0.073)	0.067 _ (0.055-0.082)	0.074 _ (0.060-0.092)	0.081 _ (0.064-0.103)	0.091 _ (0.071-0.118)	0.098 _ (0.075-0.130)
10-day _	0.029 _ (0.026-0.033)	0.033 _ (0.030-0.038)	0.039 _ (0.034-0.045)	0.043 _ (0.037-0.051)	0.049 _ (0.041-0.060)	0.054 _ (0.045-0.067)	0.060 _ (0.048-0.074)	0.066 _ (0.052-0.083)	0.073 _ (0.057-0.095)	0.079 _ (0.061-0.105)
20-day _	0.022 _ (0.020-0.024)	0.025 _ (0.022-0.028)	0.029 _ (0.025-0.033)	0.032 _ (0.027-0.038)	0.036 _ (0.030-0.044)	0.040 _ (0.033-0.048)	0.043 _ (0.035-0.054)	0.047 _ (0.037-0.059)	0.052 _ (0.040-0.067)	0.056 _ (0.043-0.073)
30-day _	0.019 _ (0.017-0.021)	0.022 _ (0.019-0.025)	0.025 _ (0.022-0.029)	0.028 _ (0.024-0.033)	0.031 _ (0.026-0.038)	0.034 _ (0.028-0.042)	0.037 _ (0.030-0.046)	0.040 _ (0.032-0.051)	0.044 _ (0.034-0.057)	0.047 _ (0.036-0.062)
45-day _	0.017 _ (0.015-0.019)	0.019 _ (0.017-0.022)	0.022 _ (0.019-0.026)	0.025 _ (0.021-0.029)	0.028 _ (0.023-0.033)	0.030 _ (0.025-0.037)	0.032 _ (0.026-0.040)	0.034 _ (0.027-0.043)	0.037 _ (0.029-0.048)	0.039 _ (0.030-0.052)
60-day _	0.015 _ (0.014-0.017)	0.017 _ (0.016-0.020)	0.020 _ (0.018-0.024)	0.022 _ (0.019-0.026)	0.025 _ (0.021-0.030)	0.027 _ (0.022-0.033)	0.028 _ (0.023-0.035)	0.030 _ (0.024-0.038)	0.032 _ (0.025-0.042)	0.034 _ (0.026-0.044)

[1] Pre _ on frequen y (PF) es maes n h s ble re b sed on frequen y n lys s of _r _l dur _on ser es (PDS). _

Numbers n _ren hes s re PF es maes lower nd u _er bounds of he 90% onf den e n erv l. The rob b l y h _ re _ on frequen y es maes (for _ g ven dur _on nd ver ge re urren e n erv l) w ll be gre _er h n he u _er bound (or less h n he lower bound) s 5%. Es maes u _er bounds re no _ he ked g ns rob ble max mum re _ on (PMP) es maes nd may be h gher h n urren ly v l d PMP v lues. _

Ple se refer o NOAA A l s 14 do umen for more nforma on. _

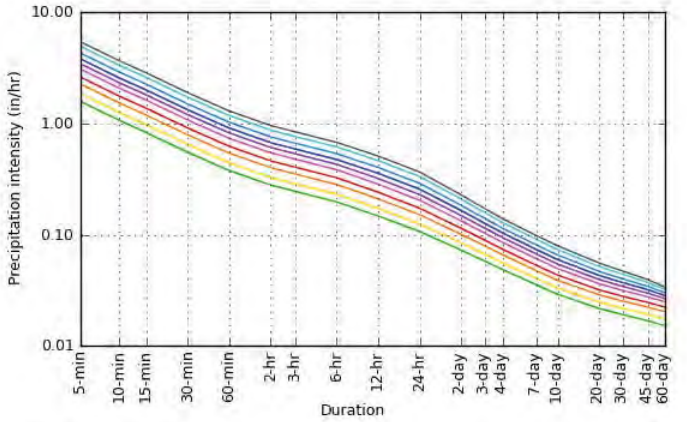
B k o To _

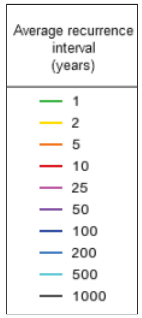
PF graphical _

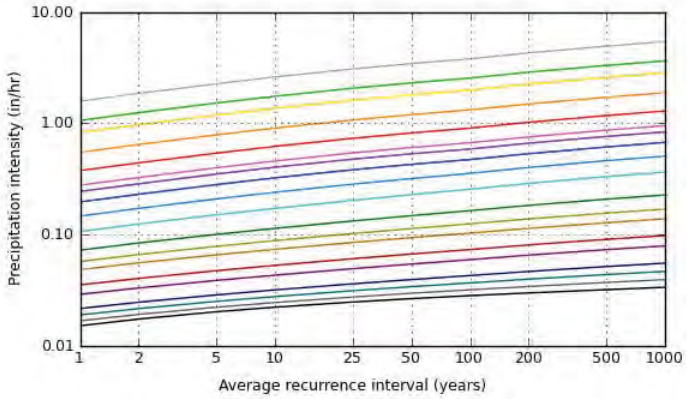
Attachment E - SMF20-01 – Phase 1 Plat

Attachment I - Drainage Report

PDS-based intensity-duration-frequency (IDF) curves
Latitude: 58.3460°, Longitude: -134.4904°







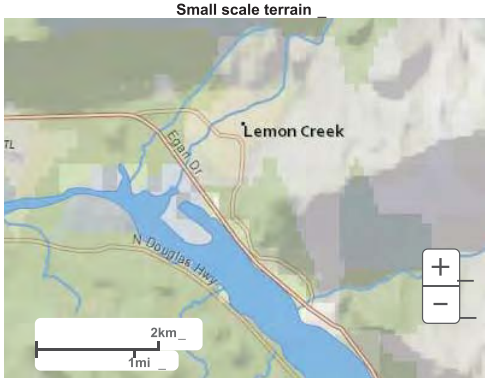


NOAA Atlas 14, Volume 7, Version 2 Created (GMT): Fri Nov 1 21:25:38 2019

B _k o To _

Maps & aerials _

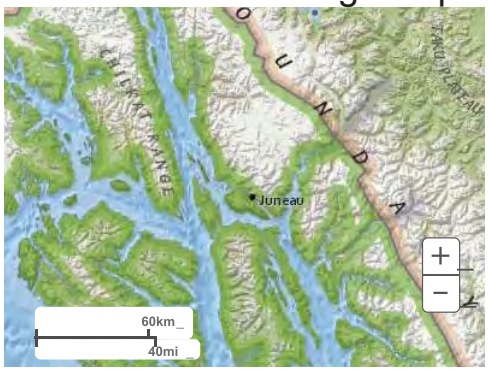
Small scale terrain _



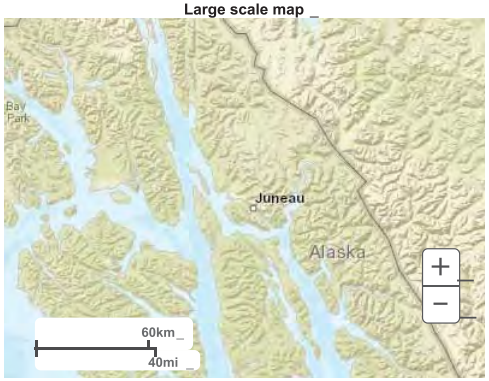
Large scale terrain _

Attachment E - SMF20-01 – Phase 1 Plat

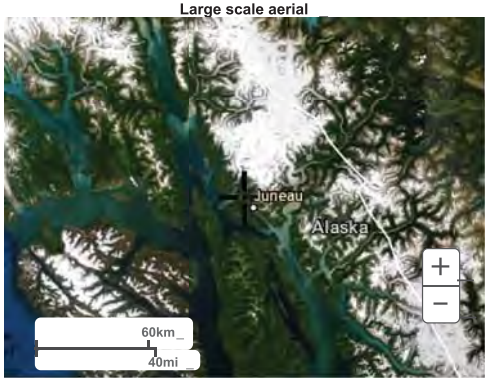
Attachment I - Drainage Report



Large scale map _



Large scale aerial _



B k o To _

US De r men of Commer e _
N on l O œ n nd A mos her Adm in s r on _
N on l We her Serv e _
N on l Wa er Cen er _
1325 E s Wes H ghw y _
S lver S r ng, MD 20910 _
Ques ons?: HDSC.Ques ons@no .gov _

D s l mer _

Attachment E - SMF20-01 – Phase 1 Plat

Appendix G
Existing 24” CMP Culvert Capacity

Existing 24" CMP Discharge Capacity		
Project:	Richland Manor Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	10/30/2019	
Prepared By:	S. Moller	
Checked By:	L. Chambers	

The following equations were used to calculate the capacity of an existing AK DOT & PF owned drainage system on Glacier Highway at the bottom of Hooter Lane and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table 5-3, Page 5-5, of the CBJ Stormwater Manual
A = cross sectional area in ft^2
R = hydraulic radius
S = slope

Existing 24" CMP Cross Culvert; Inlet Invert = 24.33', Outlet Invert = 24', Length = 46', n = 0.028. The Manning's n value of 0.028 was determined by the pipe type (Annular Corrugated Metal Pipe: plain or fully coated), all other values obtained from the attached DOT & PF Salmon Creek to Vanderbilt Hill Storm Drain System Summary (Project No. 70469; Sheets 10, 27, and 83), see Appendix H Existing 24" CMP As-built Drawings.

$$A = \pi \times \frac{d^2}{4} \qquad A_{culvert} = 3.14 \times \frac{2^2}{4} = 3.14\ ft^2$$

d = diameter in ft

$$R = \frac{d}{4} \qquad R = \frac{2}{4} = 0.5\ ft$$

$$S = \frac{\Delta z}{L} \qquad S = \frac{24.33 - 24}{46} = 0.717\%$$

S = slope
Δz = change in elevation
L = length of pipe in ft

$$Q_{culvert} = \frac{1.486}{0.028} \times 3.14 \times 0.5^{0.67} \times 0.00717^{0.5} = 8.87\ ft^3/sec$$

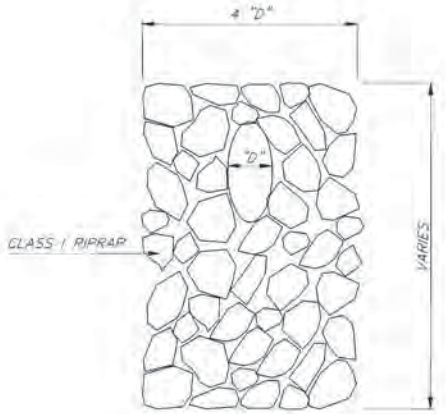
Appendix H
Existing 24” CMP Culvert
As-builts

STORM DRAIN SYSTEM SUMMARY

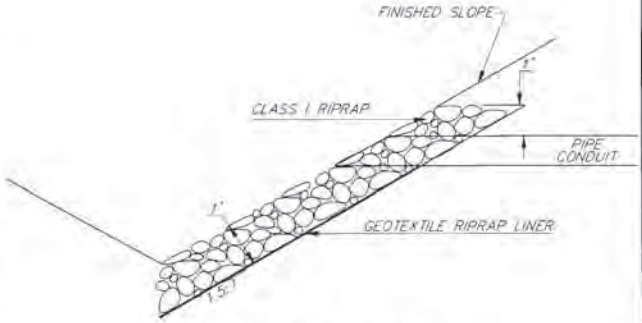
STRUCTURE NO.	INLET TYPE	LOCATION STATION	LOCATION OFFSET	TOP OF GRATE ELEVATION	INVERT ELEVATION	REMARKS	ELEV.	PIPE NO.	DESIGN LENGTH	PIPE SIZE	FROM STRUCTURE NO.	FROM INVERT ELEVATION	TO STRUCTURE NO.	TO INVERT ELEVATION	REMARKS
S-1	A	140+37	RT	27.77	23.52			P-1	19'	18"	S-1	25.52 11	OUTFALL		SPILLWAY
S-2	A	142+18	LT	26.11	21.36		19.22	P-2	60'	24"	S-2	22.86	OUTFALL		SPILLWAY
S-3	A	142+35	LT	27.23	22.48		20.76	P-3	56'	24"	S-3	23.98	OUTFALL		
S-4	A	146+58	LT	28.66	24.41			P-4	10'	18"	S-4	25.91	OUTFALL		
S-5	A	148+38	LT	30.48	26.23		25.23	P-5	13'	18"	S-5	26.73	OUTFALL	25.9	
S-6	A	148+39	RT	30.67	25.92		25.97	P-6			S-6	27.42	S-7	27.32	
S-7	A	148+72	RT	30.75 61	25.72 45			P-7	10'	24"	S-7	27.22	S-8	26.25	
S-8	FIELD	"W" 10+28	LT	29.00	25.60			P-8	60'	24"	S-8	26.20	OUTFALL		DELETED
S-9	FIELD	"W" 11+65	LT	49.00	44.30			P-9	38'	18"	S-9	45.80	S-7	27.42	
								P-10	29'	24"	DITCH		S-9	46.00	
S-10	A	152+00	LT	30.43	26.18		25.18	P-11	6'	18"	S-10	26 27.68	OUTFALL		SPILLWAY
S-11	A	153+16	LT	29.96	25.71		27.71	P-12	8'	18"	S-11	26 27.21	OUTFALL		SPILLWAY
S-12	A	154+93	RT	29.85	25.40			P-13	35	24"	S-12	26 68 40	S-13	26 40	
S-13	A	154+93	LT	29.85	24.70		24.66	P-14	4'	24"	S-13	26 93 80	OUTFALL	24.30	SPILLWAY
S-14	A	156+42	RT	20.50	26.25		25.17	P-15	11'	18"	S-14	27 75 21	OUTFALL	27.00	
S-15	A	158+05	LT	30.86	26.61			P-16	11'	18"	S-15	28.11	OUTFALL	27.80	SPILLWAY
S-16	A	160+20	RT	31.08	26.83		26.21	P-17	13'	18"	S-16	28.33	OUTFALL	25.00	
S-17	A	161+98	LT	30.46	26.21		25.21	P-18	10'	18"	S-17	26 27.71	OUTFALL	24.50	SPILLWAY
S-18	A	163+88	RT	29.96	25.21			P-19	48'	24"	S-18	26.71	OUTFALL	26.00	SPILLWAY
								P-19A	20'	18"	DITCH	28.00	S-18	28.40	
S-19	A	165+29	LT	29.42	25.17		24.17	P-20	13'	18"	S-19	25 26 67	OUTFALL	25.30	SPILLWAY
S-20	A	167+02	LT	29.83	25.58		24.68	P-21	10'	18"	S-20	26 27.08	OUTFALL	25.90	
S-21	A	169+48	LT	30.52	26.27		25.27	P-22	9'	18"	S-21	26 27.77	OUTFALL	26.50	SPILLWAY
S-22	A	172+04	LT	29.70	25.45		24.47	P-23	9'	18"	S-22	25 26.95	OUTFALL	25.70	
S-23	A	173+33	LT	29.70	24.60		23.60	P-24	9'	24"	S-23	25 26.10	S-23	24.90	
S-24	A	173+48	RT	29.71	24.96			P-25	38'	24"	S-24	26.46	S-23	26.20	
S-25	A	174+02	LT	29.63	25.38		24.38	P-26	11'	18"	S-25	24 26.88	OUTFALL	25.60	SPILLWAY
S-26	A	175+52	RT	30.17	25.42			P-27	36'	24"	S-26	26.92	S-27	26.75	SPILLWAY
S-27	A	175+52	LT	30.17	25.15		24.15	P-28	11'	24"	S-27	25 26.55	OUTFALL	25.30	
								P-27A	10'	18"	DITCH	29.00	S-26	27.96	
S-28	A	177+98	RT	30.07	25.32		25.04	P-29	50'	24"	S-28	26 27.54	OUTFALL	25.50	SPILLWAY
S-28A	A	"B" 10+34	RT	28.66	23.70		24.40	P-29B	36'	24"	S-28A	25 26.40	S-28B	25.10	
S-28B	A	"B" 10+34	LT	28.49	23.60		24.50	P-29C	7'	24"	S-28B	25 25.30	DITCH	25.05	
								P-29A	10'	24"	DITCH	25.30	S-28A	25.25	
S-29	A	180+85	RT	28.56	23.81		23.81	P-30	58'	24"	S-29	25.31	OUTFALL		
S-30	B	182+56	RT	29.13	22.40			P-31	71'	24"	S-30	23.90	OUTFALL	19.20	
								P-32	11'	18"	INLET	24.25	S-30	24.00	
S-31	A	185+00	RT	30.96	26.21			P-33	56'	24"	S-31	27.71	OUTFALL	20.70	SPILLWAY
S-32	A	185+88	RT	31.29	27.04		26.09	P-34	9'	18"	S-32	27 28 45 54	OUTFALL	27.30	SPILLWAY
S-33	A	187+22	LT	31.35	27.10		26.10	P-35	8'	18"	S-33	27 28 60	OUTFALL	27.30	SPILLWAY
S-34	A	188+98	LT	31.54	27.29		26.29	P-36	9'	18"	S-34	27 28 79	OUTFALL	27.50	SPILLWAY
S-35	A	191+00	LT	31.07	26.22		25.22	P-37	6'	18"	S-35	26 27.72	OUTFALL	26.50	
								P-37A	49'	24"	DITCH	30.00	S-35	27.82	
S-36	A	192+72	LT	30.03	25.78		24.78	P-38	6'	18"	S-36	26 27.28	OUTFALL	26.00	SPILLWAY
S-37	A	194+39	RT	31.11	26.16			P-39	36'	24"	S-37	27.86	S-38	27.31	
S-38	A	194+39	LT	31.11	26.06		25.06	P-40	9'	18"	S-38	26 27.56	OUTFALL	26.30	SPILLWAY
S-39	A	198+00	RT	30.86	26.11			P-41	36'	24"	S-39	26 27.61	S-40	27.43	
S-40	A	198+00	LT	30.86	25.81		24.81	P-42	8'	18"	S-40	26 27.31	OUTFALL	26.00	
S-41	A	200+70	RT	29.62	24.87			P-43	36'	24"	S-41	26.37	S-42	26.20	
S-42	A	200+70	LT	29.62	24.67		23.67	P-44	8'	24"	S-42	25 26.17	OUTFALL	25.00	SPILLWAY
								P-45	10'	18"	DITCH	27.00	S-41	26.50	
S-43	A	201+32	LT	29.59	25.14	DELETED									
S-44	A	203+13	RT	32.93	27.98			P-46	36'	24"	S-44	29.68	S-45	29.48	
S-45	A	203+13	LT	32.93	27.88		26.88	P-47	20'	18"	S-45	28 28 38	OUTFALL	28.00	SPILLWAY
S-44A	A	"C" 10+43	RT	33.26	29.01	1'+ Sump		P-47A	12'	18"	S-44A	29.80	OUTFALL		
S-46A	A	"C" 10+50	LT	33.38	29.13			P-47B	26.52	18"	S-46A	30.43	S-44A	30.00	
								P-47C	6'	18"	DITCH	30.70	S-46A	30.54	
S-46	A	204+18	RT	36.40	31.65			P-48	56'	24"	S-46	33.15	OUTFALL		SPILLWAY
								P-49	16'	18"	INLET S-46	33.15	S-46 Outfall	33.65 38 70	
S-47	A	206+50	RT	45.64	41.39			P-50	10'	18"	S-47	43 42.89	OUTFALL	43.00	
S-48	A	212+60	RT	45.60	41.35			P-51	12'	18"	S-48	42.85	OUTFALL	42.00	
S-49	A	216+00	RT	32.80	28.55			P-52	12'	18"	S-49	30.05	OUTFALL	28.50	
S-50	A	217+47	LT	29.33	25.00		24.00	P-53	19'	18"	S-50	25 50 26.58	OUTFALL	25.00	
S-51	A	218+53	RT	27.58	22.83			P-54	46'	24"	S-51	24.33	OUTFALL	24.00	
S-52	A	220+65	RT	26.09	21.34			P-55	60'	24"	S-52	22.84	OUTFALL	18.00	
S-53	A	223+00 00	RT	25.33	21.00		23.21	P-56	14'	18"	S-53	22.52 52	OUTFALL	22.00	
S-54	A	223+26	LT	24.71	20.38		24.65 20.32	P-57	18'	18"	S-54	21.68	OUTFALL	21.00	

TOTALS: 54- A 1- B 2- F

TOTALS: 18" - 675' 534' 24" - 1,132' 1,099'



SPILLWAY PLAN



SPILLWAY SECTION

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

ENGINEER'S SEAL

BY	DATE	DESCRIPTION OF CHANGE

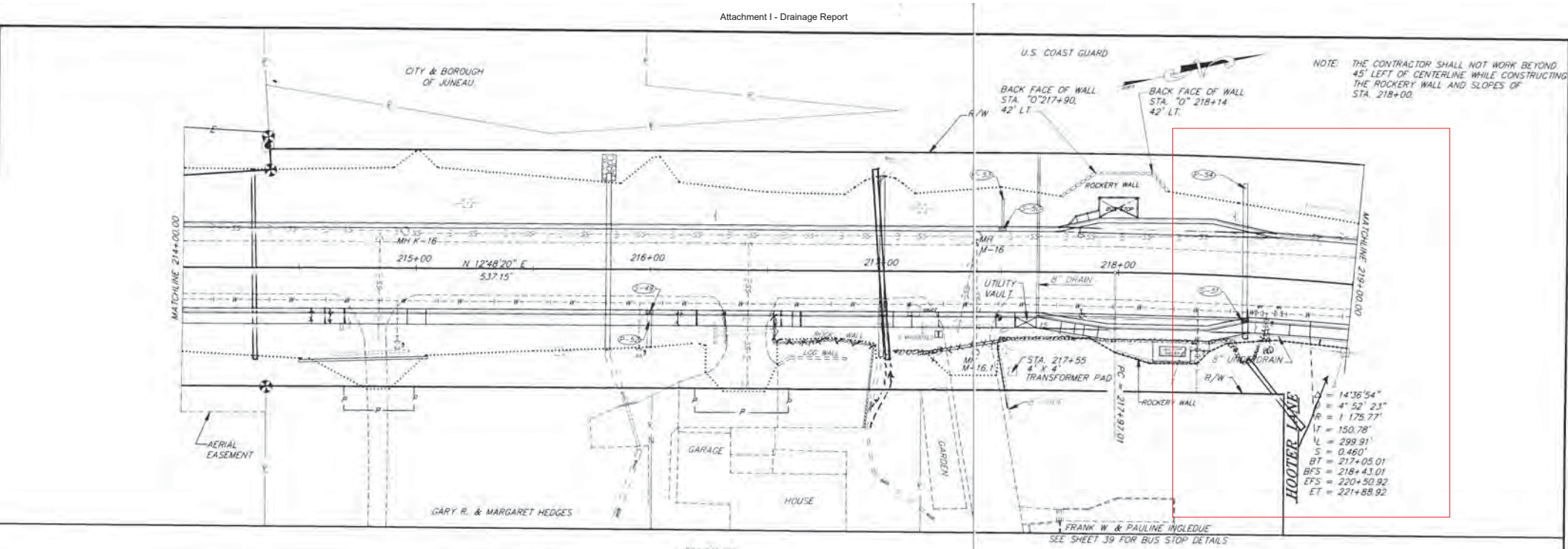
RECORD OF REVISIONS

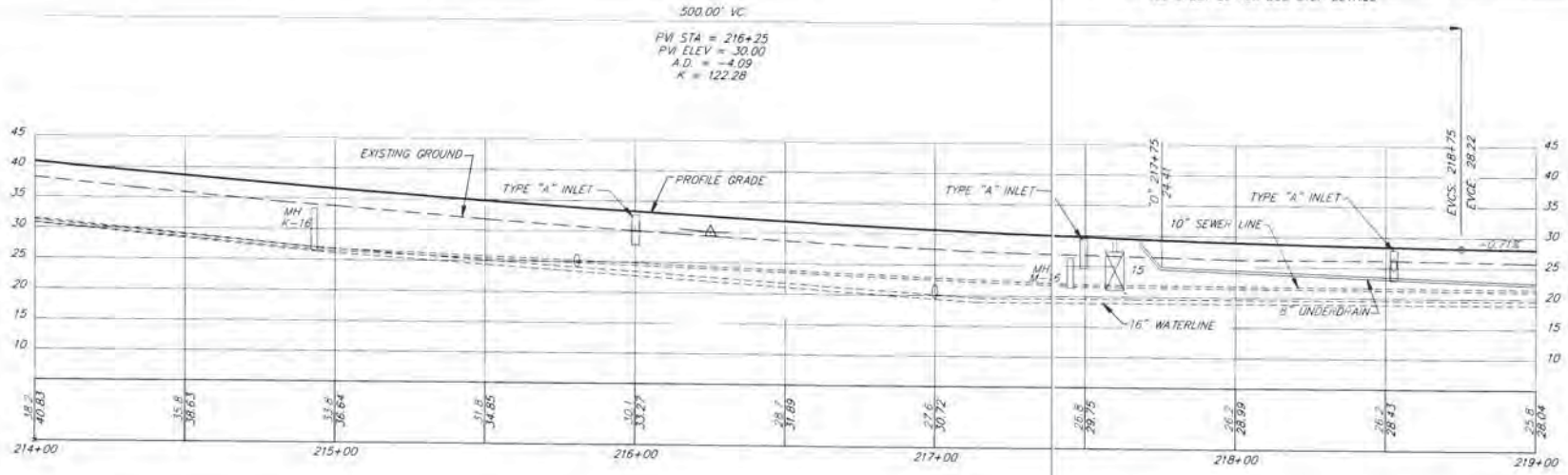
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

JUNEAU ALASKA

SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-0955(8) (70469)
STORM DRAIN SYSTEM SUMMARY

DESIGNED BY:	D. KROMAREK	PROJECT NO.	70469
DRAWN BY:	C. ANDERSON	DATE:	6/1993
CHECKED BY:	P. BEDNAROWICZ	SHEET	10 OF 85





NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

ENGINEER'S SEAL

NO.	DATE	DESCRIPTION OF CHANGE

RECORD OF REVISIONS

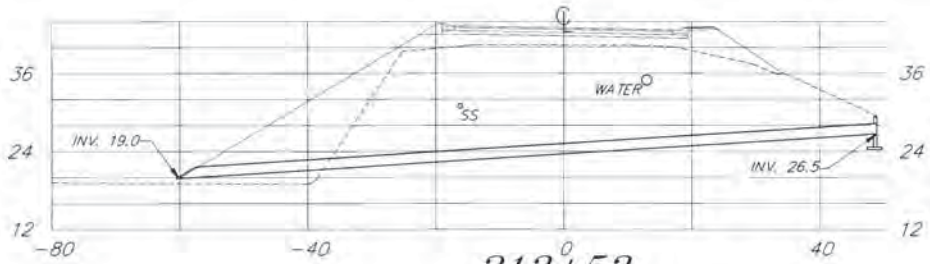
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

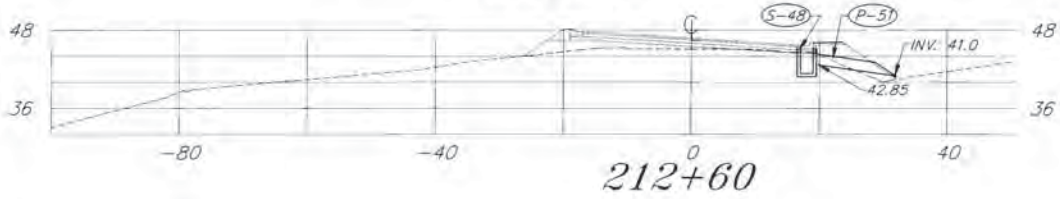
JUNEAU ALASKA

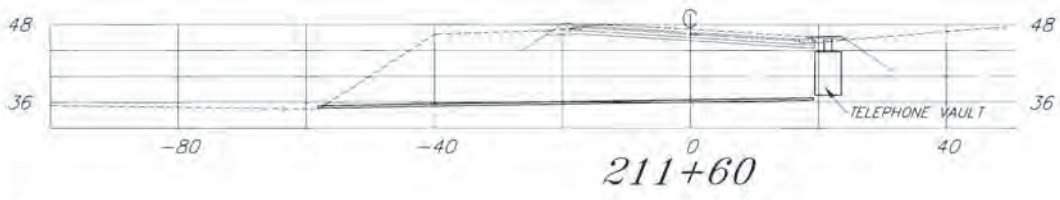
SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-0955(8) (70469)
STA. "0" 214+00.00 TO STA. "0" 219+00.00

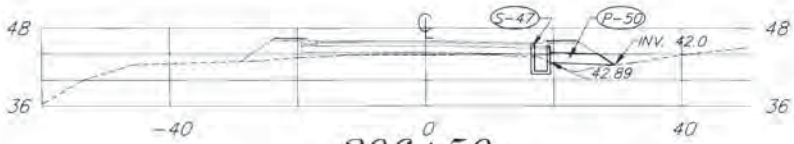
DESIGNED BY: D. KROMAREK	PROJECT NO. 70469
DRAWN BY: C. ANDERSON	DATE: 6/1993
CHECKED BY: P. BEDNAROWICZ	SHEET 27 OF 85

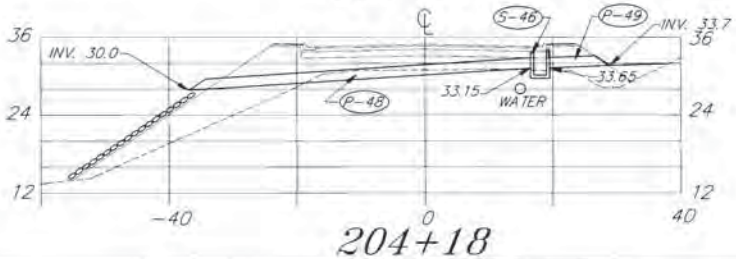
P:\JNU\SALMON\DR\P214 - 1=20

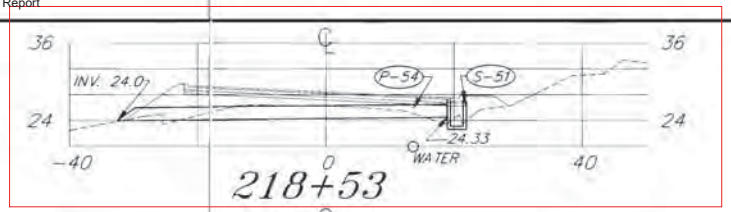


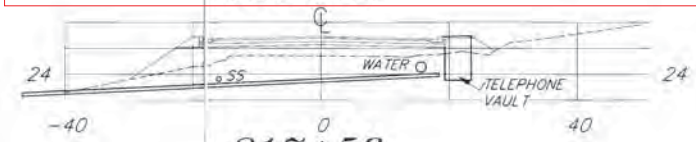






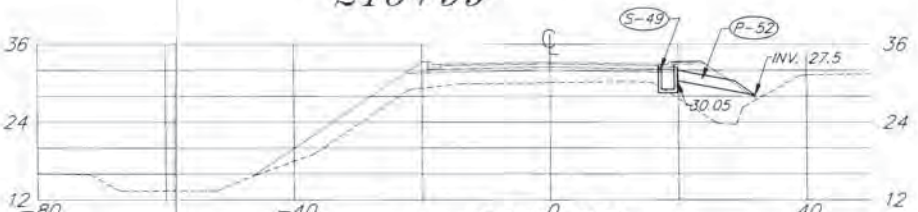


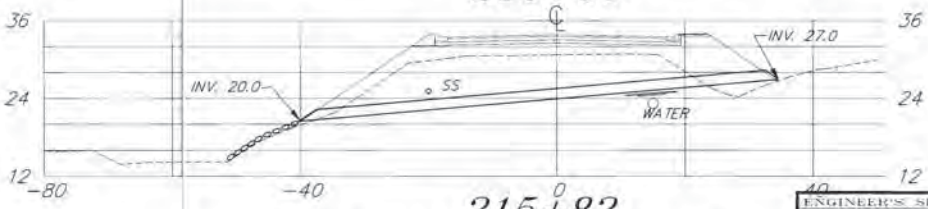












NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

ENGINEER'S SEAL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

JUNEAU ALASKA

SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-0955(8) 70469

PIPE CROSS SECTIONS-204+18 TO 218+53

DESIGNED BY:	D. KROMAREK
DRAWN BY:	C. ANDERSON
CHECKED BY:	P. BEDNAROWICZ
PROJECT NO.	70469
DATE:	6/1993
SHEET	83 OF 85

PATH: P:\JNU\SALMON\DR\PIPE9 1=10

RECORD OF REVISIONS

BY:	DATE:	DESCRIPTION OF CHANGE:

BEFORE THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU

MOUNTAINSIDE ESTATES
NEIGHBORHOOD ASSOCIATION, ET AL.,

Appellant,

vs.

CBJ PLANNING COMMISSION, and
MICHAEL AND WILLIAM HEUMANN,

Appellees,

Appeal of:
Notice of Decision
CDD File No. SMP2018-0002

STIPULATED SETTLEMENT AGREEMENT

The parties to this Agreement are the Appellants, consisting of the Mountainside Estates Neighborhood Association and 17 individuals,[1] ("MENA"); the CBJ Planning Commission ("PC"), and Michael and William Heumann, ("Heumanns"). The parties are executing this Stipulated Settlement Agreement in order to resolve this appeal in its entirety, after the Assembly granted their joint motion for a 90 day stay of the appeal for such intended purpose.

Background Information:

The Heumanns applied for approval of a preliminary plat to subdivide and develop the first 12 lots of a phased major subdivision on a 30.67 acre parcel named Richland Manor, which is adjacent to the existing Mountainside Estates subdivision. During the planning process and at the February 26, 2019 hearing on the Heumanns' application, many of the appellants testified against the application, raising concerns that included and related to increased traffic, including construction traffic, pedestrian and child safety, decreased home values, crime and quality of life.

1 In the interests of space, the individual appellants are not listed here but will sign this document at the bottom. Collectively the appellants will be designated as MENA.

On February 28, 2019 the PC issued its decision approving the preliminary plat requested by the Heumanns, with conditions. This appeal followed. The parties then entered into settlement negotiations which have resulted in the following agreements, intended to fully resolve all issues raised in MENA's appeal.

Agreements of the Parties:

The parties agree to the following terms of settlement:

1. SMP 2018 0002 is the preliminary plat approved with conditions, by the PC's February 28, 2019 Notice of Decision ("NOD"), both of which are attached as Exhibit A.
2. Within 30 days of executing this Agreement, the Heumanns will submit an application for the alternative preliminary plat depicted in Attachment B ("alternative plat"). The application will be for approval of Phase 1 of the alternative plat and conditions set out in Exhibit B. For clearer illustration, the features of the alternative plat establishing greenbelt separation on the individual lots between Richland Manor and Mountainside Estates are set out in Exhibit C, ("greenbelt buffers").
3. The parties acknowledge that the alternative preliminary plat application will include the sketch plat in Exhibit D, showing future proposed phases of the Richland Manor subdivision, as required by CBJ 49.15.410, but the application and intended PC action is limited to approval of Phase 1.
4. The following subdivision features, conditions and actions are agreed to between or accepted by the parties as a condition of the dismissal of the appeal and complete settlement of this dispute. To the extent that any of the subdivision features, conditions, or required actions may be included on the alternative plat or the associated conditions, they shall be. The appellants and Heumanns acknowledge, however, that not all features, conditions, notes or

other information appearing on the alternative plat are legally required or enforceable by the Planning Commission and/or the CBJ.

The subdivision features and conditions listed below shall be included or referenced on the plat. To the extent any features, conditions, notes or actions, including, but not limited to, density conditions, are not subject to PC authority or CBJ enforcement jurisdiction, they are indicated with an asterisk* and considered contractual obligations between the Heumanns and Appellants enforceable by direct private legal action to enforce this agreement, or any other lawful process.

(a) Hooter Lane will be developed as a public two-way street, as set out in the alternative plat, subject to CBJ public improvement standards, in CBJ 49.35.

(b) Hooter Lane from Glacier Highway to Hillcrest Avenue, and Hillcrest Avenue and Mountainside Drive shall be developed with a a sidewalk on one side. The number of sidewalks in the remainder of Richland Manor will be determined at the time of future development applications.

(c) *Density: It is agreed that the loop road of Hillcrest Ave. and Mountainside Drive will be developed as single family homes, as depicted on the attached alternative plat.

(d) *Robbie Road development that is connected to Mountainside Estates shall be limited to not more than 7 single family homes, 3 of which may have accessory apartments.

(e) Robbie Road shall terminate and shall not be a point of access to Richland Manor, unless required, and gated, for fire/emergency service access only.

(f) Hillcrest Avenue shall terminate at Hooter Lane. Hillcrest Avenue may connect to Hooter Lane west of the existing Hillcrest alignment as shown in the alternative plat (Exhibit C). Alternatively road access to the northeast portion of Tract B-1 may connect

to the east/west portion of Mountainside Drive across from the entrance to the "pocket" between Hillcrest and Mountainside.

(g) *Greenbelt buffers will be implemented and privately maintained by lot owners as delineated on the alternative plat, Exhibit B (and as more clearly drawn for illustrative purposes in Exhibit C) to separate single family homes from multi-family development. Excavation for purposes of slope stabilization may take place in the greenbelt buffers provided they are allowed to revegetate following construction. In the event this becomes necessary Heumann will consult with adjacent homeowners about the impacts.

5. The following subdivision features, conditions and requirements will not be included or referenced on the plat and are also not matters for PC and/or CBJ enforcement through the platting process, but rather are created by and subject to this contractual agreement as between Heumanns and appellants, and are thus subject to private enforcement by direct private legal action or any other lawful process:

(a) Construction traffic that will utilize roads within Mountainside Estates will be limited to the development and build out of the Hillcrest Avenue extension to Hooter Lane and any development of the seven homes allowed on Robbie Road.

(b) Hooter Lane will be constructed "from the bottom up", meaning that construction will start at Glacier Highway and proceed uphill.

(c) On Tract A, the "pocket" in the loop between Hillcrest Avenue and Mountainside Avenue, there shall be no more than 16 dwelling units, which shall be contained in buildings of no more than 4 units per building, not to exceed two stories each.

(d) Construction traffic for Richland Manor which flows through Mountainside Estates will be limited to the hours between 7:00 a.m. and 7:00 p.m. On days when children are in school in the Juneau School District there will be no construction traffic through

Mountainside Estates between the hours of 7:00 a.m. to 8:15 a.m. and 2:30 p.m. to 3:45 p.m.

(e) Traffic calming measures will be incorporated as part of the CBJ's public right of way adoption process to address changes in traffic patterns or density that may arise from the construction of Richland Manor, subject to CBJ approval. The Heumanns will be responsible for stop signs at all appropriate locations; a 20 MPH posted speed limit; and "Children at Play" warning signs in all appropriate locations within Richland Manor Subdivision. CBJ shall be responsible for similar measures, as appropriate, on Hillcrest Avenue and Mountainside Drive to Craig Street, within Mountainside Estates.

(f) *Water System: As soon as feasible, but in any event prior to connecting up to 80 new residential units to the existing water system and prior to the completion of Mountainside Drive, the Heumanns will connect the water supply system in a loop that encompasses Mountainside Drive and Hillcrest Street or more directly between Hillcrest Avenue and Mountainside Drive. For all units beyond 80, there will be a separate additional water supply developed. Should a unit be disconnected from the water system it may be replace with another.

6. The alternative plat application will be processed in the normal course of business by Community Development Department ("CDD"), followed by the PC's review at a regular PC meeting.

7. CDD has reviewed Attachments B and C, the sketch plat in Exhibit D, and the conditions set out above, and has determined it can conceptually support and recommend approval of the application to the PC, with the associated conditions.

8. Appellants will support the proposed application and agree to timely submit a statement of such support to CDD for inclusion in the packet before the PC.

9. No individual Appellant(s), member of Appellant MENA, MENA representative or Appellee will speak against, obstruct or oppose the alternative plat application or related CBJ, State of Alaska and Federal permits in writing or in public testimony.

10. The Heumanns and Appellants agree that the application is a good faith compromise to settle this appeal, and that if the application is not approved as submitted, either party may request that the stay be lifted to proceed with the appeal of SMP2018 0002. The request must be made within 10 days of the Notice of Decision.

11. The PC has not reviewed, and is not authorized to commit its support and/or approval of the application prior to reviewing it through the normal hearing process, but acknowledges that the application will not automatically supersede or replace SMP2018 0002 unless the PC issues a NOD approving the application as submitted and no appeal is filed by a third party not subject to this agreement.

12. Nothing in this Agreement shall operate or be interpreted to supersede or waive any CBJ Code provision or requirement, including technical plat requirements.

13. If the PC issues a NOD approving the application as submitted and no appeal has been filed by a 3rd party Appellants will file an executed dismissal of the appeal with prejudice, within 3 business days of the expiration of the time limit within to appeal the NOD.

14. Appellants individually and jointly expressly waive their individual and associational rights to appeal to the Assembly under CBJ 01.50, or to otherwise challenge, an NOD that approves the application as submitted. This waiver does not apply to an NOD that alters the terms of this agreement in any significant respect.

15. Should the PC issue a NOD approving the application as submitted which is not appealed by any party, all parties understand that this Agreement shall operate as a full

and final mutual release and discharge of all parties against each other on behalf of themselves, their members, officers, agents, successors, assigns, attorneys, and anyone who can claim through or on behalf of the parties from the current appeal and from any and all past, present, and future appeals or claims relating to SMP 2018 0002 and the approved application. The parties understand and acknowledge that this release and discharge is made for the purpose of settlement and that it may not be construed as an admission of liability.

16. If a third party appeals a Notice Of Decision that approves the alternative plat,, the Heumanns and MENA shall immediately meet and confer (with or without the involvement of the third party appellants) to determine whether there is a solution that is consistent with this Agreement. If an agreement cannot be reached, the Heumanns will have the right to elect to defend against the appeal of the approved alternative plat, in which case MENA will support the Heumanns to the extent necessary to preserve this Agreement, or to abandon the approved alternative plat, lift the stay and defend the original preliminary plat in this appeal brought by MENA.
17. In executing this Agreement, each member of each party fully, completely, and unconditionally acknowledges and agrees that it has had the opportunity to consult with, and have the advice of, duly licensed and competent attorneys, and that it has executed this Agreement after independent investigation, voluntarily and without fraud, duress, or undue influence. Each party expressly consents that this Agreement be given full force and effect according to each and every of its express terms and provisions.
18. Each person executing this Agreement on behalf of another person or organization represents and warrants to each member of all other parties that he or she is fully authorized to execute and deliver this Agreement on behalf of such person or

organization. Each member of each party represents and warrants to all members of all other parties that no consent of any person not a party to this Agreement is necessary in order for this Agreement to be fully and completely binding upon each member of the parties hereto.

19. The parties agree to bear their own costs and attorney fees in this appeal.

Respectfully submitted this 23 day of ~~August~~ Sept 2019.

APPELLANTS, MENA, et al

By: _____
Paul H. Grant, Esq. /Libby Bakalar, Esq.
Alaska Bar No. 7710124

APPELLEE WILLIAM HEUMANN

By: _____
William Heumann

APPELLEE MICHAEL HEUMANN

By: _____
Michael Heumann

APPELLEE PC

By: Jane S. Mores 9/30/19
Jane S, Mores, Esq.
Alaska Bar No. 9011115

Attachment J - APL20190003 Settlement Agreement
Attachment E - SMF20-01 – Phase 1 Plat

SIGNATURES OF INDIVIDUAL APPELLANTS

The following are the individual Appellants in the CBJ Planning Commission appeal designated as No. SMP2018-0002. By signing below each of them certifies that he or she has reviewed the Stipulated Settlement Agreement and the associated exhibits, and agrees that the appeal should be resolved as set out in the Agreement. It is understood that this is a compromise agreement, and that not every Appellant agrees with every term. However, each of the signing Appellants endorses the Settlement as his or her voluntary act, without coercion or undue influence. Each of the signing Appellants agrees that he or she will not oppose the application for approval of the modified plat before the planning commission, and each of them understands that MENA will provide a statement of support for the application.

Dawn Wolfe 9/6/19
Dawn Wolfe date

Eugene Huang 9/11/19
Eugene Huang date

Steve Iha 9/5/2019
Steve Iha date

Katherine Sullivan 9/11/19
Katherine Sullivan date

Euming Suewing 9-12-19
Euming Suewing date

Luciana Alinson 9-14-19
Luciana Alinson date

Kerrie Suewing 9-12-19
Kerrie Suewing date

Dave Tallmon 9/12/19
Dave Tallmon date

Kelli Manchester 9/5/19
Kelli Manchester date

Dane Lenaker 9/9/19
Dane Lenaker date

Noelle Blanc 9-12-19
Noelle Blanc date

Tom Rutecki 9-5-2019
Tom Rutecki date

Mary Noreross 9/12/2019
Mary Noreross date

Bob Janes 9/6/2019
Bob Janes date

Kris Coffee 9/5/19
Kris Coffee date

Rhonda Biles 9/5/19
Rhonda Biles date

Mathew Pegues 9/5/19
Mathew Pegues date

EXHIBIT A

Planning Commission
(907) 586-0715
PC_Comments@juneau.org
www.juneau.org/plancomm
155 S. Seward Street • Juneau, AK 99801

PLANNING COMMISSION
NOTICE OF DECISION

Date: February 28, 2019
File No.: SMP2018 0002

Michael & William Heumann
6000 Thane Road
Juneau, AK 99801

Proposal:	A Preliminary Plat for a phased major subdivision to include 12 single-family lots and 1 large tract (13 lots total).
Property Address:	4506, 4508, 4510 Hillcrest Avenue
Legal Description:	Richland Manor Tract B
Parcel Code No.:	7B1001160010
Hearing Date:	February 26, 2019

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated February 14, 2019, and approved the preliminary plat to be conducted as described in the project description and project drawings submitted with the application and with the following conditions:

1. Prior to final plat approval, the following changes shall be made to the preliminary plat:
    a. Complete all 22 requested plat changes listed in the MEMO dated January 31, 2019, from CBJ Engineering & Public Works.
    b. On sheet one (1), label Laurie Lane.
    c. On sheet two (2), label the western lot line with bearing and distances described.
    d. On sheet one (1), show all five (5) lots on the south side of Coogan Drive, created Plat 2009-18.
    e. Through the review process, Blocks A and B have gotten switched. Plat Notes 9 & 10 do not match the plat when referencing the bungalow lots and panhandle lots. Change the plat graphic to match the plat notes or vice versa.
    f. Prior to final plat recording, remove setbacks, wetlands, drainage, and contours from plat graphic and legend.

g. On all pages, use a dashed font to label the original TRACT B.
h. Add the following Plat Note: "Further Subdivision of Tract B-1, Richland Manor 2 Subdivision shall require City & Borough of Juneau Preliminary Platting Requirements indicating adequate access for all lots created in Phase 1, Richland Manor Subdivision 2, and all future Phases."

2. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.

3. The developer shall use Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.

4. The average daily trips (ADT) generated by Phase 1, Richland Manor 2 Subdivision, and all future phases will be included in the ADT's generated by any future development of Tract B1.

5. A Hillside Development Permit may be required if triggered by CBJ 49.70.210(a)(1-5).

6. Sidewalks on both sides of the street are required for Phase 1.

7. All future phases of development may require wetlands delineation.

8. For each pair of panhandle lots sharing a driveway, the applicant must provide a maintenance agreement that is recorded with the subdivision, on forms acceptable to the director, ensuring the required access and parking areas will be constructed and maintained by all future property owners. The applicant shall also create a plat note referencing the easements.

9. The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway shall be paved, whichever length is greater, for all panhandle lots created with this subdivision.

10. The applicant shall construct, or bond for, street lights at each intersection in this subdivision with spacing between lights not to exceed 250 feet.

11. Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.

12. A driveway and parking plan that shows the feasibility of off-street parking shall be submitted and approved by the Director prior to recording the plat.

13. The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue requirements in each dwelling unit within this subdivision.

14. The sketch plat shall be amended to show a future connection to Hooter Lane from Hillcrest Avenue.

15. The applicant must submit a drainage plan showing how drainage will flow from the subdivision to Glacier Highway; this drainage plan must be approved by the CBJ Engineering & Public Works Department. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

16. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to CDD for review by the Director of Engineering & Public Works for compliance with 49.35.140.

17. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to CDD and reviewed and approved by CDD and CBJ Engineering & Public Works.

18. Prior to final plat approval, the applicant must construct, and/or bond for, all required public utilities and improvements.

Attachment: February 14, 2019 memorandum from Laurel Bruggeman, Community Development, to the CBJ Planning Commission regarding SMP2018 0002.

This Notice of Decision does not authorize any construction. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance to CBJ 01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ 01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ 49.20.120).

Effective Date: The permit is effective upon approval by the Commission, February 26, 2019.

Expiration Date: The permit will expire five (5) years after the effective date, or February 26, 2024, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the subdivision permit was authorized or no final plat has been approved. Application for permit extension must be submitted thirty days prior to the expiration date.

Project Planner: _____

Laurel Bruggeman, Planner
Community Development Department

Benjamin Haight, Chair
Planning Commission

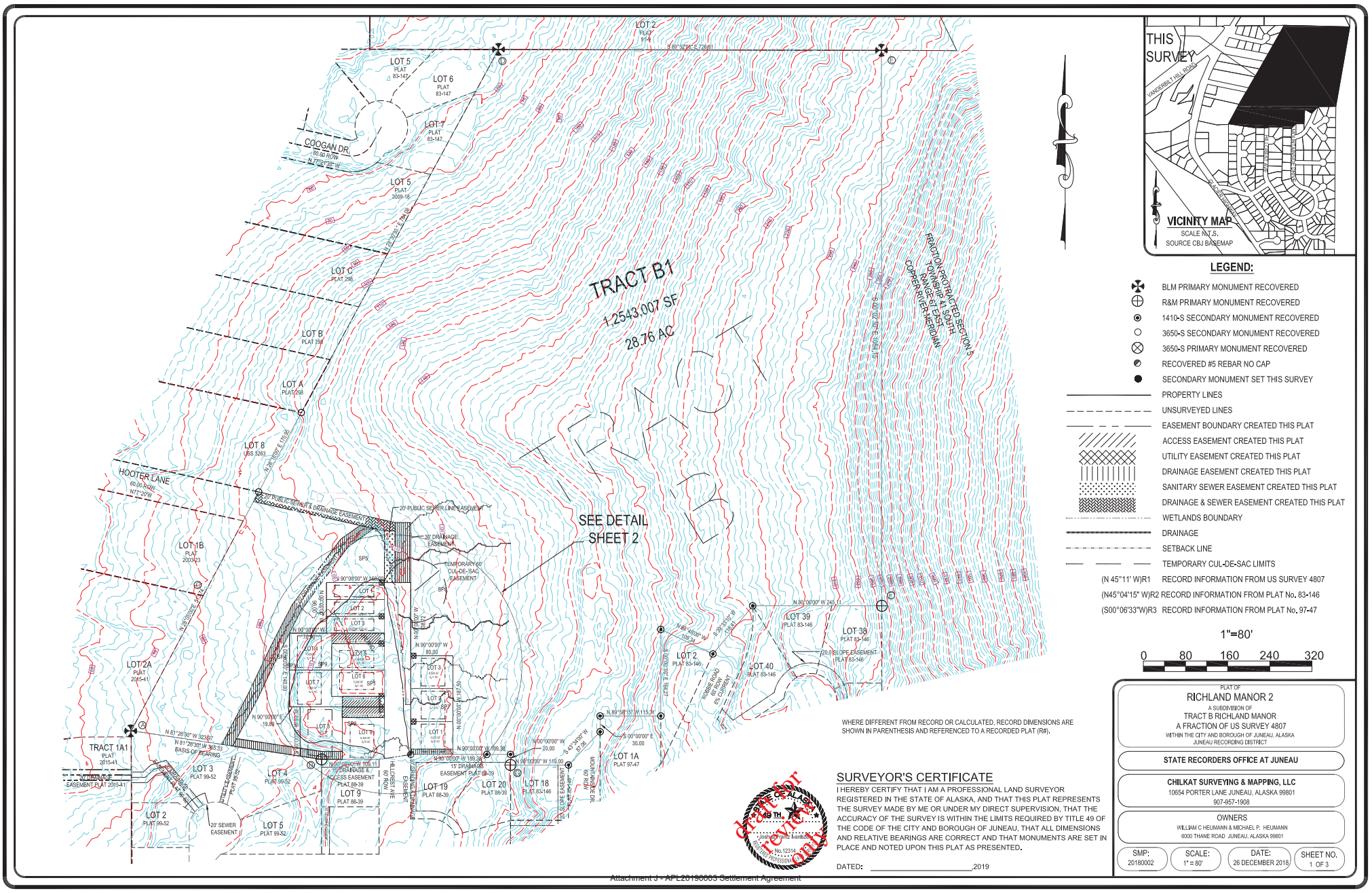
Filed With Municipal Clerk

3/5/2019
Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this subdivision. ADA regulations have access requirements above and beyond CBJ - adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.

EXHIBIT A



LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 3650-S SECONDARY MONUMENT RECOVERED
- 3650-S PRIMARY MONUMENT RECOVERED
- RECOVERED #5 REBAR NO CAP
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY CREATED THIS PLAT
- ACCESS EASEMENT CREATED THIS PLAT
- UTILITY EASEMENT CREATED THIS PLAT
- DRAINAGE EASEMENT CREATED THIS PLAT
- SANITARY SEWER EASEMENT CREATED THIS PLAT
- DRAINAGE & SEWER EASEMENT CREATED THIS PLAT
- WETLANDS BOUNDARY
- DRAINAGE
- SETBACK LINE
- TEMPORARY CUL-DE-SAC LIMITS
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47

1"=80'

0 80 160 240 320

WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

Joseph Frantz Hanks
No. 12314
PROFESSIONAL LAND SURVEYOR

Clerk's Review Only

PLAT OF
RICHLAND MANOR 2
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

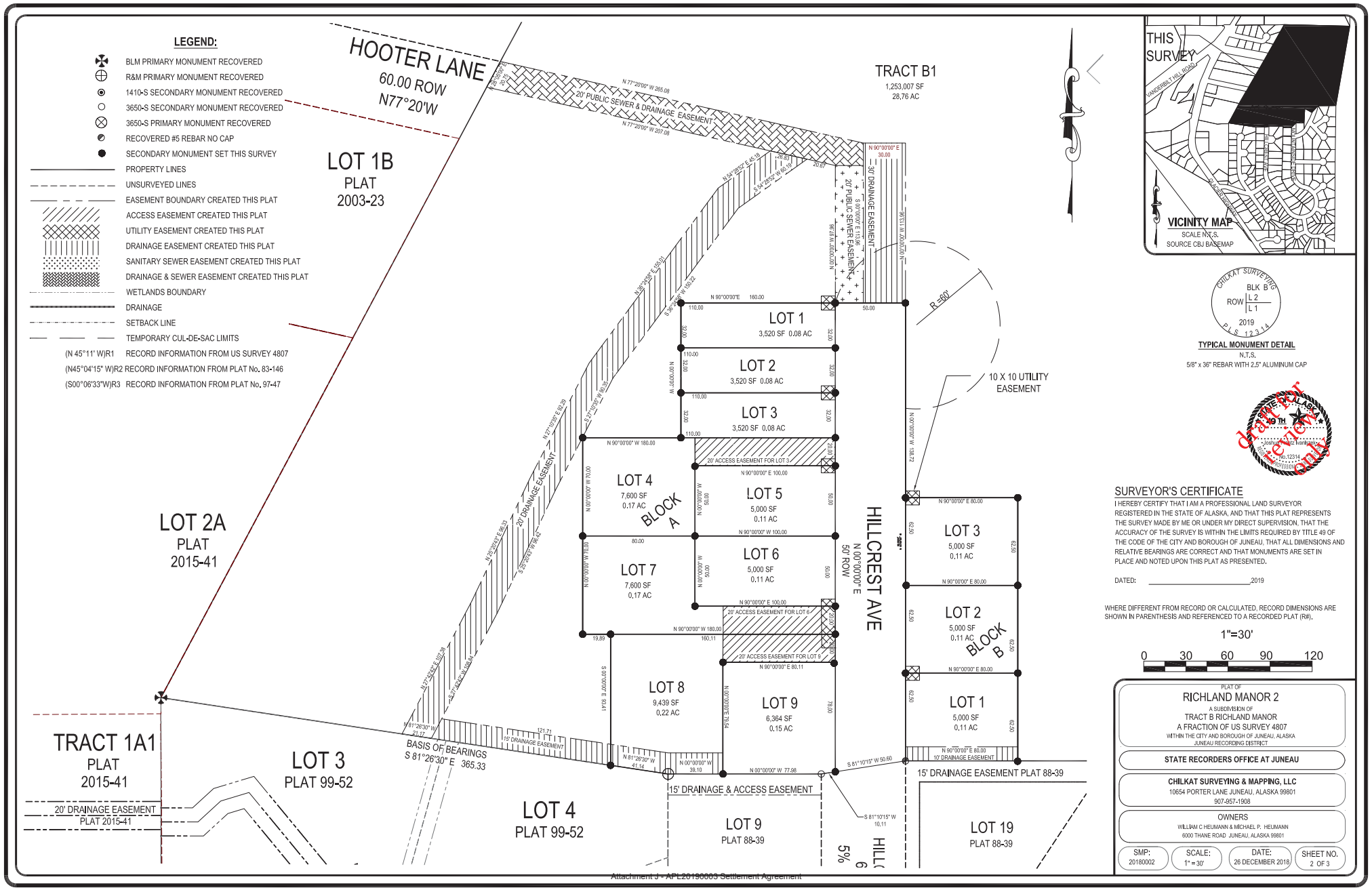
STATE RECORDERS OFFICE AT JUNEAU

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

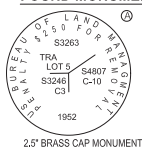
SMP:	SCALE:	DATE:	SHEET NO.
20180002	1" = 80'	26 DECEMBER 2018	1 OF 3

Attachment E - SMF20-01 – Phase 1 Plat

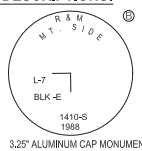


Attachment E - SMF20-01 – Phase 1 Plat

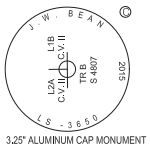
FOUND MONUMENT DESCRIPTIONS:



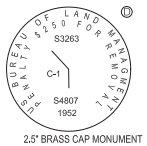
A
2.5" BRASS CAP MONUMENT



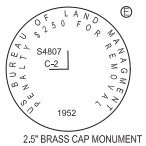
B
3.25" ALUMINUM CAP MONUMENT



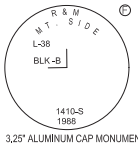
C
3.25" ALUMINUM CAP MONUMENT



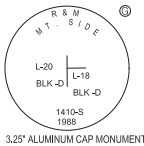
D
2.5" BRASS CAP MONUMENT



E
2.5" BRASS CAP MONUMENT



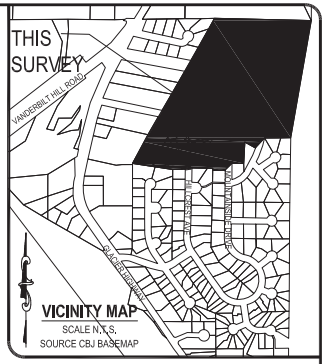
F
3.25" ALUMINUM CAP MONUMENT



G
3.25" ALUMINUM CAP MONUMENT

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 3650-S SECONDARY MONUMENT RECOVERED
- 3650-S PRIMARY MONUMENT RECOVERED
- RECOVERED #5 REBAR NO CAP
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY CREATED THIS PLAT
- ACCESS EASEMENT CREATED THIS PLAT
- UTILITY EASEMENT CREATED THIS PLAT
- DRAINAGE EASEMENT CREATED THIS PLAT
- SANITARY SEWER EASEMENT CREATED THIS PLAT
- DRAINAGE & SEWER EASEMENT CREATED THIS PLAT
- WETLANDS BOUNDARY
- DRAINAGE
- SETBACK LINE
- TEMPORARY CUL-DE-SAC LIMITS
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47



PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____ , DATED _____ , 2019_____ , AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, JUNEAU, ALASKA.

_____DATED _____ , 2019

CHAIRMAN OF THE PLANNING COMMISSION

CITY AND BOROUGH OF JUNEAU

ATTEST:

_____

MUNICIPAL CLERK

CITY AND BOROUGH OF JUNEAU

OWNERSHIP CERTIFICATE:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____,2019

_____ _____

WILLIAM C. HEUMANN MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS___ DAY OF _____, 2019, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____

NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015 ON FILE WITH IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER RICHLAND MANOR II SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET AS APPROVED BY CBJ ENGINEERING. . ALL REQUIRED RICHLAND MANOR II SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12 EXCAVATION AND GRADING CODE.

8) OTHER THAN AS SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10FT IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

9) LOTS 1 , 2, AND 3 BLOCK B ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 1 & 2 & 3 BLOCK B ARE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT: OTHER DEVELOPMENT RESTRICTIONS APPLY, SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

10) LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B ARE PANHANDLE LOTS. AT THE TIME OF PLAT RECORDING, FURTHER SUBDIVISION OF LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B IS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

11) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

11) TOPOGRAPHY DERIVED FROM WATERSHED SCIENCES, INC CBJ LIDAR AND IMAGERY PROJECT DATA COLLECTED MAY 2013 2' CONTOURS.

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF N 81°26'30" W AS DELINEATED ON THE OFFICIAL PLAT OF VANDERBILT HILL SUBDIVISION, DATED 29 OCTOBER 1999, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK THE NW CORNER OF LOT 3 AND THE NE CORNER OF LOT 4, VANDERBILT HILL SUBDIVISION AS SHOWN ON THIS PLAT.

0 80 160 240 320

1"=80'

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____2019



GRANT SEOR
REVIEW COPY

PLAT OF
RICHLAND MANOR 2
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT JUNEAU

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20180002	1" = 30'	26 DECEMBER 2018	3 OF 3

Attachment E - SMF20-01 – Phase 1 Plat

Date: 24 JANUARY 2019

To: CBJ COMMUNITY DEVELPOMENT DEPARTMENT
155 SOUTH SEWARD ST.
Juneau, Alaska 99801

Subject: Lot closure reports

Remarks: The lot closure reflects the proposed subdivision of Richland Manor II

BLOCK A
Lot 1

Northing	Easting	Bearing	Distance
2379490.480	2527711.091		
		N 90°00'00" W	110.000
2379490.480	2527601.091		
		N 00°00'00" W	32.000
2379522.480	2527601.091		
		N 90°00'00" E	110.000
2379522.480	2527711.091		
		S 00°00'00" E	32.000
2379490.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 284.000
Polyline Area: 3520 sq ft, 0.08 acres

Lot 2

Northing	Easting	Bearing	Distance
2379458.480	2527711.091		
		N 90°00'00" W	110.000
2379458.480	2527601.091		
		N 00°00'00" W	32.000
2379490.480	2527601.091		
		N 90°00'00" E	110.000
2379490.480	2527711.091		
		S 00°00'00" E	32.000
2379458.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 284.000
Polyline Area: 3520 sq ft, 0.08 acres

Lot 3

Northing	Easting	Bearing	Distance
2379426.480	2527711.091		
		N 90°00'00" W	110.000
2379426.480	2527601.091		
		N 00°00'00" W	32.000
2379458.480	2527601.091		
		N 90°00'00" E	110.000
2379458.480	2527711.091		
		S 00°00'00" E	32.000
2379426.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 284.000
Polyline Area: 3520 sq ft, 0.08 acres

Lot4

Northing	Easting	Bearing	Distance
2379406.480	2527711.091		
		N 90°00'00" W	100.000
2379406.480	2527611.091		
		S 00°00'00" E	50.000
2379356.480	2527611.091		
		N 90°00'00" W	80.000
2379356.480	2527531.091		
		N 00°00'00" W	70.000
2379426.480	2527531.091		
		N 90°00'00" E	180.000
2379426.480	2527711.091		
		S 00°00'00" E	20.000
2379406.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 500.000
Polyline Area: 7600 sq ft, 0.17 acres

Lot 5

Northing	Easting	Bearing	Distance
2379356.480	2527611.091		
		N 00°00'00" W	50.000
2379406.480	2527611.091		
		N 90°00'00" E	100.000
2379406.480	2527711.091		
		S 00°00'00" E	50.000
2379356.480	2527711.091		
		N 90°00'00" W	100.000
2379356.480	2527611.091		

Closure Error Distance> 0.00000
Total Distance> 300.000
Polyline Area: 5000 sq ft, 0.11 acres

Lot 6

Northing	Easting	Bearing	Distance
2379306.480	2527611.091		
		N 90°00'00" E	100.000
2379306.480	2527711.091		
		N 00°00'00" W	50.000
2379356.480	2527711.091		
		N 90°00'00" W	100.000
2379356.480	2527611.091		
		S 00°00'00" E	50.000
2379306.480	2527611.091		

Closure Error Distance> 0.00000
Total Distance> 300.000
Polyline Area: 5000 sq ft, 0.11 acres

Lot 7

Northing	Easting	Bearing	Distance
2379286.480	2527711.091		
		N 90°00'00" W	180.000
2379286.480	2527531.091		
		N 00°00'00" W	70.000
2379356.480	2527531.091		
		N 90°00'00" E	80.000
2379356.480	2527611.091		
		S 00°00'00" E	50.000
2379306.480	2527611.091		
		N 90°00'00" E	100.000
2379306.480	2527711.091		
		S 00°00'00" E	20.000
2379286.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 500.000
Polyline Area: 7600 sq ft, 0.17 acres

Lot 8

Northing	Easting	Bearing	Distance
2379266.480	2527711.091		
		N 00°00'00" W	20.000
2379286.480	2527711.091		
		N 90°00'00" W	160.109
2379286.480	2527550.982		
		S 00°00'00" E	93.380
2379193.100	2527550.982		
		S 81°26'30" E	41.359
2379186.946	2527591.880		
		N 90°00'00" E	39.100
2379186.946	2527630.980		
		N 00°00'00" W	79.535
2379266.480	2527630.980		
		N 90°00'00" E	80.111
2379266.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 513.594
Polyline Area: 9439 sq ft, 0 acres

Lot 9

Northing	Easting	Bearing	Distance
2379186.946	2527701.100		
		N 90°00'00" W	70.120
2379186.946	2527630.980		
		N 00°00'00" W	79.535
2379266.480	2527630.980		
		N 90°00'00" E	80.111
2379266.480	2527711.091		
		S 00°00'00" E	77.983
2379188.497	2527711.091		
		S 81°10'15" W	10.110
2379186.946	2527701.100		

Closure Error Distance> 0.00000
Total Distance> 317.859
Polyline Area: 6364 sq ft, 0 acres

BLOCK B
Lot 1

Northing	Easting	Bearing	Distance
2379196.264	2527761.091		
		N 00°00'00" W	62.500
2379258.764	2527761.091		
		N 90°00'00" E	80.000
2379258.764	2527841.091		
		S 00°00'00" E	62.500
2379196.264	2527841.091		
		N 90°00'00" W	80.000
2379196.264	2527761.091		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0 acres

Lot 2

Northing	Easting	Bearing	Distance
2379258.764	2527761.091		
		N 00°00'00" W	62.500
2379321.264	2527761.091		
		N 90°00'00" E	80.000
2379321.264	2527841.091		
		S 00°00'00" E	62.500
2379258.764	2527841.091		
		N 90°00'00" W	80.000
2379258.764	2527761.091		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0 acres

Lot 3

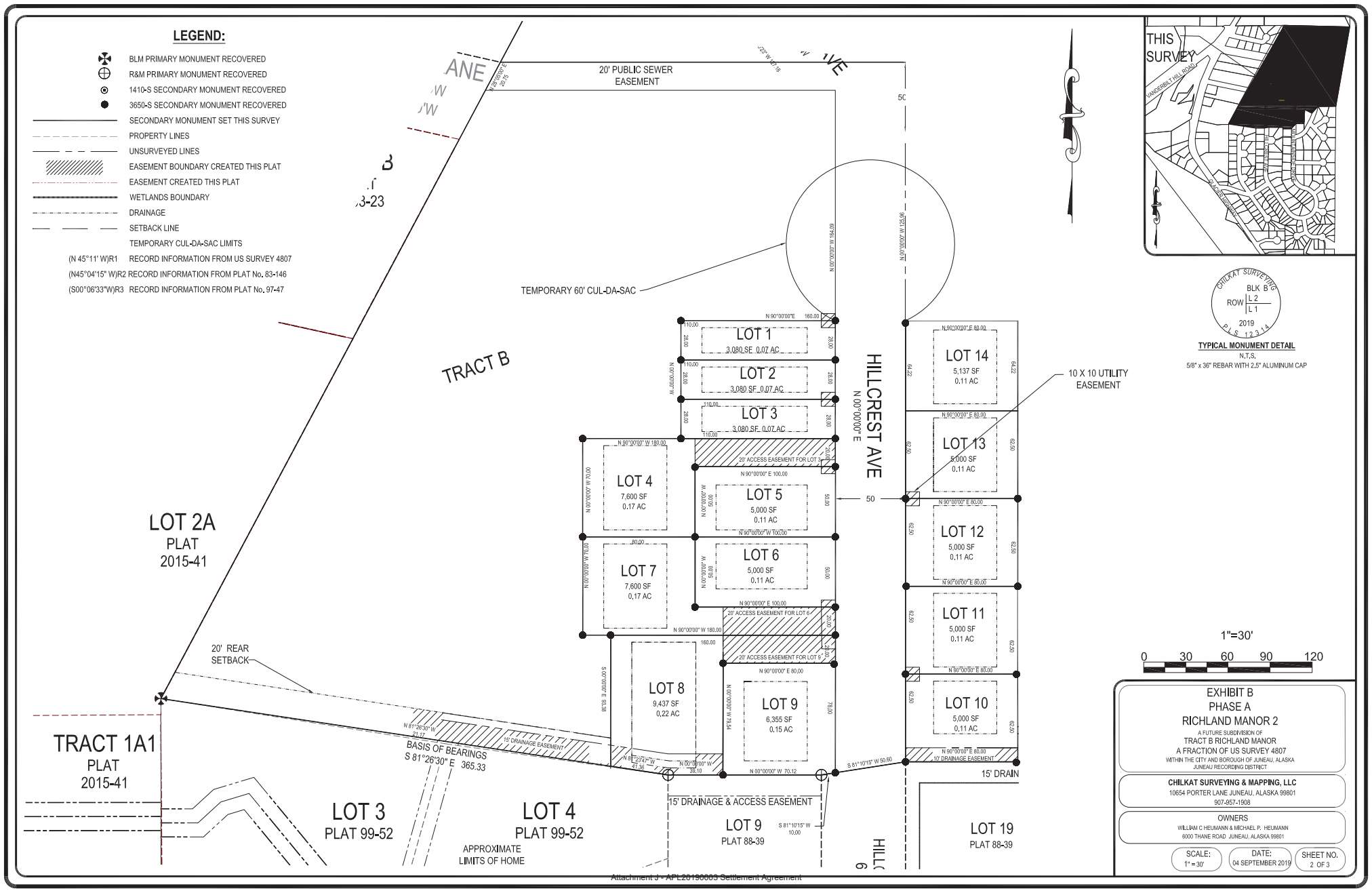
Northing	Easting	Bearing	Distance
2379321.264	2527761.091		
		N 00°00'00" W	62.500
2379383.764	2527761.091		
		N 90°00'00" E	80.000
2379383.764	2527841.091		
		S 00°00'00" E	62.500
2379321.264	2527841.091		
		N 90°00'00" W	80.000
2379321.264	2527761.091		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0 acres

Tract B1

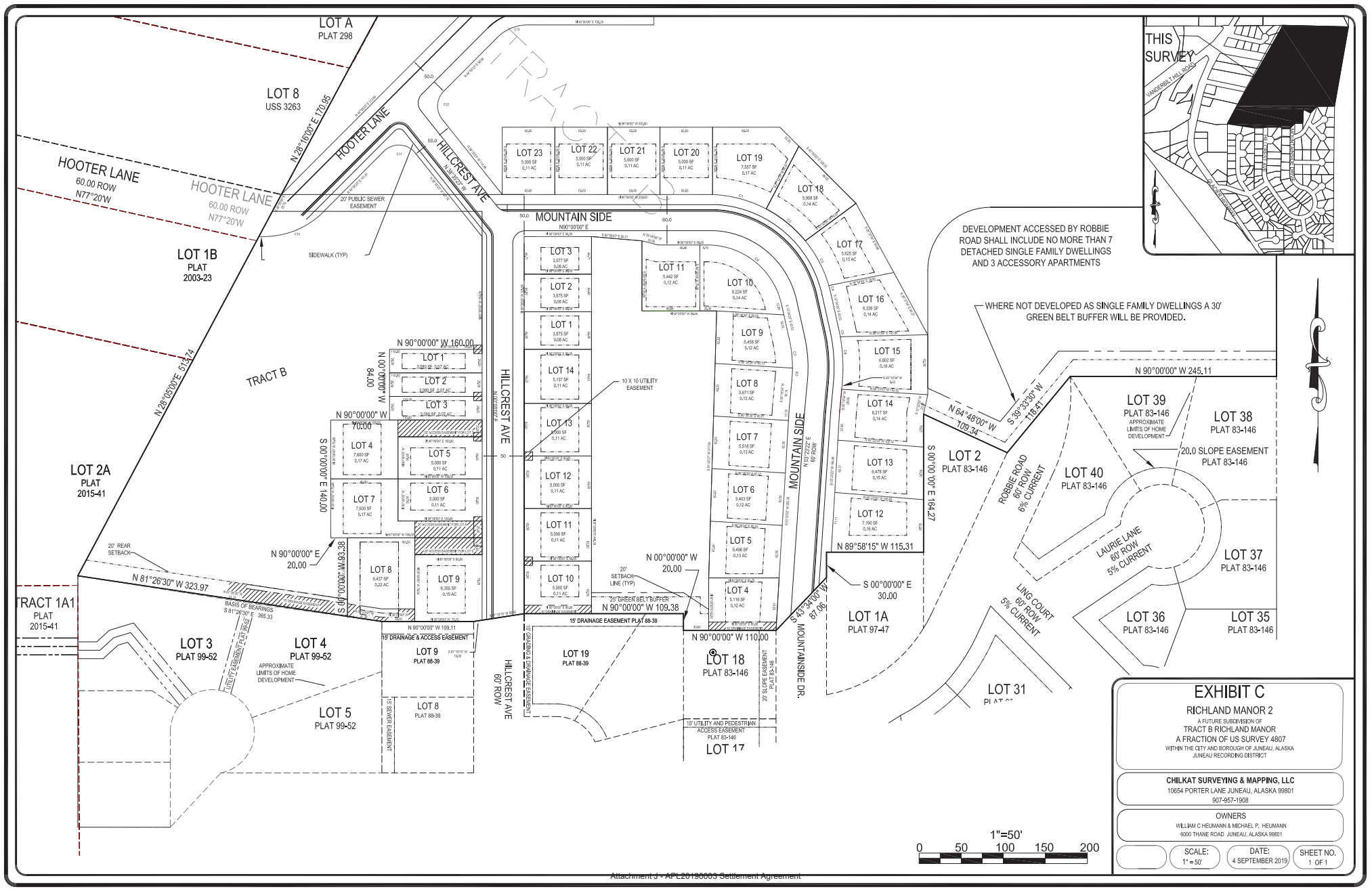
Northing	Easting	Bearing	Distance
2379193.100	2527550.982		
		N 81°26'30" W	323.971
2379241.313	2527230.618		
		N 28°05'00" E	513.740
2379694.567	2527472.464		
		N 28°16'00" E	170.950
2379845.132	2527553.422		
		N 28°30'30" E	784.080
2380534.140	2527927.653		
		S 89°52'00" E	726.810
2380532.449	2528654.461		
		S 00°02'30" E	1054.150
2379478.299	2528655.227		
		N 90°00'00" W	245.110
2379478.299	2528410.117		
		S 39°33'10" W	118.408
2379387.002	2528334.716		
		N 64°48'00" W	109.340
2379433.556	2528235.782		
		S 00°00'00" E	164.270
2379269.286	2528235.782		
		N 89°58'15" W	115.310
2379269.345	2528120.472		
		S 00°00'00" E	30.000
2379239.345	2528120.472		
		S 43°34'00" W	87.060
2379176.264	2528060.471		
		N 90°00'00" W	110.000
2379176.264	2527950.471		
		N 00°00'00" W	20.000
2379196.264	2527950.471		
		N 90°00'00" W	109.380
2379196.264	2527841.091		
		N 00°00'00" W	187.500
2379383.764	2527841.091		
		N 90°00'00" W	80.000
2379383.764	2527761.091		
		N 00°00'00" W	138.720
2379522.484	2527761.091		
		N 90°00'00" W	160.000
2379522.484	2527601.091		
		S 00°00'00" E	96.000
2379426.484	2527601.091		
		N 90°00'00" W	70.000
2379426.484	2527531.091		
		S 00°00'00" E	140.000
2379286.484	2527531.091		
		N 90°00'00" E	19.890
2379286.484	2527550.981		
		S 00°00'00" E	93.383
2379193.101	2527550.981		

Closure Error Distance> 0.00090 Error Bearing> S 81°26'30" E
Closure Precision> 1 in 6266245.1 Total Distance> 5668.072
Polyline Area: 1253007 sq ft, 29 acres



Attachment E - SMF20-01 – Phase 1 Plat

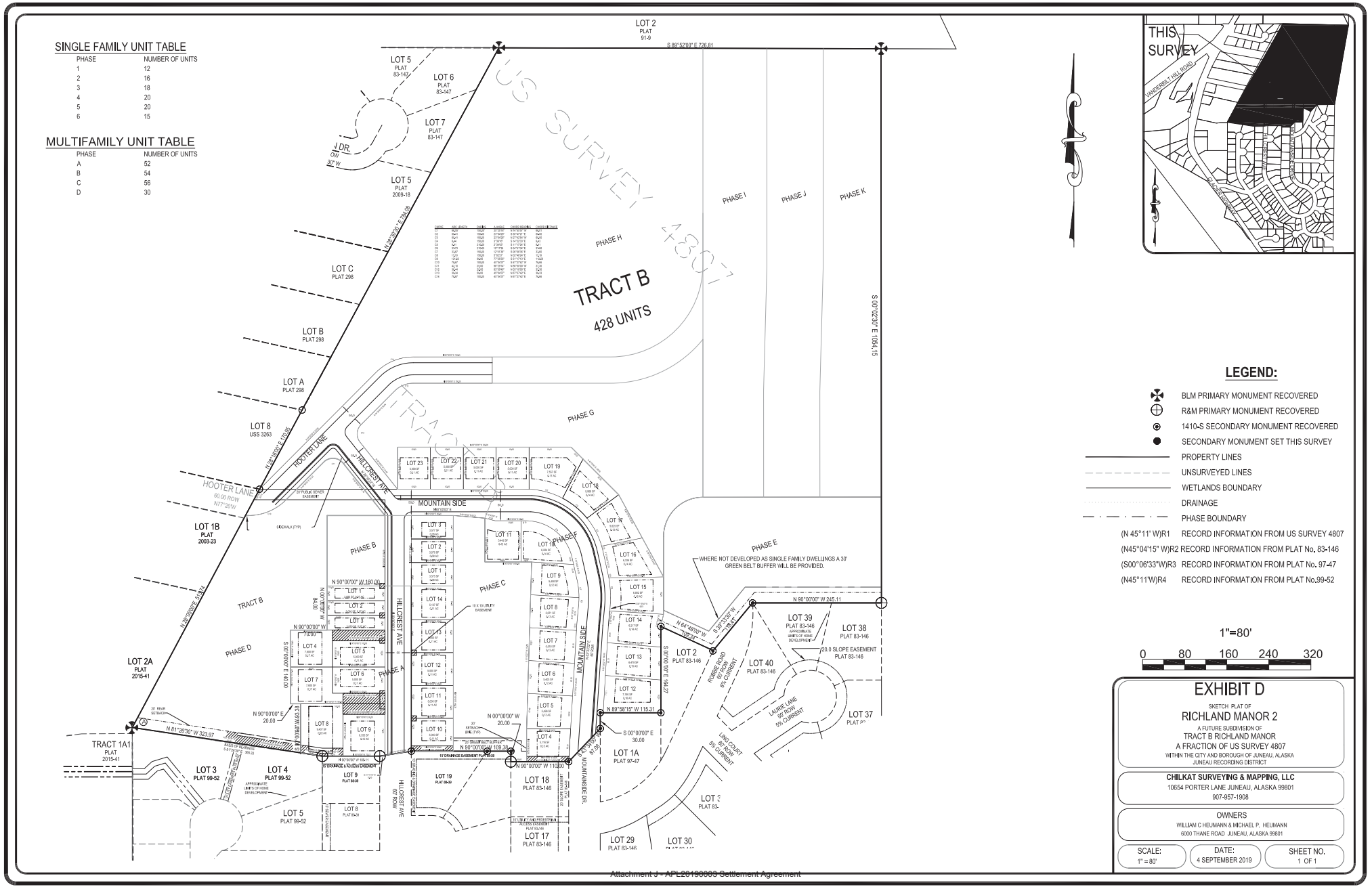
EXHIBIT C



Attachment J - APL20190003 Settlement Agreement

Attachment E - SMF20-01 – Phase 1 Plat

EXHIBIT D



Attachment J - APL20190003 Settlement Agreement

Attachment E - SMF20-01 – Phase 1 Plat

Planning Commission

(907) 586-0715
PC_Comments@juneau.org
www.juneau.org/plancomm
155 S. Seward Street • Juneau, AK 99801

PLANNING COMMISSION
NOTICE OF DECISION
Date: February 22, 2022
File No.: SMP2021 0004

William & Michael Heumann
6000 Thane Road
Juneau, AK 99801

Proposal:	Preliminary plat review for Chilkat Subdivision Phase II: Proposing subdivision of one tract into 13 lots and three tracts of land at Hillcrest Avenue in a D15 zone.
Property Address:	Hillcrest Avenue
Legal Description:	Chilkat Vistas Tract A
Parcel Code No.:	7B1001160011
Hearing Date:	February 8, 2022

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated February 1, 2022, and APPROVED the preliminary plat to be conducted as described in the project description and project drawings submitted with the application and with the following conditions:

1. Provide a wetlands fill permit from the United States Army Corps of Engineers.
2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.
3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the Director of Engineering & Public Works for compliance with CBJ 49.35.140.
4. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.
5. Prior to approval of the final plat, the developer shall submit a final drainage plan to be approved by CBJ Engineering & Public Works. This drainage plan must be prepared by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

Attachment: February 1, 2022 memorandum from Irene Gallion, Community Development, to the CBJ Planning Commission regarding SMP2021 0004.

This Notice of Decision does not authorize any construction. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance to CBJ 01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ 01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ 49.20.120).

Effective Date: The permit is effective upon approval by the Commission, February 8, 2022.

Expiration Date: The permit will expire five (5) years after the effective date, or February 8, 2027, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the subdivision permit was authorized or no final plat has been approved. Application for permit extension must be submitted thirty days prior to the expiration date.

Michael LeVine, Chair
Planning Commission

February 25, 2022
Date

Filed With City Clerk

February 25, 2022
Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this subdivision. ADA regulations have access requirements above and beyond CBJ - adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

PLANNING COMMISSION STAFF REPORT
MAJOR SUBDIVISION SMP2021 0004
HEARING DATE: FEBRUARY 8, 2022

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

DATE: February 1, 2022

TO: Michael LeVine, Chair, Planning Commission

BY: Irene Gallion, Senor Planner

THROUGH: Jill Maclean, Director, AICP

PROPOSAL: Applicant requests a preliminary plat review for Chilkat Subdivision Phase II: Proposing subdivision of one tract into fifteen (15) lots and three (3) tracts of land at Hillcrest Avenue in a D15 zone.

STAFF RECOMMENDATION: Approval with conditions

KEY CONSIDERATIONS FOR REVIEW:

- Dense development with nine bungalow lots and four regular lots (total of 13).
- Roadway and sidewalk standards established in Phase I.
- Construction and drainage plans will be submitted and reviewed after the preliminary plat is approved.

GENERAL INFORMATION	
Property Owner	William & Michael Heumann
Applicant	William & Michael Heumann
Property Address	Hillcrest Avenue
Legal Description	Chilkat Vistas Tract A
Parcel Number	7B1001160011
Zoning	D15
Lot Size	1,242,513 square feet, 28.5242 acres
Water/Sewer	CBJ, to be constructed
Access	Hillcrest Avenue
Existing Land Use	Vacant
Associated Applications	SMP2019 0004/SMF2020 0001

ALTERNATIVE ACTIONS:

1. **Amend:** require additional conditions, or delete or modify the recommended conditions.
2. **Deny:** deny the permit and adopt new findings for items 1-6 below that support the denial.
3. **Continue:** to a future meeting date if determined that additional information or analysis is needed to make a decision, or if additional testimony is warranted.

ASSEMBLY ACTION REQUIRED:

Assembly action is not required for this permit.

STANDARD OF REVIEW:

- Quasi-judicial decision
- Requires five (5) affirmative votes for approval
- Code Provisions:
  - 49.15.402
  - 49.15.411
  - 49.35
  - 49.80

The Commission shall hear and decide the case per *49.15.400(a) - Purpose and applicability.* *The purpose of this article is to facilitate the subdivision of land to promote the public health, safety, and general welfare of the citizens of the CBJ in accordance with the Comprehensive Plan of the City and Borough of Juneau, Alaska.*

And per 49.15.402(a) *A major subdivision permit is required for subdivisions resulting in 14 or more lots.*

SITE FEATURES AND ZONING



SURROUNDING ZONING AND LAND USES	
North (D18)	Vacant
South (D5)	Residential
East (RR)	Tongass National Forest
West (D15)	Residential

SITE FEATURES	
Anadromous	No
Flood Zone	No
Hazard	No
Hillside	Possible
Wetlands	Yes
Parking District	No
Historic District	No
Overlay Districts	No

BACKGROUND INFORMATION

Project Description – This project is Phase II of the Chilkat Vista Subdivision (**Attachment A**). Note that since public notice went out, the subdivision design has been modified to accommodate CBJ feedback. Rather than 15 lots, 13 lots are proposed, in addition to three tracts (**Attachment B**).

The applicant anticipates completing Hooter Lane during this phase.

Background – The table below summarizes relevant history for the lot and proposed development.

Item	Summary
PAC2020 0064	Pre-application conference for Phase II
SMP2019 0004/SMF2020 0001	Phase I of Chilkat Vistas subdivision (**Attachment H**)

ANALYSIS

Phasing – A sketch plat was provided under SMP2019 0004. The Phase II presented in this plat differs from the sketch plat (image below, left), creating some lots along Hillcrest Avenue and modifying some lots originally part of Phase C (image below, right). As a reminder, sketch plats are not binding, and are used to anticipate infrastructure and other needs.



Minimum Lot Dimensions – The proposed lots shown on the preliminary plat meet or exceed the dimensional standards listed in CBJ 49.25.400. The CBJ 49.25.400 Dimensional Standards are listed below.

Standard	Regular Lot Requirement	Bungalow Lot Requirement
Lot size, square feet	5,000	3,000
Lot width, linear feet	50	25

Additionally, bungalow lots:

- Must connect to municipal water and sewer (proposed for construction) [CBJ 49.65.610(a)(1)].
- May be platted without creating standard lots in D15 [CBJ 49.65.610 (a)(3)]
- Must include a plat note limiting structures to one 1,000-square-foot, detached single-family residence per lot [CBJ 49.65.610(a)(4)] (See Note 15 on the Preliminary Plat).

The proposed lots meet lot development standards.

Lot	Lot Type	Square Feet	Width
15	Bungalow	3427	42.84
16	Bungalow	3427	40.84
17	Bungalow	3466	44.47
18	Regular	5107	54.34
19	Regular	5029	53.5
20	Bungalow	4408	73.85
21	Bungalow	3795	45
22	Bungalow	3004	37.5
23	Bungalow	3405	32.2
24	Bungalow	3485	~36 (curve)
25	Regular	5110	54.98
26	Bungalow	3060	34
27	Regular	6445	69.59

Width of the lot is measured at the setback line. **Attachment C** shows setback and width for lots 17, 20, 24, 25, and 27.

Lot 18 includes a drainage easement 15 feet wide and 94 feet long, impacting possible development on 1,410 square feet of the lot.

Density – Bungalow lots are limited to one residential structure of 1,000 square feet, with no more than 300 additional square feet for storage [CBJ 49.65.630(a)]. Accessory apartments, mobile homes, and recreational vehicles are prohibited [CBJ 49.65.630(b)].

Regular lot density is based on acreage under D15 zoning [CBJ 49.25.500].

Lot	Lot Type	Acres	Units Allowed
18	Regular	0.12	2
19	Regular	0.12	2
25	Regular	0.12	2
27	Regular	0.15	2

Habitat – No anadromous resources exist on this lot.

Application materials included a delineation showing that proposed Phase II will impact a conifer wetland boundary and alder wetland boundary. The applicant is in the process of pursuing a Wetlands Fill Permit with the United States Army Corps of Engineers.

Condition: None.

Plat Note: WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. (Note 8 on the draft plat).

Hazard Zones – The lots are located outside of mapped hazard areas.

A Hillside Endorsement will be required for excavation or creation of 18 percent slopes [CBJ 49.70.210]. Topography provided in CBJ's Parcel Viewer indicates that some lots may have slopes of 18 percent or more.

The Hillside Endorsement requires a soils analysis, and CDD has granted grading permits in order to collect this data. A subsequent building permit will be required to meet the standards of the Hillside Endorsement if applicable. Hillside Endorsements include engineered plans, a geotechnical memo, and explicit direction on landscaping.

A construction plan will be submitted before final plat approval, and will provide more information on slopes.

Condition: None.

Plat Note: None.

LOT DESIGN

Bungalow Lots – LOTS 15, 16, 17, 20, 21, 22, 23, 24, and 26.

Standard	Requirement	Met?	Conditions and Plat Notes
49.65.600(a)(1) Public Water and Sewer	Bungalow lots must be provided public water and sewer.	☒Meets/Exceeds ☐Not met	*Developer will construct water and sewer, which will be accepted for ownership and maintenance by CBJ if standards are met.*
49.65.600(a)(1) Publically Maintained Roads	Bungalow lots must be served by publically maintained roads.	☒Meets/Exceeds ☐Not met	*Developer will construct roads, which will be accepted for ownership and maintenance by CBJ if standards are met.*
49.65.600(a)(4) Plat Note Required	A Bungalow lot plat note has been required that lists the restrictions on the size of the residence.	☒Meets/Exceeds ☐Not met	**Plat Note:** LOTS 15, 16, 17, 20, 21, 22, 23, 24, AND 26 ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 15, 16, 17, 20, 21, 22, 23, 24, AND 26 WERE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT; OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS. (See note 15 on the Draft Plat.

TRAFFIC

Traffic – According to CBJ 49.40.300(a)(3), a traffic impact analysis may be required. For projected Average Annual Daily Traffic (AADT) between 250 and 500, the Director will determine if an analysis is necessary based on type of development, location, likelihood of expansion, and other factors that may impact traffic.

Total Average Annual Daily Traffic (AADT) is 356.79 for Phase I and Phase II.

Phase 1 Lot Number	Total # of Dwellings per lot	ADTs
1, 2, 3 (Bungalow Lots)	1 Single-family	9.52 x 3 = 28.56
4, 5, 6, 7, 8, 9 10, 11, 12, 13, 14	1 Single-family and 1 accessory apartment	16.17 x 11 = 177.87
		TOTAL: 206.43 ADTs

Phase 2 Lot Number	Total # of Dwellings per lot	ADTs
LOTS 15, 16, 17, 20, 21, 22, 23, 24, AND 26 (Bungalow Lots)	1 Single-family	9.52 x 9 = 85.68
18, 19, 25 and 27 (Regular Lots)	1 Single-family and 1 accessory apartment	16.17 x 4 = 64.68
		TOTAL: 150.36 ADTs

The applicant submitted a Traffic Impact Analysis under Phase I (**Attachment D**). That analysis considered the impact of an eventual 47 single-family structures and 356 multi-family units.

Condition: None.

Plat Note: None.

ACCESS AND PUBLIC IMPROVEMENTS

Conformance with roadway construction standards will be confirmed when the applicant submits a construction plan, after approval of the Preliminary Plat. Roadway construction standards for this project are [CBJ 49.35.240]:

ADTs	TIA	Sidewalks	Travel Way Width	Street Lights	ROW Width	Paved	Publically Maintained
150	See above	See below	22 feet	Yes	See below	Yes	Yes

Access – Per 49.35.250(a), staff has determined that the primary access to the subdivision is Hillcrest Avenue. The applicant has demonstrated that each lot will have direct and practical access to a public right-of-way through the frontage of the lot, as required in 49.35.250(b).

Lot Number	Primary access
15, 16, 17[A], 18, 19, 20, 21[B], 25[A], 26, 27A	Hillcrest Avenue
21[B], 22, 23, 24	Hooter lane

A: Corner lot fronts Hillcrest Avenue, therefore cul de sacs are not required at the end of Hooter Lane or the eventual entrance to Mountainside Drive.
B: Lot 21 can access Hooter Lane or Hillcrest Avenue if driveway setbacks from the intersection can be met.

49.35.240 Table of Roadway Construction Standards – Under Phase I, right-of-way width was reduced from a required 60 feet to 50 feet with the Department of Engineering and Public Works' (E&PW) approval. Per that

approval, "…remaining phases shall also be constructed at a width of 50 feet unless further engineering indicates this is not feasible."

Condition: None.

Plat Note: None.

Pedestrian Access – Phase II development would not, in itself, generate enough ADT to require sidewalks. However, under Phase I, E&PW approved sidewalks on one side of the street. This standard is consistent with the Mountainside Subdivision, and with the Hooter Lane right-of-way requirement for sidewalk on one side.

Condition: None.

Plat Note: None.

Street Lighting – Streetlights are required at the intersection of subdivision streets and the external street system. A luminaire is 50 feet from the Hooter Lane/Tamarack Trails Driveway.

Condition: None.

Plat Note: None.

Drainage – E&PW will conduct a formal review of the proposed drainage plan after approval of the preliminary plat. As part of the permitting process for Hooter Lane, Alaska Department of Transportation and Public Facilities has proposed a drainage plan for the intersection with Old Glacier Highway.

Condition: None.

Plat Note: None.

Fire Code Improvements – Construction plans will be reviewed when they are submitted after the Preliminary Plat approval. Phase 2 was designed so that lots front onto Hooter Lane or Hillcrest Avenue, both of which are slated for construction during this phase. No *cul de sacs* are required.

Condition: None.

Plat Note: None.

AGENCY REVIEW

CDD conducted an agency review comment period between August 24, 2021 and January 16, 2022. Discussions with E&PW are extensive and on-going. Other agency review comments can be found in **Attachment E**.

Agency	Summary
Alaska Department of Environmental Conservation	No requirements for review of subdivision or platting.

Agency	Summary
United States Postal Service	Would like to be involved when closer to construction.
Capital City Fire and Rescue	No concerns at this time.
CBJ Building Division	No issues at this time.
Alaska Department of Transportation and Public Facilities	Have permitted Hooter Lane improvements at Glacier Highway, pending signatures from the applicant.

PUBLIC COMMENTS

CDD conducted a public comment period between January 5, 2022 and February 4, 2022. Public notice was mailed to property owners within 500 feet of the lot (**Attachment F**). A public notice sign was also posted on site two weeks prior to the scheduled hearing (**Attachment G**). Staff received one request for information, and no comments.

FINDINGS

Major Subdivision Preliminary Plat Approval Criteria – Per CBJ 49.15.402(c)(4), the Director makes the following findings on the proposed development:

1. ***Does the preliminary plat comply with CBJ 49.15.411?***

   Analysis: No additional analysis needed.

   Finding: Yes. With recommended conditions, the preliminary plat complies with preliminary platting requirements listed in CBJ 49.15.411.

2. ***Will applicable subdivision development standards be met, or can reasonably be met with conditions?***

   Analysis: The applicant is required to install lighting, sidewalks, and a 22-foot-wide travelled way.

   Finding: Yes. With recommended conditions, all applicable subdivision development standards can be reasonably met.

3. ***Will the proposed subdivision provide suitable building sites for the zoning district?***

   Analysis: Lots created through this subdivision meet minimum dimensional requirements for the D15 zoning district, and can reasonably meet setback and other dimensional requirements.

   Finding: Yes. The proposed subdivision provides building sites suitable for the D15 zoning district.

4. ***Will the proposed street names be unique or continuations of existing streets?***

   Analysis: None required.

   Finding: Yes. Proposed street names are extensions of existing streets.

5. Has the director of Engineering and Public Works reviewed the application and determined that:

(i) The subdivision can be constructed to conform to applicable drainage and water quality requirements;

(ii) The streets, pioneer paths, and pedestrian ways as proposed accommodate anticipated traffic, align with, and, where appropriate, connect with streets and pedestrian ways serving adjacent properties;

(iii) Any proposed improvements conform to the requirements of this Title 49 and can be feasibly constructed; and,

Analysis: A drainage plan will be submitted after approval of the preliminary plat. A construction plan, with details of road, sidewalk, lighting, water and sewer will be submitted and reviewed after approval of the preliminary plat.

Finding: Yes. Engineering and Public Works has reviewed the preliminary plat and supplemental materials, and believes the above criteria can be met.

RECOMMENDATION

Staff recommends the Planning Commission adopt the Director's analysis and findings and APPROVE the requested preliminary plat for the Chilkat Subdivision Phase II: Proposing subdivision of one tract into fifteen (15) lots and three (3) tracts of land at Hillcrest Avenue in a D15 zone. This permit would allow the applicant to submit for the final plat application.

This approval is subject to the following conditions:

1. Provide a wetlands fill permit from the United States Army Corps of Engineers.
2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.
3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the director of Engineering & Public Works for compliance with CBJ 49.35.140.
4. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.
5. Prior to approval of the final plat, the developer shall submit a final drainage plan to be approved by CBJ Engineering & Public Works. This drainage plan must be prepared by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

STAFF REPORT ATTACHMENTS

Item	Description
Attachment A	Application Packet
Attachment B	Preliminary Plat
Attachment C	Setbacks and Lot Width
Attachment D	Traffic Impact Analysis
Attachment E	Agency Comments
Attachment F	Abutters Notice
Attachment G	Public Notice Sign
Attachment H	Phase I of Chilkat Vistas subdivision

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

DEVELOPMENT PERMIT APPLICATION

NOTE: Development Permit Application forms must accompany all other Community Development Department land use applications.

To be completed by Applicant

PROPERTY LOCATION

Physical Address: 0 Hillcrest Ave.

Legal Description(s) (Subdivision, Survey, Block, Tract, Lot): Tract A Chilkat Vistas Subdivision

Parcel Number(s): 7B1001160011

☐ This property located in the downtown historic district

☐ This property located in a mapped hazard area, if so, which _____

LANDOWNER/ LESSEE

Property Owner	Contact Person	Phone Number(s)
William & Michael Heumann	Michael Heumann	971- 907-723-4540
Mailing Address: 6000 Thane Rd. Juneau 99801		
E-mail Address: chilkatvistas@gmail.com		

LANDOWNER/ LESSEE CONSENT Required for Planning Permits, not needed on Building/ Engineering Permits

I am (we are) the owner(s)or lessee(s) of the property subject to this application and I (we) consent as follows:

A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission.

B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application.

X _____ Landowner/Lessee Signature — 8-12-2021 Date

X _____ Landowner/Lessee Signature — _____ Date

NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.

APPLICANT If the same as OWNER, write "SAME"

Applicant	Contact Person	Phone Number(s)
William & Michael Heumann	Michael Heumann	
Mailing Address		
E-mail Address		

X _____ Applicant's Signature — 8-12-2021 Date of Application

---DEPARTMENT USE ONLY BELOW THIS LINE---

SMP21-04

Intake Initials

This form and all documents associated with it are public record once submitted.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

Case Number

Date Received 8/17/21

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

SUBDIVISION AND DEVELOPMENT PLAN APPLICATION

See subdivision hand-outs for more information regarding the permitting process and the materials required for a complete application.
NOTE: Must be accompanied by a DEVELOPMENT PERMIT APPLICATION form.

To be completed by Applicant

PROJECT SUMMARY

Number of Existing Parcels 1 Total Land Area 28.52 A. Number of Resulting Parcels 18

HAS THE PARCEL BEEN CREATED BY A MINOR SUBDIVISION IN THE PRECEDING 24 MONTHS

(X) NO ( ) YES Case Number _____

TYPE OF SUBDIVISION OR PLATTING APPROVAL REQUESTED

MINOR DEVELOPMENT (changing or creating 13 or fewer lots)	MAJOR DEVELOPMENT (changing or creating 14 or more lots)
(✓) Preliminary Plat (MIP)	(✓) Preliminary Plat (SMP)
( ) Final Plat (MIF)	( ) Final Plat (SMF)
( ) Panhandle Subdivision	( ) Preliminary Development Plan – PUD (PDP)
( ) Accretion Survey	( ) Final Development Plan – PUD (PDF) Preliminary
( ) Boundary Adjustment	( ) Development Plan – ARS (ARP) Final
( ) Lot Consolidation (SLC)	( ) Development Plan – ARS (ARF)
( ) Bungalow Lot Subdivision	( ) Bungalow Lot Subdivision
( ) Common Wall/Zero Lot Subdivision	( ) Common Wall/Zero Lot Subdivision
( ) Other _____	( ) Other _____

ALL REQUIRED DOCUMENTS ATTACHED

- [✓] **Pre-application conference notes**
- [✓] **Narrative including:**
  - [✓] Legal description(s) of property to be subdivided
  - [✓] Existing structures on the land
  - [✓] Zoning district
  - [✓] Density
  - [✓] Access
  - [✓] Current and proposed use of any structures
  - [✓] Utilities available
  - [✓] Unique characteristics of the land or structure(s)
- [✓] **Preliminary Plat checklist**

----------DEPARTMENT USE ONLY BELOW THIS LINE----------

SUBDIVISION/PLATTING FEES	Fees	Check No.	Receipt	Date
Application Fees	$ 1,980	18 x 110 = $1,980		
Admin. of Guarantee	$			
Adjustment	$			
Total Fee	$			

For assistance filling out this form, contact the Permit Center at 586-0770.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

Case Number	Date Received
SMP21-04	8/17/21

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

PRELIMINARY PLAT CHECK LIST

Name of Proposed Subdivision: Chilkat Vistas Subdivision Phase II

The following items must be included with the initial submittal of a Preliminary Plat:

- [x] ~~Application, filled out completely~~
- [ ] Application fee (see fee schedule)
- [x] ~~Project Narrative~~
- [x] ~~Five (5) – 24" by 36" Copies~~
- [x] ~~Pre-application Conference Report~~
- [ ] Lot Closure Report
- [x] ~~Disclosure of all known environmental hazards and any proposed mitigation measures recommended in the applicable environmental document.~~
- [ ] Preliminary Plat Checklist: I have reviewed the checklist and all submittals for completeness and accuracy.

Applicant or Surveyor - Signature

8-12-2021
Date

William C. Heumann
Applicant or Surveyor - Print Name

GENERAL REQUIREMENTS

- [ ] The preliminary plat shall be prepared by a professional land surveyor, registered in the State of Alaska
- [ ] The preliminary plat shall be submitted on 22 by 34 inch sheets. The director of engineering and public works may approve alternate sheet sizes
- [ ] The preliminary plat shall be drawn with black ink to a scale of one-inch to 100 feet or less, or other suitable scale approved by the director of engineering and public works
- [ ] The preliminary plat shall be oriented with north toward the top of the sheet.
- [ ] A vicinity map shall be located in the upper right-hand corner of the sheet
- [ ] The vicinity map shall be oriented in the same direction as the plat
- [ ] A suitable north arrow shall be shown for the plat and vicinity map
- [ ] All line work and lettering must be of professional quality, and all line widths and lettering sizes must be of such size that all information can be clearly shown without overlap or confusion

GRAPHIC REQUIREMENTS - A preliminary plat shall contain the following information:

Title block - An enclosed title block in the lower right-hand corner containing the following information:

- [ ] The proposed name of the subdivision
- [ ] The legal description of the parcel to be subdivided including U.S. Survey, U.S. Mineral Survey, A.T.S. number or section, township, and range number, as applicable
- [ ] "City and Borough of Juneau, Alaska"
- [ ] "State Recorder's Office at Juneau"
- [ ] The date the preliminary plat was prepared and revised
- [ ] The horizontal scale
- [ ] The name and address of the owner of record
- [ ] The name, address, and telephone number of the surveyor preparing the preliminary plat

Lot, block, and street information:

- ☐ The area of each lot
- ☐ The dimensions in feet and hundredths of a foot
- ☐ An identifying number and letter for lots and blocks
- ☐ Lots numbered consecutively, commencing with the number "1," with no omissions or duplications
- ☐ If the remainder of an original parcel being subdivided is relatively large, it shall be designated as a "tract" with an identifying number
- ☐ All parcels of land intended to be dedicated for public use or reserved for the use of all of the property owners in the proposed subdivision shall be shown as lots, and consecutively numbered. The purpose and any conditions or limitations on the use of the parcel shall be noted on the plat
- ☐ Abutting properties shall be shown with dashed lines, numbers, and/or letters
- ☐ For resubdivisions or public way vacations, the lines and legal description of the previous lots shall be shown with light dashed lines, numbers, and/or letters, or by a separate plat on the same sheet showing the previous lot lines
    - ☐ The minimum data shown for each curve shall be as follows:
        - ☐ Length
        - ☐ Central angle
        - ☐ Radius
        - ☐ Bearing and distance of long chord
    - ☐ Setbacks shall be shown on all corner lots and any lots with multiple frontage. Setbacks shall be shown on typical lots

Boundary lines:

- ☐ All boundary lines of the subdivision with bearings and distances described
- ☐ All retraced boundary lines shall show record and measured bearings and distances where they differ. Record dimension information shall be shown within parentheses and include a record source identification
- ☐ The exterior boundary lines of the subdivision shall be a solid black opaque line that is of a width that distinguishes it from all other property lines shown on the plat
- ☐ If phasing is proposed, then the boundaries and number of each phase, sequential lot numbering, and a subdivision name consistent with previous phases shall be shown

Monumentation:

- ☐ The monuments used to establish the basis of bearing
- ☐ Each monument found or set shall be identified on the plat by a symbol
- ☐ A complete description of the monument, including type and all information printed on the cap. A typical drawing shall be shown for each type of monument cap set
- ☐ A legend showing the symbols for all the types of monuments
- ☐ The identification, description location, elevation, and datum of the benchmark used to establish vertical control

Site access, circulation, and utilities:

- ☐ The widths and names of existing rights-of-way within the subdivision and within 100 feet of the subdivision boundary
- ☐ Proposed rights-of-way, including their widths and proposed names
- ☐ The grades of existing and proposed streets within these rights-of-way
- ☐ The width, ownership, use, and record reference of all proposed and existing easements within the subdivision and within 100 feet of the subdivision boundary
- ☐ The width, ownership, and use of all proposed easements

- ☐ All proposed and existing easements shall have sufficient dimensions shown to determine their location on the ground
- ☐ Existing trails or pathways within the subdivision and within 100 feet of the subdivision boundary, including the width of any associated rights-of way or easements
- ☐ Proposed trails or pathways and widths of their rights-of-way
- ☐ If the plat submitted covers only a part of the tract under the control of the applicant, a sketch plat of the prospective street system of the unplatted part shall be submitted
- ☐ The location of any existing or proposed driveways/curb cuts that access or are proposed to access any existing or proposed street

Topographic information:

- ☐ For slopes of less than five percent, show one foot contour lines and include spot elevations at all breaks in grade, along all drainage channels or swales, and at selected points not more than 100 feet apart in all directions
- ☐ For slopes between five percent and ten percent, show two foot contour lines
- ☐ For slopes greater than ten percent, show five foot contour lines
- ☐ Every fifth elevation contour shall be distinctive and clearly labeled
- ☐ Dashed lines shall represent existing contours
- ☐ Mapping shall include any significant features which can materially affect the design of the subdivision, including, but not limited to, structures, fences, walls, and utility poles
- ☐ If irregular slopes or special features are present, additional contour information may be required by the director of engineering and public works for planning or construction purposes. Additional required information may include projecting the topography of the site after grading has taken place, showing such items as:
    - ☐ Pad elevations and drainage patterns for each lot
    - ☐ Tops and toes of all manufactured slopes, including daylight lines
    - ☐ Existing and proposed retaining wall locations and heights
- ☐ For subdivisions located in hillside areas with slopes greater than eighteen percent, additional requirements apply in accordance with CBJ 49.70, Article II

Sewer and water:

- ☐ Existing sewer and water mains within the tract with pipe sizes and grades
- ☐ A draft plan for proposed water and sewer lines showing the size, approximate slope, and connection points with elevations for the purpose of determining the feasibility of construction

Multisheet plats:

- ☐ When a plat requires more than one sheet, exclusive of a certificate sheet, an index sheet shall be included. When a plat requires more than three sheets, a cover sheet shall also be included, showing the subdivision title, a key map, and all certificates. Each additional sheet shall include the following data:
    - ☐ North arrow
    - ☐ Legend
    - ☐ Surveyor's seal and signature
    - ☐ Title block
    - ☐ Sheet _____ of _____
    - ☐ Scale
    - ☐ All plat notes
    - ☐ Vicinity map

ADDITIONAL MAPPING OR REPORTS- *At the pre-application meeting, it will be determined if any of the following additional mapping or reports are required to be submitted with the preliminary plat. If required, the following additional mapping or reports shall be submitted:*

Hazard and Special Habitat Areas:

- ☐ Any portion of a special flood hazard area, landslide or avalanche area, habitat area as defined by CBJ 49.70.310, or watersheds, either existing at the proposed subdivision site or shown on the overlay maps, adopted pursuant to this title, to exist at the proposed subdivision site, must be depicted on the preliminary plat
- ☐ The boundaries of any wetland areas must be depicted on the preliminary plat. Boundaries must be determined by a person qualified to perform wetland delineations

Soils report:

- ☐ A soils report prepared by an engineer licensed by the State of Alaska shall be required if the proposed subdivision is located farther from the existing public sewer system than specified in CBJ 49.35, and the applicant chooses to provide on-lot waste disposal rather than to connect to the public system. A soils report shall include the following:
  - ☐ Certification that the proposed lots are large enough and have soil of sufficient permeability to permit the construction of approved waste treatment systems for on-lot waste disposal
  - ☐ The location and size of drain fields for each lot
  - ☐ The locations and logs of test borings, percolation test results, and a hydrological evaluation of on-site sewage disposal
  - ☐ If the soils report indicates that the soils found on the site are not of sufficient permeability or the lots are not large enough to permit the construction of systems for on-lot waste disposal, the size of the proposed lots must be increased or alternate methods for waste disposal proposed
  - ☐ The soils report shall describe the nature of the subsurface soils and any soil conditions that would affect the design of the proposed development. The soils report shall state whether the proposed subdivision plan is feasible and provide general solutions for all known geotechnical conditions or problems

Drainage report:

- ☐ A preliminary report specifying the method by which the applicant proposes to manage surface and subsurface drainage for the subdivision and the effect of such method on adjacent areas. Unlike the drainage plan required by CBJ 49.35.510, the preliminary drainage report does not need to be prepared by a licensed engineer. The report must address the following:
  - ☐ A calculation of the increase in stormwater runoff resulting from the proposed development as well as the runoff from all drainage areas associated with the site. Runoff calculations shall be based on a fully-developed subdivision and a 25-year storm event
  - ☐ How drainage from the proposed subdivision will join an established drainage channel or channels, unless the director of engineering and public works approves use of an alternative drainage way
  - ☐ An evaluation of existing drainage ways and structures located between the subdivision and the receiving water body, and verification that the existing drainage ways can accommodate the increased runoff. If the increased runoff cannot be handled, the plan must propose solutions to the problem
  - ☐ All required improvements, on or off site, that are shown on the construction plans in accordance with CBJ 49.35, Article V, and that will be constructed as part of the subdivision

Water:

- ☐ For subdivisions of five or more lots, including major subdivisions, the following shall be included, where applicable, in accordance with CBJ 49.15.412:
  - ☐ If a proposed subdivision is located at greater distance from the existing public water system than specified in CBJ 49.35, Article III, and the applicant chooses not to connect to the public system, a statement that the applicant will provide a community water system or that individual wells will be used

☐ A report by a registered engineer or geologist that clearly supports the legal and physical availability of adequate water. Methods for proof of water availability and the standards for quantity are listed in CBJ 49.35, Article III

☐ A copy of the State application for a permit to appropriate water in the quantity required to meet the subdivisions demands

☐ This does not apply to remote subdivisions unless: the subdivider of the remote subdivision chooses to provide potable water, a public water system is available and the subdivision falls within the criteria outlined in CBJ 49.35.310(a), or the subdivision has four or fewer lots.

☐ The director for minor subdivisions, and the planning commission for major subdivisions, may, for good cause, temporarily waive the requirement to provide a water report and proof of water, and condition the approval of the preliminary plat upon the provision of both documents as part of the final plat application and approval process.

Erosion control:

☐ A report explaining the method by which the applicant proposes to control erosion and manage runoff, and potential impacts to adjacent properties or water bodies. The report shall include a plan for preservation of ground cover in areas where runoff and resulting erosion need to be minimized.

Traffic study:

☐ A traffic impact analysis may be required with the preliminary plat in accordance with CBJ 49.40.300.

Shadow plats:

☐ For subdivisions of five or more lots in transition areas, a shadow plat shall be submitted according to CBJ 49.70.710. The shadow plat shall consist of a sketch superimposed on the proposed subdivision layout. This sketch shall reflect any future resubdivision of the parcels into smaller lots consistent with the higher density and the lot size allowed under the transition zoning.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

Chilkat Vistas – Phase 2 Subdivision and Robbie Road Rezone

Case Number: PAC2020 0064

Applicant: Mike Heumann

Property Owner: City and Borough of Juneau – See Reconveyance Agreement (SMP2019004)

Property Address: Not Assigned

Parcel Code Number: 7B1001160011

Site Size: 28.52 Acres

Zoning: D15 Multi-family

Existing Land Use: Vacant

Conference Date:	10/21/20
Report Issued:	10/27/20

List of Attendees

Note: Copies of the Pre-Application Conference Report will be emailed, instead of mailed, to participants who have provided their email address below.

Name	Title	Email address
Mike Heumann William Heumann	Applicants	mpheumann@hotmail.com
Laurel Christian Joseph Meyers	Planning	Laurel.christian@juneau.org Joseph.meyers@juneau.org
Autumn Sapp	General Engineering	Autumn.sapp@juneau.org
Kyle Paw	Permit Office	Kyle.paw@juneau.org

Conference Summary

Questions/issues/agreements identified at the conference that weren't identified in the attached reports. The following is a list of issues, comments and proposed actions, and requested technical submittal items that were discussed at the pre-application conference.

Note: The property owners entered into a reconveyance agreement with CBJ to cover the bond cost of the improvements for Phase 1. The applicants cannot apply for Phase 2 until the land has been reconveyed to the property owners.

Planning Division – Phase 2 Subdivision Notes

1. **Zoning** – D15 Residential. Minimum lot size is 5,000 square feet for a standard lot; minimum lot width is 50' and minimum lot depth is 80'. Minimum lot size for a bungalow lot is 3,000 square feet; minimum lot width is 25' and minimum lot depth is 80'.
2. **Setbacks** – 20' front; 15' rear; 13' street side; 5' side. Lots that abut the D5 zoning district may have a greater setback. Until the temporary cul-de-sac is vacated, setbacks will be measured from the temporary cul-de-sac easement for lots who have frontage on the temporary cul-de-sac. Additionally, structures cannot be built over the existing sewer easement.
    a. Setbacks should be shown on the preliminary plat to demonstrate a buildable area exists on each proposed lot.
3. **Height** – 35' permissible uses; 25' accessory uses; 25' for bungalow lot homes
4. **Access** – Extension of Hillcrest Avenue
    a. **Secondary Access** – Through the previous approval (SMP20190004) it was determined that no more than 200 homes may be served by a single public access (Craig Street). A second access or sprinkling may be required based on the number of units proposed for Phase II.
    b. **Hooter Lane** – Due to the number of anticipated ADT's through Hooter Lane, Hooter Lane may be classified as a collector. Access restrictions may apply per 49.35.210(c).
5. **Street Standards** – In the project narrative, the applicant should discuss if they are requesting a reduction in the minimum right-of-way width and discuss how the request meets the criteria of 49.35.240(b) (5).
6. **Hammerhead Turnaround** – In lieu of constructing a temporary cul-de-sac, the applicants have discussed constructing a permanent hammerhead turnaround at the intersection of the extended Hillcrest Avenue and the future connection to Hooter Lane.
    a. 49.35.240(g) (3) *hammerhead turnarounds may be built in lieu of a temporary cul-de-sac, upon approval by the director of engineering and public works.*
        i. Please submit this request in writing for review with the subdivision application.
    b. The proposed hammerhead turnaround must also meet emergency service access requirements.
7. **Parking & Circulation**– Requirements vary by use. For single-family homes, 2 spaces are required per dwelling.
8. **Lot Coverage** – Maximum 50% (reviewed with building permit).
9. **Vegetative Coverage** – Minimum 30% (reviewed with building permit).
10. **Lighting** – Lighting for dwellings will be addressed with a building permit. Street lighting shall be required based on engineering standard detail.

11. **Noise** – Construction noise shall follow the settlement agreement and be within allowed CBJ hours of operations.
12. **Flood** – Not in a flood hazard area.
13. **Hazard/Mass Wasting/Avalanche/Hillside Endorsement** – Excavation of slopes in excess of 18% may require a hillside endorsement. A plat note will be required. Hillside Endorsements will be reviewed with building permit for single-family homes (minor development) or with Conditional Use Permits (major development) for multi-family development.
14. **Wetlands** – A wetlands delineation is needed for Phase II.
15. **Habitat**– No known.
16. **Plat or Covenant Restrictions** – Appeal settlement agreement stipulations apply. Plat notes from Phase 1 will be added to the phase 2 plat.
17. **Traffic** – Applicants have submitted a Traffic Impact Analysis for a build out of 403 dwelling units. This will be reviewed with the major subdivision application.
18. **Nonconforming situations** – No known.

Planning Division – Robbie Road Rezones Notes

The applicants have expressed interest in rezoning a portion of the lot from D15 to D5 in order to do a shared access subdivision off the end of Robbie Road. Shared access subdivisions are allowed in D5 but not in D15.

19. **Process –** Rezone requests follow the process outlined in CBJ 49.75.130 (Attached). Rezone requests are reviewed by the Planning Commission and then the Assembly.
    a. **A rezone request must be submitted in January or July.**
    b. The rezone request must be at least two acres or an expansion of an existing zone. The proposed rezone would be an expansion of the neighboring D5 zoning district.
    c. The applicant should submit the metes and bounds of the area they are requesting to rezone.
    d. The Planning Commission must find: "*the proposed zoning district and the uses allowed therein are in substantial conformance with the land use maps of the comprehensive plan*".
    e. Policies from adopted plans are also taken into consideration. A downzone may not be supported by policies in the Comprehensive Plan (or other adopted plans) that support housing development and the highest and best use of land.
20. **Land Use Designation –** The lot has a land use designation of Medium Density Residential (see attached map).
    a. *These lands are characterized by urban residential lands for multifamily dwelling units at densities ranging from 5 to 20 units per acre. Any commercial development should be of a scale consistent with a residential neighborhood, as regulated in the Table of Permissible Uses (CBJ 49.25.300).*

Building Division

21. **Building** Plans will be reviewed during Building Permit Review.
22. **Outstanding Permits** -

Permit Application	Pstatus	Permit Type	Location	Permit Id	Purpose
BLD20200282	Issued	GRD	HILLCREST AVE	2023074	Grading permit for Chilkat Vistas Subdivision

General Engineering/Public Works

23. **Engineering** –

a. At the time of preliminary plat submittal, submit an erosion control report explaining the method by which the applicant proposes to control erosion and manage runoff, and potential impacts to adjacent properties or water bodies. The report shall include a plan for preservation of ground cover in areas where runoff and resulting erosion need to be minimized.

b. Construction plans to be submitted after the approval of the preliminary plat and before final plat submission. Construction plans must adhere to 49.35.140 and must be signed and stamped by Alaskan licensed engineers for each discipline. Construction plans for this layout of development does not need to include all phases of full buildout of development. For specific requirements, please refer to CBJ code by visiting: http://www.juneau.org/cddftp/ordinances.php and referencing chapter 49.35 – Public and Private Improvements.

c. Prior to final plat, an Engineer's estimate for the installation of public improvements must be submitted. Once this is received, a performance bond amount will be determined and must be paid/posted prior to recording of the final plat. Further discussion regarding the bond can take place once the project phasing is determined. For all options regarding the financial guarantee please refer to 49.55 – Financial Responsibility.

d. Dependent on the construction plan and schedule an inspection deposit will be required and a private inspector may be hired.

e. Street lighting is required and shall not exceed 250' between poles.

f. Easements: Site plan and plat shall include all existing and proposed easements for drainage, utility lines including plumbing lines, access, snow storage, trash (dumpster) storage, or any other shared use that requires crossing the property line.

g. Permits required will determined by the subdivision process you follow. They may include Right-of-way permit, grading permit, water utility permit, and sewer utility permit.

24. **Drainage** –

a. Drainage report with the submittal of the preliminary plat does not need to be engineered. At time of construction plan submittals a drainage plan with calculations must be submitted and must be signed and stamped by an Alaskan licensed engineer.

b. Preliminary plat requirements do need to be followed see 49.15.411 - Preliminary plat requirements for full listing. Please do note that topographic information shall be shown as outlined under 48.15.411, (6) – Topographic information.

25. **Utilities** – (water, power, sewer, etc.) –

a. At time of preliminary plat, a draft plan for the proposed water and sewer lines shall be submitted showing existing installed utilities including line sizing and connection points with elevations.

b. A report by a registered engineer or geologist that clearly supports the legal and physical availability of adequate water. Methods for proof of water availability and the standards for quantity are listed in CBJ 49.35, article III. Specifically for your project, it may require additional upgrades to the existing water system.

Fire Marshal

26. **Fire Items/Access** – Plans Will be reviewed with Building Permit

Other Applicable Agency Review

27. DOT&PF / Alcohol Beverage Control Board / Army Corps / DEC (wastewater) / DNR / USF&W / F&G / FAA / Corrections...
    a. Not applicable at this time. Agency review will be requested when the complete application is submitted.

List of required applications

Based upon the information submitted for pre-application review, the following list of applications must be submitted in order for the project to receive a thorough and speedy review.

1. Major Subdivision Application
2. Development Permit Application
3. Zone Change Application – submit in January or July

Additional Submittal Requirements

Submittal of additional information, given the specifics of the development proposal and site, are listed below. These items will be required in order for the application to be determined Counter Complete.

1. A copy of this pre-application conference report
2. Preliminary plat checklist
3. Revised sketch plat matching the settlement agreement and phase 2 as proposed
4. Wetlands delineation
5. Preliminary drainage plan
6. Preliminary water and sewer plan
7. Applicable items listed under the General Engineering section of this report

Exceptions to Submittal Requirements

Submittal requirements staff has determined **not** to be applicable or **not** required, given the specifics of the development proposal, are listed below. These items will **not** be required in order for the application to be reviewed.

1. None.

Fee Estimates

The preliminary plan review fees listed below can be found in the CBJ code section 49.85.

Based upon the project plan submitted for pre-application review, staff has attempted to provide an accurate estimate for the permits and permit fees which will be triggered by your proposal.

1. Major Subdivision Preliminary Plat - $110.00 per lot
2. Major Subdivision Final Plat - $70.00 per lot
3. Rezone Application - $600.00
4. Public Notice Sign Fee - $50.00 plus $100.00 refundable deposit.

For informational handouts with submittal requirements for development applications, please visit our website at www.juneau.org/cdd.

Submit your Completed Application
You must submit your application(s) in person with payment made to:

City & Borough of Juneau, Permit Center
230 South Franklin Street
Fourth Floor Marine View Center
Juneau, AK 99801

Phone: (907) 586-0715
Fax: (907) 586-4529
Web: www.juneau.org/cdd

areas should be substantially developed in order to justify permitting within areas designated to be Wetland. The Preliminary Plat incorporates this into the design.

Utilities:

5. Water. An 8" ductile iron pipe extends onto Chilkat Vistas Phase 1 at the end of Hillcrest Drive. It has been extended as part of the Phase 1 development and will be further extended and is sufficient to provide for the water requirements of the proposed 15 lots in Phase 2.
   Sewer. A sewer line was constructed running up Hooter Lane to Hillcrest Avenue and is of sufficient size to service all the lots in Phase 2 as well as the future development anticipated for Tracts A1, A2. Tract A3 will be connected to the Mountainside Estates sewer system.

6. Unique Characteristics of the land or structure(s). – None

7. Existing Structures. There are no existing structures in the Phase 2 area.

8. Drainage: We hired ProHNS Engineers to develop a drainage plan for the remaining 28 acres. In order to accommodate the drainage requirements for the anticipated future development. We plan to install a 30" culvert down Hooter Lane to Glacier Highway. We plan to install a 36" culvert under Glacier Highway. The engineering for this work has been completed and accepted by DOT and we expect the permit will be issued soon. Presently there is a 24" culvert under Glacier Highway and it is of sufficient size to handle the drainage requirements for Phase 2.

PROJECT NARRATIVE

August 12, 2021

Michael Heumann and William Heumann are applying to subdivide Tract A Chilkat Vistas Subdivision, which consist of 15 single family lots, Tract A1, Tract A2, and Tract A3.

Later phases will include additional single and multi-family. Following approval of our preliminary plat for Phase 1 in February 2019, the Mountainside Estates Neighborhood Association (MENA) appealed our subdivision and we reached settlement terms that satisfy both city code and the concerns of the appellants. The sketch plat shows a configuration that reflects that settlement. As part of the settlement process, new elevation points were collected by our surveyor and used to confirm the validity of existing LIDAR elevation data. Based on this data, we have confirmed that the roadways depicted in our sketch plat can be constructed at grades of 12% or less.

Zoning District D-15
Density 15 units per acre

Other issues of note include:

1. Water System. What is the capacity of the water system to deliver water to additional dwellings without falling below the DEC and Fire Department requirements? Included with the Phase 1 Application was a Memorandum prepare by James Dorn, a local engineer in which he reaches the conclusion that the existing system can meet the demands of an additional 80 residences. We connected 14 lots to the water system in Phase 1. As part of the Phase 2 we plan to connect the 15 single family lots to the existing water system. Also, our plan calls for bringing an 8" water line up Hooter Lane and connecting it to the Mountainside Water system. The elevation of Tract A3 (multifamily) is at an elevation low enough that we will have sufficient flow and pressure without utilizing water from the Mountainside system.
2. Fire Code Requirements. The fire code allows for the construction of additional dwellings on extensions of the street system servicing Mountainside Estates, if the water available at the hydrants is 500 gpm and if the new dwellings are provided with residential sprinkler systems. It, also, allows for the construction of new dwellings without sprinkler systems where 1,000 gpm is available. We will provide residential sprinkler systems where necessary.
3. Access. The property is accessed by Hillcrest Avenue, Mountainside Drive, and Robbie Road, as well an undeveloped right-of-way, Hooter Lane. As part of Phase 1 we placed a sewer line running from Glacier Highway up Hooter Lane to service the development of 14 homes in the Hillcrest Avenue extension. We roughed in Hooter Lane, placed shot rock and cut the slopes in anticipation of the future complete build out of Hooter Lane. We will complete development of Hooter Lane as part of this Phase 2 project.
4. Wetlands. We have negotiated with the Us Army Corp of Engineers and submitted an application for a wetlands permit a month ago. We are hopeful that they will issue the permit within 2 months. As part of our negotiations we hired a consultant to perform a Wetlands Delineation on the remaining 28 acres of our tract. The outcome of this Delineation was favorable in that large portions of the tract are not wetlands. They have stated that the uplands

Erosion Control:

Erosion control will be managed by a Storm Water Pollution Prevent Plan (SWPPP) in conjunction with the Alaska Dept. of Environmental Conservation Construction General Permit. Generally, Best managements Practices (BMP's) such as check dams, vegetive buffers and stockpile management, in addition to other BMPs as necessary will be used to prevent erosion on site and limit any impacts of unavoidable erosion to the surrounding areas during the project. The process for implementation, documentation and maintenance of storm water management and BMP's will be outlined in the Storm Water Pollution Prevention Plan (SWPPP). The implementation of BMP's during the project's construction until final stabilization will result in a minimal impact to adjacent wetlands and neighboring properties.

proHNS LLC

1945 Alex Holden Way #101 | Juneau, AK 99801 | 907-780-4004 | solutions@proHNS.com
219 Main Street #13 | Haines, AK 99827 | 907-419-6070 | www.proHNS.com

June 24, 2021

Chilkat Vistas, LLC
6000 Thane Rd
Juneau, AK 99801
mpheumann@hotmail.com
wheumann@hotmail.com

RE: Chilkat Vistas/Richland Manor Subdivision -Phase II – DOT Drainage Memo

To Whom It May Concern,

The following memo has been prepared for the Chilkat Vistas/Richland Manor Subdivision in Juneau, AK. The project generally consists of the construction of a residential subdivision and associated infrastructure. Part of the work required for this phase of the subdivision includes substantial upgrades to the existing City and Borough of Juneau's (CBJ) right-of-way of Hooter Lane. The work will also require upgrades to the Hooter Lane intersection with Glacier Highway, which is Alaska Department of Transportation and Public Facilities (AK DOT&PF) right-of-way. This memo will describe the proposed development of Hooter Lane and residential subdivision and show sufficient capacity in the storm drain crossing Glacier Highway is being provided to convey runoff from the 50-year storm event without backing-up or overflowing.

Site Drainage Patterns:

Pre-developed and post-developed drainage maps for the current phase of the sub-division have been prepared for the CBJ and have been included in appendix B of this memo. These maps show that the pre-developed drainage basin allows water to flow down the northern side ditch of the Hooter Lane before it crosses under Hooter Lane in an 18-inch culvert down the Tamarack Trails Condo's driveway ditch before flowing into an 18-inch pipe the drains into the roadside ditch of Glacier Highway and then ultimately flows through a 24-inch pipe under Glacier Highway before discharging into the wetlands on the western side of the highway. In the post-developed conditions, the stormwater from the entire residential subdivision, upland area, and most of the Hooter would be collected in a storm drain system and continue down the northern side of the Hooter Lane right-of-way and flow across Glacier Highway in a proposed 36-inch CPP Pipe. Any flow that remains in the southern side ditch of Hooter Lane would be from runoff from the southern crown of the Hooter Lane Road and a small area of undeveloped adjacent lots.

proHNS LLC
1945 Alex Holden Way #101 | Juneau, AK 99801 | 907-780-4004 | solutions@proHNS.com
219 Main Street #13 | Haines, AK 99827 | 907-419-6070 | www.proHNS.com

Hydrology and Hydraulics:

Autodesk Storm and Sanitary Analysis software (SSA) was used to perform the hydrology computations. The hydrology method inputted into the software was SCS TR-55 and a Type 1A rainfall distribution was used to model the 50-year storm event. Though the developer only intends to develop a small portion of the overall parcel at this time (phase II), our analysis considered the full development potential of the entire parcel and the associated increase of impervious areas, which resulted in a conservative peak flow estimate for this phase of the development. This resulted in a full parcel build out estimate of peak runoff of 43.51 cfs being directed to the new storm drain system running across Glacier Highway. The SSA model showed that all stormwater could be routed across Glacier Highway if the crossing was sized as a 36" CMP without any overflow or flooding. As a double-check, HY-8 software was used to confirm that the 36-inch culvert could accommodate this peak flow without any overflow or ponding.

It should be noted that there is a small secondary drainage basin on the south side of the Hooter Lane that will consist of less than one acre of contributing area. The hydrology model shows this area will only generate 0.55 cfs of runoff, which will flow through lowered existing 18-inch pipe and across Glacier Highway in the existing 24-inch pipe. This project will result in a reduction of stormwater being directed towards this existing crossing.

Note: The CBJ pre-developed and post-developed drainage maps show different discharge amounts from the Glacier Highway Intersection Plan Set as they accompanied a report that modeled the site according to CBJ requirements, which differ from DOT requirements.

Summary:

This project proposes constructing a new storm drain network that is oversized for this phase of the development but will be adequately sized to convey the 50-year storm across Glacier Highway once the subdivision is fully developed. The existing stormwater pipe under Glacier Highway will be left in place, but the amount of stormwater directed to it will be reduced. Thus, our analysis shows that there are no capacity concerns associated with the existing stormwater system at the intersection of Glacier Highway and Hooter Lane.

Respectfully,

Lucas Chambers

Lucas Chambers, P.E.
Principal Engineer – proHNS LLC Juneau

Attachments:

Appendix A: Richland Mannor Phase II – Glacier Hwy Intersection Plan Set (7 sheets)

Appendix B: CBJ Pre-Developed and Post-Developed Drainage Maps (2 sheets)

Appendix C: Autodesk Storm and Sanitary Analysis Calculations

Appendix D: HY-8 Calculations

Appendix E: Outlet 1 Hydrograph

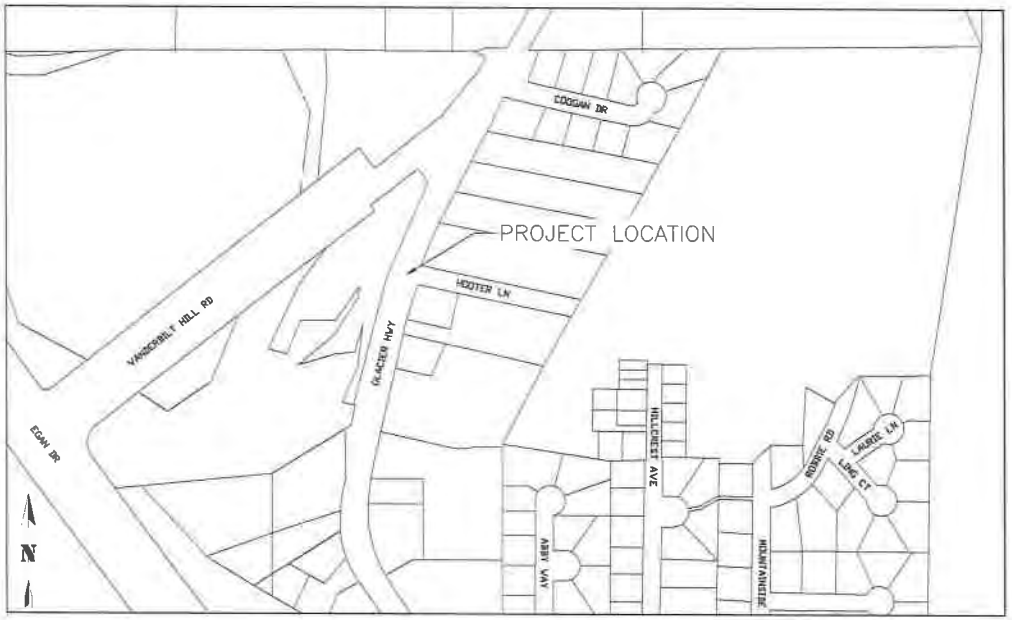
Appendix A: Richland Mannor Phase II - Glacier Highway Plan Set

CHILKAT VISTAS SUBDIVISION, GLACIER HWY INTERSECTION

JUNEAU, AK

PREPARED FOR:

MICHAEL & WILLIAM HEUMANN



PROJECT LOCATION MAP

NTS

SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	LEGEND, ABBREVIATIONS & GENERAL NOTES
3	TRENCH PATCH SECTION
4	GRADING PLAN
5	ROW PLAN VIEW
6	ROW PROFILE
7	TRAFFIC CONTROL PLAN

DOT STANDARD DRAWINGS

DOT STD NO.	DOT STD NAME
D-01.02	CULVERT PIPE & ARCH INSTALLATION DETAILS
D-04.22	PIPE & ARCH TABLES
D-06.10	CULVERT END SECTIONS
D-09.00	CULVERT MARKER POSTS
D-20.05	MANHOLES, FRAME AND COVER
D-22.01	STORMDRAIN MANHOLE FRAME AND GRATE DETAILS
D-30.11	HEADWALLS - CAST IN PLACE - TYPE II
I-20.20	CURB CUT, CURB & GUTTER AND CURB RAMP DETAILS
I-21.12	PARALLEL CURB RAMP
T-20.04	PAVEMENT MARKING APPLICATIONS
T-21.04	PAVEMENT MARKING APPLICATIONS

RECORD OF REVISIONS

NO.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100882
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004

DRAWN BY: L. CHAMBERS
DESIGNED BY: L. CHAMBERS
CHECKED BY: G. GLADSJO

CBJ REVIEW

APPROVED:

DATE:

RICHLAND MANNOR - PHASE II - GLACIER HWY INTERSECTION

MICHAEL AND WILLIAM HEUMANN

COVER

SHEET NUMBER 1 OF 7

May 19, 2021 C:\Users\Chris\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\CJD Richland Manor\Sheets\Hillcrest Extension - Phase II\DOT - Cover.dwg

Appendix A: Richland Mannor Phase II - Glacier Highway Plan Set

LEGEND

DESCRIPTION	EXISTING	REMOVE	PROPOSED
ASPHALT			
BOLLARDS			
CONCRETE			
CURB & GUTTER			
CUT			
DITCH CENTERLINE			
EDGE GRAVEL			
FENCE			
FILL			
FIRE HYDRANT			
MONUMENT			
PROPERTY EASEMENT LINE			
PROPERTY LINE			
SANITARY SEWER CLEANOUT			
SANITARY SEWER PIPE			
SANITARY SEWER MANHOLE			
SIDEWALK RAMP			
SAWCUT & MTE LIMITS			
SIGN			
STORM DRAIN CATCH BASIN			
STORM DRAIN PIPE			SD SD
STORM DRAIN MANHOLE, GRATE			
TREES			
UNDERGROUND PIPE CAP			[
UTILITY POLE			
UTILITY POLE WITH LUMINAIRE			
WATER LINE PIPE			
WATER VALVE BOX			

ABBREVIATIONS

AC	ASPHALT CONCRETE
BOP	BEGINNING OF PROJECT
BTM	BOTTOM
CB	CATCH BASIN
CBJ	CITY & BOROUGH OF JUNEAU
C/L	CENTERLINE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED POLYETHYENE PIPE
CONC	CONCRETE
CTE	CONNECT TO EXISTING
DI	DUCTILE IRON
DIA	DIAMETER
DOT	DEPARTMENT OF TRANSPORTATION
EL	ELEVATION
EP	EDGE OF PAVEMENT
EOP	END OF PROJECT
FG	FINISHED GRADE
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
LG	LIP OF GUTTER
LP	LOW POINT
LT	LEFT
MH	MANHOLE
MIN	MINIMUM
MTE	MATCH TO EXISTING
NO	NUMBER
NTS	NOT TO SCALE
PC	POINT OF CURVATURE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECTION
RP	RADIUS POINT
RT	RIGHT
ROW	RIGHT-OF-WAY
STA	STATION
STD	STANDARD
TBC	TOP BACK OF CURB
TBG	TOP BACK OF GUTTER
TP	TOP OF PAVEMENT
TYP	TYPICAL
VPC	VERTICAL POINT OF CURVATURE
VPT	VERTICAL POINT OF TANGENCY

GENERAL NOTES

1. ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2020 EDITION IS MADE A PART OF THIS PROJECT AND WILL BE FOLLOWED FOR ALL WORK INSIDE DOT ROW.
2. CITY AND BOROUGH OF JUNEAU STANDARD DETAILS, 4TH EDITION, AUGUST 2011 AND CITY AND BOROUGH OF JUNEAU STANDARD SPECIFICATIONS FOR CIVIL ENGINEERING PROJECTS AND SUBDIVISION IMPROVEMENTS, DECEMBER 2003 ARE MADE A PART OF THIS PROJECT, INCLUDING ALL ERRATA (NOS 1-16) AND CURRENT REVISIONS AS APPLICABLE, WHICH WILL BE FOLLOWED FOR ALL WORK INSIDE CBJ ROW.
3. CALL 586-1333 BEFORE YOU DIG FOR UNDERGROUND POWER, TELEPHONE AND CABLE. CALL 811 ALASKA DIGLINE BEFORE YOU DIG FOR UNDERGROUND ACS & GCI. LOCATIONS AND ELEVATION OF EXISTING UNDERGROUND WATER, SEWER, POWER, TELEPHONE AND CABLE TELEVISION SHOWN ON THE PLANS WERE DERIVED FROM CBJ AS-BUILTS AND FIELD LOCATES. THE ACTUAL LOCATION OF UTILITIES MAY VARY FROM THOSE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, PROTECTING AND MAINTAINING THE UTILITIES THROUGHOUT THE CONSTRUCTION OF THE PROJECT. ANY DAMAGE TO THE UNDERGROUND UTILITIES DURING CONSTRUCTION SHALL BE PAID FOR BY THE CONTRACTOR AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
4. THE ESTIMATED TOTAL AREA OF DISTURBANCE RESULTING FROM THESE IMPROVEMENTS WILL BE UNDER 1.00 ACRE.
5. THE ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) HAS IDENTIFIED ONE "ACTIVE" CONTAMINATED SITE WITHIN 1,500 FEET OF THE PROJECT LIMITS. THE ACTIVE CONTAMINATED SITE IS AT 5165 GLACIER HWY (GAS N GO), SEE DEC.ALASKA.GOV FOR MORE INFO. THERE ARE NO SITES LISTED AS "INSTITUTIONAL CONTROL" WITHIN 1,500 OF THE PROJECT LIMITS. THERE ARE SEVERAL SITES LISTED AS "CLEANUP COMPLETE" WITHIN 1,500 FEET OF THE PROJECT, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSULT DEC AND OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK.
6. FINISHED GRADE AND ALIGNMENT ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER. LOCATION OF PROPOSED WATER, SEWER AND STORM DRAINAGE FACILITIES ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER.
7. HORIZONTAL AND VERTICAL CONTROL IS STATE PLANE ZONE AK 1 ABOUT POINT#20 MAG [LAT: 58 20 42.12902, LON: 134 29 24.31493] [2379175.08N, 2527721.72E] (115.39' MLLW) (CONVERGENCE [DEGREES] 0.43405276) (POINT SCALE 0.99961092).
8. THE CONTRACTOR SHALL PERFORM A CLOSED LEVEL LOOP THROUGH ALL TBM'S AS LISTED HEREON TO VERIFY ELEVATIONS PRIOR TO BEGINNING ANY WORK.
9. CONTRACTOR SHALL REFERENCE ALL EXISTING PROPERTY CORNER MONUMENTS (I.E. BRASS CAP MONUMENTS, REBARS, CONCRETE NAILS, CHISELED X'S) PRIOR TO CONSTRUCTION AND REMONUMENT AFTER SURFACING IS REPLACED. EXISTING SURVEY MONUMENTS MAY NOT BE SHOWN ON THE DRAWINGS. ALL WORK SHALL BE DONE BY, OR UNDER THE DIRECTION OF, AN ALASKA REGISTERED LAND SURVEYOR.
10. THE CONTRACTOR SHALL NOTIFY CBJ WATER UTILITIES (LONI VANKIRK AT 723-4975) OF PROPOSED WATER SERVICE INTERRUPTION AND SUBMIT THE "WATER SYSTEM SPECIAL USE PERMIT" TO CBJ WATER UTILITIES SUPERINTENDENT FOR APPROVAL AT LEAST 48 HOURS PRIOR TO SHUTDOWN OR FLUSHING OF MAINLINE WATER PIPE. NO WATER SERVICE INTERRUPTION MAY PROCEED UNTIL THIS APPROVAL IS OBTAINED. THE CONTRACTOR CANNOT SHUT OFF WATER SUPPLY TO SERVICES FOR MORE THAN 4 HOURS AT ONE TIME.
11. ALL MATERIALS PROPOSED FOR THE WATER SYSTEM THAT COME IN DIRECT CONTACT WITH THE WATER SHALL BE CERTIFIED BY AN ANSI ACCREDITED ORGANIZATION TO CONFORM WITH ANSI/NSF STANDARD 61 OR AN ANSI/NSF STANDARD WITH EQUIVALENT HEALTH REQUIREMENTS.
12. THE MATERIALS USED FOR THIS PROJECT SHALL COMPLY WITH THE NEW LEAD FREE REQUIREMENTS INCLUDING NOT MORE THAN 0.2% WHEN USED WITH RESPECT TO SOLDER AND FLUX AND NOT MORE THAN A WEIGHTED AVERAGE OF 0.25% LEAD WHEN USED WITH RESPECT TO THE WETTED SURFACES OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS AND FIXTURES.
13. ONLY HORIZONTAL ELBOW FITTINGS (BENDS) ARE SHOWN (NOT ALL ARE LABELED) ON DRAWINGS. ADDITIONAL FITTINGS WILL BE REQUIRED FOR VERTICAL DEFLECTIONS NEAR CONNECTIONS TO EXISTING PIPES, AND AT OTHER LOCATIONS REQUIRING GRADE CHANGES TO AVOID CONFLICTS.
14. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF OFF-SITE, EXCEPT AS NOTED IN THE CONTRACT DOCUMENTS.

DRAFT

RECORD OF REVISIONS

No	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #333582
1945 ALEX HOLDEN WAY #101
JUNEAU AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW

APPROVED:_____

DATE:_____

RICHLAND MANNOR - PHASE II - GLACIER HWY INTERSECTION

MICHAEL AND WILLIAM HEUMANN

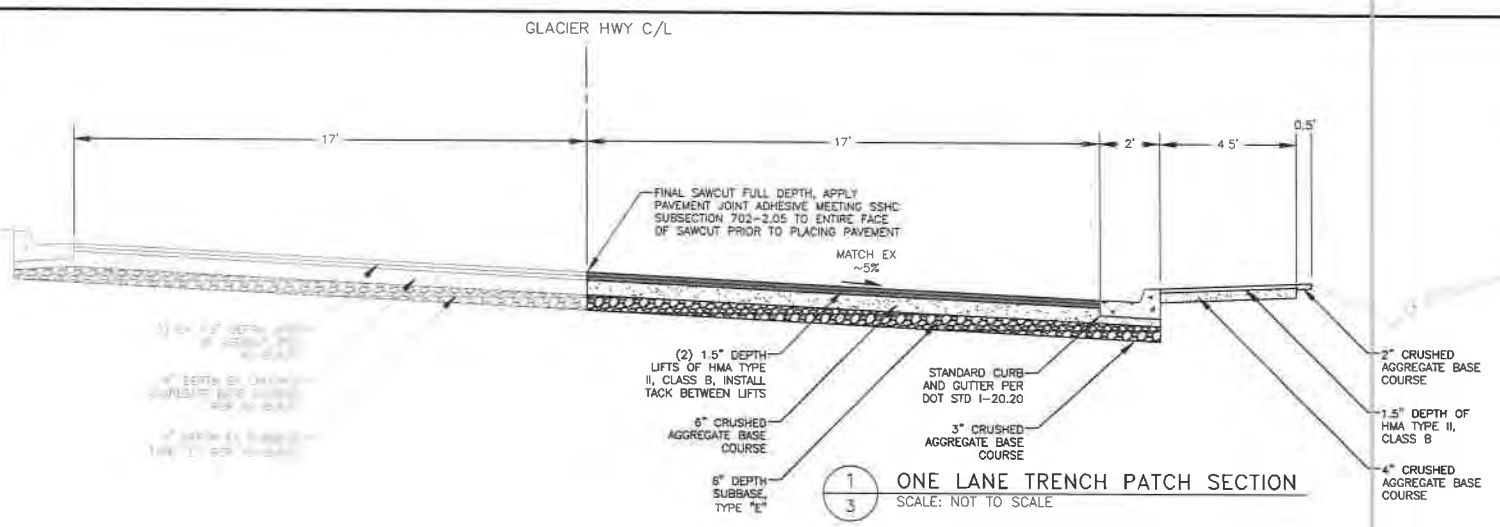
LEGEND, ABBREVIATIONS AND GENERAL NOTES

SHEET NUMBER 2 OF 7

May 19, 2021

C:\Users\Chris\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension - Phase II\DOT - Legend.dwg

Appendix A: Richland Mannor Phase II - Glacier Highway Plan Set



1/3 ONE LANE TRENCH PATCH SECTION
SCALE: NOT TO SCALE

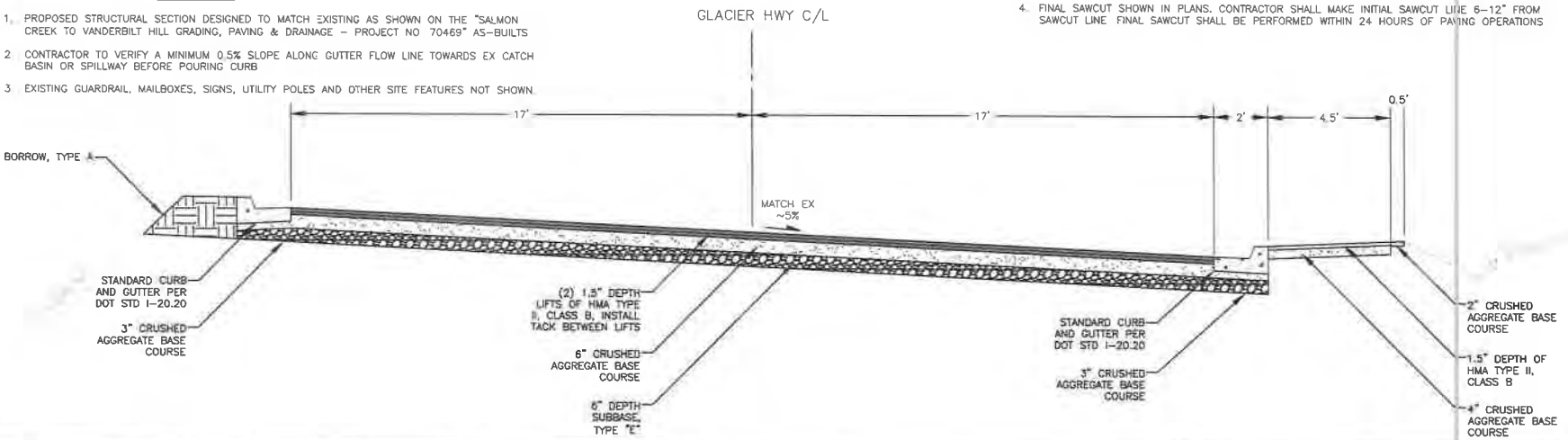
TRENCH PATCH SECTION NOTES:

1. PROPOSED STRUCTURAL SECTION DESIGNED TO MATCH EXISTING AS SHOWN ON THE "SALMON CREEK TO VANDERBILT HILL GRADING, PAVING & DRAINAGE – PROJECT NO. 70469" AS-BUILTS
2. CONTRACTOR TO VERIFY A MINIMUM 0.5% SLOPE ALONG GUTTER FLOW LINE TOWARDS EX CATCH BASIN OR SPILLWAY BEFORE POURING CURB
3. EXISTING GUARDRAIL, MAILBOXES, SIGNS, UTILITY POLES AND OTHER SITE FEATURES NOT SHOWN
4. FINAL SAWCUT SHOWN IN PLANS. CONTRACTOR SHALL MAKE INITIAL SAWCUT LINE 6-12" FROM SAWCUT LINE. FINAL SAWCUT SHALL BE PERFORMED WITHIN 24 HOURS OF PAVING OPERATIONS

2/3 TWO LANE TRENCH PATCH SECTION
SCALE: NOT TO SCALE

TRENCH PATCH SECTION NOTES:

1. PROPOSED STRUCTURAL SECTION DESIGNED TO MATCH EXISTING AS SHOWN ON THE "SALMON CREEK TO VANDERBILT HILL GRADING, PAVING & DRAINAGE – PROJECT NO. 70469" AS-BUILTS
2. CONTRACTOR TO VERIFY A MINIMUM 0.5% SLOPE ALONG GUTTER FLOW LINE TOWARDS EX CATCH BASIN OR SPILLWAY BEFORE POURING CURB
3. EXISTING GUARDRAIL, MAILBOXES, SIGNS, UTILITY POLES AND OTHER SITE FEATURES NOT SHOWN



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

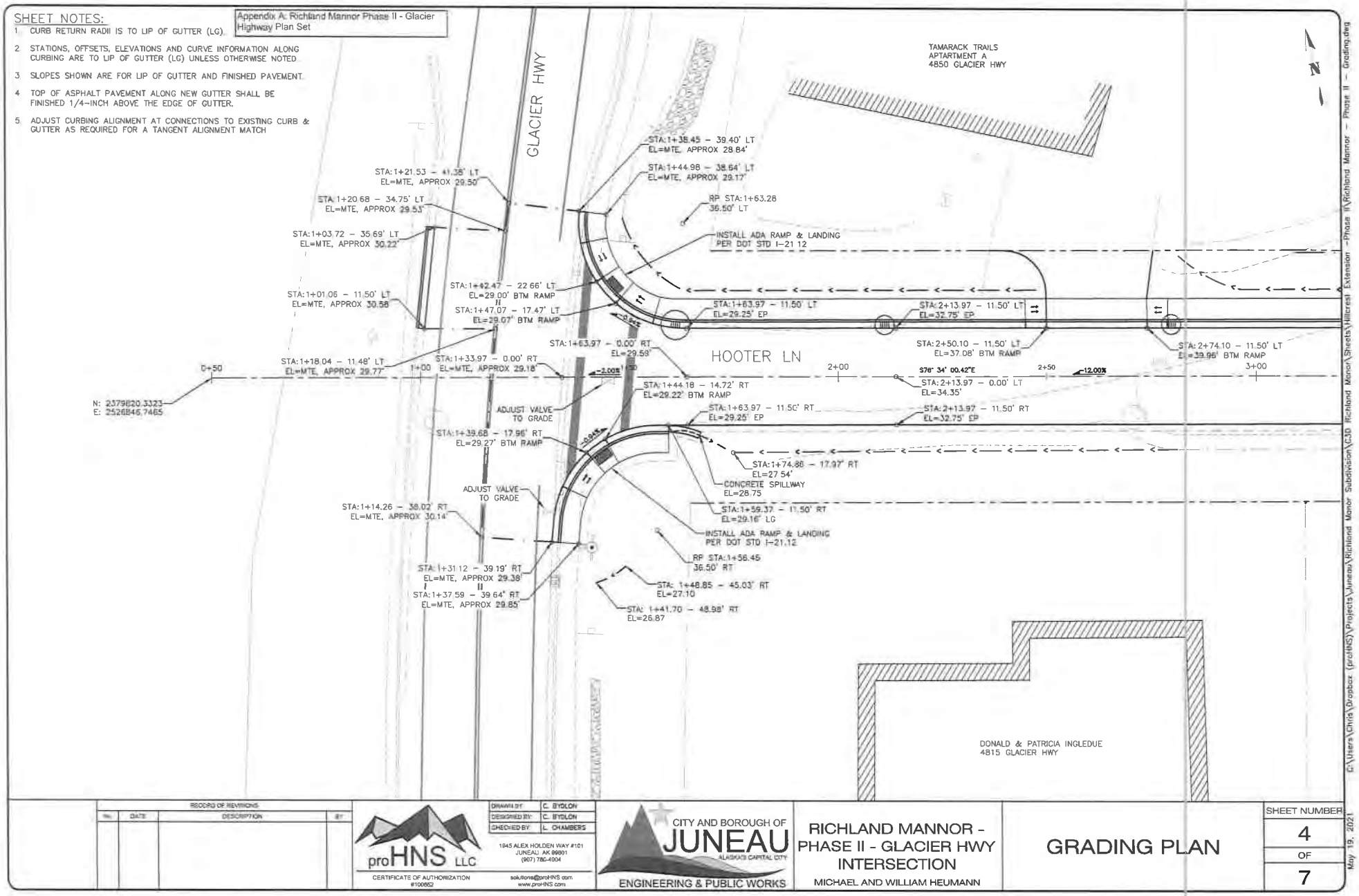
CBJ REVIEW
APPROVED:
DATE:

RICHLAND MANNOR - PHASE II - GLACIER HWY INTERSECTION
MICHAEL AND WILLIAM HEUMANN

DOT - TRENCH PATCH SECTION - TRENCH PATCHING DETAIL

SHEET NUMBER 3 OF 7

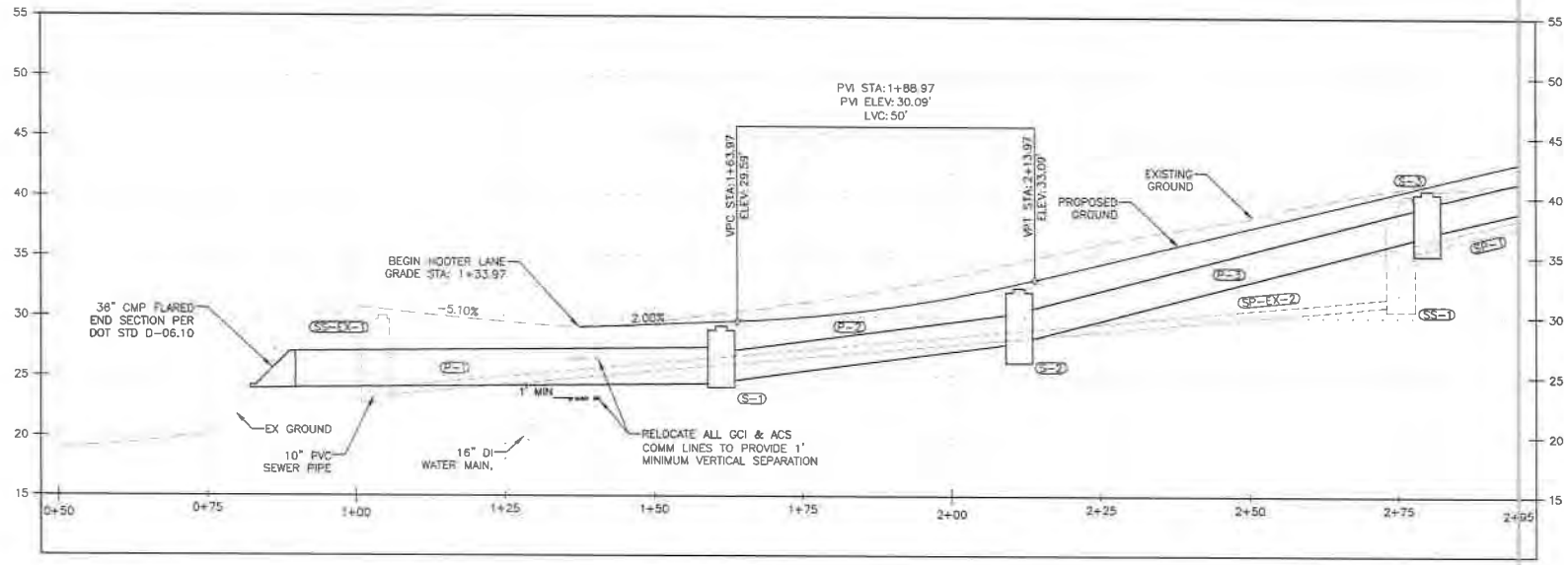
May 19, 2021 C:\Users\Chris\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension - Phase II\DOT - Trench Patch Section.dwg



Attachment F - SMP21-04 – Phase 2



Attachment F - SMP21-04 – Phase 2



HYDRAULIC SUMMARY			
PIPE NO.	RETURN PERIOD	Q50 FLOW RATE	CAPACITY
P-1	Q50	7.42 cfs	47.76 cfs

STORM DRAIN PIPE SUMMARY						
PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START INV	END INV
P-1	36"	76.24	CMP	-0.50%	24.40	24.02
P-2	30"	118.64	CPP	-6.58%	27.80	24.50
P-3	30"	68.51	CPP	-12.99%	36.80	27.90
INSTALL & BACKFILL CULVERTS & STORM DRAIN PIPES PER DOT D-01.02 INSIDE DOT ROW						

S-1	PRECAST CONCRETE
STA: 1+61.79	OFF: 12.29 LT
FRAME EL=	29.17
P-1 IE=	24.40
P-2 IE=	24.50
SHALL MEET & BE INSTALLED PER DOT STD D-20.05	

S-2	TYPE I SDMH
STA: 2+11.32	OFF: 12.28 LT
FRAME EL=	32.39
P-2 IE=	27.80
P-3 IE=	27.90
SHALL MEET & BE INSTALLED PER CBJ STD 303	

S-3	TYPE I SDMH
STA: 2+79.83,32	OFF: 12.26 LT
FRAME EL=	40.60
P-3 IE=	36.80
P-4 IE=	36.90
SHALL MEET & BE INSTALLED PER CBJ STD 303	

SHEET NOTES:

1. NOT ALL ELECTRICAL UTILITIES PAST STA 1+75 HAVE BEEN SHOWN IN PROFILE VIEW FOR CLARITY.
2. CROSSING PIPES HAVE BEEN SHOWN IN THE LOCATION WHERE THEY INTERSECT THE PROPOSED STORMDRAIN PIPE.

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100402
1945 ALEX HOLDEN WAY #101 JUNEAU, AK 99801 (907) 780-4004
solutions@proHNS.com www.proHNS.com

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

CBJ REVIEW
APPROVED:
DATE:

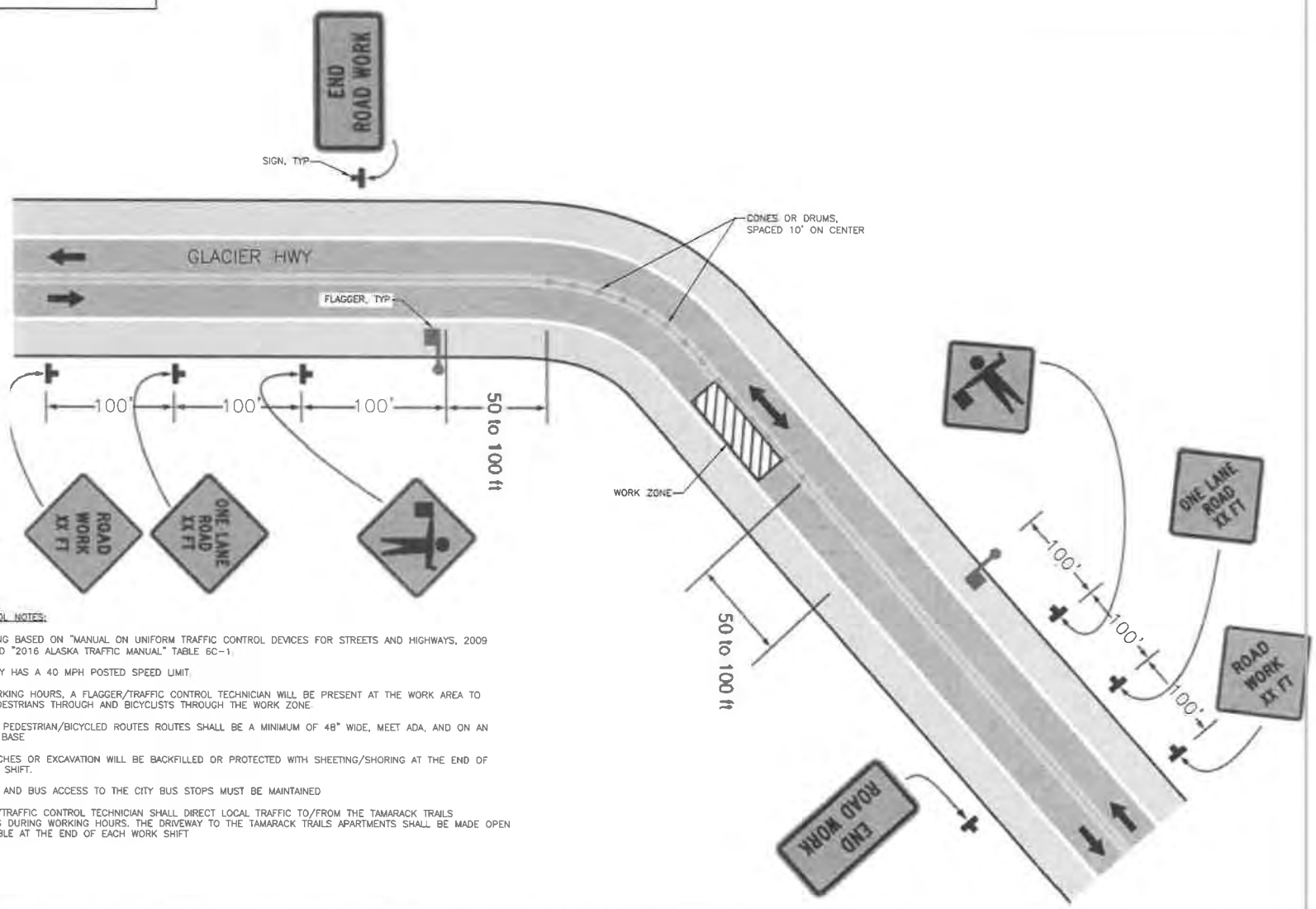
RICHLAND MANNOR - PHASE II - GLACIER HWY INTERSECTION
MICHAEL AND WILLIAM HEUMANN

PROFILE VIEW

SHEET NUMBER 6 OF 7

May 19, 2021 C:\Users\Chris\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension - Phase II\Richland Mannor - Phase II - ROW Plan & Pr

Appendix A: Richland Mannor Phase II - Glacier Highway Plan Set



TRAFFIC CONTROL NOTES:

1. SIGN SPACING BASED ON "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, 2009 EDITION" AND "2016 ALASKA TRAFFIC MANUAL" TABLE 6C-1.
2. GLACIER HWY HAS A 40 MPH POSTED SPEED LIMIT.
3. DURING WORKING HOURS, A FLAGGER/TRAFFIC CONTROL TECHNICIAN WILL BE PRESENT AT THE WORK AREA TO ESCORT PEDESTRIANS THROUGH AND BICYCLISTS THROUGH THE WORK ZONE.
4. TEMPORARY PEDESTRIAN/BICYCLED ROUTES ROUTES SHALL BE A MINIMUM OF 48" WIDE, MEET ADA, AND ON AN UNYIELDING BASE.
5. OPEN TRENCHES OR EXCAVATION WILL BE BACKFILLED OR PROTECTED WITH SHEETING/SHORING AT THE END OF EACH WORK SHIFT.
6. PEDESTRIAN AND BUS ACCESS TO THE CITY BUS STOPS MUST BE MAINTAINED
7. A FLAGGER/TRAFFIC CONTROL TECHNICIAN SHALL DIRECT LOCAL TRAFFIC TO/FROM THE TAMARACK TRAILS APARTMENTS DURING WORKING HOURS. THE DRIVEWAY TO THE TAMARACK TRAILS APARTMENTS SHALL BE MADE OPEN AND PASSABLE AT THE END OF EACH WORK SHIFT

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100882
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

CBJ REVIEW

APPROVED:_____

DATE:_____

RICHLAND MANNOR - PHASE II - GLACIER HWY INTERSECTION

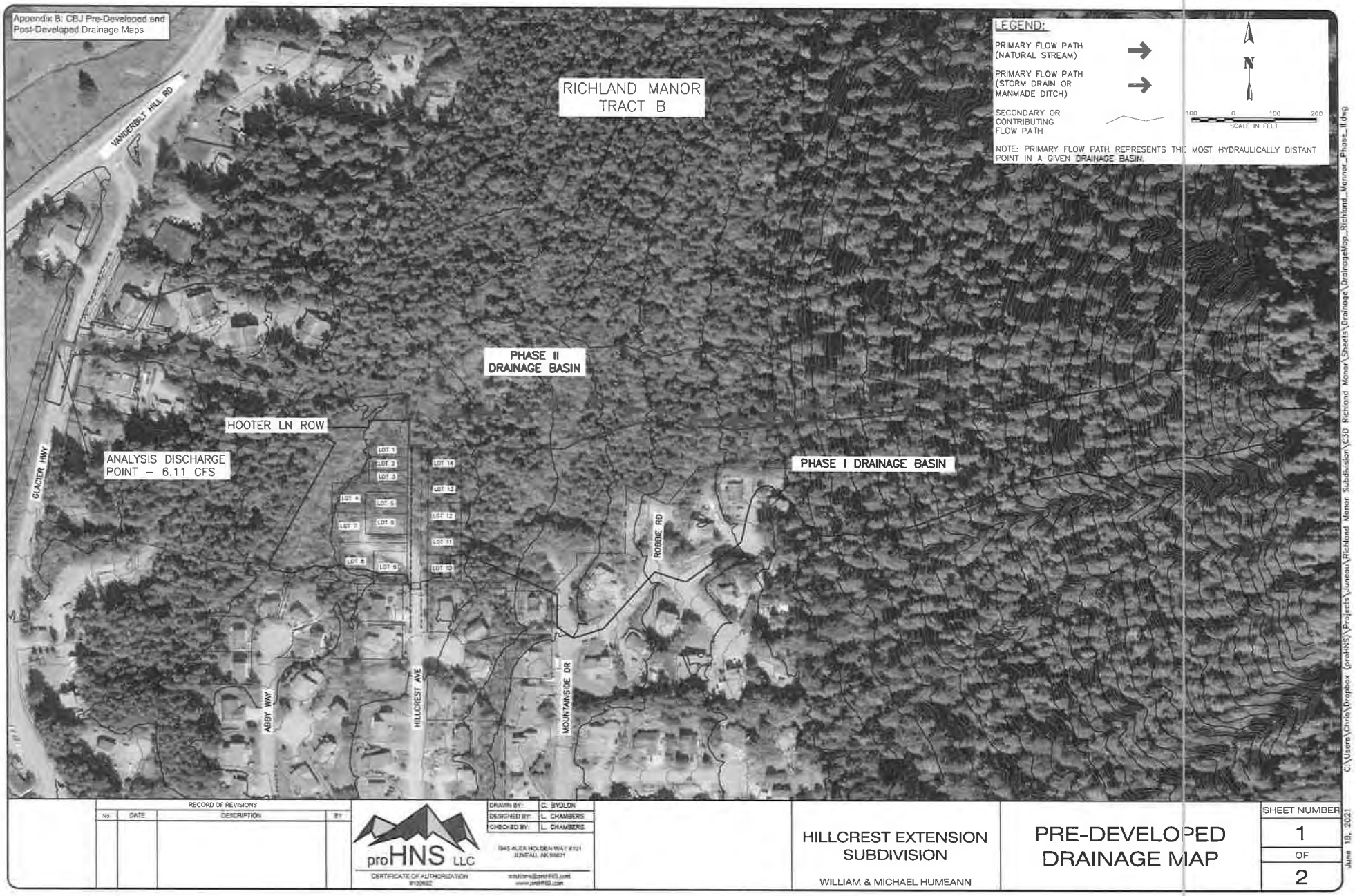
MICHAEL AND WILLIAM HEUMANN

TRAFFIC CONTROL PLAN

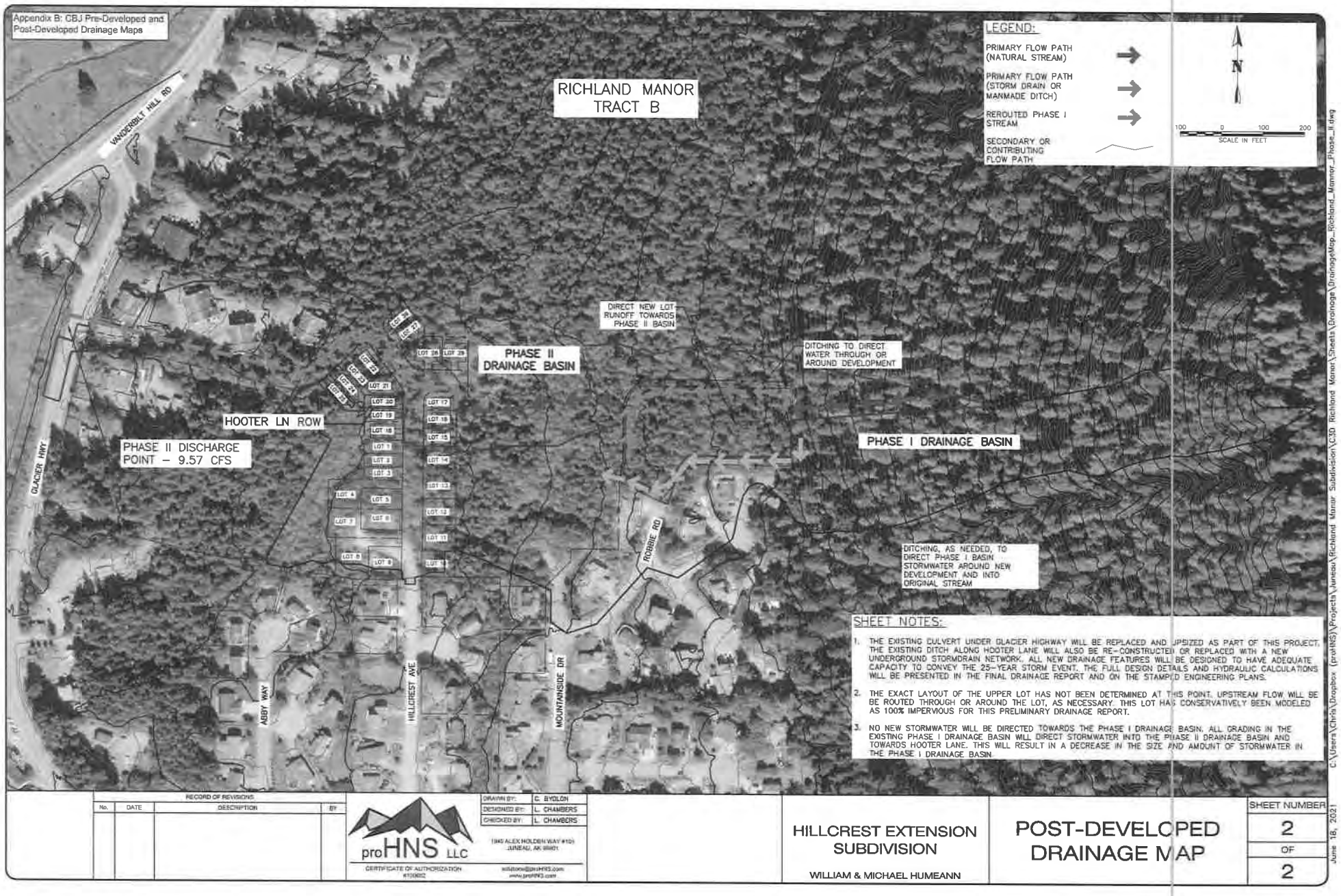
SHEET NUMBER 7 OF 7

May 19, 2021

C:\Users\Chris\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension - Phase II\Richland Mannor - Phase II - ROW Plan & Pr



Attachment F - SMP21-04 – Phase 2



Attachment F - SMP21-04 – Phase 2

Appendix C: Autodesk Storm and Sanitary Analysis Calculations

Phase II SSA Calculations

SN	Element ID	Description	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Inlet Invert Offset	Outlet Invert Elevation	Outlet Invert Offset	Total Drop	Average Slope	Pipe Shape	Pipe Diameter or Height	Pipe Width	Manning's Roughness
					(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(%)		(inches)	(inches)	
4	P-1		S-1	OUTLET-1	68.73	23.90	0.00	22.90	0.00	1.00	1.4500	CIRCULAR	36.000	36.00	0.0120
5	P-10		S-10	S-9	36.36	104.70	0.00	104.00	0.10	0.70	1.9200	CIRCULAR	18.000	18.00	0.0120
6	P-11		S-11	S-9	47.65	105.90	0.00	104.00	0.10	1.90	3.9900	CIRCULAR	18.000	18.00	0.0120
7	P-12		S-12	S-11	45.94	111.00	0.00	106.00	0.10	5.00	10.8800	CIRCULAR	18.000	18.00	0.0120
8	P-2		S-2	S-1	118.64	36.70	0.00	24.15	0.25	12.55	10.5800	CIRCULAR	24.000	24.00	0.0120
9	P-3		S-3	S-2	119.42	51.20	0.00	36.80	0.10	14.40	12.0600	CIRCULAR	24.000	24.00	0.0120
10	P-4		S-4	S-3	288.75	83.90	0.00	51.30	0.10	32.60	11.2900	CIRCULAR	24.000	24.00	0.0120
11	P-5		S-5	S-4	56.25	92.00	0.00	84.00	0.10	8.00	14.2200	CIRCULAR	24.000	24.00	0.0120
12	P-6		S-6	S-4	80.51	96.00	0.00	84.00	0.10	12.00	14.9100	CIRCULAR	18.000	18.00	0.0120
13	P-7		S-7	S-4	27.15	85.90	0.00	84.00	0.10	1.90	7.0000	CIRCULAR	18.000	18.00	0.0120
14	P-8		S-8	S-7	74.17	88.50	0.00	86.00	0.10	2.50	3.3700	CIRCULAR	18.000	18.00	0.0120
15	P-9		S-9	S-8	177.29	103.90	0.00	88.60	0.10	15.30	8.6300	CIRCULAR	18.000	18.00	0.0120

Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	Lengthening Factor	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Max Flow Velocity (ft/sec)	Travel Time (min)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged (min)	Max Flow Depth (ft)	Reported Condition
0.5000	0.5000	0.0000	0.00	NO	1.00	7.42	0 08:00	7.52	0.15	87.16	0.09	0.20	0.00	0.59	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	0.29	0 07:55	3.44	0.18	15.79	0.02	0.10	0.00	0.14	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	2.77	0 08:07	8.68	0.09	22.72	0.12	0.24	0.00	0.35	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	0.00	0 00:00	0.00		37.54	0.00	0.00	0.00	0.00	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	7.36	0 08:00	15.86	0.12	79.71	0.09	0.21	0.00	0.41	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	5.66	0 08:01	15.29	0.13	85.10	0.07	0.18	0.00	0.35	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	5.51	0 08:00	14.82	0.32	82.35	0.07	0.18	0.00	0.35	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	0.00	0 00:00	0.00		92.42	0.00	0.00	0.00	0.00	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	0.60	0 07:55	8.78	0.15	43.93	0.01	0.08	0.00	0.12	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	4.64	0 08:00	12.34	0.04	30.10	0.15	0.27	0.00	0.40	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	3.45	0 08:01	8.73	0.14	20.89	0.16	0.27	0.00	0.41	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	3.07	0 08:02	11.81	0.25	33.43	0.09	0.20	0.00	0.31	Calculated

SN	Element ID	X Coordinate	Y Coordinate	Description	Invert Elevation (ft)	Boundary Type	Flap Gate	Fixed Water Elevation (ft)	Peak Inflow (cfs)	Peak Lateral Inflow (cfs)	Maximum HGL Depth Attained (ft)	Maximum HGL Elevation Attained (ft)
1	OUTLET-1	2526890.89	2379822.38		22.90	FREE	NO		7.42	0.00	0.59	23.49
2	OUTLET-2	2526822.95	2379778.33		14.72	FREE	NO		0.46	0.00	0.09	14.81

SN	Element ID	X Coordinate	Y Coordinate	Description	Inlet Manufacturer	Manufacturer Part Number	Inlet Location	Number of Inlets	Catchbasin Invert Elevation	Max (Rim) Elevation	Max (Rim) Offset	Initial Water Elevation
									(ft)	(ft)	(ft)	(ft)
1	S-10	2527761.39	2379627.74		FHWA HEC-22 GENERIC	N/A	On Grade	1	104.70	110.63	5.93	104.70
2	S-6	2527550.68	2379686.40		FHWA HEC-22 GENERIC	N/A	On Grade	1	96.00	101.07	5.07	96.00
3	S-B1	2526916.19	2379758.86		FHWA HEC-22 GENERIC	N/A	On Grade	1	24.72	29.35	4.63	24.72

Initial Water Depth	Ponded Area	Grate Clogging Factor	Roadway Longitudinal Slope	Roadway Cross Slope	Roadway Manning's Roughness	Gutter Cross Slope	Gutter Width	Gutter Depression	Median Ditch Longitudinal Slope	Median Ditch Bottom Width	Median Ditch Left Side Slope	Median Ditch Right Side Slope	Median Ditch Manning's Roughness	Peak Flow
(ft)	(ft^2)	(%)	(ft/ft)	(ft/ft)		(ft/ft)	(ft)	(inches)	(ft/ft)	(ft)	(V:H)	(V:H)		(cfs)
0.00	N/A	0.00	0.0200	0.0500	0.0130	0.0620	2.00	0.0000	45.0000	45.0000	64	64	45.0000	0.36
0.00	N/A	0.00	0.0200	0.0500	0.0130	0.0620	2.00	0.0000	45.0000	45.0000	64	64	45.0000	0.84
0.00	N/A	0.00	0.0200	0.0500	0.0130	0.0620	2.00	0.0000	45.0000	45.0000	64	64	45.0000	0.46

Peak Lateral Inflow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Allowable Spread (ft)	Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Maximum Depth Occurrence (days hh:mm)	Total Flooded Volume (ac-inches)	Total Time Flooded (minutes)
0.36	0.31	0.05	86.56	7.00	1.97	110.76	0.12	0 07:49	0.00	0.00
0.84	0.61	0.23	72.22	7.00	2.87	101.24	0.17	0 07:54	0.00	0.00
0.46	0.38	0.08	83.68	7.00	2.20	29.49	0.13	0 07:56	0.00	0.00

SN	Element ID	X Coordinate	Y Coordinate	Description	Invert Elevation	Ground/Rim (Max) Elevation	Ground/Rim (Max) Offset	Initial Water Elevation	Initial Water Depth	Surcharge Elevation	Surcharge Depth	Ponded Area	Minimum Pipe Cover
					(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft²)	(inches)
1	S-1	2526957.75	2379806.45		23.90	29.25	5.35	23.90	0.00	29.25	0.00	0.00	28.24
2	S-11	2527773.16	2379653.88		105.90	110.22	4.32	105.90	0.00	110.22	0.00	0.00	32.60
3	S-12	2527805.92	2379686.09		111.00	114.97	3.97	111.00	0.00	114.97	0.00	0.00	29.66
4	S-2	2527073.14	2379778.86		36.70	41.96	5.26	36.70	0.00	41.96	0.00	0.00	37.91
5	S-3	2527189.29	2379751.13		51.20	54.96	3.76	51.20	0.00	54.96	0.00	0.00	19.91
6	S-4	2527470.20	2379684.30		83.90	89.77	5.87	83.90	0.00	89.77	0.00	0.00	45.25
7	S-5	2527519.29	2379711.77		92.00	99.42	7.42	92.00	0.00	99.42	0.00	0.00	65.08
8	S-7	2527476.55	2379657.90		85.90	92.83	6.93	85.90	0.00	92.83	0.00	0.00	63.98
9	S-8	2527550.64	2379654.41		88.50	91.80	3.30	88.50	0.00	91.80	0.00	0.00	20.41
10	S-9	2527727.39	2379640.64		103.90	110.66	6.76	103.90	0.00	110.66	0.00	0.00	61.87

Peak Inflow (cfs)	Peak Lateral Inflow (cfs)	Maximum HGL Elevation Attained (ft)	Maximum HGL Depth Attained (ft)	Maximum Surcharge Depth Attained (ft)	Minimum Freeboard Attained (ft)	Average HGL Elevation Attained (ft)	Average HGL Depth Attained (ft)	Time of Maximum HGL Occurrence (days hh:mm)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-inches)	Total Time Flooded (minutes)
7.42	0.07	24.56	0.66	0.00	4.69	24.32	0.42	0 08:00	0 00:00	0.00	0.00
2.77	2.77	106.25	0.35	0.00	3.96	106.06	0.16	0 08:07	0 00:00	0.00	0.00
0.00	0.00	111.00	0.00	0.00	3.97	111.00	0.00	0 00:00	0 00:00	0.00	0.00
7.36	1.73	37.15	0.45	0.00	4.81	36.95	0.25	0 08:01	0 00:00	0.00	0.00
5.66	0.16	51.65	0.45	0.00	3.31	51.45	0.25	0 08:00	0 00:00	0.00	0.00
5.51	0.07	84.40	0.50	0.00	5.37	84.16	0.26	0 08:00	0 00:00	0.00	0.00
0.00	0.00	92.00	0.00	0.00	7.42	92.00	0.00	0 00:00	0 00:00	0.00	0.00
4.64	1.29	86.41	0.51	0.00	6.42	86.17	0.27	0 08:01	0 00:00	0.00	0.00
3.45	0.41	88.91	0.41	0.00	2.89	88.73	0.23	0 08:01	0 00:00	0.00	0.00
3.07	0.06	104.35	0.45	0.00	6.30	104.14	0.24	0 08:07	0 00:00	0.00	0.00

SN	Element ID	Description	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	JUNEAU		Time Series	25-YEAR	Cumulative	inches	Alaska	Juneau (B)	25	4.82	SCS Type IA 24-hr

Appendix C: Autodesk Storm and Sanitary Analysis Calculations

SN	Element ID	Description	Area	Drainage Node ID	Weighted Curve Number	Rain Gage ID	Peak Rate Factor	Total Precipitation	Total Runoff	Peak Runoff	Time of Concentration
			(acres)					(inches)	(inches)	(cfs)	(days hh:mm:ss)
1	LOT-15		0.10	S-10	92.00	JUNEAU	484	4.82	3.91	0.10	0 00:05:24
2	LOT-16		0.10	S-10	92.00	JUNEAU	484	4.82	3.91	0.10	0 00:05:00
3	LOT-17		0.10	S-10	92.00	JUNEAU	484	4.82	3.91	0.10	0 00:05:00
4	LOT-19		0.07	S-8	92.00	JUNEAU	484	4.82	3.91	0.07	0 00:08:23
5	LOT-20		0.09	S-8	92.00	JUNEAU	484	4.82	3.91	0.09	0 00:05:00
6	LOT-21		0.12	S-8	92.00	JUNEAU	484	4.82	3.91	0.12	0 00:06:53
7	LOT-22		0.12	S-7	92.00	JUNEAU	484	4.82	3.91	0.12	0 00:08:01
8	LOT-23		0.16	S-6	92.00	JUNEAU	484	4.82	3.91	0.16	0 00:08:17
9	LOT-24		0.20	S-6	92.00	JUNEAU	484	4.82	3.91	0.20	0 00:07:19
10	LOT-25		0.18	S-6	92.00	JUNEAU	484	4.82	3.91	0.18	0 00:07:49
11	LOT-26		0.19	S-6	92.00	JUNEAU	484	4.82	3.91	0.20	0 00:08:45
12	OFFSITE-WOODS-B1		0.78	S-B1	77.00	JUNEAU	484	4.82	2.47	0.35	0 00:42:34
13	ROAD-1		0.06	S-1	98.00	JUNEAU	484	4.82	4.58	0.07	0 00:05:00
14	ROAD-11		0.09	S-11	98.00	JUNEAU	484	4.82	4.58	0.10	0 00:05:00
15	ROAD-12		0.11	S-8	98.00	JUNEAU	484	4.82	4.58	0.13	0 00:05:00
16	ROAD-13		0.04	S-7	98.00	JUNEAU	484	4.82	4.58	0.04	0 00:05:00
17	ROAD-14		0.04	S-10	98.00	JUNEAU	484	4.82	4.58	0.04	0 00:05:00
18	ROAD-15		0.05	S-9	98.00	JUNEAU	484	4.82	4.58	0.06	0 00:05:00
19	ROAD-2		0.06	S-2	98.00	JUNEAU	484	4.82	4.58	0.07	0 00:05:00
20	ROAD-3		0.14	S-3	98.00	JUNEAU	484	4.82	4.58	0.16	0 00:05:00
21	ROAD-4		0.06	S-4	98.00	JUNEAU	484	4.82	4.58	0.07	0 00:05:00
22	ROAD-5		0.08	S-6	98.00	JUNEAU	484	4.82	4.58	0.10	0 00:05:00
23	ROAD-BASIN_2_1		0.18	S-B1	98.00	JUNEAU	484	4.82	4.58	0.21	0 00:05:00
24	TAMARACK-TRAILS-CONDO		1.53	S-2	95.00	JUNEAU	484	4.82	4.24	1.67	0 00:09:55
25	TRACT-B1		0.97	S-7	98.00	JUNEAU	484	4.82	4.58	1.12	0 00:05:00
26	UPLANDS-1		5.13	S-11	77.00	JUNEAU	484	4.82	2.47	2.70	0 00:24:58

Appendix C: Autodesk Storm and Sanitary Analysis Calculations

Full Build-Out SSA Calculations

SN	Element ID	Description	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Inlet Invert Offset	Outlet Invert Elevation	Outlet Invert Offset	Total Drop	Average Slope	Pipe Shape	Pipe Diameter or Height	Pipe Width	Manning's Roughness
					(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(%)		(inches)	(inches)	
1	P-1		S-1	OUTLET-1	68.73	23.90	1.33	22.90	-0.28	1.00	1.4500	CIRCULAR	36.000	36.00	0.0120
2	P-10		S-10	S-9	36.36	104.70	-2.80	104.00	1.43	0.70	1.9300	CIRCULAR	18.000	18.00	0.0120
3	P-11		S-11	S-9	47.64	105.90	0.00	104.00	1.43	1.90	3.9900	CIRCULAR	18.000	18.00	0.0120
4	P-12		S-12	S-11	45.94	111.00	1.33	106.00	0.10	5.00	10.8800	CIRCULAR	18.000	18.00	0.0120
5	P-13		S-13	S-11	189.74	127.90	0.00	106.00	0.10	21.90	11.5400	CIRCULAR	18.000	18.00	0.0120
6	P-14		S-14	S-13	103.20	141.90	0.00	128.00	0.10	13.90	13.4700	CIRCULAR	18.000	18.00	0.0120
7	P-15		S-15	S-14	97.41	153.90	0.00	142.00	0.10	11.90	12.2200	CIRCULAR	18.000	18.00	0.0120
8	P-16		S-16	S-15	119.13	167.00	0.00	154.00	0.10	13.00	10.9100	CIRCULAR	18.000	18.00	0.0120
9	P-17		S-17	S-15	146.47	186.25	0.00	154.00	0.10	32.25	22.0200	CIRCULAR	18.000	18.00	0.0120
10	P-2		S-2	S-1	117.72	36.70	1.33	24.15	1.58	12.55	10.6600	CIRCULAR	24.000	24.00	0.0120
11	P-3		S-3	S-2	121.65	51.20	1.33	36.80	1.43	14.40	11.8400	CIRCULAR	24.000	24.00	0.0120
12	P-4		S-4	S-3	287.44	83.90	0.00	0.00	-49.87	83.90	29.1900	CIRCULAR	24.000	24.00	0.0120
13	P-5		S-5	S-4	56.25	92.00	1.33	84.00	0.10	8.00	14.2200	CIRCULAR	18.000	18.00	0.0120
14	P-6		S-6	S-4	80.51	96.00	1.33	84.00	0.10	12.00	14.9000	CIRCULAR	18.000	18.00	0.0120
15	P-7		S-7	S-4	27.16	85.90	77.33	84.00	0.10	1.90	7.0000	CIRCULAR	18.000	18.00	0.0120
16	P-8		S-8	S-7	74.17	88.50	1.33	86.00	77.43	2.50	3.3700	CIRCULAR	18.000	18.00	0.0120
17	P-9		S-9	S-8	177.29	103.90	1.33	88.60	1.43	15.30	8.6300	CIRCULAR	18.000	18.00	0.0120
18	P-B10		S-10	S-9	38.25	107.50	0.00	104.90	2.33	2.60	6.8000	CIRCULAR	18.000	18.00	0.0150
19	P-B16		S-16	S-15	121.81	167.00	0.00	153.90	0.00	13.10	10.7500	CIRCULAR	18.000	18.00	0.0150
20	P-B6		S-6	S-4	83.30	97.00	2.33	83.90	0.00	13.10	15.7300	CIRCULAR	18.000	18.00	0.0150

Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow	Flap Gate	Lengthening Factor	Peak Flow	Time of Peak Flow Occurrence	Max Flow Velocity	Travel Time	Design Flow Capacity	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged	Max Flow Depth	Reported Condition
			(cfs)			(cfs)	(days hh:mm)	(ft/sec)	(min)	(cfs)			(min)	(ft)	
0.5000	0.5000	0.0000	0.00	NO	1.00	43.51	0 07:56	10.85	0.11	73.70	0.59	0.55	0.00	1.66	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	0.69	0 07:55	7.77	0.08	35.31	0.02	0.10	0.00	0.15	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	15.40	0 07:55	13.81	0.06	22.73	0.68	0.60	0.00	0.91	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	10.96	0 07:56	18.43	0.04	37.54	0.29	0.37	0.00	0.56	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	3.56	0 07:50	13.68	0.23	38.66	0.09	0.21	0.00	0.31	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	3.31	0 07:49	14.14	0.12	41.76	0.08	0.19	0.00	0.29	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	3.25	0 07:49	13.57	0.12	39.77	0.08	0.19	0.00	0.29	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	0.13	0 07:51	4.95	0.40	37.59	0.00	0.04	0.00	0.07	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	3.04	0 07:49	16.37	0.15	53.40	0.06	0.16	0.00	0.24	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	43.44	0 07:56	25.98	0.08	80.02	0.54	0.53	0.00	1.05	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	41.61	0 07:56	26.74	0.08	84.32	0.49	0.50	0.00	0.99	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	41.43	0 07:56	26.71	0.18	84.33	0.49	0.49	0.00	0.99	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	22.67	0 08:00	24.61	0.04	42.91	0.53	0.52	0.00	0.78	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	0.71	0 07:51	9.19	0.15	43.93	0.02	0.09	0.00	0.13	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	18.06	0 07:55	17.79	0.03	30.10	0.60	0.56	0.00	0.84	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	16.62	0 07:55	13.12	0.09	20.89	0.80	0.67	0.00	1.01	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	16.16	0 07:55	18.75	0.16	33.43	0.48	0.49	0.00	0.74	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	0.00	0 00:00	0.00		35.25	0.00	0.00	0.00	0.00	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	0.00	0 00:00	0.00		33.23	0.00	0.00	0.00	0.00	Calculated
0.5000	0.5000	0.0000	0.00	NO	1.00	0.00	0 00:00	0.00		41.33	0.00	0.00	0.00	0.00	Calculated

SN	Element ID	X Coordinate	Y Coordinate	Description	Invert Elevation (ft)	Boundary Type	Flap Gate	Fixed Water Elevation (ft)	Peak Inflow (cfs)	Peak Lateral Inflow (cfs)	Maximum HGL Depth Attained (ft)	Maximum HGL Elevation Attained (ft)
1	OUTLET-1	2526890.89	2379822.38		23.18	FREE	NO		43.51	0.00	1.66	24.84
2	OUTLET-2	2526870.62	2379763.69		0.00	FREE	NO		0.55	0.55	0.00	0.00

SN	Element ID	X Coordinate	Y Coordinate	Description	Inlet Manufacturer	Manufacturer Part Number	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Max (Rim) Offset (ft)	Initial Water Elevation (ft)
1	S-10	2527761.39	2379627.74		FHWA HEC-22 GENERIC	N/A	On Grade	1	107.50	110.63	3.13	107.50
2	S-16	2528092.90	2379403.80		FHWA HEC-22 GENERIC	N/A	On Grade	1	167.00	170.13	3.13	167.00
3	S-6	2527550.68	2379686.40		FHWA HEC-22 GENERIC	N/A	On Grade	1	94.67	101.07	6.40	97.00

Initial Water Depth (ft)	Ponded Area (ft^2)	Grate Clogging Factor (%)	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (inches)	Median Ditch Longitudinal Slope (ft/ft)	Median Ditch Bottom Width (ft)	Median Ditch Left Side Slope (V:H)	Median Ditch Right Side Slope (V:H)	Median Ditch Manning's Roughness	Peak Flow (cfs)
0.00	N/A	0.00	0.0200	0.0500	0.0130	0.0620	2.00	0.0000	45.0000	45.0000	64	64	45.0000	0.69
0.00	N/A	0.00	0.0200	0.0500	0.0130	0.0620	2.00	0.0000	45.0000	45.0000	64	64	45.0000	0.13
2.33	N/A	0.00	0.0200	0.0500	0.0130	0.0620	2.00	0.0000	45.0000	45.0000	64	64	45.0000	0.71

Peak Lateral Inflow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Allowable Spread (ft)	Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Maximum Depth Occurrence (days hh:mm)	Total Flooded Volume (ac-inches)	Total Time Flooded (minutes)
0.69	nan	nan	nan	7.00	2.64	110.79	0.16	0 07:55	0.00	0.00
0.13	nan	nan	nan	7.00	1.36	170.22	0.08	0 07:48	0.00	0.00
0.71	nan	nan	nan	7.00	2.67	101.23	0.16	0 07:51	0.00	0.00

SN	Element ID	X Coordinate	Y Coordinate	Description	Invert Elevation	Ground/Rim (Max) Elevation	Ground/Rim (Max) Offset	Initial Water Elevation	Initial Water Depth	Surcharge Elevation	Surcharge Depth	Ponded Area	Minimum Pipe Cover
					(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft^2)	(inches)
1	S-1	2526957.75	2379806.45		22.57	29.25	6.68	24.90	2.33	29.25	0.00	0.00	28.24
2	S-11	2527773.16	2379653.88		105.90	110.22	4.32	105.90	0.00	110.22	0.00	0.00	32.60
3	S-12	2527805.92	2379686.09		109.67	114.97	5.30	111.00	1.33	114.97	0.00	0.00	29.66
4	S-13	2527962.90	2379653.62		127.90	132.75	4.85	127.90	0.00	132.75	0.00	0.00	39.00
5	S-14	2528057.02	2379611.29		141.90	145.96	4.06	141.90	0.00	145.96	0.00	0.00	29.56
6	S-15	2528097.80	2379522.83		153.90	158.00	4.10	153.90	0.00	158.00	0.00	0.00	30.04
7	S-17	2528244.23	2379526.31		186.25	188.38	2.13	186.25	0.00	188.38	0.00	0.00	7.60
8	S-2	2527072.17	2379778.77		35.37	40.58	5.21	0.00	-35.37	0.00	-40.58	0.00	21.36
9	S-3	2527190.75	2379751.59		49.87	54.96	5.09	0.00	-49.87	0.00	-54.96	0.00	21.12
10	S-4	2527470.20	2379684.30		83.90	89.77	5.87	83.90	0.00	89.77	0.00	0.00	46.45
11	S-5	2527519.29	2379711.77		90.67	99.42	8.75	95.00	4.33	99.42	0.00	0.00	71.08
12	S-7	2527476.55	2379657.90		8.57	92.83	84.26	87.90	79.33	92.83	0.00	0.00	63.98
13	S-8	2527550.64	2379654.41		87.17	91.80	4.63	88.90	1.73	91.80	0.00	0.00	20.41
14	S-9	2527727.39	2379640.64		102.57	110.66	8.09	104.90	2.33	110.66	0.00	0.00	51.07

Peak Inflow (cfs)	Peak Lateral Inflow (cfs)	Maximum HGL Elevation Attained (ft)	Maximum HGL Depth Attained (ft)	Maximum Surcharge Depth Attained (ft)	Minimum Freeboard Attained (ft)	Average HGL Elevation Attained (ft)	Average HGL Depth Attained (ft)	Time of Maximum HGL Occurrence (days hh:mm)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-inches)	Total Time Flooded (minutes)
43.51	0.07	25.56	2.99	0.00	3.69	24.56	1.99	0 07:56	0 00:00	0.00	0.00
15.40	0.92	106.81	0.91	0.00	3.41	106.23	0.33	0 07:55	0 00:00	0.00	0.00
10.96	10.96	111.56	1.89	0.00	3.42	111.21	1.54	0 07:56	0 00:00	0.00	0.00
3.56	0.25	128.29	0.39	0.00	4.46	128.11	0.21	0 07:49	0 00:00	0.00	0.00
3.31	0.07	142.29	0.39	0.00	3.67	142.12	0.22	0 07:49	0 00:00	0.00	0.00
3.25	0.07	154.24	0.34	0.00	3.76	154.10	0.20	0 07:49	0 00:00	0.00	0.00
3.04	3.04	186.49	0.24	0.00	1.89	186.35	0.10	0 07:49	0 00:00	0.00	0.00
43.44	1.83	37.79	2.42	0.00	2.79	37.17	1.80	0 07:56	0 00:00	0.00	0.00
41.61	0.18	52.19	2.32	0.00	2.77	51.57	1.70	0 07:56	0 00:00	0.00	0.00
41.43	0.07	84.89	0.99	0.00	4.88	84.30	0.40	0 07:56	0 00:00	0.00	0.00
22.67	22.67	92.78	2.11	0.00	6.65	92.30	1.63	0 08:00	0 00:00	0.00	0.00
18.06	1.45	87.01	78.44	0.00	5.82	86.35	77.78	0 07:55	0 00:00	0.00	0.00
16.63	0.47	89.51	2.34	0.00	2.29	88.88	1.71	0 07:55	0 00:00	0.00	0.00
16.16	0.07	104.91	2.34	0.00	5.75	104.90	2.33	0 07:55	0 00:00	0.00	0.00

SN	Element ID	Description	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	JUNEAU		Time Series	50-YEAR	Cumulative	inches	Alaska	Juneau (B)	50	5.41	SCS Type IA 24-hr

Appendix C: Autodesk Storm and Sanitary Analysis Calculations

SN	Element ID	Description	Area	Drainage Node ID	Weighted Curve Number	Rain Gage ID	Peak Rate Factor	Total Precipitation	Total Runoff	Peak Runoff	Time of Concentration
			(acres)					(inches)	(inches)	(cfs)	(days hh:mm:ss)
1	FUTURE-1		9.46	S-5	98.00	JUNEAU	484	5.41	5.17	12.27	0 00:05:00
2	FUTURE-2		2.34	S-17	98.00	JUNEAU	484	5.41	5.17	3.04	0 00:05:00
3	FUTURE-3		0.73	S-12	98.00	JUNEAU	484	5.41	5.17	0.95	0 00:05:00
4	LOT-15		0.10	S-10	92.00	JUNEAU	484	5.41	4.49	0.12	0 00:05:24
5	LOT-16		0.10	S-10	92.00	JUNEAU	484	5.41	4.49	0.12	0 00:05:00
6	LOT-17		0.10	S-10	92.00	JUNEAU	484	5.41	4.49	0.12	0 00:05:00
7	LOT-19		0.07	S-8	92.00	JUNEAU	484	5.41	4.49	0.08	0 00:08:23
8	LOT-20		0.09	S-8	92.00	JUNEAU	484	5.41	4.49	0.11	0 00:05:00
9	LOT-21		0.12	S-8	92.00	JUNEAU	484	5.41	4.49	0.14	0 00:06:53
10	LOT-22		0.12	S-7	92.00	JUNEAU	484	5.41	4.49	0.14	0 00:08:01
11	LOT-23		0.13	S-6	92.00	JUNEAU	484	5.41	4.49	0.15	0 00:06:01
12	LOT-24		0.13	S-6	92.00	JUNEAU	484	5.41	4.49	0.15	0 00:06:11
13	LOT-25		0.13	S-6	92.00	JUNEAU	484	5.41	4.49	0.15	0 00:06:34
14	LOT-26		0.13	S-6	92.00	JUNEAU	484	5.41	4.49	0.15	0 00:07:18
15	LOT-27		0.13	S-12	92.00	JUNEAU	484	5.41	4.49	0.15	0 00:05:51
16	LOT-28		0.13	S-12	92.00	JUNEAU	484	5.41	4.49	0.15	0 00:06:11
17	LOT-29		0.14	S-12	92.00	JUNEAU	484	5.41	4.49	0.17	0 00:06:13
18	LOT-30		0.20	S-12	92.00	JUNEAU	484	5.41	4.49	0.23	0 00:06:34
19	LOT-31		0.17	S-12	92.00	JUNEAU	484	5.41	4.49	0.20	0 00:05:42
20	LOT-32		0.16	S-12	92.00	JUNEAU	484	5.41	4.49	0.19	0 00:05:30
21	LOT-33		0.17	S-12	92.00	JUNEAU	484	5.41	4.49	0.20	0 00:06:26
22	LOT-34		0.18	S-12	92.00	JUNEAU	484	5.41	4.49	0.21	0 00:06:38
23	LOT-35		0.17	S-12	92.00	JUNEAU	484	5.41	4.49	0.20	0 00:06:39
24	LOT-36		0.18	S-12	92.00	JUNEAU	484	5.41	4.49	0.21	0 00:06:46
25	LOT-37		0.20	S-12	92.00	JUNEAU	484	5.41	4.49	0.23	0 00:06:54
26	LOT-42		0.11	S-10	92.00	JUNEAU	484	5.41	4.49	0.12	0 00:13:59
27	LOT-43		0.14	S-10	92.00	JUNEAU	484	5.41	4.49	0.16	0 00:13:57
28	LOT-44		0.16	S-13	92.00	JUNEAU	484	5.41	4.49	0.19	0 00:07:26
29	LOT-45		0.14	S-11	92.00	JUNEAU	484	5.41	4.49	0.17	0 00:06:44
30	OFFSITE-BASIN_1		0.78	OUTLET-2	77.00	JUNEAU	484	5.41	2.97	0.44	0 00:42:34
31	ROAD-1		0.06	S-1	98.00	JUNEAU	484	5.41	5.17	0.07	0 00:05:00
32	ROAD-10		0.05	S-13	98.00	JUNEAU	484	5.41	5.17	0.07	0 00:05:00
33	ROAD-11		0.09	S-11	98.00	JUNEAU	484	5.41	5.17	0.12	0 00:05:00
34	ROAD-12		0.11	S-8	98.00	JUNEAU	484	5.41	5.17	0.14	0 00:05:00
35	ROAD-13		0.04	S-7	98.00	JUNEAU	484	5.41	5.17	0.05	0 00:05:00
36	ROAD-14		0.04	S-10	98.00	JUNEAU	484	5.41	5.17	0.05	0 00:05:00
37	ROAD-15		0.05	S-9	98.00	JUNEAU	484	5.41	5.17	0.07	0 00:05:00
38	ROAD-2		0.06	S-2	98.00	JUNEAU	484	5.41	5.17	0.07	0 00:05:00
39	ROAD-3		0.14	S-3	98.00	JUNEAU	484	5.41	5.17	0.18	0 00:05:00
40	ROAD-4		0.06	S-4	98.00	JUNEAU	484	5.41	5.17	0.07	0 00:05:00
41	ROAD-5		0.08	S-6	98.00	JUNEAU	484	5.41	5.17	0.11	0 00:05:00
42	ROAD-6		0.22	S-12	98.00	JUNEAU	484	5.41	5.17	0.28	0 00:05:00
43	ROAD-7		0.10	S-16	98.00	JUNEAU	484	5.41	5.17	0.13	0 00:05:00
44	ROAD-8		0.06	S-15	98.00	JUNEAU	484	5.41	5.17	0.07	0 00:05:00
45	ROAD-9		0.05	S-14	98.00	JUNEAU	484	5.41	5.17	0.07	0 00:05:00
46	ROAD-BASIN_2_1		0.18	OUTLET-2	98.00	JUNEAU	484	5.41	5.17	0.23	0 00:05:00
47	ROBBIE ROAD		2.51	S-12	92.00	JUNEAU	484	5.41	4.49	2.88	0 00:14:24
48	TAMARACK_TRAILS_APTS		1.42	S-2	95.00	JUNEAU	484	5.41	4.83	1.76	0 00:09:46
49	TRACT-A		0.49	S-11	98.00	JUNEAU	484	5.41	5.17	0.64	0 00:05:00
50	TRACT-B1		0.97	S-7	98.00	JUNEAU	484	5.41	5.17	1.26	0 00:05:00
51	UPLAND-1		16.44	S-5	77.00	JUNEAU	484	5.41	2.97	11.27	0 00:18:07
52	UPLAND-2		6.59	S-12	77.00	JUNEAU	484	5.41	2.97	4.76	0 00:06:49

HY-8 Analysis Results

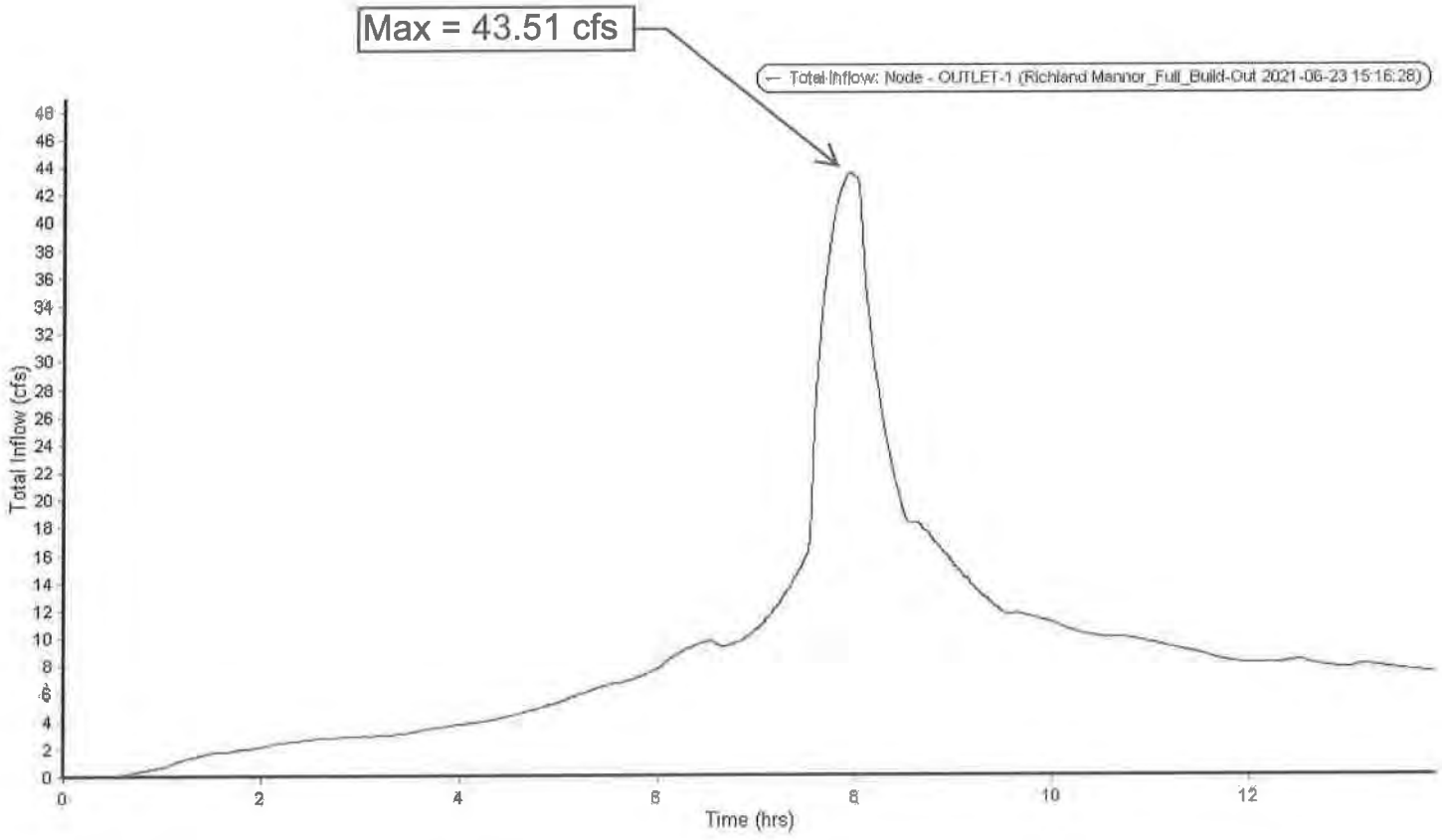
Crossing Summary Table

Culvert Crossing: 36-INCH CMP (PROPOSED)

Headwater Elevation (ft)	Total Discharge (cfs)	36-INCH Discharge (cfs)	Roadway Discharge (cfs)	Iterations
24.89	1.00	1.00	0.00	1
25.63	5.90	5.90	0.00	1
26.10	10.80	10.80	0.00	1
26.50	15.70	15.70	0.00	1
26.86	20.60	20.60	0.00	1
27.20	25.50	25.50	0.00	1
27.54	30.40	30.40	0.00	1
27.89	35.30	35.30	0.00	1
28.29	40.20	40.20	0.00	1
28.66	43.51	43.51	0.00	1
29.29	50.00	48.73	1.25	7
29.17	47.76	47.76	0.00	Overtopping

Pipe can accomidate 47.76 cfs before reaching top of structure.

Appendix E: Outlet 1 Hydrograph - Full Build-Out



CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Date: 26 May 2021

To: CBJ COMMUNITY DEVELPOMENT DEPARTMENT
155 SOUTH SEWARD ST.
Juneau, Alaska 99801

Subject: Lot closure reports

Remarks: The lot closure reflects the proposed subdivision of Chilkat Vistas Phase 2

Tract A1

Northing	Easting	Bearing	Distance
2379595.332	2528263.968		
		S 00°00'00" E	118.940
2379476.392	2528263.968		
		S 08°32'51" W	53.680
2379423.308	2528255.990		
		S 64°45'24" E	109.360
2379376.670	2528354.907		
		N 39°40'42" E	118.350
2379467.757	2528430.470		
		S 89°59'32" E	245.092
2379467.730	2528675.562		
		N 00°00'13" W	202.600
2379670.330	2528675.550		
		N 90°00'00" W	336.581
2379670.330	2528338.969		

Radius: 75.000 Chord: 106.064 Degree: 76°23'40" Dir: Left
Length: 117.807 Delta: 89°59'53" Tangent: 74.998
Chord BRG: S 45°00'04" W Rad-In: S 00°00'01" W Rad-Out: S 89°59'53" E
Radius Point: 2379595.330,2528338.968

2379595.332 2528263.968

Closure Error Distance> 0.00000
Total Distance> 1302.410
Polyline Area: 92174 sq ft, 2.1160 acres

TRACT A2

Northing	Easting	Bearing	Distance
2379595.330	2528263.969		
		S 00°00'00" E	118.945
2379476.385	2528263.969		
		S 08°32'51" W	53.677
2379423.305	2528255.991		
		S 00°02'36" W	164.300
2379259.005	2528255.866		
		N 89°55'40" W	115.180
2379259.150	2528140.687		

S 00°06'22" W 29.900
2379229.250 2528140.631
S 43°40'22" W 86.777
2379166.484 2528080.708
S 89°42'06" W 110.311
2379165.910 2527970.399
N 01°00'49" E 20.021
2379185.928 2527970.753
S 89°59'39" W 109.840
2379185.917 2527860.913
N 00°00'00" W 444.906
2379630.823 2527860.913
S 88°09'10" E 26.378
2379629.973 2527887.277
N 00°00'00" W 133.704
2379763.677 2527887.277
N 90°00'00" W 106.394
2379763.677 2527780.883
N 00°00'00" W 28.512
2379792.189 2527780.883
N 38°35'23" W 30.475
2379816.009 2527761.874
S 51°24'37" W 6.085
2379812.213 2527757.118
N 38°09'17" W 45.000
2379847.599 2527729.318
N 45°04'37" W 50.000
2379882.907 2527693.915
S 44°55'24" W 281.399
2379683.661 2527495.202
N 28°21'14" E 954.853
2380523.961 2527948.677
S 89°52'00" E 726.810
2380522.270 2528675.485
S 00°00'13" E 851.940
2379670.330 2528675.550
N 90°00'00" W 336.581
2379670.330 2528338.969
Radius: 75.000 Chord: 106.066 Degree: 76°23'40" Dir: Left
Length: 117.810 Delta: 90°00'00" Tangent: 75.000
Chord BRG: S 45°00'00" W Rad-In: S 00°00'00" E Rad-Out: N 90°00'00" E
Radius Point: 2379595.330,2528338.969
2379595.330 2528263.969

Closure Error Distance> 0.00000
Total Distance> 4949.797
Polyline Area: 955771 sq ft, 21.9415 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

TRACT A3

Northing	Easting	Bearing	Distance
2379646.963	2527524.288		
		S 45°04'37" E	94.638
2379580.133	2527591.297		
		N 90°00'00" E	45.600
2379580.133	2527636.897		
		S 00°00'00" E	164.010
2379416.123	2527636.897		
		N 90°00'00" W	86.000
2379416.123	2527550.897		
		S 00°00'00" E	140.000
2379276.123	2527550.897		
		N 90°00'00" E	20.100
2379276.123	2527570.997		
		S 00°00'00" E	93.360
2379182.763	2527570.997		
		N 81°21'10" W	323.535
2379231.407	2527251.139		
		N 28°21'14" E	457.091
2379633.661	2527468.220		
		N 90°00'00" E	6.233
2379633.661	2527474.453		

Radius: 100.000 Chord: 51.579 Degree: 57°17'45" Dir: Left
Length: 52.169 Delta: 29°53'26" Tangent: 26.693
Chord BRG: N 75°03'17" E Rad-In: N 00°00'00" W Rad-Out: N 29°53'26" W
Radius Point: 2379733.661,2527474.453

2379646.963 2527524.288

Closure Error Distance> 0.00000
Total Distance> 1482.736
Polyline Area: 100730 sq ft, 2.3125 acres

LOT 15

Northing	Easting	Bearing	Distance
2379500.137	2527860.913		
		N 90°00'00" W	80.000
2379500.137	2527780.913		
		N 00°00'00" W	42.840
2379542.977	2527780.913		
		N 90°00'00" E	80.000
2379542.977	2527860.913		
		S 00°00'00" E	42.840
2379500.137	2527860.913		

Closure Error Distance> 0.00000
Total Distance> 245.680
Polyline Area: 3427 sq ft, 0.0787 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

LOT 16

Northing	Easting	Bearing	Distance
2379542.977	2527860.913		
		N 90°00'00" W	80.000
2379542.977	2527780.913		
		N 00°00'00" W	42.840
2379585.817	2527780.913		
		N 90°00'00" E	80.000
2379585.817	2527860.913		
		S 00°00'00" E	42.840
2379542.977	2527860.913		

Closure Error Distance> 0.00000
Total Distance> 245.680
Polyline Area: 3427 sq ft, 0.0787 acres

LOT 17

Northing	Easting	Bearing	Distance
2379585.817	2527860.913		
		N 90°00'00" W	80.000
2379585.817	2527780.913		
		N 00°00'00" W	20.000
2379605.817	2527780.913		

Radius: 25.000 Chord: 35.355 Degree: 229°10'59" Dir: Right
Length: 39.270 Delta: 90°00'00" Tangent: 25.000
Chord BRG: N 45°00'00" E Rad-In: N 90°00'00" E Rad-Out: S 00°00'00" E
Radius Point: 2379605.817,2527805.913

2379630.817	2527805.913		
		N 90°00'00" E	55.000
2379630.817	2527860.913		
		S 00°00'00" E	45.000
2379585.817	2527860.913		

Closure Error Distance> 0.00000
Total Distance> 239.270
Polyline Area: 3466 sq ft, 0.0796 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

LOT 18

Northing	Easting	Bearing	Distance
2379512.124	2527730.895		
		N 90°00'00" W	94.000
2379512.124	2527636.895		
		N 00°00'00" W	43.850
2379555.974	2527636.895		
		N 90°00'00" E	94.000
2379555.974	2527730.895		
		S 00°00'00" W	43.850
2379512.124	2527730.895		

Closure Error Distance> 0.00000
Total Distance> 275.700
Polyline Area: 4122 sq ft, 0.0946 acres

LOT 19

Northing	Easting	Bearing	Distance
2379555.974	2527730.895		
		N 00°00'00" W	32.000
2379587.974	2527730.895		
		N 90°00'00" W	94.000
2379587.974	2527636.895		
		S 00°00'00" E	32.000
2379555.974	2527636.895		
		N 90°00'00" E	94.000
2379555.974	2527730.895		

Closure Error Distance> 0.00000
Total Distance> 252.000
Polyline Area: 3008 sq ft, 0.0691 acres

LOT 20

Northing	Easting	Bearing	Distance
2379587.974	2527730.895		
		N 00°00'00" W	32.000
2379619.974	2527730.895		
		N 90°00'00" W	94.000
2379619.974	2527636.895		
		S 00°00'00" E	32.000
2379587.974	2527636.895		
		N 90°00'00" E	94.000
2379587.974	2527730.895		

Closure Error Distance> 0.00000
Total Distance> 252.000
Polyline Area: 3008 sq ft, 0.0691 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

LOT 21

Northing	Easting	Bearing	Distance
2379619.974	2527636.895		
		N 44°47'33" W	15.205
2379630.764	2527626.183		
		N 44°55'23" E	86.415
2379691.950	2527687.206		
		S 38°35'23" E	61.292
2379644.042	2527725.436		

Radius: 25.000 Chord: 16.521 Degree: 229°10'59" Dir: Right
Length: 16.838 Delta: 38°35'23" Tangent: 8.752
Chord BRG: S 19°17'41" E Rad-In: S 51°24'37" W Rad-Out: N 90°00'00" W
Radius Point: 2379628.449,2527705.895

2379628.449	2527730.895		
		S 00°00'00" E	8.475
2379619.974	2527730.895		
		N 90°00'00" W	94.000
2379619.974	2527636.895		

Closure Error Distance> 0.00000
Total Distance> 282.225
Polyline Area: 4408 sq ft, 0.1012 acres

LOT 22

Northing	Easting	Bearing	Distance
2379660.088	2527655.429		
		N 45°04'37" W	80.095
2379716.648	2527598.718		
		N 44°55'23" E	26.103
2379735.130	2527617.150		

Radius: 25.000 Chord: 37.299 Degree: 229°10'59" Dir: Right
Length: 42.101 Delta: 96°29'14" Tangent: 28.004
Chord BRG: S 86°50'00" E Rad-In: S 45°04'37" E Rad-Out: S 51°24'37" W
Radius Point: 2379717.476,2527634.852

2379733.070	2527654.393		
		S 38°35'23" E	52.607
2379691.950	2527687.206		
		S 44°55'23" W	44.999
2379660.088	2527655.429		

Closure Error Distance> 0.00000
Total Distance> 245.905
Polyline Area: 3795 sq ft, 0.0871 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

LOT 23

Northing	Easting	Bearing	Distance
2379633.536	2527628.948		
		N 44°55'23" E	37.500
2379660.088	2527655.429		
		N 45°04'37" W	80.095
2379716.648	2527598.718		
		S 44°55'23" W	37.500
2379690.096	2527572.237		
		S 45°04'37" E	80.095
2379633.536	2527628.948		

Closure Error Distance> 0.00000
Total Distance> 235.190
Polyline Area: 3004 sq ft, 0.0690 acres

Lot 24

Northing	Easting	Bearing	Distance
2379667.296	2527549.498		
		N 44°55'23" E	32.200
2379690.096	2527572.237		
		S 45°04'37" E	80.095
2379633.536	2527628.948		
		S 44°55'23" W	3.916
2379630.764	2527626.183		
		S 44°47'33" E	15.205
2379619.974	2527636.895		
		S 00°00'00" E	39.840
2379580.133	2527636.895		
		N 45°04'37" W	123.432
2379667.296	2527549.498		

Closure Error Distance> 0.00000
Total Distance> 294.687
Polyline Area: 3405 sq ft, 0.0782 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Lot 25
Northing Easting Bearing Distance
2379646.963 2527524.288
Radius: 100.000 Chord: 26.428 Degree: 57°17'45" Dir: Left
Length: 26.505 Delta: 15°11'11" Tangent: 13.331
Chord BRG: N 52°30'58" E Rad-In: N 29°53'26" W Rad-Out: N 45°04'37" W
Radius Point: 2379733.661,2527474.453
2379663.045 2527545.259
N 44°55'23" E 6.004
2379667.296 2527549.498
S 45°04'37" E 123.432
2379580.133 2527636.895
N 90°00'00" W 45.599
2379580.133 2527591.297
N 45°04'37" W 94.638
2379646.963 2527524.288

Closure Error Distance> 0.00000
Total Distance> 296.179
Polyline Area: 3485 sq ft, 0.0800 acres

Lot 26
Northing Easting Bearing Distance
2379812.426 2527757.385
S 51°24'37" W 80.000
2379762.527 2527694.854
N 38°35'23" W 13.584
2379773.145 2527686.382
Radius: 25.000 Chord: 33.298 Degree: 229°10'59" Dir: Right
Length: 36.439 Delta: 83°30'46" Tangent: 22.318
Chord BRG: N 03°10'00" E Rad-In: N 51°24'37" E Rad-Out: S 45°04'37" E
Radius Point: 2379788.738,2527705.923
2379806.392 2527688.221
N 44°55'23" E 58.197
2379847.599 2527729.318
S 38°35'23" E 44.999
2379812.426 2527757.385

Closure Error Distance> 0.00000
Total Distance> 233.219
Polyline Area: 3134 sq ft, 0.0719 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Lot 27

Northing	Easting	Bearing	Distance
2379686.752	2527757.777		
		N 00°00'00" W	62.019
2379748.770	2527757.777		
		N 57°10'22" E	27.497
2379763.677	2527780.883		
		N 00°00'00" W	28.512
2379792.189	2527780.883		
		N 38°35'23" W	30.475
2379816.009	2527761.874		
		S 51°24'37" W	85.743
2379762.527	2527694.854		
		S 38°35'23" E	88.845
2379693.083	2527750.271		

Radius: 25.000 Chord: 9.812 Degree: 229°10'59" Dir: Left
Length: 9.876 Delta: 22°38'05" Tangent: 5.003
Chord BRG: S 49°54'25" E Rad-In: N 51°24'37" E Rad-Out: N 28°46'32" E
Radius Point: 2379708.677,2527769.811

2379686.764 2527757.777

Closure Error Distance> 0.01218 Error Bearing> S 00°00'00" E
Closure Precision> 1 in 27334.1 Total Distance> 332.967
Polyline Area: 5200 sq ft, 0.1194 acres

Lot 28

Northing	Easting	Bearing	Distance
2379763.677	2527780.883		
		N 90°00'00" E	43.894
2379763.677	2527824.777		
		S 00°00'00" E	80.000
2379683.677	2527824.777		
		N 90°00'00" W	55.859
2379683.677	2527768.918		

Radius: 25.000 Chord: 11.557 Degree: 229°10'59" Dir: Right
Length: 11.663 Delta: 26°43'46" Tangent: 5.940
Chord BRG: N 74°34'11" W Rad-In: N 02°03'55" E Rad-Out: N 28°47'42" E
Radius Point: 2379708.660,2527769.819

2379686.752 2527757.777
N 00°00'00" W 62.019
2379748.770 2527757.777
N 57°10'22" E 27.497
2379763.677 2527780.883

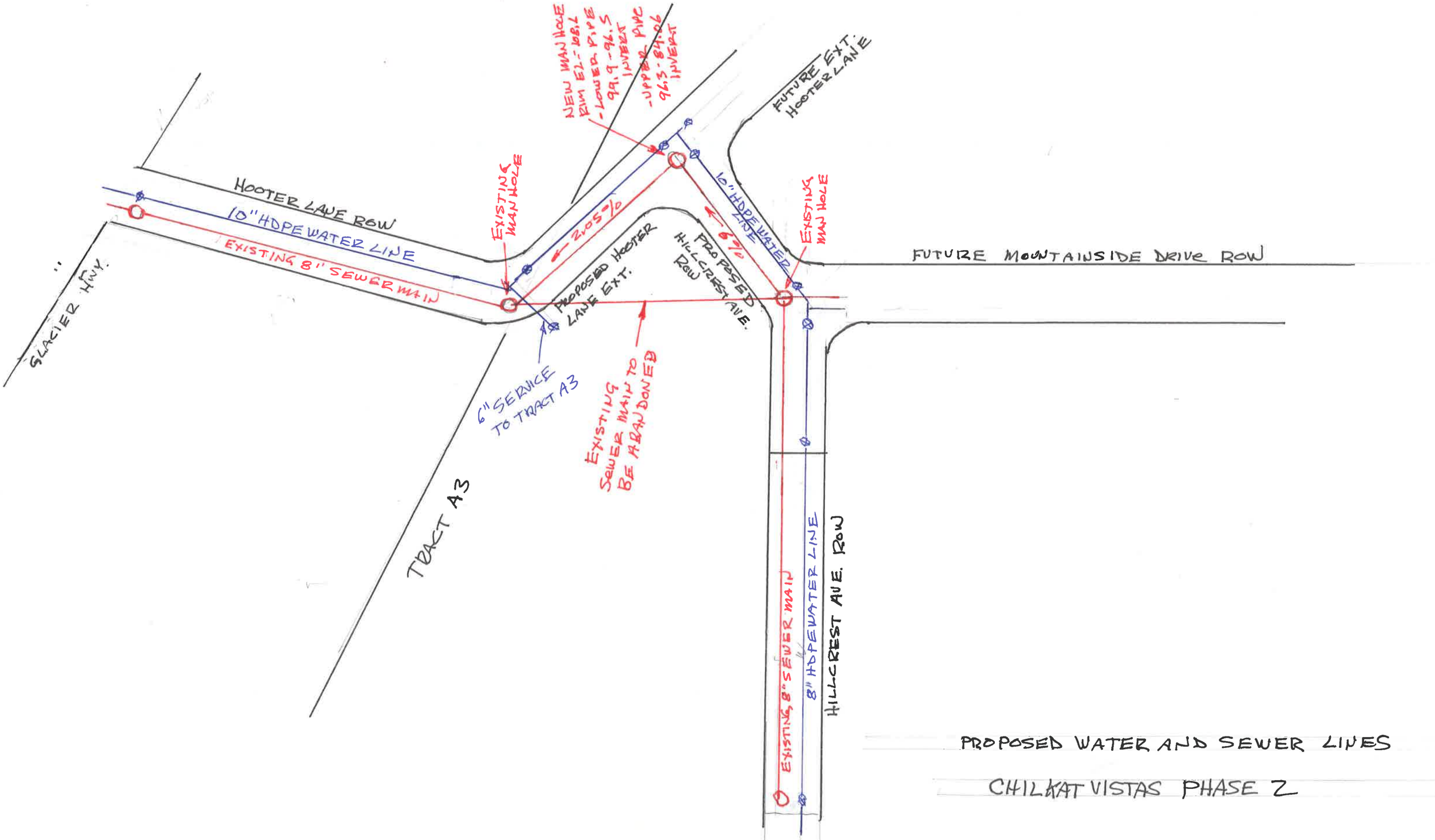
Closure Error Distance> 0.00000
Total Distance> 280.932
Polyline Area: 5176 sq ft, 0.1188 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Lot 29

Northing	Easting	Bearing	Distance
2379763.677	2527824.777		
		N 90°00'00" E	62.500
2379763.677	2527887.277		
		S 00°00'00" E	80.000
2379683.677	2527887.277		
		N 90°00'00" W	62.500
2379683.677	2527824.777		
		N 00°00'00" W	80.000
2379763.677	2527824.777		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0.1148 acres



PROPOSED WATER AND SEWER LINES

CHILKAT VISTAS PHASE 2

8/10/21

1"=80'

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF S 68° 52'00" E AS DELINEATED ON THE OFFICIAL PLAT OF US SURVEY 4807 SUBDIVISION, APPROVED 23 MARCH 1965, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK CORNER 1 AND CORNER 2, US SURVEY 4807 AS SHOWN ON THIS PLAT.

US SURVEY 4807
TRACT A
CHILKAT VISTA

LOT 2
PLAT 91-9

LOT 6
PLAT 83-147

LOT 7
PLAT 83-147

COOGAN DRIVE
60' ROW

LOT 5
PLAT 2020-18

LOT C
PLAT 298

LOT B
PLAT 298

LOT A
PLAT 298

LOT 8
USS 3263

N 38°21'14" E 664.85

FRACTION US
SURVEY 1762

(S 00°02'36"E 1064.15)R3
S 00°00'13" E 1054.55

N 45° 04'37" W 50.00
N 38°08'17" W 45.00
S51°24'37"W 6.06
N 38°35'23" W 30.48
N00°00'00" W 28.51

LOT 26
LOT 27
LOT 28
LOT 29
LOT 22
LOT 23
LOT 24
LOT 25
LOT 21
LOT 20
LOT 19
LOT 18
LOT 17
LOT 16
LOT 15

HOOTER LANE
60' ROW

TEMPORARY
CUL-DE-SAC
EASEMENT
PLAT 60-60

LOT 1B
PLAT
2003-23

N 88°09'10" W 26.38

S 08°32'51" W 53.66

(S90°00'00" E45.12)R3
S 89°59'32" E 249.08

LOT 39
PLAT 83-146

LOT 38
PLAT 83-146

20.0 SLOPE EASEMENT
PLAT 83-146

(S 89°30'25" W 115.46)R3
N 89°46'52" E 115.35

N 84°45'24" W 109.25
(N 84°45'00" W 109.34)R3

(S 00°00'00" E 194.27)R3
S 00°02'36" W 194.30

LOT 2
PLAT 83-146

LOT 40
PLAT 83-146

ROBERT ROAD
60' ROW

(N 00°00'00" E 30.00)R3
N 89°06'22" E 29.99

(N 89°58'15" W 115.31)R3
N 89°50'45" W 115.18

LOT 1
PLAT
2018-3

N 90°00'00" E
26.10

221.55
S 81°21'15" E 384.70
(S 81°26'39" E 385.33)R3

25' GREENBELT BUFFER

(N00°00'00" E 20.00)R3
N 01°00'49" E 20.02

N 89°59'39" E 189.84
(N 90°00'00" W 189.36)R3

109.64

N 89°59'52" E 109.22
(N 90°00'00" E 109.22)R3

S 61°10'07" W
60.71
(S61°10'15" W
60.71)R3

N 69°42'06" E 110.31
(N 90°00'00" E 110.00)R3

S 43°40'22" W 85.78
(S 43°34'06" W 83.39)R3

LOT 3
PLAT 99-52

LOT 4
PLAT 99-52

LOT 9
PLAT 88-39

LOT 19
PLAT 88-39

LOT 20
PLAT 88-39

LOT 18
PLAT 83-146

LOT 1A
PLAT 97-47

MOUNTAINSIDE DR.
60' ROW

HILLCREST AVE
50' ROW

HILLCREST AVE
60' ROW

VANDALE WAY
VANDALE ROW



LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY

(N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
(N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
(S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
(S00°06'33"W)R4 RECORD INFORMATION FROM PLAT No. 2020-27
ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY

1"=80'

0 80 160 240 320

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 26 MAY 2021

STATE OF ALASKA
49 TH
Nathan Frantz Swenson
26 MAY 2021
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 1
SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

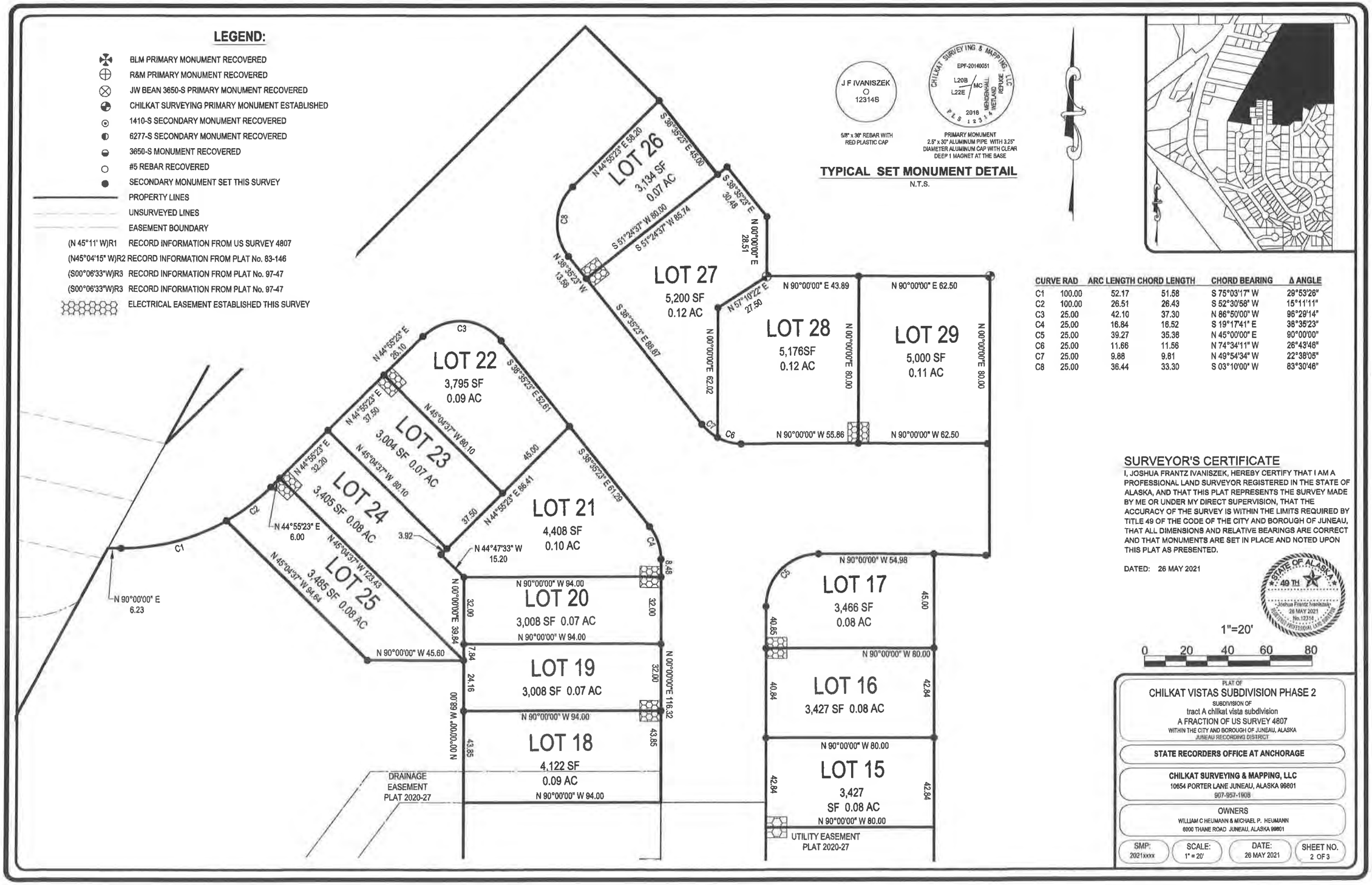
CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
2021XXXX	1" = 80'	26 MAY 2021	1 OF 3

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- 1410-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY



J F IVANISZEK
12314S

5/8" x 36" REBAR WITH RED PLASTIC CAP

CHILKAT SURVEYING & MAPPING, LLC
EPF-20140051
L20B L22E MC
MENDENHALL WETLANDS REFUGE
2016
PLS 1 2 3 4

PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP WITH CLEAR DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.

CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	100.00	52.17	51.58	S 75°03'17" W	29°53'26"
C2	100.00	26.51	26.43	S 52°30'58" W	15°11'11"
C3	25.00	42.10	37.30	N 86°50'00" W	96°29'14"
C4	25.00	16.84	16.52	S 19°17'41" E	38°35'23"
C5	25.00	39.27	35.38	N 45°00'00" E	90°00'00"
C6	25.00	11.66	11.56	N 74°34'11" W	26°43'46"
C7	25.00	9.88	9.81	N 49°54'34" W	22°38'05"
C8	25.00	36.44	33.30	S 03°10'00" W	83°30'46"

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 26 MAY 2021

STATE OF ALASKA
49 TH
Joshua Frantz Ivaniszek
26 MAY 2021
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

1"=20'

0 20 40 60 80

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
tract A chilkat vista subdivision
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

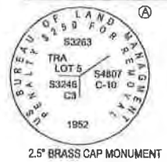
CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
2021xxxx	1" = 20'	26 MAY 2021	2 OF 3

FOUND MONUMENT DESCRIPTIONS:

Ⓐ



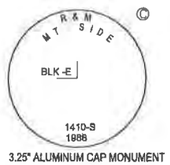
2.5" BRASS CAP MONUMENT

Ⓑ



3.25" ALUMINUM CAP MONUMENT

Ⓒ



3.25" ALUMINUM CAP MONUMENT

Ⓓ



2.5" BRASS CAP MONUMENT

Ⓔ



3.25" ALUMINUM CAP MONUMENT
FOUND J.W. BEAN MONUMENT
S 61°36'46" E 0.37 FROM
US SURVEY 4807 BOUNDARY
MONUMENT NOT ACCEPTED

Ⓕ



2.5" BRASS CAP MONUMENT

Ⓖ

FOUND J.W. BEAN REBAR MONUMENT
S 01°34'23" W0.62 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE WITH
ALASKA DNR

Ⓗ

FOUND JW BEAN REBAR
S 11°57'46"W 1.60 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓘ

FOUND #5 REBAR
S 04°55'58"W 1.29 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓙ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓚ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓛ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓜ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1963; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015 ON FILE WITH IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFRENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER CHILKAT VISTAS SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET. ALL REQUIRED CHILKAT VISTAS SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12.120 BEST MANAGEMENT PRACTICES.

8) LOTS 1 , 2, AND 3 ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 1 & 2 & 3 WERE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT; OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

9) LOTS 4, 5, 6, 7, 8, AND 9 ARE PANHANDLE LOTS. AT THE TIME OF PLAT RECORDING, FURTHER SUBDIVISION OF LOTS 4, 5, 6, 7, 8, AND 9 IS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

10) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY.
WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

11) HOOTER LANE WILL BE DEVELOPED AS A PUBLIC TWO-WAY STREET, AS SET OUT IN THE SKETCH PLAT SUBMITTED WITH SMP20190004, SUBJECT TO CBJ PUBLIC IMPROVEMENT STANDARDS IN CBJ 49.35.

12) HOOTER LANE FROM GLACIER HIGHWAY TO HILLCREST AVENUE, AND HILLCREST AVENUE AND MOUNTAINSIDE DRIVE SHALL BE DEVELOPED WITH A SIDEWALK ON ONE SIDE. THE NUMBER OF SIDEWALKS IN THE REMAINDER OF CHILKAT VISTAS WILL BE DETERMINED AT THE TIME OF FUTURE DEVELOPMENT APPLICATIONS.

13) ROBBIE ROAD SHALL TERMINATE AND SHALL NOT BE A POINT OF ACCESS TO CHILKAT VISTAS, UNLESS REQUIRED, AND GATED, FOR FIRE/EMERGENCY SERVICE ACCESS ONLY.

14) HILLCREST AVENUE SHALL TERMINATE AT HOOTER LANE. HILLCREST AVENUE MAY CONNECT TO HOOTER LANE WEST OF THE EXISTING HILLCREST ALIGNMENT AS SHOWN IN THE SKETCH PLAT SUBMITTED WITH SMP20190004. ALTERNATIVELY ROAD ACCESS TO THE NORTHEAST PORTION OF "TRACT A" MAY CONNECT TO THE EAST/WEST PORTION OF MOUNTAINSIDE DRIVE ACROSS FROM THE ENTRANCE TO THE "POCKET" BETWEEN HILLCREST AND MOUNTAINSIDE.

15) OTHER THAN SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10 FEET IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

16) TEMPORARY CUL-DE-SAC EASEMENT SHALL BE VACATED UPON EXTENSION OF HILLCREST AVENUE UNLESS THE DIRECTOR DETERMINES ALL OR A PORTION OF THE CUL-DE-SAC MAY REMAIN.

17) ACCESS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. ACCESS TO PANHANDLE LOTS CREATED THIS SUBDIVISION SHALL BE RESTRICTED TO A SINGLE DRIVEWAY APRON IN THE RIGHT OF WAY UNLESS A SECOND DRIVEWAY TO IS APPROVED BY CBJ. USE OF THE ACCESS EASEMENT DELINEATED ON THIS PLAT IS SUBJECT TO THE REQUIREMENTS SET FORTH IN THE COMMON DRIVEWAY ACCESS, JOINT USE AND HOLD HARMLESS AGREEMENT RECORDED WITH THIS SUBDIVISION.



OWNERSHIP CERTIFICATE:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____2021 DATE:_____2021

_____ _____
WILLIAM C. HEUMANN MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS___DAY OF _____, 2021, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____, DATED _____, 2021, AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, ANCHORAGE, ALASKA.

_____DATED _____, 2021
CHAIRMAN OF THE PLANNING COMMISSION
CITY AND BOROUGH OF JUNEAU

ATTEST:

_____
MUNICIPAL CLERK
CITY AND BOROUGH OF JUNEAU



5/8" x 36" REBAR WITH
RED PLASTIC CAP



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP WITH CLEAR
DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL
N.T.S.

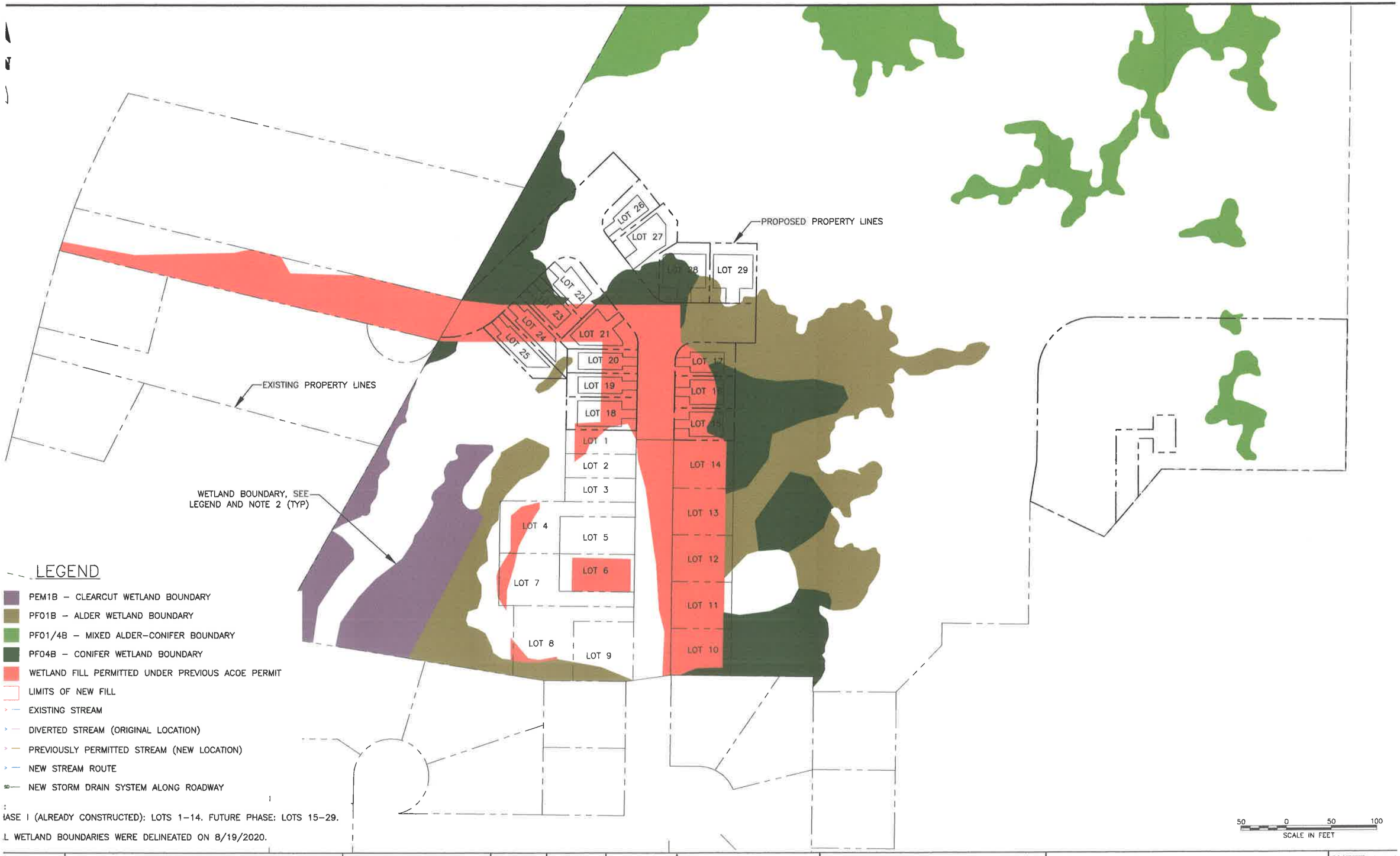
PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10854 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
2021XXXX	1" = 30'	26 MAY 2021	3 OF 3



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100862
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 789-4868
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

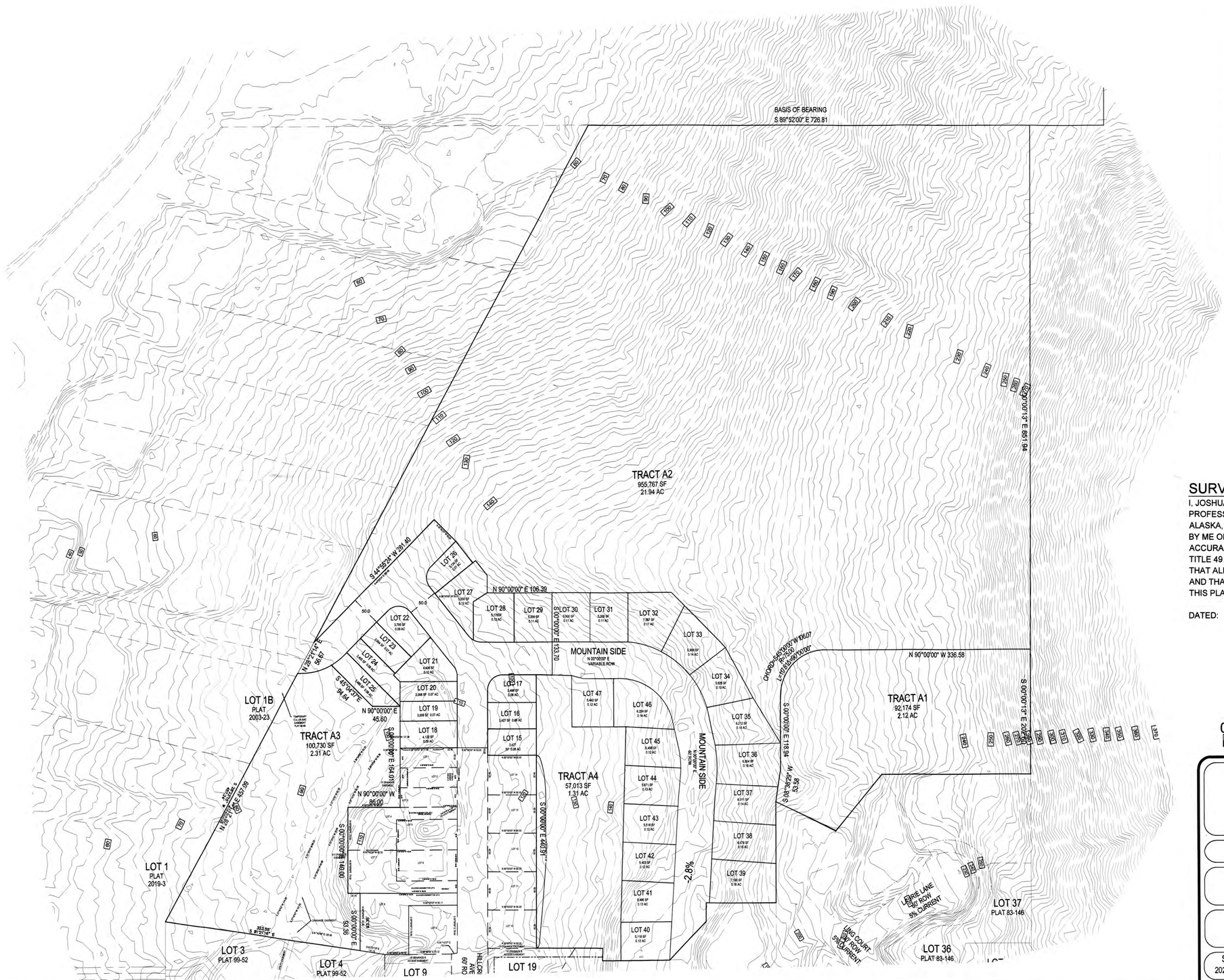
CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS WETLAND IMPACTS

SHEET NUMBER 1 OF 6

Attachment F - SMP21-04 – Phase 2



SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 21 JULY 2021

STATE OF ALASKA
49TH
Joshua Frantz Ivaniszek
21 JULY 2021
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

1"=80'

0 80 160 240 320

SKETCH PLAT OF

CHILKAT VISTAS SUBDIVISION PHASE 2

SUBDIVISION OF
TRACT A CHILKAT VISTA SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

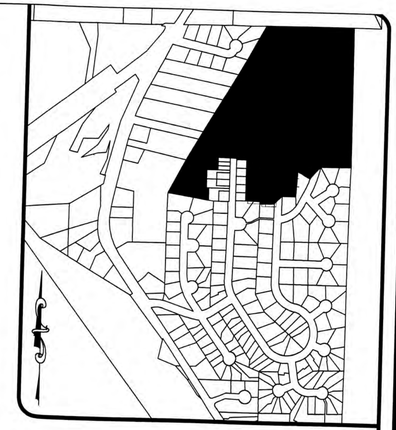
CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
2021XXXX	1" = 80'	29 JULY 2021	1 OF 1

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF S 89° 52'00" E AS DELINEATED ON THE OFFICIAL PLAT OF US SURVEY 4807 SUBDIVISION, APPROVED 23 MARCH 1965, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK CORNER 1 AND CORNER 2, US SURVEY 4807 AS SHOWN ON THIS PLAT.



LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R4 RECORD INFORMATION FROM PLAT No. 2020-27
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY

1"=80'

0 80 160 240 320

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

STATE OF ALASKA 49TH — Joshua Frantz Ivaniszek 21 JULY 2021 No.12314 — REGISTERED PROFESSIONAL LAND SURVEYOR

DATED: 21 JULY 2021

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTA SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
2021XXXX	1" = 80'	21 JULY 2021	1 OF 3

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- 1410-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY

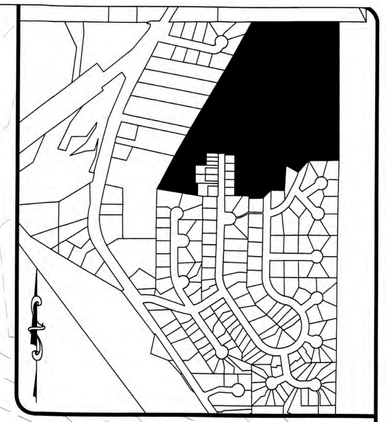
J F IVANISZEK
12314S

5/8" x 36" REBAR WITH RED PLASTIC CAP

CHILKAT SURVEYING & MAPPING, LLC
EPF-20140051
L20B / L22E
MC
MENDENHALL WETLAND REFUGE
PLS 2016 1 2 3 1 4

PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP WITH CLEAR DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL
N.T.S.



CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	100.00	52.17	51.58	S 75°03'17" W	29°53'26"
C2	100.00	26.51	26.43	S 52°30'58" W	15°11'11"
C3	25.00	42.10	37.30	N 86°50'00" W	96°29'14"
C4	25.00	16.84	16.52	S 19°17'41" E	38°35'23"
C5	25.00	39.27	35.36	N 45°00'00" E	90°00'00"
C6	25.00	11.66	11.56	N 74°34'11" W	26°43'46"
C7	25.00	9.88	9.81	N 49°54'34" W	22°38'05"
C8	25.00	36.44	33.30	S 03°10'00" W	83°30'46"

LOT 26
3,134 SF
0.07 AC

LOT 27
5,200 SF
0.12 AC

LOT 28
5,176SF
0.12 AC

LOT 29
5,000 SF
0.11 AC

LOT 22
3,795 SF
0.09 AC

LOT 23
3,004 SF 0.07 AC

LOT 24
3,405 SF 0.08 AC

LOT 25
3,485 SF 0.08 AC

LOT 21
4,408 SF
0.10 AC

LOT 20
3,008 SF 0.07 AC

LOT 19
3,008 SF 0.07 AC

LOT 18
4,122 SF
0.09 AC

LOT 17
3,466 SF
0.08 AC

LOT 16
3,427 SF 0.08 AC

LOT 15
3,427
SF 0.08 AC

TRACT A3
100,730 SF
2.31 AC

DRAINAGE EASEMENT PLAT 2020-27

UTILITY EASEMENT PLAT 2020-27

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 21 JULY 2021

STATE OF ALASKA 49TH
Joshua Frantz Ivaniszek
21 JULY 2021
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

1"=20'

0 20 40 60 80

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTA SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

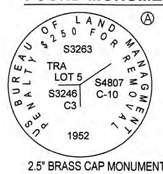
CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
2021xxxx	1" = 20'	21 JULY 2021	2 OF 3

FOUND MONUMENT DESCRIPTIONS:

Ⓐ



2.5" BRASS CAP MONUMENT

Ⓑ



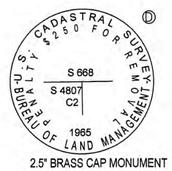
3.25" ALUMINUM CAP MONUMENT

Ⓒ



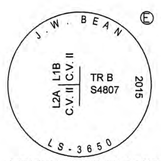
3.25" ALUMINUM CAP MONUMENT

Ⓓ



2.5" BRASS CAP MONUMENT

Ⓔ



3.25" ALUMINUM CAP MONUMENT
FOUND J.W. BEAN MONUMENT
S 61°38'46" E 0.37 FROM
US SURVEY 4807 BOUNDARY
MONUMENT NOT ACCEPTED

Ⓕ



2.5" BRASS CAP MONUMENT

Ⓖ

FOUND J.W. BEAN REBAR MONUMENT
S 01°34'23" W0.62 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE WITH
ALASKA DNR

Ⓗ

FOUND JW BEAN REBAR
S 11°57'46"W 1.60 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓘ

FOUND #5 REBAR
S 04°55'56"W 1.29 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓙ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP



5/8" x 36" REBAR WITH
RED PLASTIC CAP



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP WITH CLEAR
DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.

OWNERSHIP CERTIFICATE:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____,2021 DATE:_____,2021

_____ _____

WILLIAM C. HEUMANN MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS___ DAY OF _____, 2021, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____

NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____, DATED _____, 2021, AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, ANCHORAGE, ALASKA.

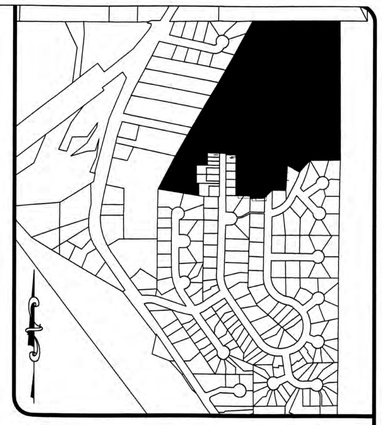
_____DATED _____, 2021

CHAIRMAN OF THE PLANNING COMMISSION
CITY AND BOROUGH OF JUNEAU

ATTEST:

_____

MUNICIPAL CLERK
CITY AND BOROUGH OF JUNEAU



NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015; CHILKAT VISTAS SUBDIVISION PHASE 1 PLAT NO. 2020-27 RECORDED 11 AUGUST 2020 ON FILE WITH THE ALASKA DEPARTMENT OF NATURAL RESOURCES RECORDERS OFFICE IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER CHILKAT VISTAS SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET. ALL REQUIRED CHILKAT VISTAS SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12.120 BEST MANAGEMENT PRACTICES.

8) LOTS 1 , 2, AND 3 ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 1 & 2 & 3 WERE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT; OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

9) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY.
WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

10) HOOTER LANE WILL BE DEVELOPED AS A PUBLIC TWO-WAY STREET, AS SET OUT IN THE SKETCH PLAT SUBMITTED WITH SMP20190004, SUBJECT TO CBJ PUBLIC IMPROVEMENT STANDARDS IN CBJ 49.35.

11) HOOTER LANE FROM GLACIER HIGHWAY TO HILLCREST AVENUE, AND HILLCREST AVENUE AND MOUNTAINSIDE DRIVE SHALL BE DEVELOPED WITH A SIDEWALK ON ONE SIDE. THE NUMBER OF SIDEWALKS IN THE REMAINDER OF CHILKAT VISTAS WILL BE DETERMINED AT THE TIME OF FUTURE DEVELOPMENT APPLICATIONS.

12) ROBBIE ROAD SHALL TERMINATE AND SHALL NOT BE A POINT OF ACCESS TO CHILKAT VISTAS, UNLESS REQUIRED, AND GATED, FOR FIRE/EMERGENCY SERVICE ACCESS ONLY.

13) HILLCREST AVENUE SHALL TERMINATE AT HOOTER LANE. HILLCREST AVENUE MAY CONNECT TO HOOTER LANE WEST OF THE EXISTING HILLCREST ALIGNMENT AS SHOWN IN THE SKETCH PLAT SUBMITTED WITH SMP20190004. ALTERNATIVELY ROAD ACCESS TO THE NORTHEAST PORTION OF "TRACT A" MAY CONNECT TO THE EAST/WEST PORTION OF MOUNTAINSIDE DRIVE ACROSS FROM THE ENTRANCE TO THE "POCKET" BETWEEN HILLCREST AND MOUNTAINSIDE.

14) OTHER THAN SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10 FEET IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

15) TEMPORARY CUL-DE-SAC EASEMENT SHALL BE VACATED UPON EXTENSION OF HILLCREST AVENUE UNLESS THE DIRECTOR DETERMINES ALL OR A PORTION OF THE CUL-DE-SAC MAY REMAIN.

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 21 JULY 2021



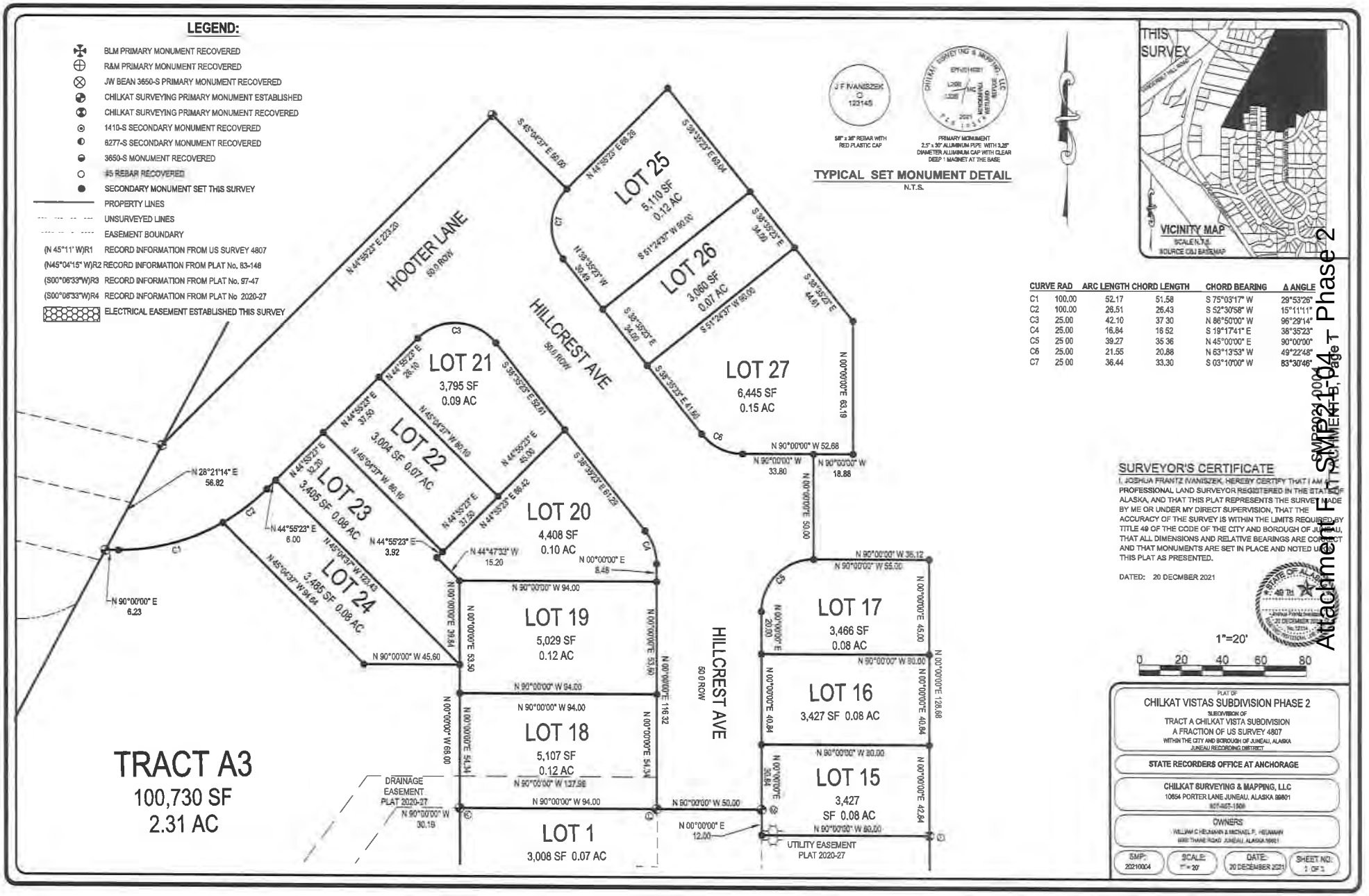
PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTA SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

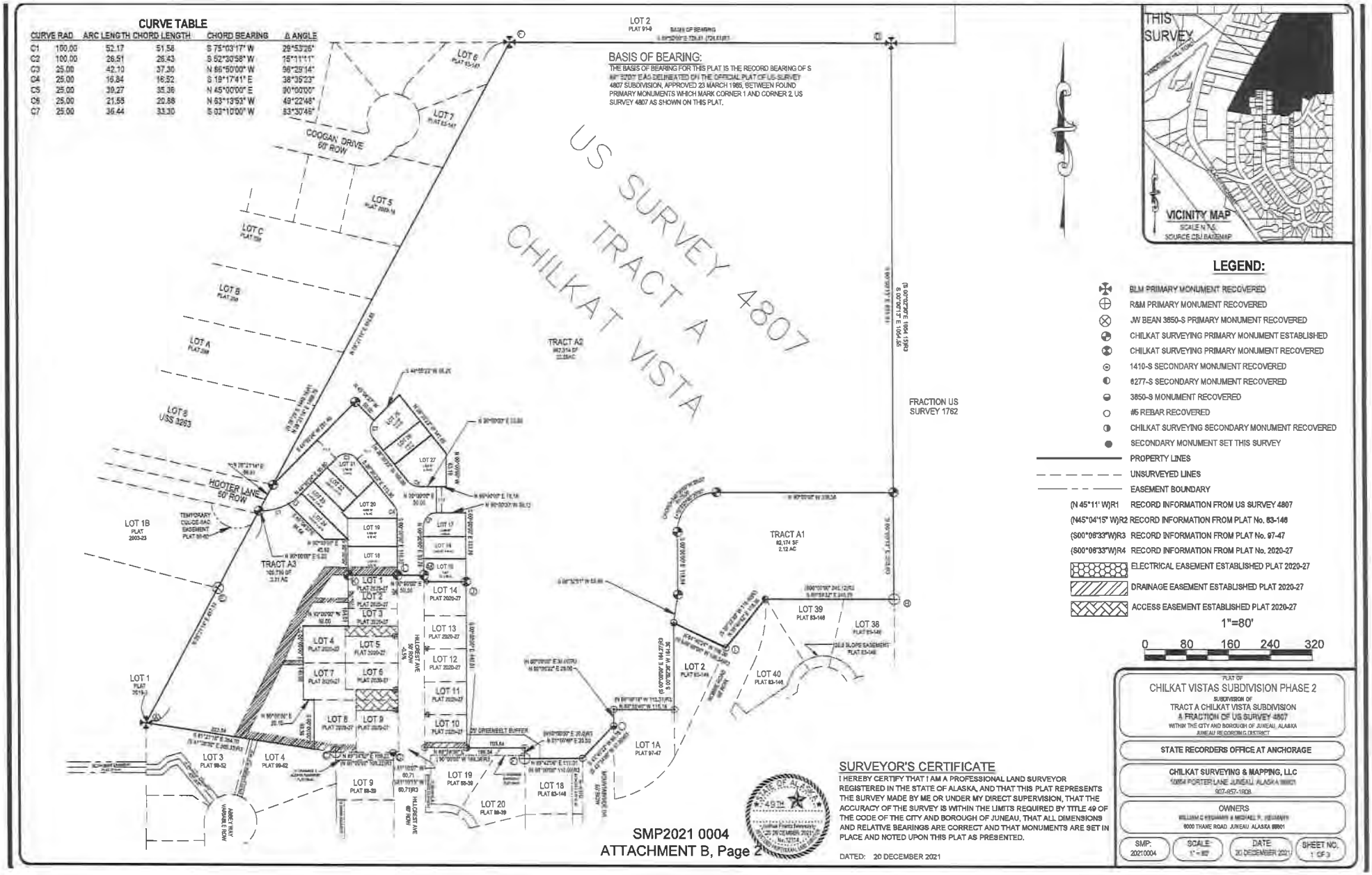
CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
2021XXXX	1" = 30'	21 JULY 2021	3 OF 3



Attachment F - SMP2021-004 Page 2 of 4, SMP2021-004



SMP2021 0004
ATTACHMENT B, Page 2

Attachment F - SMP21-04 – Phase 2

FOUND MONUMENT DESCRIPTIONS:

N.T.S.



Ⓐ 2.5" BRASS CAP MONUMENT



Ⓑ 3.25" ALUMINUM CAP MONUMENT



Ⓒ 3.25" ALUMINUM CAP MONUMENT



Ⓓ 2.5" BRASS CAP MONUMENT



Ⓔ 3.25" ALUMINUM CAP MONUMENT
FOUND J.W. BEAN MONUMENT
S 6°38'48" E 0.37 FROM
US SURVEY 4807 BOUNDARY
MONUMENT NOT ACCEPTED



Ⓒ 2.5" BRASS CAP MONUMENT

Ⓖ FOUND J.W. BEAN REBAR MONUMENT
S 01°34'23" W0.62 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE WITH
ALASKA DNR

Ⓗ FOUND JW BEAN REBAR
S 11°57'48"W 1.80 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓘ FOUND #5 REBAR
S 04°55'56"W 1.29 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR



Ⓙ PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP



Ⓚ PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP



Ⓛ PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP



Ⓜ PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3283; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3283 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-6 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2008-18 RECORDED 7 JULY 2008; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1 US SURVEY 3246 PLAT NO 2015-41 RECORDED 6 OCTOBER 2015; CHILKAT VISTAS SUBDIVISION PHASE 1 PLAT NO. 2020-27 RECORDED 11 AUGUST 2020 ON FILE WITH THE ALASKA DEPARTMENT OF NATURAL RESOURCES RECORDERS OFFICE IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER CHILKAT VISTAS SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET. ALL REQUIRED CHILKAT VISTAS SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19 12.120 BEST MANAGEMENT PRACTICES

8) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

9) HOOTER LANE WILL BE DEVELOPED AS A PUBLIC TWO-WAY STREET, AS SET OUT IN THE SKETCH PLAT SUBMITTED WITH SMP20190004, SUBJECT TO CBJ PUBLIC IMPROVEMENT STANDARDS IN CBJ 49.35.

10) HOOTER LANE FROM GLACIER HIGHWAY TO HILLCREST AVENUE. AND HILLCREST AVENUE AND MOUNTAINSIDE DRIVE SHALL BE DEVELOPED WITH A SIDEWALK ON ONE SIDE. THE NUMBER OF SIDEWALKS IN THE REMAINDER OF CHILKAT VISTAS WILL BE DETERMINED AT THE TIME OF FUTURE DEVELOPMENT APPLICATIONS.

11) ROBBIE ROAD SHALL TERMINATE AND SHALL NOT BE A POINT OF ACCESS TO CHILKAT VISTAS, UNLESS REQUIRED, AND GATED, FOR FIRE/EMERGENCY SERVICE ACCESS ONLY.

12) HILLCREST AVENUE SHALL TERMINATE AT HOOTER LANE. HILLCREST AVENUE MAY CONNECT TO HOOTER LANE WEST OF THE EXISTING HILLCREST ALIGNMENT AS SHOWN IN THE SKETCH PLAT SUBMITTED WITH SMP20190004. ALTERNATIVELY ROAD ACCESS TO THE NORTHEAST PORTION OF "TRACT A2" MAY CONNECT TO THE EAST/WEST PORTION OF MOUNTAINSIDE DRIVE ACROSS FROM THE ENTRANCE TO THE "POCKET" BETWEEN HILLCREST AND MOUNTAINSIDE.

13) OTHER THAN SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10 FEET IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

14) TEMPORARY CUL-DE-SAC EASEMENT SHALL BE VACATED UPON EXTENSION OF HILLCREST AVENUE UNLESS THE DIRECTOR DETERMINES ALL OR A PORTION OF THE CUL-DE-SAC MAY REMAIN

15) LOTS 15, 16, 17, 20, 21, 22, 23, 24, AND 26 ARE BUNGALOW LOTS AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 15, 16, 17, 20, 21, 22, 23, 24, AND 26 RE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE FAMILY RESIDENCE PER LOT. OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.



5/8" x 36" REBAR WITH
RED PLASTIC CAP



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP WITH CLEAR
DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.

OWNERSHIP CERTIFICATE:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS ALLEYS WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED

DATE:_____2021 DATE:_____2021

_____ _____

WILLIAM C. HEUMANN MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS___DAY OF _____, 2021, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, ANC ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES:_____

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____ DATED _____, 2021, AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, ANCHORAGE ALASKA.

_____ DATED _____, 2021

CHAIRMAN OF THE PLANNING COMMISSION
CITY AND BOROUGH OF JUNEAU

ATTEST:

_____
MUNICIPAL CLERK
CITY AND BOROUGH OF JUNEAU

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT, AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 20 DECEMBER 2021



PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTA SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

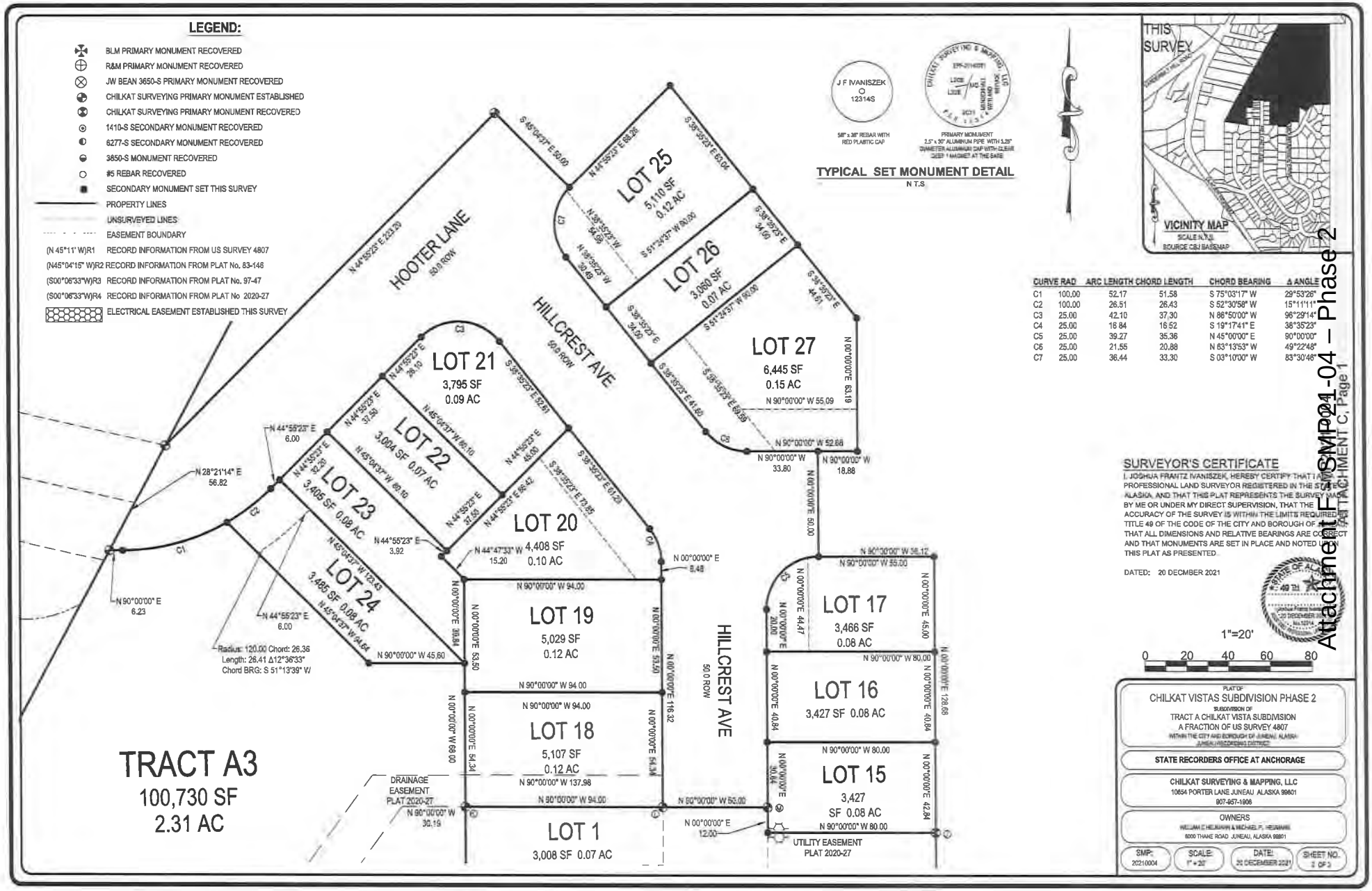
STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10854 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20210004	NTS	20 DECEMBER 2021	3 OF 3

SMP2021 0004
Attachment F - SMP2021 0004 Phase 2



Attachment F - SMP2021-04 – Phase 2 PLAT ATTACHMENT C, Page 1

MEMORANDUM

DATE: February 28, 2020

TO: William Heumann, Owner

FROM: Michael Read, PE, Principal, TENW

SUBJECT: Richland Manor- Traffic Impact Analysis
TENW Project No. 3709

This memorandum summarizes a traffic impact analysis of *Richland Manor*, a proposed residential development in the vicinity of Hooter Lane and Craig Street north of Glacier Highway in Juneau, Alaska. This memo includes a summary of the project, a description of existing transportation conditions within the immediate site vicinity, methodology used to derive the trip generation estimate, traffic operational traffic impact analysis at key study intersections, review of site access, and identification of any transportation mitigation measures.

Project Description

The proposed *Richland Manor r*esidential development would consist of up to 47 single family homes (detached) and approximately 356 multifamily homes in the vicinity of Hooter Lane and Craig Street north of Glacier Highway in Juneau, Alaska. A site vicinity map is provided in Figure 1. The proposed development would be constructed in phases, beginning in 2020, with full build-out and occupancy anticipated by 2029.

Primary vehicular access would be provided via construction of a public roadway within the undeveloped right-of-way of Hooter Lane, with secondary vehicular access via Hillcrest Drive and Abey Way via Craig Street. Additional gated access would be provided onto Robbie Road for emergency vehicles only. A conceptual site plan has been developed for the project and is shown in Figure 2.

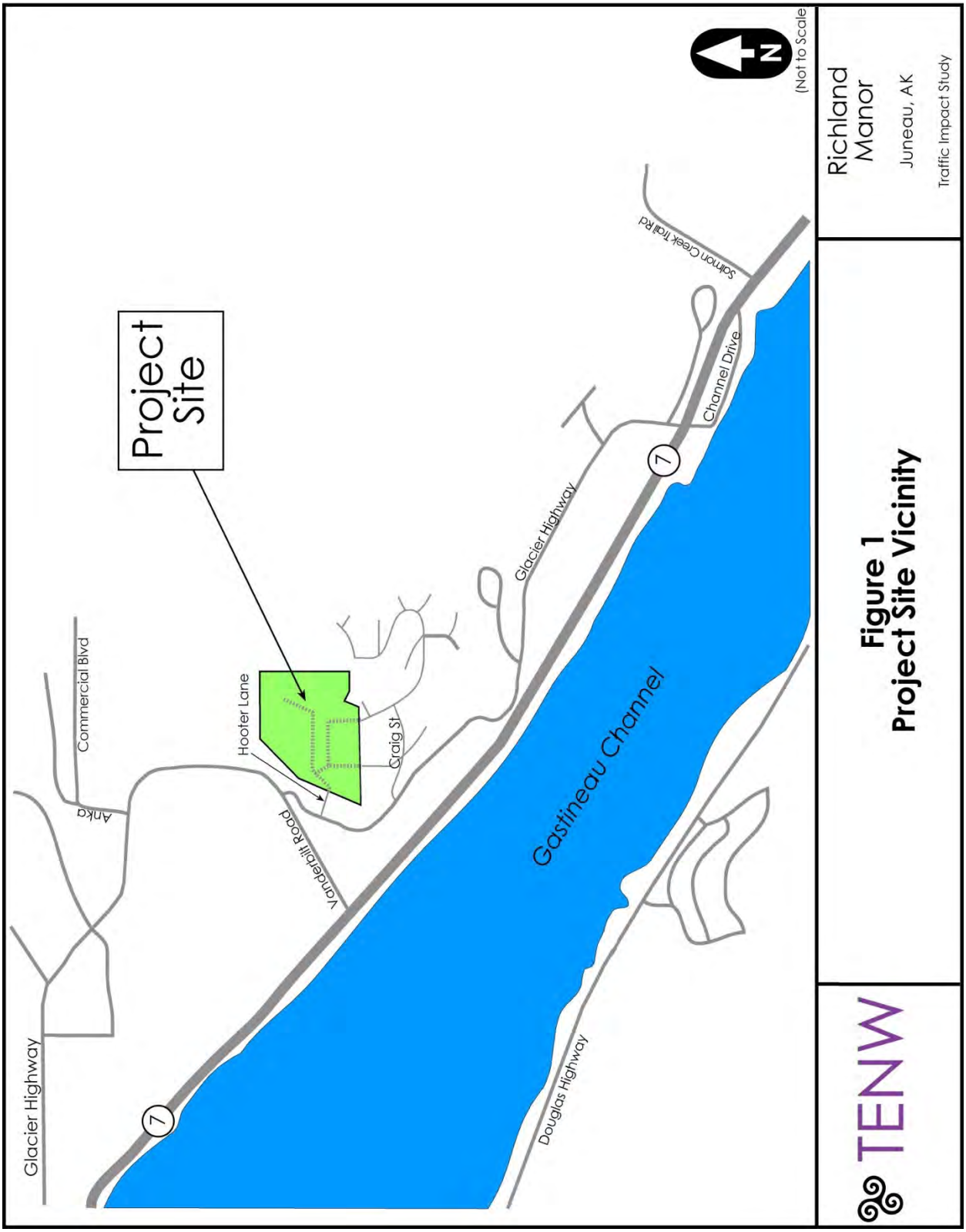
Existing Transportation Conditions

This section includes an inventory of existing roadway conditions, traffic volumes, levels of service and planned roadway improvements.

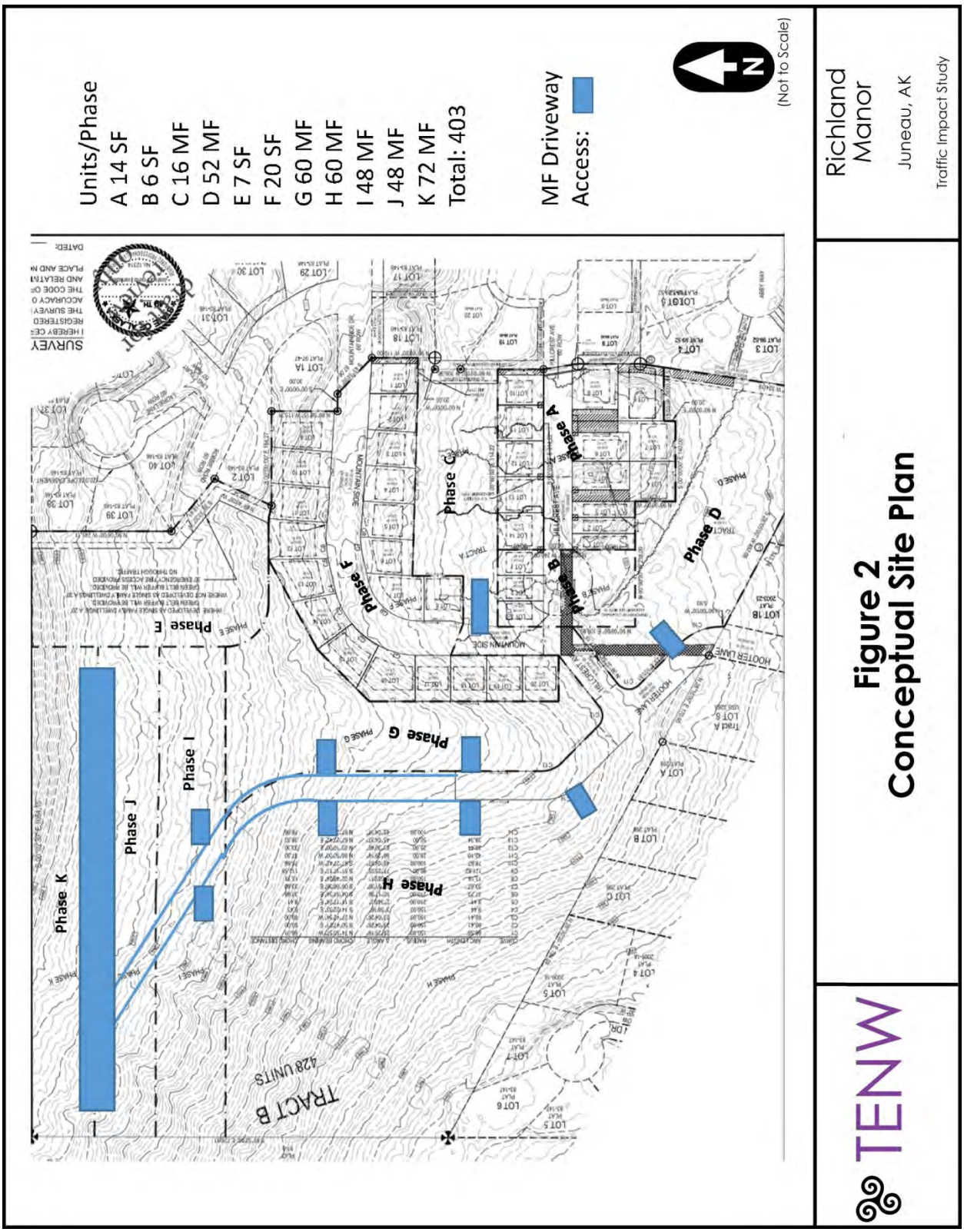
Roadway Conditions

The following paragraphs describe existing arterial roadways that would be used for site access. Roadway characteristics are described in terms of number of lanes, speed limits, shoulder types and widths.

Glacier Highway is a three-lane roadway with a center southbound left-turn lane north of Glacier Highway. East of Vanderbilt Road and Glacier Highway, the roadway consists of two lanes with curbs and gutters on both sides of the street, and a sidewalk on the north side of street. Bicycle lanes are provided on both sides of the street. The posted speed limit is 40 mph.



Attachment F - SMP21-04 – Phase 2



Attachment F - SMP21-04 – Phase 2

Vanderbilt Road is a three-lane roadway with a center refuge lane, which transitions into a left turn lane at Egan Drive. Bicycle lanes are provided on both sides of the street. The posted speed limit is 45 mph south of Glacier Highway.

Hillcrest Drive is a local street approximately 26 feet in width. The roadway is unchannelized with two travel lanes, curbs, and gutters, but no sidewalks. There is no posted speed.

Traffic Counts

Peak hour traffic volumes represent the highest hourly volume of vehicles passing through an intersection during a typical 7-9 a.m. and 4-6 p.m. weekday peak period. Peak period turning movement counts at several study intersections during the afternoon p.m. peak period were conducted by PDC Engineers early December 2019 (Attachment 1). Figure 3 overviews channelization/traffic control at study intersections. Figure 4 summarizes the existing p.m. peak period turning movements at study intersections determined in scoping discussions with the Alaska Department of Transportation and Public Facilities (DOT&PF).

Intersection Levels of Service

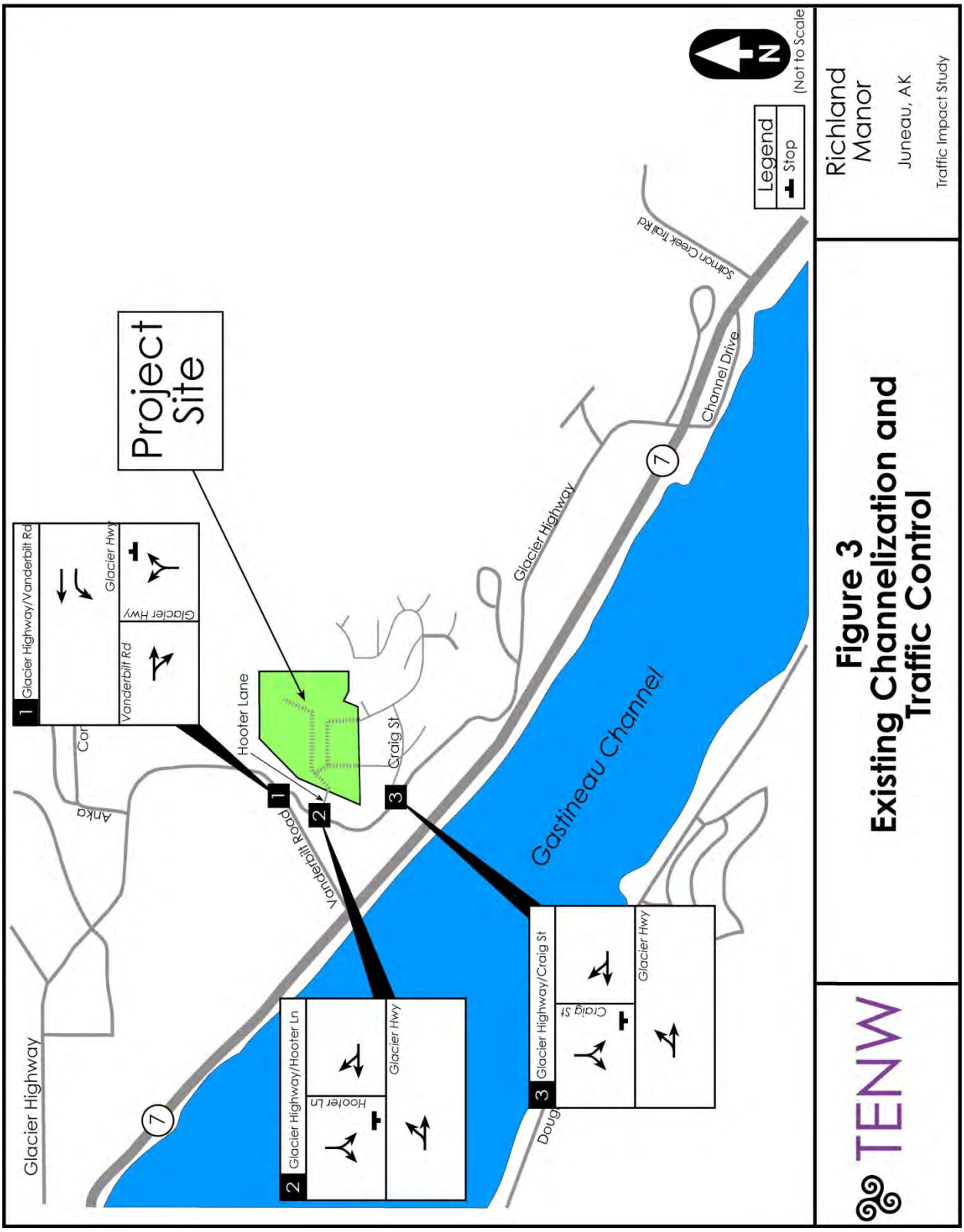
Intersection level of service (LOS) analyses were conducted at the study intersections during the weekday p.m. peak hour of existing conditions and with and without project traffic generated by the proposed development. LOS refers to the degree of congestion on a roadway or intersection. It is a measure of vehicle operating speed, travel time, travel delays, and driving comfort. A letter scale from A to F generally describes LOS. At signalized intersections, LOS A represents free-flow conditions-motorists experience little or no delays, and LOS F represents forced-flow conditions-motorists experience an average delay in excess of 80 seconds per vehicle. The LOS reported for signalized intersections represents the average control delay per vehicle entering the intersection. The LOS reported at stop-controlled intersections is also based on the average control delay (sec/veh) and is reported for each movement. Therefore, the reported LOS at unsignalized intersections does not represent a measure of the overall operations of the intersection.

LOS calculations for both signalized and stop-controlled intersections were calculated using the methodologies and procedures outlined in the 2000 and 2010 *Highway Capacity Manual (HCM)*, Special Report 209, Transportation Research Board (TRB), using the *Synchro 10* software program. Table 1 outlines the LOS criteria for signalized and unsignalized intersections based on these methodologies. ADOT&PF maintains a level of service standard of LOS D for development review. Existing p.m. peak hour LOS analyses are summarized in Table 2. As shown, all intersections or critical movements operate at LOS B or better under existing conditions. Detailed LOS summary worksheets are included in Attachment 2.

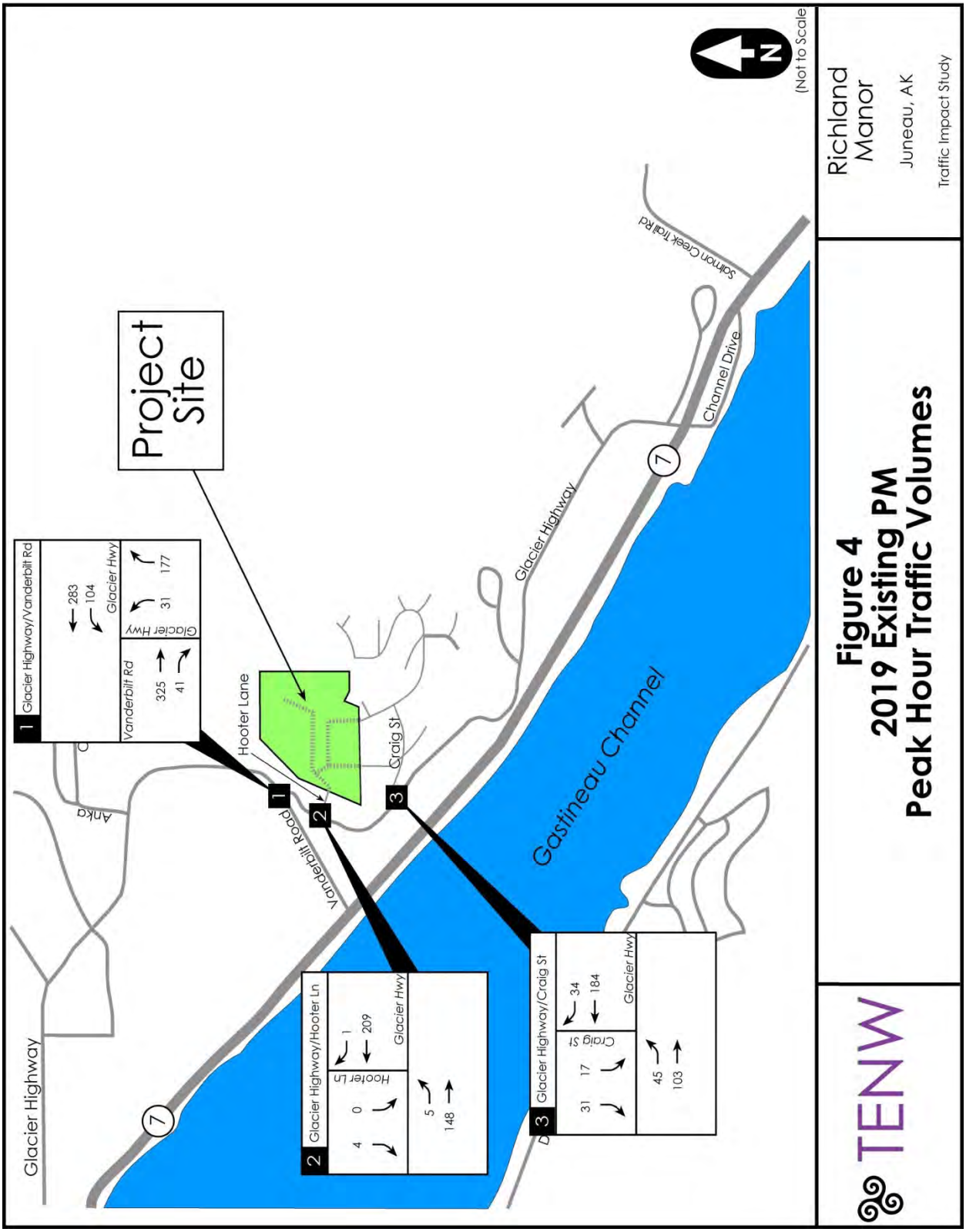
Table 1: Level of Service Criteria for Signalized and Unsignalized Intersections

Level of Service	Signalized Intersection Average Delay Range (sec)	Unsignalized Intersection Delay Range (sec)
A	≤ 10	≤ 10
B	> 10 to ≤ 20	> 10 to ≤ 15
C	> 20 to ≤ 35	> 15 to ≤ 25
D	> 35 to ≤ 55	> 25 to ≤ 35
E	> 55 to ≤ 80	> 35 to ≤ 50
F	> 80	> 50

Source: "Highway Capacity Manual", Special Report 209, Transportation Research Board, 2000.



Attachment F - SMP21-04 – Phase 2



Attachment F - SMP21-04 – Phase 2

Table 2: Existing PM Peak Hour Intersection Levels of Service

Study Intersection		PM Peak Hour LOS	PM Peak Hour Delay (sec)	PM Peak Hour V/C Ratio
Stop Controlled Intersections				
#1 – Glacier Highway at Vanderbilt Road	(NB – Stop)	B	14.2	0.37
	(WB – Left)	A	8.4	0.10
#2 – Glacier Highway at Hooter Lane	(SB – Stop)	A	9.6	0.01
#3 – Glacier Highway at Craig Street	(SB – Stop)	B	10.4	0.07

Source: TENW.

Planned Transportation Improvements

ADOT&PF has a programmed improvement at the intersection of Glacier Highway and Vanderbilt Road intersection. The improvement is part of a larger regional trail/bicycle plan and would involve installation of a pedestrian/bicycle crossing treatment west side of the intersection to include a median refuge island and pedestrian-activated rectangular rapid flashing beacon (RRFB) system. The currently planned improvement would eliminate the existing median refuge lane for northbound left turning movements from Glacier Highway onto Vanderbilt Road.

Traffic Impact Analysis

The following section describes projected future baseline traffic growth, new trips generated by the proposed development, distribution and assignment of new project trips, intersection level of service impacts, site access, safety and circulation issues, and identification of transportation mitigation to offset impacts.

2029 Baseline Traffic Volumes

To evaluate project traffic impacts at full buildout, traffic counts obtained in 2019 were factored by a 1 percent annual background growth rate to forecast 2029 future baseline traffic volumes.

Project Trip Generation

Documented trip rate equations compiled by the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*, 2017, were used to estimate daily, a.m. peak hour and p.m. peak hour traffic that would be generated by the proposed residential uses within *Richland Manor,* assuming new detached single-family homes (ITE Land Use Code 210) and Low-Rise Multifamily uses (LUC 220).

As shown in Table 3, total site trip generation of the project is estimated to generate a approximately 3,050 new weekday daily trips, 199 new a.m. peak hour trips (46 entering and 153 exiting), and 246 new p.m. peak hour trips (155 entering and 91 new exiting).

Table 3: Richland Manor - Trip Generation

Time Period	In	Out	Total
Weekday Daily	1,525	1,525	3,050
Weekday AM Peak Hour	46	153	199
Weekday PM Peak Hour	155	91	246

Source: TENW. See also Attachment 3.

Trip Distribution and Assignment

To distribute trips onto the vicinity-street and arterial network, trip distribution patterns were determined based on review of existing travel patterns, and the relative distribution of employment and residential density in the vicinity (see also Attachment 4). Generally, average distribution and assignment of project trips were assumed as:

- 45 percent easterly via Glacier Highway; and
- 55 percent westerly and northwesterly via Glacier Highway and Vanderbilt Road.

Figure 5 shows p.m. peak hour trip distribution, while Figure 6 summarizes p.m. peak hour trip assignment. Figure 7 summarizes p.m. peak hour traffic volume forecasts without and with the proposed *Richland Manor* project for the 2029 horizon year.

Intersection Level of Service Impacts

Table 4 summarizes level of service impacts in 2029 with and without completion of the proposed project. All study intersections and site access driveways would operate at LOS D or better with and without the project in the 2029 horizon year. Per the footnote in Table 4, the Alaska DOT&PF's proposal to remove the median refuge lane for vehicular capacity would drop the future level of service with buildout of *Richland Manor* to LOS D by 2029. If the existing intersection capacity is maintained, buildout of *Richland Manor* would operate at LOS C and not require any mitigation. Detailed LOS summary worksheets are included in Attachment 1.

Table 4: 2029 PM Intersection Level of Service Impacts

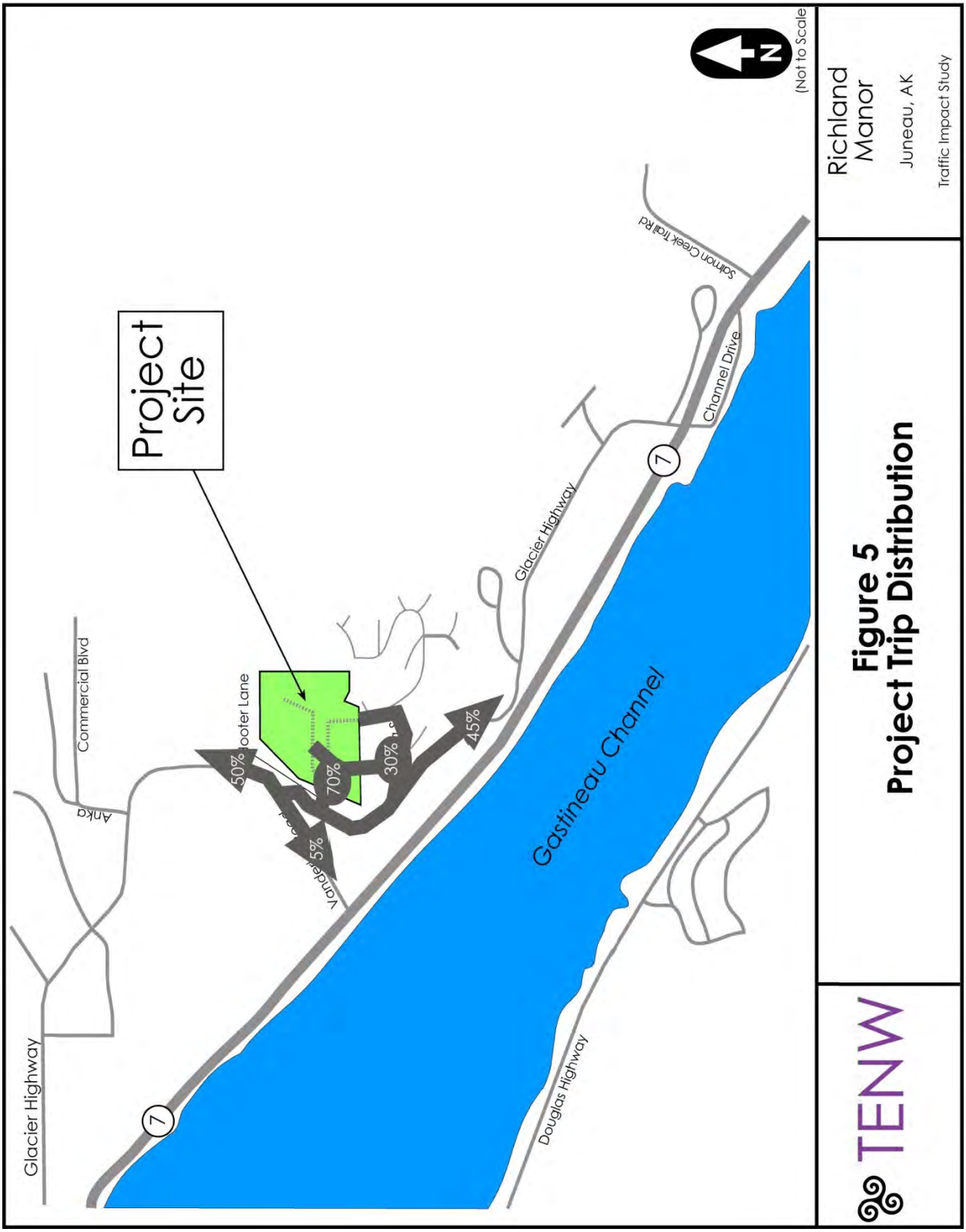
		PM Without Project			PM With Project		
Study Intersection		LOS	Delay (sec)	V/C Ratio	LOS	Delay (sec)	V/C Ratio
Stop Controlled Intersections							
#1 – Glacier Highway at Vanderbilt Road	(NB – Stop)	C	18.3	0.48	D*	25.8	0.65
	(WB – Left)	A	8.6	0.11	A	9.0	0.19
#2 – Glacier Highway at Hooter Lane	(SB – Stop)	A	9.8	0.01	B	11.9	0.14
#3 – Glacier Highway at Craig Street	(SB – Stop)	B	10.7	0.09	B	19.3	0.55

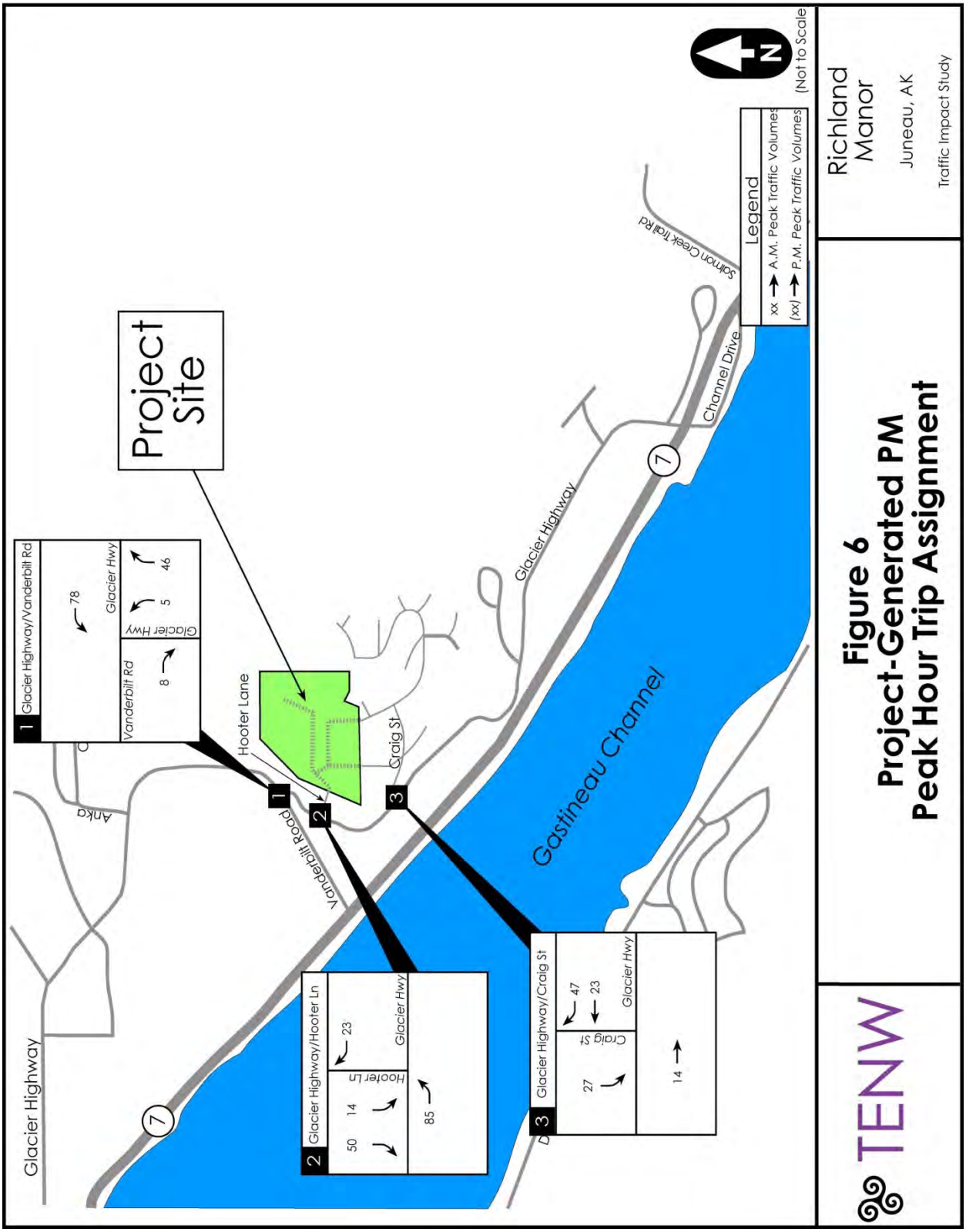
Source: TENW. * - At the intersection of Glacier Highway and Vanderbilt Road, the DOT&PF project to remove intersection capacity to install the RRFB results in a LOS D condition in at buildout of *Richland Manor* by 2029. If the median refuge lane remains available for left turns, with buildout of the project in 2029 this approach would operate at LOC C with an average delay of 19.3 Seconds per vehicle.

Site Access and Circulation

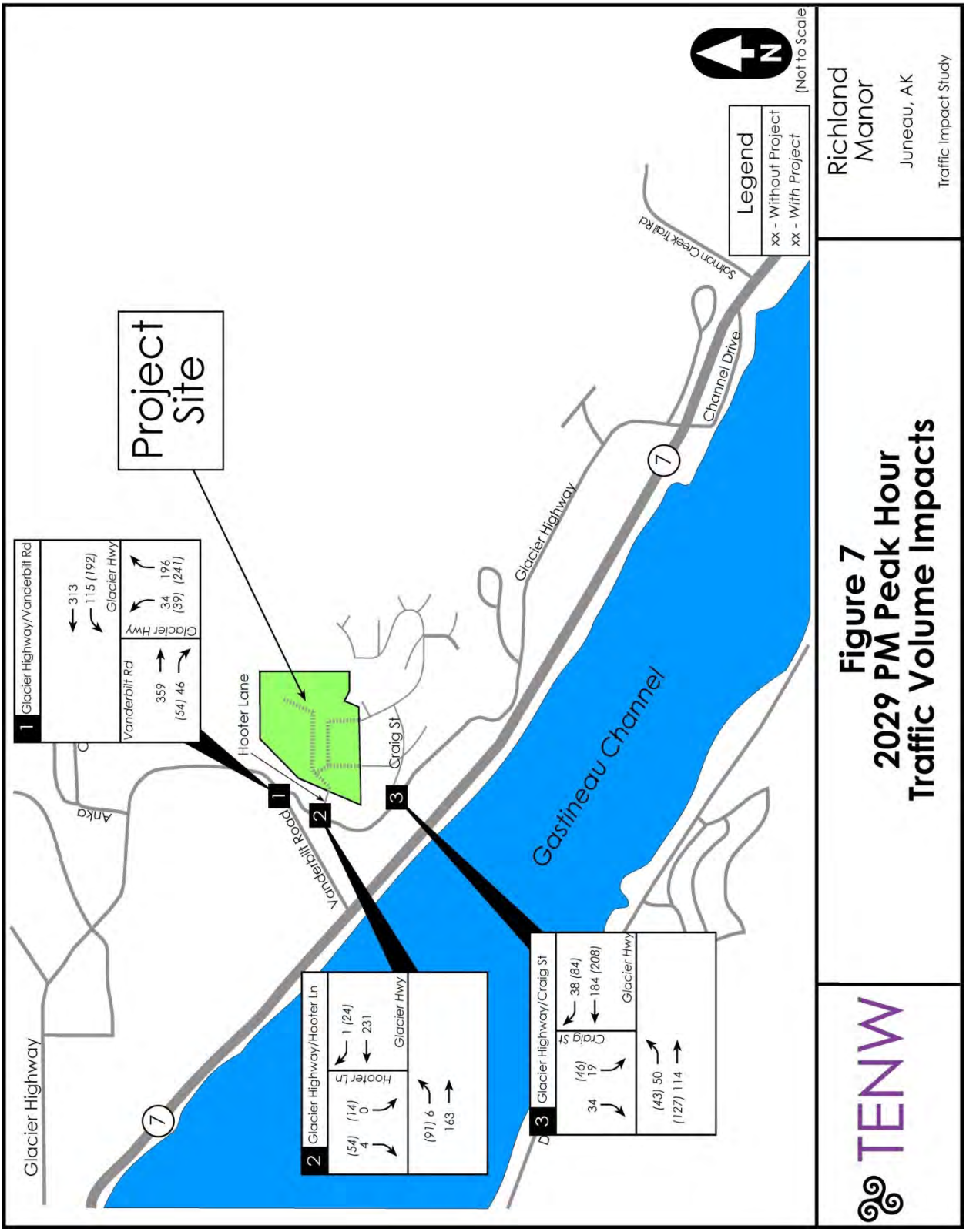
Primary vehicular access would be provided via construction of a public roadway within the undeveloped right-of-way of Hooter Lane, with secondary vehicular access via Hillcrest Drive and Abey Way via Craig Street. Additional gated access would be provided onto Robbie Road for emergency vehicles only to meet the minimum fire accessibility codes (above 200 multifamily housing units) per the International Fire Code to provide for secondary access beyond the Hooter Lane and Abey Way intersection.

The main access points to the site would be located on Glacier Highway at Hooter Lane and Craig Street. As identified previously, all critical stop-controlled movements at these two intersections are anticipated to operate at LOS B or better with the proposed development in 2029, with little or no vehicular queuing.


Project Site
Glacier Highway
Commercial Blvd
Anka
Footer Lane
Vantage
50%
30%
70%
45%
5%
Gastineau Channel
Douglas Highway
Glacier Highway
Salmon Creek Trail Rd
Channel Drive
7
7
N
(Not to Scale)
TENW
Figure 5
Project Trip Distribution
Richland Manor
Juneau, AK
Traffic Impact Study



Attachment F - SMP21-04 – Phase 2



Attachment F - SMP21-04 – Phase 2

Sight Distance

The American Association of State and Highway Transportation Officials (AASHTO) was used to determine entering and stopping sight distance requirements. AASHTO requires 555 feet of entering sight distance and 425 feet of stopping sight distance for a 50 mph design speed (10 mph over posted speed limit of 40 mph) on Glacier Highway. Field-measured sight distances by TENW in 2006 on Glacier Highway east and west of Hooter Lane are estimated to be greater than 700 feet, and are estimated to be greater than 1,000 feet east of and more than 700 feet west of Craig Street. Therefore, entering sight distance at the main site access points onto Glacier Highway at Hooter Lane and Craig Street would exceed AASHTO requirements.

Left-Turn Lane Warrants

Left-turn movements represent critical turning movements at unsignalized intersections, increasing the potential for intersection delay and safety issues. Therefore, the potential need for a left-turn lane onto Glacier Highway at Hooter Lane was analyzed considering typical evening commute periods.

Based upon procedures and guideline's found in Volume Warrants for Left-Turn Storage Lanes at Unsignalized Intersections (Highway Research Record 211), an eastbound left-turn lane is not warranted based upon approximately 35 percent of eastbound left-turns, a 40 mph posted speed limit, advancing volume of approximately 255 vehicles and an opposing volume of 255 vehicles (Attachment 5).

Project Mitigation

A traffic analysis and review was conducted of vehicular trip generation, intersection impacts, and site access, circulation, and safety issues for the proposed *Richland Manor* residential development in Juneau, AK. No direct mitigation measures were found to be necessary as a result of the proposed project. To meet level of service objectives of DOT&PF, the planned pedestrian/bicycle crossing treatment should be modified to preserve existing intersection capacity at its intersection with Vanderbilt Road or review of traffic operational impacts consider that level of service standards would not trigger any project mitigation if existing intersection capacity was maintained under existing conditions per 17 AAC 10.070.

As part of the development, the development would pay for the improvement and/or construction of all new site public access roadways and access connections including construction of Hooter Lane the extension of Abey Way and Hillcrest Drive, and Robbie Road (to serve as secondary fire/emergency vehicle access). A gated control for fire/emergency vehicles utilizing Opticom pre-emption is recommended for ease of fire/emergency vehicle access via Robbie Road.

If you have any questions regarding the information presented in this memo, please call me at (206) 361-7333 x 101 or mikeread@tenw.com.

Attachments:
1. 2019 Traffic Counts
2. Level of Service Summary Sheets
3. Trip Generation Estimates
4. Trip Distribution Observations
5. Turn Lane Warrant per HRR 211

Attachment 1
2019 Traffic Counts

TABULAR SUMMARY OF TURNING MOVEMENT COUNTS

Name: PDC **Date:** 9/25/2019 **City:** Juneau

Project: Richland Manor

Intersection of: Craig Street **and** Glacier Highway

Street:	Craig Street			Craig Street			Glacier Highway			Glacier Highway			Total All	Hour Total
Time	East Bound			West Bound			North Bound			South Bound				
Begins	L	T	R	L	T	R	L	T	R	L	T	R		
3:00 PM													0	
3:15 PM													0	
3:30 PM													0	
3:45 PM													0	0
4:00 PM				3		12		39	12	14	17		97	97
4:15 PM				4		10		36	16	8	27		101	198
4:30 PM				3		8		45	10	9	33		108	306
4:45 PM				3		3		35	11	12	24		88	394
5:00 PM				8		13		50	8	12	21		112	409
5:15 PM				3		7		37	5	12	25		89	397
5:30 PM				1		5		24	11	12	19		72	361
5:45 PM				3		7		37	5	12	25		89	362
Peak Hour	0	0	0	18	0	34	0	166	45	41	105	0		1506

Peak Hour Factor = $\frac{409}{4 \quad 112}$ = 0.913

Transportation Engineering Northwest MJR

TABULAR SUMMARY OF TURNING MOVEMENT COUNTS

Name: PDC **Date:** 9/25/2019 **City:** Juneau

Project: Richland Manor

Intersection of: Hooter Lane **and** Glacier Highway

Street:	Hooter Lane			Hooter Lane			Glacier Highway			Glacier Highway			Total All	Hour Total
Time	East Bound			West Bound			North Bound			South Bound				
Begins	L	T	R	L	T	R	L	T	R	L	T	R		
3:00 PM													0	
3:15 PM													0	
3:30 PM													0	
3:45 PM													0	0
4:00 PM				0		0		52	1	1	30		84	84
4:15 PM				0		1		42	1	0	37		81	165
4:30 PM				0		0		65	1	2	45		113	278
4:45 PM				0		0		34	0	1	30		65	343
5:00 PM				0		2		62	0	2	34		100	359
5:15 PM				0		2		48	0	0	39		89	367
5:30 PM				1		0		35	1	1	29		67	321
5:45 PM				0		1		33	0	0	27		61	317
Peak Hour	0	0	0	0	0	4	0	209	1	5	148	0		1347

Peak Hour Factor = $\frac{367}{4 \quad 113}$ = 0.812

Transportation Engineering Northwest MJR

TABULAR SUMMARY OF TURNING MOVEMENT COUNTS

Name: PDC **Date:** 9/26/2019 **City:** Juneau

Project: Richland Manor

Intersection of: Glacier Highway **and** Vanderbilt Road

Street:	Glacier Highway			Glacier Highway			Vanderbilt Road			Vanderbilt Road			Total All	Hour Total
Time Begins	East Bound			West Bound			North Bound			South Bound				
	L	T	R	L	T	R	L	T	R	L	T	R		
3:00 PM													0	
3:15 PM													0	
3:30 PM													0	
3:45 PM													0	0
4:00 PM				15		47		97	5	25	56		245	245
4:15 PM				11		46		85	10	26	61		239	484
4:30 PM				8		53		80	8	27	61		237	721
4:45 PM				7		36		84	8	20	65		220	941
5:00 PM				12		40		74	15	28	89		258	954
5:15 PM				4		48		87	11	29	68		247	962
5:30 PM				10		32		45	9	18	55		169	894
5:45 PM				12		16		45	10	18	38		139	813
Peak Hour	0	0	0	31	0	177	0	325	42	104	283	0		3578

Peak Hour Factor = $\frac{962}{4 \quad 258}$ = 0.932

Transportation Engineering Northwest MJR

Attachment 2
Intersection LOS Summary Sheets

Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	31	177	325	42	104	283
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	190	349	45	112	304

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	900	372	0	0	395	0
Stage 1	372	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	309	674	-	-	1164	-
Stage 1	697	-	-	-	-	-
Stage 2	592	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	279	674	-	-	1164	-
Mov Cap-2 Maneuver	400	-	-	-	-	-
Stage 1	697	-	-	-	-	-
Stage 2	535	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	2.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	612	1164	-
HCM Lane V/C Ratio	-	-	0.365	0.096	-
HCM Control Delay (s)	-	-	14.2	8.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.7	0.3	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	5	148	209	1	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	183	258	1	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	259	0	-	0	454	259
Stage 1	-	-	-	-	259	-
Stage 2	-	-	-	-	195	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1306	-	-	-	564	780
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	838	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1306	-	-	-	561	780
Mov Cap-2 Maneuver	-	-	-	-	561	-
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	834	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1306	-	-	-	780
HCM Lane V/C Ratio	0.005	-	-	-	0.006
HCM Control Delay (s)	7.8	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	45	103	167	34	17	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	113	184	37	19	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	221	0	-	0	414	202
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	212	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1348	-	-	-	595	839
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1348	-	-	-	572	839
Mov Cap-2 Maneuver	-	-	-	-	572	-
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	791	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1348	-	-	-	720
HCM Lane V/C Ratio	0.037	-	-	-	0.073
HCM Control Delay (s)	7.8	0	-	-	10.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	34	196	359	46	115	313
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	211	386	49	124	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	995	411	0	0	435	0
Stage 1	411	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	271	641	-	-	1125	-
Stage 1	669	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	241	641	-	-	1125	-
Mov Cap-2 Maneuver	241	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	496	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.3	0	2.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	515	1125	-
HCM Lane V/C Ratio	-	-	0.48	0.11	-
HCM Control Delay (s)	-	-	18.3	8.6	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	2.6	0.4	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	6	163	231	1	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	201	285	1	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	286	0	-	0	502	286
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	216	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1276	-	-	-	529	753
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	820	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1276	-	-	-	526	753
Mov Cap-2 Maneuver	-	-	-	-	526	-
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	815	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1276	-	-	-	753
HCM Lane V/C Ratio	0.006	-	-	-	0.007
HCM Control Delay (s)	7.8	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	50	114	185	38	19	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	125	203	42	21	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	245	0	-	0	459	224
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	235	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1321	-	-	-	560	815
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	804	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1321	-	-	-	535	815
Mov Cap-2 Maneuver	-	-	-	-	535	-
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	768	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1321	-	-	-	686
HCM Lane V/C Ratio	0.042	-	-	-	0.085
HCM Control Delay (s)	7.8	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	7.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	39	241	359	54	192	313
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	259	386	58	206	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1164	415	0	0	444	0
Stage 1	415	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	215	637	-	-	1116	-
Stage 1	666	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	175	637	-	-	1116	-
Mov Cap-2 Maneuver	175	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	381	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.8	0	3.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	466	1116	-
HCM Lane V/C Ratio	-	-	0.646	0.185	-
HCM Control Delay (s)	-	-	25.8	9	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	4.5	0.7	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	91	163	231	24	14	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	112	201	285	30	17	67

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	315	0	-	0	726	300
Stage 1	-	-	-	-	300	-
Stage 2	-	-	-	-	426	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1245	-	-	-	391	740
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	659	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1245	-	-	-	352	740
Mov Cap-2 Maneuver	-	-	-	-	352	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	592	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1245	-	-	-	603
HCM Lane V/C Ratio	0.09	-	-	-	0.139
HCM Control Delay (s)	8.2	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	50	127	208	84	46	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	140	229	92	51	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	321	0	-	0	524	275
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	249	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1239	-	-	-	514	764
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	792	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1239	-	-	-	489	764
Mov Cap-2 Maneuver	-	-	-	-	489	-
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	754	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1239	-	-	-	577
HCM Lane V/C Ratio	0.044	-	-	-	0.152
HCM Control Delay (s)	8	0	-	-	12.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	5.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	39	241	359	54	192	313
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	259	386	58	206	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1164	415	0	0	444	0
Stage 1	415	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	215	637	-	-	1116	-
Stage 1	666	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	175	637	-	-	1116	-
Mov Cap-2 Maneuver	292	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	381	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.3	0	3.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	547	1116	-
HCM Lane V/C Ratio	-	-	0.55	0.185	-
HCM Control Delay (s)	-	-	19.3	9	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	3.3	0.7	-

Attachment 3
Trip Generation Estimates

Richland Manor Site Plan (47 SF and 356 MF units) October 2019

	Land Use			AM Peak			PM Peak			Daily	
New	**Code**	**Size**	**X**	**Enter**	**Exit**	**Trips**	**Enter**	**Exit**	**Trips**	**Trips**	Method
Single Family Detached Housing	210	47	Units	9	26	35	30	17	47	444	average
Residential Condominiums/Townhouses/Apartments	220	356	Units	38	126	164	125	74	199	2,606	average
Total Trip Generation				**46**	**153**	**199**	**155**	**91**	**246**	**3,050**	

Attachment 4
Trip Distribution Observations

Neighborhood Traffic Distribution along Glacier Highway

AM Peak 2006

To/From West	69	57%
To/From East	52	43%
	122	

PM Peak 2006

To/From West	93	56%
To/From East	72	44%
	165	

PM Peak 2019

To/From West	94	62%
To/From East	57	38%
	151	

Study Assumptions Were:		Average From Observations Above:
To/From West	55%	58%
To/From East	45%	42%

Attachment 5
Turn Lane Warrants per HRR 211

Contents

VOLUME WARRANTS FOR LEFT-TURN STORAGE LANES AT UNSIGNALIZED GRADE INTERSECTIONS
M. D. Harmelink 1

A PRACTICAL COMPUTER PROGRAM FOR DESIGNING TRAFFIC-SIGNAL-SYSTEM TIMING PLANS
Robert L. Bleyl 19

USE OF A COMPUTER AND VEHICLE LOOP DETECTORS TO MEASURE QUEUES AND DELAYS AT SIGNALIZED INTERSECTIONS
A. Christensen 34

THE EFFECTS OF STREET GEOMETRICS AND SIGNALIZATION ON TRAVEL TIME AND THEIR RELATIONSHIPS TO TRAFFIC OPERATIONS EVALUATION
J. F. Torres 54

Volume Warrants for Left-Turn Storage Lanes At Unsignalized Grade Intersections

M. D. HARMELINK, Project Research Engineer (Traffic), Department of Highways, Ontario

This paper describes the derivation of volume warrants and design charts for left-turn storage lanes at unsignalized grade intersections on four-lane and two-lane highways. The design charts are based on a theoretical analysis and on a series of field studies of traffic behavior at intersections.

The analysis is based on a queuing model in which arrival and service times are assumed to follow a negative exponential distribution. The arrival rates are determined by the volumes of left-turning, through or "advancing," and opposing traffic, and by the time interval required by the left-turning vehicle to clear the advancing lane. The service rates are determined by the volume of opposing traffic, and by the time interval required to make a left-turn maneuver.

Field studies of traffic behavior conducted at seven unsignalized Ontario intersections provided average values of the time interval required by a left-turning vehicle to make a left turn and to clear the advancing lane, the delay experienced by a left-turning vehicle because of opposing traffic, gap acceptance and rejection behavior, and actual arrival rates and headway distributions at various volume levels.

•THIS study was undertaken because of the lack of consistent volume warrants for left-turn storage lanes at unsignalized intersections. The usual method of analyzing such intersections individually on the basis of past experience, accident records, complaints from the traveling public, and engineering judgment has led to inconsistency from location to location.

It was felt that the volume warrants developed should be consistent in their evaluation of traffic parameters from location to location; they should provide reasonable recommendations for specific intersections; and they should be based on traffic and operational considerations, rather than on a benefit-cost analysis, because of the difficulty of translating the benefits received to a monetary value on a suitable rational basis.

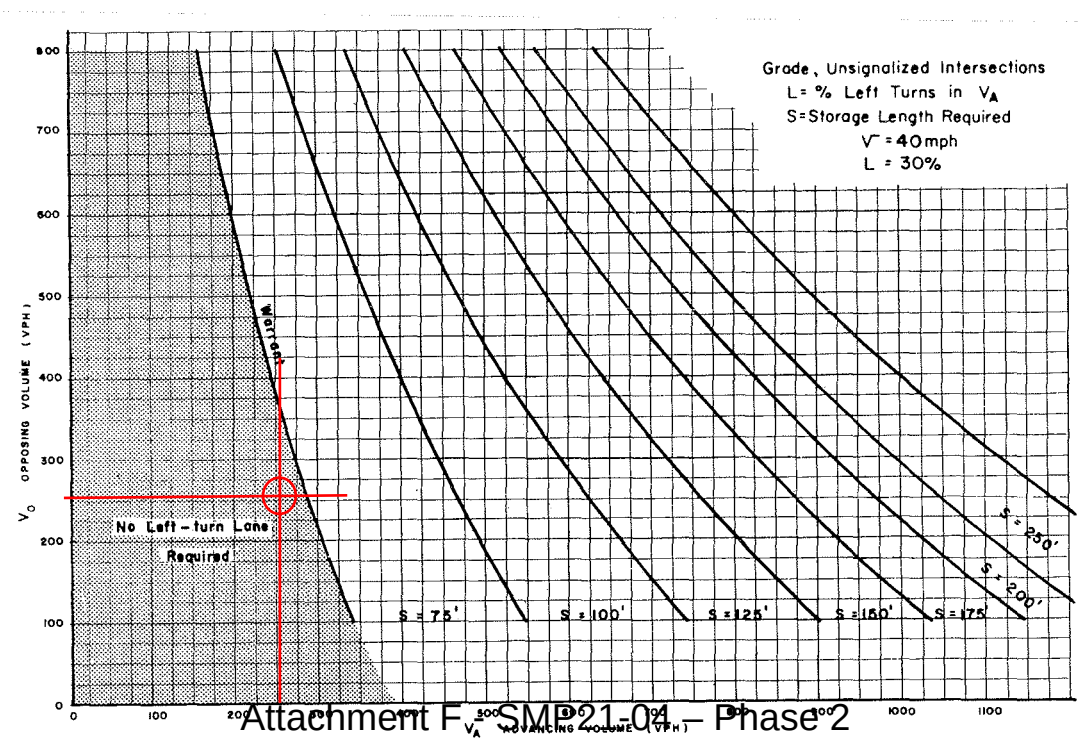
The study contained three phases: a theoretical analysis, a series of field studies of traffic behavior, and analysis of a series of questionnaires completed for specific intersections by Department of Highways regional traffic engineers.

THEORETICAL ANALYSIS

Queuing theory may be used to analyze operational flow problems where the state of the system changes from time to time and which have elements that follow this basic behavior: A sequence of units arrives at some facility which services each unit and eventually discharges it (1). In our problem, a sequence of left-turning vehicles arrives at some intersection that permits each left-turning vehicle to proceed if and when there is a suitable gap in the opposing traffic stream, and then discharges the vehicle from the intersection. Morse (1) explains that instead of trying to predict in detail how the state of the system changes with time, we can calculate the probabilities that the system is in each of the possible states.

Paper sponsored by Committee on Traffic Control Devices.

SMP2021 0004
Attachment F - SMP21-04 – Phase 2
ATTACHMENT D, Page 33



Attachment F SMP21-04 – Phase 2

Figure 6. Warrant for left-turn storage lanes on two-lane highways.

Irene Gallion

From: Bear, Tonya (DEC) <tonya.bear@alaska.gov>
Sent: Tuesday, August 24, 2021 5:19 PM
To: Irene Gallion
Cc: Tabor, Brock N (DEC); Zimmer, Raymond T (DEC)
Subject: Re: SMP21-04: Agency Review

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Hello Irene,

Your inquiry was passed on to me. ADEC repealed the regulations involving subdivision/platting reviews back in 1998. There is no review or letter we would offer specific to the subdividing a property. Be aware that we do have separation distance requirements from water systems and surface waters and the lot should be large enough to meet those distances when an onsite wastewater system is needed. If the area is served by a utility or community system, then no onsite water or septic systems should be installed and separation distances shouldn't be an issue.

Also, Sally is no longer with the Department. Our plan review engineer for the Juneau area is Ray Zimmer who is cc'd on this email. If this project involves the extension of sewer mains or the installation of a community wastewater system, then he would review the request for Approval to Construct.

Let me know if you have further questions.

Tonya Bear, P.E.
Engineer II/Section Manager
Department of Environmental Conservation
Division of Water, WQSAR
Engineering Support & Plan Review
610 University Avenue, Fairbanks, AK 99709
Email: tonya.bear@alaska.gov
Office: 907-451-2177

From: Irene Gallion [mailto:Irene.Gallion@juneau.org]
Sent: Tuesday, August 24, 2021 3:48 PM
To: Sally.wanstall@alaska.gov; Tabor, Brock N (DEC)
Subject: SMP21-04: Agency Review
Hello Sally and Brock,
We currently have you as our subdivision reviewers for ADEC. Let me know if that needs to be corrected, and feel free to send this information on.
CBJ is reviewing the second phase of the Chilkat Subdivision. This is the one above Mountainside Estates, between Twin Lakes and Lemon Creek.
The application package is quite large, so I'll be sending you a ZendTo that has the files for download.
Let us know if you have any questions or concerns about the development. This is the preliminary plat (basically a draft) so there is time to have meaningful input.
Thank you,

Irene Gallion | Senior Planner
Community Development Department | City & Borough of Juneau, AK
Location: 230 S. Franklin Street | 4th Floor Marine View Building
Office: 907.586.0753 X2

Irene Gallion

From: Nicholson, Pamela J - Juneau, AK <Pamela.J.Nicholson@usps.gov>
Sent: Wednesday, August 25, 2021 10:30 AM
To: Irene Gallion
Cc: Johnson, Susan M - Juneau, AK
Subject: FW: [EXTERNAL] SMP2021 0004: Chilkat Vistas

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Hello Irene,

It is a carrier from the Mendenhall Station that delivers the mail in this area so Max forwarded the email here. I will forward the fileshare to the growth management coordinator at the district so that he is aware of the plans. We hope to avoid any future delays and frustration regarding establishing mail delivery to the new homeowners and apartment and/or condo owners.

When CBJ, USPS and the builder/developer are able to meet in the early planning stages of the development or redesign, the CBU location(s) can be planned and approved well in advance off occupancy taking into consideration customer needs and all traffic flow concerns. This also allows time for the CBU(s) to be approved and ordered, all addresses to be added to the route book and helps to avoid potential service problems or disruptions.

Thank you for taking the time to reach out. Establishing mail delivery to a brand new address is more time consuming than the customer putting up a box and wanting to know why they haven't got any mail despite our efforts to notify our customers.

Sincerely,

Pamela Nicholson
Supervisor Customer Service
Mendenhall Station
9491 Vintage Blvd
Juneau, AK 99801-7111
(907) 789-0934

From: Cava Jr, Maximino F - Juneau, AK <Maximino.F.Cava@usps.gov>
Sent: Wednesday, August 25, 2021 9:15 AM
To: Johnson, Susan M - Juneau, AK <susan1.m.johnson@usps.gov>; Nicholson, Pamela J - Juneau, AK <Pamela.J.Nicholson@usps.gov>
Subject: FW: [EXTERNAL] SMP2021 0004: Chilkat Vistas

From: Irene Gallion <Irene.Gallion@juneau.org>
Sent: Wednesday, August 25, 2021 8:00 AM
To: henricksen, kaylee R - Juneau, AK <Kaylee.R.Henricksen@usps.gov>; Cava Jr, Maximino F - Juneau, AK

<Maximino.F.Cava@usps.gov>
Subject: [EXTERNAL] SMP2021 0004: Chilkat Vistas

CAUTION: This email originated from outside USPS. **STOP and CONSIDER** before responding, clicking on links, or opening attachments.

Hi Kaylee and Max,

We have a new subdivision application, the second phase of Chilkat Vistas. That is the one that is above Mountainside Estates, between Twin Lakes and Lemon Creek.

New addresses will need to be eventually created, so we wanted to give your organization the chance for an early weigh-in.

The files are too big to send via e mail so I'll send you a ZendTo. If this does not work with your system permissions, let me know and I will figure out a different way.

Thanks!

Irene Gallion | Senior Planner
Community Development Department | City & Borough of Juneau, AK
Location: 230 S. Franklin Street | 4th Floor Marine View Building
Office: 907.586.0753 X2

.

Fostering excellence in development for this generation and the next.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Fire

STAFF PERSON/TITLE: Daniel Jager, Fire marshal

DATE: 9-2-2021

APPLICANT:

TYPE OF APPLICATION: Preliminary Plat for a Major Subdivision

PROJECT DESCRIPTION:

Chilkat Vistas is above Mountainside Estates, on the border between Twin Lakes and Lemon Creek. One 28-acre tract is proposed to be subdivided.
* 2.1 acres will be subdivided into 15 lots with a developed road system.
* The remainder will be divided between three Tracts. Note that the Sketch Plan has a mistake and shows a Tract A4 that has no lot lines associated with it. Tract A4 is not being proposed, and will be removed in subsequent versions.

LEGAL DESCRIPTION: CHILKAT VISTAS TR A

PARCEL NUMBER(S): 7B1001160011

PHYSICAL ADDRESS: Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

AGENCY COMMENTS:

There are no fire code or fire department concerns at this time for the proposed Phase II of this subdivision.

Irene Gallion

From: Jeffrey Hedges
Sent: Wednesday, August 25, 2021 9:12 AM
To: Irene Gallion
Subject: RE: SMP21-04: Chilkat Vistas Ph 2

Irene,

The Building division has no issues with the proposed subdivision at this time.

Thanks,

Jeff Hedges, MCP, CBO, CSP | Building Inspector III
Community Development Department | City & Borough of Juneau, AK
Location: 230 S. Franklin Street, 4th Floor Marine View Building
Mailing: 155 S. Seward Street, Juneau, AK, 99801
Office: 907.586.0767 x4137| Cell: 907.321.4361

Fostering excellence in development for this generation and the next.

From: Irene Gallion <Irene.Gallion@juneau.org>
Sent: Wednesday, August 25, 2021 8:24 AM
To: Charlie Ford <Charlie.Ford@juneau.org>; Jeffrey Hedges <Jeffrey.Hedges@juneau.org>; Quinn Tracy <Quinn.Tracy@juneau.org>; Alec Venechuk <Alec.Venechuk@juneau.org>; Dan Jager <Dan.Jager@juneau.org>
Subject: SMP21-04: Chilkat Vistas Ph 2

Hello all,

We have a preliminary plat review for the Chilkat Vistas Phase II. This is the subdivision above Mountainside Estates, on the border of Twin Lakes and Lemon Creek.

Charlie, Jeff and Quinn, you can access electronic files here: I:\DOCUMENTS\CASES\2021\SMP\SMP21-04 Chilkat Ph 2\REVIEW FILES for Departments

Dan, I don't think you can access our I drive, so I'll send you a file transfer under ZendTo.

Alec, I tried to save a folder on your drive but do not have permissions. I'll put paper copies and a thumb drive on your desk.

Since this is a major subdivision I anticipate you'll need some extra time for review. If you could have comments back by **8:00 am on September 27, 2021**, that would be great. If you need more time just let me know.

Thanks all!

Irene Gallion

From: Bizzarro, Caleb T (DOT) <caleb.bizzarro@alaska.gov>
Sent: Tuesday, October 12, 2021 10:47 AM
To: Irene Gallion
Cc: Schuler, Michael K (DOT)
Subject: DOT&PF SCR ROW Review Feedback for CBJ Planning - SMP21-04 & Case No PAC2020 0064
Attachments: DW30955_For Signature.pdf; JNU SUP 21-007_For Signature.pdf

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Good morning Irene,

After reviewing the submitted documentation from CBJ Planning for the proposed Chilkat Vistas Subdivision atop Mountain Side Estates – DOT&PF SCR ROW would like to provide the following remarks;

1) SCR ROW has been working extensively with Chilkat Vistas, LLC (Mike and Bill Heumann). We have accepted an application for improvements on behalf of CBJ, to modify the Hooter Lane approach in accordance with requirements and standards. We have reviewed Chilkat Vistas' construction request and have forwarded two permits for signing in order to grant necessary permissions for the improvements.
    a. The first is a Driveway Permit (# 30955) to bring the connection onto Glacier Hwy into compliance.
    b. The second is a Special Use Permit (# JNU SUP 21-007) which allows the installation of a cross culvert within state right of way for the conveyance of higher anticipated water volumes across state property in the future.
    c. DOT&PF Acknowledges the TIA, hydraulic report, and associative findings. We are currently working through the permits with CBJ and Chilkat Vistas, LLC at this time.

DOT&PF holds no objection to this proposed subdivision and thanks you for the opportunity to review.

Best Regards,

Caleb Bizzarro
Right Of Way Agent
Department of Transportation & Public Facilities
Southcoast Region Design & Engineering Services
Ph: (907) 465 4519
Email: caleb.bizzarro@alaska.gov

State of Alaska
Department of Transportation and Public Facilities

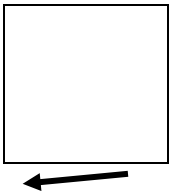
Driveway and Approach Road Permit

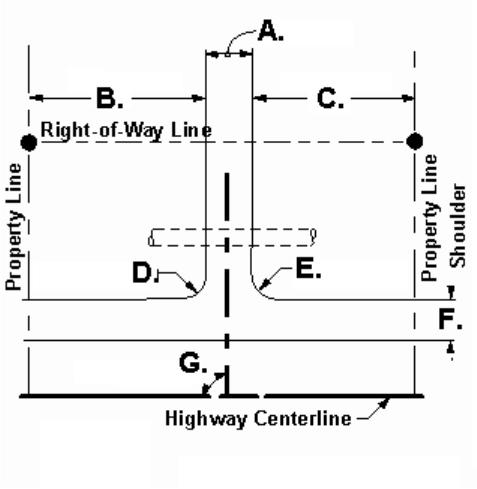
This permit allows the permittee to construct and maintain a driveway or approach road within a State owned highway Right of Way.

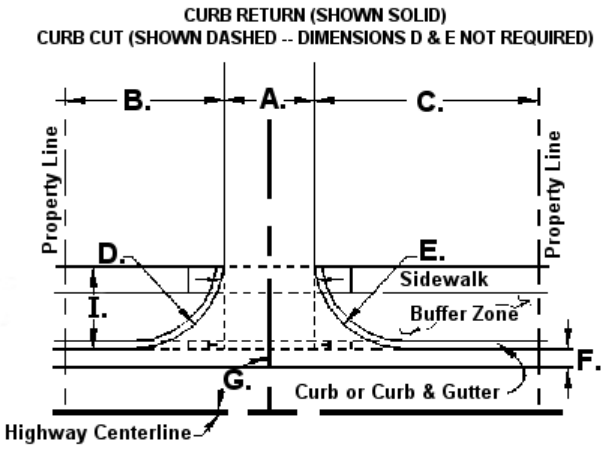
[X] Residential Approach Road [ ] Commercial [ ] Government Agency	
Applicant:	**Chilkat Vistas, LLC on behalf of CITY & BOROUGH OF JUNEAU**
Mailing Address:	6000 Thane Rd Juneau, AK 99801
Contact Name:	Michael Heumann
E-mail Address:	chilkatvistas@gmail.com
Phone: (971) 261-8014	Fax: _____
Driveway or Approach Road location (highway, subdivision, legal description milepost, etc.) Intersection of Hooter Lane and Glacier Highway in Juneau, AK	
Proposed or Existing: EXISTING	Anticipated Completion Date: 10/01/2023
Number of lots served:	Max. number of vehicles in any 1 hour: 246
Zoning Designation: D-15	Proposed Land Use: Residential Subdivision

Driveway Specifications

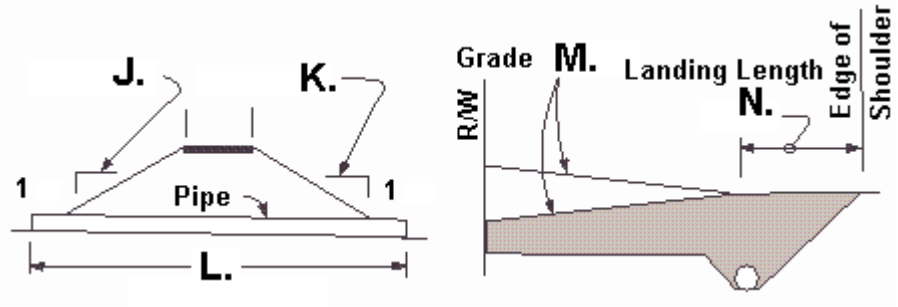
Direction of North in relation to the drawing.







A.	Driveway width	23	feet
B.	Left edge clearance	19	feet
C.	Right edge clearance	19	feet
D.	Left return radius	28	feet
E.	Right return radius	28	feet
F.	Shoulder width	4	feet
G.	Approach angle	90	degrees
H.	Curb type	Curb return w/o buffer zone	
I.	Curb to sidewalk distance		feet



J.	Left driveway foreslope	4	:1
K.	Right driveway foreslope	4	:1
L.	Culvert length	76.25	Feet
M.	Landing grade	2	Percent
N.	Landing length	30	Feet
O.	Culvert size	36	inches
P.	Culvert type	CAP OR CPP	
Q.	Ditch depth		feet
R.	Shoulder type	Paved	
S.	Pavement type	Paved	
T.	Driveway surface type	Asphalt	

Permittee upon signing this permit acknowledges and agrees to the following provisions:

This permit applies only to the State right of way.

This permit grants permission for a driveway allowing access to and from your property onto a State maintained highway. It does not permit the following within the right of way or within that portion of a driveway that is within the right of way: (1) Parking of vehicles "for sale"; (2) Obstructions of any kind (i.e. logs, cables, fencing, etc.); (3) Advertising signs or banners/flags; (4) Parking vehicles with signs/advertising on the side.

A driveway or approach road constructed under permit within a highway right-of-way is the property of the State, but all cost and liability arising from the construction, operation, or maintenance of a driveway or approach road is at the sole expense of those lands served. The Department is not obligated to change its maintenance practices to accommodate a driveway or approach road constructed under a permit, or to incur any additional expense removing snow berms or other obstructions from a driveway or approach road within a right of way resulting from the Department's activities, or activities under a permit issued under 17 AAC 15.

Permittee is responsible for adjusting or relocating the driveway or approach road without cost or liability to the Department if the use or safety of the highway requires that the driveway or approach road be adjusted or relocated.

This permit is not a property right but a temporary authorization, revocable by the State upon violation of any permit terms or conditions, or for other reasons. All reasonable attorney's fees and costs associated with legal or enforcement actions related to the terms and conditions of this permit will be borne by the Permittee.

Any survey monument or monument accessory that is disturbed or destroyed during construction or maintenance of the driveway will be restored or replaced by a Land Surveyor licensed in the State of Alaska.

The Permittee will be responsible for all necessary Federal, State, and Municipal permits and licenses required by law, pay all taxes and special assessments lawfully imposed upon the permitted area, and pay other fees and charges assessed under applicable law.

Placement of fill material in waters of the U.S., including wetlands and streams, requires prior authorization from the U.S. Army Corps of Engineers. It is the responsibility of the owner to contact the Corps before filling activities take place.

The Permittee shall construct and maintain a driveway in such a manner that the highway, and all of the highway's appurtenances or facilities, including drainage facilities, pipes, culverts, ditches, traffic control devices, street lights, pathways, and sidewalks are not impaired or endangered in any way by the construction or maintenance. (17 AAC 10.020(b) If you damage any improvements within the State owned right of way, you will be responsible for returning them to their previous condition. The Department will inspect and approve the restored improvements. (17 AAC 10.065)

Permittee shall indemnify, defend and hold harmless the State, and its officers, employees, and contractors, from any and all claims or actions resulting from injury, death, loss, or damage sustained by any person or personal property resulting directly or indirectly from Permittee's use of or activities in the permitted area.

Landings from all paved roads must be paved and maintained from edge of the road to the length of the landing as stipulated in this permit.

If a culvert is required by this driveway permit, culvert ends must be installed at the time of installation and maintained continuously by the owner.

No person shall place, leave or deposit upon any street, avenue, alley, sidewalk or other public right of way any snow or ice which has been removed from a private driveway, private parking area, or the adjacent property. Permittee is responsible for their snow removal contractor's actions concerning placement of snow from Permittee's property.

If driveway construction or maintenance interferes with the public's safety and/or use of facilities within State owned right of way, you will be directed to stop work until adjustments are made.

While doing construction or maintenance activities do not park equipment or stockpile material on the shoulder during non-working hours.

Permittee is responsible for sight distance clearing of brush and obstructions adjacent to their property.

Driveway landings as stipulated in the permit must be paved and maintained from pavement edge on all paved roads.

Please contact the Department for information about acceptable driveway markers (i.e., size, materials, distance, etc.) for placement within the right of way.

The State will not change its maintenance practices to accommodate your driveway or incur additional expense to clear snow berms or other obstacles resulting from the Department's activities.

Permittee upon signing this permit acknowledges and agrees to the following conditions:

Metal track equipment is not allowed on the paved road surface. Any damage and cost to repair the roadway will be the responsibility of the Permittee.

All equipment and materials must be kept on own site premise and off main road during non-working hours.

Along with a traffic control plan, proof of certification to direct and implement traffic control is required before work within State Right of Way may commence.

Permittee must clear any and all track-out or debris from the roadway as a result of use of this driveway immediately. Remediation should be performed by a street sweeper, wet broom, or manually sweeping up debris. Dispose of debris in accordance with all federal, state, and municipal requirements. Washing or spraying track out off the roadway is prohibited. If Department personnel is required to repair or clean up the drive as a result of the Permittee’s activities, the Permittee will be charged the cost.

Ensure sight distance is maintained in compliance with the Alaska Highway Preconstruction Manual (AHPCM).

Permittee not to exceed maximum allowable hourly traffic in operation of this drive as outlined in the AHPCM.

Parking is not authorized within the right of way.

Access must be constructed to completion within two years from date of issuance.

Permittee shall submit a request for final inspection to the Department within 60 days of completion.

An inspection is required prior to reimbursement of permittee’s performance deposit or refund of remaining retainer. Please contact DOT&PF for an inspection appointment.

DOT&PF retains the right to require additional work as a part of final inspection by the Department in adjudication of this permit.

Permittee acknowledges and agrees with the Department; the 36-inch Glacier Highway cross culvert is the responsibility of Chilkat Vistas, LLC to install and maintain during construction. DOT&PF shall issue a special use permit to Chilkat Vistas, LLC for the installation and maintenance of said cross culvert as referenced in associate site plan as P-1 for a term of up to two (2) years. Chilkat Vistas, LLC shall bear all cost. Upon acceptance by DOT&PF, the Department shall assume all maintenance and operation responsibility of said cross culvert in perpetuity.

Attachments included as part of this permit are:

REQUIRED for ALL DRIVEWAYS:

- [X] Plat including notes of the placement of the driveway.
- [X] Site plan.
- [X] Proof of ownership.
- [X] Traffic control plan.

REQUIRED for ALL APPROACH ROADS:

- [X] Construction plans.
- [X] Recorded plat or waiver including notes of the placement of the approach road.
- [X] Traffic control plan.

I, _____, acknowledge that I am acting on behalf of the above named organization with the full authority to do so. I further acknowledge and accept that **CITY AND BOROUGH OF JUNEAU** shall comply with all the provisions and conditions that the Department of Transportation and Public Facilities has included as a condition of issuing this permit.

_____ _____

CITY & BOROUGH OF JUNEAU, Permittee Signature Date

_____ _____

DOT&PF, Signature Date

SPECIAL USE PERMIT

BETWEEN
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
AND CHILKAT VISTAS, LLC

PERMIT NO. JNU SUP 21-007

THIS PERMIT is issued and effective this **27TH day of August, 2021** by the **STATE OF ALASKA, DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES, SOUTHEAST REGION RIGHT-OF-WAY**, whose mailing address is P.O. Box 112506, Juneau Alaska 99811-2506, acting through its Commissioner and referred to as "Department", and **CHILKAT VISTAS, LLC**, referred to as "Permittee," whose mailing address is: 6000 Thane Rd. Juneau, AK 99801

Permittee may occupy the following described right-of-way, which is shown on the attached drawing, and is referred to hereinafter as the "Permitted Area"

The proposed permit area is located at the intersection of Hooter Lane and Glacier Highway in Juneau, AK

This permit is subject to the provisions of Alaska Administrative Code, Title 17, Chapter 010, and the following general and special conditions:

1. **For the purpose of: Installation and maintenance of 36-inch Corrugated Aluminum Pipe (CAP) or Corrugated Plastic Pipe (CPP) cross culvert underneath Glacier Hwy. Called out as P-1 on attached drawing. In association with driveway and approach road Permit # 30955**

2. **Term:** Permittee may occupy the permitted area for a term of **two (2) years** unless sooner revoked as provided herein. Before the expiration of said term, and before subsequent term anniversary dates, Permittee may request, in writing, renewal of this Permit for an additional term.

3. **Use by the State:** The issuance of this Permit notwithstanding, the permitted area's primary use is for transportation purposes. The State may revoke this permit (as stated below), and/or enter the permitted area at any time, without notice, for emergency use, or for the planning, design, construction, inspection, or maintenance of existing or future transportation facilities. Any such use of the permitted area will in no way invoke the protections provided under 23 USC Section 138 (Preservation of Parklands).

4. **Compliance with Laws:** Permittee shall comply with all laws, ordinances, regulations, and administrative agency and/or court orders, including those relating to health, safety, noise, environmental protection, waste disposal, hazardous or toxic materials, and water and air quality. No fuel, hazardous or combustible substances are to be stored in the Permit area. Should Permittee's use of the permitted area cause any discharge, leak, spill, emission, or pollution release of any type to occur at any time during this occupancy, Permittee shall immediately notify the State and the appropriate federal, state, and local authorities. Permittee shall act immediately to contain and/or absorb the release, repair any damage, and clean up the release area, and to restore the permitted area to compliance with all applicable state, federal, or local laws or regulations. Permittee shall be held liable for any and all costs incurred by the State to dispose of cleanup materials or to clean up the permitted area unless otherwise agreed to, in writing, by both parties.

5. **Corps of Engineers Authorization:** Before any filling activities take place within the right-of-way, or on the property adjacent to the right-of-way affected by this permit, please contact the U.S. Army Corps of Engineers (USACE) to see if any further authorization is required. Placement of fill material in waters of the U.S., including wetlands and streams, requires prior authorization in most cases. You can reach the USACE

at:
Anchorage: (907) 753-2712, Fax: (907) 753-5567 Toll Free 1-800-478-2712
Fairbanks: (907) 474-2166, Fax: (907) 474-2164
Juneau: (907) 790-4490, Fax: (907) 790-4499
Kenai: (907) 283-3519, Fax: (907) 283-3981
The website is http://www.poa.usace.army.mil/reg

1. **Waiver of Claims:** Permittee waives any claim or right of action Permittee may have against the State in the event of damage to property, and injury to or death of any person in the permitted area that arises because of the design, construction, maintenance, management, or operation of a highway in the right of way containing the permitted area.

2. **Reimbursement of Costs:** Permittee shall reimburse the State for all costs and expenses incurred by the State, including attorney's fees, in any action brought by the State to recover any delinquent fees, or for the breach of any terms or conditions contained in this Permit, or to recover possession of the permitted area.

3. **Non-discrimination:** No person, on the basis of race, religion, color, national origin, age, or sex, shall be excluded from participation in, denied the benefits of, or otherwise subjected to discrimination in that person's use of the permitted area.

4. **Assignment:** Permittee may not assign or transfer this permit.

5. **Indemnification:** Permittee shall indemnify, defend and hold harmless the State, and its officers, employees, and contractors, from any claim resulting from injury, loss, or damage to any person or personal property resulting from Permittee's use of the permitted area. The Department shall not be responsible for damages to property or injuries to persons which may arise out of activities of the Permittee, its officers, agents, employees, representatives or contractors; or for any contamination caused by the Permittee; or for damages to property or injuries to the Department's officers, agents, servants or employees, or others who may be on the permitted premises at their invitation or the invitation of any one of them, except for claims arising out of the negligence or willful misconduct of the Department or its officers, agents, employees or invitees.

6. **Revocation:** This Permit is not a property right but a temporary authorization, revocable by the State. The State may revoke this permit in its sole discretion and upon 30 days written notice unless a shorter period is agreed to herein by Permittee. Said notice will be sent to Permittee's last known mailing address. Permittee shall have no right of action against the State. Upon the expiration or revocation of this Permit, Permittee shall remove all encroachments and restore the permitted area to a clean and safe condition. This Permit may be also revoked based upon a written determination by the Federal Highway Administration that federal funding requirements applicable to outdoor advertising have been violated.

7. **Loss of Business:** The State is not responsible for loss of business.

8. **No Relocation Benefits:** Issuance of this Permit does not entitle Permittee to a payment of just compensation or relocation benefits under AS 34.60 if Permit is revoked, Permittee elects not to renew, or the State denies Permittee's request for renewal.

9. **Cancellation by Permittee:** Permittee may cancel this Permit by providing written notice to the State at the above address. Permittee is not entitled to a refund of any fees or expenses related to the revocation or cancellation of this Permit.

10. **Abandonment by Permittee:** Upon abandonment by Permittee of the permitted area, Permittee's rights under this Permit will immediately terminate, but Permittee's obligations will survive until fulfilled.

11. **Permittee to provide:** Notification of completion in order to arrange final inspection by DOT & PF ROW Personnel

12. **SPECIAL STIPULATIONS;**

I. Sod layer should be removed out 4 feet from culvert ends to assure a common flow line in the ditch after cleaning and maintenance.

II. Any erosion, adverse settlement as deemed by the Department, water damage caused in construction or in operation of this cross culvert to the State Right of Way will be the responsibility of the Permittee to repair. The Permittee will bear all costs.

III. Permittee shall install a Corrugated Aluminum Pipe (CAP) or Corrugated Plastic Pipe (CPP) rather than galvanized steel pipe. Ensure adequate fill requirements and compaction requirements met.

IV. Permittee shall place appropriate sized splash pad, constructed of 6-inch minus drainage material at new culvert outfall within DOT&PF Right of Way to ensure expected conveyance within the ROW.

V. Permittee shall meet or exceed applicable Federal, State, and municipal standards and requirements for installation and maintenance of P-1 cross culvert pipe. Provide compaction test results prior to paving.

VI. This special use permit shall be issued in conjunction with the issuance of driveway and approach road permit # 30955 to the City and Borough of Juneau for the Hooter Lane, Glacier Hwy intersection.

VII. Upon the Department's final inspection, and acceptance; the Department shall assume maintenance and operation responsibility for the herein described cross culvert, thereby concluding this special use permit.

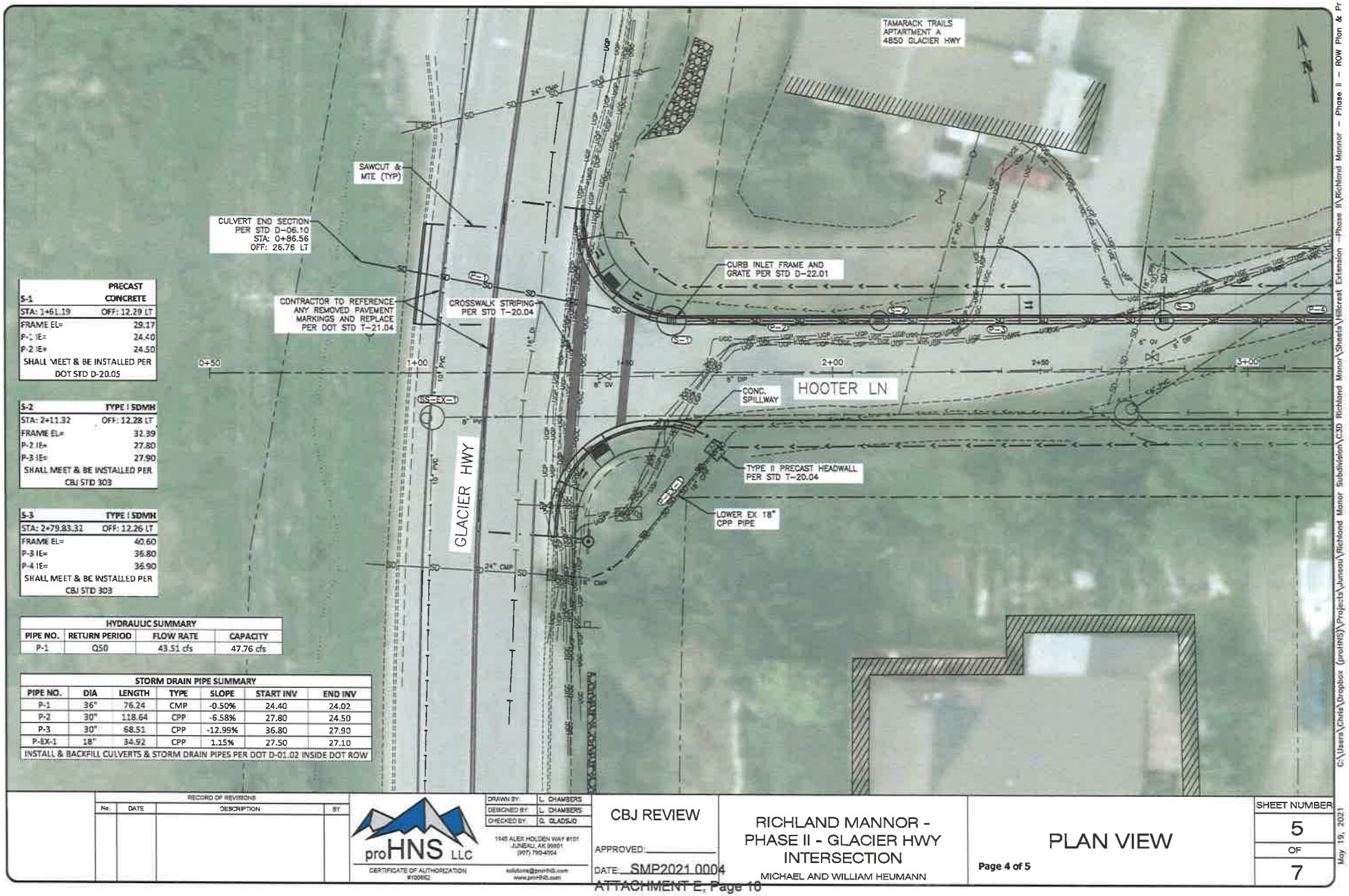
I, **MICHAEL HEUMANN,** acknowledge that I am acting on behalf of the above named organization with the full authority to do so. I further acknowledge and accept that **CHILKAT VISTAS, LLC** shall comply with all conditions that the Department of Transportation and Public Facilities has included as a condition of issuing this permit.

_____ _____

CHILKAT VISTAS, LLC, Permittee **Date**

_____ _____

DOT & PF Signature **Date**
Caleb T. Bizzarro



S-1	PRECAST CONCRETE
STA: 1+61.19	OFF: 12.29 LT
FRAME EL=	29.17
P-1 IE=	24.40
P-2 IE=	24.50
SHALL MEET & BE INSTALLED PER DOT STD D-20.05	

S-2	TYPE I SDMH
STA: 2+11.32	OFF: 12.28 LT
FRAME EL=	32.39
P-2 IE=	27.80
P-3 IE=	27.90
SHALL MEET & BE INSTALLED PER CBJ STD 303	

S-3	TYPE I SDMH
STA: 2+79.83.32	OFF: 12.26 LT
FRAME EL=	40.60
P-3 IE=	35.80
P-4 IE=	35.90
SHALL MEET & BE INSTALLED PER CBJ STD 303	

HYDRAULIC SUMMARY

PIPE NO.	RETURN PERIOD	FLOW RATE	CAPACITY
P-1	Q50	43.51 cfs	47.76 cfs

STORM DRAIN PIPE SUMMARY

PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START INV	END INV
P-1	36"	76.24	CMP	-0.50%	24.40	24.02
P-2	30"	118.64	CPP	-6.58%	27.80	24.50
P-3	30"	68.51	CPP	-12.99%	36.80	27.90
P-EX-1	18"	34.92	CPP	1.15%	27.50	27.10

INSTALL & BACKFILL CULVERTS & STORM DRAIN PIPES PER DOT D-01.02 INSIDE DOT ROW

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101 JUNEAU, AK 99801 (907) 780-4004 solutions@prohns.com www.prohns.com

DRAWN BY: L. CHAMBERS
DESIGNED BY: L. CHAMBERS
CHECKED BY: G. GLADSJO

CBJ REVIEW
APPROVED:
DATE: SMP2021 0004

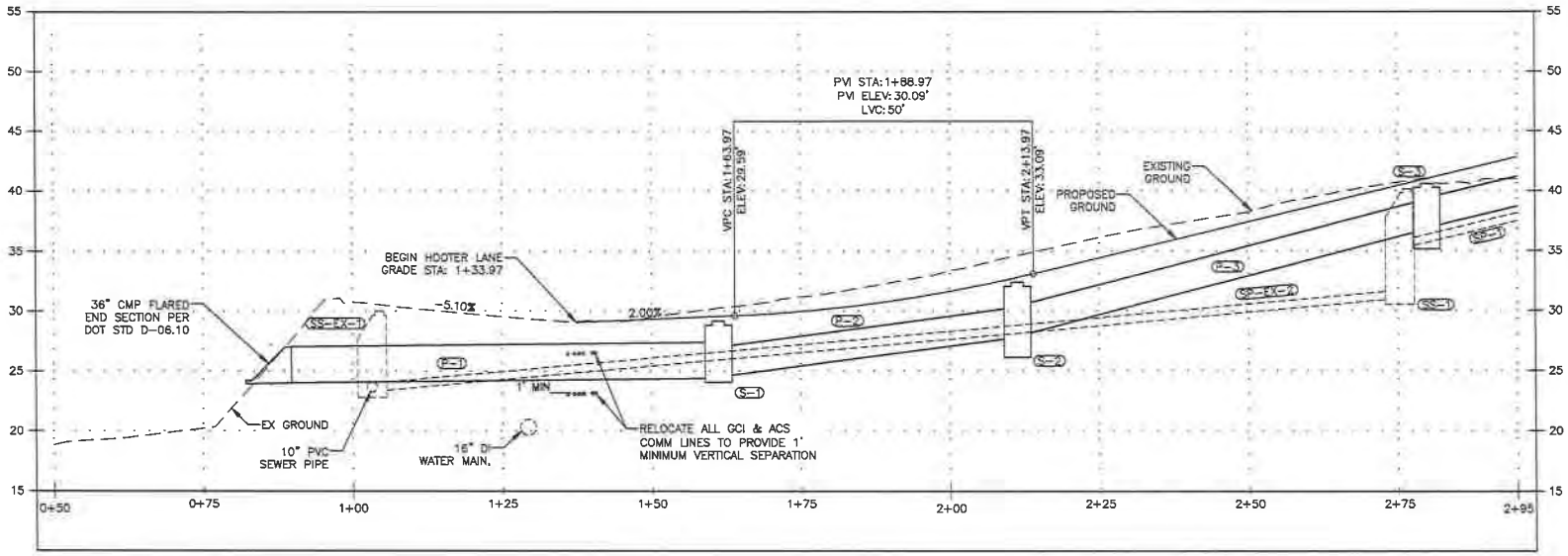
RICHLAND MANNOR - PHASE II - GLACIER HWY INTERSECTION
MICHAEL AND WILLIAM HEUMANN

PLAN VIEW
Page 4 of 5

SHEET NUMBER 5 OF 7

May 19, 2021 C:\Users\Chris\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor Sheets\Hillcrest Extension - Phase II\Richland Mannor - Phase II - ROW Plan & Pr

Attachment F - SMP21-04 – Phase 2



HYDRAULIC SUMMARY			
PIPE NO.	RETURN PERIOD	FLOW RATE	CAPACITY
P-1	Q50	43.51 cfs	47.76 cfs

STORM DRAIN PIPE SUMMARY						
PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START INV	END INV
P-1	36"	76.24	CMP	-0.50%	24.40	24.02
P-2	30"	118.64	CPP	-6.58%	27.80	24.50
P-3	30"	68.51	CPP	-12.99%	36.80	27.90
INSTALL & BACKFILL CULVERTS & STORM DRAIN PIPES PER DOT D-01.02 INSIDE DOT ROW						

S-1	PRECAST CONCRETE
STA: 1+61.19	OFF: 12.29 LT
FRAME EL=	29.17
P-1 IE=	24.40
P-2 IE=	24.50
SHALL MEET & BE INSTALLED PER DOT STD D-20.05	

S-2	TYPE I SDMH
STA: 2+11.32	OFF: 12.28 LT
FRAME EL=	32.39
P-2 IE=	27.80
P-3 IE=	27.90
SHALL MEET & BE INSTALLED PER CBJ STD 303	

S-3	TYPE I SDMH
STA: 2+79.83.32	OFF: 12.26 LT
FRAME EL=	40.60
P-3 IE=	36.80
P-4 IE=	36.90
SHALL MEET & BE INSTALLED PER CBJ STD 303	

SHEET NOTES:

1. NOT ALL ELECTRICAL UTILITIES PAST STA 1+75 HAVE BEEN SHOWN IN PROFILE VIEW FOR CLARITY.
2. CROSSING PIPES HAVE BEEN SHOWN IN THE LOCATION WHERE THEY INTERSECT THE PROPOSED STORMDRAIN PIPE.

RECORD OF REVISIONS			
No	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	D. GLADSJO

CBJ REVIEW
APPROVED:
DATE: SMP2021 0004

RICHLAND MANNOR - PHASE II - GLACIER HWY INTERSECTION
MICHAEL AND WILLIAM HEUMANN

PROFILE VIEW
Page 5 of 5

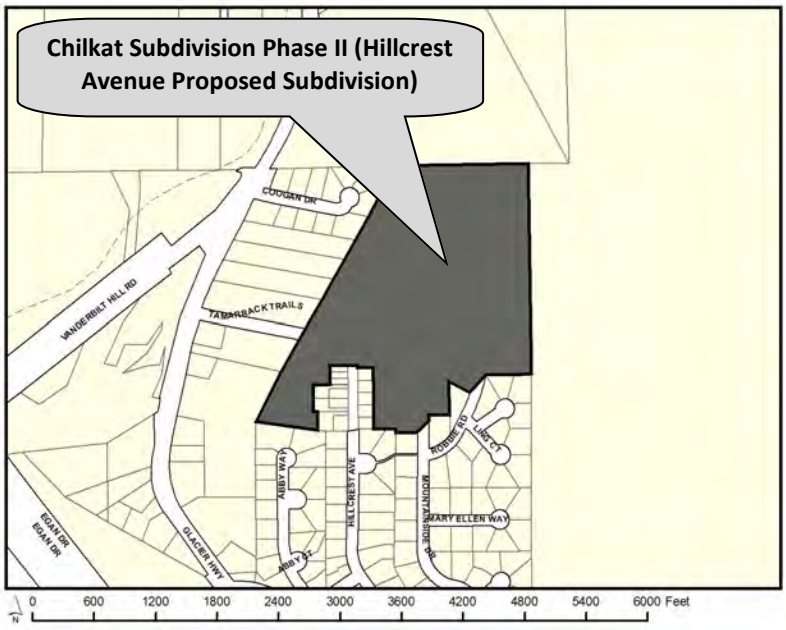
SHEET NUMBER 6 OF 7

C:\Users\Chris\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension --Phase II\Richland Mannor -- Phase II -- ROW Plan & Pr
May 19, 2021

Invitation to Comment

On a proposal to be heard by the CBJ Planning Commission

Your Community, Your Voice



CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

155 S. Seward Street Juneau, Alaska 99801

TO:

An application has been submitted for consideration and public hearing by the Planning Commission for **Chilkat Subdivision Phase II: Proposing subdivision of one (1) tract into fifteen (15) lots and three (3) tracts of land** at **Hillcrest Avenue** in a **D15 zone.**

TIMELINE

Staff Report expected to be posted **January 31, 2022,** at **https://juneau.org/community-development/planning-commission.** Find hearing results, meeting minutes and more here as well.

Now through Jan. 18

Comments received during this period will be sent to the Planner, **Irene Gallion,** to be included as an attachment in the staff report.

Jan. 19 — noon, Feb. 4

Comments received during this period will be sent to Commissioners to read in preparation for the hearing.

HEARING DATE & TIME: 7:00 pm, Feb. 8, 2022

This virtual meeting will be by video and telephonic participation only. To join the Webinar, visit: https://juneau.zoom.us/j/82676484943 . The Webinar ID is: 826 7648 4943 . To join by telephone, call: +1 253 215 8782 or +1 346 248 7799 or +1 669 900 6833 or +1 301 715 8592 or +1 312 626 6799 or +1 929 436 2866 and enter the Webinar ID.

Feb. 9

The results of the hearing will be posted online.

Phone: **(907)586-0715** ◆ Email: **pc_comments@juneau.org**
Mail: **Community Development, 155 S. Seward St, Juneau AK 99801**

Case No.: SMP2021 0004
Parcel No.: 7B1001160011
CBJ Parcel Viewer: http://epv.juneau.org

Printed January 5, 2022

Irene Gallion

From: Chilkat Vistas <chilkatvistas@gmail.com>
Sent: Monday, January 24, 2022 12:03 PM
To: Irene Gallion
Subject: Re: Reminder: Send a photo of the public notice sign
Attachments: image001.jpg; 20220124_112759.jpg

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

On Mon, Jan 24, 2022, 7:53 AM Irene Gallion <Irene.Gallion@juneau.org> wrote:

> That will need to be posted by tomorrow – visible from the ROW.
>
> The e mail you send will serve as the date stamp for the posting of the sign.
>
> Thanks!
>
> **Irene Gallion | Senior Planner**
>
> Community Development Department | City & Borough of Juneau, AK
>
> Location: 230 S. Franklin Street | 4th Floor Marine View Building
>
> Office: 907.586.0753 X2
>
> .
>
> *Fostering excellence in development for this generation and the next.*

ATTACHMENT H

Attachment Page

SMP2019 0004:

Notice of Decision……2

Staff Report……5

Minutes……176

SMF2020 0001

Notice of Decision……193

Staff Report……195

Minutes……414

Planning Commission

(907) 586-0715
PC_Comments@juneau.org
www.juneau.org/plancomm
155 S. Seward Street • Juneau, AK 99801

PLANNING COMMISSION
NOTICE OF DECISION
Date: November 13, 2019
File No.: SMP2019 0004

William & Michael Heumann
6000 Thane Road
Juneau, AK 99801

Proposal:	Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels)
Property Address:	4506, 4508, & 4510 Hillcrest Avenue
Legal Description:	Richland Manor Tract B
Parcel Code No.:	7B1001160010
Hearing Date:	November 12, 2019

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated November 4, 2019, and **APPROVED** the preliminary plat to be conducted as described in the project description and project drawings submitted with the application and with the following conditions:

1. Prior to approval of the final plat, all required plat corrections listed in the MEMO from the Community Development Department (CDD) to Michael Heumann (applicant), dated November 1, 2019 shall be completed (Attachment H).

2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.

3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the Director of Engineering and Public Works for compliance with CBJ 49.35.140.

4. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to the CDD and reviewed and approved by CDD and Engineering and Public Works.

5. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.

6. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.

7. The developer shall utilize Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.

8. The developer shall submit a final drainage plan to be approved by Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

9. The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway, whichever length is greater, for all panhandle lots created with this subdivision.

10. Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.

11. The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue requirements in each dwelling unit constructed through Phase 1 of this subdivision.

Attachment: November 4, 2019 memorandum from Laurel Christian, Community Development, to the CBJ Planning Commission regarding SMP2019 0004.

This Notice of Decision does not authorize any construction. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance to CBJ 01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ 01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ 49.20.120).

Effective Date: The permit is effective upon approval by the Commission, November 12, 2019.

Expiration Date: The permit will expire five (5) years after the effective date, or November 12, 2024, if no Building Permit has been issued and substantial construction progress has not been

made in accordance with the plans for which the subdivision permit was authorized or no final plat has been approved. Application for permit extension must be submitted thirty days prior to the expiration date.

Project Planner: Laurel Christian

Laurel Christian, Planner
Community Development Department

Benjamin Haight

Benjamin Haight, Chair
Planning Commission

Elizabeth J McEwen

Filed With Municipal Clerk

11/26/2019

Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this subdivision. ADA regulations have access requirements above and beyond CBJ - adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

DATE: November 4, 2019

TO: Planning Commission

FROM: Laurel Christian, Planner I
Community Development Department

FILE NO.: SMP2019 0004

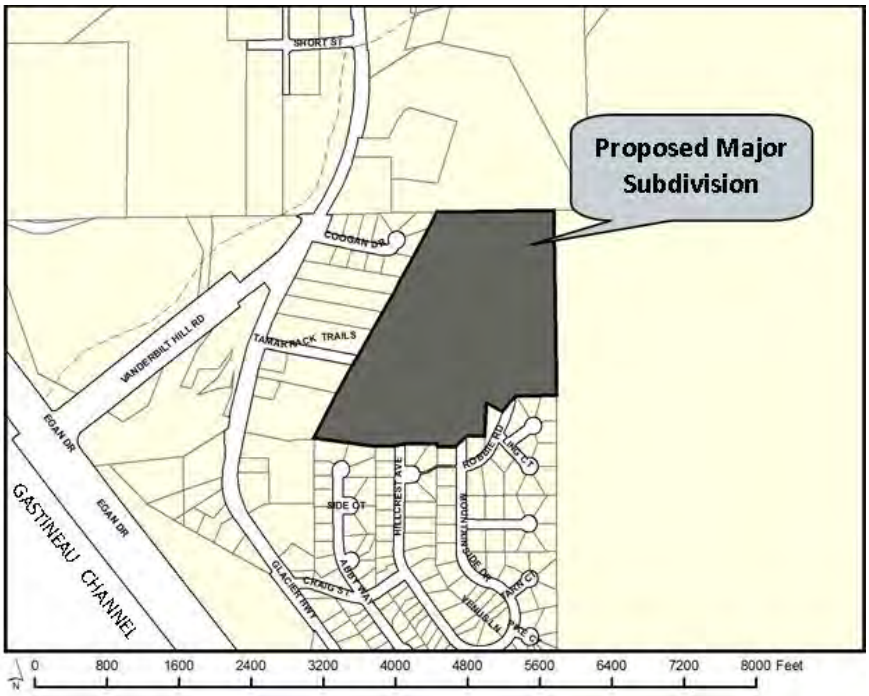
PROPOSAL: Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels)

GENERAL INFORMATION

Applicant:	Michael & William Heumann
Property Owner:	Michael & William Heumann
Legal Description:	Richland Manor Tract B
Parcel Code No.:	7B1001160010
Site Size:	30.67 Acres (1,335,985 square feet)
Comprehensive Plan Future Land Use Designation:	Medium Density Residential (MDR)
Zoning:	D15
Utilities:	Public Water & Sewer Proposed
Access:	Mountainside Drive, Hillcrest Avenue, and Robbie Road through Craig Street
Existing Land Use:	Vacant

Surrounding Land Use:
North – D18 Multi-family
South – Mountainside Estates Subdivision (D5 Single-family Residential)
East – Vacant forested RR
West – D5 and D15 Single-family Residential and Multi-family

VICINITY MAP



ATTACHMENTS

Attachment A – Application
Attachment B – Preliminary Plat
Attachment C – Sketch Plat
Attachment D – Zoning Map and Comprehensive Plan Future Land Use Designation Map
Attachment E – Preliminary Construction Drawings
Attachment F – Agency Comments
Attachment G – Public Comments
Attachment H – Preliminary Plat Corrections MEMO Dated November 1, 2019
Attachment I – Preliminary Drainage Plan
Attachment J – Water Report
Attachment K – Wetlands Delineation
Attachment L – APL20190003 Settlement Agreement

BACKGROUND

The subject parcel was originally platted through US Survey 4807. Over time, US Survey 4807 was subdivided into the Mountainside Estates Subdivision, Vanderbilt Hill Subdivision, and the remaining tract was called Richland Manor. The parcel was originally planned to be developed with the Mountainside Estates Subdivision, however no development has been completed on the parcel and it has remained vacant.

In 2018, the applicants purchased the subject parcel intending to subdivide and develop the parcel in multiple phases for single-family homes and multifamily developments. The applicants applied, and received approval, for a preliminary plat for a phased major subdivision to include 12 single-family lots and 1 large tract (13 lots total) in February of 2019 for the Richland Manor subdivision (SMP20180002). The approved preliminary plat was appealed to the CBJ Assembly (APL20190003). As a result of this appeal, the appellants and the applicants came to a settlement agreement, which resulted in the submittal of a new preliminary plat application. The applicants submitted a new preliminary plat application on September 19, 2019 (Attachment A), preliminary plat (Attachment B) and sketch plat (Attachment C).

It should be noted that the applicants have chosen to change the subdivision name from Richland Manor 2 to Chilkat Vistas.

APL20190003 SETTLEMENT

As stated above, the applicants received preliminary plat approval in February of 2019 for SMP20180002. This Planning Commission decision was appealed to the CBJ Assembly (APL20190003). The applicants, Mountainside Estates Neighborhood Association (MENA), and the CBJ worked developed a settlement agreement, which would suit all parties. This settlement agreement may be found in Attachment L. This settlement agreement resulted in this preliminary plat application (SMP20190004). The settlement agreement is provided as certain aspects of the agreement have guided subdivision development.

Please note that the Planning Commission is not reviewing this settlement agreement and must review the preliminary plat according to CBJ 49.15.400.

PROPOSAL

The applicant requests preliminary plat approval for Phase 1 of the Chilkat Vistas Subdivision (formerly known as the Richland Manor 2 Subdivision). Phase 1 consists of 14 lots for single-family development and one (1) large tract for future development (15 lots total). Phase 1 includes the extension of Hillcrest Avenue and the installation of public water and sewer. For Phase 1, the applicant proposes a mix of bungalow lots, panhandle lots, and standard D15 lots. Future phases

may include a mix of single-family and multi-family development.

ANALYSIS

Phasing – The proposed subdivision is creating 15 total parcels (14 lots for single-family development and one (1) large tract for future development). Phasing is allowed through the major subdivision process, as long as the infrastructure provided accommodates future phases. A sketch plat has been provided to demonstrate the future potential for the remaining tract of land (Attachment C).

According to CBJ 49.15.410(a), the sketch plat serves the following purposes:

> *(1) To inform the applicant of the City and Borough's subdivision requirements, public improvement requirements, and platting procedures before substantial costs are incurred by the developer in preparation of a subdivision application;*
>
> *(2) To inform the department of the applicant's development plans; and*
>
> *(3) To identify issues with the proposed subdivision, such as issues with the subdivision layout, the extent and nature of required improvements, the location and protection of sensitive areas, impacts to adjoining properties, and traffic, platting, drainage, and utilities requirements.*

The settlement agreement (APL2019 0003) resulted in a revised sketch plat, which contains the following features:

- The extension of Hooter Lane;
- Robbie Road terminates and is not to be a point of access to Chilkat Vistas subdivision. Robbie Road may serve as an emergency service access, but not a public through street;
- Hillcrest Avenue terminates at Hooter Lane; and
- Greenbelt buffers are depicted along the property lines shared by the Mountainside Estates and Chilkat Vistas subdivisions.

Zoning – The subject parcel is located in the D15 zoning district, which allows up to 15 dwelling units per acre. The subject parcel is currently 30.67 acres and the total density for the parcel, un-subdivided, is 460 dwelling units. This density does not take into account any land required for roads, utilities, setbacks, parking or other dimensional standard requirements.

A current zoning map zoning map may be found in Attachment D. The subject parcel is zoned D15, and is surrounded by other zoning districts. The Tamarack Trails Condominiums parcel to the west

is zoned D15, while the neighboring parcels to the south, within the Mountainside Estates subdivision, are zoned D5. To the north, parcels are zoned D18 and General Commercial.

Table of Dimensional Standard Excerpts:

Dimensional Standard		D5	**D15**	D18
Min. Lot Size				
	Single-Family	7,000	**5,000**	5,000
	Bungalow	3,500	**3,000**	2,500
	Duplex	10,500	**5808***	4840*
	Commonwall	7,000	**3,500**	2,500
Min. Lot Width				
	Single-family	70’	**50’**	50’
	Bungalow	35’	**25’**	25’
	Commonwall	60’	**30’**	30’
Min. Lot Depth				
	All Uses	85’	**80’**	80’
Setbacks**				
	Front	20’	**20’**	20’
	Rear	20’	**15’**	10’
	Side	5’	**5’**	5’
	Street Side	13’	**13’**	13’

Table Notes: *Minimum lot size for duplex calculated by allowable density. 1 Acre = 43,560 sq. ft. Minimum lot size required for a duplex in D15 is 5,808sq. ft. (43,560 / 15 = 2,904 X 2). **Per CBJ 49.25.400 Table of Dimensional Standards Note 3, *when one zoning district abuts another, the greater of the two setbacks is required for both uses on the common property line*.

All lots created in Phase 1 meet the required dimensional standards for the D15 zoning district. Future phases are required to meet the dimensional standards for the zoning district. The sketch plat shows future phases may feasibly be developed.

The D15 multifamily zoning district allows for residential construction with densities up to 15 units per acre. A lot that measures 5,000 square feet in the D15 zoning district may have one single-family dwelling. Additionally, per CBJ 49.25.510(k)(2)(G)(i) if a lot in the multifamily zoning district is used primarily for a single-family dwelling, that lot may be permitted to have one accessory apartment under certain conditions.

For multifamily development in the D15 zoning district, 2,904 sq. ft. are required per dwelling unit, as density is measured based on 15 units per acre (43,560 sq. ft. / 15 DU per acre = 2,904 sq. ft.

per DU). The following table demonstrates the dwelling units allowed on each lot created through phase 1:

Phase 1 Lot Number	Lot Size	Total # of Dwellings per lot
1, 2, 3	3,080 sq. ft.	1 dwelling unit
5, 6, 10, 11, 12, 13	5,000 sq. ft.	1 Single-family and 1 accessory apartment
14	5,137 sq. ft.	1 Single-family and 1 accessory apartment
4, 7	7,600 sq. ft.	2 dwelling units
8	9,438 sq. ft.	3 dwelling units
9	6,355 sq. ft.	2 dwelling units
Tract B1	28.80 acres	421 dwelling units**

**Note: this does not take into account any land required for roads, utilities, setbacks, parking or other dimensional standard requirements; this count is strictly based on 15 units per acre x 28.80 acres.

Lot Design

Bungalow Lots – CBJ 49.65 Article IV establishes standards for bungalow lots and bungalow lot subdivisions. These standards include the requirement for public utilities and roads, ratios of bungalow to standard lots, and the process for creating a bungalow lot subdivision. Staff finds all conditions of this chapter can be reasonably met. A standard plat note identifying the proposed bungalow lots and the specified use requirements has been added:

> LOTS 1, 2, AND 3 ARE BUNGALOW LOTS. AT TIME OF PLAT RECORDING, STRUCTURES ON LOTS 1, 2, AND 3 BLOCK B WERE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT; OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

Note: Block information may be removed from this plat note. The note may be revised to include lot and phases information.

Panhandle Lots – CBJ 49.15.423 establishes requirements for panhandle lots; through this chapter, panhandle lots may be created through the subdivision process. Dimensional standards, setbacks, and access and parking standards specific to panhandle lots are established in this section. Staff finds all conditions of this chapter can be reasonably met. Two standard plat notes identifying the

panhandle lots have been added:

> LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B ARE PANHANDLE LOTS. AT TIME OF PLAT RECORDING, FURTHER SUBDIVISION OF LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B IS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. SEE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.
>
> ACCESS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. ACCESS TO PANHANDLE LOTS CREATED THIS SUBDIVISION SHALL BE RESTRICTED TO A SINGLE DRIVEWAY APRON IN THE RIGHT OF WAY UNLESS A SECOND DRIVEWAY IS APPROVED BY CBJ. USE OF THE ACCESS EASEMENT DELINEATED ON THIS PLAT IS SUBJECT TO THE REQUIREMENTS SET FORTH IIN THE COMMON DRIVEWAY ACCESS, JOINT USE AND HOLD HARMLESS AGREEMENT RECORDED WITH THIS SUBDIVISION.

Note: Block information may be removed from these plat notes. The notes may be revised to include lot and phase information.

Drainage – CBJ Engineering and Public Works Department (E&PW) has reviewed the preliminary drainage plan and found that the plan is not complete though the plan appears to be feasible (Attachment F). E&PW would like to review a final drainage plan prior to the approval of construction plans. The preliminary drainage plan and report may be found in Attachment I.

The following are recommended conditions of approval:

1. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.
2. The developer shall utilize Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.
3. The developer shall submit a final drainage plan to be approved by CBJ Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

Water – The applicant has submitted a water report completed by Jim Dorn of Carson Dorn, Inc. (Attachment J). The purpose of the technical memorandum was to evaluate the water booster pump station at the corner of Craig Street and Hillcrest Avenue and determine if there would be adequate pressure with the addition of the proposed homes. It was determined that an additional 80 residential units could be constructed without significantly reducing water pressures.

E&PW has reviewed this report and believes that there is adequate water pressure for Phase I of development using the above referenced pump station (Attachment F).

Wetlands – The 2008 and 2016 Juneau Wetlands Management Plans did not include the subject

parcel in the study area. The applicant has performed wetlands delineation for Phase 1 and found that there are approximately 3.61 total acres of wetlands (Attachment K). The need for a wetlands delineation will be determined at the pre-application conference for each future phase of development. Additionally a standard plat note has been added:

> WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. WETLANDS DELINEATED BY KAREN BOSWORTH NOVEMBER 2018.

The previous preliminary plat approval application (SMP20180002) was taken to the Wetlands Review Board on February 21, 2019. Phase 1 of the proposed subdivision has not significantly changed, so staff does not recommend an additional review by the Wetlands Review Board. Future phases may require additional review. The Wetlands Review Board made the following recommendation on the previous preliminary plat:

> "The applicant use control measures or storm water best management practices that cause the runoff from the development to infiltrate the ground on-site. Conventional storm water systems transport water into impervious surfaces like streets and driveways which concentrates flow of water and pollutants. On-site infiltration treats water naturally."

Under the drainage section of this report, staff recommends conditions that speak to storm water best management practices. The applicant may need an Army Corps of Engineers (ACOE) permit to fill wetlands on the subject parcel. The applicant is aware of this and is working directly with ACOE.

Habitat – There are no known habitat concerns on the subject parcel. The Alaska Department of Fish and Game (ADF&G) was invited to review the proposed subdivision. ADF&G found no issues with the proposed development (Attachment F).

Access – The subject parcel abuts four CBJ rights-of-way: Hillcrest Avenue, Mountainside Drive, Robbie Road, and Hooter Lane. Phase 1 of the proposed subdivision extends Hillcrest Avenue. Future phases of development extend Hillcrest Avenue and Mountainside Drive to form a connected loop, which then connects to Hooter Lane and feeds out onto Glacier Highway. All lots created through Phase 1 have access and frontage on the extension of Hillcrest Avenue.

The applicants request that the right-of-way width be reduced by 10 feet for the extension of Hillcrest Avenue. Per CBJ 49.35.240(a)(3) streets other than arterials and collectors are required to have a minimum right-of-way width of 60 feet; the applicant proposes 50 feet. This right-of-way width may be reduced in accordance with CBJ 49.35.240(b). According to E&PW, this is an acceptable request and *remaining phases shall also be constructed at a width of 50' unless further engineering indicates this is not feasible* (Attachment F).

In Phase 1, the applicants will construct Hillcrest Avenue to standards that are acceptable for public acceptance and maintenance, as required by CBJ 49.250(a). Preliminary construction drawings may

be found in Attachment E. According to E&PW, *the proposed improvements conform to the requirements of this title and can be feasibly constructed in accordance with Title 49* (Attachment F). Preliminary construction drawings for the extension of Hillcrest Avenue show a 50' wide right-of-way containing a 26' wide travel way with sidewalk on one side of the street. Based on the Average Daily Trips (ADTs) generated by the entire development shown on the sketch plat, sidewalks on two sides of the streets should be required.

Per CBJ 49.35.130(b) the Director of E&PW may prescribe different construction standards than those required in the Table of Roadway Construction Standards. E&PW has reviewed the request for sidewalk on one side of the street and approves this request due to the following:

> *"This request is consistent with the other recent local subdivision determinations of similar size developments and is also consistent with the infrastructure within the Mountainside Subdivision, with sidewalk only constructed on one side of the two main access roads, Mountainside Drive and Craig Street (and no sidewalks on the side streets). The previously platted Hooter Lane right-of-way (ROW), which will provide pedestrian connection from the development to Glacier Highway, is only required to have one sidewalk, making the requirement of two sidewalks within the new development an unnecessary redundancy."*(Attachment F)

Prior to final plat approval, the applicant is required to submit construction drawings to be approved by E&PW for all required improvements, this has been added as a condition of approval.

Traffic Analysis – CBJ 49.40.300 states that a traffic impact analysis is required for developments that are projected to generate 500 or more average daily trips. The proposed development for Phase 1 includes 14 single-family homes and one (1) tract for future development. A single-family home generates 9.52 average daily trips and an accessory apartment generates 6.65 average daily trips.

The below table demonstrates the ADTs generated:

Phase 1 Lot Number	**Total # of Dwellings per lot**	**ADTs**
1, 2, 3 (Bungalow Lots)	1 Single-family	9.52 x 3 = 28.56
4, 5, 6, 7, 8, 9 10, 11, 12, 13, 14	1 Single-family and 1 accessory apartment	16.17 x 11 = 177.87
		TOTAL: 206.43 ADTs

The 14 single-family homes and potential accessory apartments would generate 206 ADTs, so

no traffic impact analysis is required for Phase 1. The potential ADTs generated by the large remaining tract (for future development) is not taken into consideration at this time, because future development of that parcel has not been applied for. All existing phases of the Chilkat Vistas subdivision should be taken into consideration when calculating the ADTs generated by the project as each phase is applied for.

Non-motorized Access – As discussed above, the developer is required to install sidewalks within the subdivision. Sidewalk on one side of the street for Phase 1 of development is required. CBJ 49.35.610(b)(1) requires a minimum width of 5 feet for sidewalks. Dimensional standards for sidewalks will be reviewed with construction drawings after preliminary plat approval.

Street Lighting – E&PW Standard Detail 118 requires street lighting at all intersections with spacing between lights not to exceed 250 feet. This is reviewed as part of the construction drawings, after preliminary plat approval.

Hillside Development – The subject parcel contains slopes that are greater than 18%. According to CBJ 49.70.210 (a), *this article applies to all development on hillsides in the City and Borough that involves the following:*

> *(1) Removal of vegetative cover;*
> *(2) Excavation of any slope in excess of 18 percent;*
> *(3) Creation of new slope in excess of 18 percent for a vertical distance of at least five feet; or*
> *(4) Any hazard area identified on the landslide and avalanche maps dated September 9, 1987…*

At this time, final construction plans have not been submitted. A Hillside Development Permit may be required if any of the above listed activities occur within slopes in excess of 18%. CBJ 49.70.220(b) states that, "*The developer shall apply for and obtain a hillside development endorsement prior to any site work other than land and engineering surveys and soils exploration."* The requirement for a Hillside Development Permit will be reviewed with construction plans for roads and utilities, and again upon submittal of building plans for the single-family dwellings.

AGENCY REVIEW

The proposed subdivision application was sent for review to Capital City Fire & Rescue; Building Division, Assessors Office, Parks and Recreation, Lands and Resources Division, E&PW; the Alaska Department of Transportation and Public Facilities; the Alaska Department of Fish and Game; Army Corps of Engineers; and AEL&P. Agency review comments may be found in Attachment F and are summarized below.

CBJ Assessors Office – Does not anticipate a negative effect on neighboring property values.

Capital City Fire & Rescue (CCFR) – Due to the number of dwellings accessed by a single point (Craig Street) CCFR requires that all homes constructed through Phase 1 be sprinkled. Once there are 200 dwelling units accessed by Craig Street, a second access is required. The requirement for sprinkling has been added as a condition of approval.

CBJ Engineering and Public Works – Comments received from E&PW have been discussed throughout this report.

Alaska Department of Fish and Game (ADF&G) – Found no issues with the proposed development, but recommends employing best management practices for managing waste. Additionally, ADF&G recommends the applicants maintain existing hydrology and drainage channels. No anadromous waterbodies were found on the subject parcel during site visits performed by ADF&G.

Alaska Department of Transportation and Public Facilities (DOT) – No issues at this time. A Traffic Impact Analysis may be required in the future.

PUBLIC COMMENTS

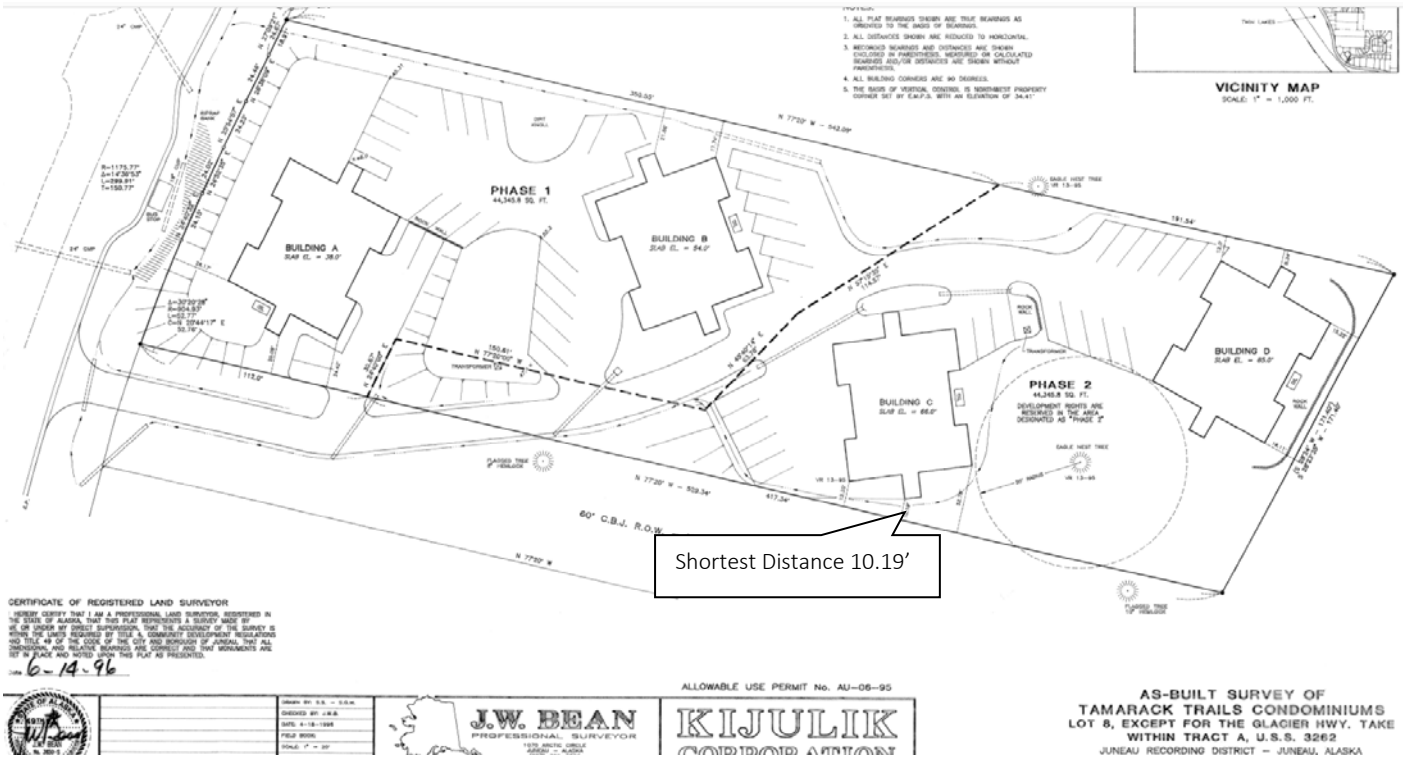
At time of writing this staff report, staff received two (2) public comments (Attachment G).

> *Joan Shorey 10/21/2019* – Ms. Shorey raised concerns over the use of the Hooter Lane right-of-way as an access point for the subdivision. Specific concerns included the loss of parking for the condominium complex and the close proximity of a roadway to buildings within the condominium complex and the potential for impacts on the residents.
>
> *Mountainside Estates Neighborhood Association (MENA) 10/25/2019* – A letter of support for the proposed subdivision was submitted through Paul Grant, representing MENA, in response to the settlement agreement reached between the Applicant and MENA.

Hooter Lane Right-of-Way

The Hooter Lane right-of-way was originally platted in 1971 and re-platted in 1980. The Tamarack Trails Condominiums were permitted in 1995. The undeveloped Hooter Lane right-of-way currently contains the driveway for the Tamarack Trails Condominiums.

According to CDD records, when the Tamarack Trails Condos were constructed, a surveying error was made and one of the buildings was built into the required setback from the Hooter Lane right-of-way (VR-06-96). A variance was approved for this encroachment (VR-06-96). The as-built survey on file for Tamarack Trails Condos shows one building to be within the required setback from Hooter Lane right-of-way and it shows that no structure and no parking are within the Hooter Lane right-of-way. Parking is directly adjacent to the Hooter Lane right-of-way. The following image is a clip from the 1996 as-built survey CDD has on file for Tamarack Trails Condos:



It should be noted that the construction of a public street in the Hooter Lane right-of-way is not proposed in Phase 1 of this subdivision. Hooter Lane is planned to be used as a future second access to the development. During Phase 1, the applicant plans to run a sewer line in the Hooter Lane right-of-way, and use it for construction purposes, but not to construct a full city street at this time.

FINDINGS

CBJ 49.15.402(4) Major Subdivisions, the Director shall prepare and submit a report to the Planning Commission noting any conditions of approval or plat notes recommended, and addressing the following criteria:

(A) Does the preliminary plat comply with CBJ 49.15.411?

Yes. With the conditions listed below, and the plat revisions required, staff finds that the preliminary can comply with CBJ 49.15.411. Required plat corrections can be found in Attachment H, these corrections are required as a condition of approval.

(B) The applicable subdivision development standards of this title are met, or can reasonably be met with conditions?

Yes. Staff finds that applicable subdivision development standards can be reasonably met with conditions.

(C) Will the proposed subdivision will provide building sites suitable for the zoning district?

Yes. Staff finds the proposed subdivision can, with conditions, provide building sites suitable to the D15 zoning district.

(D) Are the proposed street names unique in the City and Borough or are continuations of existing streets and are otherwise acceptable?

Yes. Hillcrest Avenue, platted through Phase 1 of the proposed subdivision is an extension of an existing street.

(E) Has the director of Engineering and Public Works (E&PW) reviewed the application and determined that:

(i) The subdivision can be constructed to conform to applicable drainage and water quality requirements;

Yes. E&PW found drainage and water quality requirements can reasonably be met with conditions (Attachment F).

(ii) The streets, pioneer paths, and pedestrian ways as proposed accommodate anticipated traffic, align, and, where appropriate, connect with streets and pedestrian ways serving adjacent properties;

Yes. E&PW finds the proposed improvements conform to the requirements of this title and can be feasibly constructed in accordance with Title 49 (Attachment F).

(iii) Any proposed improvements conform to the requirements of this title and can feasibly be constructed in accordance with this title; and

Yes. E&PW finds improvements can reasonably be constructed in accordance with this title (Attachment F).

(iv) Where public sewer is not required, the applicant has shown that soils are suitable for individual on-lot wastewater treatment and disposal or has shown the feasibility of alternative methods for wastewater treatment and disposal.

Not Applicable.

CBJ 49.35.240(b)(5) The director shall make written findings supporting right-of-way minimum width reductions granted under this section. The director's findings shall state that:

(A) The applicant has provided room for electric utility features and demonstrates that if the road is upgraded in the future to include additional sidewalks that there is sufficient right-of-way for construction of the sidewalks without need for retaining walls over two feet in height.

(B) There is sufficient right-of-way or easements to allow for drainage improvements required by construction of the sidewalks.

(C) That any driveways shall be constructed to accommodate the elevations of future sidewalks.

(D) No additional right-of-way width will be required in order to provide for sufficient access to abutting lands.

(E) There is sufficient room for snow storage**.**

The Director approves the right-of-way reduction request and finds the above listed conditions can be reasonably met. Additionally, E&PW agrees to this request (Attachment F).

CBJ 49.15.402(5) Major Subdivisions, in issuing its notice of decision on a preliminary plat, the commission may accept, amend, or reject the director's proposed recommendations. The decision of the commission approving or denying a preliminary plat application will be set forth in a notice of decision, and will specify any conditions or plat notes required for final plat approval. If the preliminary plat is denied, the applicant may submit a revised plat application, without paying additional application fees, within 180 days from the date of the notice of decision.

RECOMMENDATION

Staff recommends that the Planning Commission adopt the Director's analysis and findings and **APPROVE** the Preliminary Plat for Phase 1 of the Chilkat Vistas Subdivision. This approval would allow the applicant to submit for the Final Plat Application. The approval is subject to the following conditions:

1. Prior to approval of the final plat, all required plat corrections listed in the MEMO from CDD to Michael Heumann (Applicant), dated November 1, 2019 shall be completed (Attachment H).

2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing

that all real property taxes and special assessments levied against the property for the year of recording have been paid.

3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the director of Engineering and Public Works for compliance with CBJ 49.35.140.

4. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to the Community Development Department (CDD) and reviewed and approved by CDD and Engineering and Public Works.

5. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.

6. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.

7. The developer shall utilize Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.

8. The developer shall submit a final drainage plan to be approved by Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

9. The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway, whichever length is greater, for all panhandle lots created with this subdivision.

10. Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.

11. The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue requirements in each dwelling unit constructed through Phase 1 of this subdivision.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

DEVELOPMENT PERMIT APPLICATION

NOTE: Development Permit Application forms must accompany all other Community Development Department land use applications.

To be completed by Applicant

PROPERTY LOCATION

Physical Address
4506 Hillcrest Ave; 4508 Hillcrest Ave; 4510 Hillcrest Ave

Legal Description(s) (Subdivision, Survey, Block, Tract, Lot)
Richland Manor Tract B, A Fraction of US Survey 4807

Parcel Number(s) 7B1001160010

☐ This property located in the downtown historic district
☐ This property located in a mapped hazard area, if so, which _____

LANDOWNER/ LESSEE

Property Owner	Contact Person
William Heumann (50%), Michael Heumann (50%)	Michael Heumann
Mailing Address	**Phone Number(s)**
6000 Thane Rd Juneau, AK 99801	971-261-8014
E-mail Address	
mpheumann@hotmail.com	

LANDOWNER/ LESSEE CONSENT Required for Planning Permits, not needed on Building/ Engineering Permits

I am (we are) the owner(s)or lessee(s) of the property subject to this application and I (we) consent as follows:

A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission.
B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application.

X _____ 9-19-19
Landowner/Lessee Signature — Date

X _____ _____
Landowner/Lessee Signature — Date

NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.

APPLICANT

If the same as OWNER, write "SAME"

Applicant	Contact Person
SAME	
Mailing Address	**Phone Number(s)**
E-mail Address	

X _____ 9-19-19
Applicant's Signature — Date of Application

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

----------DEPARTMENT USE ONLY BELOW THIS LINE----------

This form and all documents associated with it are public record once submitted.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

Intake Initials	
LC	
Case Number	**Date Received**
SMP20190004	9/19/19

Attachment F – SMP 21-04 – Phase 2

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

SUBDIVISION APPLICATION

See subdivision hand-outs for more information regarding the permitting process and the materials required for a complete application.

NOTE: Must be accompanied by a DEVELOPMENT PERMIT APPLICATION form.

To be completed by Applicant

PROJECT SUMMARY

Number of Existing Parcels 4 Total Land Area 30.67 Number of Resulting Parcels 15

HAS THE PARCEL BEEN CREATED BY A MINOR SUBDIVISION IN THE PRECEDING 24 MONTHS

⊗ NO ○ YES Case Number _____

TYPE OF SUBDIVISION OR PLATTING APPROVAL REQUESTED

MINOR SUBDIVISION
(changing or creating 13 or fewer lots)

- ○ Preliminary Plat (MIP)
- ○ Final Plat (MIF)
- ○ Panhandle Subdivision
- ○ Accretion Survey
- ○ Boundary Adjustment
- ○ Lot Consolidation (SLC)
- ○ Bungalow Lot Subdivision
- ○ Common Wall/Zero Lot Subdivision
- ○ Other _____

MAJOR SUBDIVISION
(changing or creating 14 or more lots)

- ⊗ Preliminary Plat (SMP)
- ○ Final Plat (SMF)
- ○ Preliminary Development Plan - PUD (PDP)
- ○ Final Development Plan – PUD (PDF)
- ○ Bungalow Lot Subdivision
- ○ Common Wall/Zero Lot Subdivision
- ○ Other _____

ALL REQUIRED DOCUMENTS ATTACHED

- ☑ Pre-application conference notes
- ☑ Narrative including:
  - ☑ Legal description(s) of property to be subdivided
  - ☑ Existing structures on the land
  - ☑ Zoning district
  - ☑ Density
  - ☑ Access
  - ☑ Current and proposed use of any structures
  - ☑ Utilities available
  - ☑ Unique characteristics of the land or structure(s)
- ☑ Preliminary Plat checklist

----------DEPARTMENT USE ONLY BELOW THIS LINE----------

SUBDIVISION/PLATTING FEES	Fees	Check No.	Receipt	Date
Application Fees	$ 16650.00			
Admin. of Guarantee	$			
~~Adjustment~~ Sign	$ 150 + 100 deposit			
Total Fee	$ 19800.00			

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

For assistance filling out this form contact the Permit Center at 586-0770.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

Case Number	Date Received
SMP 2019 0004	LC

Attachment F - SMP21-04 – Phase 2

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

PROJECT NARRATIVE September 18, 2019

Michael Heumann and William Heumann purchased Richland Manor (zoned D15), a subdivided tract of land to the North of Mountainside Estates at Vanderbilt Hill (Tract B, Richland Manor, A Fraction of US Survey 4807).

In our first phase we are applying to subdivide a portion of the tract into 14 lots at the end of Hillcrest Drive. Later phases will include additional single and multi-family as shown in our sketch plat. Mountainside Estates (MENA). Following approval of our preliminary plat in February 2019, MENA appealed our subdivision and we have since reached settlement terms that satisfy both city code and the concerns of the appellants. The sketch plat shows a configuration that reflects that settlement. As part of the settlement process, new elevation points were collected by our surveyor and used to confirm the validity of existing LIDAR elevation data. Based on this data, we have confirmed that the roadways depicted in our sketch plat can be constructed at grades of 12% or less.

Other issues of note include:

1. Water System. What is the capacity of the water system to deliver water to additional dwellings without falling below the DEC and Fire Department requirements? Included with this Application is a Memorandum prepare by James Dorn, a local engineer in which he reaches the conclusion that the existing system can meet the demands of an additional 80 residences. As part of our settlement with MENA, we agree to extend a water line to connect with the one on Mountainside Drive. This connection will provide a loop which will reduce frictional pressure losses and thereby increase available flow rates in the upper reaches of Mountainside Estates.
2. Fire Code requirements. The fire code allows for the construction of additional dwellings on extensions of the street system servicing Mountainside Estates, if the water available at the hydrants is 500 gpm and if the new dwellings are provided with residential sprinkler systems. It, also, allows for the construction of new dwellings without sprinkler systems where 1,000 gpm is available. We will provide residential sprinkler systems where necessary.
3. Access. The property is accessed by Hillcrest Avenue, Mountainside Drive, and Robbie Road, as well an undeveloped right-of-way, Hooter Lane. We will develop Hooter Lane as fire access in the near future, and fully develop it as a city street as necessary in a future phase of development.
4. Wetlands. We obtained a Wetlands Delineation and have met with the U.S. Army Corps of Engineers several times. They have stated that the uplands areas should be fully developed in order to justify build within areas designated to delineated to be Wetland. The Preliminary Plat incorporates this into the design. We have requested that the Hillcrest Drive ROW be reduced to 50' to reduce the fill requirements on the back of the downhill lots. Since our February we have made great headway on obtaining permits and expect to have them in hand prior to year's end.

Utilities:

Water. An 8" ductile iron pipe extends onto Richland Manor at the end of Hillcrest Drive and is sufficient to provide for the water requirements of the proposed 14 lots.

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

Sewer. The planned means to connect to the CBJ sewer system will be to extend the sewer line in Hooter Lane to the proposed lots. It is possible to connect to the manhole between Lot 7 and Lot 8 on Hillcrest drive on the ROW. This would require a sewer lift station.

Unique Characteristics of the land or structure(s). – None

Existing Structures. There is an existing foundation on the land located on the western side of the proposed Hillcrest Avenue extension. This is the only current structure. We hope to use a portion of this foundation for construction of a house in the future.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

PRELIMINARY PLAT CHECK LIST

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

Name of Proposed Subdivision: Chilkat Vistas

The following items must be included with the initial submittal of a Preliminary Plat:

- ☑ Application, filled out completely
- ☑ Application fee (see fee schedule)
- ☑ Project Narrative
- ☑ Five (5) – 24" by 36" Copies
- ☑ Pre-application Conference Report
- ☑ Lot Closure Report
- ☑ Disclosure of all known environmental hazards and any proposed mitigation measures recommended in the applicable environmental document.
- ☑ Preliminary Plat Checklist: I have reviewed the checklist and all submittals for completeness and accuracy.

Applicant or Surveyor - Signature

9-19-19
Date

Applicant or Surveyor - Print Name

GENERAL REQUIREMENTS

- ☑ The preliminary plat shall be prepared by a professional land surveyor, registered in the State of Alaska
- ☑ The preliminary plat shall be submitted on 22 by 34 inch sheets. The director of engineering and public works may approve alternate sheet sizes
- ☑ The preliminary plat shall be drawn with black ink to a scale of one-inch to 100 feet or less, or other suitable scale approved by the director of engineering and public works
- ☑ The preliminary plat shall be oriented with north toward the top of the sheet.
- ☑ A vicinity map shall be located in the upper right-hand corner of the sheet
- ☑ The vicinity map shall be oriented in the same direction as the plat
- ☑ A suitable north arrow shall be shown for the plat and vicinity map
- ☑ All line work and lettering must be of professional quality, and all line widths and lettering sizes must be of such size that all information can be clearly shown without overlap or confusion

GRAPHIC REQUIREMENTS - A preliminary plat shall contain the following information:

Title block - An enclosed title block in the lower right-hand corner containing the following information:

- ☑ The proposed name of the subdivision
- ☑ The legal description of the parcel to be subdivided including U.S. Survey, U.S. Mineral Survey, A.T.S. number or section, township, and range number, as applicable
- ☑ "City and Borough of Juneau, Alaska"
- ☑ "State Recorder's Office at Juneau"
- ☑ The date the preliminary plat was prepared and revised
- ☑ The horizontal scale
- ☑ The name and address of the owner of record
- ☑ The name, address, and telephone number of the surveyor preparing the preliminary plat

Lot, block, and street information:

- ☑ The area of each lot
- ☑ The dimensions in feet and hundredths of a foot
- ☑ An identifying number and letter for lots and blocks
- ☑ Lots numbered consecutively, commencing with the number "1," with no omissions or duplications
- ☑ If the remainder of an original parcel being subdivided is relatively large, it shall be designated as a "tract" with an identifying number
- ☑ All parcels of land intended to be dedicated for public use or reserved for the use of all of the property owners in the proposed subdivision shall be shown as lots, and consecutively numbered. The purpose and any conditions or limitations on the use of the parcel shall be noted on the plat
- ☑ Abutting properties shall be shown with dashed lines, numbers, and/or letters
- ☑ For resubdivisions or public way vacations, the lines and legal description of the previous lots shall be shown with light dashed lines, numbers, and/or letters, or by a separate plat on the same sheet showing the previous lot lines
  - ☑ The minimum data shown for each curve shall be as follows:
    - ☑ Length
    - ☑ Central angle
    - ☑ Radius
    - ☑ Bearing and distance of long chord
  - ☑ Setbacks shall be shown on all corner lots and any lots with multiple frontage. Setbacks shall be shown on typical lots

Boundary lines:

- ☑ All boundary lines of the subdivision with bearings and distances described
- ☑ All retraced boundary lines shall show record and measured bearings and distances where they differ. Record dimension information shall be shown within parentheses and include a record source identification
- ☑ The exterior boundary lines of the subdivision shall be a solid black opaque line that is of a width that distinguishes it from all other property lines shown on the plat
- ☑ If phasing is proposed, then the boundaries and number of each phase, sequential lot numbering, and a subdivision name consistent with previous phases shall be shown

Monumentation:

- ☑ The monuments used to establish the basis of bearing
- ☑ Each monument found or set shall be identified on the plat by a symbol
- ☑ A complete description of the monument, including type and all information printed on the cap. A typical drawing shall be shown for each type of monument cap set
- ☑ A legend showing the symbols for all the types of monuments
- ☑ The identification, description location, elevation, and datum of the benchmark used to establish vertical control

Site access, circulation, and utilities:

- ☑ The widths and names of existing rights-of-way within the subdivision and within 100 feet of the subdivision boundary
- ☑ Proposed rights-of-way, including their widths and proposed names
- ☑ The grades of existing and proposed streets within these rights-of-way
- ☑ The width, ownership, use, and record reference of all proposed and existing easements within the subdivision and within 100 feet of the subdivision boundary
- ☑ The width, ownership, and use of all proposed easements

- ☑ All proposed and existing easements shall have sufficient dimensions shown to determine their location on the ground
- ☑ Existing trails or pathways within the subdivision and within 100 feet of the subdivision boundary, including the width of any associated rights-of way or easements
- ☑ Proposed trails or pathways and widths of their rights-of-way
- ☑ If the plat submitted covers only a part of the tract under the control of the applicant, a sketch plat of the prospective street system of the unplatted part shall be submitted
- ☑ The location of any existing or proposed driveways/curb cuts that access or are proposed to access any existing or proposed street

Topographic information:

- ☑ For slopes of less than five percent, show one foot contour lines and include spot elevations at all breaks in grade, along all drainage channels or swales, and at selected points not more than 100 feet apart in all directions
- ☑ For slopes between five percent and ten percent, show two foot contour lines
- ☑ For slopes greater than ten percent, show five foot contour lines
- ☑ Every fifth elevation contour shall be distinctive and clearly labeled
- ☑ Dashed lines shall represent existing contours
- ☑ Mapping shall include any significant features which can materially affect the design of the subdivision, including, but not limited to, structures, fences, walls, and utility poles
- ☑ If irregular slopes or special features are present, additional contour information may be required by the director of engineering and public works for planning or construction purposes. Additional required information may include projecting the topography of the site after grading has taken place, showing such items as:
  - ☑ Pad elevations and drainage patterns for each lot
  - ☑ Tops and toes of all manufactured slopes, including daylight lines
  - ☑ Existing and proposed retaining wall locations and heights
- ☑ For subdivisions located in hillside areas with slopes greater than eighteen percent, additional requirements apply in accordance with CBJ 49.70, Article II

Sewer and water:

- ☑ Existing sewer and water mains within the tract with pipe sizes and grades
- ☑ A draft plan for proposed water and sewer lines showing the size, approximate slope, and connection points with elevations for the purpose of determining the feasibility of construction

Multisheet plats:

- ☐ When a plat requires more than one sheet, exclusive of a certificate sheet, an index sheet shall be included. When a plat requires more than three sheets, a cover sheet shall also be included, showing the subdivision title, a key map, and all certificates. Each additional sheet shall include the following data:
  - ☑ North arrow
  - ☑ Legend
  - ☑ Surveyor's seal and signature
  - ☑ Title block
  - ☑ Sheet _____ of _____
  - ☑ Scale
  - ☑ All plat notes
  - ☑ Vicinity map

***ADDITIONAL MAPPING OR REPORTS**- At the pre-application meeting, it will be determined if any of the following additional mapping or reports are required to be submitted with the preliminary plat. If required, the following additional mapping or reports shall be submitted:*

Hazard and Special Habitat Areas:

- ☑ Any portion of a special flood hazard area, landslide or avalanche area, habitat area as defined by CBJ 49.70.310, or watersheds, either existing at the proposed subdivision site or shown on the overlay maps, adopted pursuant to this title, to exist at the proposed subdivision site, must be depicted on the preliminary plat
- ☑ The boundaries of any wetland areas must be depicted on the preliminary plat. Boundaries must be determined by a person qualified to perform wetland delineations

Soils report:

N/A

- ☐ A soils report prepared by an engineer licensed by the State of Alaska shall be required if the proposed subdivision is located farther from the existing public sewer system than specified in CBJ 49.35, and the applicant chooses to provide on-lot waste disposal rather than to connect to the public system. A soils report shall include the following:
  - ☐ Certification that the proposed lots are large enough and have soil of sufficient permeability to permit the construction of approved waste treatment systems for on-lot waste disposal
  - ☐ The location and size of drain fields for each lot
  - ☐ The locations and logs of test borings, percolation test results, and a hydrological evaluation of on-site sewage disposal
  - ☐ If the soils report indicates that the soils found on the site are not of sufficient permeability or the lots are not large enough to permit the construction of systems for on-lot waste disposal, the size of the proposed lots must be increased or alternate methods for waste disposal proposed
  - ☐ The soils report shall describe the nature of the subsurface soils and any soil conditions that would affect the design of the proposed development. The soils report shall state whether the proposed subdivision plan is feasible and provide general solutions for all known geotechnical conditions or problems

Drainage report:

- ☑ A preliminary report specifying the method by which the applicant proposes to manage surface and subsurface drainage for the subdivision and the effect of such method on adjacent areas. Unlike the drainage plan required by CBJ 49.35.510, the preliminary drainage report does not need to be prepared by a licensed engineer. The report must address the following:
  - ☑ A calculation of the increase in stormwater runoff resulting from the proposed development as well as the runoff from all drainage areas associated with the site. Runoff calculations shall be based on a fully-developed subdivision and a 25-year storm event
  - ☑ How drainage from the proposed subdivision will join an established drainage channel or channels, unless the director of engineering and public works approves use of an alternative drainage way
  - ☑ An evaluation of existing drainage ways and structures located between the subdivision and the receiving water body, and verification that the existing drainage ways can accommodate the increased runoff. If the increased runoff cannot be handled, the plan must propose solutions to the problem
  - ☑ All required improvements, on or off site, that are shown on the construction plans in accordance with CBJ 49.35, Article V, and that will be constructed as part of the subdivision

Water:

- ☑ For subdivisions of five or more lots, including major subdivisions, the following shall be included, where applicable, in accordance with CBJ 49.15.412:
  - ☐ If a proposed subdivision is located at greater distance from the existing public water system than specified in CBJ 49.35, Article III, and the applicant chooses not to connect to the public system, a statement that the applicant will provide a community water system or that individual wells will be used

☑ A report by a registered engineer or geologist that clearly supports the legal and physical availability of adequate water. Methods for proof of water availability and the standards for quantity are listed in CBJ 49.35, Article III

☐ A copy of the State application for a permit to appropriate water in the quantity required to meet the subdivisions demands

☐ This does not apply to remote subdivisions unless: the subdivider of the remote subdivision chooses to provide potable water, a public water system is available and the subdivision falls within the criteria outlined in CBJ 49.35.310(a), or the subdivision has four or fewer lots.

☐ The director for minor subdivisions, and the planning commission for major subdivisions, may, for good cause, temporarily waive the requirement to provide a water report and proof of water, and condition the approval of the preliminary plat upon the provision of both documents as part of the final plat application and approval process.

Erosion control:

☑ A report explaining the method by which the applicant proposes to control erosion and manage runoff, and potential impacts to adjacent properties or water bodies. The report shall include a plan for preservation of ground cover in areas where runoff and resulting erosion need to be minimized.

Traffic study:

☑ A traffic impact analysis may be required with the preliminary plat in accordance with CBJ 49.40.300. N/A

Shadow plats:

☑ For subdivisions of five or more lots in transition areas, a shadow plat shall be submitted according to CBJ 49.70.710. The shadow plat shall consist of a sketch superimposed on the proposed subdivision layout. This sketch shall reflect any future resubdivision of the parcels into smaller lots consistent with the higher density and the lot size allowed under the transition zoning. N/A

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK. 99801

Richland Manor Proposed Subdivision – UPDATED REPORT

Case Number: **PAC2018 0054**

Applicant: **William Heumann**

Property Owner: **Richland Corporation**

Property Address: **4506, 4508, 4510 Hillcrest Avenue**

Parcel Code Number: **7B1001160010**

Site Size: **30.67 acres**

Zoning: **D-15, Multi-family, 15 du/acre**

Comprehensive Plan Land Use Designation: **MDR (Medium Density Residential, 5 – 20 du/acre)**

Existing Land Use: **Vacant**

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

Conference Date: **August 29, 2018 (Follow up meeting with Gen. Eng., Fire, and Planning – Nov. 14, 2018)**

Report Issued: September 13, 2018 (Updated Report Issued: November 20, 2018)

List of attendees

Note: Copies of the Pre-Application Conference Report will be emailed, instead of mailed, to participants who have provided their email address below.

Name	Title	Email address
Autumn Sapp	Eng. & Public Works Business Manager	Autumn.Sapp@juneau.org
Laura Boyce	Senior Planner, CDD	Laura.boyce@juneau.org
Sven Pearson	Deputy Fire Marshall	Sven.pearson@juneau.org
Laurel Bruggeman	Planner, CDD	Laura.bruggeman@juneau.org
Dan Jager	Fire Marshall	Dan.jager@juneau.org

Conference Summary

Questions/issues/agreements identified at the conference that were not already identified in the attached reports.
The following is a list of issues, comments and proposed actions, and requested technical submittal items that were discussed at the pre-application conference.

Planning Division:

A major subdivision application is required for the proposed subdivision. A major subdivision is a two-step process – the preliminary plat and the final plat. Both steps require a public hearing and approval by the Planning Commission. Due to the overall potential number of dwelling units on the parcel and the trips generated, a Traffic Impact Analysis will be needed and is required with submittal of the preliminary plat. Additionally, due to the slopes shown on the property, a Hillside Endorsement Development application may also be needed for proposed development in these areas. The slope map is attached to this report.

Requirements for the preliminary plat are listed at CBJ 49.25.411 and final plat requirements are at CBJ 49.25.412. Because this project is projected to be part of a major subdivision development, pursuant to CBJ49.15.401(a) (1) (A), a major subdivision must be applied for.

Because the property is zoned D-15, uses would need to be consistent with the Table of Permissible Uses, CBJ 49.25.300. If single-family development is proposed, as the applicant indicates that some of the development would be adjacent to Mountainside Estates, then lots would need to be consistent with the Table of Dimensional Standards, CBJ 49.25.400. Minimum lot size in the D-15 zone district is 5,000 square feet with lots meeting the minimum lot width and depth of 50 feet and 80 feet, respectively. Common wall lot sizes in D-15 are a minimum of 3,500 square feet and can be a minimum of 30 feet in width and 80 feet in depth.

1. **Zoning** – D-15, a multi-family zone district
2. **Maximum Density** – 460 dwelling units (30.67 acres X 15 du/ac)
3. **Setbacks** – Front – 20 feet, Rear - 15 feet, Side – 5 feet. The property abuts some D-5 zoned lands in Mountainside. When two differing zone districts abut one another, the greater setback of the districts applies. The front and side yards are the same in D-5 and D-15; however, the rear yard is greater in the D-5 zone district, requiring a minimum of a 20 foot setback.
4. **Height** – Maximum height of structures in the D-15 zone district is 35 feet for permissible uses and 25 feet for accessory uses.
5. **Access** – Access to the property is via Hillcrest Avenue, Mountainside Drive, Robbie Lane, and Hooter Lane which is an undeveloped right-of-way. The Planning Commission at its 12/8/1998 meeting stated that any permit for further development must include plans for access/egress as it relates to Mountainside Subdivision, Hooter Lane, and for drainage. Connection to Hooter Lane from development in Mountainside Estates will be required. Platting the right-of-way to it will be required for the first phase of development; however, construction of the ROW will not be required until triggered by Fire Code requirements. CBJ 49.15.400(a)(3), CBJ 49.35.120(a), and CBJ 49.35.210 require a connected street system and connectivity to adjoining unsubdivided lands. Additionally, previous subdivision approvals for Mountainside Estates required future

second access for the subdivision.

Roadway Construction Standards may be waived by the director or Planning Commission as stated in CBJ 49.35.240(i)(4) if the request is for a street reconstruction or new street construction located in a right-of-way platted before 1987 and the waiver request meets the criteria of said chapter. Requests for such waivers shall be in writing.

Privately maintained access in the right-of-way is not allowed as the criteria set forth in CBJ 49.35.273(b) have not been met because the property is located within the Urban Service Area.

The Comprehensive Plan's Land Use Map H shows a future road (alignment not specific) from Tract B to the property to the north. Connection will not be required until that portion of the tract is proposed for development.

6. **Parking** – Parking for multifamily is generally two parking spaces per unit
7. **Lot Coverage** – The maximum lot coverage in the D-15 zone district is 50%.
8. **Vegetative Coverage** – The minimum vegetative cover is 30% in the D-15 zone district.
9. **Lighting** – N/A
10. **Noise** – Noise during construction must not exceed CBJ Code requirements.
11. **Flood** – Flood Zone X, Not in a Floodway
12. **Hazard/Mass Wasting/Avalanche/Hillside Endorsement** – Some portions of the site appear to exceed 18% slope. A Hillside Endorsement may be needed for development in these areas. See attached map.
13. **Wetlands** – According to the applicant, portions of the site contain wetlands. Initial development plans would be on the areas that do not contain wetlands.
14. **Habitat** – The applicant will need to check with Federal Authorities if any eagle nests appear to be on the site. No anadromous streams are located on the property.
15. **Plat or Covenant Restrictions** – The Planning Commission at its 12/8/1998 meeting stated that any permit for further development must include plans for access/egress as it relates to Mountainside Subdivision, Hooter Lane, and for drainage. An overall Tract B master plan will be required.

Building Division:

16. **Building** – N/a
17. **Outstanding Permits** – n/a

General Engineering/Public Works:

18. **Engineering** –

    a. At the time of preliminary plat submittal, submit an erosion control report explaining the method by which the applicant proposes to control erosion and manage runoff, and potential impacts to adjacent properties or water bodies. The report shall include a plan for preservation of ground cover in areas where runoff and resulting erosion need to be minimized.

b. Construction plans to be submitted after the approval of the preliminary plat and before final plat submission. Construction plans must adhere to 49.35.140 and must be signed and stamped by Alaskan licensed engineers for each discipline. Construction plans for this layout of development does not need to include all phases of full buildout of development. For specific requirements, please refer to CBJ code by visiting: http://www.juneau.org/cddftp/ordinances.php and referencing chapter 49.35 – Public and Private Improvements.

c. Prior to final plat, an Engineer's estimate for the installation of public improvements must be submitted. Once this is received, a performance bond amount will be determined and must be paid/posted prior to recording of the final plat. Further discussion regarding the bond can take place once the project phasing is determined. For all options regarding the financial guarantee please refer to 49.55 – Financial Responsibility.

d. Dependent on the construction plan and schedule an inspection deposit will be required and a private inspector may be hired.

e. Street lighting is required and shall not exceed 250' between poles.

19. **Drainage –**

a. Drainage report with the submittal of the preliminary plat does not need to be engineered. At time of construction plan submittals a drainage plan must be submitted and must be signed and stamped by an Alaskan licensed engineer.

b. Preliminary plat requirements do need to be followed see 49.15.411 - Preliminary plat requirements for full listing. Please do note that topographic information shall be shown as outlined under 48.15.411, (6) – Topographic information.

20. **Utilities** – (water, power, sewer, etc.) –

a. At time of preliminary plat, a draft plan for the proposed water and sewer lines shall be submitted showing existing installed utilities including line sizing and connection points with elevations.

b. A report by a registered engineer or geologist that clearly supports the legal and physical availability of adequate water. Methods for proof of water availability and the standards for quantity are listed in CBJ 49.35, article III. Specifically for your project, it may require additional upgrades to the existing water system. It is recommended that a point of contact would be the original designer, Jim Dorn, of the water pump station located on Hillcrest Avenue near the intersection of Craig Street.

c. A copy of the state application for a permit to appropriate water in the quantity required to meet the subdivisions demands will need to be obtained and must be submitted prior construction plan approval.

Fire Marshal:

21. **Fire Items/Access** – Because there is only one access to all of Mountainside Estates, each dwelling will need to be sprinkled. There are approximately 157 lots within Mountainside Estates with only one access road into the subdivision.

Other Applicable Agency Review:

22. The applicant will need to check with Alaska Department of Transportation to see if they have any requirements for this development.

List of required applications

Based upon the information submitted for pre-application review, the following list of applications must be submitted in order for the project to receive a thorough and speedy review.

1. Major Subdivision Application, include Preliminary Plat Checklist
2. Hillside Development Permit
3. Conditional Use permit is required for development of nine or more dwelling units.

Additional submittal requirements:

Submittal of additional information, given the specifics of the development proposal and site, are listed below. These items will be required in order for the application to be determined Counter Complete.

1. A copy of this pre-application conference report.
2. A preliminary plat checklist for the preliminary plat.
3. Traffic Impact Analysis.
4. A final plat checklist will be needed at the final plat stage.

Exceptions to submittal requirements:

Submittal requirements staff has determined **not** to be applicable or **not** required, given the specifics of the development proposal, are listed below. These items will **not** be required in order for the application to be reviewed.

1. N/A

Fee estimates

The preliminary plan review fees listed below can be found in the CBJ code section 49.85.

Based upon the project plan submitted for pre-application review, staff has attempted to provide an accurate estimate for the permits and permit fees which will be triggered by your proposal.

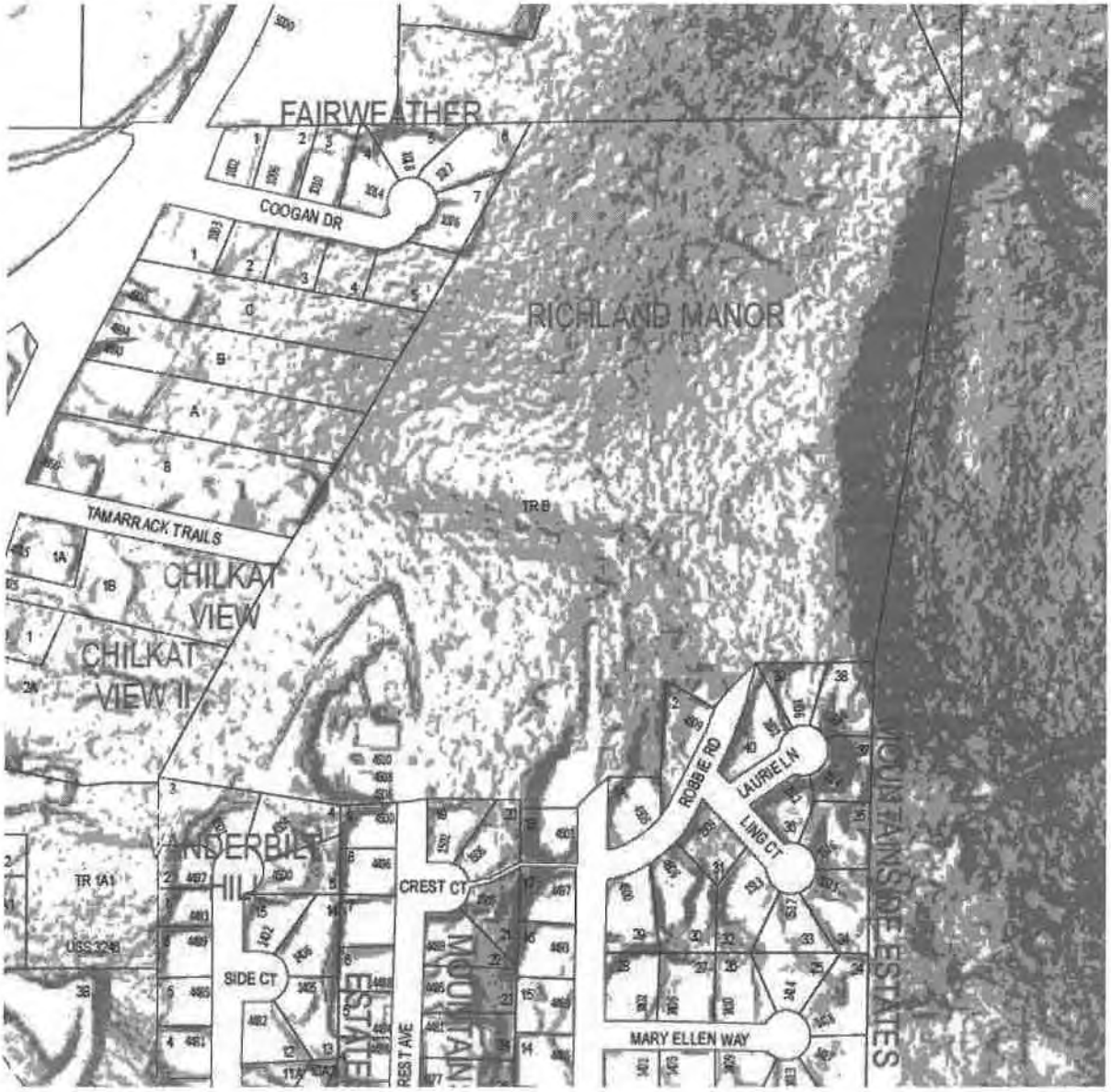
1. Major Subdivision Application (for subdivisions of 14 or more lots) - $110 per resulting lot
    a. Preliminary Plat - $110 for each resulting lot; Public Notice Sign Fee - $150
    b. Final Plat - $70 for each resulting lot; Public Notice Sign Fee (may be required) - $150
2. Hillside Development Endorsement - $60 gross hourly rate for professional review and inspection
3. Prior to plat recording, if the improvements are not in place, a financial guarantee that meets the requirements of CBJ 49.55, Financial Responsibility will be required.

For informational handouts with submittal requirements for development applications, please visit our website at www.juneau.org/cdd.

Submit your completed application
You must submit your application(s) in person with payment to:

City/Borough of Juneau
Permit Center
230 S. Franklin Street,
Fourth Floor Marine View Center
Juneau, AK 99801

Phone: (907) 586-0715
Fax: (907) 586-4529
Web: www.juneau.org/cdd



Slopes

18% - 37%

>37%



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION
#100662

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	S. MOLLER
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

RICHLAND MANOR SUBDIVISION

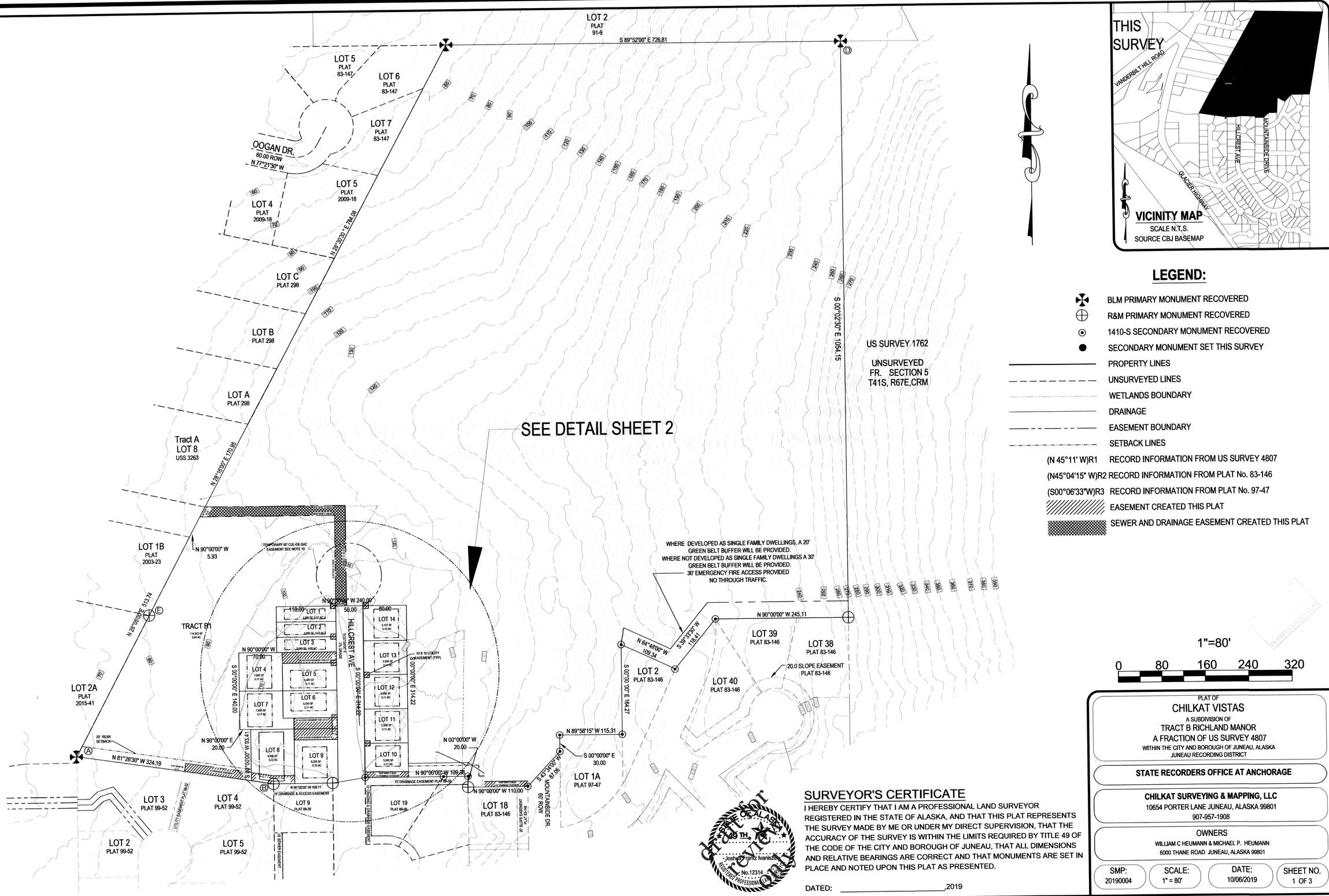
WILLIAM & MICHAEL HUMEAN

ROAD GRADES

SHEET NUMBER 1 OF 1

November 1, 2019 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Richland Manor_Road Grades.dwg

Attachment A - Application
Attachment F - SMF 21-04 - Phase 2



SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

STATE OF ALASKA
REGISTERED
49TH
Joshua Frantz Ivaniszek
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

PERMIT CLARIFICATION

PLAT OF
CHILKAT VISTAS
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20190004	1" = 80'	10/06/2019	1 OF 3

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- WETLANDS BOUNDARY
- DRAINAGE
- EASEMENT BOUNDARY
- SETBACK LINES
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- EASEMENT CREATED THIS PLAT
- SEWER AND DRAINAGE EASEMENT CREATED THIS PLAT

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF N 81°26'30" W AS DELINEATED ON THE OFFICIAL PLAT OF VANDERBILT HILL SUBDIVISION, DATED 29 OCTOBER 1999, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK THE NW CORNER OF LOT 3 AND THE NE CORNER OF LOT 4, VANDERBILT HILL SUBDIVISION SHOWN ON THIS PLAT.

HOOTER LANE
N 77°20' W
60.00 ROW

S 28°05'06" W 20.03

TRACT A
LOT 8
S 3263

N 90°00'00" W 258.52
N 90°00'00" E 248.48

LOT 1B
PLAT
2003-23

TEMPORARY 60' CUL-DE-SAC
EASEMENT SEE NOTE 19

S 28°0500" W 457.06

TRACT B1
114,983 SF
2.64 AC

LOT 2A
PLAT
2015-41

20' REAR
SETBACK

N 81°26'30" W
21.17

15' DRAINAGE EASEMENT

BASIS OF BEARINGS
S 81°26'30" E 365.33

N 81°26'30" W
41.14

N 00°00'00" W
39.32

N 00°00'00" W 69.90

S 81°10'15" W 50.60

S 81°10'15" W
10.22

TRACT 1A1
PLAT
2015-41

20' DRAINAGE EASEMENT
PLAT 2015-41

20' DRAINAGE EASEMENT
PLAT 99-52

15' ACCESS EASEMENT
PLAT 99-52

LOT 3
PLAT 99-52

LOT 4
PLAT 99-52

LOT 9
PLAT 88-39

LOT 19
PLAT 88-39

HILLCREST AVE
60' ROW

N 00°00'00" E 449.30
0% GRADE

LOT 1
3,080 SF 0.07 AC

LOT 2
3,080 SF 0.07 AC

LOT 3
3,080 SF 0.07 AC

LOT 4
7,600 SF
0.17 AC

LOT 5
5,000 SF
0.11 AC

LOT 6
5,000 SF
0.11 AC

LOT 7
7,600 SF
0.17 AC

LOT 8
9,438 SF
0.22 AC

LOT 9
6,355 SF
0.15 AC

20' ACCESS EASEMENT FOR LOT 5

20' ACCESS EASEMENT FOR LOT 6

20' ACCESS EASEMENT FOR LOT 9

LOT 14
5,137 SF
0.12 AC

LOT 13
5,000 SF
0.11 AC

LOT 12
5,000 SF
0.11 AC

LOT 11
5,000 SF
0.11 AC

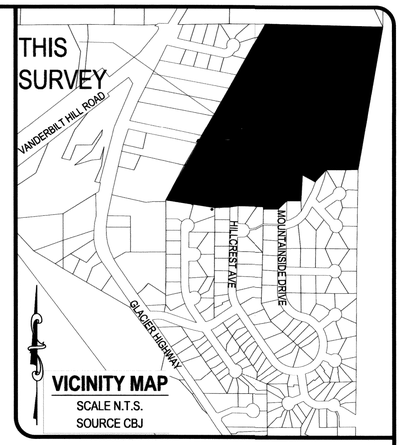
LOT 10
5,000 SF
0.11 AC

10 X 10 UTILITY
EASEMENT (TYP)

20'
SETBACK
LINE (TYP)

25' GREEN BELT

10' DRAINAGE EASEMENT



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ

CHILKAT SURVEYING
BLK B
ROW L 2 / L 1
2019
PLS 12314

TYPICAL MONUMENT DETAIL
N.T.S.
5/8" x 36" REBAR WITH 2.5" ALUMINUM CAP

STATE OF ALASKA
49TH
Joshua Heintz Ivanisevich
No. 12314
REGISTERED PROFESSIONAL LAND SURVEYOR

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

RECEIVED
[illegible]

1"=30'

0 30 60 90 120

PLAT OF
CHILKAT VISTAS
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

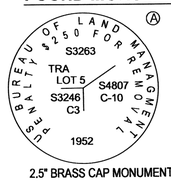
STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

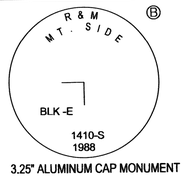
OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20190004	1" = 30'	10/06/2019	2 OF 3

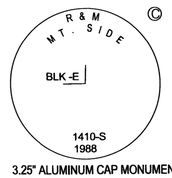
FOUND MONUMENT DESCRIPTIONS:



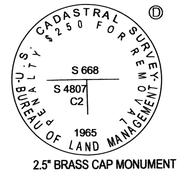
2.5" BRASS CAP MONUMENT



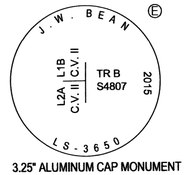
3.25" ALUMINUM CAP MONUMENT



3.25" ALUMINUM CAP MONUMENT



2.5" BRASS CAP MONUMENT



3.25" ALUMINUM CAP MONUMENT

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015 ON FILE WITH IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFRENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER CHILKAT VISTAS SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET. ALL REQUIRED CHILKAT VISTAS SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12.120 BEST MANAGEMENT PRACTICES.

8) LOTS 1 , 2, AND 3 ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 1 & 2 & 3 BLOCK B WERE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT; OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

9) LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B ARE PANHANDLE LOTS. AT THE TIME OF PLAT RECORDING, FURTHER SUBDIVISION OF LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B IS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS', SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

10) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

11) HOOTER LANE WILL BE DEVELOPED AS A PUBLIC TWO-WAY STREET, AS SET OUT IN THE ALTERNATIVE PLAT, SUBJECT TO CBJ PUBLIC IMPROVEMENT STANDARDS, IN CBJ 49.35.

12) HOOTER LANE FROM GLACIER HIGHWAY TO HILLCREST AVENUE, AND HILLCREST AVENUE AND MOUNTAINSIDE DRIVE SHALL BE DEVELOPED WITH A A SIDEWALK ON ONE SIDE. THE NUMBER OF SIDEWALKS IN THE REMAINDER OF RICHLAND MANOR WILL BE DETERMINED AT THE TIME OF FUTURE DEVELOPMENT APPLICATIONS.

13) DENSITY: IT IS AGREED THAT THE LOOP ROAD OF HILLCREST AVE. AND MOUNTAINSIDE DRIVE WILL BE DEVELOPED AS SINGLE FAMILY HOMES, AS DEPICTED ON THE ATTACHED ALTERNATIVE PLAT.

14) ROBBIE ROAD DEVELOPMENT THAT IS CONNECTED TO MOUNTAINSIDE ESTATES SHALL BE LIMITED TO NOT MORE THAN 7 SINGLE FAMILY HOMES, 3 OF WHICH MAY HAVE ACCESSORY APARTMENTS.

15) ROBBIE ROAD SHALL TERMINATE AND SHALL NOT BE A POINT OF ACCESS TO RICHLAND MANOR, UNLESS REQUIRED, AND GATED, FOR FIRE/EMERGENCY SERVICE ACCESS ONLY.

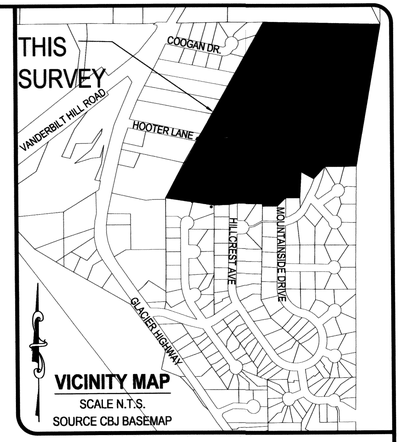
16) HILLCREST AVENUE SHALL TERMINATE AT HOOTER LANE. HILLCREST AVENUE MAY CONNECT TO HOOTER LANE WEST OF THE EXISTING HILLCREST ALIGNMENT AS SHOWN IN THE ALTERNATIVE PLAT (EXHIBIT C). ALTERNATIVELY ROAD ACCESS TO THE NORTHEAST PORTION OF TRACT B-1 MAY CONNECT TO THE EAST/WEST PORTION OF MOUNTAINSIDE DRIVE ACROSS FROM THE ENTRANCE TO THE "POCKET" BETWEEN HILLCREST AND MOUNTAINSIDE.

17) GREENBELT BUFFERS WILL BE IMPLEMENTED AND PRIVATELY MAINTAINED BY LOT OWNERS AS DELINEATED ON THE ALTERNATIVE PLAT, EXHIBIT B (AND AS MORE CLEARLY DRAWN FOR ILLUSTRATIVE PURPOSES IN EXHIBIT C) TO SEPARATE SINGLE FAMILY HOMES FROM MULTI-FAMILY DEVELOPMENT. EXCAVATION FOR PURPOSES OF SLOPE STABILIZATION MAY TAKE PLACE IN THE GREENBELT BUFFERS PROVIDED THEY ARE ALLOWED TO REVEGETATE FOLLOWING CONSTRUCTION. IN THE EVENT THIS BECOMES NECESSARY HEUMANN WILL CONSULT WITH ADJACENT HOMEOWNERS ABOUT THE IMPACTS.

18) OTHER THAN SHOWN, THERE IS AN IMPLIED PRIVATE DAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10 FEET IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

19) TEMPORARY CUL-DE-SAC EASEMENT SHALL BE VACATED UPON EXTENSION OF HILLCREST AVENUE UNLESS THE DIRECTOR DETERMINES ALL OR A PORTION OF THE CUL-DE-SAC MAY REMAIN.

20) ACCESS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. ACCESS TO PANHANDLE LOTS CREATED THIS SUBDIVISION SHALL BE RESTRICTED TO A SINGLE DRIVEWAY APRON IN THE RIGHT OF WAY UNLESS A SECOND DRIVEWAY TO IS APPROVED BY CBJ. USE OF THE ACCESS EASEMENT DELINEATED ON THIS PLAT IS SUBJECT TO THE REQUIREMENTS SET FORTH IN THE COMMON DRIVEWAY ACCESS, JOINT USE AND HOLD HARMLESS AGREEMENT RECORDED WITH THIS SUBDIVISION.



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP



SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

OWNERSHIP CERTIFICATE:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____,2019

_____
WILLIAM C. HEUMANN

DATE: _____,2019

_____
MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS___ DAY OF _____, 2019, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____, DATED _____, 2019, AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, ANCHOORAGE, ALASKA.

_____DATED _____, 2019
CHAIRMAN OF THE PLANNING COMMISSION
CITY AND BOROUGH OF JUNEAU

ATTEST:

_____
MUNICIPAL CLERK
CITY AND BOROUGH OF JUNEAU

RECEIVED
STATE OF ALASKA
RECORDER'S OFFICE

1"=80'
0 80 160 240 320

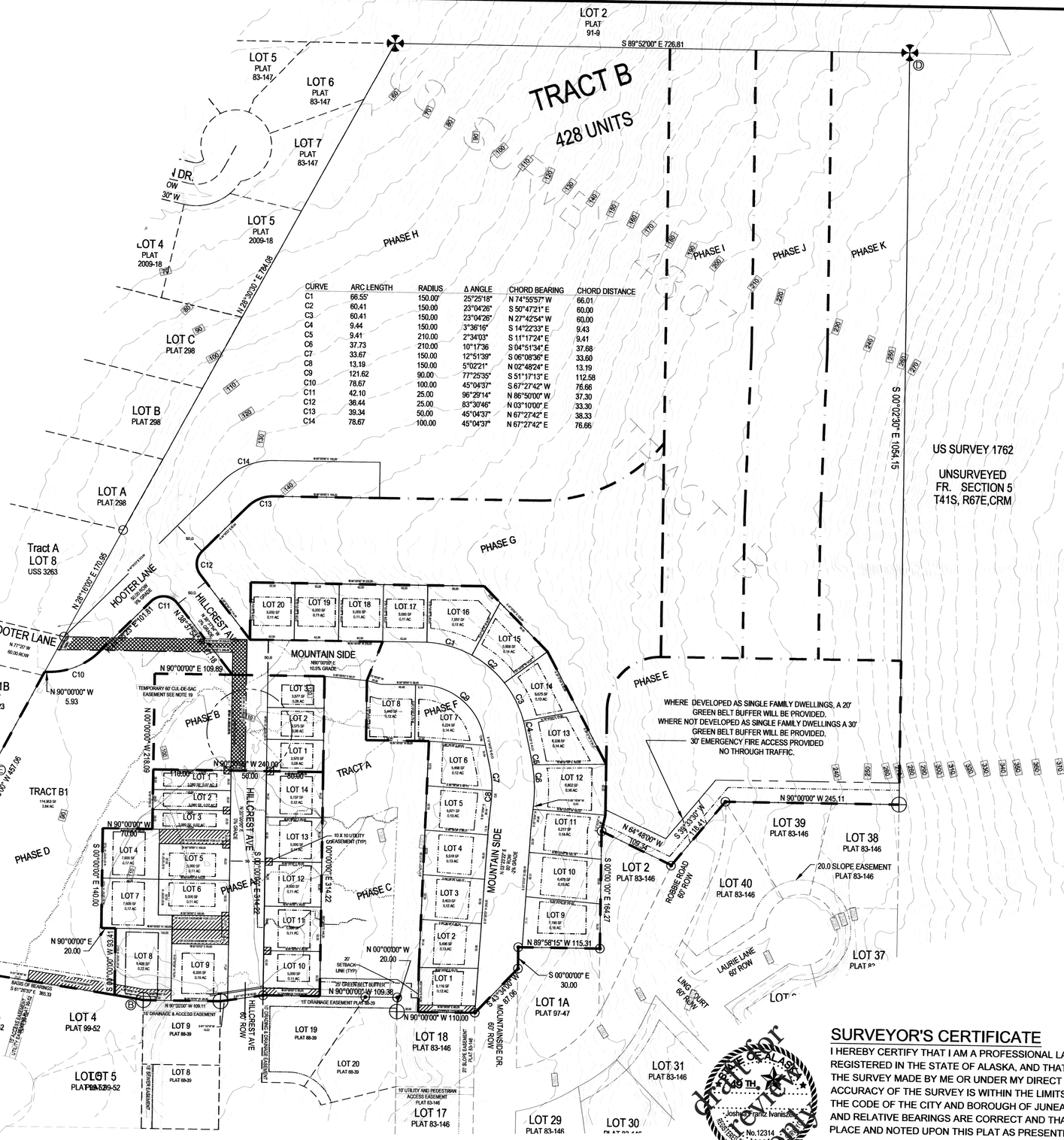
PLAT OF
CHILKAT VISTAS
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

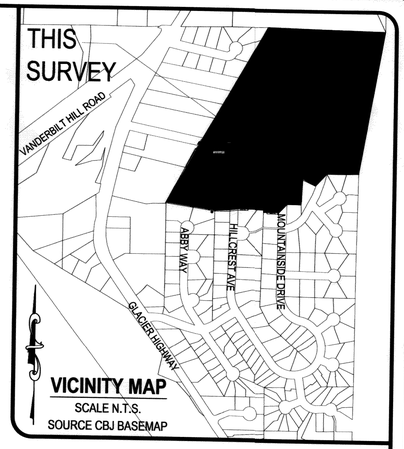
STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20190004	1" = 80'	10/06/2019	3 OF 3





VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

CURVE	ARC LENGTH	RADIUS	Δ ANGLE	CHORD BEARING	CHORD DISTANCE
C1	66.55'	150.00'	25°25'18"	N 74°55'57" W	66.01
C2	60.41	150.00	23°04'26"	S 50°47'21" E	60.00
C3	60.41	150.00	23°04'26"	N 27°42'54" W	60.00
C4	9.44	150.00	3°36'16"	S 14°22'33" E	9.43
C5	9.41	210.00	2°34'03"	S 11°17'24" E	9.41
C6	37.73	210.00	10°17'36	S 04°51'34" E	37.68
C7	33.67	150.00	12°51'39"	S 06°08'36" E	33.60
C8	13.19	150.00	5°02'21"	N 02°48'24" E	13.19
C9	121.62	90.00	77°25'35"	S 51°17'13" E	112.58
C10	78.67	100.00	45°04'37"	S 67°27'42" W	76.66
C11	42.10	25.00	96°29'14"	N 86°50'00" W	37.30
C12	36.44	25.00	83°30'46"	N 03°10'00" E	33.30
C13	39.34	50.00	45°04'37"	N 67°27'42" E	38.33
C14	78.67	100.00	45°04'37"	N 67°27'42" E	76.66

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- WETLANDS BOUNDARY
- DRAINAGE
- EASEMENT BOUNDARY
- SETBACK LINES
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- EASEMENT CREATED THIS PLAT
- SEWER AND DRAINAGE EASEMENT CREATED THIS PLAT

1"=80'

0 80 160 240 320

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

STATE OF ALASKA
49TH
Joshua Franz Ivanisze...
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

SKETCH PLAT OF
CHILKAT VISTAS
A FUTURE SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

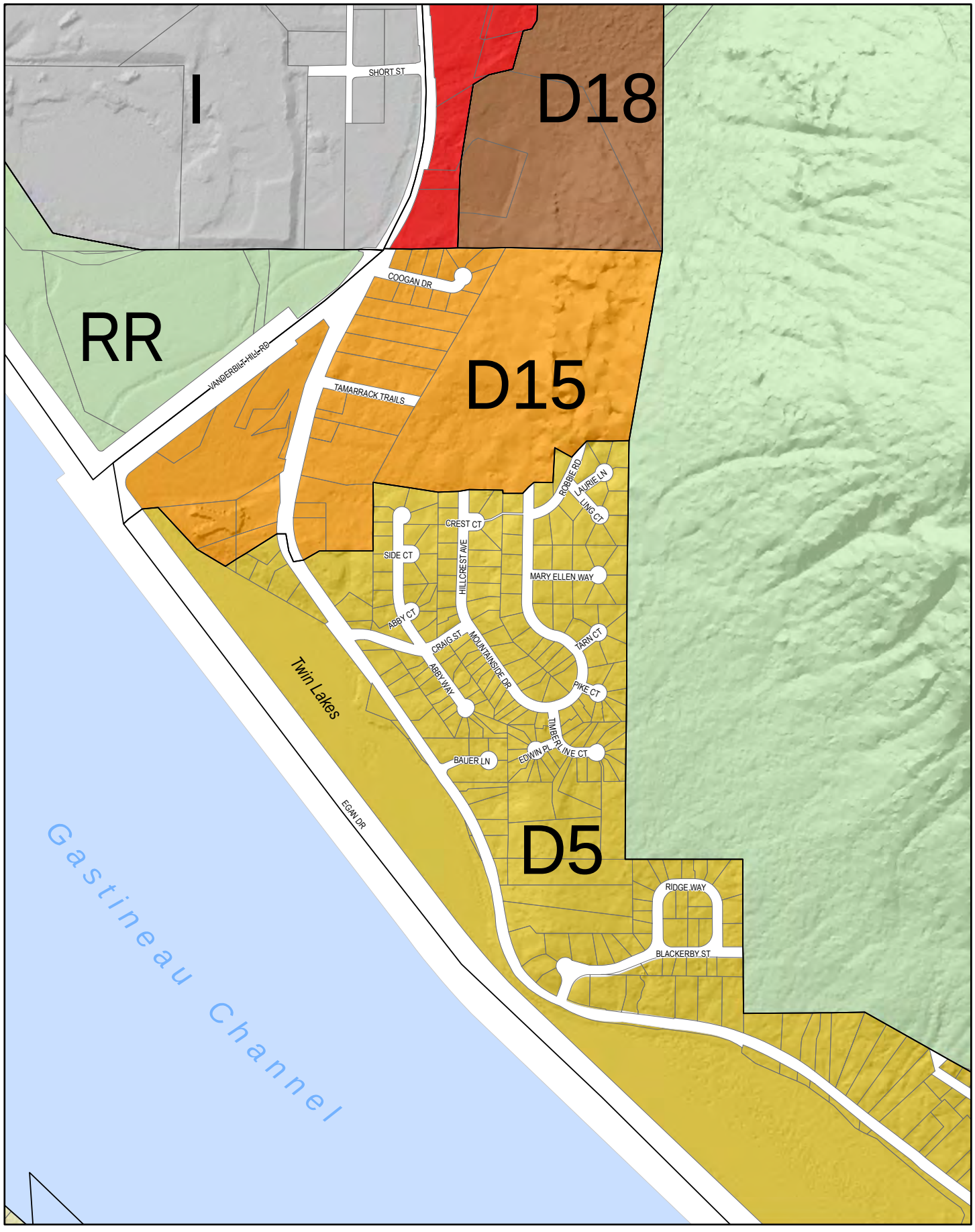
STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20190004	1" = 80'	10/06/2019	1 OF 1

RECEIVED
STATE OF ALASKA
PERMIT CENTER/CDD

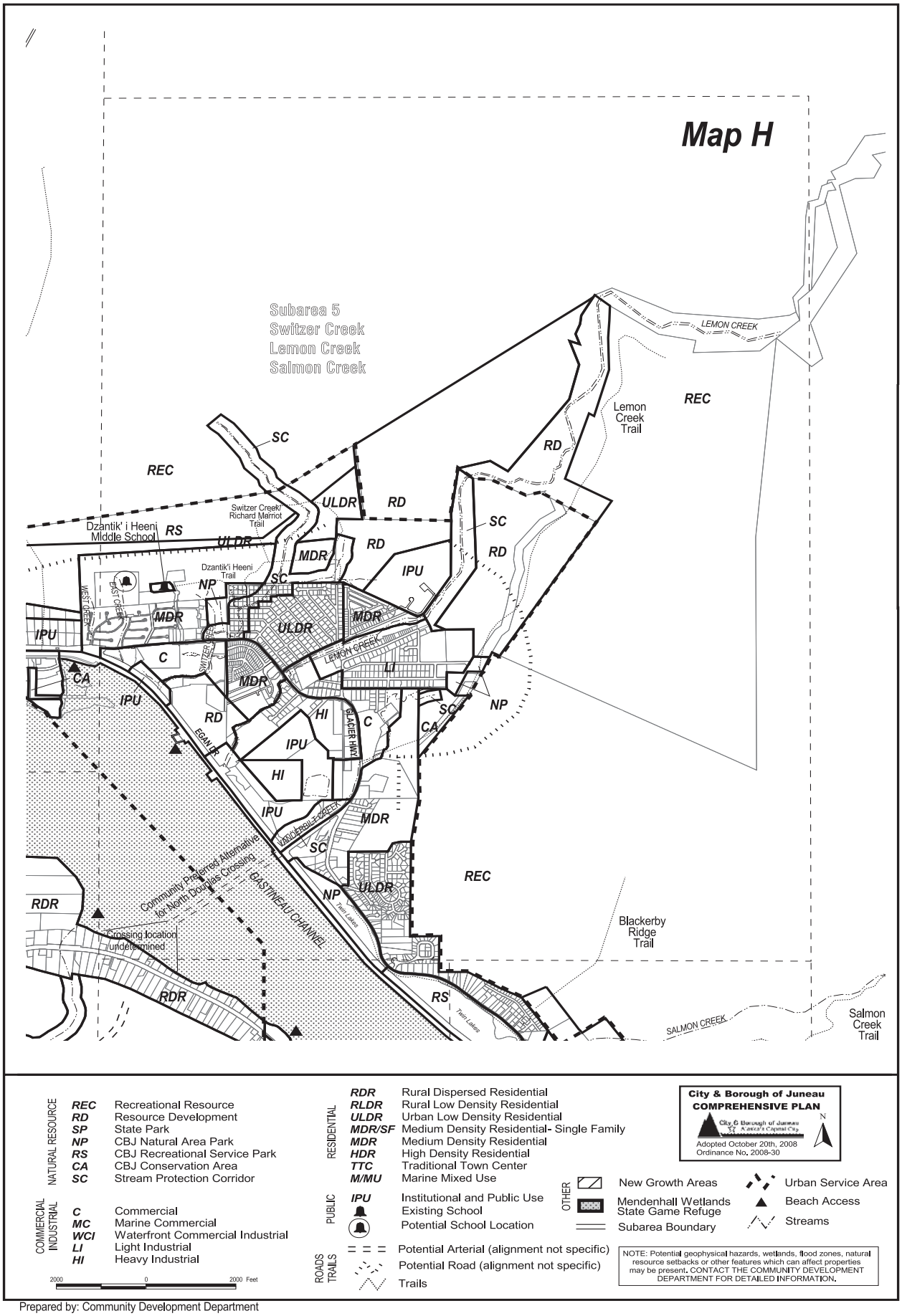


ZONING

0 500 1,000 Feet

N

Attachment F - SMP21-04 – Phase 2



Prepared by: Community Development Department

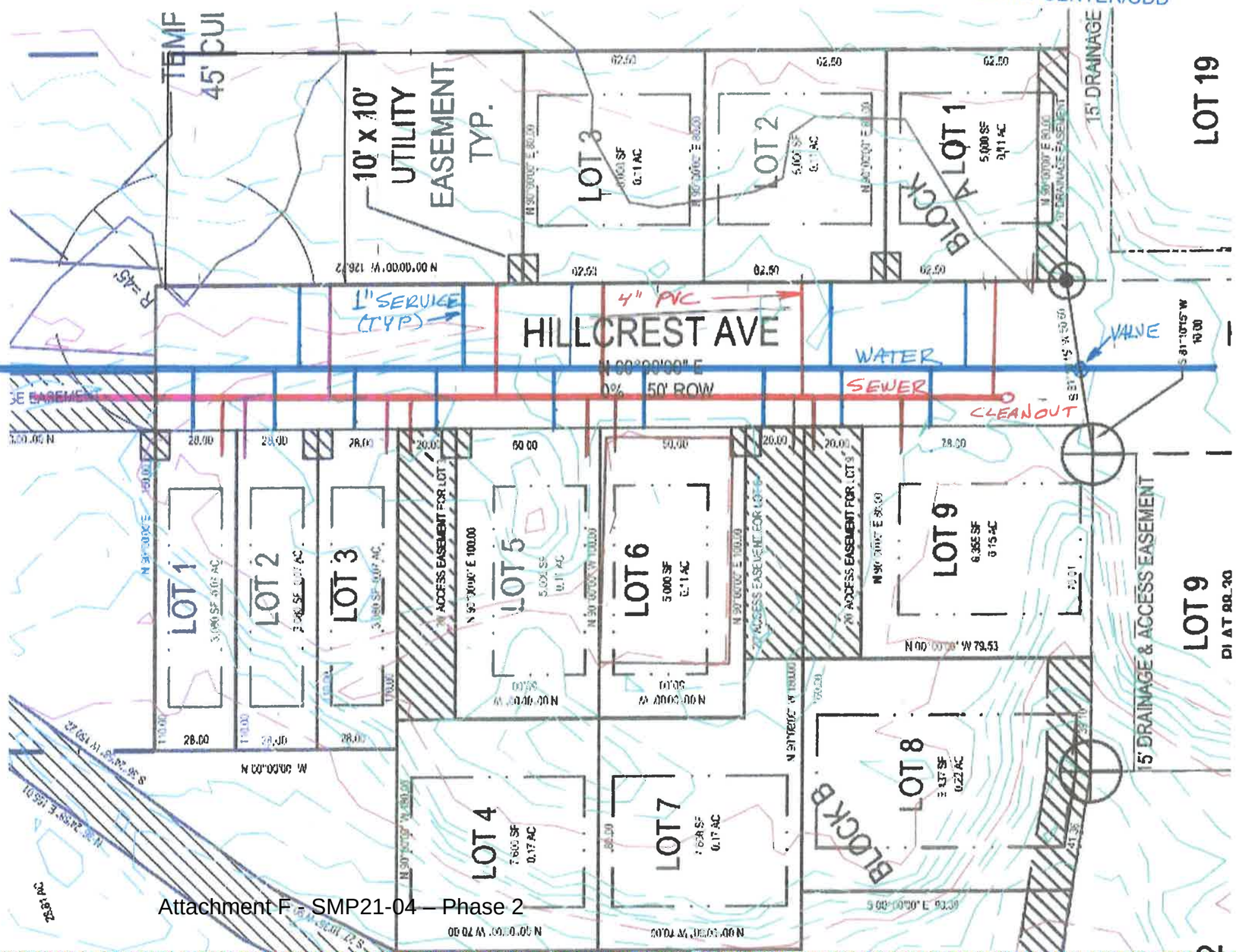
Map 11.9

Attachment F - SMP21-04 – Phase 2

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

RECEIVED
[illegible]
PERMIT CENTER/CDD

WATER AND SEWER LATERAL LAYOUT



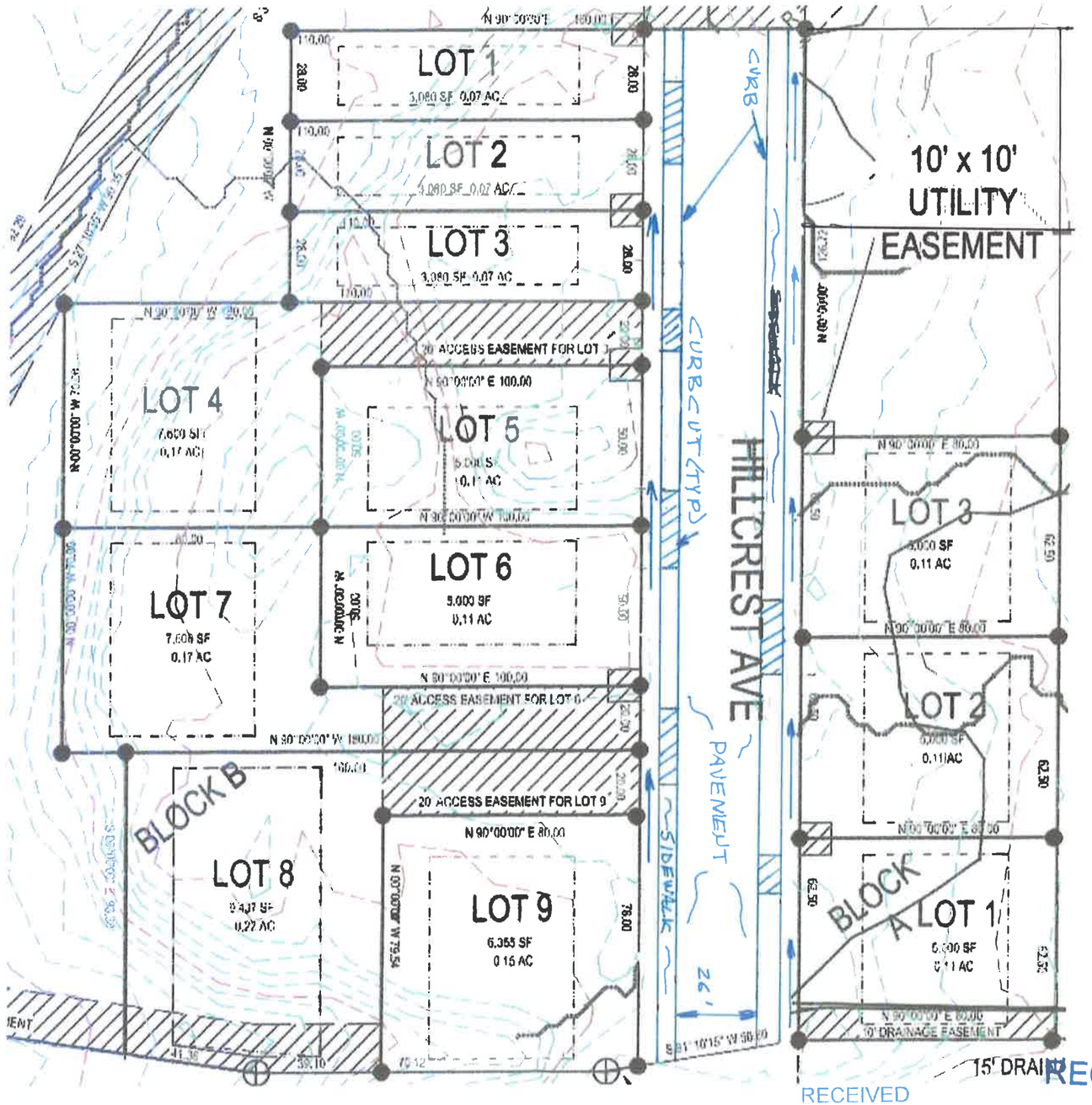
NOTE:
NEW 8" WATER LINE TO EXISTING 8" WATER LINE

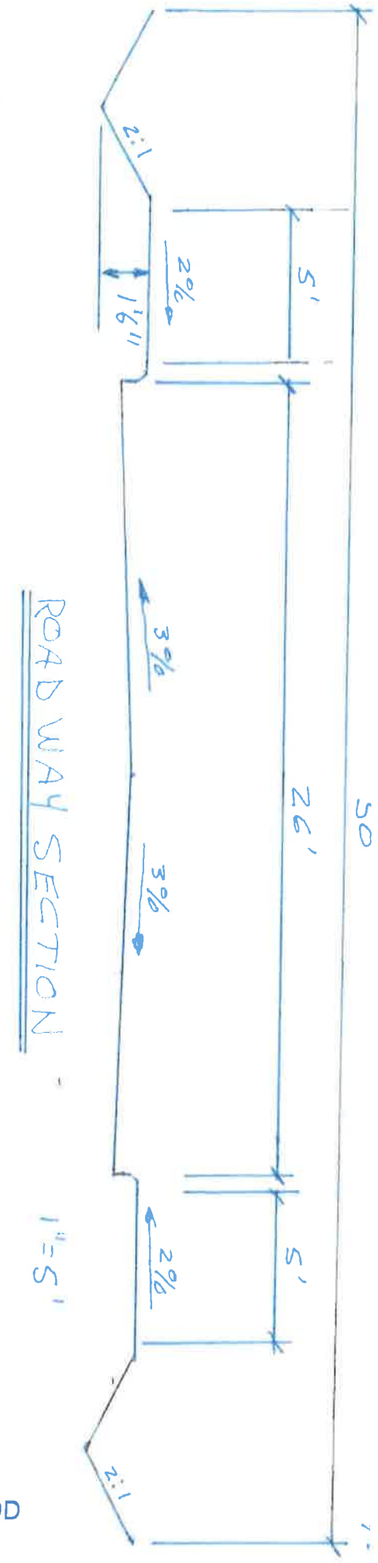
NEW 8" SEWER LINE TO HOOTER LANE CONNECTION

1"=40'
12/26/18

1"=40'
WCH
12/27/18

ROADWAY LOCATION IN HILLCREST ROW.



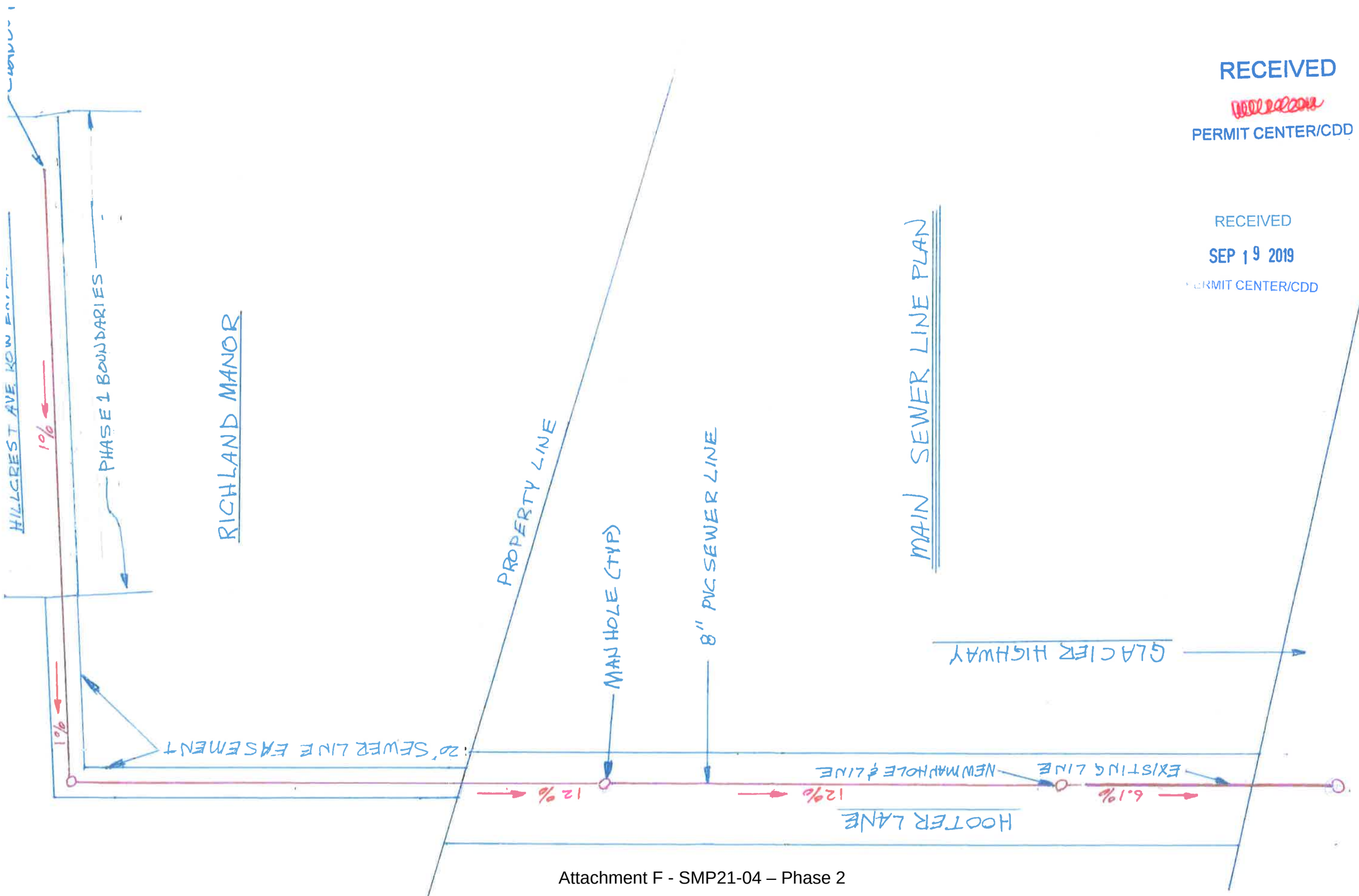


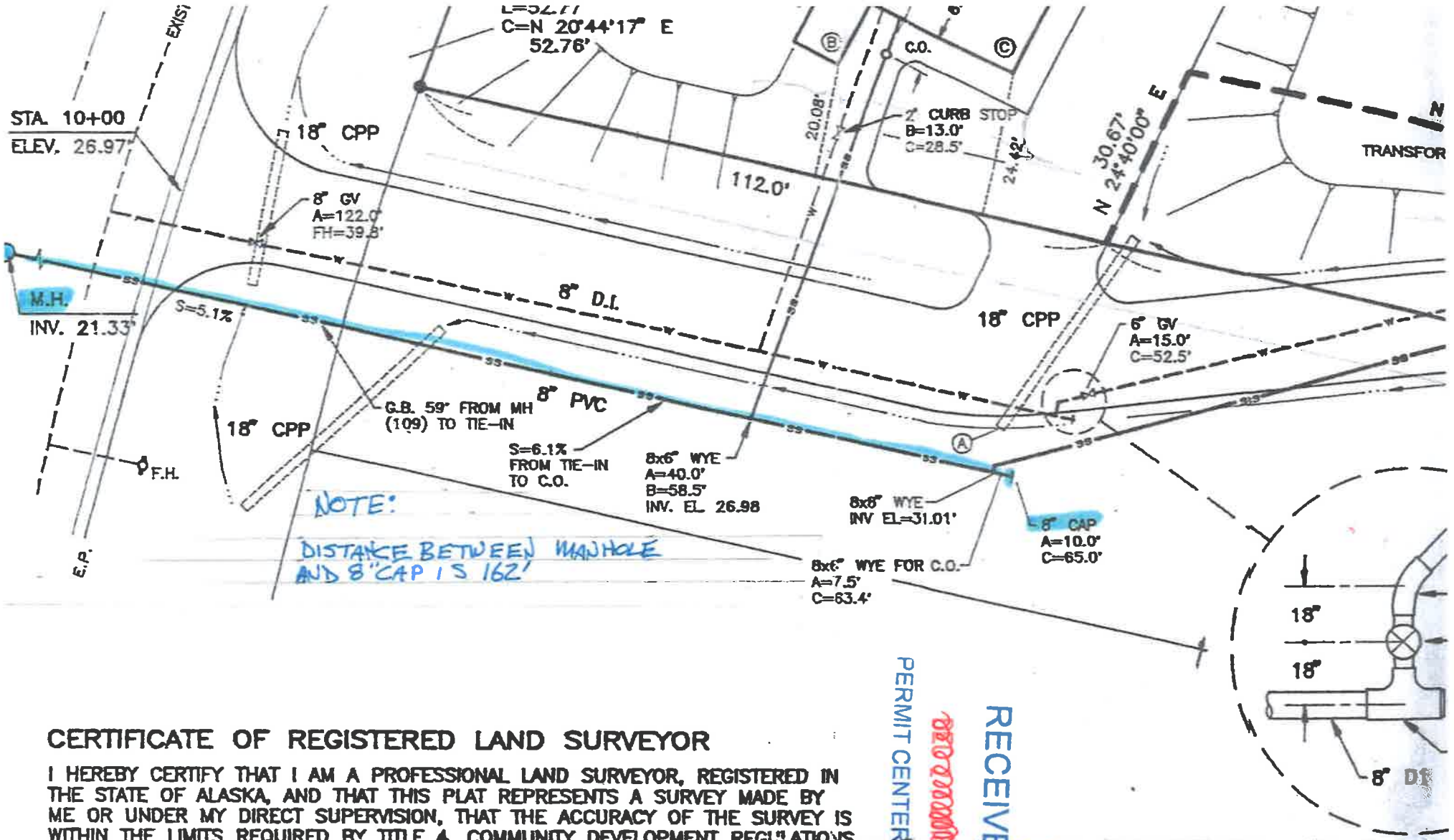
RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

RECEIVED
PERMIT CENTER/CDD

RECEIVED
PERMIT CENTER/CDD

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD





CERTIFICATE OF REGISTERED LAND SURVEYOR

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 4, COMMUNITY DEVELOPMENT REGULATIONS AND TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONAL AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

Date 2-14-96

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

RECEIVED
PERMIT CENTER/CDD

OTER LANE
WATER AND SEWER AS-BUILT

Attachment F - SMP21194 – Phase 2

Engineering & Public Works Department
155 South Seward Street
Juneau, Alaska 99801
Phone: 907-586-0800 | Fax: 907-463-2606

DATE: September 27, 2019

TO: Laurel Christian, CDD

FROM: Autumn Sapp, Engineering & Public Works Department
John Bohan, Engineering & Public Works Department

RE: SMP20190004 – Chilkat Vistas Subdivision (formerly known as Richland Manor 2 Subdivision), Major Subdivision Engineering & Public Works Department Review

Engineering and Public Works Department has completed a preliminary review of the proposed Chilkat Vistas Subdivision to create a total of 15 lots. The following has been determined as required by CBJ code 49.15.402(c)(4)(e):

1. The preliminary drainage plan is incomplete. It appears feasible; however, it does not delineate all the runoff conveyed into the Hooter Lane drainage system by the construction of Phase A.
    a. The plan does not account for the additional runoff from the areas uphill of the development when determining the capacity of the 24" culvert crossing Glacier Highway at Hooter Lane.

    b. Revise and resubmit the drainage plan upon full delineation of all runoff conveyed by the Hooter Lane drainage, including a determination of the proper culvert sizing necessary at the Hooter Lane - Glacier Highway culvert crossing prior to approval of the construction plans.

2. The Chilkat Vistas Subdivision proposed street and sidewalk plan is acceptable. The following request are also acceptable as noted:
    a. Reduced right-of-way width of 50'. Remaining phases shall also be constructed at a width of 50' unless further engineering indicate this is not feasible.

3. The proposed improvements conform to the requirements of this title and can be feasibly constructed in accordance with Title 49.

Other concerns-

4. As outlined in a memo dated 12/11/2018 by Carson Dorn, Inc., an additional 80 residential units could be constructed in the Mountainside Estates water zone that fed by the existing pump station. Additionally, capacity would still be preserved for fire flows. For more detailed information please review the memo which is attached for your reference.

Laurel Christian

From: John Bohan
Sent: Tuesday, October 15, 2019 5:28 PM
To: Laurel Christian
Cc: Autumn Sapp; Alexandra Pierce; Jill Maclean; Mike Vigue
Subject: RE: SMP20190004 Preliminary Plat Approval - Agency Review

Hi Laurel

After reviewing the sketch plat for Chilkat Vistas Subivision, I concur with the applicant's request to install sidewalks on one side of the street. This request is consistent with the other recent local subdivision determinations of similar size developments and is also consistent with the infrastructure within the Mountainside Subdivision, with sidewalk only constructed on one side of the two main access roads, Mountainside Drive and Craig Street (and no sidewalks on the side streets). The previously platted Hooter Lane ROW, which will provide pedestrian connection from the development to Glacier Highway, is only required to have one sidewalk, making the requirement of two sidewalks within the new development an unnecessary redundancy.

Future development plans should be evaluated to determine the need for sidewalks on one or both sides, based on the density and type of development planned.

Thanks
John Bohan,
Acting Director Engineering and Public Works

From: Laurel Christian <Laurel.Christian@juneau.org>
Sent: Monday, October 14, 2019 10:35 AM
To: John Bohan <John.Bohan@juneau.org>
Cc: Autumn Sapp <Autumn.Sapp@juneau.org>; Alexandra Pierce <Alexandra.Pierce@juneau.org>; Jill Maclean <Jill.Maclean@juneau.org>
Subject: FW: SMP20190004 Preliminary Plat Approval - Agency Review

Hi John,

The applicant has requested to place sidewalks on one side of the street for this development, rather than two. Based on the ADTs generated by the development as a whole (upon reviewing the sketch plat), and according to CBJ 49.35.240 Table of Roadway Construction Standards, a 26' travel way width is required with sidewalks on both sides of the street.

Per *CBJ 49.35.130(b) The director of engineering and public works may prescribe different or additional standards if unusual or unforeseen conditions exist in a particular development, and the alternative meets or exceeds the intent of the original standard.*

Can you verify the “unusual or unforeseen” conditions which exist for the development, and verify that Engineering & Public Works approves this change as required by 49.35.130(b)?

Thanks for your help on this,

Laurel Christian | Planner
Community Development Department | City & Borough of Juneau, AK
Location: 230 S. Franklin Street, 4th Floor Marine View Building
Office: 907.586.0761
Please note name change (Bruggeman to Christian) and new email: Laurel.christian@juneau.org

---

From: Laurel Christian <Laurel.Christian@juneau.org>
Sent: Tuesday, October 8, 2019 12:51 PM
To: Dan Jager <Dan.Jager@juneau.org>; Sven Pearson <Sven.Pearson@juneau.org>; General Engineering <General_Engineering@juneau.org>; Mary Grant <Mary.Grant@juneau.org>; Charlie Ford <Charlie.Ford@juneau.org>; George Schaaf <George.Schaaf@juneau.org>; Ed Foster <Ed.Foster@juneau.org>; John Bohan <John.Bohan@juneau.org>; Greg Chaney <Greg.Chaney@juneau.org>; Dan Bleidorn <Dan.Bleidorn@juneau.org>; 'Skagerberg, Verne R (DOT)' <verne.skagerberg@alaska.gov>; 'kate.kanouse@alaska.gov' <kate.kanouse@alaska.gov>; 'Dubour, Adam J (DFG)' <adam.dubour@alaska.gov>; 'randal.p.vigil@usace.army.mil' <randal.p.vigil@usace.army.mil>; 'Darrell Wetherall' <Darrell.Wetherall@aelp.com>; Quinn Tracy <Quinn.Tracy@juneau.org>
Subject: SMP20190004 Preliminary Plat Approval - Agency Review

Good afternoon,

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by **October 22, 2019**.

Please note that the plat notes on page 3 of the preliminary plat are subject to change and some plat notes are not subject to CBJ enforcement.

Let me know if you have any questions or need additional information.

Thank you,

Laurel Christian | Planner
Community Development Department | City & Borough of Juneau, AK
Location: 230 S. Franklin Street, 4th Floor Marine View Building
Office: 907.586.0761
Please note name change (Bruggeman to Christian) and new email: Laurel.christian@juneau.org

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Alaska Department of Fish and Game

STAFF PERSON/TITLE: Adam DuBour/Habitat Biologist

DATE: October 22, 2019

APPLICANT: Michael and William Heumann

TYPE OF APPLICATION: Major Subdivision Preliminary Plat Approval

PROJECT DESCRIPTION:

Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels).

LEGAL DESCRIPTION: Richland Manor Tract B

PARCEL NUMBER(S): 7B1001160010

PHYSICAL ADDRESS: 4506 Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by October 22, 2019.

AGENCY COMMENTS:

The Alaska Department of Fish and Game (ADF&G) has reviewed SMP20190004, the application materials submitted by Michael and William Heumann for preliminary plat approval for Phase A of a major subdivision located within Section 5, T41S, R67E, CRM, to be known as Richland Manor II. The applicant proposes to create 14 lots for single-family development and one large tract for future development. ADF&G previously reviewed and commented on a preliminary plat for Richland Manor in January of 2019 in which the applicant proposed to create 12 lots for single-family development and one large tract for future development.

During the above mentioned review, ADF&G indicated that there were not any objections to the plat as proposed. However, we would like to reiterate our previous recommendations. In January 2019, ADF&G Habitat Biologists performed a site visit to document fish habitat on the subject parcel (report attached). While the subject parcel does not contain fish habitat, drainages on the property flow into Twin Lakes and Vanderbilt Creek. Vanderbilt Creek is cataloged within ADF&G's Anadromous Waters Catalog (AWC #111-40-10125) as providing habitat for Dolly Varden and chum, coho and pink salmon. Twin Lakes support resident Dolly Varden.

Best practices should be employed to prevent sediments and contamination from construction activities from entering the waters of Vanderbilt Creek and drainages that flow into Twin Lakes. Existing hydrology and drainage patterns on site should be maintained to reduce the impact on downstream fish habitat.

AGENCY COMMENTS (CONTINUED):

The currently proposed plat eliminates a drainage easement that was included on the previous plat (SMP20180002) west of the proposed lots. The easement incorporated a highly altered stream channel that flowed into Twin Lakes. The elimination of this easement is consistent with our previous recommendations.

The subject property is adjacent to large portions of undeveloped land and black bears are common in the area. During construction activities, care should be taken in securing all potential wildlife attractants, including petroleum products. Any wildlife conflicts should be reported to ADF&G Division of Wildlife Conservation.

The applicants have previously been in contact with ADF&G Habitat Biologists regarding this project and we request that they maintain this contact. For more information on best practices for protecting fish habitat during design and construction of this development, please contact ADF&G Habitat Biologist Greg Albrecht, 907-465-6384, greg.albrecht@alaska.gov.

Thank you for the opportunity to review and comment on this preliminary plat.

Adam DuBour
Access Defense Program
Alaska Department of Fish and Game
Division of Wildlife Conservation
333 Raspberry Road
Anchorage, Alaska 99518
(907)267-2292
adam.dubour@alaska.gov

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Alaska Department of Fish and Game

STAFF PERSON/TITLE: Greg Albrecht, ADF&G Habitat Biologist

DATE: October 11, 2019

APPLICANT: Michael and William Heumann

TYPE OF APPLICATION: Major Subdivision Preliminary Plat Approval

PROJECT DESCRIPTION:

Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels).

LEGAL DESCRIPTION: Richland Manor Tract B

PARCEL NUMBER(S): 7B1001160010

PHYSICAL ADDRESS: 4506 Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by October 22, 2019.

AGENCY COMMENTS:

Hello Laurel,

This site provides habitat for bear, deer, coyote, and other wildlife. As with most development in Juneau, it is important the owner/developers manage and store waste in garages or bear proof containers so as not to create an attractant. I have attached documentation focused on fish resources in the area, originally submitted to CBJ through the Department of Natural Resources in 2018.

Thank you for the opportunity to comment.

Greg Albrecht
ADF&G Habitat Biologist
802 3rd St
Douglas, AK 99824
465-6384

MEMORANDUM

State of Alaska
Department of Fish and Game
Division of Habitat

TO:	Adam DuBour Habitat Biologist Division of Wildlife Conservation	DATE:	January 9, 2019
THRU:	Kate Kanouse Acting Regional Supervisor	SUBJECT:	Richland Manor II Development Comments
FROM:	Greg Albrecht Habitat Biologist	PHONE NO:	(907) 465-6384

I reviewed Michael and William Heumann's application to the City and Borough of Juneau (CBJ) for the proposed 30-acre Richland Manor II residential development and completed stream surveys with a backpack electrofisher on October 8, 2018[a] and January 4, 2019 (Table 1; Figure 1). The main drainage on the south end of the property feeds into the north end of Twin Lakes and does not support fish; the 8% gradient culvert under Glacier Highway prevents upstream fish passage, as does a 100 ft long perched culvert on private property 110 ft upstream of Glacier Highway. Within the proposed development, the stream appears to have been rerouted and is shallow, straight, and void of overwintering fish habitat and fish habitat complexity (Figures 2, 3). Potential resident fish habitat is present downstream of the proposed development area (Figures 4, 5), though overwintering habitat remains limited.

Drainages on the north side of the property reporting to Vanderbilt Creek[b] and one of its tributaries[c] would be too steep to provide fish habitat, based on topography.

[a] Greg Albrecht, Habitat biologist, ADF&G Division of Habitat, to Jackie Timothy, Southeast Regional Supervisor, ADF&G Division of Habitat. Memorandum: Twin Lakes Culvert Slip Line Investigations Trip Report; dated 10/9/2018.

[b] Stream No. 111-40-10125; provides habitat for chum, coho and pink salmon and Dolly Varden char.

[c] Stream No. 111-40-10125-2010; provides habitat for coho salmon and is a cite of recent fish habitat enhancement. Greg Albrecht, Habitat Biologist, ADF&G Division of Habitat, to Jackie Timothy, Southeast Regional Supervisor, ADF&G Division of Habitat. Memorandum: Baumgartner Pond Dredging Trip Report; dated 8/22/2017.

Table 1.–Field survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
127	58.3455	-134.4951	Culvert outlet at alder grove bordering north Twin Lakes wetland. 1 Dolly Varden char captured here. Culvert is about 8% gradient. Moving upstream electrofishing continuously.	Electrofish	1 Dolly Varden char
128	58.3454	-134.4943	Straight channel, with steep eroded banks, knowtweed, no overwintering habitat, 9% gradient.	Electrofish	
129	58.3452	-134.4940	Culvert outlet perched 3 ft, relief culvert perched at 4 ft.	Electrofish	
130	58.3451	-134.4938	Knotweed forest at culvert inlets. Tributary enters river left about 10 ft upstream.	Electrofish	
131	58.3450	-134.4935	8% gradient up to here, 2 step pools present, river right bank is fill slope, river left is second growth forest.	Electrofish	
132	58.3449	-134.4930	Forested strip on river right about 75 ft to the clearing. Gradient is 9% looking upstream. Dolly Varden char spawning habitat is present, minimal overwintering, no fish. Stream is unstable and banks absent, looks flashy.	Electrofish	
133	58.3450	-134.4926	Iron stained tributary enters river left, no fish habitat. 7% gradient to here in main channel.	Electrofish	
134	58.3450	-134.4922	Gradient increases to 14% here and river left bank is fill from 20-30 year old homes.	Electrofish	
135	58.3451	-134.4917	Fork here with divided flow, river left wraps around homes and forks again about 10 ft upstream, minimal Dolly Varden char habitat, not investigating due to private property, 10-16% gradient. River right channel steps up a few feet, then 3% through alder grove, from	Electrofish	
136	58.3457	-134.4911	The channel appears to have been moved to the toe of the clearing. It is straight at	Electrofish	
137	58.3462	-134.4902	Ending here, No fish, stream is at toe of slope, minimal habitat, originates from hill seeps.	Electrofish	

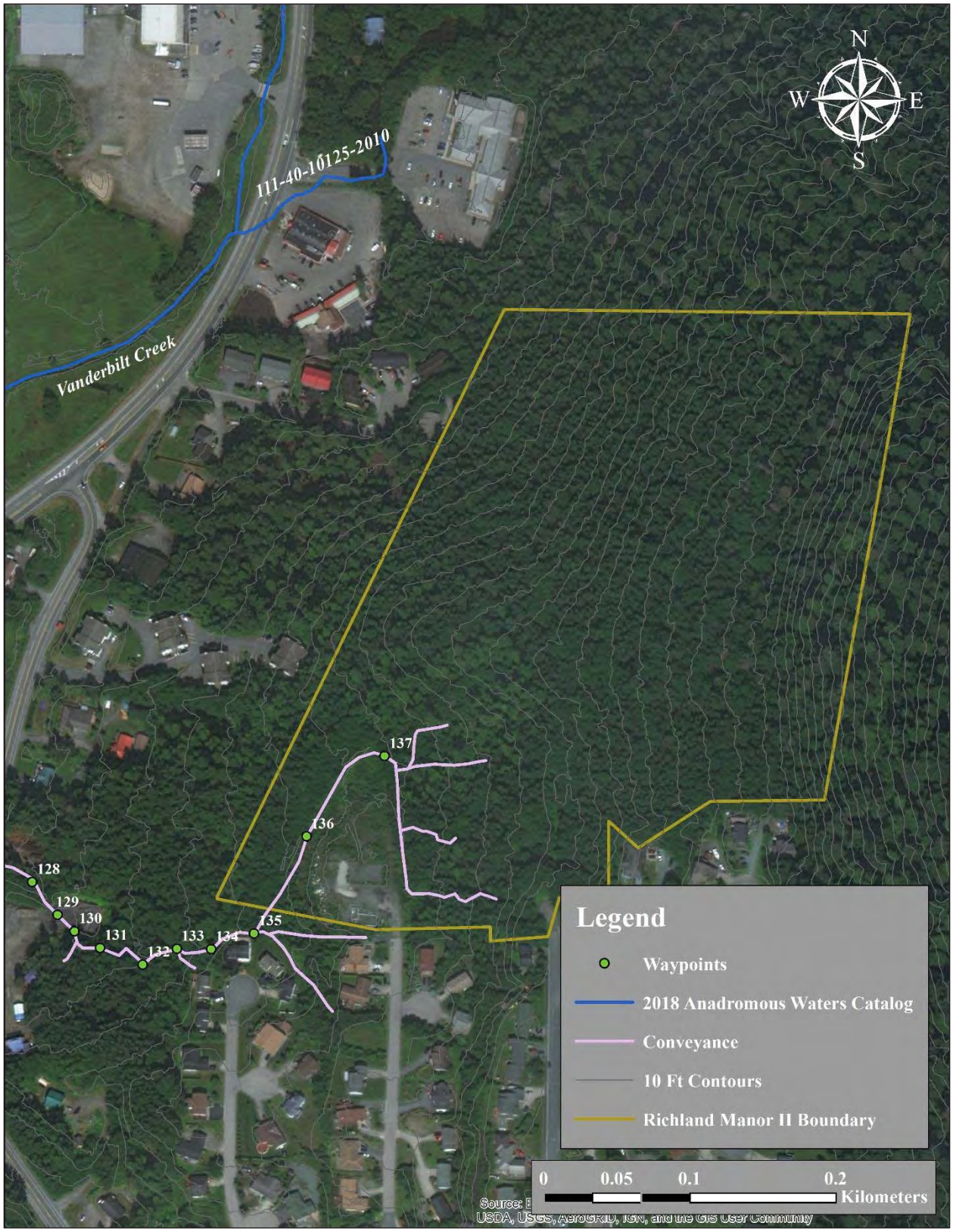


Figure 1.–Survey map.



Figure 2.–Channel at toe of fill.



Figure3.–Straightened channel.



Figure 4.–Step-pool reach downstream of property.



Figure 3.–Downstream of property.

Recommendations

I recommend the CBJ consider measures to maintain existing hydrology and drainage patterns, especially for water bodies reporting to Vanderbilt Creek and its tributary.

Email cc:

Al Ott, ADF&G Habitat, Fairbanks
ADF&G Habitat Staff, Douglas
Dan Teske, ADF&G SF, Douglas
Dave Harris, ADF&G CF, Douglas
Roy Churchwell, ADF&G WC, Douglas
Neil Stichert, USFWS, Juneau
Cindy Hartmann Moore, NMFS, Juneau

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: AEL&P

STAFF PERSON/TITLE: Darrell Wetherall/Asst. T&D Engineer

DATE: 10/8/2019

APPLICANT: Michael and William Heumann

TYPE OF APPLICATION: Major Subdivision Preliminary Plat Approval

PROJECT DESCRIPTION:

Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels).

LEGAL DESCRIPTION: Richland Manor Tract B

PARCEL NUMBER(S): 7B1001160010

PHYSICAL ADDRESS: 4506 Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by October 22, 2019.

AGENCY COMMENTS:

We don't have any issues with the proposed plat.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Assessor

STAFF PERSON/TITLE:

DATE: 10/17/2019

APPLICANT: Michael and William Heumann

TYPE OF APPLICATION: Major Subdivision Preliminary Plat Approval

PROJECT DESCRIPTION:

Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels).

LEGAL DESCRIPTION: Richland Manor Tract B

PARCEL NUMBER(S): 7B1001160010

PHYSICAL ADDRESS: 4506 Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by October 22, 2019.

AGENCY COMMENTS:

The proposed subdivision is not likely to have a negative impact on the value of neighboring properties.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Capital City Fire Rescue

STAFF PERSON/TITLE: Dan Jager, Fire Marshal

DATE: 10/22/2019

APPLICANT: Michael and William Heumann

TYPE OF APPLICATION: Major Subdivision Preliminary Plat Approval

PROJECT DESCRIPTION:

Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels).

LEGAL DESCRIPTION: Richland Manor Tract B

PARCEL NUMBER(S): 7B1001160010

PHYSICAL ADDRESS: 4506 Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by October 22, 2019.

AGENCY COMMENTS:

All fire code comments and requirements were already made apart of pre-app meetings and conversations with the applicants.

Laurel Christian

From: Dan Jager
Sent: Tuesday, October 22, 2019 11:08 AM
To: Laurel Christian; Sven Pearson
Subject: RE: SMP20190004 Preliminary Plat Approval - Agency Review

Yes, that is all correct Laurel. Thanks!
Dan

From: Laurel Christian
Sent: Tuesday, October 22, 2019 10:54 AM
To: Dan Jager <Dan.Jager@juneau.org>; Sven Pearson <Sven.Pearson@juneau.org>
Subject: RE: SMP20190004 Preliminary Plat Approval - Agency Review

Thanks Dan, just to be clear (for my staff report) – sprinklers are required for all homes constructed with this phase of development and a secondary access to the entire neighborhood is triggered at 200 Dwelling units (being accessed through Craig street)? This 200 dwelling units includes existing homes that use Craig Street for access to Glacier Highway AND the homes constructed through the proposed subdivision?

Thanks!

Laurel Christian | Planner
Community Development Department | City & Borough of Juneau, AK
Location: 230 S. Franklin Street, 4th Floor Marine View Building
Office: 907.586.0761
Please note name change (Bruggeman to Christian) and new email: Laurel.christian@juneau.org

---

From: Dan Jager <Dan.Jager@juneau.org>
Sent: Tuesday, October 22, 2019 9:15 AM
To: Laurel Christian <Laurel.Christian@juneau.org>; Sven Pearson <Sven.Pearson@juneau.org>
Subject: RE: SMP20190004 Preliminary Plat Approval - Agency Review

Hi Laurel, here is the comments form. Thanks.
Dan

From: Laurel Christian
Sent: Tuesday, October 22, 2019 8:43 AM
To: Dan Jager <Dan.Jager@juneau.org>; Sven Pearson <Sven.Pearson@juneau.org>
Subject: FW: SMP20190004 Preliminary Plat Approval - Agency Review

Hello Dan and Sven,

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: DOT&PF, Southcoast Region

STAFF PERSON/TITLE: Joanne Schmidt, Planner

DATE: October 22, 2019

APPLICANT: Michael and William Heumann

TYPE OF APPLICATION: Major Subdivision Preliminary Plat Approval

PROJECT DESCRIPTION:

Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels).

LEGAL DESCRIPTION: Richland Manor Tract B

PARCEL NUMBER(S): 7B1001160010

PHYSICAL ADDRESS: 4506 Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by October 22, 2019.

AGENCY COMMENTS:

DOT does not have any comments or concerns at this time. However, if the development as currently proposed has in fact scaled back the scope from 450 apartments/condos to just 15 SF homes, then there is no need for a TIA at this time. However, there is potential for a TIA requirement to be triggered in the future should the developer move forward with plans to construct up to 400+ units at the proposed project location.

Ms. Christian,

I am a Tamarack Trails Condominium owner, writing this email to submit my concerns regarding the proposed development of the Hooter Lane ROW that is part of the Tamarack Trails entrance driveway. Here are my concerns.

If Hooter Lane is developed as a roadway to the proposed major subdivision (7B1001160010), the road would be in extremely close proximity to the Tamarack Trails buildings A and C. This will substantially effect the lifestyle, safety, security and overall sense of well-being of all of the 32 families residing at Tamarack Trails. It will result in the loss of property use and parking, an increase of traffic, noise, and dust, and loss of the tree buffer surrounding the property.

Tamarack Trails Condominiums will be the most impacted community of homeowners of the Richland Manor subdivision project if Hooter Lane is allowed to be developed as a new roadway to that project. The development will drastically alter the quality of life and sense of community that now exists at Tamarack Trails, not for the better.

Please do NOT approve a Hooter Lane as a new roadway to the Richland Manor Subdivision.

Respectfully,
Joan Shorey
(907) 321-5823

Paul H. Grant
Counselor at Law

313 Coleman Street, Juneau, Alaska 99801
(907)586-2701 (v) (907) 586-2722 (fax)
paul@paulgrantjuneau.com

October 25, 2019

Juneau Planning Commission
155 S. Seward Street
Juneau, Alaska 99801

Re: Mountainside Estates,
Appeal No. SMP2018-0002

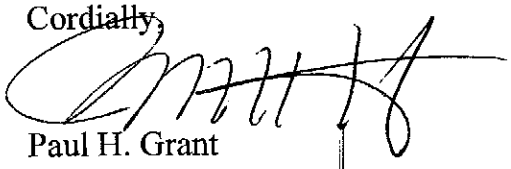
I represent the Mountainside Estates Neighborhood Association (MENA) and individual appellants who appealed the Planning Commission's approval of a preliminary plat for the development of the Richland Manor subdivision. Following lengthy negotiations between appellants and the developers, William and Michael Heumann, a settlement agreement was reached. The settlement consists of a "Stipulated Settlement Agreement", dated September 23, 2019, as well as plat drawings, Exhibits A-C. All parties to the appeal have signed the Agreement. Under its terms, upon approval of the Heumann's modified plat application (and the expiration of any appeal periods) the MENA appeal will be dismissed.

The purpose of this letter is to provide MENA's support of the modified plat application. While the plat of Phase I of the project is not significantly different than the originally-approved design, there are significant modifications and improvements to future phases of the project that are set out in the Agreement and the attachments. In

particular, the subdivision access and desired separations between single and multi-family homes have been modified for future phases, as set out in the Exhibits to the Agreement. In addition, the Agreement itself contains a number of conditions that are enforceable privately between the parties in the event of non-compliance. Further, the CBJ has agreed to incorporate certain safety measures into the project, and a number of the conditions have been adopted as plat notes in the application.

Provided the terms of the Agreement and the design considerations set out in the modified alternative plats are implemented, this agreement satisfactorily resolves MENA's concerns which prompted the appeal. While not perfect, the Agreement is a good faith compromise by all parties which MENA unreservedly supports.

Cordially,



Paul H. Grant
Attorney for MENA and Individual Appellants

CITY AND BOROUGH OF JUNEAU
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/cdd
155 S. Seward Street • Juneau, Alaska 99801

November 1, 2019

MEMORANDUM

To: **Michael Heumann**

From: **Laurel Christian, CDD**

Case Number: **SMP20190004**

Legal Description: **Tract B Richland Manor**

Parcel No.: **5B1401020071**

RE: SMP20190004 Preliminary Plat V2 Corrections

The following is a consolidated list of review comments received regarding the preliminary plat for SMP20190004, Chilkat Vistas Subdivision Phase 1. Prior to final plat approval, the following changes should be made to the plat:

GENERAL ENGINEERING

All Sheets

1. Drainage from Lot 4 and Lot 7 will require a drainage easement across Tract B1 to an established drainage way or will need to engineered to drain uphill.
2. For the final plat, remove contours, building setbacks, and wetland boundaries.
3. Add subdivision or USS information including tract, lot, and/or block information to all adjacent properties.

Sheet 1

4. Adjust viewport or move text of Coogan Dr.
5. Label Hooter Ln. and Abby Wy. rights-of-way and list widths.
6. List width of the existing portion of Hillcrest Ave.
7. Remove leaders without text or add text to the existing leaders.
8. Add leaders to indicate where bearings and distances along westerly property line of Tract B1 begin and end.
9. Add bearing and distance for Tract B1's property line at rear of Lots 1, 2, and 3.
10. Trim easement and lines from bearing of Tract B1 at end of Hillcrest Ave.
11. Show monument detail letter "C" for corresponding monument.

12. Remove road grade from Hillcrest ROW.

Sheet 2

13. Standardize adjacent lot labels.
14. Remove road grades from ROW labeling.
15. Submit a new closure report to all for verification that the following inconsistencies have been addressed:
    a. Verify the following distances for the following bearings as they do not correlate with the closure report:
        i. Northern boundary of phase I: N 90°00’00” E – 160.00, closure lists 160.12
        ii. Southern lot line of Lot 7: N 90°00’00” E – 160.00, closure lists 160.12
        iii. Southern lot line of Lot 8: N 81°26’30” W – 41.36, closure lists 41.47
    b. Verify the acreage of Lot 14 as it does not correlate with the closure report.
    c. Verify the square footage of Lot 8 as it does not correlate with the closure report.
16. Modify the line type scale of the easement boundary lines so they match the line type shown in the legend.
17. Move the labels and leaders of the 25’ Greenbelt and 20’ Setback Line (Typ) to allow for legibility.

PLANNING

Sketch Plat

1. Above Robbie Road, change "30' EMERGENCY FIRE ACCESS" to "30' EMERGENCY SERVICE ACCESS"

All Sheets

2. Verify the square footage and acreage of Tract B1 (large remaining tract)

Sheet 1

3. Above Robbie Road, change "30' EMERGENCY FIRE ACCESS" to "30' EMERGENCY SERVICE ACCESS"
4. Label adjacent Lot 20 Plat 88-39
5. Label the Robbie Road right-of-way

Sheet 2

6. Label the drainage and sewer easement that connects to the Hooter Lane right-of-way

Plat Notes

7. Remove block information from notes 8 and 9 and use "Lot X, Phase 1" typical language.
8. Amend note 11 to read:
   HOOTER LANE WILL BE DEVELOPED AS A PUBLIC TWO-WAY STREET, AS SET OUT IN THE SKETCH PLAT SUBMITTED WITH SMP20190004, SUBJECT TO CBJ PUBLIC IMPROVEMENT STANDARDS IN CBJ 49.35.
9. In note 12 change "RICHLAND MANOR" to "CHILKAT VISTAS".
10. Amend note 13 to read:
    *DENSITY: IT IS AGREED THAT THE LOOP ROAD OF HILLCREST AVENUE AND MOUNTAINSIDE DRIVE WILL BE DEVELOPED AS SINGLE-FAMILY HOMES, AS DEPICTED ON THE SKETCH PLAT SUBMITTED WITH SMP20190004.
11. Add an asterisk to note 14: "*ROBBIE ROAD"
12. In note 15, change "RICHLAND MANOR" to "CHILKAT VISTAS"
13. Amend note 16 to read:
    HILLCREST AVENUE SHALL TERMINATE AT HOOTER LANE. HILLCREST AVENUE MAY CONNECT TO HOOTER LANE WEST OF THE EXISTING HILLCREST ALIGNMENT AS SHOWN IN THE SKETCH PLAT SUBMITTED WITH SMP20190004. ALTERNATIVELY ROAD ACCESS TO THE NORTHEAST PORTION OF TRACT B-1 MAY CONNECT TO THE

EAST/WEST PORTION OF MOUNTAINSIDE DRIVE ACROSS FROM THE ENTERNANCE TO THE "POCKET" BETWEEN HILLCREST AND MOUNTAINSIDE.

14. In note 16, verify lot name for Tract B-1 based on naming options outlined in the "Cartography" section of this MEMO.
15. Amend note 17 to read:

    GREENBELT BUFFERS WILL BE IMPLEMENTED AND PRIVATELY MAINTAINED BY LOT OWNERS AS DELINEATED ON THE SKETCH PLAT SUBMITTED WITH SMP20190004 AND AS DELINEATED THIS PLAT, TO SEPARATE SINGLE FAMILY HOMES FROM MULTI-FAMILY DEVELOPMENT. EXCAVATION FOR PURPOSES OF SLOPE STABILIZATION MAY TAKE PLACE IN THE GREENBELT BUFFERS PROVIDED THEY ARE ALLOWED TO REVEGETATE FOLLOWING CONSTRUCTION. IN THE EVENT THIS BECOMES NECESSARY THE PROPERTY OWNER WILL CONSULT WITH ADJACENT HOMEOWNERS ABOUT THE IMPACTS.

16. Plat notes 13, 14, and 17 should be moved to their own section at the bottom of the notes section with their own heading that reads:

    <u>*NOTES BELOW REFLECT PRIVATE OBLIGATIONS ASSUMED BY THE DEVELOPER:</u>

    1. *DENITY…
    2. *ROBBIE ROAD…
    3. *GREENBELT…

CARTOGRAPHY

All Sheets

1. Contours, wetlands areas, and setbacks will be removed from final plat prior to recording.
2. Label previous TRACT B with dashed font.
3. Rename phases 1, 2, 3, etc. instead of A, B, C, etc. to maintain consistency with other phased subdivisions within CBJ.
4. Delete the centerline for Coogan Dr from sheet 1. It's the same line type as the unsurveyed lines. Also correct the label so it doesn't say "OOGAN".
5. Use a consistent line symbol for unsurveyed lot lines. Preferably the darker line type.
6. Label all adjacent lots with a gray or lighter font, and with a consistent font size (sheets 1 and 2). Show complete labels.
7. There's a line on the Hillcrest Ave ROW that serves an unknown purpose.
8. Remove the percent grade label and add bearing and distance annotation to the east and west sides of Hillcrest Ave ROW.

Sheet 1

9. Label HOOTER LN.
10. Move the TRACT A LOT 8 label onto the lot so it isn't covering the easement and decrease the font size.
11. Half of the line type for the easement north of LOT 39 uses a solid surveyed line type. Revise to the dashed easement line type.
12. Increase font size or remove the tiny.

Sheet 2

13. Use an annotation arrow to point to the west boundary of the 15' drainage easement, or orient the label so it aligns to the boundary line.
14. The "20' SETBACK LINE (TYP)" label is pointing to the title block. Correct as needed.
15. Move the "25' GREEN BELT" label so the "T" isn't covered by the title block.

Sheet 3

16. Remove the scale bar.
17. In note 12 on sheet 3, there is an extra "A" next to "SIDEWALK".
18. In the Planning Commission Plat Approval, there is an extra "O" in "ANCHORAGE".

Title Block

19. Title block option 1 (if we keep TRACT B1 as part of Richland Manor, it needs to be included in the title block):

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 1
AND
TRACT B1 RICHLAND MANOR
A SUBDIVISION OF
TRACT B RICHLAND MANOR
WITHIN CITY & BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

_____

_____
STATE RECORDER'S OFFICE AT ANCHORAGE

20. Title block option 2 (if we do away with Richland Manor altogether, rename TRACT B to TRACT A and include it as a part of Chilkat Vistas Subdivision):

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 1
A SUBDIVISION OF
TRACT B RICHLAND MANOR
WITHIN CITY & BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

_____

_____
STATE RECORDER'S OFFICE AT ANCHORAGE

proHNS LLC
1945 Alex Holden Way #101 | Juneau, AK 99801 | 907-780-4004 | solutions@proHNS.com
219 Main Street #13 | Haines, AK 99827 | 907-419-6070 | www.proHNS.com

September 19, 2019

Michael and William Heumann
6000 Thane Rd
Juneau, AK 99801
mpheumann@hotmail.com
(971) 261-8014

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

RE: Richland Manor Subdivision - Drainage Plan

To Whom It May Concern,

The following Drainage Plan has been prepared for the Richland Manor Subdivision in Juneau, AK, a proposed development of single and multi-family residential units on a 30-acre site at 4506, 4508, and 4510 Hillcrest Avenue.

Attached sheets depict survey data, proposed phase A development, as-built information and rainfall data used for the proposed drainage analysis for this subdivision.

NOTE This report only accounts for the area being developed. The intent of this report is to show that the increased runoff due to development of the site can be handled by the existing drainage system on Glacier Highway. This report will be revised and updated as necessary during the design and layout of the conveyance system.

Site Runoff Calculation Method:

To calculate site runoff from the proposed development and through existing drainage structures, we have elected to use the Rational Method. Utilizing Appendix D of the "2010 CBJ Manual of Stormwater Best Management Practices" as a guide[1], the Rational Method equation employed for calculating stormwater runoff flows is as follows:

$$Q = CIA$$

Q = peak flow in cubic feet per second (cfs) *C = runoff coefficient*
I = rainfall intensity (inches per hour) *A = catchment area (acres)*

[1] There are no current municipal code requirements dictating adherence with the "2010 CBJ Manual of Stormwater Best Management Practices" when preparing a drainage plan that complies with 49.35.510. Regardless, we have elected to utilize portions of this Manual as a guide in the preparation of this Drainage Plan for the proposed development.

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

Catchment Areas (A):

There is an existing 24" CMP culvert that crosses Glacier Highway at the location where the proposed subdivision runoff will tie into Hooter Lane's existing ditch. This report analyzes the converted areas for the proposed subdivision. A delineation of all contributing flows should be performed before sizing or constructing any conveyance devices for this project.

Runoff Coefficient (C):

Catchment Areas contain multiple land cover types within the sub-division area. The existing catchment area for the 24" CMP culvert and coefficients were determined by analyzing CBJ 2014 Lidar data, aerial photos and field investigations. The calculations in this report use developed area quantities provided by the client. We have selected runoff coefficients based on a 25-year storm event, based on both "2010 CBJ Manual of Stormwater Best Management Practices" as well as "AK DOT & PF Highway Drainage Manual".

The following formula, taken from Page D-9 of the CBJ Stormwater Manual, was used to compute composite runoff coefficients for each Catchment Area (also tabulated below):

$$C_c = (C_1A_1 + C_2A_2)/A_t$$

C_c = composite runoff coefficient — *$C_{1,2}$ = runoff coefficient for each area land cover type*

A_t = total area (acres) — *$A_{1,2}$ = areas of land cover types (acres)*

Composite Runoff Coefficients for Existing Subdivision Conditions					
Catchment Area	**Total Basin**	**Forest**	**Lawn**	**Gravel**	**Cc**
Size (Acres)	2.26	0.23	0.45	1.58	**0.62**
Runoff Coefficient[2]	n/a	0.10	0.25	0.8	

Composite Runoff Coefficients for Developed Subdivision Conditions					
Catchment Area	**Total Basin**	**Roof**	**Pavement**	**Lawn**	**Cc**
Size (Acres)	2.26	0.41	0.70	1.15	**0.57**
Runoff Coefficient[3]	n/a	0.9	0.9	0.25	

[2] Runoff coefficients utilized for Composite Runoff Coefficient calculations were obtain from Table D-4 for a 25-year Return Period (2010 CBJ Manual of Stormwater Best Management Practices).

[3] Runoff coefficients utilized for Composite Runoff Coefficient calculations were obtain from Table D-4 for a 25-year Return Period (2010 CBJ Manual of Stormwater Best Management Practices).

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

proHNS LLC

Composite Runoff Coefficients for Existing 24" CMP Culvert					
Catchment Area	**Total Basin**	**Forest**	**Lawn**	**Pavement/Roof**	**Cc**
Size (Acres)	2.31	0.88	0.25	1.12	**0.502**
Runoff Coefficient[4]	n/a	0.10	0.25	0.9	

Rainfall Intensity (I):

The peak rainfall intensity is determined by calculating the time of concentration from the most hydraulically distant location in the drainage basin and applying the duration to the annual exceedance probability.

$$T_c = T_1 + T_2 + \cdots + T_n$$

T_c = time of concentration (min) *$T_{1,2}$ = travel time across separate flow path segments (min)*

$$T_t = L/60V$$

T_t = travel time (min)
L= the distance of flow across a given segment (feet)
$V=k_R Sqrt(S_0)$=average velocity (feet/sec) across land cover
k_R= time of concentration velocity factor (CBJ Manual of Storm Water BMP 2010, Table D-5, PG. D-10)
S_0= slope of flow path (feet/feet)

Time of Concentration Existing Sub. Conditions	
Flow Segments	**T_n (min)**
Gravel (nearly bare ground)	1.2
Forest	2.1
T_C	**3.3**

Time of Concentration Developed Sub. Conditions	
Flow Segments	**T_n (min)**
Lawn	1.3
Paved Area/Roof	0.4
T_C	**1.7**

Time of Concentration Existing 24" CMP Culvert	
Flow Segments	**T_n (min)**
Sheet Flow	37.5
Shallow Concentrated Flow	78.0
Open Channel	0.5
T_C	**116.0**

[4] Runoff coefficients utilized for Composite Runoff Coefficient calculations were obtain from Table D-4 for a 25-year Return Period (2010 CBJ Manual of Stormwater Best Management Practices).

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

Per CBJ Manual of Storm Water BMP 2010, Table 5-1, page. 5-1, design event frequencies are specified. For storm sewer feeder lines, a 25-year storm event is the required design return period. We will base our analysis on a 25-year design return period for all drainage structures and catchment areas.

Existing Conditions	Design Return Period
Tc Duration 10 (min)	25-year
Intensity (in/hr) =	**2.03**

Developed Conditions	Design Return Period
Tc Duration 10 (min)	25-year
Intensity (in/hr) =	**2.03**

Existing 24" CMP Culvert	Design Return Period
Tc Duration 120 (min)	25-year
Intensity (in/hr) =	**0.534**

Anticipated Site Runoff (Q):

Using the Rational Method equation and site data listed above, the amount of stormwater runoff per catchment area can be determined:

Catchment Area	**Cc**	**I**	**A**	**Q (cfs)**
Existing Conditions	0.62	2.03	2.26	**2.84**
Developed Conditions	0.57	2.03	2.26	**2.61**
Existing 24" CMP Culvert	0.50	0.53	2.31	**0.62**

Conveyance/Discharge Structure Capacities:

The following equations were used to calculate the capacity of an existing AK DOT & PF owned drainage system on Glacier Highway at the bottom of Hooter Lane and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$A = \pi \times \frac{d^2}{4}$$

A = cross sectional area in ft² *d = diameter in ft*

$$R = \frac{d}{4}$$

R = hydraulic radius

$$S = \frac{\Delta z}{L}$$

S = slope *Δz = change in elevation* *L = length of pipe in ft*

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft³/sec K = coefficient for English units (1.486) n = Manning's coefficient of roughness[5]

Existing Glacier Highway 24" CMP Cross Culvert:

Existing 24" CMP Cross Culvert; Inlet Invert = 24.33', Outlet Invert = 24', Length = 46', n = 0.028. The Manning's n value of 0.028 was determined by the pipe type (Annular Corrugated Metal Pipe: plain or fully coated), all other values obtained from the attached DOT & PF Salmon Creek to Vanderbilt Hill Storm Drain System Summary (Project No. 70469; Sheets 10, 27, and 83).

$$A_{culvert} = 3.14 \times \frac{2^2}{4} = 3.14\ ft^2$$

$$R = \frac{2}{4} = 0.5\ ft$$

$$S = \frac{24.33 - 24}{46} = 0.717\%$$

$$Q_{culvert} = \frac{1.486}{0.028} \times 3.14 \times 0.5^{0.67} \times 0.00717^{0.5} = 8.87\ ft^3/sec$$

Summary:

Drainage Basin	Post Development Runoff Q (cfs)	Capacity Check	Flow Capacity Q (cfs)	Conveyance/Discharge Structures
Existing 24" CMP Culvert	0.62	<	8.87	Existing 24"CMP Culvert
Existing 24" CMP Culvert + Proposed Subdivision	3.23	<	8.87	To Be Determined

The results show that the development will result in a reduction in overall runoff from the developed area. This is due to replacing large portions of the existing gravel with lawn, which will absorb and slow the runoff more effectively than in the existing conditions. Current discharge from the area to be developed enters existing drainage channels not currently eased for upland drainage. As a result, runoff from the proposed development will be conveyed to developable ROW of Hooter lane and directed into the existing drainage system on Glacier Hwy. Our analysis shows that there is more than enough capacity in the existing Glacier Hwy. drainage system to handle increased flows from the proposed development.

[5] Manning's "n" values for culverts obtained from Table 5-3, Page 5-5, of the CBJ Stormwater Manual.

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

Respectfully,

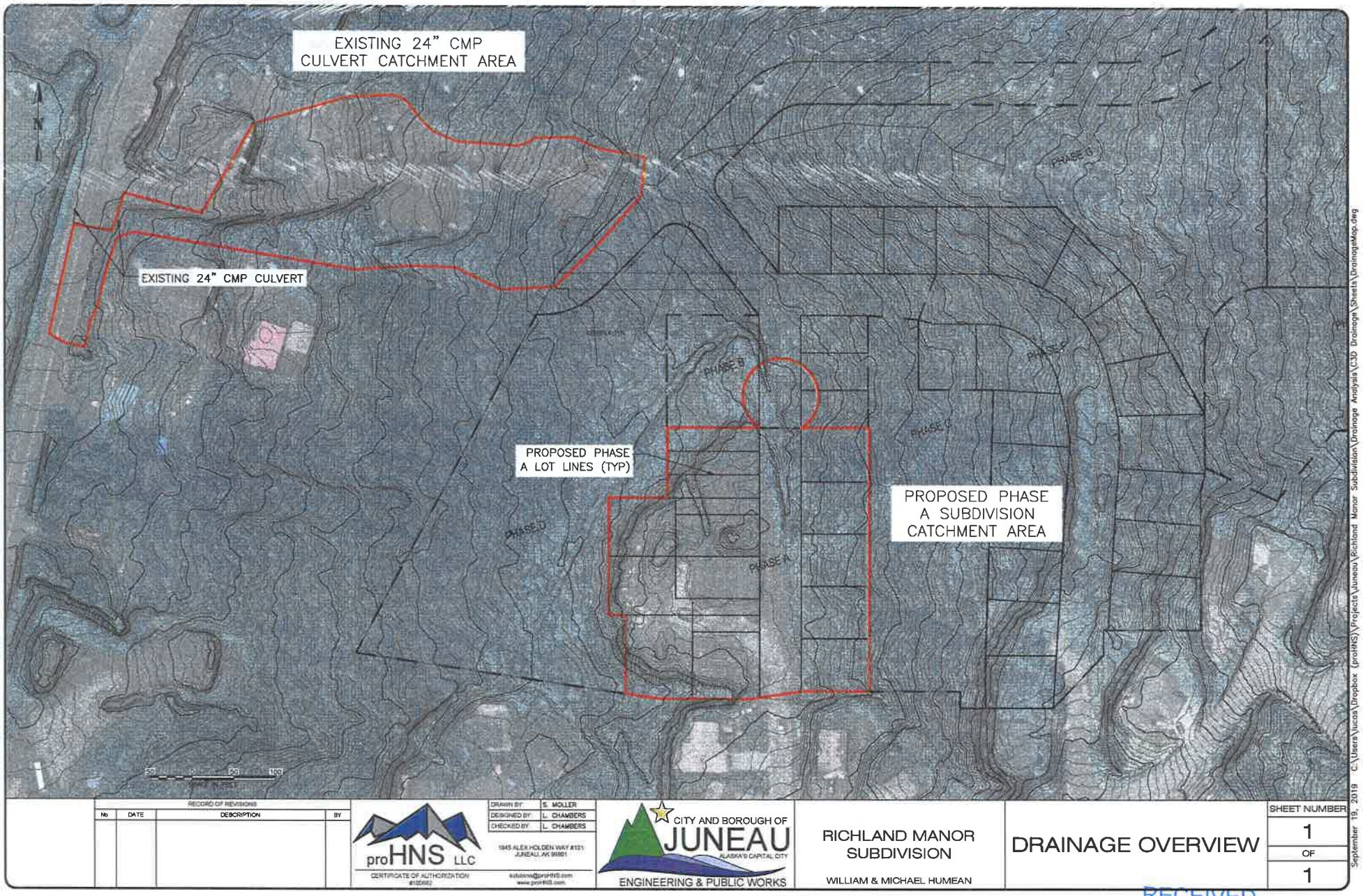
Lucas Chambers

Lucas Chambers, P.E.
Principal Engineer – proHNS LLC Juneau

Attachments: Drainage Overview Graphic

Glacier Hwy As-built Plans

NOAA Precipitation Frequency Data



RECORD OF REVISIONS			
No	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #102662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801

DRAWN BY:	S. MOLLER
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

RICHLAND MANOR SUBDIVISION

WILLIAM & MICHAEL HUMEAN

DRAINAGE OVERVIEW

SHEET NUMBER 1 OF 1

September 19, 2019 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\Drainage Analysis\C3D Drainage\Sheets\DrainageMap.dwg

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

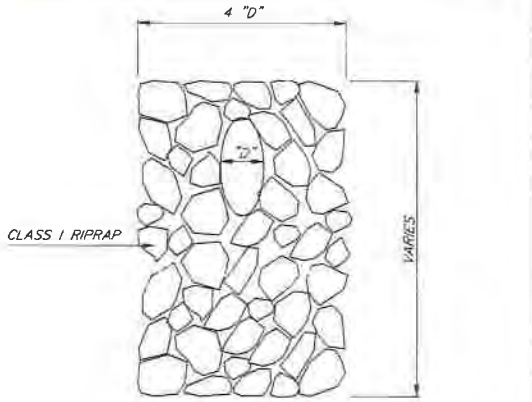
Attachment F - SMP21-04 – Phase 2

STORM DRAIN SYSTEM SUMMARY

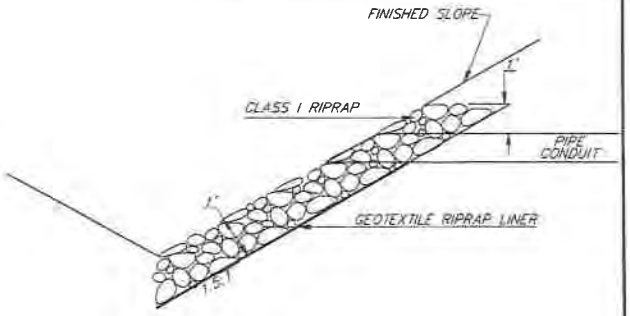
STRUCTURE NO.	INLET TYPE	LOCATION STATION	LOCATION OFFSET	TOP OF GRATE ELEVATION	INVERT ELEVATION	REMARKS ELEV.	PIPE NO.	DESIGN LENGTH	PIPE SIZE	FROM STRUCTURE NO.	FROM INVERT ELEVATION	TO STRUCTURE NO.	TO INVERT ELEVATION	REMARKS
S-1	A	140+37	RT	27.77	23.52		P-1	8' 13"	18"	S-1	25.62 13	OUTFALL		SPILLWAY
S-2	A	142+18	LT	26.11	21.36	19.22	P-2	56' 6"	24"	S-2	22.86	OUTFALL		SPILLWAY
S-3	A	144+35	LT	27.23	22.48	20.76	P-3	56'	24"	S-3	23.98	OUTFALL		
S-4	A	146+58	LT	28.66	24.41		P-4	10'	18"	S-4	25.91	OUTFALL		
S-5	A	148+38	LT	30.48	26.23	25.23	P-5	24' 13"	18"	S-5	26 24.23	OUTFALL	25.9	
S-6	A	148+39	RT	30.67	25.92	25.97	P-6	39'	24"	S-6	27.42	S-7	27.32	
S-7	A	148+72	RT	30.29 61	25 29 45		P-7	10'	24"	S-7	27.22	S-8	26.25	
S-8	FIELD	"W" 10+28	LT	29.00	25.60		P-8	62' 10"	24"	S-8	26.20	OUTFALL		DELETED
S-9	FIELD	"W"11+65	LT	48.00	44.30		P-9	138'	18"	S-9	45.80	S-7	27.42	
							P-10	24' 21"	24"	DITCH		S-9	46.00	
S-10	A	152+00	LT	30.43	26.18	25.18	P-11	12' 6"	18"	S-10	26 27.68	OUTFALL		SPILLWAY
S-11	A	153+16	LT	29.96	25.71	24.71	P-12	12' 0"	18"	S-11	26 27.21	OUTFALL		SPILLWAY
S-12	A	154+93	RT	29.85	25.40		P-13	39' 35"	24"	S-12	26.68 40	S-13	26.49	
S-13	A	154+93	LT	29.85	24.70	24.66	P-14	12' 4"	24"	S-13	26.47 8	OUTFALL	24.30	SPILLWAY
S-14	A	156+42	RT	20.50	26.25	25.17	P-15	8' 11"	18"	S-14	27.39 21	OUTFALL	27.00	
S-15	A	158+05	LT	30.86	26.61		P-16	14' 11"	18"	S-15	28.11	OUTFALL	27.80	SPILLWAY
S-16	A	160+70	RT	31.08	26.83	26.21	P-17	12' 11"	18"	S-16	28.33	OUTFALL	28.00	
S-17	A	161+98	LT	30.46	26.21	25.21	P-18	12' 10"	18"	S-17	26 27.71	OUTFALL	26.50	SPILLWAY
S-18	A	163+88	RT	29.96	25.21		P-19	48'	24"	S-18	26.71	OUTFALL	26.00	SPILLWAY
							P-19A	16' 10"	18"	DITCH	28.00	S-18	28.40	
S-19	A	165+29	LT	29.42	25.17	24.17	P-20	29' 13"	18"	S-19	25 26.67	OUTFALL	26.30	SPILLWAY
S-20	A	167+02	LT	29.83	25.58	24.68	P-21	14' 10"	18"	S-20	26 27.08	OUTFALL	26.90	
S-21	A	169+48	LT	30.52	26.27	25.27	P-22	15' 9"	18"	S-21	26 27.77	OUTFALL	26.50	SPILLWAY
S-22	A	172+04	LT	29.70	25.45	24.47	P-23	14' 9"	18"	S-22	25 26.95	OUTFALL	25.70	
S-23	A	173+33	LT	29.70	24.60	23.60	P-24	16' 9"	24"	S-23	25 25.10	S-23	24.70	
S-24	A	173+48	RT	29.71	24.96		P-25	38'	24"	S-24	26.46	S-23	26.20	
S-25	A	174+02	LT	29.53	25.38	24.38	P-26	12' 11"	18"	S-25	26 26.88	OUTFALL	26.60	SPILLWAY
S-26	A	175+52	RT	30.17	25.42		P-27	36'	24"	S-26	26.92	S-27	26.75	SPILLWAY
S-27	A	175+52	LT	30.17	25.15	24.15	P-28	12' 11"	24	S-27	25 26.65	OUTFALL	26.30	
							P-29A	10'	18"	DITCH	29.00	S-26	27.50	
S-28	A	177+98	RT	30.07	25.32	25.04	P-29	62' 10"	24"	S-28	26 27.59	OUTFALL	26.50	SPILLWAY
S-28A	A	"B"10+34	RT	28.66	23.70	24.70	P-29B	14' 10"	24"	S-28A	25 29.40	S-28B	25.40	
S-28B	A	"B"10+34	LT	28.49	23.60	24.60	P-29C	6' 7"	24"	S-28B	25 25.30	DITCH	25.05	
							P-29A	10'	24"	DITCH	25.30	S-28A	25.25	
S-29	A	180+85	RT	28.56	23.81	23.81	P-30	24' 8"	24"	S-29	25.31	OUTFALL		
S-30	B	182+56	RT	29.13	22.40		P-31	14' 7"	24"	S-30	23.90	OUTFALL	17.20	
							P-32	12' 11"	18"	INLET	24.25	S-30	24.00	
S-31	A	185+00	RT	30.96	26.21		P-33	45 56"	24"	S-31	27.71	OUTFALL	20.70	SPILLWAY
S-32	A	185+88	RT	31.29	27.04	26.04	P-34	10' 9"	18"	S-32	27 28 45 54	OUTFALL	27.30	SPILLWAY
S-33	A	187+22	LT	31.35	27.10	26.10	P-35	12' 8"	18"	S-33	27 28.60	OUTFALL	27.30	SPILLWAY
S-34	A	188+98	LT	31.54	27.29	26.29	P-36	12' 9"	18"	S-34	29 28.79	OUTFALL	29.60	SPILLWAY
S-35	A	191+00	LT	31.07	26.22	25.22	P-37	26' 8"	18"	S-35	26 27.72	OUTFALL	26.50	
							P-37A	45 10"	24"	DITCH	30.00	S-35	22.82	
S-36	A	192+72	LT	30.03	25.78	24.78	P-38	12' 6"	18"	S-36	26 27.28	OUTFALL	26.00	SPILLWAY
S-37	A	194+39	RT	31.11	26.16		P-39	36'	24"	S-37	27.86	S-38	27.71	
S-38	A	194+39	LT	31.11	26.06	25.06	P-40	14' 9"	18"	S-38	26 27.56	OUTFALL	26.36	SPILLWAY
S-39	A	198+00	RT	30.86	26.11		P-41	16'	24"	S-39	26 27.61	S-40	27.413	
S-40	A	198+00	LT	30.86	25.81	24.81	P-42	14' 8"	18"	S-40	26 27.31	OUTFALL	26.00	
S-41	A	200+70	RT	29.62	24.87		P-43	36'	24"	S-41	26.37	S-42	26.20	
S-42	A	200+70	LT	29.52	24.67	23.67	P-44	10' 8"	24"	S-42	25 26.17	OUTFALL	25.00	SPILLWAY
							P-45	8' 10"	18"	DITCH	27.00	S-41	26.50	
S-43	A	201+02	LT	29.59	25.14	DELETED								
S-44	A	203+13	RT	32.93	27.98		P-46	16'	24"	S-44	29.68	S-45	29.48	
S-45	A	203+13	LT	32.93	27.88	26.88	P-47	20'	18"	S-45	28 29.38	OUTFALL	28.00	SPILLWAY
S-44A	A	"C"10+43	RT	33.26	29.01	1'+ SUMP	P-47A	12'	18"	S-44A	29.80	OUTFALL		
S-46A	A	"C"10+50	LT	33.38	29.13		P-47B	26 35"	18"	S-46A	30.43	S-44A	30.00	
							P-47C	6'	18"	DITCH	30.70	S-46A	30.53	
S-46	A	204+18	RT	35.40	31.65		P-48	56'	24"	S-46	33.16	OUTFALL	33.05	SPILLWAY
							P-49	12' 10"	18"	INLET S-46	33.15	S-46 OMEGA	33.05 2	
S-47	A	206+50	RT	45.64	41.39		P-50	10'	18"	S-47	43 42.89	OUTFALL	43.00	
S-48	A	212+60	RT	45.60	41.35		P-51	14' 12"	18"	S-48	42.85	OUTFALL	42.00	
S-49	A	216+00	RT	32.80	28.55		P-52	14' 11"	18"	S-49	30.05	OUTFALL	28.50	
S-50	A	217+47	LT	29.33	25.00	24.00	P-53	12' 11"	18"	S-50	25 26.58	OUTFALL	25.00	
S-51	A	218+53	RT	27.58	22.83		P-54	53' 9"	24"	S-51	24.13	OUTFALL	24.00	
S-52	A	220+65	RT	26.09	21.34		P-55	44' 10"	24"	S-52	22.84	OUTFALL	18.00	
S-53	A	223+66 00	RT	25.33	21.08	23.21	21.02	P-56	14'	18"	S-53	22.58 52	OUTFALL	22.00
S-54	A	223+26	LT	24.71	20.38	24.65	20.32	P-57	18' 10"	18"	S-54	21.88	OUTFALL	21.00

TOTALS: 54- A 1- B 2- F

TOTALS: 18" - 615' 24" - 1,139'



SPILLWAY PLAN



SPILLWAY SECTION

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

ENGINEER'S SEAL

BY:	DATE:	DESCRIPTION OF CHANGE

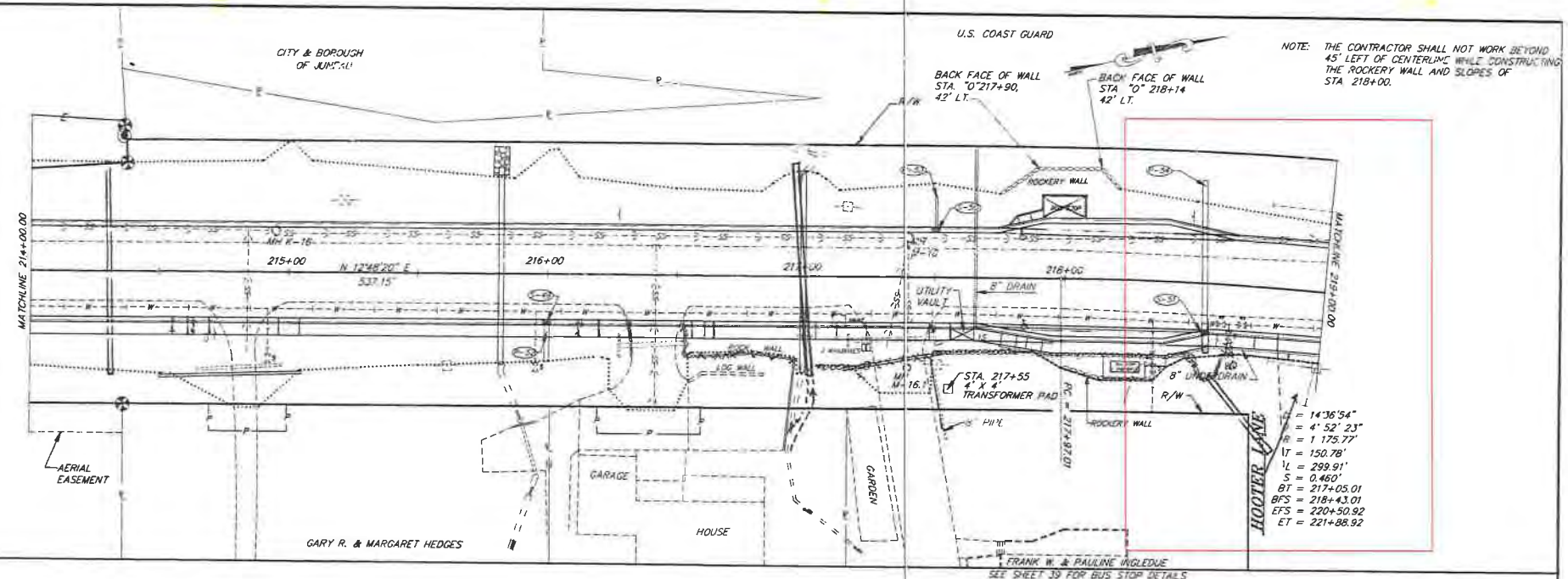
RECORD OF REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

JUNEAU ALASKA

SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-0955(8) (70469)
STORM DRAIN SYSTEM SUMMARY

DESIGNED BY: D. KROMAREK	PROJECT NO. 70469
DRAWN BY: C. ANDERSON	DATE: 6/1993
CHECKED BY: P. BEDNAROWICZ	SHEET 10 OF 85



NOTE: DO NOT SCALE FROM THESE PLANS–USE DIMENSIONS

ENGINEER'S SEAL

DATE:	DESCRIPTION OF CHANGE:

RECORD OF REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

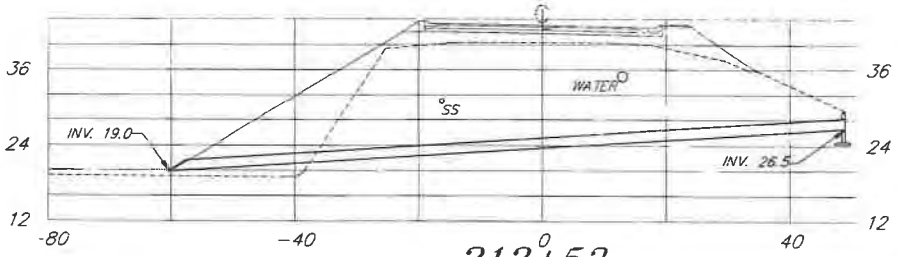
JUNEAU ALASKA

SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-0955(8) (70469)
STA. "0" 214+00.00 TO STA. "0" 219+00.00

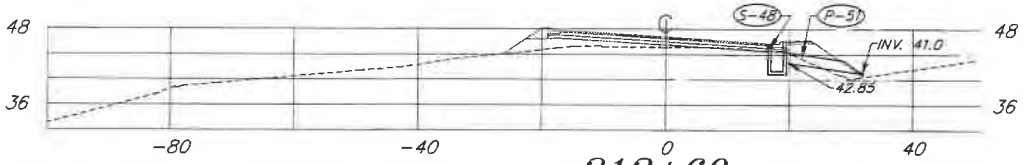
DESIGNED BY: D. KROMAREK	PROJECT NO. 70469
DRAWN BY: C. ANDERSON	DATE: 5/1993
CHECKED BY: P. BEDNAROWICZ	SHEET 27 OF 85

R:\JNU\SALMON DR\P214 1=20

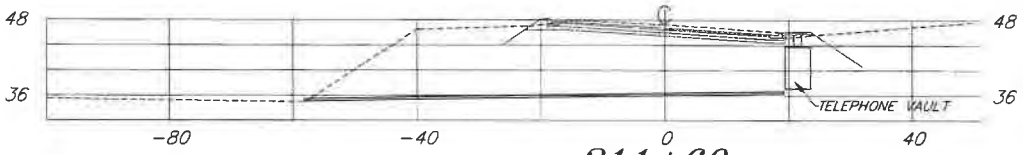
RECEIVED
SEP 19 2019
PERMIT CENTER/CDD



213+53



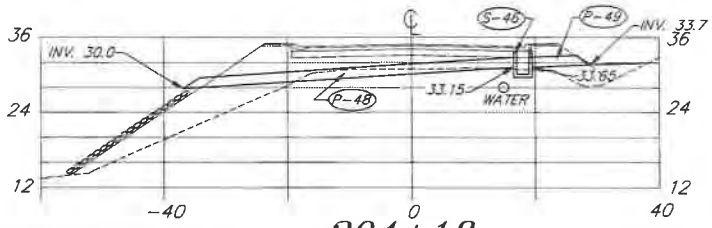
212+60



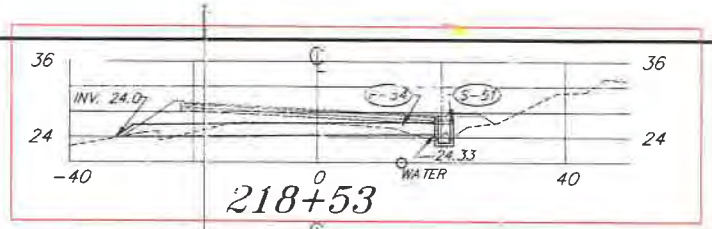
211+60



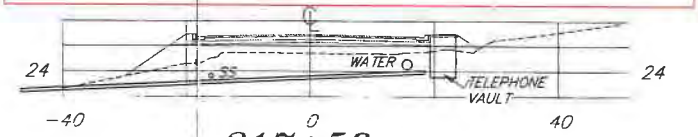
206+50



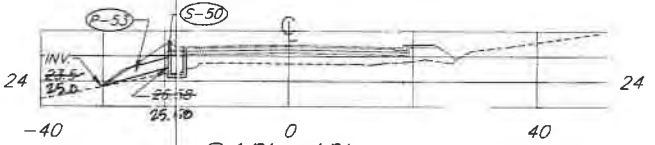
204+18



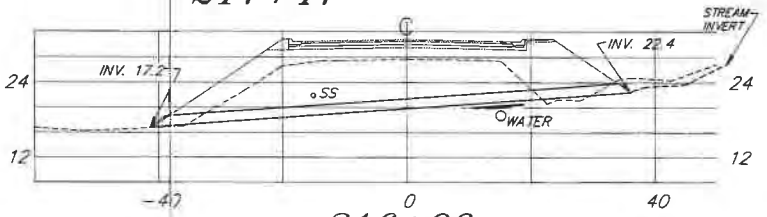
218+53



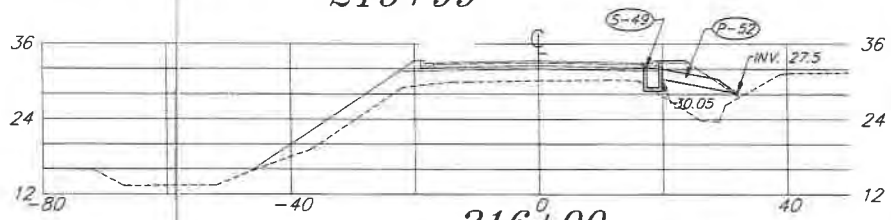
217+58



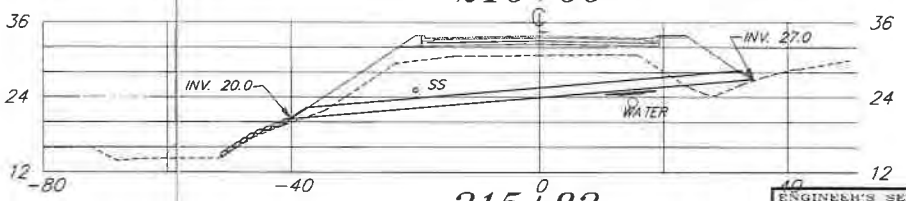
217+47



216+99



216+00



215+82

NOTE: DO NOT SCALE FROM THESE PLANS–USE DIMENSIONS

ENGINEER'S SEAL

PATH: P:\JNU\SALMON\DR\PIPE9 1=10		
NO.	DATE:	DESCRIPTION OF CHANGE:

RECORD OF REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

JUNEAU ALASKA

SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-0955(8) 70169

PIPE CROSS SECTIONS–204+18 TO 218+53

DESIGNED BY: D. KROMAREK	PROJECT NO. 70469
DRAWN BY: C. ANDERSON	DATE: 6/1993
CHECKED BY: P. BEDNARCZUK	SHEET 83 OF 85

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

NOAA Atlas 14, Volume 7, Version 2
Location name: Juneau, Alaska, USA*
Latitude: 58.3454°, Longitude: -134.4905°
Elevation: 101.1 ft**
* source: ESRI Maps
** source: USGS

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Douglas Kane, Sarah Dietz, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Svetlana Stuefer, Amy Tidwell, Carl Trypaluk, Dale Unruh, Michael Yekta, Erica Betts, Geoffrey Bonnin, Sarah Heim, Lillian Hiner, Elizabeth Lilly, Jayashree Narayanan, Fenglin Yan, Tan Zhao

NOAA, National Weather Service, Silver Spring, Maryland
and
University of Alaska Fairbanks, Water and Environmental Research Center

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.57 (1.27-1.99)	1.84 (1.46-2.36)	2.24 (1.75-2.95)	2.58 (1.98-3.44)	3.04 (2.27-4.15)	3.38 (2.48-4.72)	3.74 (2.70-5.30)	4.20 (2.98-6.06)	4.80 (3.32-7.08)	5.26 (3.59-7.88)
10-min	1.06 (0.852-1.34)	1.24 (0.984-1.59)	1.51 (1.17-1.98)	1.73 (1.32-2.31)	2.03 (1.52-2.78)	2.27 (1.67-3.17)	2.51 (1.81-3.55)	2.82 (2.00-4.07)	3.22 (2.23-4.75)	3.53 (2.41-5.29)
15-min	0.824 (0.664-1.04)	0.964 (0.768-1.24)	1.17 (0.912-1.54)	1.35 (1.03-1.80)	1.59 (1.19-2.17)	1.77 (1.30-2.47)	1.96 (1.41-2.78)	2.20 (1.56-3.16)	2.52 (1.74-3.71)	2.76 (1.88-4.13)
30-min	0.546 (0.440-0.692)	0.640 (0.510-0.822)	0.778 (0.606-1.02)	0.894 (0.684-1.19)	1.05 (0.788-1.44)	1.18 (0.864-1.64)	1.30 (0.938-1.84)	1.46 (1.03-2.10)	1.67 (1.16-2.46)	1.83 (1.25-2.74)
60-min	0.374 (0.302-0.474)	0.438 (0.349-0.563)	0.533 (0.415-0.700)	0.613 (0.469-0.819)	0.722 (0.539-0.988)	0.806 (0.592-1.12)	0.890 (0.642-1.26)	0.999 (0.708-1.44)	1.14 (0.792-1.69)	1.25 (0.853-1.88)
2-hr	0.276 (0.222-0.350)	0.324 (0.258-0.416)	0.394 (0.307-0.518)	0.453 (0.346-0.606)	0.534 (0.399-0.730)	0.596 (0.438-0.830)	0.658 (0.474-0.932)	0.738 (0.523-1.06)	0.844 (0.586-1.25)	0.925 (0.630-1.39)
3-hr	0.243 (0.196-0.308)	0.284 (0.226-0.366)	0.347 (0.270-0.455)	0.398 (0.305-0.532)	0.469 (0.351-0.642)	0.523 (0.384-0.729)	0.577 (0.417-0.818)	0.648 (0.460-0.935)	0.742 (0.514-1.09)	0.813 (0.554-1.22)
6-hr	0.195 (0.158-0.248)	0.229 (0.182-0.294)	0.279 (0.217-0.366)	0.320 (0.245-0.428)	0.377 (0.282-0.516)	0.421 (0.309-0.586)	0.465 (0.335-0.659)	0.522 (0.370-0.753)	0.597 (0.414-0.881)	0.654 (0.446-0.981)
12-hr	0.146 (0.118-0.185)	0.171 (0.136-0.220)	0.208 (0.162-0.273)	0.238 (0.182-0.318)	0.280 (0.210-0.384)	0.314 (0.231-0.438)	0.349 (0.252-0.495)	0.393 (0.278-0.566)	0.450 (0.312-0.664)	0.493 (0.336-0.740)
24-hr	0.106 (0.096-0.118)	0.124 (0.111-0.141)	0.150 (0.131-0.173)	0.171 (0.147-0.201)	0.201 (0.169-0.242)	0.226 (0.186-0.277)	0.252 (0.204-0.314)	0.283 (0.225-0.359)	0.324 (0.252-0.420)	0.354 (0.272-0.467)
2-day	0.072 (0.065-0.081)	0.084 (0.075-0.095)	0.100 (0.087-0.116)	0.113 (0.097-0.133)	0.131 (0.110-0.158)	0.146 (0.120-0.179)	0.161 (0.131-0.201)	0.179 (0.143-0.227)	0.202 (0.158-0.263)	0.220 (0.169-0.290)
3-day	0.057 (0.051-0.064)	0.066 (0.059-0.074)	0.078 (0.068-0.090)	0.088 (0.075-0.103)	0.101 (0.085-0.122)	0.112 (0.092-0.137)	0.123 (0.099-0.153)	0.135 (0.108-0.171)	0.152 (0.118-0.197)	0.164 (0.126-0.216)
4-day	0.048 (0.044-0.054)	0.055 (0.049-0.063)	0.065 (0.057-0.076)	0.073 (0.063-0.086)	0.084 (0.071-0.101)	0.093 (0.076-0.114)	0.101 (0.082-0.126)	0.111 (0.089-0.141)	0.124 (0.097-0.161)	0.134 (0.103-0.177)
7-day	0.036 (0.032-0.040)	0.041 (0.036-0.046)	0.048 (0.042-0.055)	0.053 (0.046-0.063)	0.061 (0.051-0.073)	0.067 (0.055-0.082)	0.073 (0.059-0.091)	0.080 (0.064-0.101)	0.089 (0.069-0.115)	0.096 (0.074-0.127)
10-day	0.029 (0.027-0.033)	0.034 (0.030-0.038)	0.039 (0.034-0.046)	0.044 (0.038-0.052)	0.050 (0.042-0.060)	0.055 (0.045-0.067)	0.060 (0.048-0.074)	0.065 (0.052-0.083)	0.072 (0.057-0.094)	0.078 (0.060-0.103)
20-day	0.022 (0.020-0.025)	0.025 (0.022-0.029)	0.029 (0.026-0.034)	0.032 (0.028-0.038)	0.037 (0.031-0.044)	0.040 (0.033-0.049)	0.043 (0.035-0.054)	0.047 (0.037-0.059)	0.051 (0.040-0.067)	0.055 (0.042-0.073)
30-day	0.019 (0.018-0.022)	0.022 (0.020-0.025)	0.026 (0.022-0.030)	0.028 (0.024-0.033)	0.032 (0.027-0.038)	0.035 (0.028-0.042)	0.037 (0.030-0.046)	0.040 (0.032-0.051)	0.044 (0.034-0.057)	0.047 (0.036-0.061)
45-day	0.017 (0.015-0.019)	0.020 (0.017-0.022)	0.023 (0.020-0.026)	0.025 (0.021-0.029)	0.028 (0.023-0.034)	0.030 (0.025-0.037)	0.032 (0.026-0.040)	0.034 (0.027-0.044)	0.037 (0.029-0.048)	0.039 (0.030-0.052)
60-day	0.015 (0.014-0.017)	0.018 (0.016-0.020)	0.020 (0.018-0.024)	0.022 (0.019-0.026)	0.025 (0.021-0.030)	0.027 (0.022-0.033)	0.028 (0.023-0.035)	0.030 (0.024-0.038)	0.032 (0.025-0.041)	0.033 (0.026-0.044)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

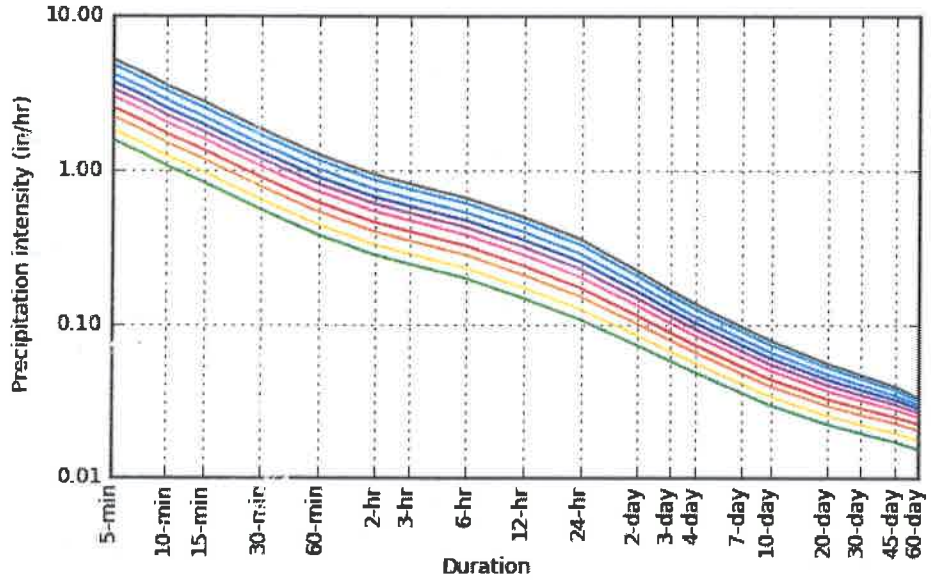
Please refer to NOAA Atlas 14 document for more information.

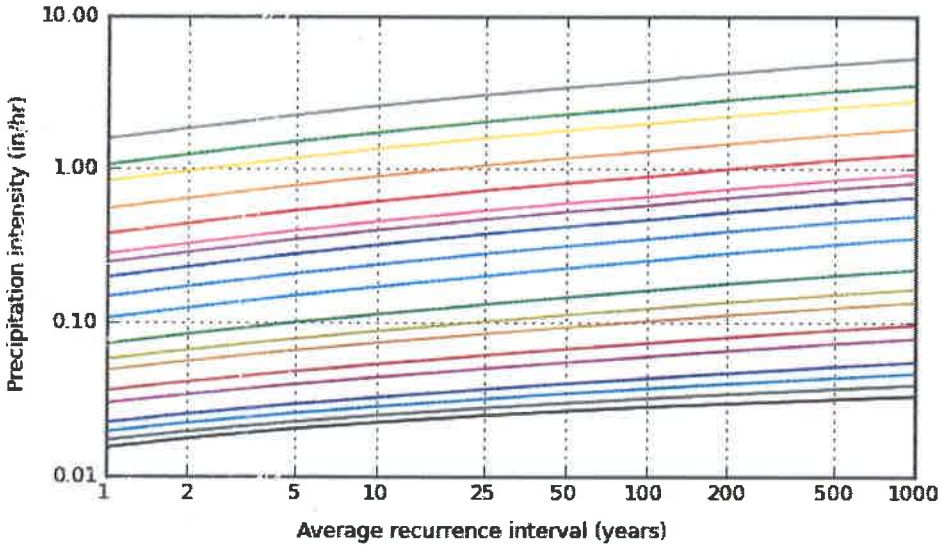
Back to Top

PF graphical

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

PDS-based intensity-duration-frequency (IDF) curves
Latitude: 58.3454°, Longitude: -134.4905°





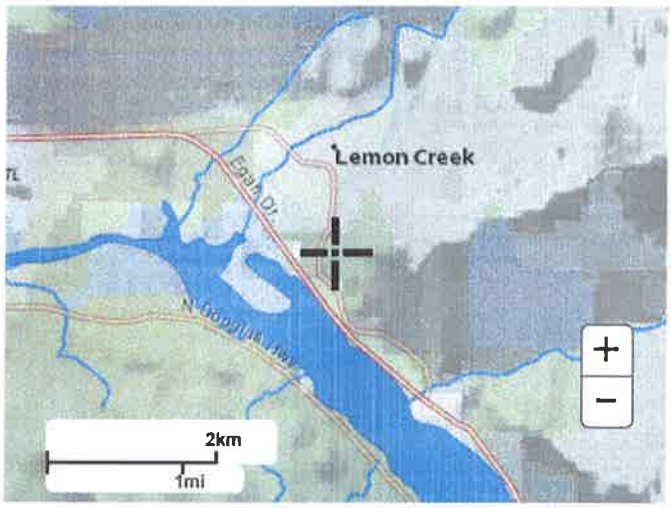
NOAA Atlas 14, Volume 7, Version 2

Created (GMT): Fri Jun 14 16:56:22 2019

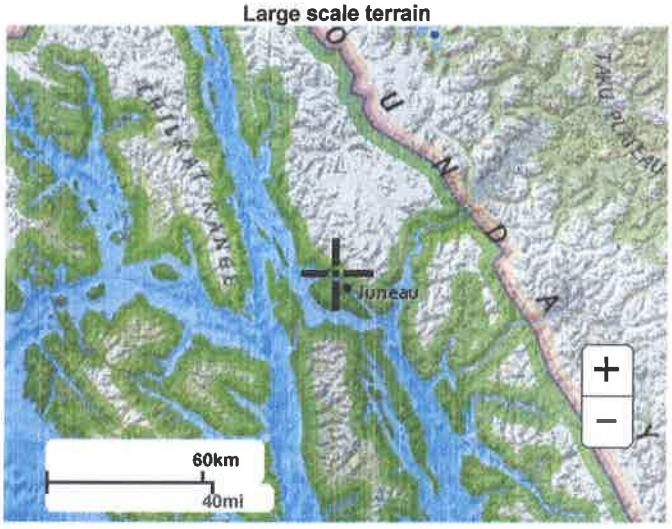
Back to Top

Maps & aerials

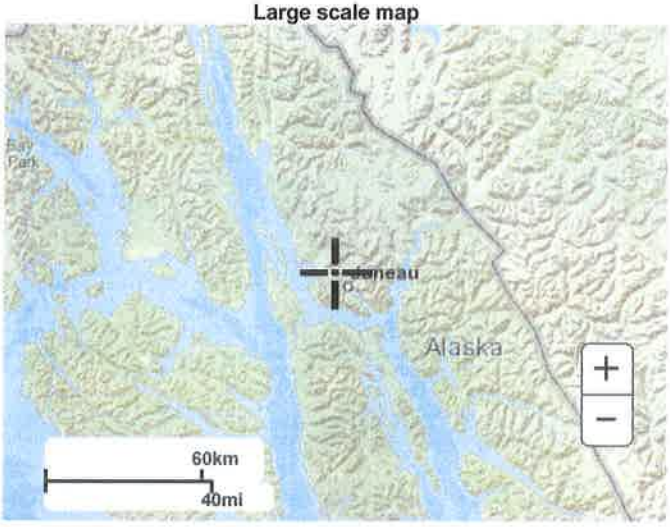
Small scale terrain



Large scale terrain

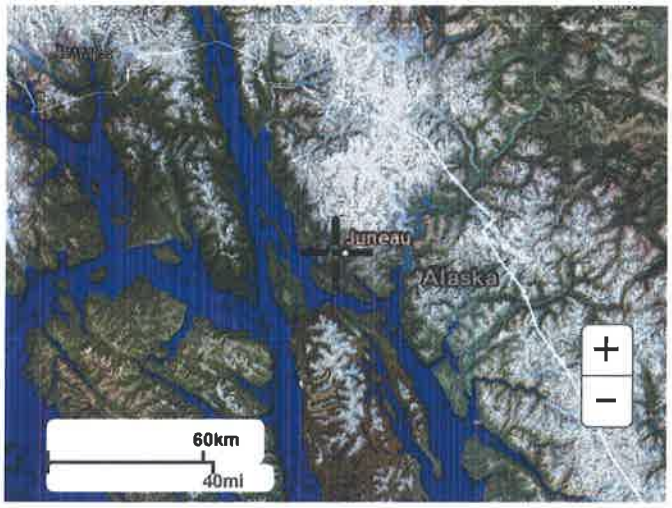


Large scale map



Large scale aerial

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD



RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Technical Memorandum

Carson Dorn, Inc.

712 West 12th Street
Juneau, AK 99801
Tel: 907-723-4717
jdorn@carsondorn.com

Date: 12/11/2018

To: Bill Heumann

From: Jim Dorn

Reference:

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

**Subject: Mountainside Estates
High Elevation Water System
Evaluation**

PURPOSE OF TECH MEMO

The purpose of this technical memorandum is to evaluate the water booster pump station and water distribution system piping serving the high elevation water system in the Mountainside Estates Subdivision with regards to the possibility of constructing new residences off the end of Hillcrest Avenue, Mountainside Drive and Robbie Road.

SUMMARY OF FINDINGS AND CONCLUSIONS

- The existing Mountainside Estates water booster pump station has 3 – 10 hp pumps each of which is designed to pump 200 gpm. The total design capacity of the pump station is therefore 600 gpm.
- The original design intent for the existing Mountainside Estates water booster pump station was to have sufficient capacity to meet a peak hourly domestic water demand of 100 gpm while simultaneously providing 500 gpm for fire flows.
- 18 AAC 80.205 (a) (5) of the Alaska Department of Environmental Conservation's Drinking Water Regulations requires "...that at least 20 psi of service pressure at the highest elevation or pressure zone of a distribution main be maintained under peak design demand."
- The water pressure provided by the Mountainside Estates water booster pump station is 95 psi. The lowest elevation in the service area is at the end of Hillcrest Avenue and it has a static water pressure of about 96 psi. The highest elevation in the service area is at the upper end of Ling Court and it has the lowest static water pressure in the Mountainside Estates subdivision of about 42 psi.

- Water demand in the high elevation water system in 2018 has averaged about 16,400 gpd. This is equal to about 140 gpd per residence.
- Greatest water demand was in July. In July the daily demand was 20,423 gpd. The CBJ Water Department reviewed the historic water demand trend charts for July, 2018 and peak flows recorded during this period were consistently in the 50 to 60 gpm range.
- There are about 120 residences currently served by the Mountainside Estates Water Booster Pump Station. With current Peak Hourly Flows of 60 gpm, the average per residence Peak Hourly Flow is 0.5 gpm (60 gpm peak hourly flow/120 residential units = 0.5 gpm peak hourly flow/residential unit).
- With the pump station designed to provide peak hourly domestic water flows of 100 gpm, and 60 gpm is currently being used to meet Peak Hourly Domestic demand, there remains 40 gpm of pump station capacity available to meet peak hourly water demands from future residential development. This preserves 500 gpm of pump station capacity for fire flows.
- With average peak hourly flow per residence in Mountainside Estates of 0.5 gpm, if an additional 80 residential units are constructed it would result in a projected 40 gpm increase in the peak hourly flow (80 residential units x 0.5 gpm peak hourly flow/residential unit = 40 gpm). This uses the remaining domestic peak hourly water flow design capacity of the Mountainside Estates pump station.
- Using a computer model of the Mountainside Estates water system, water pressure in the water main at the upper end of Ling Court (the area with the lowest water system pressure) is projected to be as follows for the following conditions:
    - Static Pressure No Water Demand = 41.79 psi
    - 60 gpm Existing Peak Hourly Water Demand = 41.69 psi
    - 100 gpm Future Peak Hourly Water Demand = 41.56 psi
    - 60 gpm Existing Peak Hourly and 500 gpm Fire @ Robbie Rd. = 31.59 psi
    - 100 gpm Future Peak Hourly and 500 gpm Fire @ Robbie Rd. = 30.70 psi
- It appears that an additional 80 residential units could be constructed in the Mountainside Estates high elevation water zone without exceeding the existing pump station design capacity of 100 gpm for peak hourly domestic water demand or reducing pressures in the distribution main to below 20 psi. This also preserves additional pump station capacity of 500 gpm for fire flows without reducing water pressures in the water main to below 20 psi.

MOUNTAINSIDE ESTATES HIGH ELEVATION WATER SYSTEM BACKGROUND

The higher elevations of the Mountainside Estates Subdivision are at an elevation that is too high for it to be served by the low elevation water system which serves much of Juneau. High elevation developments in Juneau, like Mountainside Estates, are typically supplied water using water booster pumps. In some instances, these water booster pumps fill water storage reservoirs that provide higher elevation areas with adequate water pressure and flows using

water stored in the reservoirs. In other instances, the pumps are constant pressure pumps that maintain water pressure in higher elevation areas by varying pump speed to ensure a constant pressure is provided to residents under varying water demand conditions.

The Mountainside Estate Pump Station, located at the intersection of Craig Street and Hillcrest Avenue is a constant pressure pump station that was constructed in 1994. It has three 10 hp pumps each capable of producing 200 gpm. Two of the pumps are controlled by variable frequency drives (VFDs) that adjust pump speed to maintain a constant output pressure of 95 psi at the pump station. For the Mountainside Estates pump station one of the VFD controlled pumps typically operates continuously to maintain water pressure and other is a standby in case water demand exceeds the 200 gpm capacity of a single pump. The two VFD controlled pumps alternate operation each day. The third pump is a constant speed pump and it only operates when the two VFD controlled pumps are unable to maintain a pump station output pressure of 95 psi. The combined output of the three pumps is about 600 gpm. The design flow of the pump station was based on a fire flow of 500 gpm and a peak hourly domestic demand of 100 gpm. These design flows were the result of meetings and conversations between the CBJ Public Utilities, CBJ Engineering and CBJ Fire Departments in 1994.



Mountainside Estates Pump Station

The desired static water pressure (the no flow condition) in water mains within the Juneau Areawide Water System is typically a low of 40 psi and a high of 95 psi. The Mountainside Estates pump station is at elevation 108' and its output pressure is 95 psi. The lowest elevation in the Mountainside Estates high elevation water service area is at the end of Hillcrest Avenue.

Its elevation is 106' and it has a static operating pressure of about 96 psi. The highest elevation in the Mountainside Estates high elevation water service area is at the end of Ling Court. Its elevation is 231' and it has a static operating pressure of about 42 psi. Houses that are higher or lower than the water main in the road may have pressures that are higher or lower than these calculated pressures.

The water distribution system piping in the Mountainside Estates high elevation service area consists of 8" ductile iron pipe. The service area includes:

- Hillcrest Avenue
- Mountainside Drive
- Timberline Court
- Edwin Place
- Pike Court
- Tarn Court
- Mary Ellen Way
- Robbie Road
- Laurie Lane
- Ling Court

A drive through survey of the service area counted 118 residences in the service area.

MOUNTAINSIDE ESTATES DOMESTIC WATER DEMAND EVALUATION

As discussed earlier, the Mountainside Estates pump station was designed to provide 100 gpm for peak hourly domestic water demand and 500 gpm for fire flows.

There are currently about 118 residences in the service area. Water usage is recorded at the Mountainside Estates pump station a couple of times each week (see Appendix A – 2018 Mountainside Estates Pump Station Flows). From the recorded water usage, daily usage is calculated by dividing the recorded usage by the number of days between each recording. The Average Gallons per Day per Residence is calculated by dividing the calculated daily usage by the number of residences. Average Daily Flow rate is calculated by dividing the daily usage by 1,440 minutes, the number of minutes in a day.

Water demand constantly changes throughout a day. Generally, there are peak water demand periods in the morning and again in the evening. Since water demand is not constant over a day it is typical to evaluate water systems based on the Peak Hourly Flow. Peak Hourly Flows are usually estimated to be between 3 and 4 times the Average Daily Flow. Since Mountainside is a relatively small subdivision, we have used a peaking factor of 4 to calculate the estimated peak hourly flows. Table 1 is a summary of the monthly flows for the Mountainside Estates Pump Station.

Table 1
2018 Mountainside Estates Water Flow Summary

Month	Average Daily Use (GPD)	Avg. GPD Per Residence	Avg. Daily Flow (gpm)	Estimated Peak Hourly Flow (gpm)[1]
January	16,116	136.6	11.2	44.8
February	17,460	148.0	12.1	48.5
March	14,884	126.1	10.3	41.3
April	15,135	128.3	10.5	42.0
May	15,202	128.8	10.6	42.2
June	18,932	160.4	13.1	52.6
July	20,423	173.1	14.2	56.7
August	16,931	143.5	11.8	47.0
September	14,276	121.0	9.9	39.7
October	14,515	123.0	10.1	40.3
November	16,511	139.9	11.5	45.9
December				
Annual Avg.	**16,399**	**139.0**	**11.4**	**45.6**

1. Estimated Peak Hourly Flow is 4.0 times the Average Daily Flow

The CBJ Water Department was contacted to discuss the estimates of peak hourly flow and they were able to review water flow trends at the Mountainside Estates pumps station using their areawide water monitoring system. They reported that in June and July the peak water flow rates recorded by their system for the Mountainside Estates pump station were constantly varying between 50 and 60 gpm. They believe 60 gpm is a good estimate of the current peak hourly flows at Mountainside Estates.

During Peak Hourly Water Demand periods not all residences will be using water simultaneously. Some will be using water at high rates and some will not be using any water at all. To evaluate future peak hourly water demands it is helpful to consider the current average contribution to the peak hourly flow rate per residence. Since there are about 120 current residences in Mountainside and the current peak hourly flows are estimated at 60 gpm, the average peak hourly flow per residence is 0.5 gpm (60 gpm peak hourly flow/120 residential units = 0.5 gpm peak hourly flow/residential unit).

Of the 100 gpm of the pump station capacity dedicated to meeting peak hourly domestic flows, there remains 40 gpm if 60 gpm is currently being used to meet peak hourly flows. Assuming new residences have similar peak hourly water demands as the existing residences, each new residence would add about 0.5 gpm to the peak hourly water demand. On that basis the remaining 40 gpm of pump station capacity available for meeting peak hourly domestic water demand is sufficient to meet the demand from an additional 80 homes (40 gpm/0.5 gpm per residence = 80 residences).

MOUNTAINSIDE ESTATES WATER PRESSURE EVALUATION

During periods of high water demand such as during a fire, the Alaska Department of Environmental Conservation's (ADEC) Drinking Water Regulations (18 AAC 80.205 (a) (5))

requires a minimum residual pressure of 20 psi in water distribution systems after accounting for pressure losses due to flow conditions.

In a water system, highest water pressures occur at the lower elevations and the lowest pressures occur at the highest elevations. ADEC's expectation is that water system pressures will be above 20 psi under conditions of peak hourly demand plus fire flows. A computer model of the Mountainside Estates water system was developed based on as-built record drawings of the water system layout, elevations and water line sizes. A number of different water system scenarios were evaluated including combinations of existing and future peak hourly water demand and fire flows to see what the impact would be on water system operating pressures. The fire flows were modeled with a 500 gpm fire flow at the end of Robbie Road. This is the location that will result in the greatest pressure losses under conditions of fire flow because it has the fire hydrant that is the furthest away from the pump station and at the highest elevation.

An additional scenario was modelled that included a future 1,000' extension to Robbie Road at the same elevation of the existing end of Robbie Road, to see the impact on water system pressure in any future development under fire flow conditions. Table 2 is a summary of the results from the computer modelling of the system.

TABLE 2
MOUNTAINSIDE ESTATES PROJECTED WATER PRESSURES AT SELECTED LOCATIONS FOR DIFFERENT WATER DEMAND SCENARIOS

Water Demand Scenario	End of Hillcrest Ave.	Pump Station	Timberline Court	Pike Court	Tarn Court	Mary Ellen Way	End of Mtnside Drive	Robbie Road	Laurie Lane	Ling Court
Static Pressures (No Flow) (95 psi at Pump Station)	95.95	95.09	74.29	60.42	50.89	43.96	68.22	50.89	44.39	41.79
Peak Hourly Flow 60 gpm (Existing 118 Residences)	95.95	95.09	74.23	60.36	50.82	43.87	68.12	50.79	44.29	41.69
Peak Hourly Flow 100 gpm (Total 200 Residences)	95.95	95.09	74.18	60.30	50.75	43.76	68.00	50.65	44.16	41.56
Existing Peak Hour (60 gpm) Plus 500 gpm Fire @ Robbie Road	95.95	95.09	70.99	56.30	45.74	36.35	59.17	39.73	34.19	31.59
New Peak Hour (100 gpm) Plus 500 gpm Fire @ Robbie Road	95.95	95.09	70.69	55.93	45.27	35.64	58.33	38.79	33.30	30.70
New Peak Hour (100 gpm) Plus 500 gpm Fire @ End of 1000' Extension to Robbie Road	95.95	95.09	70.69	55.93	45.27	35.64	58.33	34.78	33.30	30.70

In general, it appears that there is a very small decrease in operating system pressures during periods of either existing or future peak hourly flows when compared to the static pressure. When evaluated in combination with fire flow conditions of 500 gpm at the upper end of Robbie Road, a more notable pressure drop of up to about 12 psi is expected in the existing Robbie Road, Ling Court and Laurie Lane area. However, none of the conditions of peak hourly demand in combination with 500 gpm fire flows result in water system pressures less than the ADEC minimum of 20 psi.

APPENDIX A

MOUNTAINSIDE ESTATES PUMP STATION

2018 WATER FLOW RECORDS

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

January, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2	1040	45	95	718,752	74,500	18,625	12.9
3							
4							
5							
6							
7							
8							
9	1000	46	94	720,837	108,500	15,500	10.8
10							
11							
12	0930	48	94	721,312	47,500	15,833	11.0
13							
14							
15							
16	1000	45	95	721,987	67,500	16,875	11.7
17							
18							
19	1000	48	95	722,417	43,000	14,333	10.0
20							
21							
22							
23	1520	48	94	723,097	68,000	17,000	11.8
24							
25							
26	1100	49	94	723,512	41,500	13,833	9.6
27							
28							
29							
30	0900	51	94	724,189	67,700	16,925	11.8
31							
					Averages	**16,116**	**11.2**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

February, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2	1005	50	94	724,678	48,900	16,300	11.3
3							
4							
5							
6	1040	38	92	725,428	75,000	18,750	13.0
7							
8							
9							
10							
11							
12							
13	0940	53	94	726,712	128,400	18,343	12.7
14							
15							
16	1130	49	93	727,196	48,400	16,133	11.2
17							
18							
19							
20	1033	48	94	727,907	71,100	17,775	12.3
21							
22							
23							
24							
25							
26							
27							
28							
					Averages	**17,460**	**12.1**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

March, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2	0830	49	93	729,680	177,300	14,775	10.3
3							
4							
5							
6	1150	49	94	730,365	68,500	17,125	11.9
7							
8							
9	1200	49	94	730,815	45,000	15,000	10.4
10							
11							
12							
13	0915	49	95	731,463	64,800	16,200	11.3
14							
15							
16	1115	48	95	731,905	44,200	14,733	10.2
17							
18							
19							
20	1020	47	94	732,491	58,600	14,650	10.2
21							
22							
23	1000	48	95	732,874	38,300	12,767	8.9
24							
25							
26							
27							
28	0900	48	95	733,565	69,100	13,820	9.6
29							
30							
					Averages	**14,884**	**10.3**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

April, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2							
3	1040	48	94	734,444	87,900	14,650	10.2
4							
5	1545	49	94	734,730	28,600	14,300	9.9
6							
7							
8							
9							
10	1000	48	95	735,488	75,800	15,160	10.5
11							
12	1505	49	94	735,839	35,100	17,550	12.2
13							
14							
15							
16							
17							
18							
19							
20	1110	48	94	736,992	115,300	14,413	10.0
21							
22							
23							
24	0936	46	94	737,629	62,700	15,675	10.9
25							
26							
27	1430	47	94	738,055	42,600	14,200	9.9
28							
29							
30							
					Averages	**15,135**	**10.5**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

May, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2							
3							
4	1135	46	94	739,141	108,600	15,514	10.8
5							
6							
7							
8	1000	48	93	739,783	64,200	16,050	11.1
9							
10	1310	45	94	740,092	30,900	15,450	10.7
11							
12							
13							
14							
15	1020	47	95	740,859	49,700	9,940	6.9
16							
17							
18	1445	47	95	741,337	47,800	15,933	11.1
19							
20							
21	1520	46	94	741,868	53,100	17,700	12.3
22							
23							
24							
25	1015	45	94	742,437	56,900	14,225	9.9
26							
27							
28							
29	0935	48	93	743,109	67,200	16,800	11.7
30							
31							
					Averages	**15,202**	**10.6**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

June, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1	1230	49	93	743,662	55,300	18,433	12.8
2							
3							
4							
5	1015	47	95	744,419	75,700	18,925	13.1
6							
7							
8	1320	47	94	744,896	47,700	15,900	11.0
9							
10							
11							
12	0935	48	92	745,545	64,900	16,225	11.3
13							
14							
15	1335	49	93	746,032	48,700	16,233	11.3
16							
17							
18	1315	48	95	746,524	49,200	16,400	11.4
19							
20							
21							
22	0915	47	95	747,462	93,800	23,450	16.3
23							
24							
25							
26	1000	47	93	748,651	118,900	29,725	20.6
27							
28							
29	0912	47	94	749,106	45,300	15,100	10.5
30							
					Averages	**18,932**	**13.1**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

July, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2	1020	47	93	749,642	53,600	17,867	12.4
3							
4							
5							
6	0825	50	91	750,490	84,800	21,200	14.7
7							
8							
9							
10							
11	1300	46	94	751,470	98,000	19,600	13.6
12							
13	1050	47	92	751,796	32,600	16,300	11.3
14							
15							
16							
17	1030	48	93	752,545	74,900	18,725	13.0
18							
19							
20	1135	47	94	753,065	52,000	17,333	12.0
21							
22							
23							
24	1245	47	93	754,016	95,100	23,775	16.5
25							
26							
27	1505	47	94	754,647	65,800	21,933	15.2
28							
29							
30							
31	1030	46	94	755,730	108,300	27,075	18.8
					Averages	**20,423**	**14.2**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

August, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2							
3	1020	47	94	756,274	54,400	18,133	12.6
4							
5							
6							
7	1020	46	93	756,982	76,800	19,200	13.3
8							
9							
10	1010	50	94	757,435	45,300	15,100	10.5
11							
12							
13							
14	1000	45	93	758,089	65,400	16,350	11.4
15							
16							
17	1010	47	94	758,683	59,400	19,800	13.8
18							
19							
20							
21	1030	47	95	759,377	69,400	17,350	12.0
22							
23							
24	1245	48	94	759,842	46,500	15,500	10.8
25							
26							
27							
28	1340	47	93	760,497	65,500	16,375	11.4
29							
30							
31	0825	48	94	760,934	43,700	14,567	10.1
					Averages	**16,931**	**11.8**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

September, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2							
3							
4	1435	42	94	761,661	72,700	18,175	12.6
5							
6							
7	0930	46	93	762,065	40,400	13,467	9.4
8							
9							
10							
11	1020	49	94	762,637	57,200	14,300	9.9
12							
13							
14	0955	45	94	763,041	40,400	13,467	9.4
15							
16							
17							
18	1055	50	93	763,656	61,500	15,375	10.7
19							
20							
21	1020	45	94	764,057	40,100	13,367	9.3
22							
23							
24							
25	1205	47	93	764,618	56,100	14,025	9.7
26							
27							
28	0930	46	94	764,979	36,100	12,033	8.4
29							
30							
					Averages	**14,276**	**9.9**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

October, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2	1000	47	93	765,571	76,551	19,138	13.3
3							
4							
5	0955	47	93	765,996	42,500	14,167	9.8
6							
7							
8							
9	1010	47	94	766,616	62,000	15,500	10.8
10							
11							
12	1400	47	93	767,005	38,900	12,967	9.0
13							
14							
15							
16	1015	46	94	767,567	56,200	14,050	9.8
17							
18							
19	0910	47	93	767,952	38,500	12,833	8.9
20							
21							
22							
23	1450	46	94	768,552	60,000	15,000	10.4
24							
25							
26	1010	47	93	768,926	37,400	12,467	8.7
27							
28							
29							
30							
31							
					Averages	**14,515**	**10.1**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

November 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2							
3							
4							
5							
6	1030	48	93	770,616	169,200	15,382	10.7
7							
8							
9	1010	47	95	771,102	48,600	16,200	11.3
10							
11							
12							
13	1020	48	93	771,820	71,800	17,950	12.5
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
					Averages	**16,511**	**11.5**

Wetland Delineation Report for the Richland Manor, Section 1, Mountainside Estates, Juneau, AK



RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

Bosworth Botanical Consulting

RECEIVED
[illegible]
PERMIT CENTER/CDD

November 2018

By:

Bosworth Botanical Consulting
korenbosworth@gmail.com
907-723-1931

For:

William Heumann & Associates
Juneau, Alaska 99801
907-723 4540
WHeumann@msn.com

Table of Contents

Introduction 3

Methods 4

Project Area 5

Results 13

Conclusions 14

References 16

Appendix A - Scanned Sample Site Data Sheets 18

Introduction

William Heumann & Associates is exploring the option of developing a 4.74-acre property at the end of Hillcrest Ave in Mountainside Estates, Old Glacier Highway, Juneau, Alaska. This wetland delineation report and maps are in support of the US Army Corps of Engineers wetland permit for development of this project.



Photo 1 – Location map for Richland Manor Project Area.

Methods

The project area was visited for delineation and mapping on November 14, 2018. The weather at that time was light rain and temperatures were in the lower 50's °F. The month before fieldwork had had slightly lower rainfall than average for October and daily high temperatures were between 45°F and 60°F. Plants were senesced but still recognizable.

Wetlands areas were mapped using the "triple parameter" method described in the U.S. Army Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987) as supplemented by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region - November 2007*. Wetlands are required to have a prevalence of wetland hydrology, hydric soils, and hydrophytic vegetation. Wetlands are determined when positive indicators of all of these three criteria are present. The "routine determination delineation" methodology was used. The wetland boundaries and classifications described herein represent best professional opinion.

Sample points were done at either side of any significant changes in vegetation, soils or hydrology. At each sample point, the wetland status of that point was determined by observing indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. Once representative sample points were done for all wetland/upland types wetland boundaries along the transects were marked with a GPS waypoint.

Sample plot vegetation was divided into three strata; tree, shrub, and forb, and each layer was classified using the dominance test (more than 50% of the dominant plant species across all strata are rated obligate, facultative wet, or facultative) and the prevalence index (a weighted-average wetland indicator status of all plant species in the sample plot). The 2012 U.S. Army Corps of Engineers *National Wetland Plant List –Alaska Region* was used to classify plants.

Hydrology was determined using two methods: (1) visually, if the water table is at or above the surface, or (2) with a soil pit. The presence of standing water, depth to free water in the soil pit, and depth to saturated soils was recorded. Other primary and secondary hydrology indicators were recorded, such as presence of watermarks, sediment deposits, drift deposits, iron deposits, hydrogen sulfide odor, geomorphic position, and drainage patterns in wetlands.

Soil pits were dug to a depth of 12-16 inches, or to bedrock or glaciomarine sediment refusal, to determine if indicators of hydric soils were present. Soil colors were determined from a moist sample with the Munsell Soil Color Chart. Sample point data sheets are included in Appendix A. The project area has young and disturbed soils and so have been treated as "problematic " soils.

The base for the delineation maps was 2013 lidar and photography imagery flown by Aerometrics, Inc. Polygon acreages and stream lengths were calculated in GIS. Final delineation maps were done in ArcMap 10.5. Modeled stream locations were checked in the field.

Project Area

The project area is 4.74 acres of fill and disturbed forest at the end of Hillcrest Ave.

The project area slope before disturbance and fill was gently sloping with a much steeper slope above and flatter below.

Streams on most of the project area have been channelized with one main perennial ditch draining the uphill edge of the fill pad (**R3UB1** – Riverine Upper-Perennial Unconsolidated-Bottom Cobble Gravel) and arching around to drain the lower edge of the fill pad. The ditch then drains into a deeply entrenched, perennial stream that flows along the southern edge of the project area and to Gastineau Channel via the Pioneer marsh. The other smaller tributaries to these streams are seasonal or ephemeral streams (**R4SB3/6** – Riverine Intermittent Streambed Cobble-gravel/Organic)

The fill pad at the end of Hillcrest Ave is two feet of well drained course gravel fill over mixed fill of gravel, sand, and silt. The fill pad is sparsely vegetated with red alder saplings, Sitka willow and reed canary grass. There are two house foundations on the fill pad that are 4-5 feet below the level of the fill. One of the foundations (northern) had the water table at the surface at the time of the survey and patchy wetland vegetation (**PEM1A** – Palustrine Emergent Persistent Seasonally Flooded). There is a small, seasonal, created, drainage coming out of this foundation hole. The other foundation (southern) is at the edge of the fill pad near a deep stream channel and is well-drained. The foundations are both dominated by red alder saplings and horsetail.

The area surrounding the fill pad has disturbed vegetation, soils and hydrology. The vegetation has been cleared and regrown with patchy red alder and western hemlock forest. and the native organic soil is mixed or covered with eroded fill material and the hydrology is altered by channelization (**PFO1B** – Palustrine Forested Broad-Leaved Deciduous Saturated) (**PFO4B** – Palustrine Forested Needle-Leaved Evergreen Saturated).



Photo 2 – The lower part of the perennial ditched stream that surrounds the fill pad.



Photo 3 – Seasonal streams entering the channelized stream east of the fill pad.



Photo 4 – Course gravel on the surface of the fill pad.



Photo 5 – Eroded fill material with silts and gravels over native organic soils at the toe of the fill pad.



Photo 6 – Saturated organic soils uphill of the fill pad.



Photo 7 – Disturbed area with red alder sapling forest.



Photo 8 – steep slope at the south edge of the fill pad. Red alder saplings dominate.



Photo 9 – Western foundation site with the water table at the surface and vegetation dominated by horsetail and red alder saplings.

Table 0-1 - Plant Species List (Lichvar, 2014)

Scientific name	Common name	Indicator status[1]
Alnus rubra	red alder	FAC
Alnus sinuata	Sitka alder	FAC
Athyrium felix-femina	lady fern	FAC
Calamagrostis canadensis	Canada blue-joint	FAC
Carex sitchensis	Sitka sedge	OBL
Cornus canadensis	dwarf dogwood	FACU
Deschampsia beringensis	Bering hair-grass	FAC
Dryopteris dilatata	spiny wood fern	FACU
Equisetum arvense	horsetail	FACU
Gymnocarpium dryopteris	oak fern	FACU
Lysichiton americanum	skunk cabbage	OBL
Menziesia ferruginea	false azalea	FACU
Oplopanax horridus	devil's club	FACU
Picea sitchensis	Sitka spruce	FACU
Rubus pedatus	trailing raspberry	FAC
Rubus spectabilis	salmonberry	FACU
Salix sitchensis	Sitka willow	FAC
Scirpus microcarpus	Bulrush	OBL
Tsuga heterophylla	western hemlock	FAC
Vaccinium ovalifolium	early blueberry	FAC

[1] See Table 2 for abbreviation definitions

Table 0-2 - Indicator code table (Lichvar, 2012)

Indicator Code	Type	Comment
OBL	Obligate Wetland	Almost always occur in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface.
FACW	Facultative Wetland	Usually occur in wetlands, but may occur in non-wetlands. These plants predominately occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.
FAC	Facultative	Occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions.
FACU	Facultative Upland	Usually occur in non-wetlands, but may occur in wetlands. These plants predominately occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.
UPL	Obligate Upland	Almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.
NI	No indicator	Insufficient information was available to determine an indicator status.

Results

Table 0-1 - Sample point table

Sample point	Dominant vegetation / Hydrology / Geomorphology	Cowardin Classification	PJD[2]	Rationale for PJD
1	Fill pad set 5ft. below grade with water table at the surface, seasonal drainage to perennial stream and scattered red alder saplings and horsetail.	PEM1A	Yes	Wetland on RPW[3] that flows into TNW[4]
2	Fill pad set 5 ft. below grade at the edge of deep stream channel - so well-drained. Patchy red alder saplings and horsetail.	upland	No	
3	Toe of fill pad slope, mixed fill and organics, red alder, creeping buttercup, bulrush and reed canary grass dominant.	PFO1B	Yes	Wetland on RPW that flows into TNW
4	Toe of fill pad slope, mixed fill and organics, red alder, saplings, creeping buttercup, lady fern, skunk cabbage, bulrush and reed canary grass dominant.	PFO1B	Yes	Wetland on RPW that flows into TNW
5	Toe of fill pad slope, mixed fill and organics, Sitka spruce and cottonwood saplings, and lady fern dominant.	PFO1B	Yes	Wetland on RPW that flows into TNW
6	Disturbed, gentle hillside with saturated organic soils mixed with uplifted silts, Western hemlock, blueberry and dwarf dogwood dominant.	PFO4B	Yes	Wetland on RPW that flows into TNW
7	Disturbed, gentle hillside with saturated organic soils mixed with uplifted beach deposits. Red alder, salmonberry and skunk cabbage dominant.	PFO1B	Yes	Wetland on RPW that flows into TNW
8	Disturbed, gentle hillside with saturated organic soils mixed with uplifted beach deposits. Western hemlock, blueberry and alse azalea dominant.	PFO4B	Yes	Wetland on RPW that flows into TNW
9	Fill pad/fill pile. Course gravel over mixed fill. Red alder saplings and creeping buttercup dominant	upland	No	

[2] PJD - Preliminary Jurisdictional Determination
[3] TNW - Traditional Navigable Water
[4] RPW - Relatively Permanent Water

Conclusions

Using GIS tools and wetland information gathered in the field, the acreage of wetlands and waters of the US was determined.

There are 3.61 total acres of wetland in the project area.

- **PEM1A** - 0.08 acres
- **PFO4B** - 2.31 acres
- **PFO1B** – 1.22 acres
- **Upland** - 1.13 acres

There are 2,531 linear feet of ephemeral, seasonal and perennial streams in the parcel

- **R4SB3/6** - ephemeral & seasonal (with surface water at least 2 weeks out of the growing season) - 1,316 linear feet
- **R3UB1** - perennial -1,215 linear feet

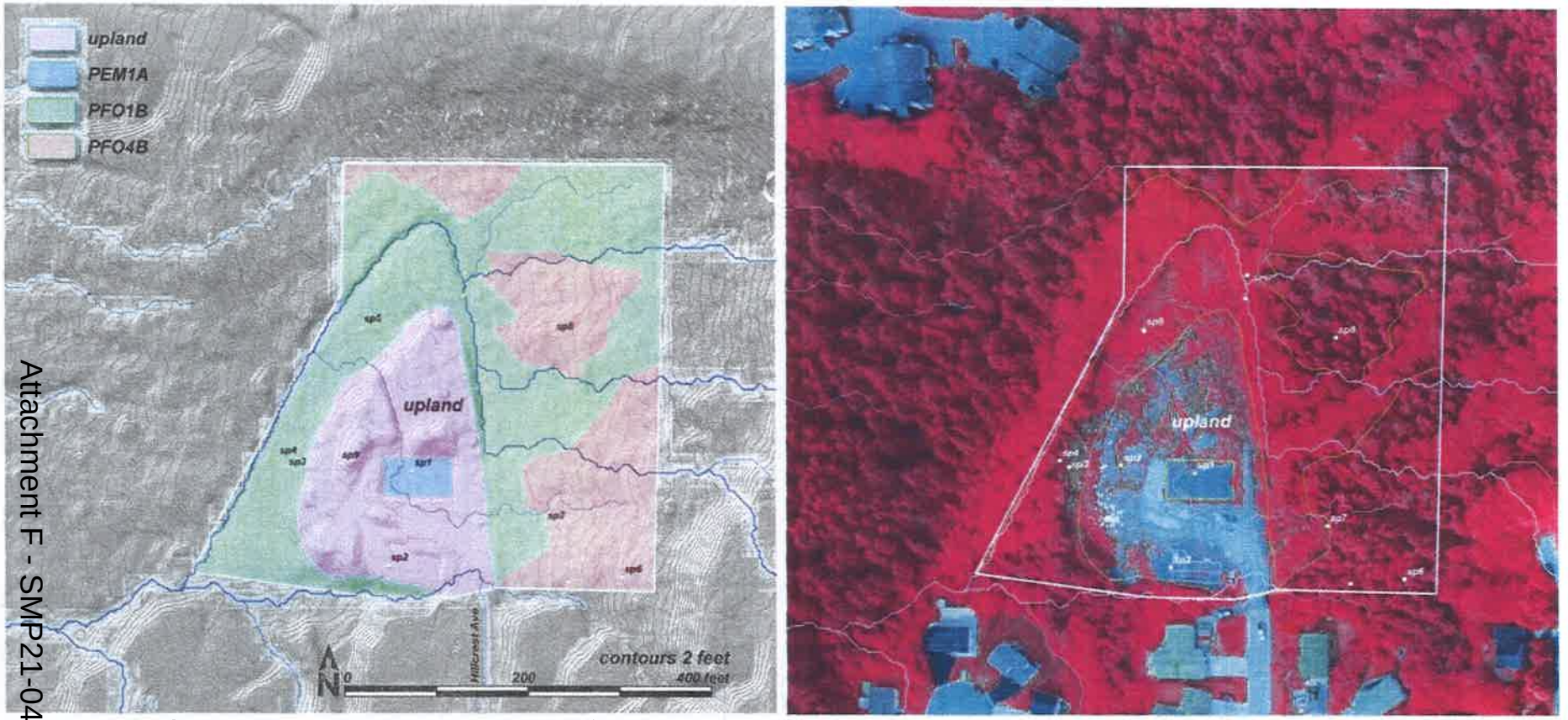


Figure 1 – Wetland Delineation map pair – 2013 CBJ LiDAR hillshade and CIR aerial photo. Sample points (yellow dots) for the project area. The blue lines are the field-checked modeled streams.

Attachment F - SMP21-04 Phase 2

References

ADF&G. 2016. Anadromous Waters Catalog.
https://www.adfg.alaska.gov/sf/SARR/AWC/index.cfm?ADFG=maps.dataFiles

Adamus, Paul, K. Bosworth,, R. Carstensen, F. Naglich, C. Pohl. 2016. *Juneau Wetland Management Plan - Update, Volume 2*. City and Borough of Juneau - CDD

Cooperative Soil Survey. 2010. *Alaska Soil Series Data.*
http://soilsurveydemo.org/soilseries.asp?x=A&sort=Series&st=AK

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. Office of Biological Services, USDI Fish and Wildlife Service. Washington, D.C. FES/OBS-79-31. 131pp.

D'Amore, David V. 2010. personal communication. *Wetland Soils of Northern Southeast Alaska.*

D'Amore, David V., Warren C Lynn,. 2002. *Classification of Forested Histosols in Southeast Alaska.* Soil Sci. Soc. Am. J. 2002 66: 554–562

Hulten, E. 1968. *Flora of Alaska and Neighboring Territories*. Stanford University Press, Stanford, California. 1008 pp.

Miller, R. 1975. *Surficial geology map of the Juneau urban area and vicinity, Alaska*. Miscellaneous Investigations Series I-885.

National Wetlands Working Group/ edited by: B.G. Warner and C.D.A. Rubec, 1997. *The Canadian Wetland Classification System, Second Edition*. Wetland Research Centre, University of Waterloo, Waterloo, Ontario.

Lichvar, Robert W. and John T. Kartesz. 2012. *North American Digital Flora: National Wetland Plant List, version 2.4.0* (https://wetland_plants.usace.army.mil). U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH, and BONAP, Chapel Hill, NC.

Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2014. State of Alaska - Wetland Plant List - The National Wetland Plant List: 2014 Update of Wetland Ratings. Cold Region Research and Engineering Lab. US Army Corps of Engineers. 1-42

Schoephorester, Dale B. and Clarence E. Furbush. June 1974. *Soils of the Juneau Area, Alaska*
U.S. Army Corps of Engineers, *U.S. Army Corp of Engineers Wetlands Delineation Manual*, USDA Soil Conservation Service (NRCS).

Technical Report Y-87-1, Environmental Laboratory. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

U.S. Army Corps of Engineers. 1987. *Corps of Engineers Wetland Delineation Manual.* Technical Report Y-87-1, US Army Waterways Experiment Station, Vicksburg, MS.

US Army Corps of Engineers, Oct. 2007. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region*, Environmental Laboratory, ERDC/EL TR-06-x, US Army Engineer Research and Development Center, Vicksburg, MS.

Appendix A - Scanned Sample Site Data Sheets

SP 1







WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 1
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): fill
Local relief (concave, convex, none): concave Slope (%): 0
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PEM1A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No	Is the Sampled Area within a Wetland? Yes ✓ No
Hydric Soil Present?	Yes ✓ No	
Wetland Hydrology Present?	Yes ✓ No	

Remarks: Foundation area on fill pad

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum			
1. Alnus rubra (Alru)	30	✓	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover:	20% of total cover:		
Herb Stratum			
1. Equisetum arvense (Eqar)	50	✓	FAC
2. Juncus arcticus (Juar)	5		FACW
3. Scirpus microcarpus (Scmi)	2		OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	57		
50% of total cover: 28.5	20% of total cover: 11.4		

Plot size (radius, or length x width) 10x10 % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) Total Cover of Bryophytes

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

US Army Corps of Engineers Alaska Version 2.0

SOIL Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16+	—	100%					coarse gravel	WT

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:
- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- ___ Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:
- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ✓ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:
New surface!

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)
- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)
- ___ Water-stained Leaves (B9)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Salt Deposits (C5)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ✓ No ___ Depth (inches): 1-0
Water Table Present? Yes ✓ No ___ Depth (inches): 0-2
Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SP2



WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 2
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): fill pad
Local relief (concave, convex, none): concave Slope (%): —
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: —
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No	Is the Sampled Area within a Wetland? Yes No ✓
Hydric Soil Present?	Yes	No ✓	
Wetland Hydrology Present?	Yes	No ✓	

Remarks:
Next to deep stream gully → well-drained.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover:	20% of total cover:		
Herb Stratum			
1. Picea sitchensis (Pisi) seedlings	10	✓	FU
2. Salix sitchensis (Sasi) "	5	✓	F
3. Alnus rubra (Alru) "	5	✓	F
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	20		
50% of total cover:	10	20% of total cover:	4

Plot size (radius, or length x width) 10x10 % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) Total Cover of Bryophytes

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

SOIL Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16+							course gravel	unsat.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- ___ Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ___ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-stained Leaves (B9)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Salt Deposits (C5)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): —

Water Table Present? Yes ___ No ✓ Depth (inches): 7½

Saturation Present? (Includes capillary fringe) Yes ___ No ✓ Depth (inches): 7½

Wetland Hydrology Present? Yes ___ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers Alaska Version 2.0

SP3





WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 3
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): toe-of-fill/hillside
Local relief (concave, convex, none): none Slope (%): 4%
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland? Yes ✓ No ____
Hydric Soil Present?	Yes ✓ No ____	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover: ____ 20% of total cover: ____			
Sapling/Shrub Stratum			
1. Alru	50	✓	F
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover: ____ 20% of total cover: ____			
Herb Stratum			
1. Ranunculus repens (Rare)	30	✓	F
2. Scirpus microcarpus (Scmi)	10	✓	OB
3. Phalaris arundinacea (Phar)	5		OB
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 45			
50% of total cover: 22.5 20% of total cover: 9			

Plot size (radius, or length x width) 15 x 15 % Bare Ground ____
% Cover of Wetland Bryophytes ____ (Where applicable) Total Cover of Bryophytes ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

US Army Corps of Engineers Alaska Version 2.0

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16+	2.5Y 3/2	100%					mixed fill - silt & gravel - sat.	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- ___ Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ✓ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:

Mixed-fill

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-stained Leaves (B9)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Salt Deposits (C5)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): 7+2

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers Alaska Version 2.0

SP4





WP4

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 4
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): hillside toe-of-slope
Local relief (concave, convex, none): concave Slope (%): 2
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No	Is the Sampled Area within a Wetland? Yes ✓ No
Hydric Soil Present?	Yes ✓ No	
Wetland Hydrology Present?	Yes ✓ No	

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover: 20% of total cover:			
Sapling/Shrub Stratum			
1. Alru	40	✓	FAC
2. Pisi	5		FAC
3.			
4.			
5.			
6.			
Total Cover: 45			
50% of total cover: 22.5 20% of total cover: 9			
Herb Stratum			
1. Ranunculus repens (Rare)	10	✓	FAC
2. Atfe	20	✓	FAC
3. Scmi	10	✓	OBL
4. Phar	5		OBL
5. Lyam	10	✓	OBL
6.			
7.			
8.			
9.			
10.			
Total Cover: 55			
50% of total cover: 27.5 20% of total cover: 11			
Plot size (radius, or length x width) 15' x 15' % Bare Ground			
% Cover of Wetland Bryophytes (Where applicable) Total Cover of Bryophytes			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

US Army Corps of Engineers Alaska Version 2.0

WP4

SOIL Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	2.5YR 3/2	100					silt + gravel fill	Sat
7-13+	5YR 2.5/2	100					peat	WT

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ✓ Histosol or Histel (A1)
- __ Histic Epipedon (A2)
- __ Hydrogen Sulfide (A4)
- __ Thick Dark Surface (A12)
- ✓ Alaska Gleyed (A13)
- __ Alaska Redox (A14)
- __ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __ Alaska Color Change (TA4)[4]
- __ Alaska Alpine Swales (TA5)
- __ Alaska Redox With 2.5Y Hue
- __ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Dry-Season Water Table (C2)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-stained Leaves (B9)
- __ Drainage Patterns (B10)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Salt Deposits (C5)
- __ Stunted or Stressed Plants (D1)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): ____

Water Table Present? Yes ✓ No ____ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

stream/ditch below

SP5





WPS

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 5
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): toe of fill
Local relief (concave, convex, none): _____ Slope (%): 2
Subregion: SE Alaska Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: _____ NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	Is the Sampled Area within a Wetland?	Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____		
Wetland Hydrology Present?	Yes ✓ No _____		

Remarks: slash

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover: _____ 20% of total cover: _____			
Sapling/Shrub Stratum			
1. Populus balsamifera (Poba)	10		F
2. Picea sitchensis (Pisi)	35	✓	FU
3. Ribes glandulosum (Rigl)	5		F
4. Rubus spectabilis	5		FU
5.			
6.			
Total Cover:	55		
50% of total cover: 27.5 20% of total cover: 11			
Herb Stratum			
1. Athyrium felix-femina (Atfe)	50	✓	F
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:			
50% of total cover: _____ 20% of total cover: _____			

Plot size (radius, or length x width) 15' x 15' % Bare Ground _____
% Cover of Wetland Bryophytes _____ (Where applicable) Total Cover of Bryophytes _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 65	x 3 =	195
FACU species 40	x 4 =	160
UPL species	x 5 =	
Column Totals: 105 (A)		355 (B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
✓ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: Disturbance - adopted species (Pisi, Rusp FU)

US Army Corps of Engineers Alaska Version 2.0

SOIL Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 2.5/1	100					Peat w/ gravel	sat.
8-12+	10YR 2/2	100					Peat w sand	WT

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ✓ Histosol or Histel (A1)
- __ Histic Epipedon (A2)
- __ Hydrogen Sulfide (A4)
- __ Thick Dark Surface (A12)
- __ Alaska Gleyed (A13)
- __ Alaska Redox (A14)
- __ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __ Alaska Color Change (TA4)[4]
- __ Alaska Alpine Swales (TA5)
- __ Alaska Redox With 2.5Y Hue
- __ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Dry-Season Water Table (C2)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-stained Leaves (B9)
- __ Drainage Patterns (B10)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Salt Deposits (C5)
- __ Stunted or Stressed Plants (D1)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): —

Water Table Present? Yes ✓ No ____ Depth (inches): 6-7

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 10

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SP6





WP10

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 6
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): hillside - terrace
Local relief (concave, convex, none): complex Slope (%): 3%
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PF04B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No	Is the Sampled Area within a Wetland?	Yes ✓ No
Hydric Soil Present?	Yes ✓ No		
Wetland Hydrology Present?	Yes ✓ No		

Remarks: 2nd growth w/ lots of slash + stumps

VEGETATION -- Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla (Tshe)	60	✓	F
2. Pisi	15		FU
3. Poba	5		F
4.			
Total Cover:	80		
50% of total cover: 40	20% of total cover: 16		
Sapling/Shrub Stratum			
1. Vaccinium ovalifolium (Vaov)	10	✓	F
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover:	20% of total cover:		
Herb Stratum			
1. Cornus canadensis (Coca)	10	✓	FU
2. Tiarella trifoliata (Titr)	3	✓	F
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	13		
50% of total cover: 6.5	20% of total cover: 2.6		

Plot size (radius, or length x width) 15'x15' % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) Total Cover of Bryophytes

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

US Army Corps of Engineers Alaska Version 2.0

SOIL Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100%					peat + roots	sat.
2-4	2.5Y 3/1	100%					sand w/ peat	sat
4-12	2.5Y 3/1	100%					sand w/ silt + gravel + OM	sat. + W.T.
12-15	2.5Y 3/1	90%	5YR 3/4	10%			sand	W.T.
15+	10YR 2/2	100%					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:
- ✓ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- ___ Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:
- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks: Mixed peat & fill sediment washed down.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)
- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)
- ___ Water-stained Leaves (B9)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Salt Deposits (C5)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No ✓	Depth (inches): –
Water Table Present?	Yes ✓	No ___	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes ✓	No ___	Depth (inches): 0

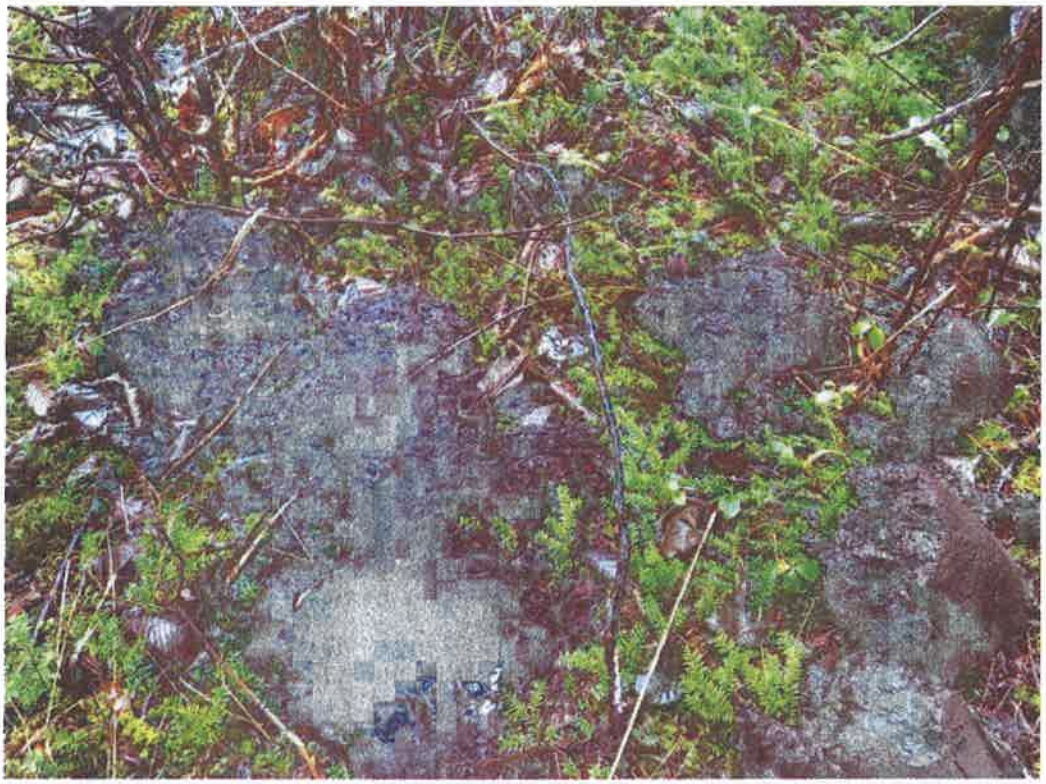
Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SP7





WP11

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 7
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): hillside swale
Local relief (concave, convex, none): concave Slope (%): 2
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ✓, Soil , or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No	Is the Sampled Area within a Wetland?	Yes ✓ No
Hydric Soil Present?	Yes ✓ No		
Wetland Hydrology Present?	Yes ✓ No		

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Alru	60	✓	F
2.			
3.			
4.			
Total Cover:			
50% of total cover: 20% of total cover:			
Sapling/Shrub Stratum			
1. Menziesia ferruginea (MEFE)	20	✓	FU
2. Rubus spectabilis (RUSP)	10	✓	FU
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover: 20% of total cover:			
Herb Stratum			
1. Lysichiton americanum (LYAM)	30	✓	OB
2. Tsuga heterophylla (TSHE)	15	✓	FACU
3. Cornus canadensis (COCA)	2		FU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 47			
50% of total cover: 23.5 20% of total cover: 9.4			
Plot size (radius, or length x width) % Bare Ground			
% Cover of Wetland Bryophytes (Where applicable) Total Cover of Bryophytes			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

US Army Corps of Engineers Alaska Version 2.0

SOIL Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 2.5/1	100					Peat	sat
12+	10YR 2/3	100					Peat + sand	WT

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:
- ✓ Histosol or Histel (A1)
- __ Histic Epipedon (A2)
- __ Hydrogen Sulfide (A4)
- __ Thick Dark Surface (A12)
- __ Alaska Gleyed (A13)
- __ Alaska Redox (A14)
- __ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:
- __ Alaska Color Change (TA4)[4]
- __ Alaska Alpine Swales (TA5)
- __ Alaska Redox With 2.5Y Hue
- __ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)
- __ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Dry-Season Water Table (C2)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)
- __ Water-stained Leaves (B9)
- __ Drainage Patterns (B10)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Salt Deposits (C5)
- __ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ✓	No ____	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes ✓	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers Alaska Version 2.0

SP8





WP12

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 8
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): hillside terrace
Local relief (concave, convex, none): Convex Slope (%): 2%
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PF04B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No	Is the Sampled Area within a Wetland? Yes ✓ No
Hydric Soil Present?	Yes ✓	No	
Wetland Hydrology Present?	Yes ✓	No	

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tshe	60	✓	F
2. Pisi	12		FU
3.			
4.			
Total Cover: 72			
50% of total cover: 36	20% of total cover: 14.4		
Sapling/Shrub Stratum			
1. Mefe	20	✓	FU
2. Vaov	15	✓	F
3. Oplopanax horridus (Opho)	3		FU
4.			
5.			
6.			
Total Cover: 38			
50% of total cover: 19	20% of total cover: 7.6		
Herb Stratum			
1. Rubus pedatus (Rupe)	3	✓	F
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:			
50% of total cover:	20% of total cover:		

Plot size (radius, or length x width) % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) Total Cover of Bryophytes

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

US Army Corps of Engineers Alaska Version 2.0

SOIL Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Peat	sat
10-15	10YR 2/1	100					Peat w/ sand	sat.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:
- ✓ Histosol or Histel (A1)
- __ Histic Epipedon (A2)
- __ Hydrogen Sulfide (A4)
- __ Thick Dark Surface (A12)
- __ Alaska Gleyed (A13)
- __ Alaska Redox (A14)
- __ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:
- __ Alaska Color Change (TA4)[4]
- __ Alaska Alpine Swales (TA5)
- __ Alaska Redox With 2.5Y Hue
- __ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: ____
Depth (inches): ____

Hydric Soil Present? Yes ✓ No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)
- __ Surface Water (A1)
- __ High Water Table (A2)
- ✓ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Dry-Season Water Table (C2)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)
- __ Water-stained Leaves (B9)
- __ Drainage Patterns (B10)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Salt Deposits (C5)
- __ Stunted or Stressed Plants (D1)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): —
Water Table Present?	Yes ____	No ✓	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes ✓	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers Alaska Version 2.0

SP9





– WP9

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 9
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): file pile
Local relief (concave, convex, none): Convex Slope (%): 2
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: –
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No	Is the Sampled Area within a Wetland? Yes No ✓
Hydric Soil Present?	Yes ✓ No	
Wetland Hydrology Present?	Yes ✓ No	

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

50% of total cover: 20% of total cover:

Sapling/Shrub Stratum			
1. Alru	100	✓	F
2. Sosi	5		F
3.			
4.			
5.			
6.			
Total Cover:	105		

50% of total cover: 52.5 20% of total cover: 21

Herb Stratum			
1. Kore	15	✓	F
2. Phar	5	✓	OB
3. Deschampsia beringensis (Dabe)	5	✓	F
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	25		

50% of total cover: 12.5 20% of total cover: 5

Plot size (radius, or length x width) 15 x 15' % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) Total Cover of Bryophytes

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

US Army Corps of Engineers Alaska Version 2.0

SOIL Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16+	—						course gravel	unsat

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- ___ Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ___ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-stained Leaves (B9)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Salt Deposits (C5)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): —

Water Table Present? Yes ___ No ✓ Depth (inches): >12

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): >12

Wetland Hydrology Present? Yes ___ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers Alaska Version 2.0

BEFORE THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU

MOUNTAINSIDE ESTATES
NEIGHBORHOOD ASSOCIATION, ET AL.,

Appellant,

vs.

CBJ PLANNING COMMISSION, and
MICHAEL AND WILLIAM HEUMANN,

Appellees,

Appeal of:
Notice of Decision
CDD File No. SMP2018-0002

STIPULATED SETTLEMENT AGREEMENT

The parties to this Agreement are the Appellants, consisting of the Mountainside Estates Neighborhood Association and 17 individuals,[1] ("MENA"); the CBJ Planning Commission ("PC"), and Michael and William Heumann, ("Heumanns"). The parties are executing this Stipulated Settlement Agreement in order to resolve this appeal in its entirety, after the Assembly granted their joint motion for a 90 day stay of the appeal for such intended purpose.

Background Information:

The Heumanns applied for approval of a preliminary plat to subdivide and develop the first 12 lots of a phased major subdivision on a 30.67 acre parcel named Richland Manor, which is adjacent to the existing Mountainside Estates subdivision. During the planning process and at the February 26, 2019 hearing on the Heumanns' application, many of the appellants testified against the application, raising concerns that included and related to increased traffic, including construction traffic, pedestrian and child safety, decreased home values, crime and quality of life.

1 In the interests of space, the individual appellants are not listed here but will sign this document at the bottom. Collectively the appellants will be designated as MENA.

On February 28, 2019 the PC issued its decision approving the preliminary plat requested by the Heumanns, with conditions. This appeal followed. The parties then entered into settlement negotiations which have resulted in the following agreements, intended to fully resolve all issues raised in MENA's appeal.

Agreements of the Parties:

The parties agree to the following terms of settlement:

1. SMP 2018 0002 is the preliminary plat approved with conditions, by the PC's February 28, 2019 Notice of Decision ("NOD"), both of which are attached as Exhibit A.
2. Within 30 days of executing this Agreement, the Heumanns will submit an application for the alternative preliminary plat depicted in Attachment B ("alternative plat"). The application will be for approval of Phase 1 of the alternative plat and conditions set out in Exhibit B. For clearer illustration, the features of the alternative plat establishing greenbelt separation on the individual lots between Richland Manor and Mountainside Estates are set out in Exhibit C, ("greenbelt buffers").
3. The parties acknowledge that the alternative preliminary plat application will include the sketch plat in Exhibit D, showing future proposed phases of the Richland Manor subdivision, as required by CBJ 49.15.410, but the application and intended PC action is limited to approval of Phase 1.
4. The following subdivision features, conditions and actions are agreed to between or accepted by the parties as a condition of the dismissal of the appeal and complete settlement of this dispute. To the extent that any of the subdivision features, conditions, or required actions may be included on the alternative plat or the associated conditions, they shall be. The appellants and Heumanns acknowledge, however, that not all features, conditions, notes or

other information appearing on the alternative plat are legally required or enforceable by the Planning Commission and/or the CBJ.

The subdivision features and conditions listed below shall be included or referenced on the plat. To the extent any features, conditions, notes or actions, including, but not limited to, density conditions, are not subject to PC authority or CBJ enforcement jurisdiction, they are indicated with an asterisk* and considered contractual obligations between the Heumanns and Appellants enforceable by direct private legal action to enforce this agreement, or any other lawful process.

(a) Hooter Lane will be developed as a public two-way street, as set out in the alternative plat, subject to CBJ public improvement standards, in CBJ 49.35.

(b) Hooter Lane from Glacier Highway to Hillcrest Avenue, and Hillcrest Avenue and Mountainside Drive shall be developed with a a sidewalk on one side. The number of sidewalks in the remainder of Richland Manor will be determined at the time of future development applications.

(c) *Density: It is agreed that the loop road of Hillcrest Ave. and Mountainside Drive will be developed as single family homes, as depicted on the attached alternative plat.

(d) *Robbie Road development that is connected to Mountainside Estates shall be limited to not more than 7 single family homes, 3 of which may have accessory apartments.

(e) Robbie Road shall terminate and shall not be a point of access to Richland Manor, unless required, and gated, for fire/emergency service access only.

(f) Hillcrest Avenue shall terminate at Hooter Lane. Hillcrest Avenue may connect to Hooter Lane west of the existing Hillcrest alignment as shown in the alternative plat (Exhibit C). Alternatively road access to the northeast portion of Tract B-1 may connect

to the east/west portion of Mountainside Drive across from the entrance to the "pocket" between Hillcrest and Mountainside.

(g) *Greenbelt buffers will be implemented and privately maintained by lot owners as delineated on the alternative plat, Exhibit B (and as more clearly drawn for illustrative purposes in Exhibit C) to separate single family homes from multi-family development. Excavation for purposes of slope stabilization may take place in the greenbelt buffers provided they are allowed to revegetate following construction. In the event this becomes necessary Heumann will consult with adjacent homeowners about the impacts.

5. The following subdivision features, conditions and requirements will not be included or referenced on the plat and are also not matters for PC and/or CBJ enforcement through the platting process, but rather are created by and subject to this contractual agreement as between Heumanns and appellants, and are thus subject to private enforcement by direct private legal action or any other lawful process:

(a) Construction traffic that will utilize roads within Mountainside Estates will be limited to the development and build out of the Hillcrest Avenue extension to Hooter Lane and any development of the seven homes allowed on Robbie Road.

(b) Hooter Lane will be constructed "from the bottom up", meaning that construction will start at Glacier Highway and proceed uphill.

(c) On Tract A, the "pocket" in the loop between Hillcrest Avenue and Mountainside Avenue, there shall be no more than 16 dwelling units, which shall be contained in buildings of no more than 4 units per building, not to exceed two stories each.

(d) Construction traffic for Richland Manor which flows through Mountainside Estates will be limited to the hours between 7:00 a.m. and 7:00 p.m. On days when children are in school in the Juneau School District there will be no construction traffic through

Mountainside Estates between the hours of 7:00 a.m. to 8:15 a.m. and 2:30 p.m. to 3:45 p.m.

(e) Traffic calming measures will be incorporated as part of the CBJ's public right of way adoption process to address changes in traffic patterns or density that may arise from the construction of Richland Manor, subject to CBJ approval. The Heumanns will be responsible for stop signs at all appropriate locations; a 20 MPH posted speed limit; and "Children at Play" warning signs in all appropriate locations within Richland Manor Subdivision. CBJ shall be responsible for similar measures, as appropriate, on Hillcrest Avenue and Mountainside Drive to Craig Street, within Mountainside Estates.

(f) *Water System: As soon as feasible, but in any event prior to connecting up to 80 new residential units to the existing water system and prior to the completion of Mountainside Drive, the Heumanns will connect the water supply system in a loop that encompasses Mountainside Drive and Hillcrest Street or more directly between Hillcrest Avenue and Mountainside Drive. For all units beyond 80, there will be a separate additional water supply developed. Should a unit be disconnected from the water system it may be replace with another.

6. The alternative plat application will be processed in the normal course of business by Community Development Department ("CDD"), followed by the PC's review at a regular PC meeting.

7. CDD has reviewed Attachments B and C, the sketch plat in Exhibit D, and the conditions set out above, and has determined it can conceptually support and recommend approval of the application to the PC, with the associated conditions.

8. Appellants will support the proposed application and agree to timely submit a statement of such support to CDD for inclusion in the packet before the PC.

9. No individual Appellant(s), member of Appellant MENA, MENA representative or Appellee will speak against, obstruct or oppose the alternative plat application or related CBJ, State of Alaska and Federal permits in writing or in public testimony.

10. The Heumanns and Appellants agree that the application is a good faith compromise to settle this appeal, and that if the application is not approved as submitted, either party may request that the stay be lifted to proceed with the appeal of SMP2018 0002. The request must be made within 10 days of the Notice of Decision.

11. The PC has not reviewed, and is not authorized to commit its support and/or approval of the application prior to reviewing it through the normal hearing process, but acknowledges that the application will not automatically supersede or replace SMP2018 0002 unless the PC issues a NOD approving the application as submitted and no appeal is filed by a third party not subject to this agreement.

12. Nothing in this Agreement shall operate or be interpreted to supersede or waive any CBJ Code provision or requirement, including technical plat requirements.

13. If the PC issues a NOD approving the application as submitted and no appeal has been filed by a 3rd party Appellants will file an executed dismissal of the appeal with prejudice, within 3 business days of the expiration of the time limit within to appeal the NOD.

14. Appellants individually and jointly expressly waive their individual and associational rights to appeal to the Assembly under CBJ 01.50, or to otherwise challenge, an NOD that approves the application as submitted. This waiver does not apply to an NOD that alters the terms of this agreement in any significant respect.

15. Should the PC issue a NOD approving the application as submitted which is not appealed by any party, all parties understand that this Agreement shall operate as a full

and final mutual release and discharge of all parties against each other on behalf of themselves, their members, officers, agents, successors, assigns, attorneys, and anyone who can claim through or on behalf of the parties from the current appeal and from any and all past, present, and future appeals or claims relating to SMP 2018 0002 and the approved application. The parties understand and acknowledge that this release and discharge is made for the purpose of settlement and that it may not be construed as an admission of liability.

16. If a third party appeals a Notice Of Decision that approves the alternative plat,, the Heumanns and MENA shall immediately meet and confer (with or without the involvement of the third party appellants) to determine whether there is a solution that is consistent with this Agreement. If an agreement cannot be reached, the Heumanns will have the right to elect to defend against the appeal of the approved alternative plat, in which case MENA will support the Heumanns to the extent necessary to preserve this Agreement, or to abandon the approved alternative plat, lift the stay and defend the original preliminary plat in this appeal brought by MENA.
17. In executing this Agreement, each member of each party fully, completely, and unconditionally acknowledges and agrees that it has had the opportunity to consult with, and have the advice of, duly licensed and competent attorneys, and that it has executed this Agreement after independent investigation, voluntarily and without fraud, duress, or undue influence. Each party expressly consents that this Agreement be given full force and effect according to each and every of its express terms and provisions.
18. Each person executing this Agreement on behalf of another person or organization represents and warrants to each member of all other parties that he or she is fully authorized to execute and deliver this Agreement on behalf of such person or

organization. Each member of each party represents and warrants to all members of all other parties that no consent of any person not a party to this Agreement is necessary in order for this Agreement to be fully and completely binding upon each member of the parties hereto.

19. The parties agree to bear their own costs and attorney fees in this appeal.

Respectfully submitted this 23 day of ~~August~~ Sept 2019.

APPELLANTS, MENA, et al

By: _____
Paul H. Grant, Esq. /Libby Bakalar, Esq.
Alaska Bar No. 7710124

APPELLEE WILLIAM HEUMANN

By: _____
William Heumann

APPELLEE MICHAEL HEUMANN

By: _____
Michael Heumann

APPELLEE PC

By: Jane S. Mores 9/30/19
Jane S, Mores, Esq.
Alaska Bar No. 9011115

SIGNATURES OF INDIVIDUAL APPELLANTS

The following are the individual Appellants in the CBJ Planning Commission appeal designated as No. SMP2018-0002. By signing below each of them certifies that he or she has reviewed the Stipulated Settlement Agreement and the associated exhibits, and agrees that the appeal should be resolved as set out in the Agreement. It is understood that this is a compromise agreement, and that not every Appellant agrees with every term. However, each of the signing Appellants endorses the Settlement as his or her voluntary act, without coercion or undue influence. Each of the signing Appellants agrees that he or she will not oppose the application for approval of the modified plat before the planning commission, and each of them understands that MENA will provide a statement of support for the application.

Dawn Wolfe 9/5/19
Dawn Wolfe date

Eugene Huang 9/11/19
Eugene Huang date

Steve Ilia 9/5/2019
Steve Ilia date

Katherine Sullivan 9/11/19
Katherine Sullivan date

Euming Suewing 9-12-19
Euming Suewing date

Luciana Alinson 9-14-19
Luciana Alinson date

Kerrie Suewing 9-12-19
Kerrie Suewing date

Dave Tallmon 9/12/19
Dave Tallmon date

Kelli Manchester 9/5/19
Kelli Manchester date

Dane Lenaker 9/9/19
Dane Lenaker date

Noelle Blanc 9-12-19
Noelle Blanc date

Tom Rutecki 9-5-2019
Tom Rutecki date

Mary Noreross 9/12/2019
Mary Noreross date

Bob Janes 9/6/2019
Bob Janes date

Kris Coffee 9/5/19
Kris Coffee date

Rhonda Biles 9/5/19
Rhonda Biles date

Mathew Pegues 9/5/19
Mathew Pegues date

EXHIBIT A

Planning Commission

(907) 586-0715
PC_Comments@juneau.org
www.juneau.org/plancomm
155 S. Seward Street • Juneau, AK 99801

PLANNING COMMISSION
NOTICE OF DECISION

Date: February 28, 2019
File No.: SMP2018 0002

Michael & William Heumann
6000 Thane Road
Juneau, AK 99801

Proposal:	A Preliminary Plat for a phased major subdivision to include 12 single-family lots and 1 large tract (13 lots total).
Property Address:	4506, 4508, 4510 Hillcrest Avenue
Legal Description:	Richland Manor Tract B
Parcel Code No.:	7B1001160010
Hearing Date:	February 26, 2019

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated February 14, 2019, and approved the preliminary plat to be conducted as described in the project description and project drawings submitted with the application and with the following conditions:

1. Prior to final plat approval, the following changes shall be made to the preliminary plat:
    a. Complete all 22 requested plat changes listed in the MEMO dated January 31, 2019, from CBJ Engineering & Public Works.
    b. On sheet one (1), label Laurie Lane.
    c. On sheet two (2), label the western lot line with bearing and distances described.
    d. On sheet one (1), show all five (5) lots on the south side of Coogan Drive, created Plat 2009-18.
    e. Through the review process, Blocks A and B have gotten switched. Plat Notes 9 & 10 do not match the plat when referencing the bungalow lots and panhandle lots. Change the plat graphic to match the plat notes or vice versa.
    f. Prior to final plat recording, remove setbacks, wetlands, drainage, and contours from plat graphic and legend.

g. On all pages, use a dashed font to label the original TRACT B.
h. Add the following Plat Note: "Further Subdivision of Tract B-1, Richland Manor 2 Subdivision shall require City & Borough of Juneau Preliminary Platting Requirements indicating adequate access for all lots created in Phase 1, Richland Manor Subdivision 2, and all future Phases."

2. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.

3. The developer shall use Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.

4. The average daily trips (ADT) generated by Phase 1, Richland Manor 2 Subdivision, and all future phases will be included in the ADT's generated by any future development of Tract B1.

5. A Hillside Development Permit may be required if triggered by CBJ 49.70.210(a)(1-5).

6. Sidewalks on both sides of the street are required for Phase 1.

7. All future phases of development may require wetlands delineation.

8. For each pair of panhandle lots sharing a driveway, the applicant must provide a maintenance agreement that is recorded with the subdivision, on forms acceptable to the director, ensuring the required access and parking areas will be constructed and maintained by all future property owners. The applicant shall also create a plat note referencing the easements.

9. The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway shall be paved, whichever length is greater, for all panhandle lots created with this subdivision.

10. The applicant shall construct, or bond for, street lights at each intersection in this subdivision with spacing between lights not to exceed 250 feet.

11. Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.

12. A driveway and parking plan that shows the feasibility of off-street parking shall be submitted and approved by the Director prior to recording the plat.

13. The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue requirements in each dwelling unit within this subdivision.

14. The sketch plat shall be amended to show a future connection to Hooter Lane from Hillcrest Avenue.

15. The applicant must submit a drainage plan showing how drainage will flow from the subdivision to Glacier Highway; this drainage plan must be approved by the CBJ Engineering & Public Works Department. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

16. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to CDD for review by the Director of Engineering & Public Works for compliance with 49.35.140.

17. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to CDD and reviewed and approved by CDD and CBJ Engineering & Public Works.

18. Prior to final plat approval, the applicant must construct, and/or bond for, all required public utilities and improvements.

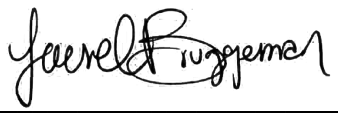
Attachment: February 14, 2019 memorandum from Laurel Bruggeman, Community Development, to the CBJ Planning Commission regarding SMP2018 0002.

This Notice of Decision does not authorize any construction. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

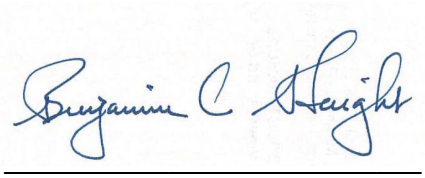
This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance to CBJ 01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ 01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ 49.20.120).

Effective Date: The permit is effective upon approval by the Commission, February 26, 2019.

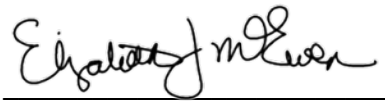
Expiration Date: The permit will expire five (5) years after the effective date, or February 26, 2024, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the subdivision permit was authorized or no final plat has been approved. Application for permit extension must be submitted thirty days prior to the expiration date.

Project Planner: 

Laurel Bruggeman, Planner
Community Development Department



Benjamin Haight, Chair
Planning Commission



Filed With Municipal Clerk

3/5/2019
Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this subdivision. ADA regulations have access requirements above and beyond CBJ - adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.

LOT 2
PLAT
91-9

S 89°52'00" E 726.81

LOT 5
PLAT
83-147

LOT 6
PLAT
83-147

LOT 7
PLAT
83-147

COOGAN DR.
60.00 ROW
N 77°21'30" W

LOT 5
PLAT
2009-18

N 28°30'00" E 784.08

LOT C
PLAT 298

LOT B
PLAT 298

LOT A
PLAT 298

LOT 8
USS 3263

N 28°16'00" E 170.95

HOOTER LANE
60.00 ROW
N77°20'W

20' PUBLIC SEWER & DRAINAGE EASEMENT

20' PUBLIC SEWER LINE EASEMENT

30' DRAINAGE EASEMENT

TEMPORARY 60' CUL-DE- SAC EASEMENT

LOT 1B
PLAT
2003-23

N 28°16'00" E 574.74

LOT 2A
PLAT
2015-41

TRACT 1A1
PLAT
2015-41

N 81°26'30" W 323.97

N 81°26'30" W 365.33
BASIS OF BEARING

20' DRAINAGE EASEMENT PLAT 2015-41

20' DRAINAGE EASEMENT PLAT 99-52

UTILITY EASEMENT PLAT 99-52

LOT 3
PLAT 99-52

LOT 4
PLAT 99-52

LOT 2
PLAT 99-52

20' SEWER EASEMENT

LOT 5
PLAT 99-52

LOT 9
PLAT 88-39

HILLCREST AVE
60' ROW

10' GRADING & DRAINAGE EASEMENT

LOT 19
PLAT 88-39

LOT 20
PLAT 88-39

LOT 18
PLAT 83-146

20' SLOPE EASEMENT PLAT 83-146

MOUNTAINSIDE DR.
60' ROW

LOT 1A
PLAT 97-47

N 89°58'15" W 115.31

S 00°00'00" E 30.00

N 00°00'00" W 20.00

S 43°34'00" W 87.06

N 90°00'00" W 109.38

N 90°00'00" W 189.38

N 90°00'00" W 110.00

15' DRAINAGE & ACCESS EASEMENT PLAT 88-39

N 90°00'00" W 109.11

15' DRAINAGE EASEMENT PLAT 88-39

TRACT B1

1,2543,007 SF

28.76 AC

SEE DETAIL
SHEET 2

S 00°02'26" E 1064.15

FRACTION PROTRACTED SECTION 5
TOWNSHIP 41 SOUTH
RANGE 67 EAST
COPPER RIVER MERIDIAN

LOT 2
PLAT 83-146

N 64°48'00" W
109.34

S 39°33'10" W
118.41

N 90°00'00" W 245.11

LOT 39
PLAT 83-146

LOT 38
PLAT 83-146

20.0 SLOPE EASEMENT
PLAT 83-146

LOT 40
PLAT 83-146

S 00°00'00" E 194.27

ROBBIE ROAD
66' ROW
6% CURRENT

N 90°00'00" W 160.00

N 00°00'00" E 96.00

N 90°00'00" W 70.00

S 00°00'00" E 140.00

N 90°00'00" E 19.89

N 00°00'00" W 69.38

N 90°00'00" W 80.00

N 00°00'00" W 138.78

N 00°00'00" W 187.50

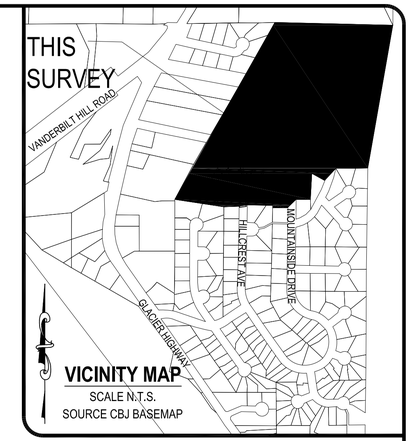
S 00°00'00" E 69.38

LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9

SP1 SP2 SP3 SP4 SP5 SP6 SP7 SP8 SP9

20' DRAINAGE EASEMENT

PROPOSED



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 3650-S SECONDARY MONUMENT RECOVERED
- 3650-S PRIMARY MONUMENT RECOVERED
- RECOVERED #5 REBAR NO CAP
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY CREATED THIS PLAT
- ACCESS EASEMENT CREATED THIS PLAT
- UTILITY EASEMENT CREATED THIS PLAT
- DRAINAGE EASEMENT CREATED THIS PLAT
- SANITARY SEWER EASEMENT CREATED THIS PLAT
- DRAINAGE & SEWER EASEMENT CREATED THIS PLAT
- WETLANDS BOUNDARY
- DRAINAGE
- SETBACK LINE
- TEMPORARY CUL-DE-SAC LIMITS
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47

1"=80'

0 80 160 240 320

WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

STATE OF ALASKA
49 TH
Joshua Frantz Ivanszen
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

draft for review only

PLAT OF
RICHLAND MANOR 2
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT JUNEAU

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20180002	1" = 80'	26 DECEMBER 2018	1 OF 3

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 3650-S SECONDARY MONUMENT RECOVERED
- 3650-S PRIMARY MONUMENT RECOVERED
- RECOVERED #5 REBAR NO CAP
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY CREATED THIS PLAT
- ACCESS EASEMENT CREATED THIS PLAT
- UTILITY EASEMENT CREATED THIS PLAT
- DRAINAGE EASEMENT CREATED THIS PLAT
- SANITARY SEWER EASEMENT CREATED THIS PLAT
- DRAINAGE & SEWER EASEMENT CREATED THIS PLAT
- WETLANDS BOUNDARY
- DRAINAGE
- SETBACK LINE
- TEMPORARY CUL-DE-SAC LIMITS

(N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
(N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
(S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47

HOOTER LANE
60.00 ROW
N77°20'W

LOT 1B
PLAT
2003-23

N 26°05'00" E 20.15
N 77°20'00" W 265.08
20' PUBLIC SEWER & DRAINAGE EASEMENT
N 77°20'00" W 207.08

TRACT B1
1,253,007 SF
28.76 AC

N 90°00'00" E 30.00
30' DRAINAGE EASEMENT
20' PUBLIC SEWER EASEMENT
S 00°00'00" E 113.96
96.67
N 00°00'00" W 113.96
N 00°00'00" W

N 54°28'52" E 45.18
26.83
20.67
S 54°28'52" W 60.19
N 36°24'39" E 155.01
S 36°24'39" W 150.22

N 90°00'00"E 160.00
110.00
50.00
R=60'
LOT 1
3,520 SF 0.08 AC
LOT 2
3,520 SF 0.08 AC
LOT 3
3,520 SF 0.08 AC
32.00
110.00
N 00°00'00" W 96.00
10 X 10 UTILITY EASEMENT
N 00°00'00" W 138.72

N 90°00'00" W 180.00
20' ACCESS EASEMENT FOR LOT 3
20.00
N 90°00'00" E 100.00
LOT 4
7,600 SF
0.17 AC
BLOCK A
LOT 5
5,000 SF
0.11 AC
N 00°00'00" W 70.00
N 00°00'00" W 50.00
50.00
80.00
N 90°00'00" W 100.00
LOT 7
7,600 SF
0.17 AC
LOT 6
5,000 SF
0.11 AC
N 00°00'00" W 70.00
N 00°00'00" W 50.00
50.00
N 90°00'00" E 100.00
20' ACCESS EASEMENT FOR LOT 6
N 90°00'00" W 180.00
160.11
19.89
20' ACCESS EASEMENT FOR LOT 9
N 90°00'00" E 80.11
LOT 8
9,439 SF
0.22 AC
S 00°00'00" E 93.41
LOT 9
6,364 SF
0.15 AC
N 00°00'00" E 79.54
78.00

HILLCREST AVE
N 00°00'00" E
50' ROW

N 90°00'00" E 80.00
LOT 3
5,000 SF
0.11 AC
62.50
N 90°00'00" E 80.00
LOT 2
5,000 SF
0.11 AC
BLOCK B
N 90°00'00" E 80.00
LOT 1
5,000 SF
0.11 AC
N 90°00'00" E 80.00
10' DRAINAGE EASEMENT

S 81°10'15" W 50.60
15' DRAINAGE EASEMENT PLAT 88-39
S 81°10'15" W 10.11

N 25°20'45" E 92.29
20' DRAINAGE EASEMENT
S 27°10'35" W 90.35
N 27°10'35" E 92.29
S 25°20'45" W 96.33
N 27°32'42" E 107.39
S 27°32'42" W 108.84
N 81°26'30" W 21.17
121.71
15' DRAINAGE EASEMENT
BASIS OF BEARINGS
S 81°26'30" E 365.33
N 81°26'30" W 41.14
N 00°00'00" W 39.10
N 00°00'00" W 77.98
15' DRAINAGE & ACCESS EASEMENT

LOT 2A
PLAT
2015-41

TRACT 1A1
PLAT
2015-41

20' DRAINAGE EASEMENT
PLAT 2015-41

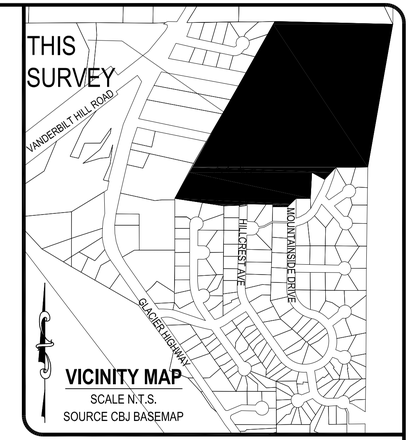
LOT 3
PLAT 99-52

LOT 4
PLAT 99-52

LOT 9
PLAT 88-39

LOT 19
PLAT 88-39

HILLC
5%



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

CHILKAT SURVEYING
BLK B
ROW L 2 / L 1
2019
PLS 12314

TYPICAL MONUMENT DETAIL
N.T.S.
5/8" x 36" REBAR WITH 2.5" ALUMINUM CAP

STATE OF ALASKA
19TH
Joshua Lutz Ivanisevic
No.12314
PROFESSIONAL

draft for review only

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

1"=30'

0 30 60 90 120

PLAT OF
RICHLAND MANOR 2
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

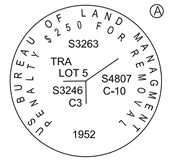
STATE RECORDERS OFFICE AT JUNEAU

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20180002	1" = 30'	26 DECEMBER 2018	2 OF 3

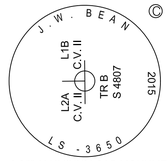
FOUND MONUMENT DESCRIPTIONS:



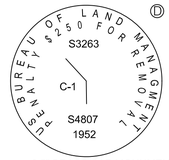
2.5" BRASS CAP MONUMENT



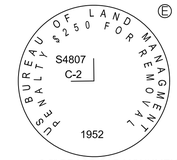
3.25" ALUMINUM CAP MONUMENT



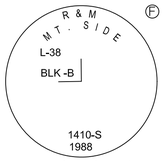
3.25" ALUMINUM CAP MONUMENT



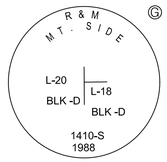
2.5" BRASS CAP MONUMENT



2.5" BRASS CAP MONUMENT



3.25" ALUMINUM CAP MONUMENT



3.25" ALUMINUM CAP MONUMENT

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____ , DATED _____ , 2019_____ , AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, JUNEAU, ALASKA.

_____DATED _____ , 2019

CHAIRMAN OF THE PLANNING COMMISSION

CITY AND BOROUGH OF JUNEAU

ATTEST:

_____

MUNICIPAL CLERK

CITY AND BOROUGH OF JUNEAU

OWNERSHIP CERTIFICATE:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____,2019

_____ WILLIAM C. HEUMANN

_____ MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS____ DAY OF _____, 2019, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015 ON FILE WITH IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER RICHLAND MANOR II SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET AS APPROVED BY CBJ ENGINEERING. . ALL REQUIRED RICHLAND MANOR II SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12 EXCAVATION AND GRADING CODE.

8) OTHER THAN AS SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10FT IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

9) LOTS 1 , 2, AND 3 BLOCK B ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 1 & 2 & 3 BLOCK B ARE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT; OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

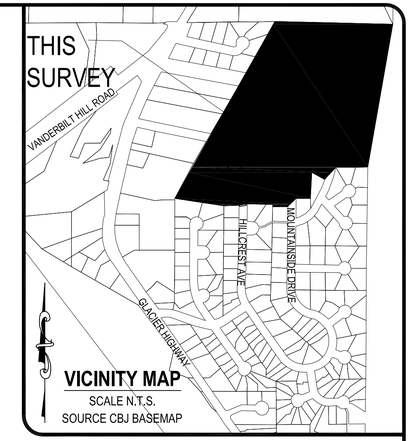
10) LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B ARE PANHANDLE LOTS. AT THE TIME OF PLAT RECORDING, FURTHER SUBDIVISION OF LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B IS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

11) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

11) TOPOGRAPHY DERIVED FROM WATERSHED SCIENCES, INC CBJ LIDAR AND IMAGERY PROJECT DATA COLLECTED MAY 2013 2" CONTOURS.

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 3650-S SECONDARY MONUMENT RECOVERED
- 3650-S PRIMARY MONUMENT RECOVERED
- RECOVERED #5 REBAR NO CAP
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY CREATED THIS PLAT
- ACCESS EASEMENT CREATED THIS PLAT
- UTILITY EASEMENT CREATED THIS PLAT
- DRAINAGE EASEMENT CREATED THIS PLAT
- SANITARY SEWER EASEMENT CREATED THIS PLAT
- DRAINAGE & SEWER EASEMENT CREATED THIS PLAT
- WETLANDS BOUNDARY
- DRAINAGE
- SETBACK LINE
- TEMPORARY CUL-DE-SAC LIMITS
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF N 81°26'30" W AS DELINEATED ON THE OFFICIAL PLAT OF VANDERBILT HILL SUBDIVISION, DATED 29 OCTOBER 1999, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK THE NW CORNER OF LOT 3 AND THE NE CORNER OF LOT 4, VANDERBILT HILL SUBDIVISION AS SHOWN ON THIS PLAT.

0 80 160 240 320

1"=80'



SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

PLAT OF
RICHLAND MANOR 2
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT JUNEAU

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20180002	1" = 30'	26 DECEMBER 2018	3 OF 3

Great for previews Only

Date: 24 JANUARY 2019

To: CBJ COMMUNITY DEVELPOMENT DEPARTMENT
155 SOUTH SEWARD ST.
Juneau, Alaska 99801

Subject: Lot closure reports

Remarks: The lot closure reflects the proposed subdivision of Richland Manor II

BLOCK A
Lot 1

Northing	Easting	Bearing	Distance
2379490.480	2527711.091		
		N 90°00'00" W	110.000
2379490.480	2527601.091		
		N 00°00'00" W	32.000
2379522.480	2527601.091		
		N 90°00'00" E	110.000
2379522.480	2527711.091		
		S 00°00'00" E	32.000
2379490.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 284.000
Polyline Area: 3520 sq ft, 0.08 acres

Lot 2

Northing	Easting	Bearing	Distance
2379458.480	2527711.091		
		N 90°00'00" W	110.000
2379458.480	2527601.091		
		N 00°00'00" W	32.000
2379490.480	2527601.091		
		N 90°00'00" E	110.000
2379490.480	2527711.091		
		S 00°00'00" E	32.000
2379458.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 284.000
Polyline Area: 3520 sq ft, 0.08 acres

Lot 3

Northing	Easting	Bearing	Distance
2379426.480	2527711.091		
		N 90°00'00" W	110.000
2379426.480	2527601.091		
		N 00°00'00" W	32.000
2379458.480	2527601.091		
		N 90°00'00" E	110.000
2379458.480	2527711.091		
		S 00°00'00" E	32.000
2379426.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 284.000
Polyline Area: 3520 sq ft, 0.08 acres

Lot4

Northing	Easting	Bearing	Distance
2379406.480	2527711.091		
		N 90°00'00" W	100.000
2379406.480	2527611.091		
		S 00°00'00" E	50.000
2379356.480	2527611.091		
		N 90°00'00" W	80.000
2379356.480	2527531.091		
		N 00°00'00" W	70.000
2379426.480	2527531.091		
		N 90°00'00" E	180.000
2379426.480	2527711.091		
		S 00°00'00" E	20.000
2379406.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 500.000
Polyline Area: 7600 sq ft, 0.17 acres

Lot 5

Northing	Easting	Bearing	Distance
2379356.480	2527611.091		
		N 00°00'00" W	50.000
2379406.480	2527611.091		
		N 90°00'00" E	100.000
2379406.480	2527711.091		
		S 00°00'00" E	50.000
2379356.480	2527711.091		
		N 90°00'00" W	100.000
2379356.480	2527611.091		

Closure Error Distance> 0.00000
Total Distance> 300.000
Polyline Area: 5000 sq ft, 0.11 acres

Lot 6

Northing	Easting	Bearing	Distance
2379306.480	2527611.091		
		N 90°00'00" E	100.000
2379306.480	2527711.091		
		N 00°00'00" W	50.000
2379356.480	2527711.091		
		N 90°00'00" W	100.000
2379356.480	2527611.091		
		S 00°00'00" E	50.000
2379306.480	2527611.091		

Closure Error Distance> 0.00000
Total Distance> 300.000
Polyline Area: 5000 sq ft, 0.11 acres

Lot 7

Northing	Easting	Bearing	Distance
2379286.480	2527711.091		
		N 90°00'00" W	180.000
2379286.480	2527531.091		
		N 00°00'00" W	70.000
2379356.480	2527531.091		
		N 90°00'00" E	80.000
2379356.480	2527611.091		
		S 00°00'00" E	50.000
2379306.480	2527611.091		
		N 90°00'00" E	100.000
2379306.480	2527711.091		
		S 00°00'00" E	20.000
2379286.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 500.000
Polyline Area: 7600 sq ft, 0.17 acres

Lot 8

Northing	Easting	Bearing	Distance
2379266.480	2527711.091		
		N 00°00'00" W	20.000
2379286.480	2527711.091		
		N 90°00'00" W	160.109
2379286.480	2527550.982		
		S 00°00'00" E	93.380
2379193.100	2527550.982		
		S 81°26'30" E	41.359
2379186.946	2527591.880		
		N 90°00'00" E	39.100
2379186.946	2527630.980		
		N 00°00'00" W	79.535
2379266.480	2527630.980		
		N 90°00'00" E	80.111
2379266.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 513.594
Polyline Area: 9439 sq ft, 0 acres

Lot 9

Northing	Easting	Bearing	Distance
2379186.946	2527701.100		
		N 90°00'00" W	70.120
2379186.946	2527630.980		
		N 00°00'00" W	79.535
2379266.480	2527630.980		
		N 90°00'00" E	80.111
2379266.480	2527711.091		
		S 00°00'00" E	77.983
2379188.497	2527711.091		
		S 81°10'15" W	10.110
2379186.946	2527701.100		

Closure Error Distance> 0.00000
Total Distance> 317.859
Polyline Area: 6364 sq ft, 0 acres

BLOCK B
Lot 1

Northing	Easting	Bearing	Distance
2379196.264	2527761.091		
		N 00°00'00" W	62.500
2379258.764	2527761.091		
		N 90°00'00" E	80.000
2379258.764	2527841.091		
		S 00°00'00" E	62.500
2379196.264	2527841.091		
		N 90°00'00" W	80.000
2379196.264	2527761.091		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0 acres

Lot 2

Northing	Easting	Bearing	Distance
2379258.764	2527761.091		
		N 00°00'00" W	62.500
2379321.264	2527761.091		
		N 90°00'00" E	80.000
2379321.264	2527841.091		
		S 00°00'00" E	62.500
2379258.764	2527841.091		
		N 90°00'00" W	80.000
2379258.764	2527761.091		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0 acres

Lot 3

Northing	Easting	Bearing	Distance
2379321.264	2527761.091		
		N 00°00'00" W	62.500
2379383.764	2527761.091		
		N 90°00'00" E	80.000
2379383.764	2527841.091		
		S 00°00'00" E	62.500
2379321.264	2527841.091		
		N 90°00'00" W	80.000
2379321.264	2527761.091		

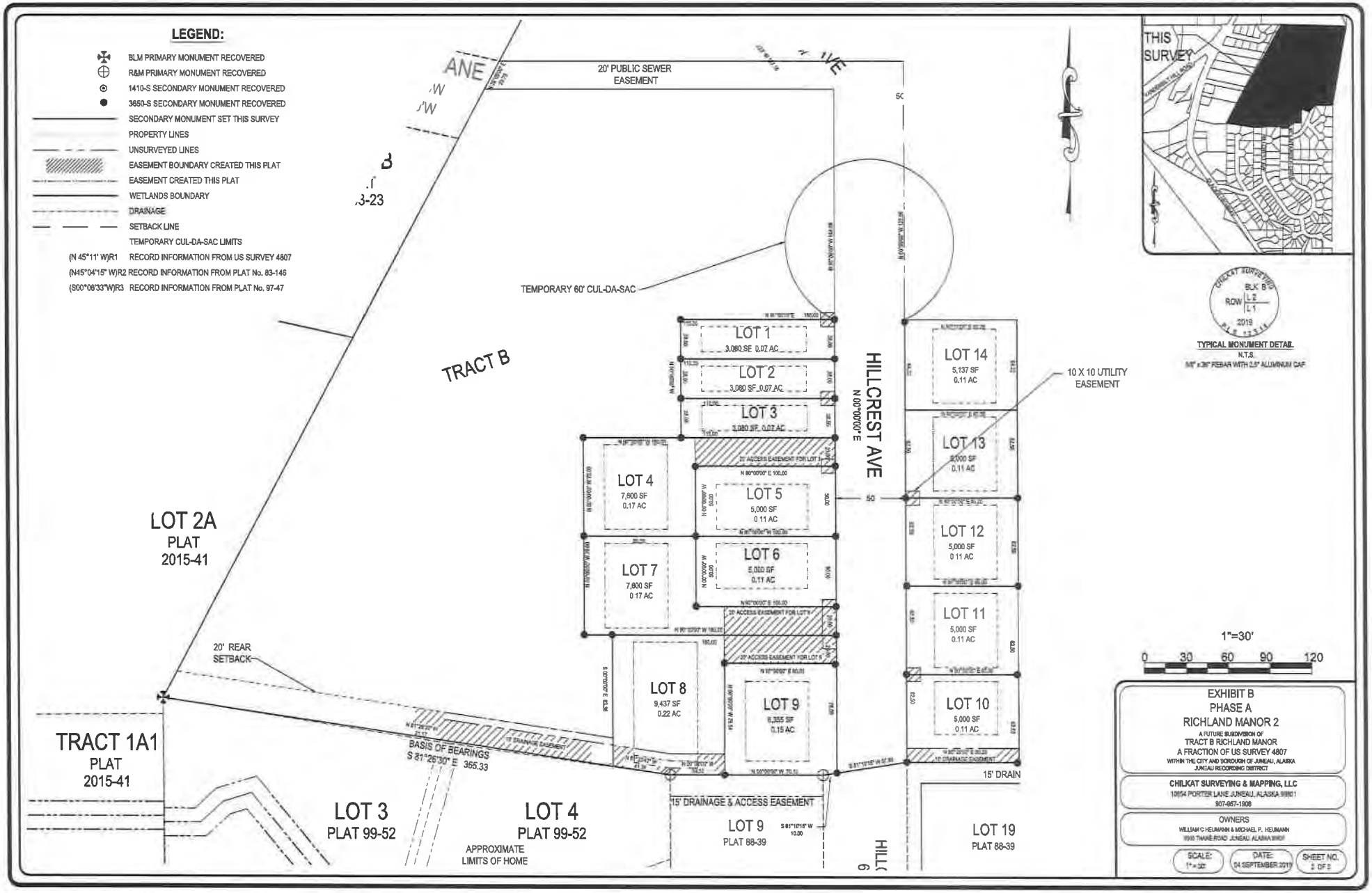
Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0 acres

Tract B1

Northing	Easting	Bearing	Distance
2379193.100	2527550.982		
		N 81°26'30" W	323.971
2379241.313	2527230.618		
		N 28°05'00" E	513.740
2379694.567	2527472.464		
		N 28°16'00" E	170.950
2379845.132	2527553.422		
		N 28°30'30" E	784.080
2380534.140	2527927.653		
		S 89°52'00" E	726.810
2380532.449	2528654.461		
		S 00°02'30" E	1054.150
2379478.299	2528655.227		
		N 90°00'00" W	245.110
2379478.299	2528410.117		
		S 39°33'10" W	118.408
2379387.002	2528334.716		
		N 64°48'00" W	109.340
2379433.556	2528235.782		
		S 00°00'00" E	164.270
2379269.286	2528235.782		
		N 89°58'15" W	115.310
2379269.345	2528120.472		
		S 00°00'00" E	30.000
2379239.345	2528120.472		
		S 43°34'00" W	87.060
2379176.264	2528060.471		
		N 90°00'00" W	110.000
2379176.264	2527950.471		
		N 00°00'00" W	20.000
2379196.264	2527950.471		
		N 90°00'00" W	109.380
2379196.264	2527841.091		
		N 00°00'00" W	187.500
2379383.764	2527841.091		
		N 90°00'00" W	80.000
2379383.764	2527761.091		
		N 00°00'00" W	138.720
2379522.484	2527761.091		
		N 90°00'00" W	160.000
2379522.484	2527601.091		
		S 00°00'00" E	96.000
2379426.484	2527601.091		
		N 90°00'00" W	70.000
2379426.484	2527531.091		
		S 00°00'00" E	140.000
2379286.484	2527531.091		
		N 90°00'00" E	19.890
2379286.484	2527550.981		
		S 00°00'00" E	93.383
2379193.101	2527550.981		

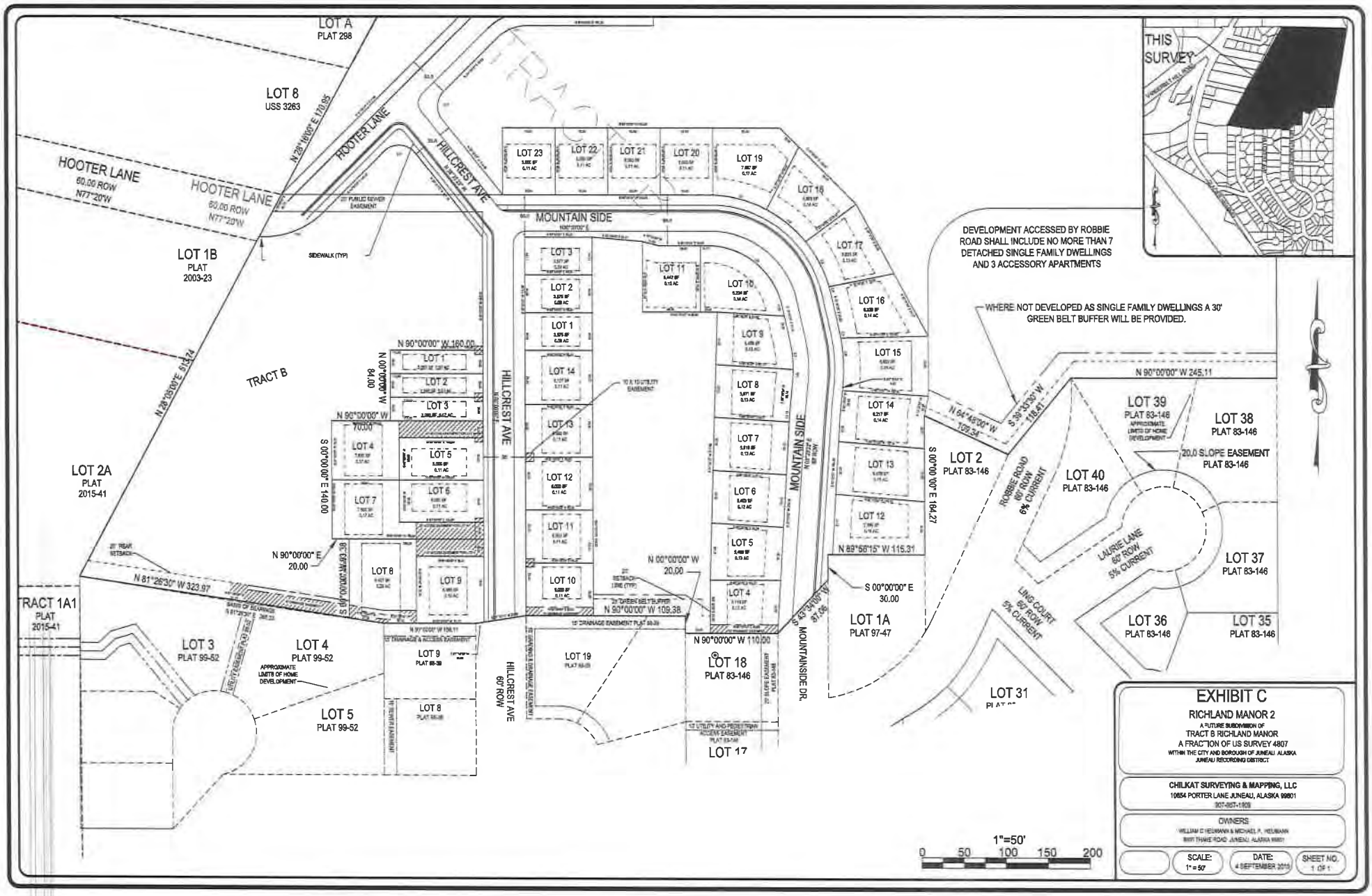
Closure Error Distance> 0.00090 Error Bearing> S 81°26'30" E
Closure Precision> 1 in 6266245.1 Total Distance> 5668.072
Polyline Area: 1253007 sq ft, 29 acres

EXHIBIT B



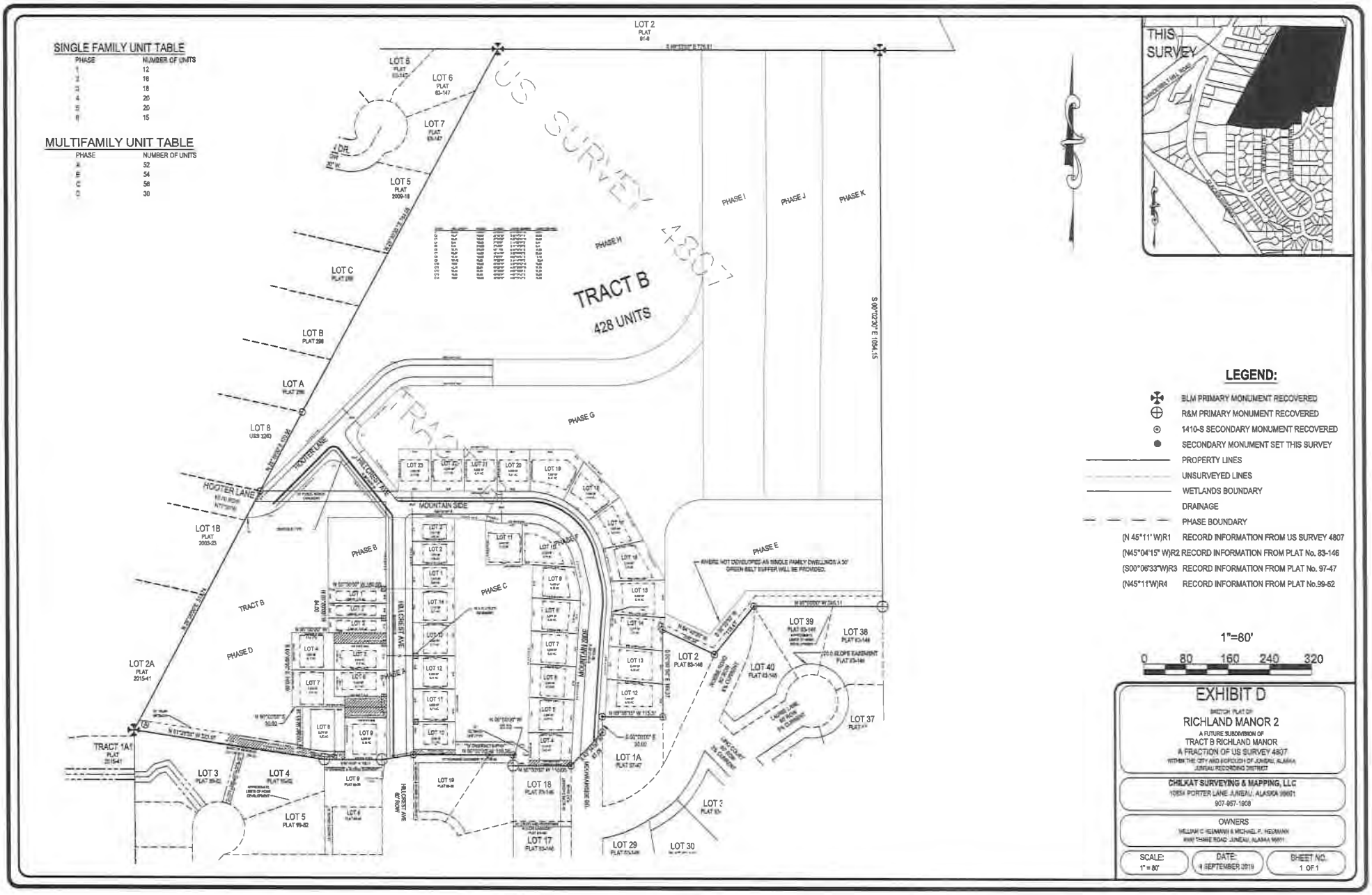
Attachment F - SMP21-04 – Phase 2

EXHIBIT C



Attachment F - SMP21-04 – Phase 2

EXHIBIT D



Attachment F - SMP21-04 – Phase 2

Agenda
Planning Commission
Special Meeting
CITY AND BOROUGH OF JUNEAU
Ben Haight, Chairman
November 12, 2019

I. ROLL CALL

Ben Haight, Chairman, called the Regular Meeting of the City and Borough of Juneau (CBJ) Planning Commission (PC), held in the Assembly Chambers of the Municipal Building, to order at 7:05 p.m.

Commissioners present: Ben Haight, Chairman; Paul Voelckers, Vice Chairman; Michael LeVine, Ken Alper, Dan Hickok, Travis Arndt

Commissioners absent: Shannon Crossley, Nathaniel Dye

Staff present: Jill Maclean, CDD Director; Irene Gallion, Senior Planner; Laurel Christian, Planner; Allison Eddins, Planner

Assembly members: Greg Smith

II. REQUEST FOR AGENDA CHANGES AND APPROVAL OF AGENDA - None

III. APPROVAL OF MINUTES

A. October 15, 2019 DRAFT Minutes – Planning Commission Special Meeting

MOTION: *by Mr. LeVine to approve the October 15, 2019, Planning Commission Special Meeting minutes noting any staff corrections or Commissioner comments.*

The motion passed with no objection.

IV. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS - None

V. ITEMS FOR RECONSIDERATION - None

VI. CONSENT AGENDA

CSP2019 0010:	A State Consistency Review for the Auke Bay Ferry Terminal site improvements
Applicant:	State of Alaska Department of Transportation & Public Facilities
Location:	13445 Glacier Highway

Staff Recommendation
Staff recommends APPROVAL of this project.

MOTION: *by Mr. LeVine to adopt* CSP2019 0010 and approve it with Directors analysis and findings.

The motion passed with no objection.

VII. UNFINISHED BUSINESS

VIII. REGULAR AGENDA

SMP2019 0004:	Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels)
Applicant:	Michael & William Heumann
Location:	4506 Hillcrest Avenue

Staff Recommendation
Staff recommends that the Planning Commission adopt the Director's analysis and findings and **APPROVE** the Preliminary Plat for Phase 1 of the Chilkat Vistas Subdivision. This approval would allow the applicant to submit for the Final Plat Application. The approval is subject to the following conditions:

1. Prior to approval of the final plat, all required plat corrections listed in the MEMO from CDD to Michael Heumann (Applicant), dated November 1, 2019 shall be completed (Attachment H).

2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.

3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the director of Engineering and Public Works for compliance with CBJ 49.35.140.

4. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to the Community Development Department (CDD) and reviewed and approved by CDD and Engineering and Public Works.

5. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.

6. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.

7. The developer shall utilize Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.

8. The developer shall submit a final drainage plan to be approved by Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

9. The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway, whichever length is greater, for all panhandle lots created with this subdivision.

10. Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.

11. The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue (CCFR) requirements in each dwelling unit constructed through Phase 1 of this subdivision.

Before beginning the hearing of this case, Mr. Haight explained the procedure of how hearing a case occurs. He stated that Staff would give a report regarding the case, the Commission would have the opportunity to ask clarifying questions, the applicant would give additional information and the Commission would be able to ask them more questions, then the public would have the chance to make comments regarding the case. After public testimony has been completed, the applicant would have a chance to add additional comments and address any comments and questions from the public and the Commission. Once this is concluded, the Commission would then go into deliberation. Mr. Haight then asked Ms. Maclean to give a brief summary of the background to case SMP2019 0004.

Ms. Maclean stated that a similar, but different, application in February of 2019 for a preliminary plat for a major subdivision in the same location, for the same parcel. That preliminary plat was approved by the Commission; however, it was then subsequently appealed by some of the abutters to the parcel. Over the following months, the appellants, the applicants, and CBJ worked to mediate what was hoped to be a settlement that everyone could agree to. That preliminary plat still stands. What was before the Commission at this meeting is a

new, separate preliminary plat application that is neither a modification nor an amendment to the previous plat. The applicants and the appellants did work together to create a settlement. While some of the settlement is within the Commission's purview, not all of the conditions are within the Commission's purview or something that CBJ would be holding to compliance. Some of the conditions are private agreements between the applicants and the appellants. Ms. Maclean wanted to remind the Commission that, as Ms. Christian goes through the application and the Commission hears the proposal and reviews the Staff Report, the purview of the Commission is still the same as it typically is for any major subdivision. It is per Title 49 and any other agreements, such as the buffers, are not within the Commission's purview. The Commission's purview is just the platting requirements per Title 49.

To clarify that everyone was on the same page procedurally, Mr. LeVine asked, since there is still a current, existing preliminary plat that covers largely the same geography, if the Commission was to approve this application, if it would fully replace the existing preliminary plat, or if there would then be two approved plats.

Ms. Maclean stated that she would have to double check the agreement, but she believed that if the Commission were to approve the preliminary plat being reviewed at this meeting, then there would be two standing plats that had been approved. Once the appeal period for the plat before the Commission at this meeting expires, if it is not appealed, then the applicants and appellants have agreed that they would withdraw the previous plat and move forward with the newest one. If the newest one is also appealed by a third party, or another party, then the applicant reserves the right to have the first preliminary plat stand until the newest one is worked through. Ms. Maclean asked if the Commission understood this procedure.

Mr. LeVine stated that this made sense and was the impression he was under when reviewing the information beforehand. He trusted that someone had made sure it would be okay for the Commission to approve two separate preliminary plats for the same area.

Ms. Maclean stated that the Commission could do so.

Staff Presentation
Ms. Christian gave a presentation regarding the application at hand, highlighting some of the primary differences of the new plat and proposals, compared to the previous plat and proposals. She noted aspects of the application that included Capital City Fire & Rescue requirements, traffic impacts, a reduction in a right-of-way width (ROW) for Phase 1 only, request for alternative roadway construction standards, drainage and grading requirements, agency and public comments, and Staff's findings. Staff recommends that the Planning Commission adopt the Director's analysis and findings and approve the preliminary plat for Phase 1 of the Chilkat Vistas Subdivision with conditions. This approval would allow the applicant to submit for the final plat application.

Questions from Commissioners
To help in terms of background and context, Mr. Voelckers asked to review what the sketch plat means and what its legal standing is in relation to the preliminary plat. A number of phases are shown for development, some showing a lot of detail and some showing none, so the Commission would like to know what that meant.

Ms. Maclean stated that typically with a major subdivision, a sketch plat would be presented and is a requirement of an application. The basis for a sketch plat is for Staff, the Commission, and other agencies to have the chance to review a subdivision for its full, build-out potential, to ensure that the public roads and infrastructure are sized appropriately and is safe. Normally, a developer would not be held to developing a sketch plat exactly so, and as they go through the phases they are allowed to change that or go in a different direction. In this case, the applicant and the appellants have agreed to a number of conditions that do pertain to the sketch plat and the sketch plat was the method that was thought would best fit in with what the Commission also reviews. Through the sketch plat, some of the items are part of the conditions under the Commission's purview, others are part of the private agreement, such as the loop of Mountainside Drive and Hillcrest Avenue and Robbie Road will all be single-family dwelling units. They have also agreed that Robbie Road will only be extending so much as to allow for seven single-family homes, three of which could have accessory apartments. Ms. Maclean noted that the Community Development Department requires that, while Robbie Road may end in a cul-de-sac for seven homes, there may be an emergency service access road only, so future development in a later phase would have connections to the other side in case of an emergency, but it will not be a public road. Other items shown on the sketch plat per the agreement are a buffer between the existing Mountainside Estates Subdivision and the proposed subdivision and sidewalks on one side of the street, among other construction agreements. They have also limited how many units can be constructed in a specific area, but that is not something the Commission can condition, as the CBJ cannot limit density.

Mr. LeVine asked if the loop drawn on the sketch plat around Mountainside Drive was a piece of the settlement agreement, or if it was something under the Commission's approval.

Ms. Maclean stated that, that area was a piece of the private agreement.

Mr. LeVine asked for clarification on all of what the Commission was looking to make a decision on at this meeting.

Ms. Maclean stated that the Commission was only looking at Phase 1, 14 lots along Hillcrest Avenue and the large tract for future development at this meeting. The rest of the information was being presented, because the sketch plat was the method being used to make a settlement between the applicants and the appellants.

Ms. Christian noted that the preliminary plat, minus the color, is what development will look like. It will only have the fourteen lots and the large, remaining tract will just be blank. The

sketch plat will not be recorded with that. It is just something for CBJ files. The preliminary plat and the information with it is what the Commission would be making a decision on at this meeting.

As Richland Manor is neighboring a D18 zone, Mr. Hickok asked if there was a possibility that the applicant could attempt to rezone their parcels in the future.

Ms. Christian stated that she did not know if that was the intent of the applicant, but it could be possible. If the parcel is larger than two acres, or an extension of an existing zoning district, one could apply for a rezone. This parcel would meet either of those rezoning requirements.

Mr. Eiler asked for clarification on CCFR's requirements for separate access after more than 200 residential units are developed in the neighborhood, and where the requirements are derived from.

Ms. Christian stated that those requirements are derived from the International Fire Code and pointed out where the sections were quoted on these requirements.

In regards to condition 9, Mr. Arndt asked if the changes that were currently being made to Title 49 would have an impact on this.

Ms. Christian noted that the changes being made were in regards to Shared Access, but this parcel is considered a panhandle, so the proposed shared access changes to Title 49 would not impact this lot.

Mr. Voelckers asked if accessory apartments counted as two residential lots or if they counted as individual residential units, when calculating the aggregate numbers for a secondary fire access.

Ms. Christian stated that the Fire Code includes accessory apartments, but Staff won't know if the houses will or will not have accessory apartments until they build them, though. Three of them would not be able to have accessory apartments, as they will be bungalow lots, but the remaining 11 lots would be able to build accessory apartments and they will count as two residential units for fire code purposes.

With these calculations in mind, Mr. Alper noted that there could be up to 25 dwelling units in the subdivision, as proposed.

In regards to the corrections required for the preliminary plat, Mr. LeVine asked if these corrections were more for the recording aspect, or if they were for the Commission to look into.

Ms. Christian stated they were for the recording aspect.

With no further questions from the Commission, Mr. Haight asked the applicant to give his presentation.

Applicant Presentation
Michael Heumann, 1925 Davis Avenue Unit D5, Juneau, AK 99801
As the applicants anticipate, they are currently looking at just over 400 units at full build-out, 47 of which are single-family and 353 are multi-family units. The applicants believe this will help to mitigate some of the housing shortage in Juneau and provide a wide range of housing options. One of the challenges that has been seen is a lot of new construction has been more expensive units and some of the bungalow lots and panhandles will provide more-affordable options for people.

Mr. Heumann thanked everyone that had participated in the settlement agreement, as it was a very intensive process. Many were involved, including the applicants, appellants, neighbors, developers, planners, lawyers, surveyors, and engineers. The sketch plat has had a lot of work put into it, and while the Commission is only making a decision on the first phase, the applicants are bound to the rest of it via the settlement agreement, as long as the preliminary plat is approved. It provides a clear future for development, which has helped alleviate some concerns from the surrounding neighbors.

There were many concerns about traffic impact and neighborhood harmony, so the applicants have worked to balance things out in a way that works for everyone. With the previous application, the Commission had express some concerns with drainage, so the applicants hired a civil engineering firm to work on the drainage and come up with a more feasible plan. Roadway traffic wasbrought up as well, so they had the engineers look into that and there is currently a traffic impact analysis underway. The traffic impact analysis is not required for phase one, but the applicants felt it was prudent to begin working on that for future phases. Hooter Lane was also a big concern; it will not be built during this phase, but the applicants have worked out a path forward for that, as it will be required when the multi-family dwelling units are being developed.

Mr. Voelckers thanked Mr. Heumann for the analysis on the future phases, and asked for more elaboration on the proposed development of Hooter Lane regarding the drainage and buried utilities.

Mr. Heumann stated that sewer lines would be run up to the large tract. That could be avoided by building a sewer lift station, but the applicants feel it would be best to make the investment to run the lines in the first phase in order to avoid destroying people's yards and building a lift station that ultimately won't be needed in the future.

To follow, Mr. Voelckers noted Item 3 of the applicant's narrative that described how Hooter Lane will be developed as a fire access in the near future and fully developed as a City street, as

necessary. He asked if developing as a fire access meant being used for only emergency purposes.

Mr. Heumann stated Mr. Voelckers' interpretation was correct. He noted that they would probably improve the lane in the first phase, as installing the sewer lines and doing everything properly will require a road that big trucks can drive on and get the equipment to, so it makes sense to make the fire access as well.

In regards to the negotiations with the Mountainside Neighborhood Association, and working with the people of Tamarack Trails, Mr. Alper thought there may have been some miscommunication to them. Some of the people seem to be under the impression that the future Hooter Lane was an extension of the existing road that serves the condos, whereas the actual platted road kind of runs behind them, other than the initial part that runs off the highway. Mr. Alper asked if there was some sense of clarity with the neighbors there as to where the road is actually going to go.

As the applicants have not yet decided on the exact location of the roadway, Mr. Heumann stated that the discussion with the neighbors to provide clarity has not occurred. He noted that the intent is to build a road that is centered in the ROW. The applicants are aware that some of the concern is with the parking, but the as-built shows that this should not be a problem and the applicants have no intent to eliminate any parking spaces. Some realignment of the driveway may be necessary when the roadway is built, though.

Ms. Maclean pointed out that the settlement agreement did not involve Tamarack Trails. The settlement agreement was between the applicants and some of the residents of Mountainside Estates. There were also internal conversations with CBJ Engineering regarding the future build-out of Hooter Lane. For clarity, Ms. Maclean noted that previously property owners were allowed to construct a driveway in an unconstructed, but platted, public ROW. This is no longer allowed within the Urban Service Area. Allowing that driveway in that use though, does not preclude CBJ or a developer to come in and fully develop that ROW to the extent that it can be constructed. There is also a section of Code that allows for some waivers for any roads that were platted pre-1987, so they wouldn't be required for the portion of Hooter Lane that is platted today. The portion that is platted today is not required to be 60 feet in width, and CBJ would have the ability to waive it one sidewalk to have less impact to the Tamarack Trails condos if the sidewalk is put in on the opposite side of their condos, which was discussed internally.

To clarify, Mr. Alper asked if Ms. Maclean meant the sidewalk would be where within the ROW the physical road would eventually be developed, towards the south side away from the existing condos.

Ms. Maclean stated this was correct. She noted that it is a 40-foot ROW, so there would be travel lanes and one sidewalk, with lighting, on the other side to make less of an impact to the driveway for Tamarack Trails.

Ms. Christian clarified that it is a 60-foot ROW, not 40.

In regards to a section of land referred to in the settlement agreement as "the pocket", Mr. Alper asked about the access to this area and how the applicants planned to develop that.

Mr. Heumann stated that access to this area would be a driveway, of sorts. When the applicants were planning this, they were looking at making a test piece out of the Alternative Residential Subdivision (ARS) Code. They wanted to provide the ability to build a fourplex in this area, if they found this would be the best way to move forward, but envision something more cottage-like. Market forces will dictate what is ultimately decided.

In regards to Ms. Maclean's comments about locating the structure within the Hooter Lane ROW, Mr. Arndt felt it may make sense to push the road over away from the Tamarack Trails condos as proposed, but it looks to be a 10% grade there and it may actually make more sense to put the sidewalk on the Tamarack Trails side to avoid having to put in a crosswalk to get the people to the sidewalk.

Ms. Maclean noted that there are ongoing preliminary discussions to make sure the proposals are possible. The main concern is the grade that the current driveway accessing Tamarack Trails enters has quite a bit of a drop, so it will depend on what the engineering looks like. Staff was trying to balance the need of putting at least one sidewalk and lighting in, but also trying to be the least impactful to the existing condominium development. Pedestrian access was discussed, as well, but there was some feelings that it may work better on the opposite side of the existing ROW.

Public Testimony
Paul Grant, attorney representing the appellants
Mr. Grant told the Commission that he could answer any questions about the legal aspects of the settlement agreement from the perspective of the appellants.

Brian Duncan – 4850 Glacier Highway, President of the Tamarack Trails Condo Association
Mr. Duncan stated that Tamarack Trails has not been a party to any agreement that was settled upon. They have been participants in the CBJ planning process, at best. The initial plat that was approved previously had Hooter Lane being used as a utility corridor and there wasn't much discussion on it in the multiple phases and getting it developed into a road. Tamarack Trails was involved in the process, but not alarmed by the process. Certainly, there is an impact on the condos, since the proposal is to add 400-500 more residents behind the existing condos and a considerable amount of that traffic will be coming down the hillside within 20 feet of the condo development. Putting a road in will be a substantial development to the existing condos and

the development behind them. From what he has seen, it sounds like the applicants and the City are trying very hard to go through all of the processes and get the developments done right. Mr. Duncan is more in favor of the sidewalk being on the far side of the road. It looks like two or three accesses will developed from the condos onto that street, but they have not seen any drawings on what that will look like. However, they know that the development is in the first phase and it is being proposed to use the road as a utility access. You can tell by the numbers though, Hooter Lane will need to be developed. Tamarack Trails is very concerned about their driveway. Currently, 70 plus vehicles come and go through there every day, all day long, so if the driveway is torn up, the logistics for these people are seen to be very concerning. The applicants have stated that they will do their best to make it as least impactful as possible, and Tamarack Trails hopes the CBJ will also help to work on it. They know it has to happen, but they are concerned with how it will happen. It is going to be a major impact to Tamarack Trails.

In regards to Mr. Duncan's comment about two or three access points being developed from the condos to the new road, Mr. Alper asked which access points he was referring to, because he only sees the T-intersection where the existing access driveway would intersect with the future Hooter Lane.

Mr. Duncan stated that Building C has a large parking lot. He has not seen any preliminary drawings, though. Using a drawing presented by Ms. Christian, Mr. Duncan described where he imagined that new access points would have to be developed, in order to have traffic flow properly from the developments.

Matt Pegues – 1409 Mary Ellen Way
Mr. Pegues came as a representative to all the neighbors involved in the appeal and thanked everyone involved in coming to a settlement agreement. It was a tough agreement where a lot of people gave up a lot of time; no one is completely happy on either side, but they managed to come to an agreement, as long as both sides uphold their end of the agreement.

Applicant
Mr. Heumann felt that the statements made by Mr. Duncan are accurate, as there will need to be work done on Hooter Lane. That work has been started by the civil engineers to make sure that everything is developed properly. More analysis will take place. The applicants intend to do their best to work with Tamarack Trails. The applicants recognize that this will impact the people of Tamarack Trails, since the ROW will have to be next to them. In general, this is a disruptive item that is an unfortunate requirement of creating more housing, but the applicants will do their best to be a good neighbor and minimize the impacts.

Discussion
Mr. Levine asked Staff about the meaning behind Condition #5, and why it is phrased differently than the other conditions.

Ms. Christian stated that there are various improvements required for all subdivisions, including water and sewer. This subdivision will have lighting, sidewalks, and road. Engineering requires that those improvements either be constructed to standards that in Code and can be adopted by CBJ, or the applicant has provided a financial guarantee for those improvements before the final plat is recorded. Condition #5 is standard on all subdivisions, so there is no specific reason for the wording.

Regarding the housing count, Mr. Voelckers felt that it would be useful to explicitly state what triggers Hooter Lane on the preliminary plat notes. He was curious if there is a decision where it is sufficiently covered elsewhere.

Ms. Christian stated this was a note that came out of the settlement agreement, but there would be some reorganization of the plat notes, so that it is clear which ones CBJ can enforce and which ones they cannot. That specific plat note just speaks to Hooter Lane being developed at some point in the future. The Fire Code could change, which could result in a different trigger, so it would depend on what the Code is at the time of an application review. Ms. Christian would caution not to put a specific number on the plat.

Mr. Arndt asked if adding other accessory apartments, beyond the ones being proposed, would affect the other lots that access through Craig Street and their ability to add other accessory apartments.

Ms. Maclean stated that it may not prevent them from being able to develop more, but the Fire Marshalls would review tem and determine whether they need to be sprinkled at that point.

With the 14 houses required to small, residential sprinkler systems, Mr. Alper asked if it would still be required to maintain those systems once the second access is developed.

Ms. Maclean stated that it might be possible for them to be removed, if the Fire Marshall accepted the other access; however, she is not sure how feasible that would be once it is constructed. She also noted that, at any point, once this plat is approved and moves forward, the developer can choose to build Hooter Lane sooner, rather than put in the sprinkler systems that they want. As long as they are meeting the Fire Code, either through sprinkling the units or providing the second fire access, they can develop in either manner.

Mr. Alper clarified that once the developer applied for a Building Permit down the road, the intent would then be known if sprinkler systems would be installed or the road would be developed earlier.

Ms. Maclean stated this was correct.

To determine what the Commission was attempting to do for this application, Mr. LeVine clarified that the Commission would be approving the sketch plat with there being some items in the notes, and other places, that come from the settlement, so they needed to make sure that plat meets the Code requirements with the conditions that are and are not required by Code.

Ms. Maclean stated that was correct.

MOTION: *by Mr. LeVine to adopt* SMP2019 0004 and approve it with Directors analysis and findings, subject to the conditions listed in the Staff Report.

The motion passed with no objection.

Paul Grant – 313 Coleman Street, Attorney for the appellants
Mr. Grant stated that the process the applicants, appellants, and everyone involved in the appeal went through for the appeal was quite laborious, but very productive. Mr. Grant commended the applicants for their willingness to compromise on a number of issues; they made some hard decisions, but those decisions will be for the betterment of the project and for the neighborhood, in general. Mr. Grant wanted to suggest to the Commission that there may be a way to institutionalize the process that one goes through for an appeal. It would involve some sort of mediation format, in which there is a period for the parties to get together with a neutral third party. In this case, the attorneys were sort of acting in that role; even though they were representing clients, they were also trying to be negotiators and mediators. Throughout the process, Mr. Grant felt that they made the project better through the process of negotiating for this deal. He believes that the CBJ would be well advised to consider developing some sort of formal process, which is specifically for a contested appeal that has a possibility to be resolved through mediation. Were there a more formal process, it might have been less time consuming and easier on all the parties involved.

Mr. Haight thanked Mr. Grant for his suggestion and felt that the City Attorney would be very interested in reviewing that. If a committee would be developed, Mr. Haight felt Mr. Grant would be helpful.

Mr. Grant stated he would volunteer for such a committee, as he believes that mediation is a very logical way to solve problems.

Ms. Wright noted that, for future reference, it would be good to reopen public testimony and close it again, when someone chooses to speak after it has been closed.

AME2019 0012:	A Text Amendment to adopt Juneau's Historic and Cultural Preservation Plan as part of the CBJ Comprehensive Plan.
Applicant:	City & Borough of Juneau
Location:	Borough-wide

STAFF RECOMMENDATION:

Staff recommends that the Planning Commission review and consider the draft *Historic and Cultural Preservation Plan* and recommend to the Assembly its adoption as an addendum to the Comprehensive Plan.

Staff Presentation
Ms. Eddins gave a brief overview and presentation on the draft Historic and Cultural Preservation Plan, noting some background information, why it is important for Juneau, and how it is organized.

Mr. Hickok asked about how the Plan would develop a subcommittee and how the subcommittee would do research and dictate what is historic and cultural.

Ms. Eddins stated that, if the Plan is adopted, some of the action items would be implemented. There would not be a new subcommittee formed, the Historic Resources Advisory Committee (HRAC) and Staff would continue to work together. One of the first things in mind to do is start applying for funding opportunities. Those opportunities would help to update the historic building surveys to gather an accurate representation of what is in Juneau. Once the surveys are done, HRAC and Staff would want to go out and engage with the public. There has been some discussion about how Juneau has some neighborhoods that are locally significant and there is some interest in having those neighborhoods listed on the national register of historic places. Having these neighborhoods on the national register would create more funding opportunities for preservation coming from the Federal Government. That would be a near-term action item. A long-term action item would be to take these surveys and engage with the public in conversation on becoming a nationally recognized historic neighborhood and if they would like to have design standards that go along with that. HRAC and Staff want to make sure that everything is done in a step-by-step process.

Mr. Hickok asked if certain property owners of a historical building, within a historical neighborhood, would have a say in if they want to be involved in everything, or if it would be a title given to them.

Ms. Eddins stated that they would have a say. One of the requirements for the neighborhoods to be listed on the national register is that a majority of the property owners have to sign onto it. It doesn't have to be 100% in agreement, just a majority. Additionally, there is an option for property owners to opt-out.

Mr. Hickok asked if this would be more for neighborhoods, rather than individual buildings.

Ms. Eddins stated that there are certainly quite a few buildings that are significant and could be listed on the national register themselves. They can pursue the listing on their own, but they don't need help to do that. However, there are certain funds that only a Certified Local Government (CLG) is available for. Therefore, if the City wanted to apply for funding that would create some standards for an entire neighborhood, then HRAC and Staff would play a role in that. To clarify on the process, Mr. Arndt asked if the Commission was looking to approve the draft plan at this meeting and it would continue on to the Assembly for their review, or if this was something the Commission needed to go through completely for them to approve.

Ms. Eddins stated that the Commission was to go through it completely and make a decision.

Ms. Maclean noted that the draft plan was given to Commissioners at the last meeting, in hopes of reviewing it in depth and asking question as this meeting. Staff could continue this discussion at the following Planning Commission, as well, if more time was needed for review.

Mr. Voelckers stated that he had thoroughly read the draft plan and had some comments for Staff. He felt there was a lot of good information in the draft, but didn't feel it was quite ready to go the Assembly, yet.

Mr. Eiler felt that Staff had made a great start on the draft plan, but also wanted to spend more time on reviewing it.

Mr. Arndt asked if this information had come before the Commission at an earlier time.

Mr. Haight stated that the first time the Commission had seen the full draft plan was at the previous meeting, but there had also been some discussions previously to make the Commission aware that the draft plan was coming.

Ms. Eddins noted that the process for this plan had begun in 2016. It has taken awhile to get to this point due to grant funding, though. However, Staff came before the Commission when they applied for the grant funding, when they gave an update for Phase 1 regarding public input, and again when they applied for Phase 2 to write the plan.

In regards to how this fits into the Comprehensive Plan instructed process, Mr. LeVine asked if Staff was following the old process, or the one within in the new Comprehensive Plan, or if they were merging the processes.

Ms. Maclean stated that Staff had been discussing that. For background, she noted that the Assembly had asked the Commission and appointed and Ad Hoc Committee to look at the

Comprehensive Plan and next steps. That committee unanimously agreed that a new Comprehensive Plan was needed. One of the key items being written into the scope of the new Comprehensive Plan is that the consultants clearly address the relationship between the Comprehensive Plan and the other working plans associated with it.

Mr. LeVine thanked Ms. Maclean for the update on the new Comprehensive Plan, but restated his question regarding the process being followed for adopting the Historic and Cultural Preservation Plan.
Ms. Maclean stated that it would be following the same process as before, because the new Comprehensive Plan won't be complete for a few years.

MOTION: *by Mr. LeVine to continue discussion on AME2019 0012 to the next regularly scheduled meeting to allow Commissioners more time to review it and have conversations with Staff.*

The motion passed with no objection.

Ms. Maclean noted that they will want to open the case for public testimony again at the next hearing, as well.

IX. BOARD OF ADJUSTMENT

X. OTHER BUSINESS

XI. STAFF REPORTS

Ms. Maclean noted that she would not be present at the following Commission meeting and Ms. Pierce would be sitting in for her. She asked the Commissioners to hold December 17 for a Planning Commission, in case a hearing was needed, but nothing had been scheduled at that time. The Title 49 Committee is scheduled to meet on December 12. Staff plans to bring the Conditional Use Permit application materials required for the permit to see if the Commission wanted to discuss the standards for the application. The Wetland Review Board is scheduled to meet on December 19. The Blueprint Downtown Steering Committee did not have a quorum for their last meeting; however, the Engineering Department did present on wayfinding as an informational purpose only. The South Douglas/West Juneau Area Plan has been awarded to Corvus and a couple of their subcontractors, so that plan should be starting soon. Ms. Eddins is the main staff person assigned to manage that project. The amended Rules of Order should be ready for the December 10 Planning Commission meeting. The Auke Bay Zoning Ordinance is being submitted to the Law Department. Staff is working on Accessory Apartments, Shared Access, and Common Walls to update them and return them to the Law Department in December, so they will hopefully come before the Commission sometime in January or February. The priority is the Streamside Buffers as a major ordinance, though. The Nonconforming Ordinance is schedule for a Committee of the Whole meeting before the

Assembly on December 2, and it is believed they do not intend to take public testimony that evening.

Mr. Voelckers asked if anything was scheduled for the Auke Bay Area Plan Ad Hoc Committee as this time.

Ms. Maclean stated that the way the Committee had left it was to submit the ordinance to the Law Department and once it was returned, the Committee would meet again. She noted that she has asked Ms. Eddins to schedule the meeting to occur in the evening, in Auke Bay, without public testimony. To establish a quorum, Ms. Maclean asked if Commissioners would be able to attend a Committee of the Whole Planning Commission meeting on November 26 at 6pm, before the Regular Planning Commission meeting.

Commissioners stated they could be present for this meeting.

Regarding the amended Rules of Order, Mr. Arndt asked if it was coming before the Commission to be reviewed and voted on, or what was the Commission hoping to accomplish at the next meeting.

Mr. LeVine stated that the Rules went through the Rules Committee and they had some questions for the Law Department. Mr. LeVine has had discussions with Ms. Mores and he believes the questions have been resolved. There were some substantive changes, but they all seem to be resolved. He expects the Commission to be able to review the amendments and approve them, and there will be no public testimony on this item. The ongoing conversation between the Committee and the Law Department has centered around the conditions under which meetings may be extended past 11pm, 11:30pm, and midnight and some of the nuances about which section the rules regarding public testimony belong in. There has also been an ongoing conversation about how decorum is characterized for the Commissioners and the public.

XII. COMMITTEE REPORTS

Mr. LeVine stated he had attended a meeting held by the Juneau Commission on Sustainability since the previous meeting. They are focused on a variety of topics, including one for a proposal to the Assembly for sustainability awards. There are many questions still, but Mr. LeVine felt it is a good idea.

XIII. LIAISON REPORTS

Mr. Smith stated that a Regular Assembly meeting occurred on November 4 where they joined the remote sales tax commission, hoping to generate more revenue from online sales. They set the Assembly calendar for 2020. They have a retreat on December 7 where they will set their

Assembly goals, some of which will include improving downtown housing, evaluating next steps and benefits with the West Douglas Road and Channel Crossing, developing a downtown transportation plan, updating the Comprehensive Plan, completing the Downtown Area Plan followed by Douglas and The Valley, identifying future industrial land, revitalizing downtown based on the Blueprint Downtown Plan, and maintaining Assembly focus on deferred maintenance. There was a Finance meeting on November 6 where the recycling fee will be removed from water and wastewater utility bills. This creates a $5,000 gap, but the Assembly is looking at ways to make that up. The Alaska Municipal Conference occurs the following week.

Mr. LeVine asked for an update on filling the coming vacancies on the Commission.

Mr. Smith stated that the Assembly is evaluating a few dates in December to appoint members for the Planning Commission and other boards. There may be a chance that the application period will be extending, but he does not know if that will happen.

In regards to the Nonconforming Ordinance being presented at the next Assembly meeting, Mr. Arndt asked if they had any initial thoughts on what direction they would go in.

Mr. Smith stated he was unsure.

Ms. Maclean stated that the Assembly may not have received the packet with that information yet for that meeting.

XIV. CONTINUATION OF PUBLIC PARTICIPATION ON NON-AGENDA ITEMS - None

XV. PLANNING COMMISSION COMMENTS AND QUESTIONS - None

XVI. EXECUTIVE SESSION

XVII. ADJOURNMENT

The meeting was adjourned at 9:01 p.m.

Planning Commission

(907) 586-0715
PC_Comments@juneau.org
www.juneau.org/plancomm
155 S. Seward Street • Juneau, AK 99801

PLANNING COMMISSION
NOTICE OF DECISION

Date: July 29, 2020
File No.: SMF2020 0001

William & Michael Heumann
6000 Thane Road
Juneau, AK 99801

Proposal:	Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels)
Property Address:	4506, 4508, & 4510 Hillcrest Avenue
Legal Description:	Richland Manor Tract B
Parcel Code No.:	7B1001160010
Hearing Date:	July 28, 2020

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated July 16, 2020 and approved the final plat to be conducted as described in the project description and project drawings submitted with the application.

Attachment: July 16, 2020 memorandum from Laurel Christian, Community Development, to the CBJ Planning Commission regarding SMF2020 0001.

This Notice of Decision does not authorize any construction. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance to CBJ §01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ §01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ §49.20.120).

Effective Date: The permit is effective upon approval by the Commission, on July 28, 2020.

Project Planner: Laurel Christian

Laurel Christian, Planner II
Community Development Department

Michael LeVine, Chair
Planning Commission

Filed With Municipal Clerk

8/3/2020
Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this subdivision. ADA regulations have access requirements above and beyond CBJ - adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

PLANNING COMMISSION STAFF REPORT
MAJOR SUBDIVISION FINAL PLAT REVIEW
SMF2020 0001
HEARING DATE: JULY 28, 2020

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

STAFF RECOMMENDATION:

Staff recommends APPROVAL

ALTERNATIVE ACTIONS:

1. **Amend:** amend the approval to require conditions.
2. **Deny:** deny the permit and adopt new findings for items 1-3 below that support the denial.
3. **Continue:** to a future meeting date if determined that additional information or analysis is needed to make a decision, or if additional testimony is warranted.

ASSEMBLY ACTION REQUIRED:

Assembly action is not required for this permit.

STANDARD OF REVIEW:

This is a quasi-judicial decision and requires five (5) affirmative votes for approval.

DATE: July 16, 2020

TO: Planning Commission

THROUGH: Jill Maclean, Director, AICP

BY: Laurel Christian, Planner II

PROPOSAL SYNOPSIS: Applicant requests a final plat review for a phased major subdivision creating 14 lots and 1 large tract for future development (15 lots total)

SUMMARY OF KEY CONSIDERATIONS:

- Preliminary plat approved November 12, 2019
- Conditions of preliminary plat approval have been met
- Developer has begun constructing improvements and provided a financial guarantee for the remaining work

GENERAL INFORMATION	
Property Owner	William & Michael Heumann
Applicant	William & Michael Heumann
Property Address	4506, 4508, & 4510 Hillcrest Ave
Legal Description	Richland Manor Tract B
Parcel Number	7B1001160010
Zoning	D15
Lot Size	30.67 Acres (1,335,985 sq. ft.)
Water/Sewer	Public
Access	Hillcrest Ave
Existing Land Use	Vacant
Associated Applications	SMP2019 0004

SURROUNDING LAND USES	
North	D18 Residential
South	D5 Residential
East	RR Vacant/Forested
West	D5/D15 Residential
SITE FEATURES	
Anadromous	N/A
Flood Zone	N/A
Hazard	N/A
Hillside	N/A Phase I
Wetlands	Yes



49.15.400(a) - Purpose and applicability. *The purpose of this article is to facilitate the subdivision of land to promote the public health, safety, and general welfare of the citizens of the CBJ in accordance with the Comprehensive Plan of the City and Borough of Juneau, Alaska. To meet this objective, this article is intended to:*

(1) Establish a process that facilitates the fair and predictable division of land;

(2) Encourage the efficient and cost-effective provision of public services;

(3) Address traffic and circulation to reduce congestion;

(4) Provide for flexibility in the division and establishment of residential and commercial lots;

(5) Establish procedures for subdividing land to accommodate a variety of housing types; and

(6) Accomplish uniform monumentation for land subdivision and facilitate accurate legal descriptions for land conveyance.

ATTACHMENTS

Item	Description
Attachment A	Application Packet
Attachment B	Final Plat and Closure Report
Attachment C	Abutters Notice and Public Notice Sign
Attachment D	SMP2019 0004 Preliminary Plat Notice of Decision
Attachment E	Certificate of Taxes Paid
Attachment F	Approved Construction Drawings (Includes lighting and grading)
Attachment G	Engineer's Estimate
Attachment H	Reconveyance Agreement
Attachment I	Drainage Report
Attachment J	APL2019 0003 Settlement Agreement

AGENCY REVIEW

No agency review comments have been received at time of writing this staff report. CBJ Engineering and Public Works, the CBJ GIS Analyst, and Capital City Fire & Rescue have endorsed the final plat for recording.

PUBLIC COMMENTS

At time of writing this staff report, no public comments have been received.

DISCUSSION

Background Information – The below table summarizes relevant history for the subject parcel and proposed development.

Item	Summary
SMP2018 0002	Appealed – The applicants applied, and received approval, for a preliminary plat for a phased major subdivision to include 12 single family lots and 1 large tract (13 lots total) in February of 2019 for the Richland Manor subdivision.

Item	Summary
APL2019 0003 Settlement Agreement (Attachment J)	Settlement Reached – SMP2018 0002 was appealed to the CBJ Assembly. As a result of this appeal, the appellants and the applicants came to a settlement agreement, resulting in a revised preliminary plat.
SMP2019 0004 (Attachment D)	The preliminary plat was approved in November of 2019 through SMP2019 0004. This is the current approval on which the applicants are acting.

ANALYSIS

Final Plat - The final plat complies with CBJ 49.15.412, Final Plat Requirements. The proposed lots meet dimensional requirements listed in CBJ 49.25.400. Minor revisions were made to the final plat. With the revisions, the plat is still in general conformity with the preliminary plat. Minor revisions are:

- The bungalow lots (Lots 1, 2 and3) were increased in width from 28 feet to 32 feet and decreased in length from 110 feet to 94 feet. The bungalow lots still meet minimum dimensional requirements:
    - Minimum lot with is 25 feet
    - Minimum lot depth is 80 feet
- Drainage easements were added to the final plat to conform to the drainage plan approved by CBJ Engineering and Public Works.
- Public Drainage & Sewer Easement that connects Hooter Lane to Hillcrest Avenue was widened.

Preliminary Plat Conditions of Approval – The below table lists the conditions of the preliminary plat approval, condition status, and a summary of how the condition is met/unmet.

Condition	Status	Summary
1. Prior to approval of the final plat, all required plat corrections listed in the MEMO from the Community Development Department (CDD) to Michael Heumann (applicant), dated November 1, 2019 shall be completed (Attachment H).	☒Met ☐Unmet ☐On-going	The final plat has been revised and meets the requirements of 49.15.412 for final platting standards. The final plat can be found in Attachment B.
2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.	☒Met ☐Unmet ☐On-going	The taxes for 2020 have been paid. The Certificate of Taxes Paid can be found in Attachment E.
3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the Director of Engineering and Public Works for compliance with CBJ 49.35.140.	☒Met ☐Unmet ☐On-going	Construction drawings for the required improvements have been approved by CBJ Engineering and Public Works (Attachment F).
4. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to the	☒Met ☐Unmet ☐On-going	An engineer's estimate for the cost of the improvements has been submitted and

Condition	Status	Summary
CDD, and reviewed and approved by CDD and Engineering and Public Works.		approved by CBJ Engineering and Public Works and CDD (Attachment G).
5. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.	☒Met ☐Unmet ☐On-going	The applicants and CBJ have signed a reconveyance agreement in accordance with CBJ 49.55.010(5). This will be recorded with the final plat (Attachment H). Reconveyance allows the developer to convey land to CBJ that has the same value as the cost of the improvements. Once the improvements are accepted by CBJ, the land is conveyed back to the developer.
6. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.	☐Met ☐Unmet ☒On-going	This is on-going. The applicants have filed a Storm Water Pollution Prevention Plan with the State Department of Environmental Conservation.
7. The developer shall utilize Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.	☐Met ☐Unmet ☒On-going	This is on-going. The applicants have filed a Storm Water Pollution Prevention Plan with the State Department of Environmental Conservation.
8. The developer shall submit a final drainage plan to be approved by Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.	☒Met ☐Unmet ☐On-going	The final drainage plan and report has been reviewed and accepted by CBJ Engineering and Public Works (Attachment I).
9. The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway, whichever length is greater, for all panhandle lots created with this subdivision.	☒Met ☐Unmet ☐On-going	The cost to pave the panhandle driveways is included in the engineer's estimate for all of the subdivision improvements. This work is covered under the reconveyance agreement.
10. Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.	☒Met ☐Unmet ☐On-going	Lighting is included in approved construction drawings (Attachment F).
11. The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue requirements in each dwelling unit constructed through Phase 1 of this subdivision.	☐Met ☐Unmet ☒On-going	This is on-going. Residential sprinklers will be installed with each individual dwelling. This will be reviewed through the building permit process.

FINDINGS

Final plat approval criteria - Per CBJ 49.15.402(f)(3) the Director makes the following findings:

1. ***Has the applicant complied with any conditions or plat notes as required in the notice of decision approving the preliminary plat?***

   Analysis: The above table demonstrates that all conditions of approval are met or on-going.

   Finding: Yes. All conditions of preliminary plat approval have been met or are on-going.

2. ***Has the applicant constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010?***

   Analysis: The applicant and CBJ have signed a reconveyance agreement which provides land as a financial guarantee for the cost of the required improvements. The reconveyance agreement will be recorded with the final plat.

   Finding: Yes. The applicant has provided a financial guarantee.

3. ***Does the final plat meet the standards set forth in CBJ 49.15.412 for final plats?***

   Analysis: Minor modifications were made to the final plat. These modifications meet the standards set forth in 49.15.412.

   Finding: Yes. The final plat complies with CBJ 49.15.415 Final Plat Standards.

RECOMMENDATION

Staff recommends the Planning Commission adopt the Director's analysis and findings and APPROVE the requested final plat. The final plat approval allows for the Chilkat Vistas Subdivision Phase I – a phased major subdivision – creating 14 lots and 1 large tract for future development (15 lots total). This approval allows the applicant to record the final plat with the State Recorder's Office.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

DEVELOPMENT PERMIT APPLICATION

NOTE: Development Permit Application forms must accompany all other Community Development Department land use applications.

To be completed by Applicant

PROPERTY LOCATION

Physical Address: 4506 Hillcrest Ave. Juneau

Legal Description(s) (Subdivision, Survey, Block, Tract, Lot): Richland Manor Tract B

Parcel Number(s): 7B1001160010

☐ This property located in the downtown historic district

☐ This property located in a mapped hazard area, if so, which _____

LANDOWNER/ LESSEE

Property Owner: William & Michael Heumann

Contact Person: Mike Heumann

Mailing Address: 6000 Thane Rd.

Phone Number(s): 971-261-8014

E-mail Address: mpheumann@hotmail.com

LANDOWNER/ LESSEE CONSENT

Required for Planning Permits, not needed on Building/ Engineering Permits

I am (we are) the owner(s)or lessee(s) of the property subject to this application and I (we) consent as follows:

A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission.

B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application.

X _____ Landowner/Lessee Signature — Date: 5/12/20

X _____ Landowner/Lessee Signature — Date: 5/1220

NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.

APPLICANT

If the same as OWNER, write "SAME"

Applicant: Same

Contact Person

Mailing Address

Phone Number(s)

E-mail Address

X _____ Applicant's Signature — Date of Application

----------DEPARTMENT USE ONLY BELOW THIS LINE----------

Intake Initials	
LEC	
Case Number	Date Received
SMF20-001	5/12/20

This form and all documents associated with it are public record once submitted.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

SUBDIVISION AND DEVELOPMENT PLAN APPLICATION

See subdivision hand-outs for more information regarding the permitting process and the materials required for a complete application.
NOTE: Must be accompanied by a DEVELOPMENT PERMIT APPLICATION form.

To be completed by Applicant

PROJECT SUMMARY

Number of Existing Parcels 1 Total Land Area _____ Number of Resulting Parcels 15

HAS THE PARCEL BEEN CREATED BY A MINOR SUBDIVISION IN THE PRECEDING 24 MONTHS

(X) NO ( ) YES Case Number _____

TYPE OF SUBDIVISION OR PLATTING APPROVAL REQUESTED

MINOR DEVELOPMENT (changing or creating 13 or fewer lots)	MAJOR DEVELOPMENT (changing or creating 14 or more lots)
( ) Preliminary Plat (MIP)	( ) Preliminary Plat (SMP)
(X) Final Plat (MIF)	(✓) Final Plat (SMF)
( ) Panhandle Subdivision	( ) Preliminary Development Plan – PUD (PDP)
( ) Accretion Survey	( ) Final Development Plan – PUD (PDF) Preliminary
( ) Boundary Adjustment	( ) Development Plan – ARS (ARP) Final
( ) Lot Consolidation (SLC)	( ) Development Plan – ARS (ARF)
( ) Bungalow Lot Subdivision	( ) Bungalow Lot Subdivision
( ) Common Wall/Zero Lot Subdivision	( ) Common Wall/Zero Lot Subdivision
( ) Other _____	( ) Other _____

ALL REQUIRED DOCUMENTS ATTACHED

- [✓] **Pre-application conference notes**
- [✓] **Narrative including:**
  - [✓] Legal description(s) of property to be subdivided
  - [✓] Existing structures on the land
  - [✓] Zoning district
  - [✓] Density
  - [✓] Access
  - [✓] Current and proposed use of any structures
  - [✓] Utilities available
  - [✓] Unique characteristics of the land or structure(s)
- [ ] **Preliminary Plat checklist**

----------DEPARTMENT USE ONLY BELOW THIS LINE----------

SUBDIVISION/PLATTING FEES	Fees	Check No.	Receipt	Date
Application Fees	$_____			
Admin. of Guarantee	$_____			
Adjustment	$_____			
Total Fee	$_____			

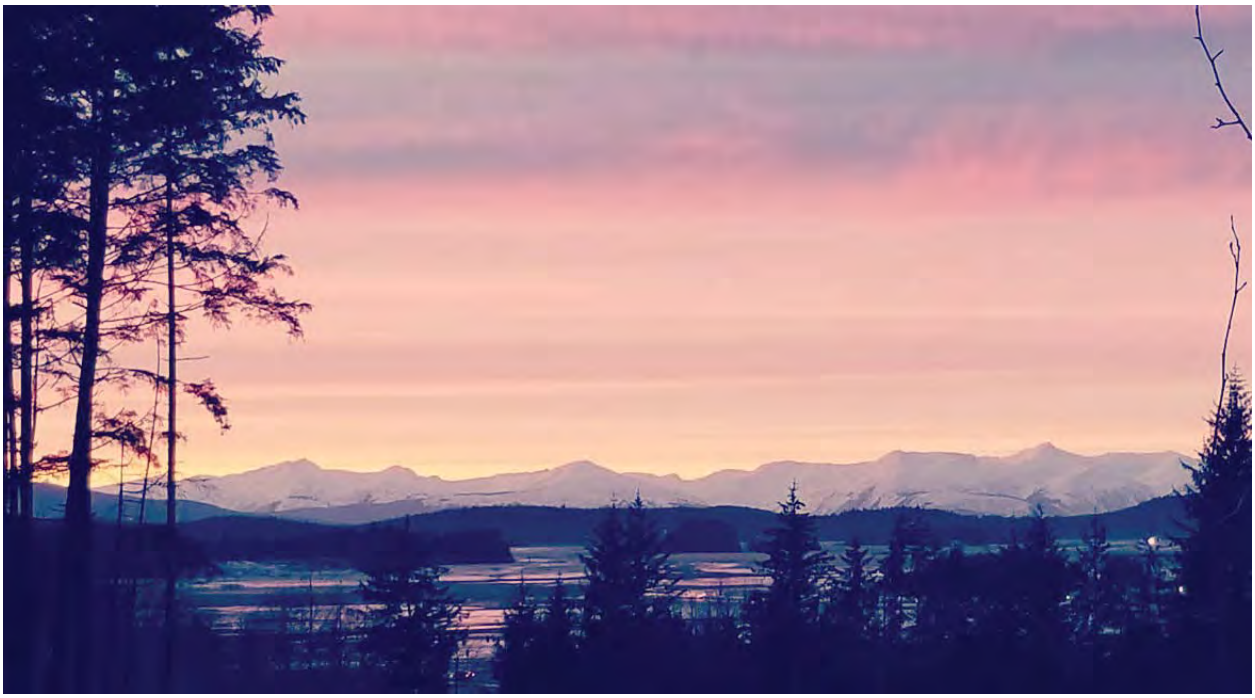
For assistance filling out this form, contact the Permit Center at 586-0770.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

Case Number	Date Received
SMF20-001	5/12/20 LEC

I:\FORMS\PLANFORM\Subdivision Application.docx

Chilkat Vistas Project Narrative



Status of Preliminary Plat Conditions

1. Attachment H corrections have been made to the plat
2. Certification of property taxes being paid have been requested by the CBJ Treasurer
3. A complete Set of Construction Drawings have been submitted for review by the Director of Engineering and Public Works
4. An engineer's estimate for installation of public utilities and improvements has been prepared and submitted
5. Discussions related to drafting a reconveyance agreement to serve as financial guarantee have begun, but an agreement has not yet been made
6. We will utilize best management practices to treat or reduce any harmful particulates that may arise from development
7. A SWPPP has been created by ProHNS engineers for managing storm water runoff during the project
8. A final engineered drainage plan has been submitted and approved
9. The driveway paving requirements shall be included in the guarantee of the subdivision improvements
10. Lighting has been accounted for in the submitted electrical engineering design

11. Residential sprinkler systems will be permitted and installed

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

FINAL PLAT CHECK LIST

Name of Proposed Subdivision: _____

The following items must be included with the initial submittal of a Final Plat:

- ✓ Application, filled out completely
- ✓ Application fee (see fee schedule)
- ✓ Preliminary Plat Notice of Decision
- Three (3) – 24" by 36" Copies
- ✓ Project Narrative explaining compliance with Notice of Decision preliminary plat conditions
- ✓ Lot Closure Report if any change to lots
- Draft improvement guarantee, if applicable
- Proof of construction plan approval
- Certificates of approval for water and sanitary systems
- ✓ Final Plat Checklist: I have reviewed the checklist and all submittals for completeness and accuracy.

Signature _____ Date 5/11/20

William Heumann
Print Name

GENERAL REQUIREMENTS

- ✓ The final plat shall be prepared by a professional land surveyor, registered in the State of Alaska
- The final plat shall be submitted on 22 by 34 inch sheets.
- ✓ The final plat shall be drawn with black ink to a scale of one-inch to 100 feet or less, or other suitable scale approved by the director of engineering and public works
- ✓ The final plat shall be oriented with north toward the top of the sheet.
- ✓ A vicinity map shall be located in the upper right-hand corner of the sheet
- ✓ The vicinity map shall be oriented in the same direction as the plat
- ✓ A suitable north arrow shall be shown for the plat and vicinity map
- ✓ All line work and lettering must be of professional quality, and all line widths and lettering sizes must be of such size that all information can be clearly shown without overlap or confusion

GRAPHIC REQUIREMENTS - A final plat shall contain the following information:

Title block - An enclosed title block in the lower right-hand corner containing the following information:

- ✓ The proposed name of the subdivision
- ✓ The legal description of the parcel to be subdivided including U.S. Survey, U.S. Mineral Survey, A.T.S. number or section, township, and range number, as applicable
- ✓ "City and Borough of Juneau, Alaska"
- ✓ "State Recorder's Office at Juneau"
- ✓ The date the plat was prepared and revised
- ✓ The horizontal scale
- ✓ The name and address of the owner of record
- ✓ The name, address, and telephone number of the surveyor preparing the plat

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

FINAL PLAT CHECK LIST

Lot, block, and street information:

- ✓ The area of each lot
- ✓ The dimensions in feet and hundredths of a foot
- ✓ An identifying number and letter for lots and blocks
- ✓ Lots numbered consecutively, commencing with the number "1," with no omissions or duplications
- ✓ If the remainder of an original parcel being subdivided is relatively large, it shall be designated as a "tract" with an identifying number
- ✓ All parcels of land intended to be dedicated for public use or reserved for the use of all of the property owners in the proposed subdivision shall be shown as lots, and consecutively numbered. The purpose and any conditions or limitations on the use of the parcel shall be noted on the plat
- ✓ Abutting properties shall be shown with dashed lines, numbers, and/or letters
- ✓ For resubdivisions or public way vacations, the lines and legal description of the previous lots shall be shown with light dashed lines, numbers, and/or letters, or by a separate plat on the same sheet showing the previous lot lines
- ✓ The minimum data shown for each curve shall be as follows:
  - Length
  - Central angle
  - Radius
  - Bearing and distance of long chord

Boundary lines:

- ✓ All boundary lines of the subdivision with bearings and distances described
- ✓ All retraced boundary lines shall show record and measured bearings and distances where they differ. Record dimension information shall be shown within parentheses and include a record source identification
- ✓ The exterior boundary lines of the subdivision shall be a solid black opaque line that is of a width that distinguishes it from all other property lines shown on the plat
- ✓ If phasing is proposed, then the boundaries and number of each phase, sequential lot numbering, and a subdivision name consistent with previous phases shall be shown

Monumentation:

- ✓ The monuments used to establish the basis of bearing
- ✓ Each monument found or set shall be identified on the plat by a symbol
- ✓ A complete description of the monument, including type and all information printed on the cap. A typical drawing shall be shown for each type of monument cap set
- ✓ A legend showing the symbols for all the types of monuments
- ✓ The identification, description location, elevation, and datum of the benchmark used to establish vertical control

Site access, circulation, and utilities:

- ✓ The widths and names of existing rights-of-way within the subdivision and within 100 feet of the subdivision boundary
- ✓ Proposed rights-of-way, including their widths and proposed names
- ✓ The width, ownership, use, and record reference of all proposed and existing easements within the subdivision and within 100 feet of the subdivision boundary
- ✓ The width, ownership, and use of all proposed easements
- ✓ All proposed and existing easements shall have sufficient dimensions shown to determine their location on the ground
- ☐ Existing trails or pathways within the subdivision and within 100 feet of the subdivision boundary, including the width of any associated rights-of way or easements

- [x] If the plat submitted covers only a part of the tract under the control of the applicant, a sketch plat of the prospective street system of the unplatted part shall be submitted
- [x] The location of any existing or proposed driveways/curb cuts that access or are proposed to access any existing or proposed street

Multisheet plats:

When a plat requires more than one sheet, exclusive of a certificate sheet, an index sheet shall be included. When a plat requires more than three sheets, a cover sheet shall also be included, showing the subdivision title, a key map, and all certificates. Each additional sheet shall include the following data:

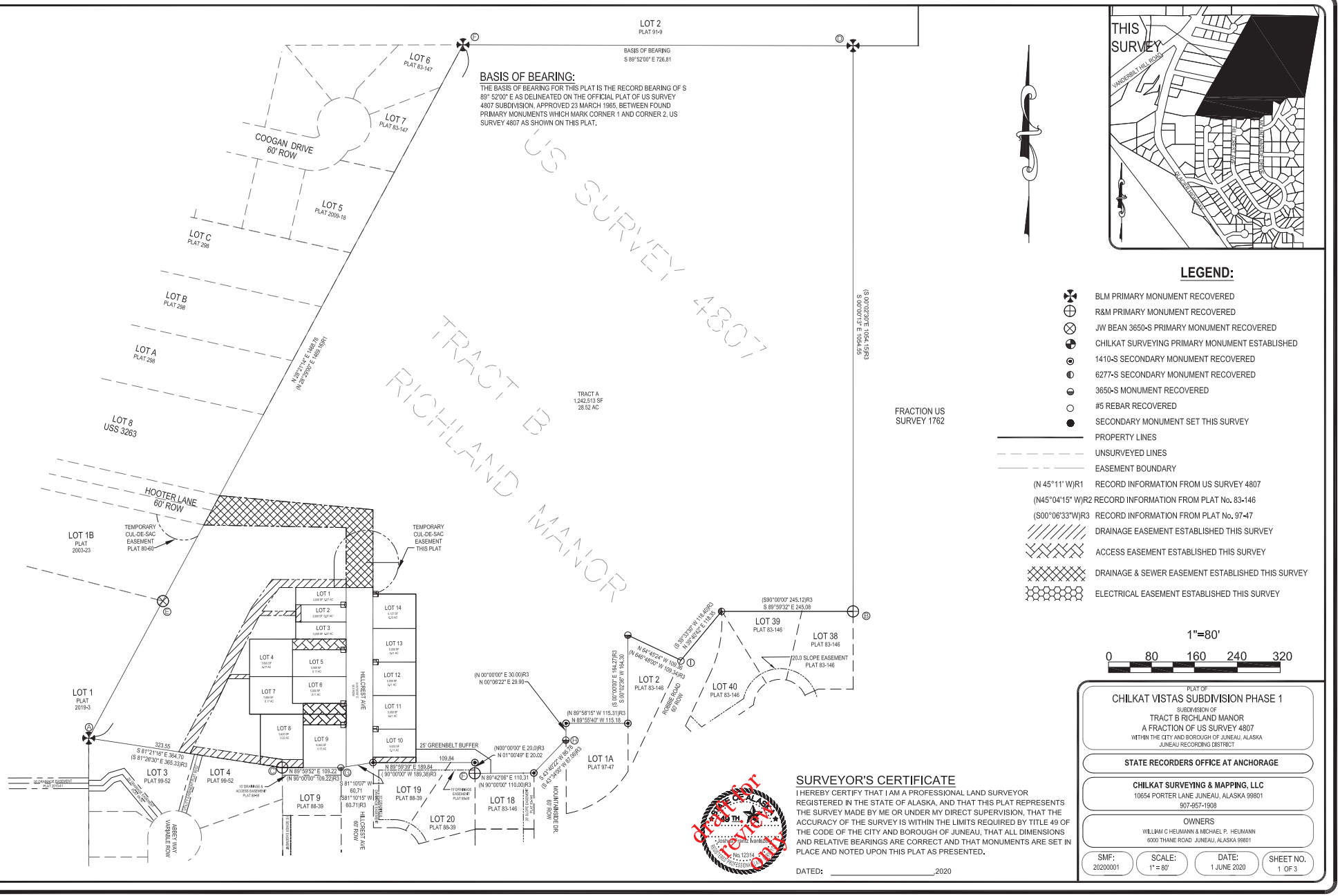
- [x] North arrow
- [x] Legend
- [x] Surveyor's seal and signature
- [x] Title block
- [x] Sheet _____ of _____
- [x] Scale
- [x] All plat notes
- [x] Vicinity map

ADDITIONAL MAPPING OR REPORTS- If required, the following additional mapping or reports shall be submitted:

Shadow plats:

- [x] For subdivisions of five or more lots in transition areas, a shadow plat shall be submitted according to CBJ 49.70.710. The shadow plat shall consist of a sketch superimposed on the proposed subdivision layout. This sketch shall reflect any future resubdivision of the parcels into smaller lots consistent with the higher density and the lot size allowed under the transition zoning.

Attachment F - SMP21-04 – Phase 2



SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2020

Graphic for review only

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 1
SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

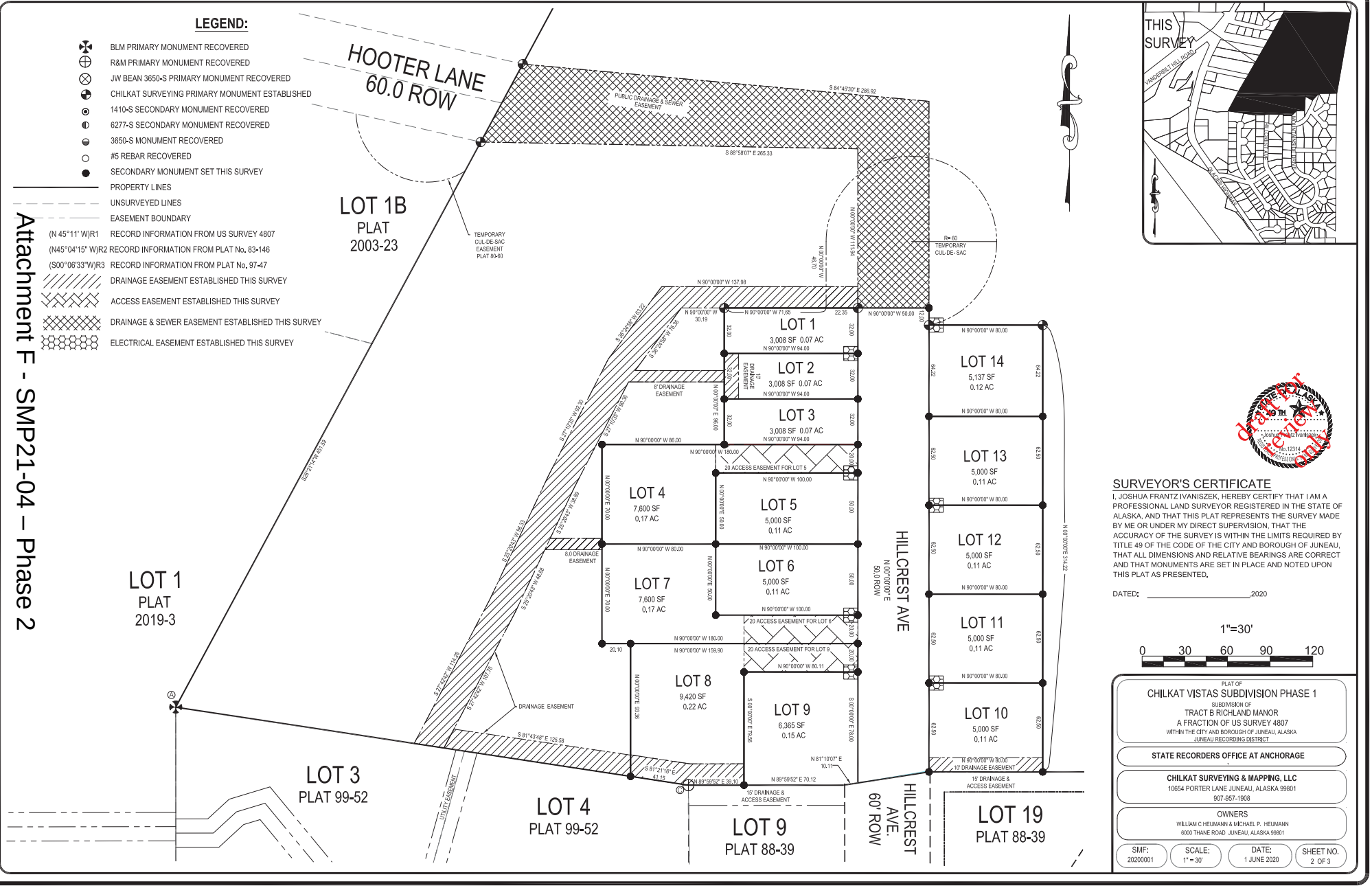
STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMF:	SCALE:	DATE:	SHEET NO.
20200001	1" = 80'	1 JUNE 2020	1 OF 3

Attachment F - SMP21-04 – Phase 2



SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2020

1"=30'

0 30 60 90 120

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 1
SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

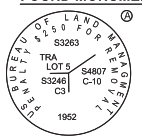
CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

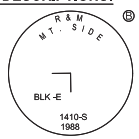
SMF:	SCALE:	DATE:	SHEET NO.
20200001	1" = 30'	1 JUNE 2020	2 OF 3

Attachment F - SMP21-04 Phase 2

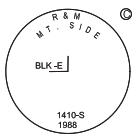
FOUND MONUMENT DESCRIPTIONS:



2.5" BRASS CAP MONUMENT



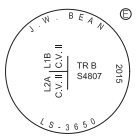
3.25" ALUMINUM CAP MONUMENT



3.25" ALUMINUM CAP MONUMENT



2.5" BRASS CAP MONUMENT



3.25" ALUMINUM CAP MONUMENT
FOUND J.W. BEAN MONUMENT
S 61°38'46" E 0,37 FROM
US SURVEY 4807 BOUNDARY
MONUMENT NOT ACCEPTED



2.5" BRASS CAP MONUMENT

Ⓖ
FOUND J.W. BEAN REBAR MONUMENT
S 01°34'23" W0,62 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE WITH
ALASKA DNR

Ⓗ
FOUND JW BEAN REBAR
S 11°57'46"W 1,60 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓘ
FOUND #5 REBAR
S 04°55'56"W 1,29 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR



5/8" x 36" REBAR WITH
RED PLASTIC CAP



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP WITH CLEAR
DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.

OWNERSHIP CERTIFICATE:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____,2020 DATE:_____2020

_____ _____

WILLIAM C. HEUMANN MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS___ DAY OF _____, 2020, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____

NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____, DATED _____, 2020, AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, ANCHORAGE, ALASKA.

_____DATED _____, 2020

CHAIRMAN OF THE PLANNING COMMISSION

CITY AND BOROUGH OF JUNEAU

ATTEST:

_____

MUNICIPAL CLERK

CITY AND BOROUGH OF JUNEAU

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-16 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015 ON FILE WITH IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFRENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER CHILKAT VISTAS SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET. ALL REQUIRED CHILKAT VISTAS SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12.120 BEST MANAGEMENT PRACTICES.

8) LOTS 1 , 2, AND 3 ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 1 & 2 & 3 WERE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT; OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

9) LOTS 4, 5, 6, 7, 8, AND 9 ARE PANHANDLE LOTS. AT THE TIME OF PLAT RECORDING. FURTHER SUBDIVISION OF LOTS 4, 5, 6, 7, 8, AND 9 IS SUBJECT TO CBJ 49,15,423 'PANHANDLE LOTS', SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

10) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

11) HOOTER LANE WILL BE DEVELOPED AS A PUBLIC TWO-WAY STREET, AS SET OUT IN THE SKETCH PLAT SUBMITTED WITH SMP20190004, SUBJECT TO CBJ PUBLIC IMPROVEMENT STANDARDS IN CBJ 49.35.

12) HOOTER LANE FROM GLACIER HIGHWAY TO HILLCREST AVENUE, AND HILLCREST AVENUE AND MOUNTAINSIDE DRIVE SHALL BE DEVELOPED WITH A SIDEWALK ON ONE SIDE, THE NUMBER OF SIDEWALKS IN THE REMAINDER OF CHILKAT VISTAS WILL BE DETERMINED AT THE TIME OF FUTURE DEVELOPMENT APPLICATIONS.

13) ROBBIE ROAD SHALL TERMINATE AND SHALL NOT BE A POINT OF ACCESS TO CHILKAT VISTAS, UNLESS REQUIRED, AND GATED. FOR FIRE/EMERGENCY SERVICE ACCESS ONLY.

14) HILLCREST AVENUE SHALL TERMINATE AT HOOTER LANE. HILLCREST AVENUE MAY CONNECT TO HOOTER LANE WEST OF THE EXISTING HILLCREST ALIGNMENT AS SHOWN IN THE SKETCH PLAT SUBMITTED WITH SMP20190004, ALTERNATIVELY ROAD ACCESS TO THE NORTHEAST PORTION OF "TRACT A" MAY CONNECT TO THE EAST/WEST PORTION OF MOUNTAINSIDE DRIVE ACROSS FROM THE ENTRANCE TO THE "POCKET" BETWEEN HILLCREST AND MOUNTAINSIDE.

15) OTHER THAN SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10 FEET IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

16) TEMPORARY CUL-DE-SAC EASEMENT SHALL BE VACATED UPON EXTENSION OF HILLCREST AVENUE UNLESS THE DIRECTOR DETERMINES ALL OR A PORTION OF THE CUL-DE-SAC MAY REMAIN.

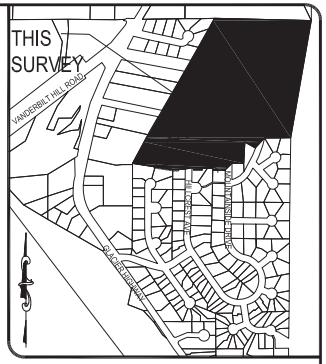
17) ACCESS SUBJECT TO CBJ 49,15,423 'PANHANDLE LOTS'. ACCESS TO PANHANDLE LOTS CREATED THIS SUBDIVISION SHALL BE RESTRICTED TO A SINGLE DRIVEWAY APRON IN THE RIGHT OF WAY UNLESS A SECOND DRIVEWAY TO IS APPROVED BY CBJ. USE OF THE ACCESS EASEMENT DELINEATED ON THIS PLAT IS SUBJECT TO THE REQUIREMENTS SET FORTH IN THE COMMON DRIVEWAY ACCESS, JOINT USE AND HOLD HARMLESS AGREEMENT RECORDED WITH THIS SUBDIVISION.

*NOTES BELOW REFLECT PRIVATE OBLIGATIONS ASSUMED BY THE DEVELOPER:

18)"DENSITY: IT IS AGREED THAT THE LOOP ROAD OF HILLCREST AVENUE AND MOUNTAINSIDE DRIVE WILL BE DEVELOPED AS SINGLE-FAMILY HOMES, AS DEPICTED ON THE SKETCH PLAT SUBMITTED WITH SMP20190004.

19)"ROBBIE ROAD DEVELOPMENT THAT IS CONNECTED TO MOUNTAINSIDE ESTATES SHALL BE LIMITED TO NOT MORE THAN 7 SINGLE FAMILY HOMES, 3 OF WHICH MAY HAVE ACCESSORY APARTMENTS, WHERE DEVELOPED AS SINGLE FAMILY DWELLINGS A 20' GR3EEN BELT BUFFER WILL BE PROVIDED, WHERE NOT DEVELOPED AS SINGLE FAMILY DWELLING A 30' GREENBELT BUFFER WILL BE PROVIDED. 30' EMERGENCY FIRE ACCESS PROVIDED. NO THROUGH TRAFFIC

20)"GREENBELT BUFFERS WILL BE IMPLEMENTED AND PRIVATELY MAINTAINED BY LOT OWNERS AS DELINEATED ON THE SKETCH PLAT SUBMITTED WITH SMP20190004 AND AS DELINEATED THIS PLAT, TO SEPARATE SINGLE FAMILY HOMES FROM MULTI-FAMILY DEVELOPMENT. EXCAVATION FOR PURPOSES OF SLOPE STABILIZATION MAY TAKE PLACE IN THE GREENBELT BUFFERS PROVIDED THEY ARE ALLOWED TO REVEGETATE FOLLOWING CONSTRUCTION. IN THE EVENT THIS BECOMES NECESSARY THE PROPERTY OWNER WILL CONSULT WITH ADJACENT HOMEOWNERS ABOUT THE IMPACTS.



SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2020



draft for review only

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 1
SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMF:	SCALE:	DATE:	SHEET NO.
20200001	1" = 30'	1 JUNE 2020	3 OF 3

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Date: 1 June 2020

To: CBJ COMMUNITY DEVELPOMENT DEPARTMENT
155 SOUTH SEWARD ST.
Juneau, Alaska 99801

Subject: Lot closure reports Chilkat Vista Subdivision

Remarks: The lot closure reflects the proposed Chilkat Vistas Phase 1 subdivision.

Tract A

Northing	Easting	Bearing	Distance
2379182.774	2527571.022		
		N 81°21'16" W	323.550
2379231.410	2527251.149		
		N 28°21'14" E	1468.760
2380523.964	2527948.687		
		S 89°52'00" E	726.810
2380522.273	2528675.495		
		S 00°00'13" E	1054.550
2379467.723	2528675.561		
		N 89°59'32" W	245.080
2379467.756	2528430.481		
		S 39°40'42" W	118.350
2379376.669	2528354.918		
		N 64°45'24" W	109.360
2379423.307	2528256.001		
		S 00°02'36" W	164.300
2379259.007	2528255.877		
		N 89°55'40" W	115.180
2379259.153	2528140.697		
		S 00°06'22" W	29.900
2379229.253	2528140.642		
		S 43°40'22" W	86.780
2379166.485	2528080.717		
		S 89°42'06" W	110.310
2379165.911	2527970.408		
		N 01°00'49" E	20.020
2379185.928	2527970.762		
		S 89°59'39" W	109.840
2379185.916	2527860.922		
		N 00°00'00" W	314.220
2379500.136	2527860.922		
		N 90°00'00" W	80.000
2379500.136	2527780.922		
		N 00°00'00" W	12.000
2379512.136	2527780.922		
		N 90°00'00" W	50.000
2379512.136	2527730.922		
		N 90°00'00" W	94.000
2379512.136	2527636.922		
		S 00°00'00" E	96.000
2379416.136	2527636.922		
		N 90°00'00" W	86.000

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

```
2379416.136   2527550.922
                          S 00°00'00" E 140.000
2379276.136   2527550.922
                          N 90°00'00" E 20.100
2379276.136   2527571.022
                          S 00°00'00" E 93.363
2379182.774   2527571.022

Closure Error Distance> 0.00000
Total Distance> 5668.472
Polyline Area: 1242513 sq ft, 28.52 acres

Lot 1
Northing      Easting       Bearing       Distance
2379480.140   2527730.909
                          N 00°00'00" W 32.000
2379512.140   2527730.909
                          N 90°00'00" W 94.000
2379512.140   2527636.909
                          S 00°00'00" E 32.000
2379480.140   2527636.909
                          N 90°00'00" E 94.000
2379480.140   2527730.909
Closure Error Distance> 0.00000
Total Distance> 252.000
Polyline Area: 3008 sq ft, 0.07 acres

Lot 2
Northing      Easting       Bearing       Distance
2379448.140   2527730.909
                          N 00°00'00" W 32.000
2379480.140   2527730.909
                          N 90°00'00" W 94.000
2379480.140   2527636.909
                          S 00°00'00" W 32.000
2379448.140   2527636.909
                          N 90°00'00" E 94.000
2379448.140   2527730.909
Closure Error Distance> 0.00000
Total Distance> 252.000
Polyline Area: 3008 sq ft, 0.07 acres
```

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Lot 3

Northing	Easting	Bearing	Distance
2379416.140	2527730.909		
		N 00°00'00" W	32.000
2379448.140	2527730.909		
		N 90°00'00" W	94.000
2379448.140	2527636.909		
		S 00°00'00" E	32.000
2379416.140	2527636.909		
		N 90°00'00" E	94.000
2379416.140	2527730.909		

Closure Error Distance> 0.00000
Total Distance> 252.000
Polyline Area: 3008 sq ft, 0.07 acres

Lot 4

Northing	Easting	Bearing	Distance
2379396.140	2527730.909		
		N 00°00'00" E	20.000
2379416.140	2527730.909		
		N 90°00'00" W	180.000
2379416.140	2527550.909		
		S 00°00'00" E	70.000
2379346.140	2527550.909		
		N 90°00'00" E	80.000
2379346.140	2527630.909		
		N 00°00'00" W	50.000
2379396.140	2527630.909		
		N 90°00'00" E	100.000
2379396.140	2527730.909		

Closure Error Distance> 0.00000
Total Distance> 500.000
Polyline Area: 7600 sq ft, 0.17 acres

Lot 5

Northing	Easting	Bearing	Distance
2379346.140	2527730.909		
		N 00°00'00" W	50.000
2379396.140	2527730.909		
		N 90°00'00" W	100.000
2379396.140	2527630.909		
		S 00°00'00" E	50.000
2379346.140	2527630.909		
		N 90°00'00" E	100.000
2379346.140	2527730.909		

Closure Error Distance> 0.00000
Total Distance> 300.000
Polyline Area: 5000 sq ft, 0.11 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Lot 6

Northing	Easting	Bearing	Distance
2379296.140	2527730.909		
		N 00°00'00" W	50.000
2379346.140	2527730.909		
		N 90°00'00" W	100.000
2379346.140	2527630.909		
		S 00°00'00" W	50.000
2379296.140	2527630.909		
		N 90°00'00" E	100.000
2379296.140	2527730.909		

Closure Error Distance> 0.00000
Total Distance> 300.000
Polyline Area: 5000 sq ft, 0.11 acres

Lot 7

Northing	Easting	Bearing	Distance
2379276.140	2527730.909		
		N 00°00'00" E	20.000
2379296.140	2527730.909		
		N 90°00'00" W	100.000
2379296.140	2527630.909		
		N 00°00'00" E	50.000
2379346.140	2527630.909		
		N 90°00'00" W	80.000
2379346.140	2527550.909		
		S 00°00'00" W	70.000
2379276.140	2527550.909		
		N 90°00'00" E	180.000
2379276.140	2527730.909		

Closure Error Distance> 0.00000
Total Distance> 500.000
Polyline Area: 7600 sq ft, 0.17 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Lot 8

Northing	Easting	Bearing	Distance
2379276.146	2527571.012		
		N 90°00'00" E	159.892
2379276.146	2527730.905		
		S 00°00'00" E	20.000
2379256.146	2527730.905		
		N 90°00'00" W	80.110
2379256.146	2527650.795		
		S 00°00'00" E	79.560
2379176.586	2527650.795		
		S 89°59'52" W	39.100
2379176.585	2527611.695		
		N 81°21'16" W	41.150
2379182.770	2527571.012		
		N 00°00'00" W	93.376
2379276.146	2527571.012		

Closure Error Distance> 0.00000
Total Distance> 513.188
Polyline Area: 9420 sq ft, 0.22 acres

Lot 9

Northing	Easting	Bearing	Distance
2379178.140	2527730.909		
		N 00°00'00" W	78.000
2379256.140	2527730.909		
		N 90°00'00" W	80.110
2379256.140	2527650.799		
		S 00°00'00" W	79.555
2379176.586	2527650.799		
		N 89°59'52" E	70.119
2379176.588	2527720.918		
		N 81°10'07" E	10.110
2379178.140	2527730.909		

Closure Error Distance> 0.00000
Total Distance> 317.895
Polyline Area: 6365 sq ft, 0.15 acres

Lot 10

Northing	Easting	Bearing	Distance
2379185.909	2527780.908		
		N 00°00'00" W	62.500
2379248.409	2527780.908		
		N 90°00'00" E	80.000
2379248.409	2527860.908		
		S 00°00'00" E	62.500
2379185.909	2527860.908		
		N 90°00'00" W	80.000
2379185.909	2527780.908		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0.11 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Lot 11

Northing	Easting	Bearing	Distance
2379248.409	2527780.908		
		N 00°00'00" E	62.500
2379310.909	2527780.908		
		N 90°00'00" E	80.000
2379310.909	2527860.908		
		S 00°00'00" W	62.500
2379248.409	2527860.908		
		N 90°00'00" W	80.000
2379248.409	2527780.908		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0.11 acres

Lot 12

Northing	Easting	Bearing	Distance
2379310.909	2527780.908		
		N 00°00'00" E	62.500
2379373.409	2527780.908		
		N 90°00'00" E	80.000
2379373.409	2527860.908		
		S 00°00'00" W	62.500
2379310.909	2527860.908		
		N 90°00'00" W	80.000
2379310.909	2527780.908		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0.11 acres

Lot 13

Northing	Easting	Bearing	Distance
2379373.409	2527780.908		
		N 00°00'00" W	62.500
2379435.909	2527780.908		
		N 90°00'00" E	80.000
2379435.909	2527860.908		
		S 00°00'00" E	62.500
2379373.409	2527860.908		
		N 90°00'00" W	80.000
2379373.409	2527780.908		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0.11 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Lot 14

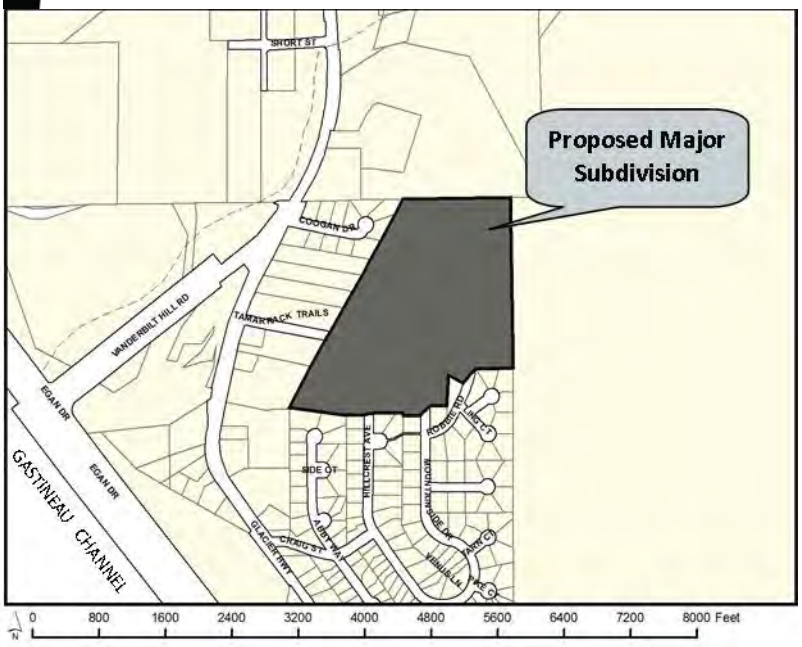
Northing	Easting	Bearing	Distance
2379435.906	2527780.920		
		N 00°00'00" W	64.217
2379500.122	2527780.920		
		N 90°00'00" E	80.000
2379500.122	2527860.920		
		S 00°00'00" E	64.217
2379435.906	2527860.920		
		N 90°00'00" W	80.000
2379435.906	2527780.920		

Closure Error Distance> 0.00000
Total Distance> 288.433
Polyline Area: 5137 sq ft, 0.12 acres

Invitation to Comment

On a proposal to be heard by the CBJ Planning Commission

Your Community, Your Voice



CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

155 S. Seward Street Juneau, Alaska 99801

TO:

An application has been submitted for consideration and public hearing by the Planning Commission for **Final Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels)** located at **4506 Hillcrest Avenue** in a **D15 Zone**.

TIMELINE

Staff Report expected to be posted **Monday, July 20, 2020** at **https://beta.juneau.org/assembly/assembly-minutes-and-agendas**
Find hearing results, meeting minutes and more here as well.

Now through July 6	July 7 — noon, July 24	HEARING DATE & TIME: 7:00 pm, July 28, 2020	July 29
Comments received during this period will be sent to the Planner, **Laurel Christian,** to be included as an attachment in the staff report.	Comments received during this period will be sent directly to Commissioners to read over the weekend in preparation for the hearing.	This virtual meeting will be by video and telephonic participation only. To join the webinar, visit http://juneau.zoom.us/j/93574327888. The Webinar ID is: 935 7432 7888. to join by telephone, call: +1 346 248 7799 or +1 669 900 6833 or +1 253 215 8782 or +1 312 626 6799 or +1 929 436 2866 or +1 301 715 8592 and enter the Webinar ID.	The results of the hearing will be posted online.

Phone: **(907)586-0715** ◆ Email: **pc_comments@juneau.org**
Mail: **Community Development, 155 S. Seward St, Juneau AK 99801**

Case No.: SMP2019 0004; SMF2020 0001
Parcel No.: 7B1001160010
CBJ Parcel Viewer: http://epv.juneau.org

Printed June 25, 2020

Attachment F - SMP21-04 – Phase 2
Attachment C - Abutters Notice and Public Notice Sign

Laurel Christian

From: Laurel Christian
Sent: Tuesday, July 14, 2020 8:18 AM
To: Laurel Christian
Subject: SMF20-01 sign
Attachments: IMG_7128.jpg; ATT00001.txt



Planning Commission

(907) 586-0715
PC_Comments@juneau.org
www.juneau.org/plancomm
155 S. Seward Street • Juneau, AK 99801

PLANNING COMMISSION
NOTICE OF DECISION
Date: November 13, 2019
File No.: SMP2019 0004

William & Michael Heumann
6000 Thane Road
Juneau, AK 99801

Proposal:	Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels)
Property Address:	4506, 4508, & 4510 Hillcrest Avenue
Legal Description:	Richland Manor Tract B
Parcel Code No.:	7B1001160010
Hearing Date:	November 12, 2019

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated November 4, 2019, and **APPROVED** the preliminary plat to be conducted as described in the project description and project drawings submitted with the application and with the following conditions:

1. Prior to approval of the final plat, all required plat corrections listed in the MEMO from the Community Development Department (CDD) to Michael Heumann (applicant), dated November 1, 2019 shall be completed (Attachment H).

2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.

3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the Director of Engineering and Public Works for compliance with CBJ 49.35.140.

4. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to the CDD and reviewed and approved by CDD and Engineering and Public Works.

5. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.

6. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.

7. The developer shall utilize Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.

8. The developer shall submit a final drainage plan to be approved by Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

9. The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway, whichever length is greater, for all panhandle lots created with this subdivision.

10. Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.

11. The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue requirements in each dwelling unit constructed through Phase 1 of this subdivision.

Attachment: November 4, 2019 memorandum from Laurel Christian, Community Development, to the CBJ Planning Commission regarding SMP2019 0004.

This Notice of Decision does not authorize any construction. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance to CBJ 01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ 01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ 49.20.120).

Effective Date: The permit is effective upon approval by the Commission, November 12, 2019.

Expiration Date: The permit will expire five (5) years after the effective date, or November 12, 2024, if no Building Permit has been issued and substantial construction progress has not been

made in accordance with the plans for which the subdivision permit was authorized or no final plat has been approved. Application for permit extension must be submitted thirty days prior to the expiration date.

Project Planner: Laurel Christian

Laurel Christian, Planner
Community Development Department

Benjamin C. Haight

Benjamin Haight, Chair
Planning Commission

Elizabeth J. McEwen

Filed With Municipal Clerk

11/26/2019

Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this subdivision. ADA regulations have access requirements above and beyond CBJ - adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.

CITY AND BOROUGH OF JUNEAU

Treasury Division
155 S. Seward Street
Juneau, AK 99801
(907) 586-0377 Phone
(907) 586-5367 Fax

CERTIFICATION OF TAXES AND ASSESSMENTS PAID

I, the undersigned, being duly appointed, qualified Treasurer for the City and Borough of Juneau, First Judicial District, State of Alaska, do hereby certify that, according to the records of the City and Borough of Juneau, the following described real property is carried on the tax records in the name of:

William C Heumann and Michael P Heumann
Current Owner

RICHLAND MANOR TR B
Legal Description

7B1001160010
Parcel Code Number

and that, all Real Property taxes and assessments levied by the City and Borough of Juneau against said Real Property have been paid in full. If approval is sought between January 1 and the date of levy, there is on deposit with the Treasury Department an amount sufficient to pay Real Property tax for the current year based on current available information; however, owner remains responsible for the balance of any taxes owed when billing occurs on July 1, 2020.

Cheryl A Crawford
Cheryl A. Crawford

June 23, 2020
Date

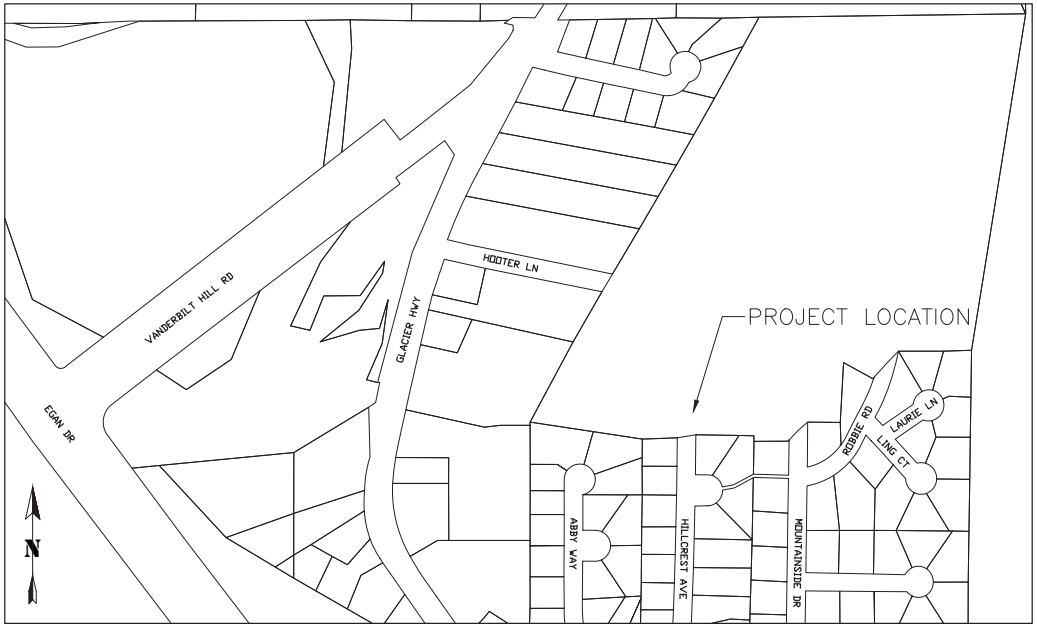
This Certification of Payment of Taxes is valid through December 31, 2020

CHILKAT VISTAS SUBDIVISION, PHASE I - HILLCREST AVE EXTENSION

JUNEAU, AK

PREPARED FOR:

MICHAEL & WILLIAM HEUMANN



PROJECT LOCATION MAP

NTS

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	LEGEND, ABBREVIATIONS & GENERAL NOTES
3	TYPICAL SECTION
4	GRADING PLAN
5	ROW PLAN & PROFILE
6	ROW PLAN & PROFILE
7	SP-4 PLAN & PROFILE
8	ESCP
9	STREET LIGHTING & ELECTRICAL PLAN

CBJ STANDARD DRAWINGS	
CBJ STD NO.	CBJ STD NAME
103A	DRIVEWAY FOR STREETS WITHOUT CURB AND GUTTER
104A	CULVERT HEADWALL WITH HINGED TRASH RACK
104B	CULVERT HEADWALL WITHOUT HINGED TRASH RACK
105	DRIVEWAY CURB CUT
107	LOCAL ACCESS STREET CUL-DE-SAC
111A	CONCRETE SIDEWALK, TYPE I CURB & GUTTER
111B	CURB & GUTTER TYPES II & III
125	PAVEMENT RESURFACING AND TRENCH DETAIL
203	SANITARY SEWER MANHOLE TYPES I&II
205	MANHOLE HEIGHTS
206A	STANDARD MANHOLE COVER AND FRAME
209	MANHOLE CONNECTION DETAILS
213	SANITARY SEWER SERVICE LATERAL
303	STORM DRAIN MANHOLE TYPES I & II
304B	TYPE IV CATCH BASIN
308	CURB INLET FRAME, GRATE & HOOD
309	LOCAL DEPRESSION AT CATCH BASIN
310	AREA DRAIN DETAIL
403	FIRE HYDRANT
404	HYDRANT GUARD POSTS
405	HYDRANT PAD
406A	WATER SERVICE
407	MAINLINE VALVE
412	RIGID INSULATION

STATE OF ALASKA 49TH
Lucas Chambers
LUCAS M. CHAMBERS
04/28/2020
CE 19659
REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

CBJ REVIEW

APPROVED:

DATE: 06/01/2020

CHILKAT VISTAS SUBDIVISION, PHASE I - HILLCREST AVE EXTENSION

MICHAEL & WILLIAM HEUMANN

COVER

SHEET NUMBER 1 OF 9

Attachment F - SMP21-04 – Phase 2

c:\Users\lucas\dropbox (prohns)\Projects\Juneau\richland manor subdivision\c3d richland manor\Sheets\hillcrest extension\Hillcrest Extension Cover.dwg

April 28, 2020

LEGEND

DESCRIPTION	EXISTING	REMOVE	PROPOSED
ASPHALT	EDGE OF ASPHALT		HATCHED AREA
BOLLARDS			
CONCRETE			
CURB & GUTTER			
CUT			
DITCH CENTERLINE			
EDGE GRAVEL			
FENCE			
FILL			
FIRE HYDRANT			
MONUMENT			
PROPERTY EASEMENT LINE			
PROPERTY LINE			
SANITARY SEWER CLEANOUT			
SANITARY SEWER PIPE	PIPE SIZE & TYPE		PIPE SIZE & TYPE
SANITARY SEWER MANHOLE			SS-1
SIDEWALK RAMP			
SAWCUT & MTE LIMITS			
SIGN			
STORM DRAIN CATCH BASIN			S-1
STORM DRAIN PIPE	PIPE SIZE & TYPE SD SD		P-1 SD SD
STORM DRAIN MANHOLE, GRATE			S-1
TREES			
UNDERGROUND PIPE CAP			
UTILITY POLE			
UTILITY POLE WITH LUMINAIRE			
WATER LINE PIPE	PIPE SIZE & TYPE		
WATER VALVE BOX			

ABBREVIATIONS

AC	ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
BOP	BEGINNING OF PROJECT
BTM	BOTTOM
BVC	BEGIN VERTICAL CURVE
CB	CATCH BASIN
CBJ	CITY & BOROUGH OF JUNEAU
C/L	CENTERLINE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED POLYETHYENE PIPE
CONC	CONCRETE
CTE	CONNECT TO EXISTING
DI	DUCTILE IRON
DIA	DIAMETER
EL	ELEVATION
EOP	END OF PROJECT
EVC	END VERTICAL CURVE
FG	FINISHED GRADE
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
LP	LOW POINT
LT	LEFT
MH	MANHOLE
MIN	MINIMUM
MTE	MATCH TO EXISTING
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PRC	POINT OF REVERSE CURVATURE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENT
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECTION
RP	RADIUS POINT
RT	RIGHT
ROW	RIGHT-OF-WAY
STA	STATION
STD	STANDARD
TBC	TOP BACK OF CURB
TBG	TOP BACK OF GUTTER
TP	TOP OF PAVEMENT
TYP	TYPICAL

GENERAL NOTES

1. CBJ ENGINEERING STANDARD DETAILS BOOK FOR CIVIL ENGINEERING PROJECTS AND SUBDIVISION IMPROVEMENTS FOURTH ADDITION DATED AUGUST, 2011 AND CBJ ENGINEERING STANDARD SPECIFICATIONS DATED DECEMBER, 2003 ARE MADE A PART OF THIS CONTRACT, INCLUDING ALL ERRATA (NOS. 1–16) AND CURRENT REVISIONS AS APPLICABLE.
2. CALL 586–1333 BEFORE YOU DIG FOR UNDERGROUND POWER, TELEPHONE AND CABLE. CALL 811 ALASKA DIGLINE BEFORE YOU DIG FOR UNDERGROUND ACS & GCI. LOCATIONS AND ELEVATION OF EXISTING UNDERGROUND WATER, SEWER, POWER, TELEPHONE AND CABLE TELEVISION SHOWN ON THE PLANS WERE DERIVED FROM CBJ AS–BUILTS AND FIELD LOCATES. THE ACTUAL LOCATION OF UTILITIES MAY VARY FROM THOSE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, PROTECTING AND MAINTAINING THE UTILITIES THROUGHOUT THE CONSTRUCTION OF THE PROJECT. ANY DAMAGE TO THE UNDERGROUND UTILITIES DURING CONSTRUCTION SHALL BE PAID FOR BY THE CONTRACTOR AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
3. THE ESTIMATED TOTAL AREA OF DISTURBANCE RESULTING FROM THESE IMPROVEMENTS WILL BE OVER 1.00 ACRE.
4. THE ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) HAS IDENTIFIED ONE "ACTIVE" CONTAMINATED SITE WITHIN 1,500 FEET OF THE PROJECT LIMITS. THE ACTIVE CONTAMINATED SITE IS AT 5165 GLACIER HWY (GAS N GO), SEE DEC.ALASKA.GOV FOR MORE INFO. THERE ARE NO SITES LISTED AS "INSTITUTIONAL CONTROL" WITHIN 1,500 OF THE PROJECT LIMITS. THERE ARE SEVERAL SITES LISTED AS "CLEANUP COMPLETE" WITHIN 1,500 FEET OF THE PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSULT DEC AND OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK.
5. FINISHED GRADE AND ALIGNMENT ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER. LOCATION OF PROPOSED WATER, SEWER AND STORM DRAINAGE FACILITIES ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER.
6. HORIZONTAL AND VERTICAL CONTROL IS STATE PLANE ZONE AK 1 ABOUT POINT#20 MAG [LAT: 58 20 42.12902, LON: 134 29 24.31493] [2379175.08N, 2527721.72E] (115.39' MLLW) (CONVERGENCE [DEGREES] 0.43405278) (POINT SCALE 0.99961092).
7. THE CONTRACTOR SHALL PERFORM A CLOSED LEVEL LOOP THROUGH ALL TBM'S AS LISTED HEREON TO VERIFY ELEVATIONS PRIOR TO BEGINNING ANY WORK.
8. CONTRACTOR SHALL REFERENCE ALL EXISTING PROPERTY CORNER MONUMENTS (I.E. BRASS CAP MONUMENTS, REBARS, CONCRETE NAILS, CHISELED X'S) PRIOR TO CONSTRUCTION AND REMONUMENT AFTER SURFACING IS REPLACED. EXISTING SURVEY MONUMENTS MAY NOT BE SHOWN ON THE DRAWINGS. ALL WORK SHALL BE DONE BY, OR UNDER THE DIRECTION OF, AN ALASKA REGISTERED LAND SURVEYOR.
9. THE CONTRACTOR SHALL NOTIFY CBJ WATER UTILITIES (LONI VANKIRK AT 723–4975) OF PROPOSED WATER SERVICE INTERRUPTION AND SUBMIT THE "WATER SYSTEM SPECIAL USE PERMIT" TO CBJ WATER UTILITIES SUPERINTENDENT FOR APPROVAL AT LEAST 48 HOURS PRIOR TO SHUTDOWN OR FLUSHING OF MAINLINE WATER PIPE. NO WATER SERVICE INTERRUPTION MAY PROCEED UNTIL THIS APPROVAL IS OBTAINED. THE CONTRACTOR CANNOT SHUT OFF WATER SUPPLY TO SERVICES FOR MORE THAN 4 HOURS AT ONE TIME.
10. ALL MATERIALS PROPOSED FOR THE WATER SYSTEM THAT COME IN DIRECT CONTACT WITH THE WATER SHALL BE CERTIFIED BY AN ANSI ACCREDITED ORGANIZATION TO CONFORM WITH ANSI/NSF STANDARD 61 OR AN ANSI/NSF STANDARD WITH EQUIVALENT HEALTH REQUIREMENTS.
11. THE MATERIALS USED FOR THIS PROJECT SHALL COMPLY WITH THE NEW LEAD FREE REQUIREMENTS INCLUDING NOT MORE THAN 0.2% WHEN USED WITH RESPECT TO SOLDER AND FLUX AND NOT MORE THAN A WEIGHTED AVERAGE OF 0.25% LEAD WHEN USED WITH RESPECT TO THE WETTED SURFACES OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS AND FIXTURES.
12. ONLY HORIZONTAL ELBOW FITTINGS (BENDS) ARE SHOWN (NOT ALL ARE LABELED) ON DRAWINGS. ADDITIONAL FITTINGS WILL BE REQUIRED FOR VERTICAL DEFLECTIONS NEAR CONNECTIONS TO EXISTING PIPES, AND AT OTHER LOCATIONS REQUIRING GRADE CHANGES TO AVOID CONFLICTS.
13. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF OFF–SITE, EXCEPT AS NOTED IN THE CONTRACT DOCUMENTS.

STATE OF ALASKA 49TH — Lucas Chambers — LUCAS M. CHAMBERS — 04/28/2020 — CE 19593 — REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

CBJ REVIEW
APPROVED:
DATE: 06/01/2020

CHILKAT VISTAS SUBDIVISION, PHASE I - HILLCREST AVE EXTENSION
MICHAEL & WILLIAM HEUMANN

LEGEND ABBREVIATIONS & GENERAL NOTES

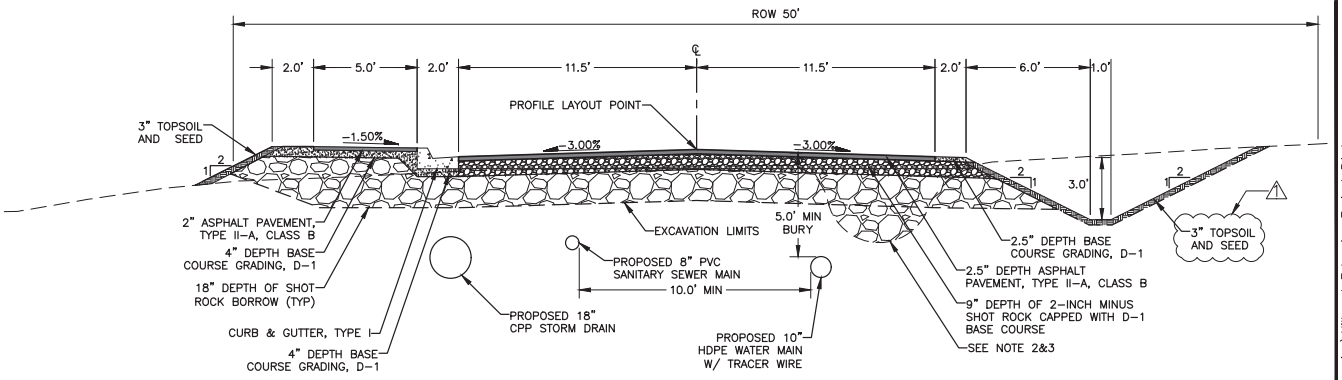
SHEET NUMBER 2 OF 9

April 28, 2020

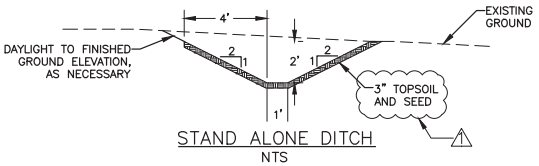
c:\Users\lucas\dropbox (prohns)\Projects\Juneau\richland manor subdivision\c3d richland manor\Sheets\hillcrest extension\Hillcrest Extension LAG.dwg

TYPICAL SECTION NOTES

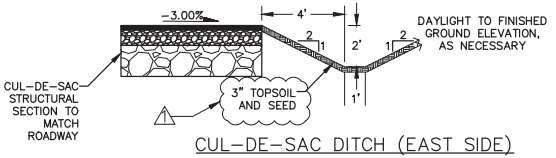
1. RIGHT-OF-WAY AND ROAD PRISM SHALL BE CLEARED AND GRUBBED.
2. CLEAR, GRUB AND INSTALL SHOT ROCK BORROW OR USABLE EXCAVATION, AS NECESSARY, WHERE EXISTING GROUND IS BELOW EXCAVATION LIMITS.
3. ADDITIONAL EXCAVATION BELOW THE NEATLINE SUBCUT LEVEL MAY BE REQUIRED IF ORGANIC OR OTHER UNSUITABLE MATERIALS ARE ENCOUNTERED. EXCAVATION AND REPLACEMENT OF UNSUITABLE MATERIALS SHALL BE APPROVED BY THE ENGINEER.
4. LARGE BOULDERS, HARDPAN, STUMPS, LOGS, ORGANICS AND GROUND WATER MAY BE ENCOUNTERED AT VARIOUS DEPTHS DURING TRENCHING, DITCHING AND ROADWAY EXCAVATION OPERATIONS. THESE MATERIALS SHALL BE DISPOSED OF AS REQUIRED BY THE ENGINEER.
5. ALL CUT AND FILL SLOPES NOT STABILIZED WITH SHOT ROCK SHALL BE TOP SOILED AND SEEDED.
6. THE CONTRACTOR/ OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSTALLING/ MAINTAINING EROSION AND SEDIMENT CONTROL PER LOCAL, STATE AND FEDERAL REQUIREMENTS



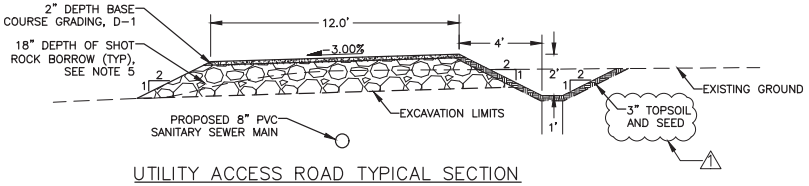
HILLCREST AVE EXTENSION TYPICAL SECTION
NTS



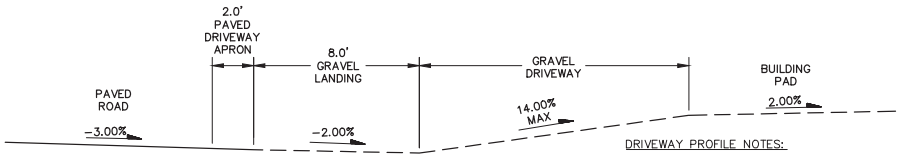
STAND ALONE DITCH
NTS



CUL-DE-SAC DITCH (EAST SIDE)
NTS



UTILITY ACCESS ROAD TYPICAL SECTION
NTS



DRIVEWAY PROFILE
(LOTS 10, 11, 12, 13 & 14)
NTS

DRIVEWAY PROFILE NOTES:

1. SEE STD 103A FOR ADDITIONAL DETAILS.
2. PROVIDE A SMOOTH TRANSITION BETWEEN GRADE BREAKS.
3. THE DRIVEWAY SHALL NOT EXCEED A 14% SLOPE.

RESIDENTIAL SEWER SERVICE SUMMARY

LOT #	STATION AND OFFSET	SIZE/TYPE
LOT 1	STA: 4+75.61, OFF: 19.50 LT	4" SDR 35 PVC
LOT 2	STA: 4+48.60 , OFF: 19.50 LT	4" SDR 35 PVC
LOT 3	STA: 4+16.62, OFF: 19.50 LT	4" SDR 35 PVC
LOT 4	STA: 3+95.58, OFF: 19.50 LT	4" SDR 35 PVC
LOT 5	STA: 3+89.59, OFF: 19.50 LT	4" SDR 35 PVC
LOT 6	STA: 2+71.55, OFF: 19.50 LT	4" SDR 35 PVC
LOT 7	STA: 2+65.59, OFF: 19.50 LT	4" SDR 35 PVC
LOT 8	STA: 2+55.59, OFF: 19.50 LT	4" SDR 35 PVC
LOT 9	STA: 2+49.59, OFF: 19.50 LT	4" SDR 35 PVC
LOT 10	STA: 2+04.61, OFF: 26.50 RT	4" SDR 35 PVC
LOT 11	STA: 2+67.11 , OFF: 26.50 RT	4" SDR 35 PVC
LOT 12	STA: 3+29.62, OFF: 26.50 RT	4" SDR 35 PVC
LOT 13	STA: 3+92.12, OFF: 26.50 RT	4" SDR 35 PVC
LOT 14	STA: 4+55.46, OFF: 26.50 RT	4" SDR 35 PVC
FUTURE LOT	STA: 5+15.25, OFF: 19.50 LT	4" SDR 35 PVC
FUTURE LOT	STA: 5+53.33, OFF: 19.50 LT	4" SDR 35 PVC
FUTURE LOT	STA: 5+90.71, OFF: 19.50 LT	4" SDR 35 PVC
FUTURE LOT	STA: 5+03.43, OFF: 26.50 RT	4" SDR 35 PVC
FUTURE LOT	STA: 5+47.62, OFF: 26.50 RT	4" SDR 35 PVC
FUTURE LOT	STA: 5+90.33, OFF: 26.50 RT	4" SDR 35 PVC

INSTALL PER CBJ STD DWG 213 W/ CLEANOUTS. CLEANOUTS LOCATED IN AGGREGATE BASE COURSE OR ASPHALT SHALL HAVE CLEANOUT RING & COVER INSTALLED PER CBJ STD 205.

RESIDENTIAL WATER SERVICE SUMMARY

LOT #	STATION AND OFFSET	SIZE (INSIDE DIA)/TYPE
LOT 1	STA: 4+73.60, OFF: 19.50 LT	1" SIDR7 POLY
LOT 2	STA: 4+46.60 , OFF: 19.50 LT	1" SIDR7 POLY
LOT 3	STA: 4+14.62, OFF: 19.50 LT	1" SIDR7 POLY
LOT 4	STA: 3+93.58, OFF: 19.50 LT	1" SIDR7 POLY
LOT 5	STA: 3+87.59, OFF: 19.50 LT	1" SIDR7 POLY
LOT 6	STA: 2+69.55, OFF: 19.50 LT	1" SIDR7 POLY
LOT 7	STA: 2+63.59, OFF: 19.50 LT	1" SIDR7 POLY
LOT 8	STA: 2+53.59, OFF: 19.50 LT	1" SIDR7 POLY
LOT 9	STA: 2+47.59, OFF: 19.50 LT	1" SIDR7 POLY
LOT 10	STA: 2+02.61, OFF: 26.50 RT	1" SIDR7 POLY
LOT 11	STA: 2+65.11 , OFF: 26.50 RT	1" SIDR7 POLY
LOT 12	STA: 3+27.62, OFF: 26.50 RT	1" SIDR7 POLY
LOT 13	STA: 3+90.12, OFF: 26.50 RT	1" SIDR7 POLY
LOT 14	STA: 4+53.46, OFF: 26.50 RT	1" SIDR7 POLY

INSTALL PER CBJ STD DWG 406A W/ TRACER WIRE SPLCED TO MAIN LINE TRACER WIRE & 5' COILED IN VAVLE BOX.

Attachment F - SMP21-04 - Phase 2

STATE OF ALASKA 49TH — Lucas Chambers — REGISTERED ENGINEER — 07/13/2020 — CE 19693 — EXPIRES: 12/31/2020

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/13/2020	CHANGED SHOT ROCK DITCH LINING TO TOPSOIL & SEED	LC

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

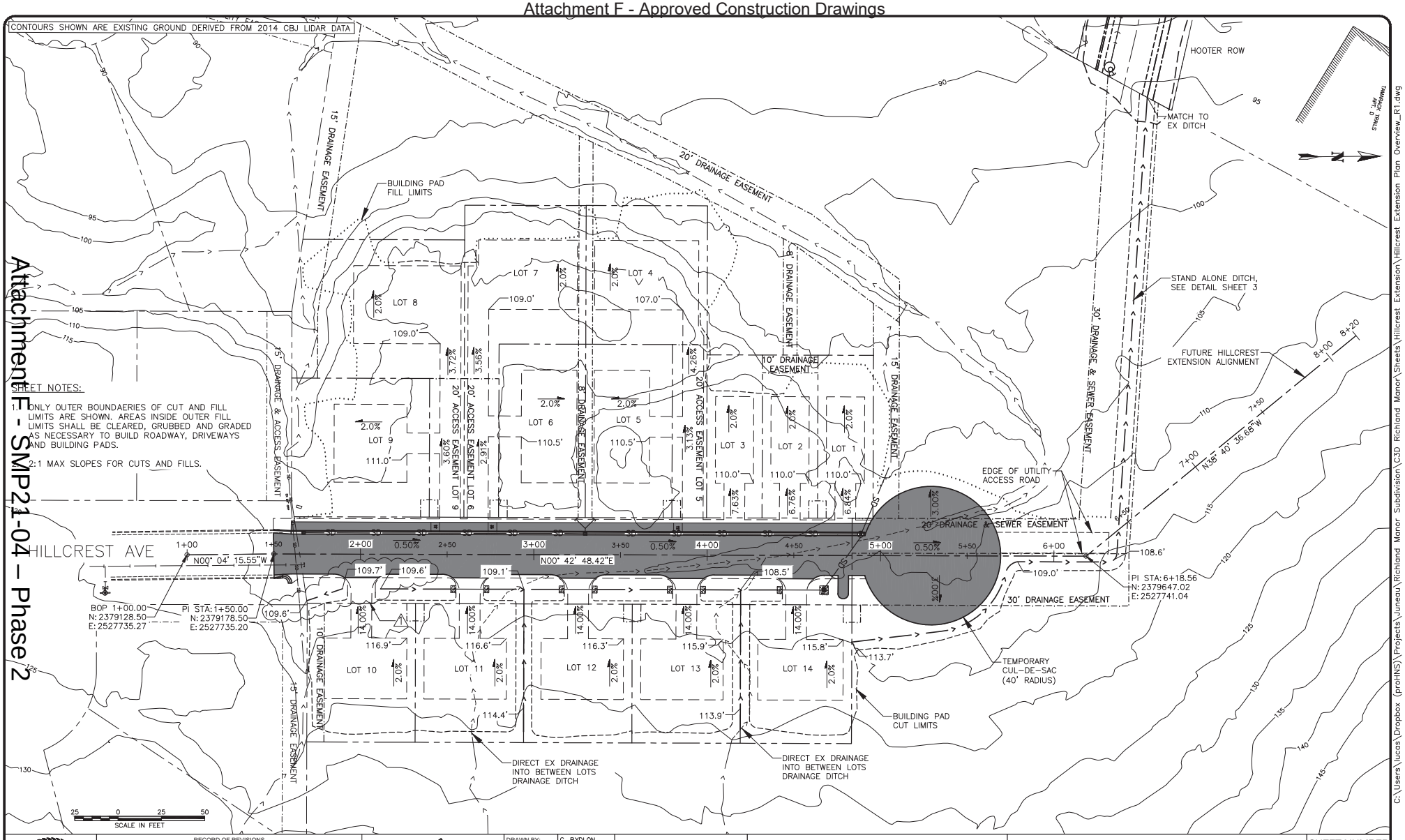
CBJ REVIEW
APPROVED:
DATE: 07/14/2020

CHILKAT VISTAS SUBDIVISION, PHASE I - HILLCREST AVE EXTENSION
MICHAEL & WILLIAM HEUMANN

TYPICAL SECTION

SHEET NUMBER 3 OF 9

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension\Hillcrest Extension Typical_R1.dwg
July 13, 2020



Attachment F - SMP21-04 – Phase 2

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/13/2020	REDIRECTED DITCH & REMOVED DRIVEWAY CULVERT	LC

STATE OF ALASKA 49TH — Lucas Chambers — 07/13/2020 — CE 19693 — REGISTERED PROFESSIONAL ENGINEER

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

CBJ REVIEW
APPROVED:
DATE: 07/14/2020

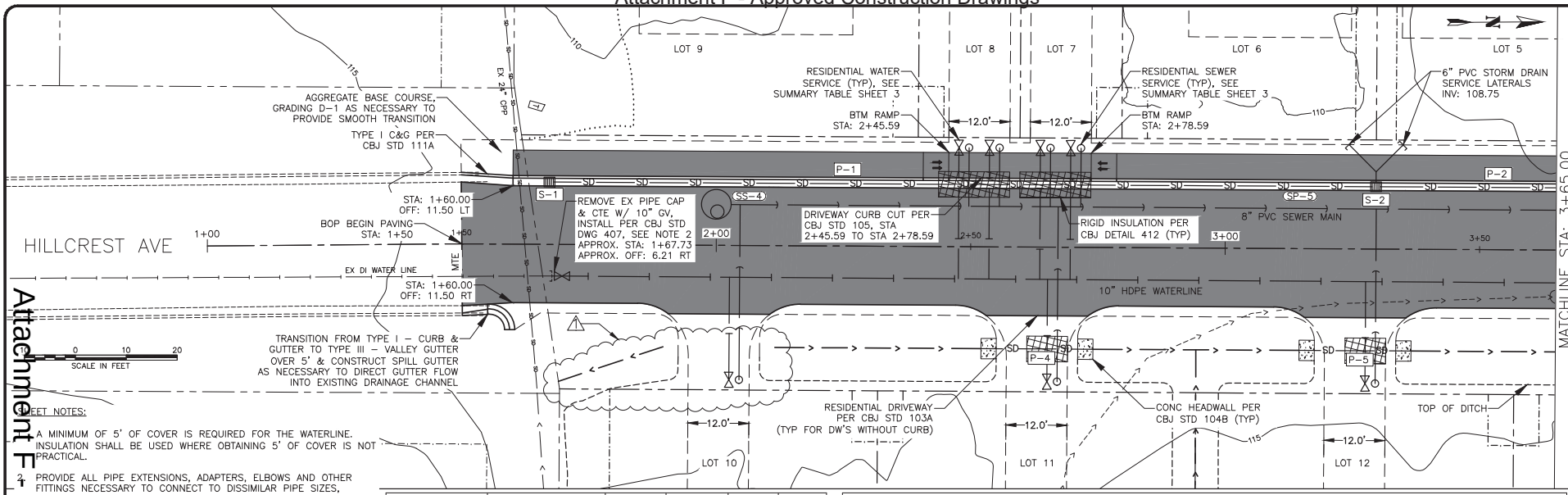
CHILKAT VISTAS SUBDIVISION, PHASE I - HILLCREST AVE EXTENSION
MICHAEL & WILLIAM HEUMANN

GRADING PLAN

SHEET NUMBER 4 OF 9

July 13, 2020

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension\Hillcrest Extension Plan Overview_R1.dwg



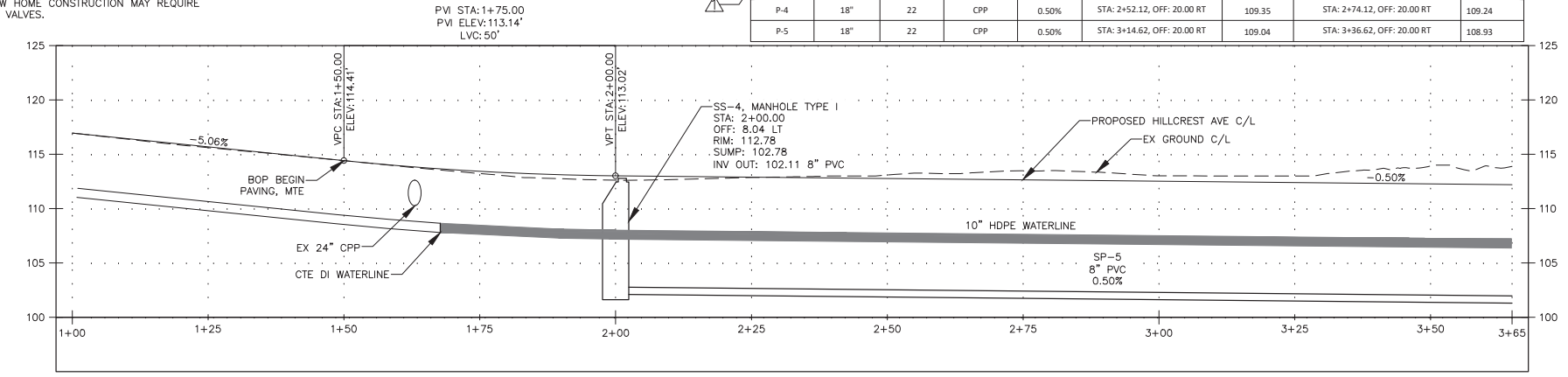
SHEET NOTES:

1. A MINIMUM OF 5' OF COVER IS REQUIRED FOR THE WATERLINE. INSULATION SHALL BE USED WHERE OBTAINING 5' OF COVER IS NOT PRACTICAL.
2. PROVIDE ALL PIPE EXTENSIONS, ADAPTERS, ELBOWS AND OTHER FITTINGS NECESSARY TO CONNECT TO DISSIMILAR PIPE SIZES, MATERIALS & DEPTHS. CONNECTIONS TO VALVES AND DI PIPE SHALL BE MECHANICAL JOINT (MJ). INSTALL ANODE ON EXISTING DI PIPE.
3. STATION AND OFFSET TO PIPES, MANHOLES AND VALVES ARE TO CENTER OF UTILITY. LID RIM ELEVATION IS GIVEN TO CENTER OF STRUCTURE. STORM DRAIN RIM STATION, OFFSET AND ELEVATION IS GIVEN TO FRONT CENTER OF FRAME.
4. EXISTING WATER LINE STATIC PRESSURE AT CONNECTION POINT IS APPROX. 95 PSI. NEW HOME CONSTRUCTION MAY REQUIRE PRESSURE REDUCING VALVES.

STRUCTURE NUMBER	STRUCTURE TYPE	STATION	OFFSET	RIM	SUMP
S-1	TYPE IV CB, STD 304B	1+67.17	11.50 LT	113.33	108.43
S-2	TYPE IV CB, STD 304B	3+29.58	11.50 LT	112.03	107.08

STORM DRAIN PIPE SUMMARY

PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START STATION/OFFSET	START INV	END STATION/OFFSET	END INV
P-1	18"	161	CPP	0.77%	S-1	109.83	S-2	108.58
P-2	18"	156	CPP	0.50%	S-2	108.48	S-3	107.70
P-3	18"	22	CPP	0.50%	~~STA: 1+89.63, OFF: 20.00 RT~~	109.71	STA: 2+11.62, OFF: 20.00 RT	109.60
P-4	18"	22	CPP	0.50%	STA: 2+52.12, OFF: 20.00 RT	109.35	STA: 2+74.12, OFF: 20.00 RT	109.24
P-5	18"	22	CPP	0.50%	STA: 3+14.62, OFF: 20.00 RT	109.04	STA: 3+36.62, OFF: 20.00 RT	108.93



Attachment F - SMP21-04 – Phase 2

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/13/2020	REDIRECTED DITCH & REMOVED DRIVEWAY CULVERT	LC

STATE OF ALASKA 49TH — LUCAS CASIMIRO — 07/13/2020 — CE 19693 — REGISTERED PROFESSIONAL ENGINEER

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101 JUNEAU, AK 99801
solutions@proHNS.com www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

CBJ REVIEW
APPROVED:
DATE: 7/14/2020

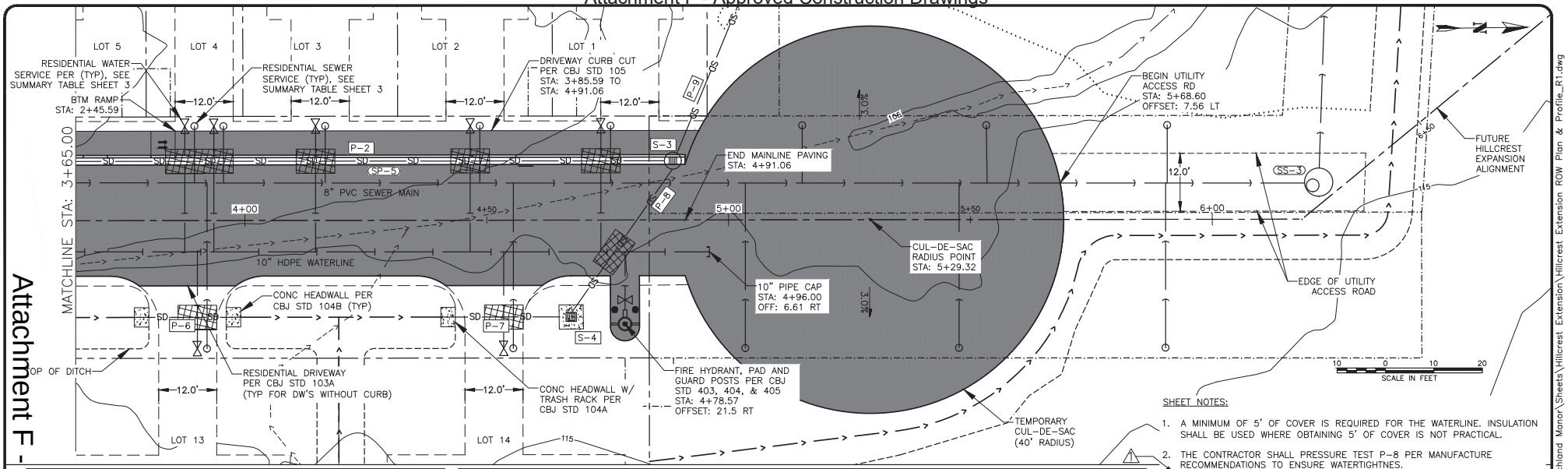
CHILKAT VISTAS SUBDIVISION, PHASE I - HILLCREST AVE EXTENSION
MICHAEL & WILLIAM HEUMANN

ROW PLAN & PROFILE BOP TO 3+85

SHEET NUMBER 5 OF 9

July 13, 2020

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension\Hillcrest Extension ROW Plan & Profile_R2.dwg



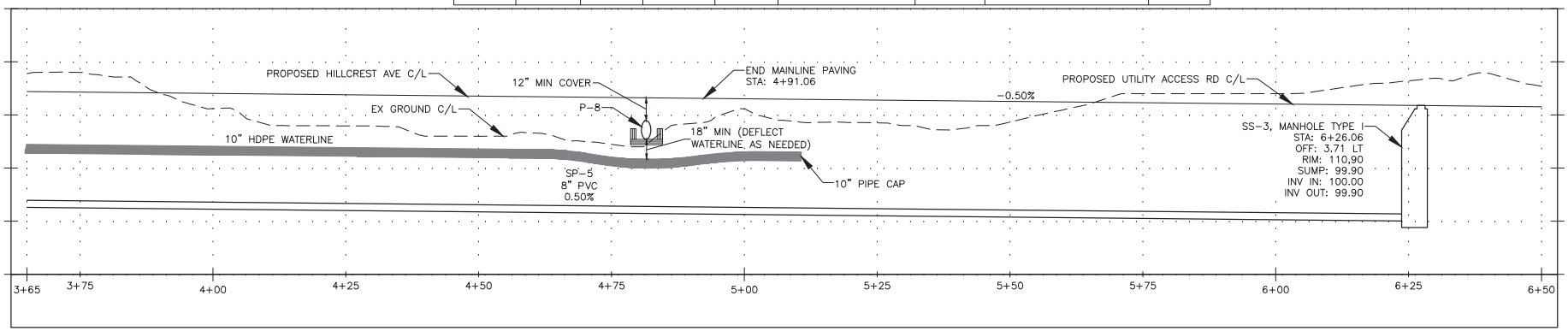
STRUCTURE NUMBER	STRUCTURE TYPE	STATION	OFFSET	RIM	SUMP
S-3	TYPE I SDMH WITH REDUCING SLAB	4+88.50	11.50 LT	111.23	106.10
S-4	TYPE IV CB, WITH AREA DRAIN	4+67.43	19.00 RT	110.80	106.40

STORM DRAIN PIPE SUMMARY

PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START STATION/OFFSET	START INV	END STATION/OFFSET	END INV
P-2	18"	156	CPP	0.50%	S-2	108.48	S-3	107.70
P-6	18"	22	CPP	0.50%	STA: 3+77.12, OFF: 20.00 RT	108.72	STA: 3+99.12, OFF: 20.00 RT	108.61
P-7	18"	25	CPP	2.12%	STA: 4+40.48, OFF 20.00 RT	108.43	S-4	107.90
P-8	18"	32	CPP	0.63%	S-4	107.80	S-3	107.60
P-9	18"	40	CPP	3.50%	S-3	107.50	STA: 5+04.63, OFF: 50.72 LT	106.10

SHEET NOTES:

1. A MINIMUM OF 5' OF COVER IS REQUIRED FOR THE WATERLINE. INSULATION SHALL BE USED WHERE OBTAINING 5' OF COVER IS NOT PRACTICAL.
2. THE CONTRACTOR SHALL PRESSURE TEST P-8 PER MANUFACTURE RECOMMENDATIONS TO ENSURE WATERTIGHTNES.
3. THE CONTRACTOR SHALL ENSURE WALTER LINE JOINTS ARE AT LEAST 9' FROM SEWER LINE JOINTS.
4. STATION AND OFFSET TO PIPES, MANHOLES AND VALVES ARE TO CENTER OF UTILITY. LID RIM ELEVATION IS GIVEN TO CENTER OF STRUCTURE. STORM DRAIN RIM STATION, OFFSET AND ELEVATION IS GIVEN TO FRONT CENTER OF FRAME.
5. EXISTING WATER LINE STATIC PRESSURE AT CONNECTION POINT IS APPROX. 95 PSI. NEW HOME CONSTRUCTION MAY REQUIRE PRESSURE REDUCING VALVES.



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY
1	6/19/2020	ADDED JOINT SEPARATION NOTE	LC

STATE OF ALASKA 49TH — Lucas Chambers — 06/19/2020 — CE 10693 — REGISTERED PROFESSIONAL ENGINEER

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101 JUNEAU, AK 99801
solutions@proHNS.com www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

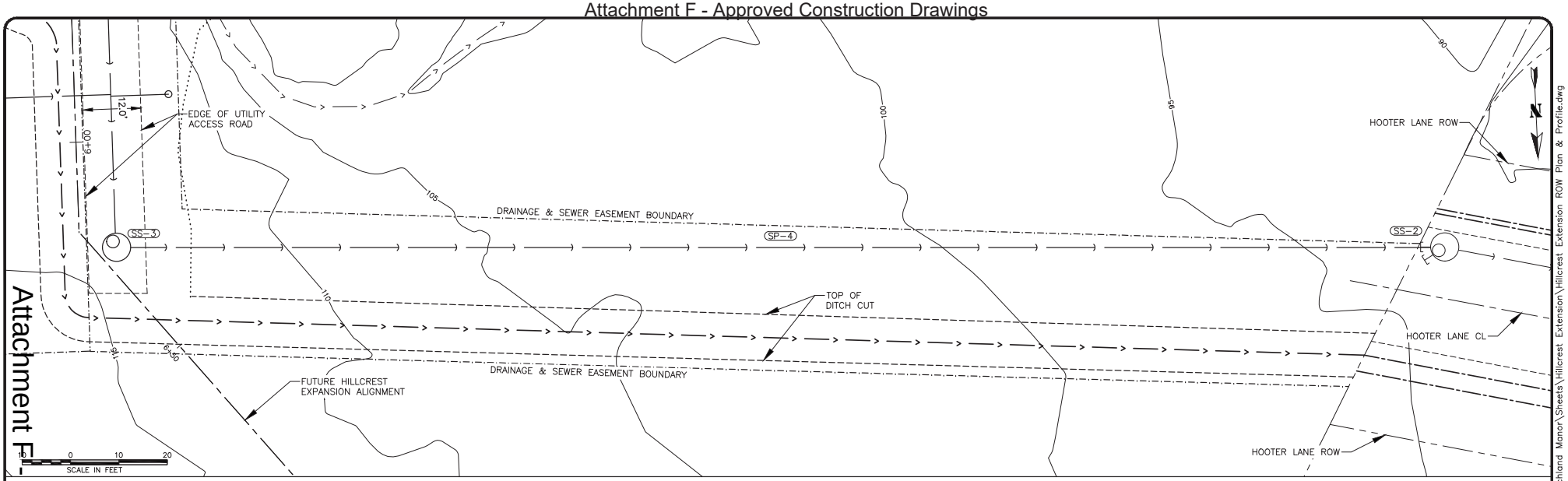
CBJ REVIEW
APPROVED:
DATE: 7/14/2020

CHILKAT VISTAS SUBDIVISION, PHASE I - HILLCREST AVE EXTENSION
MICHAEL & WILLIAM HEUMANN

ROW PLAN & PROFILE 3+85 TO EOP

SHEET NUMBER 6 OF 9

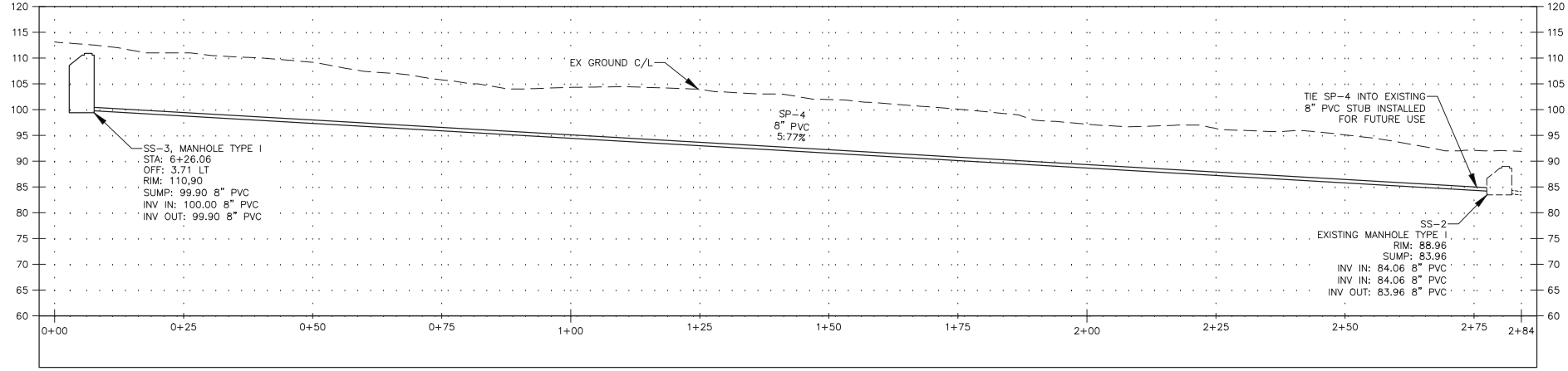
June 19, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension\Hillcrest Extension ROW Plan & Profile_R1.dwg



Attachment F - SMP21-04 – Phase 2

SHEET NOTES:

1. STATION AND OFFSET TO PIPES, MANHOLES AND VALVES ARE TO CENTER OF UTILITY.



STATE OF ALASKA 49TH — lucas chambers — LUCAS M. CHAMBERS — 05/18/2020 — CE 19693 — REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY
1	5/18/2020	ADDED EASEMENT & TOP OF DITCH CALLOUT	LC

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101, JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

CBJ REVIEW
APPROVED:
DATE: 06/01/2020

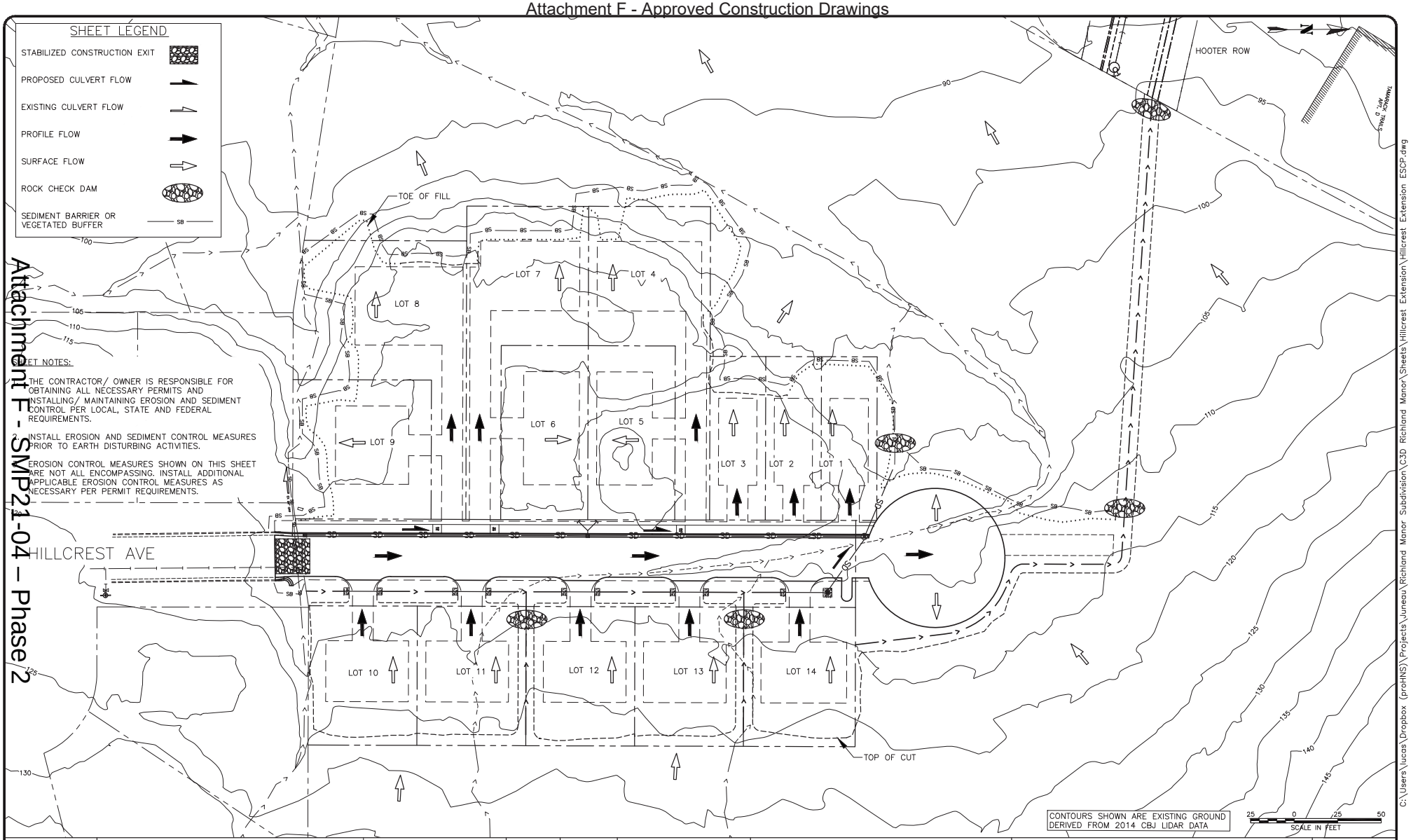
CHILKAT VISTAS SUBDIVISION, PHASE I - HILLCREST AVE EXTENSION
MICHAEL & WILLIAM HEUMANN

SP-4 PLAN & PROFILE

SHEET NUMBER 7 OF 9

May 18, 2020

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension\Hillcrest Extension ROW Plan & Profile.dwg



Attachment F - SMP21-04 – Phase 2

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension\Hillcrest Extension ESCP.dwg

April 28, 2020

ESCP DRAWING NOT SEALED, INTENDED TO BE MODIFIED & UPDATED AS SWPPP SITE MAP

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

CBJ REVIEW

APPROVED:

DATE: 06/01/2020

CHILKAT VISTAS SUBDIVISION, PHASE I - HILLCREST AVE EXTENSION

MICHAEL & WILLIAM HEUMANN

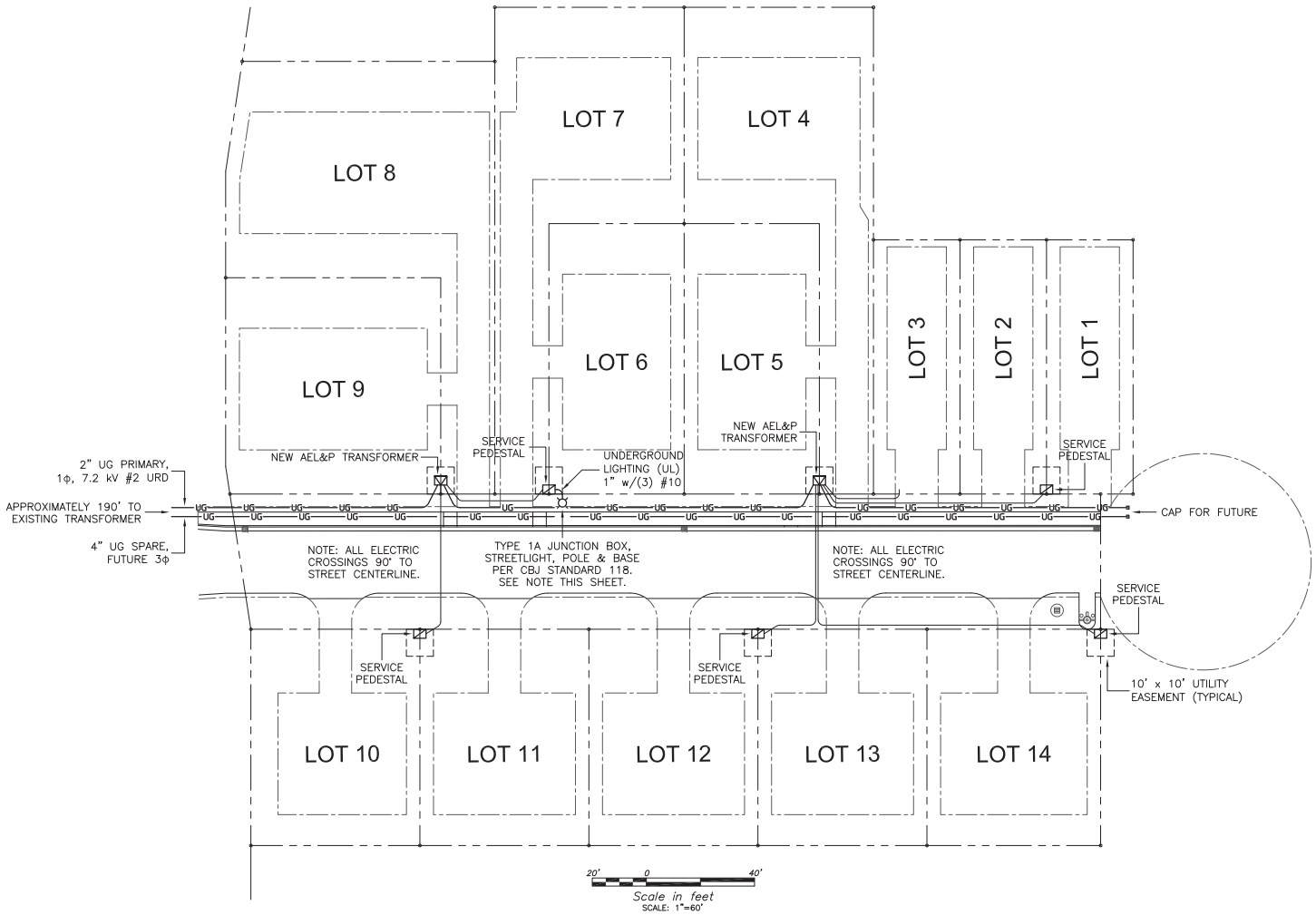
EROSION SEDIMENT CONTROL PLAN

SHEET NUMBER 8 OF 9

LEGEND

- PROPERTY LINE
- SETBACK LINE
- EASEMENT
- UG UG — UTILITY UNDERGROUND PRIMARY
- UTILITY UNDERGROUND SECONDARY
- UL — UNDERGROUND LIGHTING
- ROADWAY LUMINAIRE/STANDARD
- UTILITY TRANSFORMER
- UTILITY SERVICE PEDESTAL

LIGHTING NOTE:
FOR EACH STREET LIGHTING INSTALLATION PROVIDE A TYPE 1A BURIED JUNCTION BOX, 36" DIAMETER BY 6' DEEP CONCRETE BASE (CBJ STANDARD 118), 25' TAPERED GALVANIZED STEEL POLE WITH 4' MAST ARM, AND A 15,000 LUMEN (MINIMUM) TYPE II CUTOFF DISTRIBUTION LUMINAIRE WITH PHOTOCELL CONTROL. EQUIP EACH INSTALLATION WITH A FUSED DISCONNECT.



CBJ REVIEW
APPROVED:
DATE: 06/01/2020

REV	DATE	BY	DESCRIPTION

SCALE GRAPHIC
DESIGNED LC/PG
DRAWN CB/PG
CHECKED MH/PG
DATE APRIL 21, 2020

CHILKAT VISTAS LLC.
WILLIAM C. HEUMANN
MICHAEL P. HEUMANN
6000 THANE ROAD
JUNEAU, ALASKA 99801
(971) 261-8014

HILLCREST AVENUE EXTENSION

STATE OF ALASKA 49TH — Patrick Gorman — REGISTERED PROFESSIONAL ENGINEER
April 21, 2020

GORMAN ENGINEERS
10761 HORIZON DRIVE
JUNEAU, ALASKA 99801-7626
PHONE: 463-6721 CELL: 123-8884
e-mail: pgorman@gci.net

STREET LIGHTING & ELECTRICAL PLAN
HILLCREST AVENUE EXTENSION

DRAWING E-1
SHEET NO. 9 of 9

HOOTER LANE PHASE I ROW IMPROVEMENTS

JUNEAU, AK

PREPARED FOR:

MICHAEL & WILLIAM HEUMANN

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	LEGEND, ABBREVIATIONS & GENERAL NOTES
3	TYPICAL SECTIONS
4	PLAN & PROFILE
5	EROSION SEDIMENT CONTROL PLAN

CITY & BOROUGH OF JUNEAU STANDARD DRAWINGS:

102A	MINIMUM PAVED ROADWAY SECTION WITH CURB & GUTTER
125	PAVEMENT RESURFACING AND TRENCH DETAIL
203	SANITARY SEWER MANHOLE TYPES I & II
204	SANITARY DROP MANHOLE
205	MANHOLE HEIGHTS
206A	STANDARD MANHOLE COVER & FRAME
209	MANHOLE CONNECTION DETAILS
218	COUPLING FOR DISSIMILAR SANITARY SEWER PIPES



PROJECT LOCATION MAP

SCALE 1" = 400'



ALASKA

Attachment F - SMP21-04 – Phase 2

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101 JUNEAU, AK 99801
solutions@proHNS.com www.proHNS.com

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

CBJ REVIEW

APPROVED:

DATE: 01/24/2020

HOOTER LANE PHASE I ROW IMPROVEMENTS

MICHAEL & WILLIAM HEUMANN

TITLE SHEET

SHEET NUMBER 1 OF 5

January 21, 2020 c:\Users\lucas\dropbox (prohns)\Projects\Juneau\richland manor subdivision\c3d richland manor\Sheets\hooter lane phase i\TITLE SHEET.dwg

LEGEND

DESCRIPTION	EXISTING	PROPOSED
ASPHALT	EDGE OF ASPHALT	
BOLLARDS		
BUILDING		
CONCRETE		
CURB & GUTTER		
CUT SLOPE		
DITCH		
FENCE		
FIRE HYDRANT		
GRAVEL		
MONUMENT		
PROPERTY LINE		
SANITARY SEWER CLEANOUT		
SANITARY SEWER PIPE	PIPE SIZE & TYPE SP-EX	SP-1
SANITARY SEWER MANHOLE	SS-EX	SS-1
SIGN		
STORM DRAIN CATCH BASIN		
STORM DRAIN PIPE	PIPE SIZE & TYPE SD SD	PIPE SIZE & TYPE SD SD
STORM DRAIN UNDERDRAIN	UD UD UD	
STORM DRAIN MANHOLE, GRATE		
STORM DRAIN MANHOLE, SOLID LID		
TREES		
UNDERGROUND PIPE CAP		
UTILITY POLE		
UTILITY POLE WITH LUMINAIRE		
WATER LINE PIPE	PIPE SIZE & TYPE	
WATER VALVE BOX		

ABBREVIATIONS

AC	ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
BOP	BEGINNING OF PROJECT
BTM	BOTTOM
BVC	BEGIN VERTICAL CURVE
CB	CATCH BASIN
CBJ	CITY & BOROUGH OF JUNEAU
C/L	CENTERLINE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED POLYETHYENE PIPE
CONC	CONCRETE
CTE	CONNECT TO EXISTING
DI	DUCTILE IRON
DIA	DIAMETER
EL	ELEVATION
EOP	END OF PROJECT
EVC	END VERTICAL CURVE
FG	FINISHED GRADE
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
LP	LOW POINT
LT	LEFT
MH	MANHOLE
MIN	MINIMUM
MTE	MATCH TO EXISTING
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PRC	POINT OF REVERSE CURVATURE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENT
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECTION
RP	RADIUS POINT
RT	RIGHT
ROW	RIGHT-OF-WAY
STA	STATION
STD	STANDARD
TBC	TOP BACK OF CURB
TBG	TOP BACK OF GUTTER
TP	TOP OF PAVEMENT
TYP	TYPICAL

GENERAL NOTES

1. CBJ ENGINEERING STANDARD DETAILS BOOK FOR CIVIL ENGINEERING PROJECTS AND SUBDIVISION IMPROVEMENTS FOURTH ADDITION DATED AUGUST, 2011 AND CBJ ENGINEERING STANDARD SPECIFICATIONS DATED DECEMBER, 2003 ARE MADE A PART OF THIS CONTRACT, INCLUDING ALL ERRATA (NOS. 1–16) AND CURRENT REVISIONS AS APPLICABLE.
2. CALL 586–1333 BEFORE YOU DIG FOR UNDERGROUND POWER, TELEPHONE AND CABLE. CALL 811 ALASKA DIGLINE BEFORE YOU DIG FOR UNDERGROUND ACS & GCI. LOCATIONS AND ELEVATION OF EXISTING UNDERGROUND WATER, SEWER, POWER, TELEPHONE AND CABLE TELEVISION SHOWN ON THE PLANS WERE DERIVED FROM CBJ AS–BUILTS AND FIELD LOCATES. THE ACTUAL LOCATION OF UTILITIES MAY VARY FROM THOSE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, PROTECTING AND MAINTAINING THE UTILITIES THROUGHOUT THE CONSTRUCTION OF THE PROJECT. ANY DAMAGE TO THE UNDERGROUND UTILITIES DURING CONSTRUCTION SHALL BE PAID FOR BY THE CONTRACTOR AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
3. LOCATIONS OF EXISTING DRAINAGE STRUCTURES AND UTILITIES WERE DERIVED FROM CBJ AS–BUILT DRAWINGS AND FIELD LOCATES, ACTUAL LOCATIONS MAY VARY FROM THOSE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, PROTECTING AND MAINTAINING THE EXISTING DRAINAGE STRUCTURES AND UTILITIES THROUGHOUT CONSTRUCTION OF THIS PROJECT.
4. THE ESTIMATED TOTAL AREA OF DISTURBANCE RESULTING FROM THESE IMPROVEMENTS IS APPROXIMATELY 0.5 ACRE.
5. THE ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) HAS IDENTIFIED A CONTAMINATED SITE WITHIN 1,500 FEET OF THE PROJECT LIMITS THAT ARE CURRENTLY IN "ACTIVE" OR "INSTITUTIONAL CONTROL" CLEANUP STATUS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSULT DEC AND OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK.
6. FINISHED GRADE AND ALIGNMENT ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER. LOCATION OF PROPOSED SEWER AND STORM DRAINAGE FACILITIES ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER.
7. CONTRACTOR SHALL REFERENCE ALL EXISTING PROPERTY CORNER MONUMENTS (I.E. BRASS CAP MONUMENTS, REBARS, CONCRETE NAILS, CHISELED X'S) PRIOR TO CONSTRUCTION AND REMONUMENT AFTER SURFACING IS REPLACED. EXISTING SURVEY MONUMENTS MAY NOT BE SHOWN ON THE DRAWINGS. ALL WORK SHALL BE DONE BY, OR UNDER THE DIRECTION OF, AN ALASKA REGISTERED LAND SURVEYOR.
8. CONTRACTOR SHALL ENSURE GARBAGE PICKUP, PRIVATE AND BUSINESS DELIVERIES, AND DAILY MAIL SERVICE WILL BE UNINTERRUPTED TO ALL RESIDENCES AFFECTED BY THIS PROJECT.
9. THE CONTRACTOR SHALL NOT STORE MATERIALS OR EQUIPMENT, OR OPERATE EQUIPMENT WITH ITS TRACKS OR WHEELS PLACED ON PRIVATE PROPERTY, WITHOUT THE WRITTEN APPROVAL OF THE PROPERTY OWNER.
10. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF OFF–SITE.

STATE OF ALASKA 49TH — Lucas Chambers — LUCAS M. CHAMBERS — 01/21/2020 — CE 19693 — REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

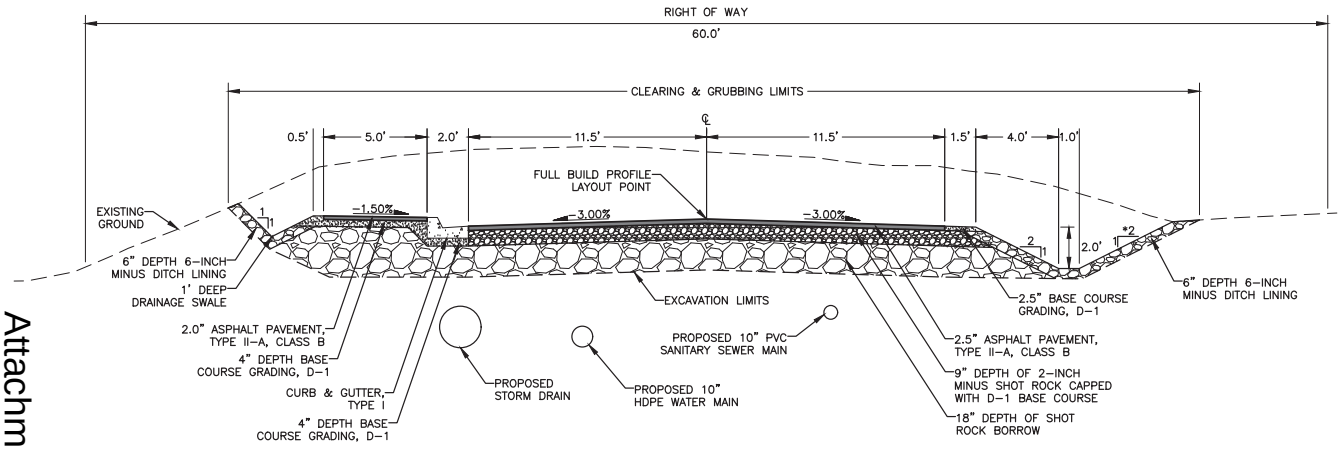
CBJ REVIEW
APPROVED:
DATE: 01/24/2020

HOOTER LANE PHASE I ROW IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

LEGEND ABREVIATIONS & GENERAL NOTES

SHEET NUMBER 2 OF 5

January 21, 2020 c:\Users\lucas\dropbox (prohns)\Projects\Juneau\richland manor subdivision\c3d richland manor\Sheets\hooter lane phase i\LEGEND, ABREVIATIONS & GENERAL NOTES.dwg

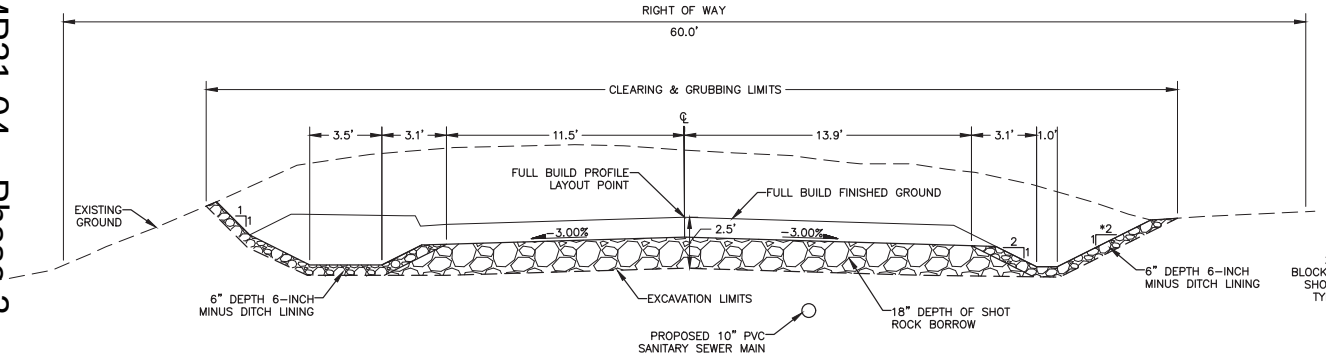


HOOTER LANE FULL BUILD TYPICAL SECTION
NTS

*BACKSLOPE VARIES
1:1 STA:1+50 TO 3+85
1.5:1 STA: 3+85 TO 4+80
2:1 STA: 4+80 TO 6+90

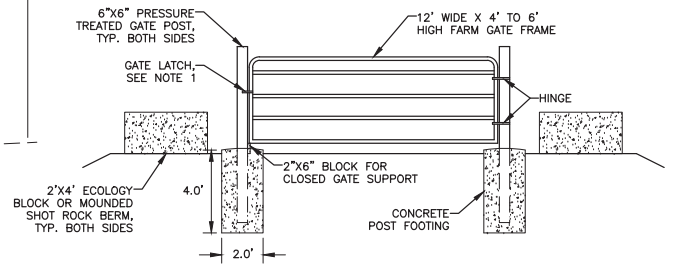
TYPICAL SECTION NOTES

1. CBJ ENGINEERING STANDARD DETAILS BOOK FOR CIVIL ENGINEERING PROJECTS AND SUBDIVISION IMPROVEMENTS DATED AUGUST, 2011 AND CBJ ENGINEERING STANDARD SPECIFICATIONS DATED DECEMBER, 2003 ARE MADE A PART OF THE CONSTRUCTION PLANS, WITH CURRENT REVISIONS AS APPLICABLE.
2. LARGE BOULDERS, HARDPAN, STUMPS, LOGS, ORGANICS AND GROUND WATER MAY BE ENCOUNTERED AT VARIOUS DEPTHS DURING TRENCHING, DITCHING AND ROADWAY EXCAVATION OPERATIONS. THESE MATERIALS SHALL BE DISPOSED OF AS REQUIRED BY THE ENGINEER.
3. ALL ORGANIC MATERIALS SHALL BE REMOVED TO A MINIMUM DEPTH OF 5' FROM TOP OF SUBGRADE AND REPLACED WITH NON FROST SUSCEPTIBLE MATERIAL WITHIN THE ROADWAY PRISM AS APPROVED BY THE ENGINEER.
4. ADDITIONAL EXCAVATION BELOW THE NEATLINE SUBCUT LEVEL MAY BE REQUIRED IF ORGANIC OR OTHER UNSUITABLE MATERIALS ARE ENCOUNTERED. EXCAVATION AND REPLACEMENT OF UNSUITABLE MATERIALS SHALL BE APPROVED BY THE ENGINEER.
5. ALL SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL INSPECTION PURSUANT TO CHAPTER 19:12 GRADING AND EXCAVATION CODE.
6. ALL CUT AND FILL SLOPES NOT STABILIZED WITH SHOT ROCK SHALL BE TOP SOILED AND SEEDED.
7. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING EROSION AND SEDIMENT CONTROL PER LOCAL, STATE AND FEDERAL REQUIREMENTS.



HOOTER LANE PHASE I TYPICAL SECTION
NTS

*BACKSLOPE VARIES
1:1 STA:2+70 TO 3+85
1.5:1 STA: 3+85 TO 4+80
2:1 STA: 4+80 TO 6+90



LOCKING SECURITY GATE DETAIL
NTS

DETAIL NOTE:

1. PROVIDE GATE LATCH WITH COMBINATION LOCK OR HEAVY GAGE CHAIN AND COMBINATION LOCK.
2. INSTALL LOCKING SECURITY GATE UPON COMPLETION OF PROJECT PERPENDICULAR TO CENTER LINE AT STA: 3+50.
3. PROVIDE TEMPORARY ACCESS DETERRENT DURING NON WORKING HOURS UNTIL LOCKING SECURITY GATE HAS BEEN INSTALLED.

STATE OF ALASKA 49TH — Lucas Chambers — LUCAS M. CHAMBERS — 01/21/2020 — CE 10669 — REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

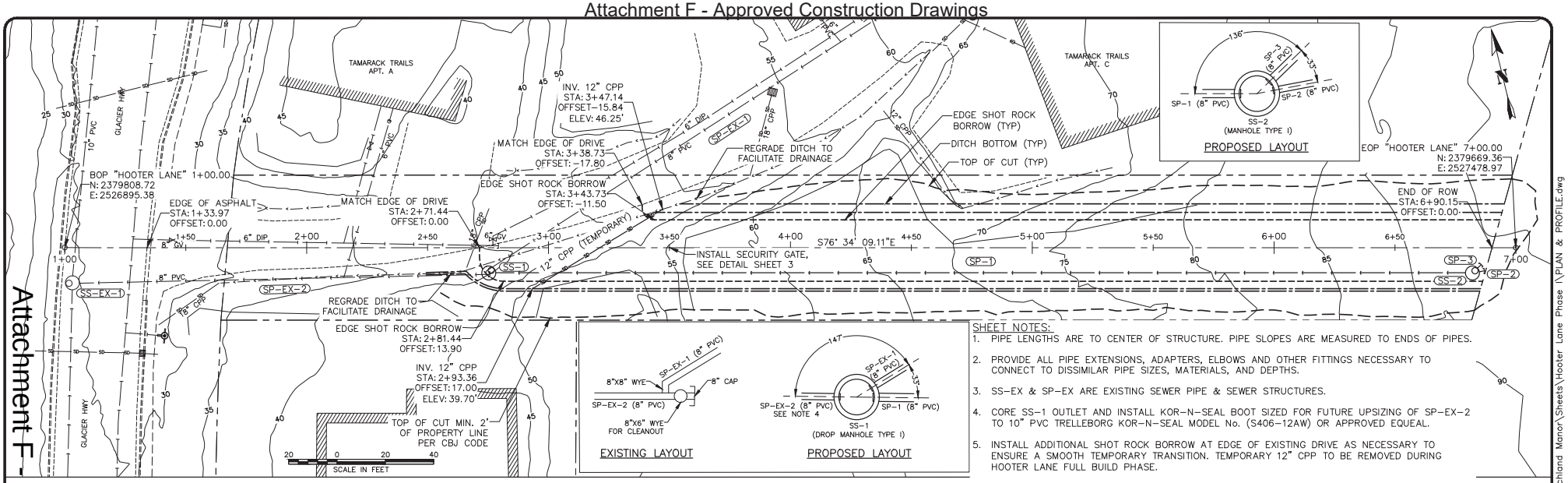
CBJ REVIEW
APPROVED:
DATE: 01/24/2020

HOOTER LANE PHASE I ROW IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

TYPICAL SECTIONS

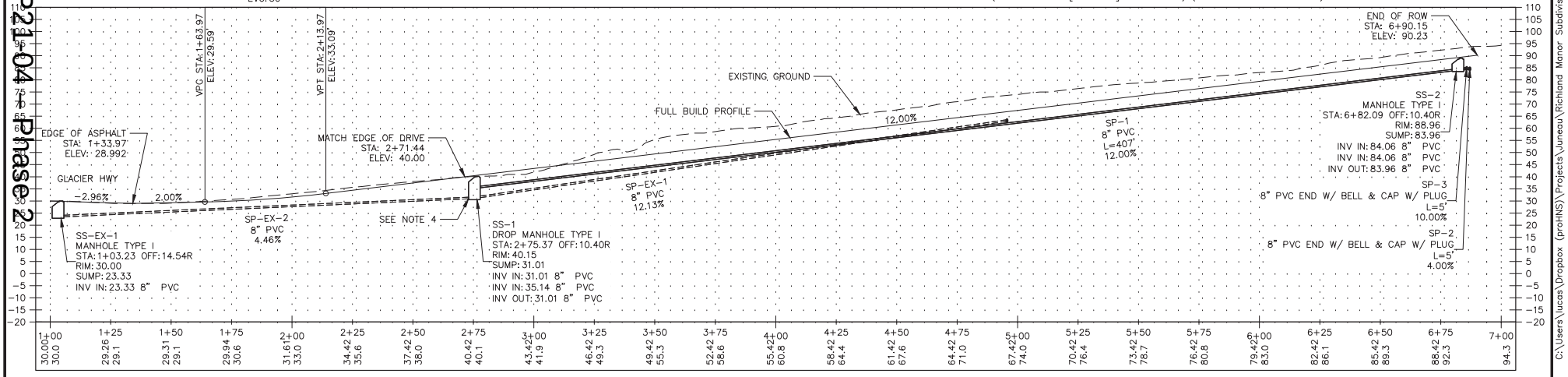
SHEET NUMBER 3 OF 5

January 21, 2020 c:\Users\lucas\dropbox (prohns)\Projects\Juneau\richland manor subdivision\c3d richland manor\Sheets\hooter lane phase i\TYPICAL SECTIONS.dwg



SHEET NOTES:

1. PIPE LENGTHS ARE TO CENTER OF STRUCTURE. PIPE SLOPES ARE MEASURED TO ENDS OF PIPES.
2. PROVIDE ALL PIPE EXTENSIONS, ADAPTERS, ELBOWS AND OTHER FITTINGS NECESSARY TO CONNECT TO DISSIMILAR PIPE SIZES, MATERIALS, AND DEPTHS.
3. SS-EX & SP-EX ARE EXISTING SEWER PIPE & SEWER STRUCTURES.
4. CORE SS-1 OUTLET AND INSTALL KOR-N-SEAL BOOT SIZED FOR FUTURE UPSIZING OF SP-EX-2 TO 10" PVC TRELLEBORG KOR-N-SEAL MODEL No. (S406-12AW) OR APPROVED EQUEAL.
5. INSTALL ADDITIONAL SHOT ROCK BORROW AT EDGE OF EXISTING DRIVE AS NECESSARY TO ENSURE A SMOOTH TEMPORARY TRANSITION. TEMPORARY 12" CPP TO BE REMOVED DURING HOOTER LANE FULL BUILD PHASE.
6. CONTOURS SHOWN ARE EXISTING GRADE DERIVED FROM 2014 CBJ LIDAR DATA.
7. HORIZONTAL AND VERTICAL CONTROL IS STATE PLANE ZONE AK 1 ABOUT POINT#20 MAG [LAT: 58 20 42.12902, LON: 134 29 24.31493] [2379175.08N, 2527721.72E] (115.39' MLLW) (CONVERGENCE [DEGREES] 0.43405278) (POINT SCALE 0.99961092).



1+00	1+25	1+50	1+75	2+00	2+25	2+50	2+75	3+00	3+25	3+50	3+75	4+00	4+25	4+50	4+75	5+00	5+25	5+50	5+75	6+00	6+25	6+50	6+75	7+00
30.0	29.2	29.3	29.9	31.6	34.4	37.4	40.4	43.4	46.4	49.4	52.4	55.4	58.4	61.4	64.4	67.4	70.4	73.4	76.4	79.4	82.4	85.4	88.4	94.3
30.0	29.1	29.1	30.6	33.0	35.6	38.0	40.1	41.9	49.3	55.3	58.6	60.8	64.4	67.6	71.0	74.0	76.4	78.7	80.8	83.0	86.1	89.3	92.3	

1+00	+25	+50	+75	2+00	+25	+50	+75	3+00	+25	+50	+75	4+00	+25	+50	+75	5+00	+25	+50	+75	6+00	+25	+50	+75	7+00

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY
1	01/23/2020	REVIEW REVISION: SS-2 8" PVC END WITH BELL & PLUG	LC

STATE OF ALASKA — 49TH — lucas chambers — LICENSED STRUCTURAL ENGINEER — 01/23/2020 — CE 19693 — REGISTERED PROFESSIONAL ENGINEER

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

CBJ REVIEW
APPROVED:
DATE: 01/24/2020

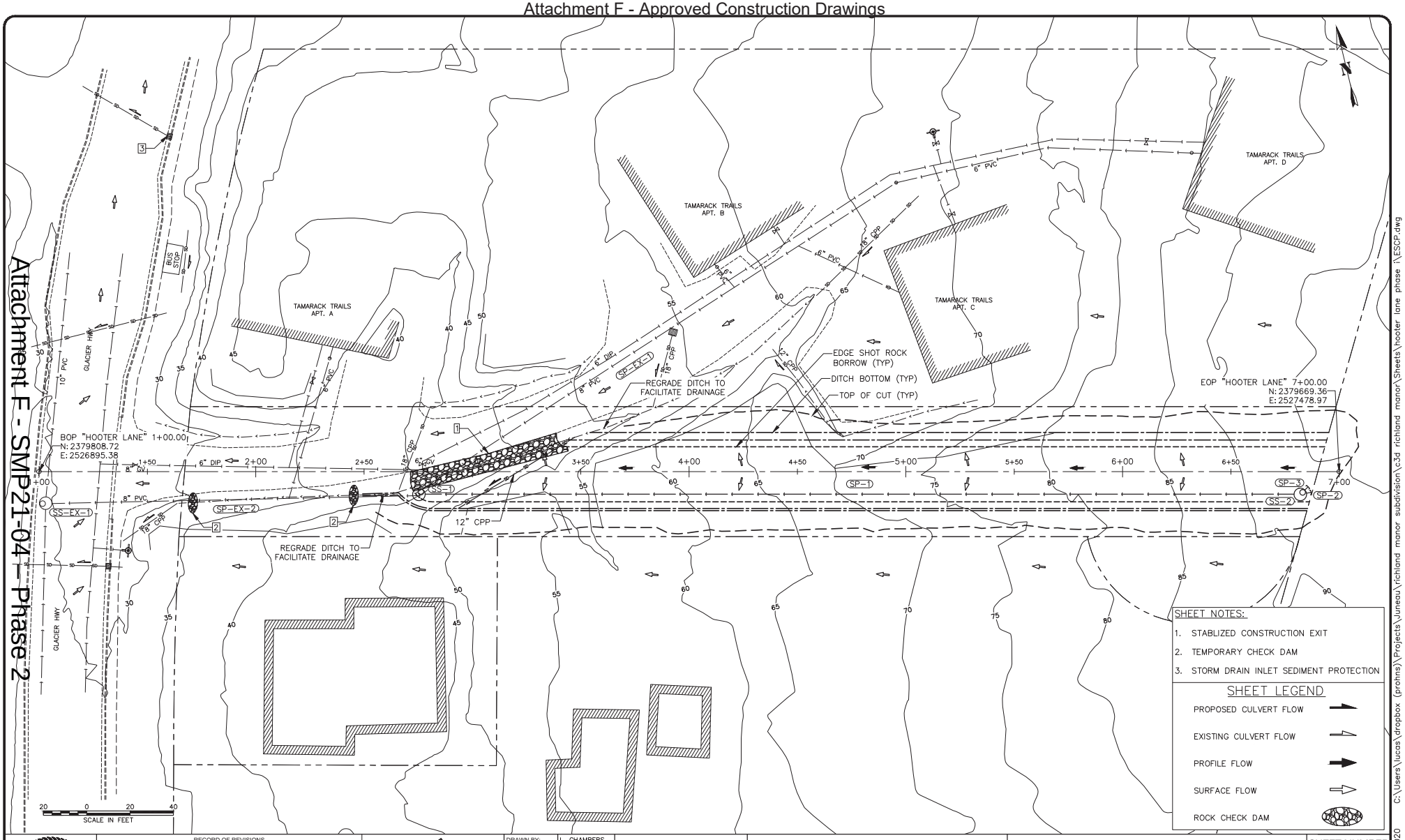
HOOTER LANE PHASE I ROW IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

BOP TO EOP PLAN & PROFILE

SHEET NUMBER 4 OF 5

January 23, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hooter Lane Phase I\PLAN & PROFILE.dwg

Attachment F - SMP21-04 Phase 2



SHEET NOTES:

1. STABLIZED CONSTRUCTION EXIT
2. TEMPORARY CHECK DAM
3. STORM DRAIN INLET SEDIMENT PROTECTION

SHEET LEGEND

- PROPOSED CULVERT FLOW
- EXISTING CULVERT FLOW
- PROFILE FLOW
- SURFACE FLOW
- ROCK CHECK DAM

STATE OF ALASKA 49TH — LUCAS M. CHAMBERS — 01/21/2020 — CE 10669 — REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101, JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

CBJ REVIEW
APPROVED:
DATE: 01/24/2020

HOOTER LANE PHASE I ROW IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

EROSION SEDIMENT CONTROL PLAN

SHEET NUMBER 5 OF 5

January 21, 2020 C:\Users\lucas\dropbox (prohns)\Projects\Juneau\richland manor subdivision\c3d richland manor\Sheets\hooter lane phase i\ESCP.dwg

Attachment F - SMP21-04 – Phase 2

HOOTER LANE FULL BUILD ROW IMPROVEMENTS CROSS SECTIONS

JUNEAU, AK

PREPARED FOR:

MICHAEL & WILLIAM HEUMANN



PROJECT LOCATION MAP

SCALE 1" = 400'

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	CROSS SECTIONS 1+50 – 2+25
3	CROSS SECTIONS 2+50 – 3+25
4	CROSS SECTIONS 3+50 – 4+00
5	CROSS SECTIONS 4+00 – 4+80
6	CROSS SECTIONS 5+00 – 5+75
7	CROSS SECTIONS 6+00 – 6+75
8	CROSS SECTION 6+80

Attachment F - SMP21-04 – Phase 2

STATE OF ALASKA 49TH Lucas Chambers LUCAS M. CHAMBERS 01/23/2020 CE 10669 PROFESSIONAL ENGINEER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHMBERS

CBJ REVIEW

APPROVED:

DATE: 01/24/2020

HOOTER LANE FULL BUILD ROW IMPROVEMENTS

MICHAEL & WILLIAM HEUMANN

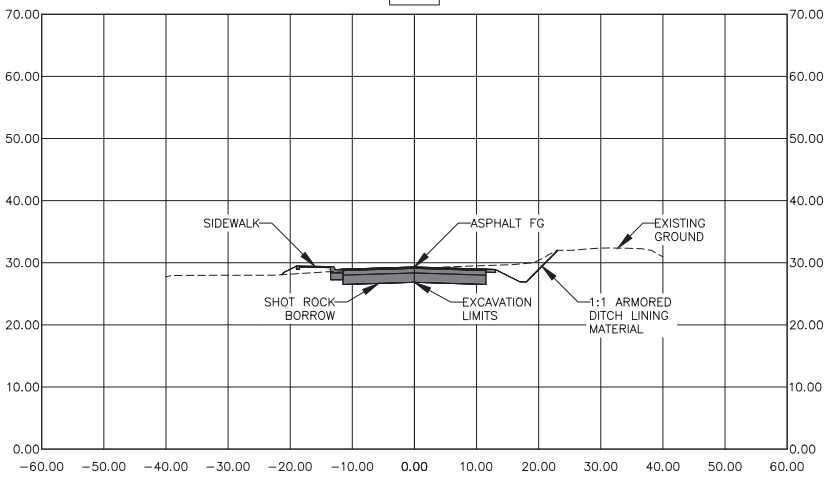
COVER SHEET

SHEET NUMBER 1 OF 8

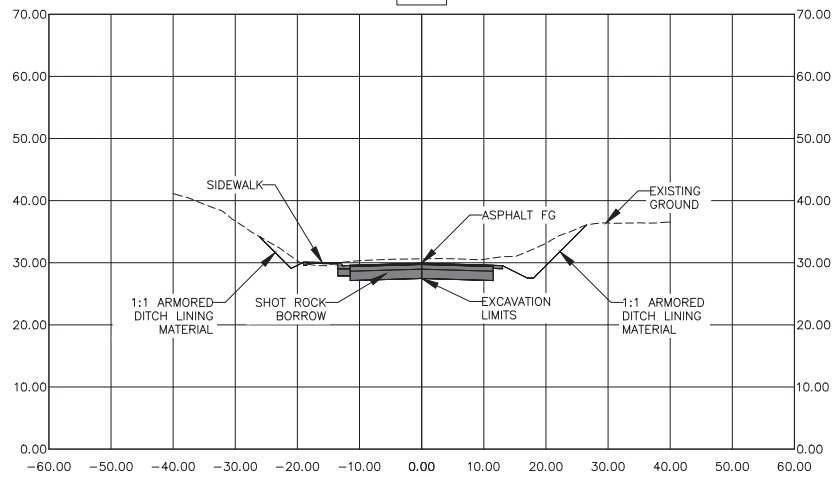
January 23, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Cross Sections\TITLE SHEET_XSECTIONS.dwg

Attachment F - SMP21-04 – Phase 2

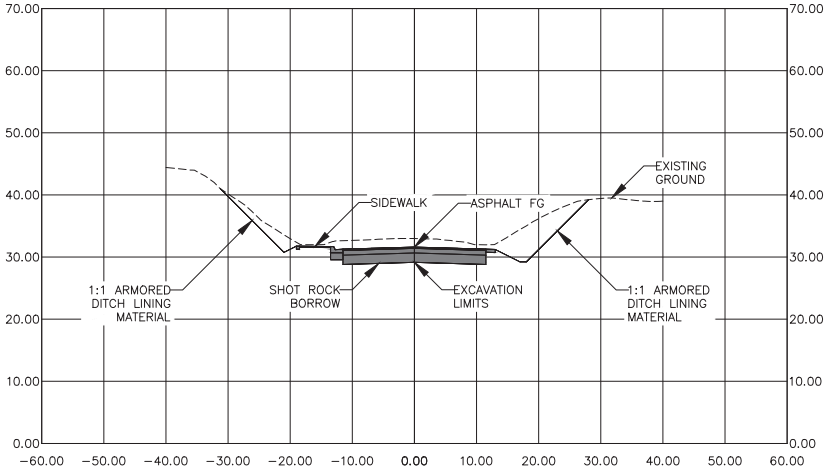
1+50.00



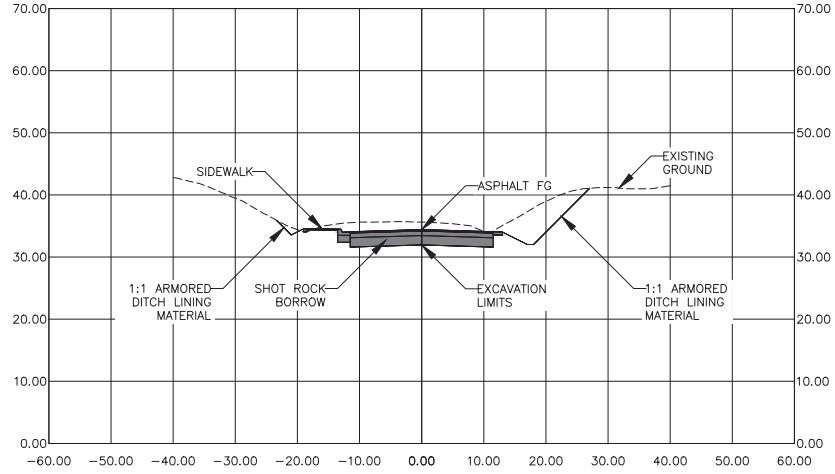
1+75.00



2+00.00



2+25.00



STATE OF ALASKA — 49TH — Lucas Chambers — LUCAS M. CHAMBERS — 01/23/2020 — CE 19693 — REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHMBERS

CBJ REVIEW
APPROVED:
DATE: 01/24/2020

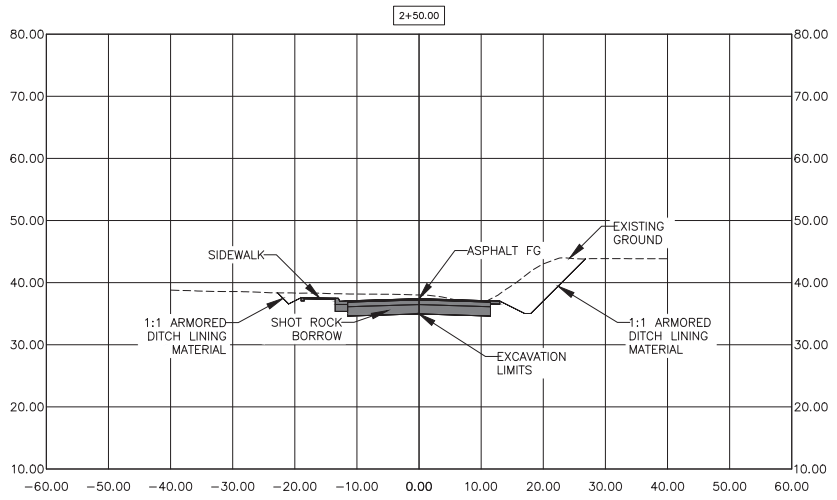
HOOTER LANE FULL BUILD ROW IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

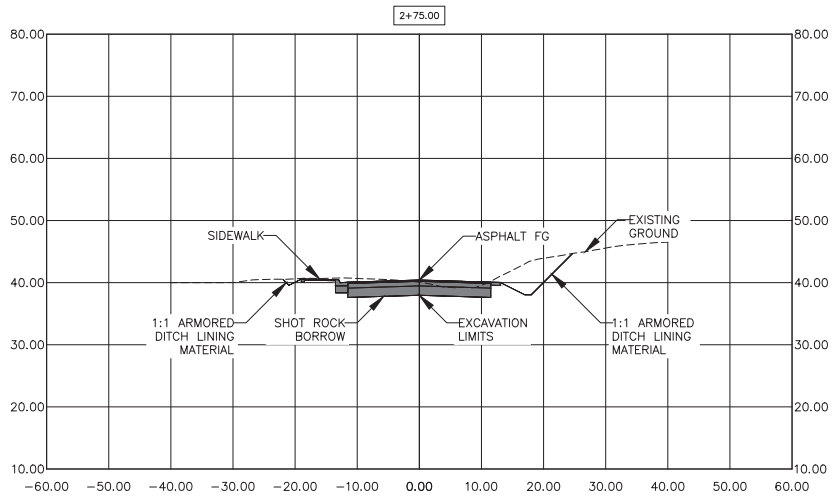
CROSS SECTIONS 1+50 - 2+25

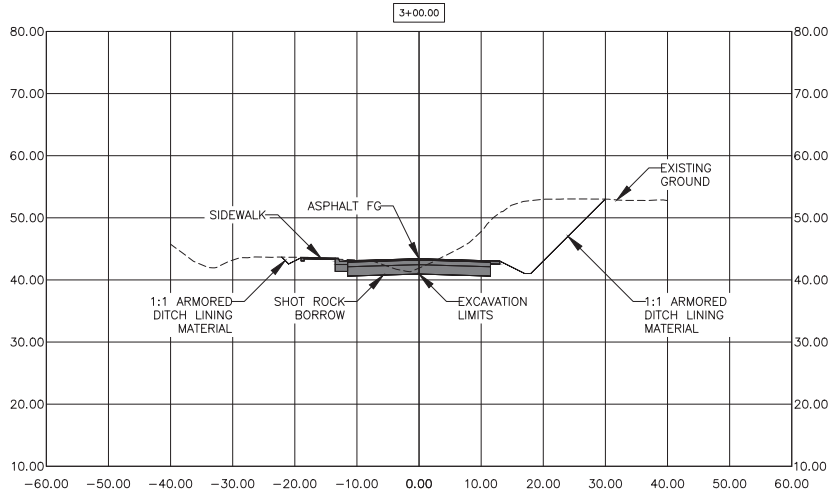
SHEET NUMBER 2 OF 8

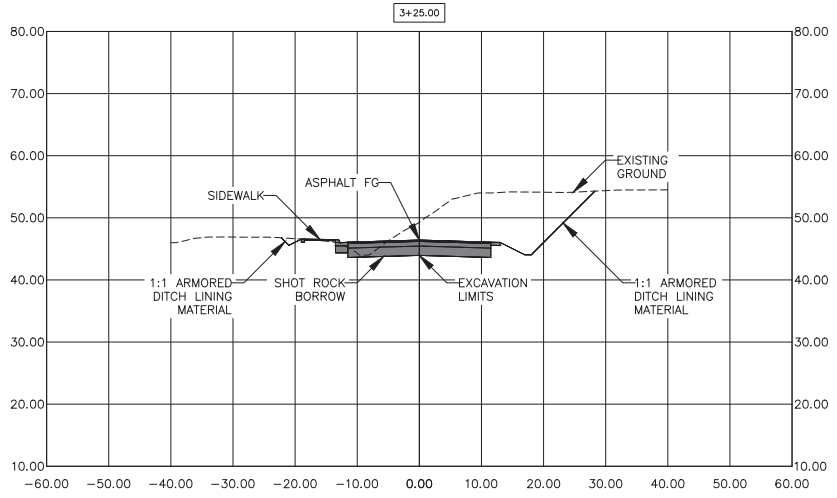
January 23, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Cross Sections\HOOER_LANE_FULL_BUILD_CROSS_SECTIONS.dwg

Attachment F - SMP21-04 – Phase 2









STATE OF ALASKA 49TH Lucas Chambers LUCAS M. CHAMBERS 01/23/2020 CE 19693 REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101 JUNEAU, AK 99801
solutions@proHNS.com www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHMBERS

CBJ REVIEW
APPROVED:
DATE: 01/24/2020

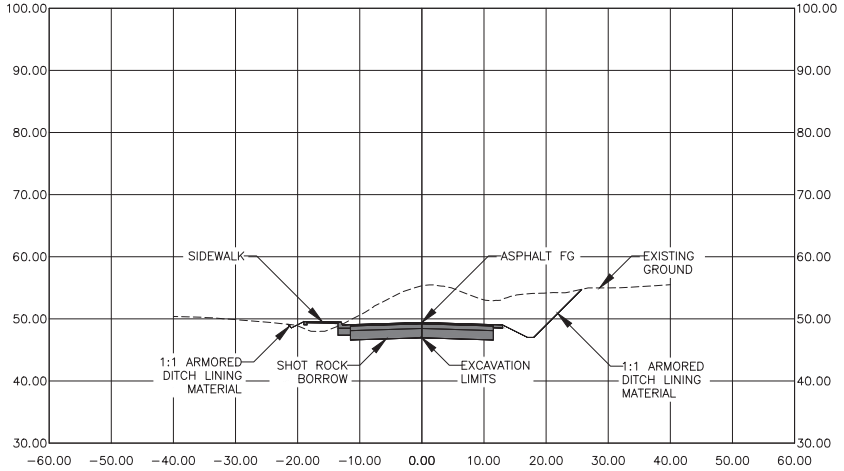
HOOTER LANE FULL BUILD ROW IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

CROSS SECTIONS 2+50 - 3+25

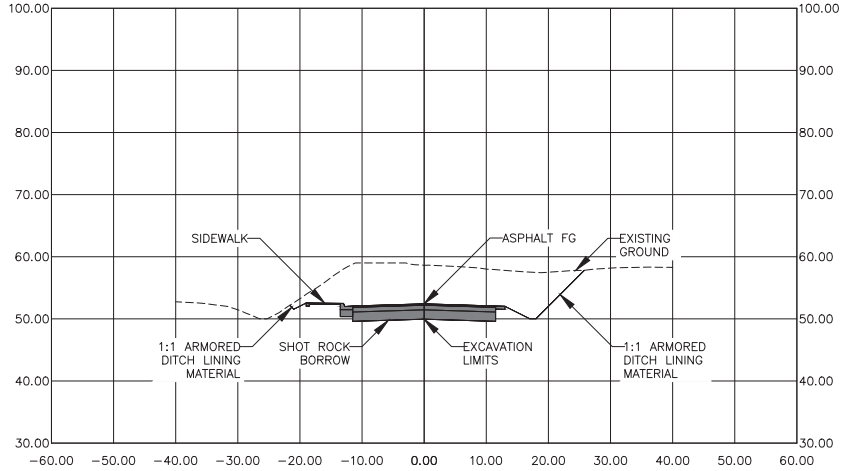
SHEET NUMBER 3 OF 8

January 23, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Cross Sections\HOOER_LANE_FULL_BUILD_CROSS_SECTIONS.dwg

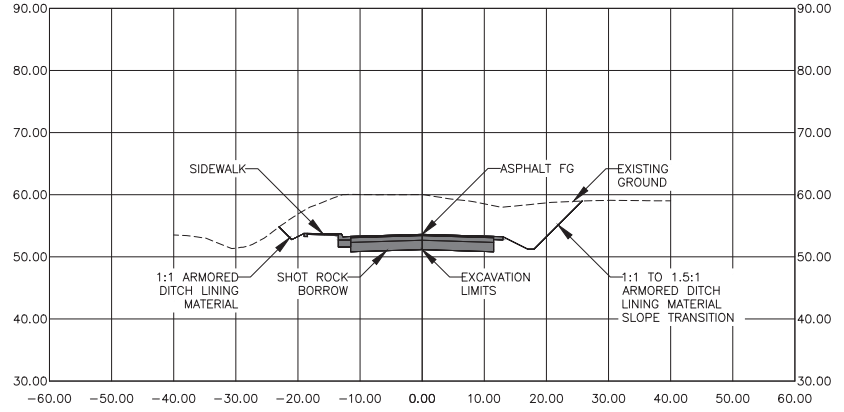
3+50.00



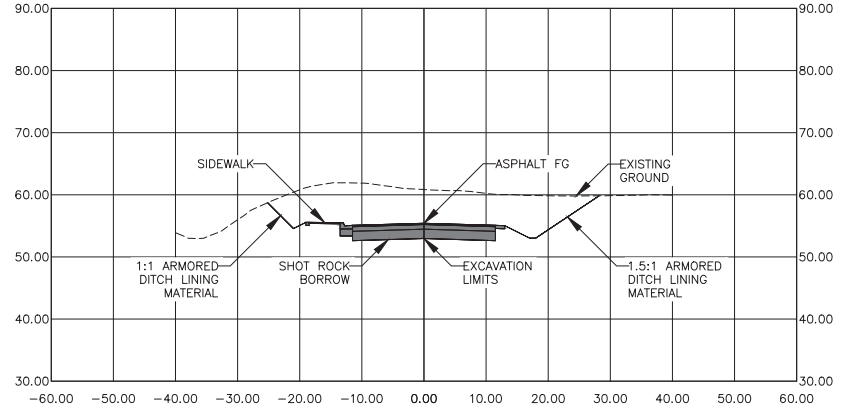
3+75.00



3+85.00



4+00.00



RIGHT SIDE ARMORED DITCH BACK SLOPE TRANSITIONS FROM 1:1 TO 1.5:1 SLOPE AT STA: 3+85.

STATE OF ALASKA 49TH — Lucas Chambers — LUCAS M. CHAMBERS — 01/23/2020 — CE 19693 — REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHMBERS

CBJ REVIEW
APPROVED:
DATE: 01/24/2020

HOOTER LANE FULL BUILD
ROW IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

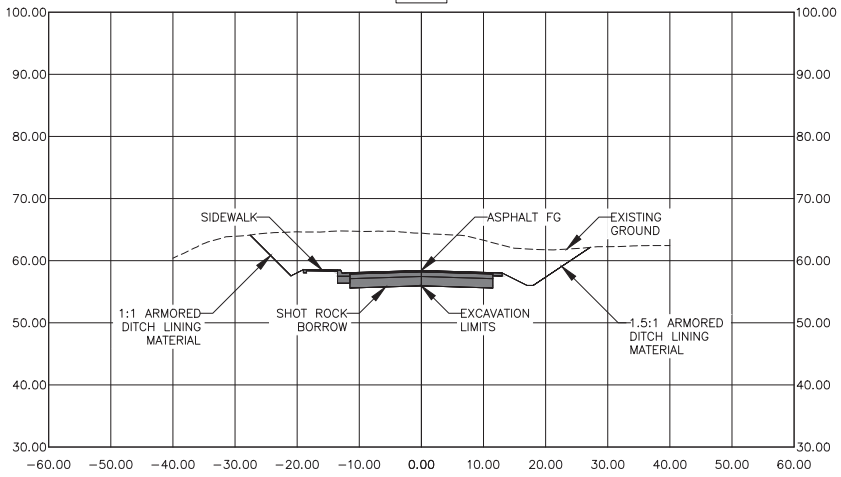
CROSS SECTIONS 3+50 - 4+00

SHEET NUMBER 4 OF 8

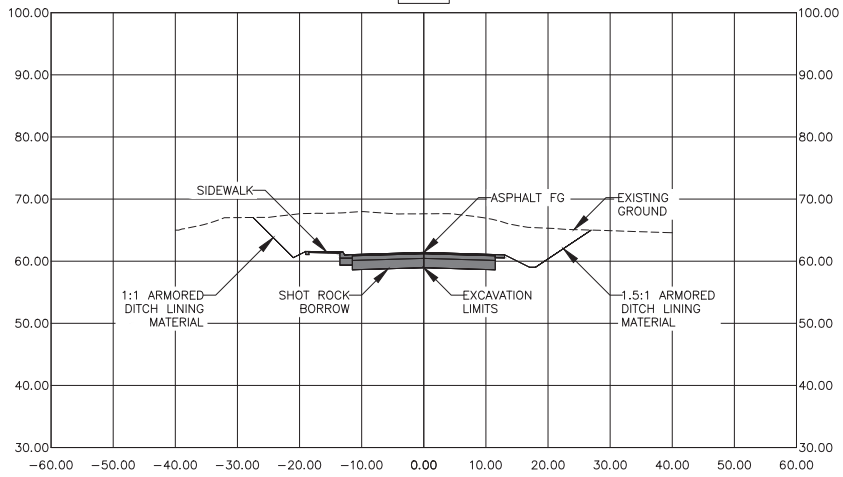
January 23, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Cross Sections\HOOER_LANE_FULL_BUILD_CROSS_SECTIONS.dwg

Attachment F - SMP21-04 – Phase 2

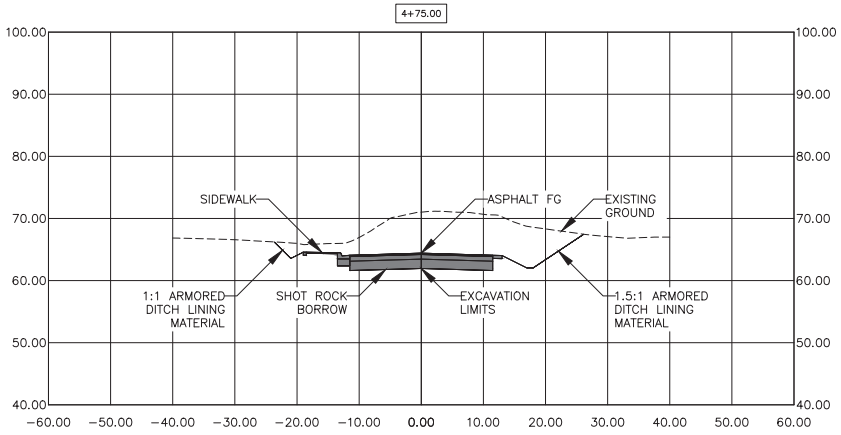
4+25.00



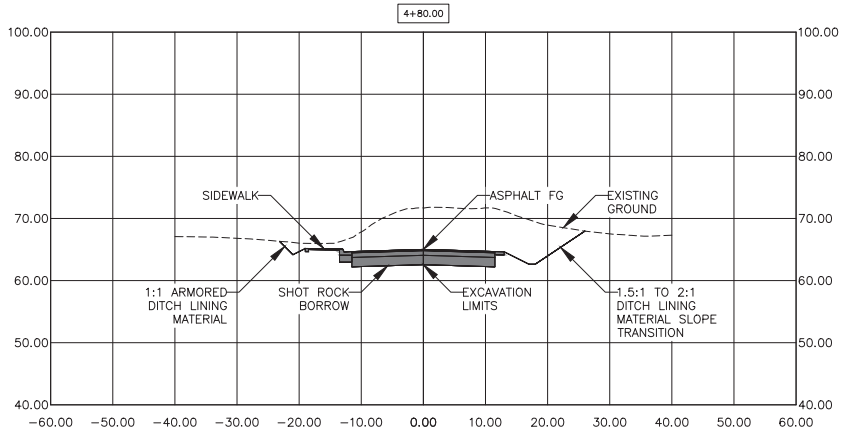
4+50.00



4+75.00



4+80.00



RIGHT SIDE ARMORED DITCH BACK SLOPE TRANSITIONS FROM 1.5:1 TO 2:1 DITCH LINING BACK SLOPE AT STA: 4+80.

STATE OF ALASKA 49TH Lucas Chambers LUCAS M. CHAMBERS 01/23/2020 CE 19693 PROFESSIONAL ENGINEER

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHMBERS

CBJ REVIEW
APPROVED:
DATE: 01/24/2020

HOOTER LANE FULL BUILD ROW IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

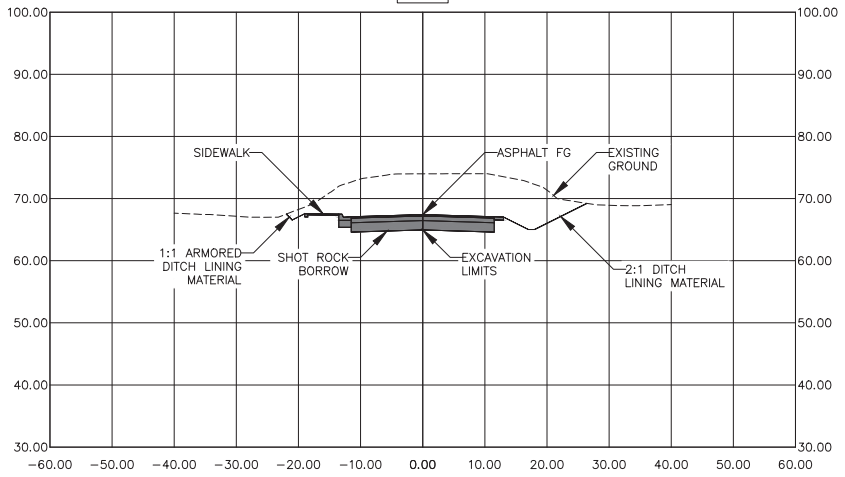
CROSS SECTIONS 4+25 - 4+80

SHEET NUMBER 5 OF 8

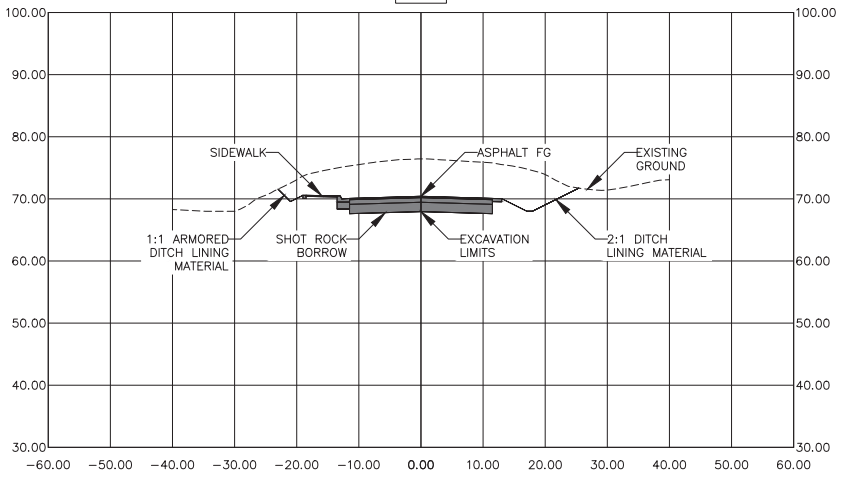
January 23, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Cross Sections\HOOER_LANE_FULL_BUILD_CROSS_SECTIONS.dwg

Attachment F - SMP21-04 – Phase 2

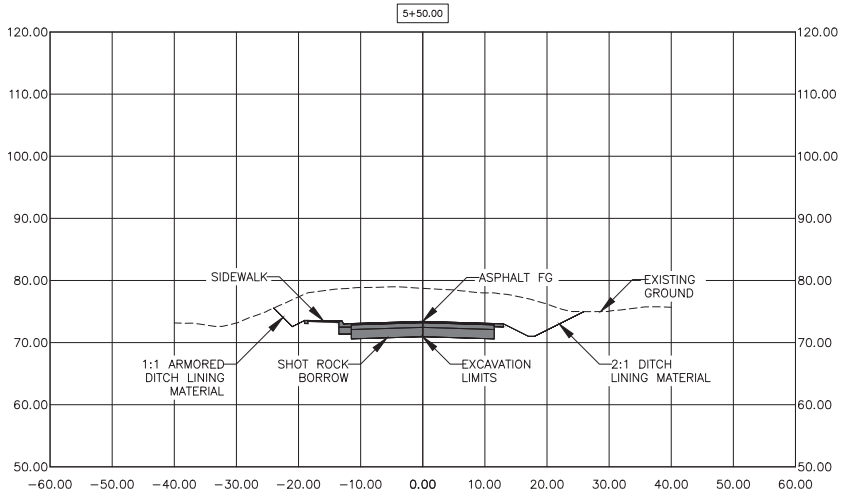
5+00.00



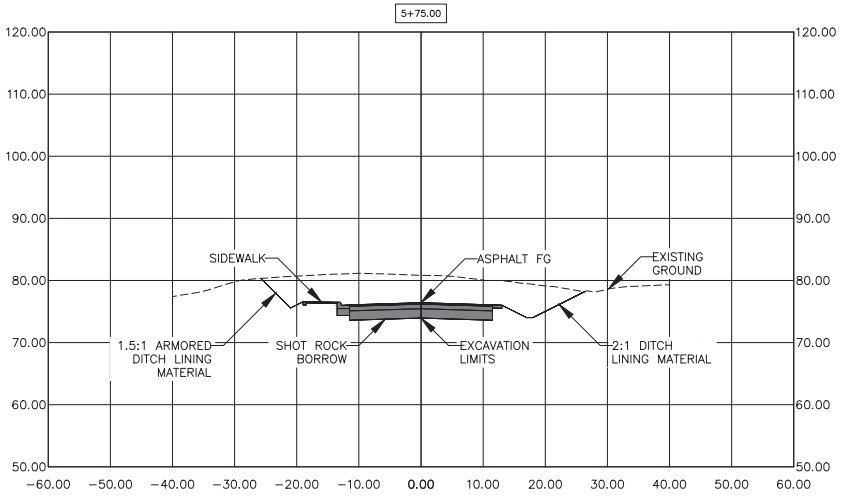
5+25.00



5+50.00



5+75.00



STATE OF ALASKA
49TH
LUCAS M. CHAMBERS
01/23/2020
CE 19693
REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHMBERS

CBJ REVIEW
APPROVED:
DATE: 01/24/2020

HOOTER LANE FULL BUILD ROW IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

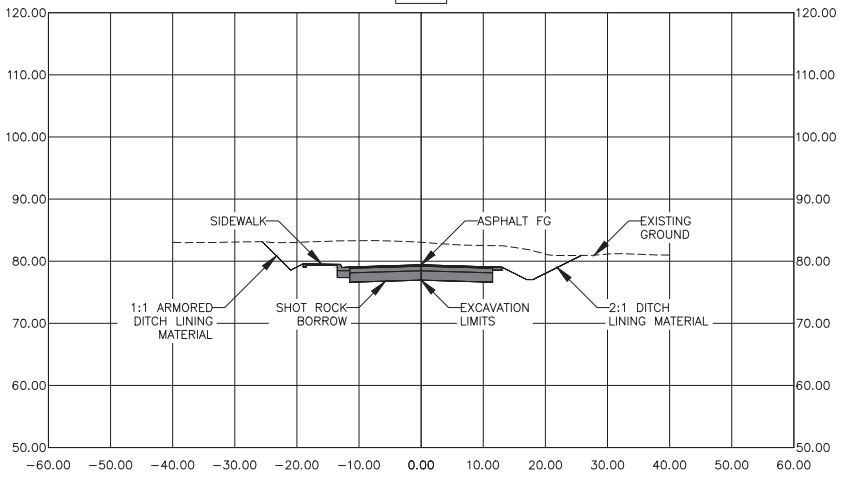
CROSS SECTIONS 5+00 - 5+75

SHEET NUMBER 6 OF 8

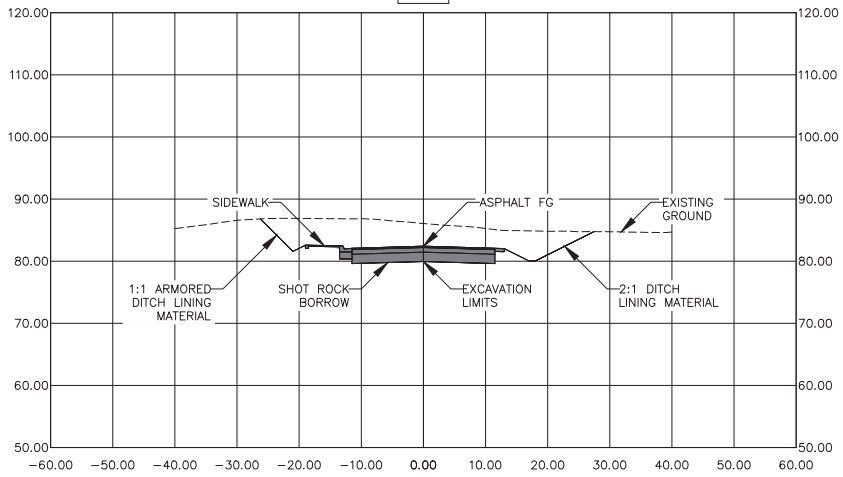
January 23, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Cross Sections\HOOER_LANE_FULL_BUILD_CROSS_SECTIONS.dwg

Attachment F - SMP21-04 – Phase 2

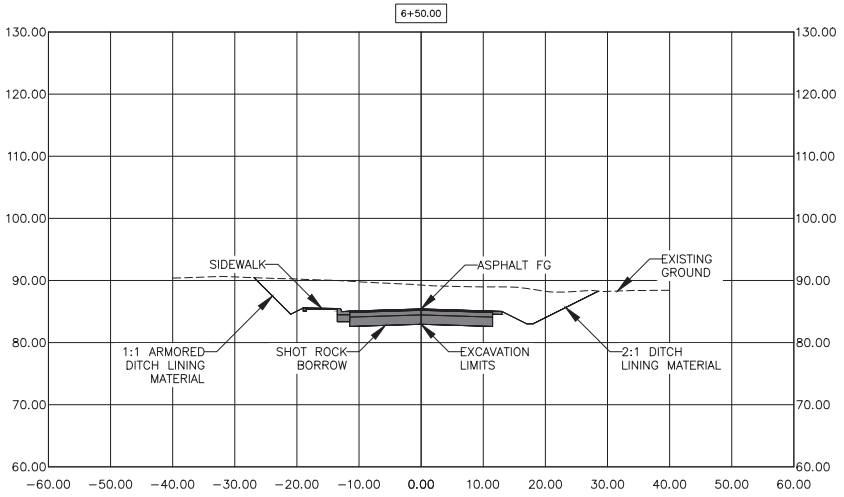
6+00.00



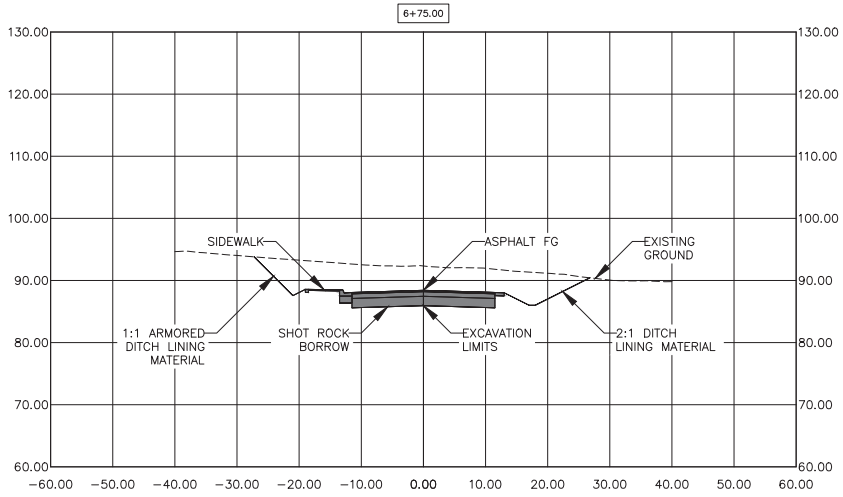
6+25.00



6+50.00



6+75.00



STATE OF ALASKA
49TH
LUCAS M. CHAMBERS
01/23/2020
CE 19693
REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801

solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHMBERS

CBJ REVIEW

APPROVED:

DATE: 01/24/2020

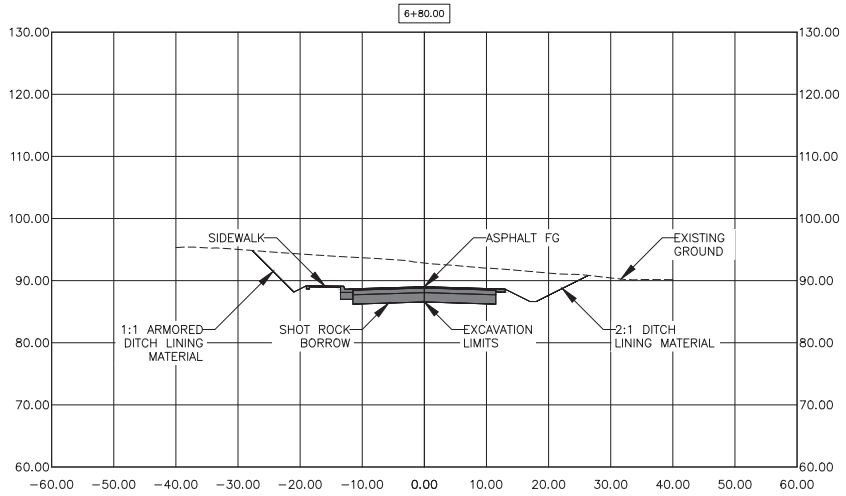
HOOTER LANE FULL BUILD ROW IMPROVEMENTS

MICHAEL & WILLIAM HEUMANN

CROSS SECTIONS 6+00 - 6+75

SHEET NUMBER 7 OF 8

January 23, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Cross Sections\HOOER_LANE_FULL_BUILD_CROSS_SECTIONS.dwg



Attachment F - SMP21-04 – Phase 2

STATE OF ALASKA 49TH — lucas chambers — LUCAS M. CHAMBERS — 01/23/2020 — CE 19693 — REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHMBERS

CBJ REVIEW
APPROVED:
DATE: 01/24/2020

HOOTER LANE FULL BUILD ROW IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

CROSS SECTION 6+80

SHEET NUMBER 8 OF 8

January 23, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Cross Sections\HOOER_LANE_FULL_BUILD_CROSS_SECTIONS.dwg

CONTRACTOR'S REQUEST
FOR PAYMENT NO. 1

CONTRACTOR: Coogan Construction
PROJECT TITLE: Chillkat Vistas Subdivision, Phase I - Hillcrest Ave Extension
[X] Partial Pay Request for period: **6/4/2020** **to** **6/17/2020**
[ ] Final Pay Request

Original Contract Amount	$436,266.30
Amount Added/Deleted by Change Order	$0.00
Adjusted Contract Price	$436,266.30
Total Work Completed to Date	$78,855.00
Materials on Hand	
NET EARNED ON CONTRACT TO DATE	$78,855.00

REMAINING CONTRACT AMOUNT TO BE COMPLETED: $357,411.30

Previous Payments:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Total of Previous Payment	(-)	$0.00
AMOUNT OF THIS PAYMENT REQUEST		**$78,855.00** ⬅ PAY THIS AMOUNT

The undersigned hereby certify that all items and amounts on this request for payment are correct and that the work has been performed and/or material supplied in full accordance with the contract.

(Date)	(Signature of Contractor's Representative)	(Title)

(Date)	(Signature of Project Engineer/Architect)

Attachment G - Engineer's Estimate

CONTRACTOR'S PAY ESTIMATE NO.: 1
(UNIT PRICE CONTRACT)

CONTRACT TITLE: Chillkat Vistas Subdivision, Phase I - Hillcrest Ave Extension
CONTRACTOR: Coogan Construction

ESTIMATE OF WORK COMPLETED ON: 6/17/2020

BASE BID							
ITEM	**DESCRIPTION**	**Unit Of Measure**	**Unit Price**	**BID AMOUNT**	**QUANTITY THIS EST.**	**QUANTITY TO DATE**	**AMOUNT TO DATE**
1505.1	Mobilization	All Req'd	Lump Sum	$20,000.00	100%	100%	$20,000.00
1570.1	Erosion and Sediment Control	All Req'd	Lump Sum	$12,000.00	20%	20%	$2,400.00
2201.1	Clearing & Grubbing	All Req'd	Lump Sum	$5,000.00	100%	100%	$5,000.00
2202.1	Excavation	877 CY	$ 10.00	$8,770.00	714.00	714.00	$7,140.00
2202.1A	Excavation	179 CY	$ 10.00	$1,790.00	0.00	0.00	$0.00
2204.1	2-Inch minus Shot Rock w/ Base Course	220 CY	$ 50.00	$11,000.00	0.00	0.00	$0.00
2204.1A	2-Inch minus Shot Rock w/ Base Course	144 CY	$ 50.00	$7,200.00	0.00	0.00	$0.00
2204.2	Base Course, Grading D-1 for Driveways & Shouldering	88 TN	$ 30.00	$2,640.00	0.00	0.00	$0.00
2204.3	Shot Rock Borrow	749 CY	$ 35.00	$26,215.00	749.00	749.00	$26,215.00
2204.3A	Shot Rock Borrow	287 CY	$ 35.00	$10,045.00	0.00	0.00	$0.00
2204.4	6-Inch Ditch Lining	134 CY	$ 35.00	$4,690.00	0.00	0.00	$0.00
2401.1	Sanitary Sewer Pipe, 8-Inch PVC	697 LF	$ 70.00	$48,790.00	230.00	230.00	$16,100.00
2401.2	Sanitary Sewer Service Lateral 4-inch SDR35 PVC	20 Each	$ 1,650.00	$33,000.00	0.00	0.00	$0.00
2402.1	Sanitary Sewer Manhole, Type I	2 Each	$ 5,000.00	$10,000.00	0.00	0.00	$0.00
2402.2	Connect to Existing Sanity Sewer Manhole	1 Each	$ 750.00	$750.00	0.00	0.00	$0.00
2501.1	18-Inch CPP Pipe	502 LF	$ 45.00	$22,590.00	0.00	0.00	$0.00
2502.1	Catch Basin, Type IV	3 Each	$ 2,000.00	$6,000.00	0.00	0.00	$0.00
2502.2	Storm Drain Manhole, Type I	1 Each	$ 4,500.00	$4,500.00	0.00	0.00	$0.00
2601.1	10-Inch HDPE Water Pipe	328 LF	$ 75.00	$24,600.00	0.00	0.00	$0.00
2601.2	Connect to Existing Water Pipe	1 Each	$ 1,500.00	$1,500.00	0.00	0.00	$0.00
2601.3	Corrosion Protection	1 Each	$ 600.00	$600.00	0.00	0.00	$0.00
2602.1	10-Inch Gate Valve	1 Each	$ 3,000.00	$3,000.00	0.00	0.00	$0.00
2603.1	Fire Hydrant Assembly with Access Pad	1 Each	$ 7,000.00	$7,000.00	0.00	0.00	$0.00
2605.1	1-Inch Poly Water Services	14 Each	$ 1,800.00	$25,200.00	0.00	0.00	$0.00
2607.1	Pipe Insulation Boards	72.0 Each	$ 30.00	$2,160.00	0.00	0.00	$0.00
2702.1	Construction Surveying	All Req'd	Lump Sum	$10,000.00	20%	20%	$2,000.00
2709.1	Topsoil	42 CY	$ 65.00	$2,730.00	0.00	0.00	$0.00
2709.2	Topsoil Finish Grading	10 MH	$ 85.00	$850.00	0.00	0.00	$0.00

CONTRACTOR'S PAY ESTIMATE NO.: **1**
(UNIT PRICE CONTRACT)

CONTRACT TITLE: **Chillkat Vistas Subdivision, Phase I - Hillcrest Ave Extension**
CONTRACTOR: **Coogan Construction**

ESTIMATE OF WORK COMPLETED ON: **6/17/2020**

BASE BID							
ITEM	**DESCRIPTION**	**Unit Of Measure**	**Unit Price**	**BID AMOUNT**	**QUANTITY THIS EST.**	**QUANTITY TO DATE**	**AMOUNT TO DATE**
2710.1	Seeding, Hydraulic Method, Type III	1.5 Slurry Unit	$ 1,200.00	$1,800.00	0.00	0.00	$0.00
2801.1	A.C. Pavement, Type II-A, Class B	137 TN	$ 185.00	$25,345.00	0.00	0.00	$0.00
2801.1	A.C. Pavement, Type II-A, Class B	137 TN	$ 185.00	$16,465.00	0.00	0.00	$0.00
2801.2	A.C. Pavement for Sidewalks	23 TN	$ 210.00	$4,830.00	0.00	0.00	$0.00
3302.1	Concrete Headwall without Trash Rack	9 Each	$ 600.00	$5,400.00	0.00	0.00	$0.00
3302.2	Concrete Area Drains	1 Each	$ 800.00	$800.00	0.00	0.00	$0.00
3303.4	Curb and Gutter, Type I	358 LF	$ 35.00	$12,530.00	0.00	0.00	$0.00
16000.1	Street Lighting and Utility Coordination	All Req'd	Lump Sum	$56,476.30	0.00	0.00	$0.00
				$436,266.30	**TOTAL BASE BID:**		**$78,855.00**

proHNS LLC
PO Box 33322
Juneau, AK 99803
907-780-4004
solutions@proHNS.com

PO Box 1041
Haines, AK 99827
907-419-6070
www.proHNS.com

Chilkat Visas Pay
Request # 1
6/18/2020
B. Mikkell
Page # 1

1505.1 (Mobilization) $20,000

When 5% of contract is complete pay for 50% of Mobilization.
When 10% of contract is complete pay for 100% of Mobilization

Since over 10% of the original contract has been earned from other items, 100% of the mobilization pay item will be paid this pay request.

$20,000.00

1570.1 (Erosion & Sediment Control)

Assuming the project continues as scheduled there will be 5 pay periods. Each pay period will pay 1/5th or 20%, of the Erosion and Sediment control bid item.

$\left(\frac{100\%}{5 \text{ pay requests}}\right) = 20\%/\text{pay request}$

$(\$12,000)(.20) = \$2,400$

Dates: 6/4/20 - 6/17/20

proHNS LLC
PO Box 33322
Juneau, AK 99803
907-780-4004
solutions@proHNS.com

PO Box 1045
Haines, AK 99827
907-419-6070
www.proHNS.com

Chilkat Vistas Pay Request #1
6/18/2020
B. Mitchell
Page #2

2202.1 (Clearing & Grubbing)

Since all of the necessary clearing and grubbing has been completed, 100% of the clearing and grubbing pay item will be paid this pay request.

$5,000.00

Dates: 6/08/20 — 6/10/20

2202.1 (Excavation) $10.00/yard^3

Volume Excavated = 714 yard^3 (for Hillcrest Ave Extension, NOT Cul-De-Sac)
Value obtained from CAD volumes dashboard

$$(714 \text{ yard}^3)\left(\frac{\$10.00}{1 \text{ yard}^3}\right) = \$7,140.00$$

Dates: 6/08/10 — 6/17/20

proHNS LLC
PO Box 33122
Juneau, AK 99803
907-780-4004
solutions@proHNS.com
PO Box 1043
Haines, AK 99827
907-419-6070
www.proHNS.com

Chilkat Vistas Pay
Request #1
6/18/2020
B. Mitchell
Page #3

2204.3 (Shot Rock Borrow) $\frac{\$35.00}{1\ yard^3}$

Hillcrest Ave Extension Roadway Area = 12,725 ft^2
Access Road Area = 756 ft^2
(Values from AutoCAD, NOT including Cul-de-Sac)

Depth = 1.5 ft Total Area = 13,481 ft^2

Volume of Rock = (Total Area)(Depth) = $(13{,}481\ ft^2)(1.5\ ft)\left(\frac{1\ yard^3}{27\ ft^3}\right) = 749\ yards^3$

$(749\ yards^3)\left(\frac{\$35.00}{1\ yard^3}\right) = \$26{,}215.00$

Dates: 6/10/20 – 6/17/20

2401.1 (8-inch Sewer Pipe, PVC) $70.00/ft

SP-4 Installation = 230 ft (Value from AutoCAD & Onsite measurement)

$(230\ ft)\left(\frac{\$70.00}{1\ ft}\right) = \$16{,}100$

Dates: 6/04/20 – 6/05/20

proHNS LLC
PO Box 34822
Juneau, AK 99803
907-780-4004
solutions@proHNS.com
PO Box 1041
Haines, AK 99827
907-419-6070
www.proHNS.com

Chilkat Vistas Pay Request #1
6/18/2020
B. Mitchell
Page # 4

2702.1 (Construction Surveying)

Assuming the project continues as scheduled there will be 5 pay periods. Each pay period will pay 1/5th or 20% of the construction surveying bid item.

$\left(\frac{100\%}{5 \text{ pay requests}}\right) = 20\% / \text{pay request}$

$(\$10{,}000)(.20) = \$2{,}000.00$

Dates: 6/4/20 — 6/17/20

Engineer's Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Owner:	Michael & William Heumann					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
	Base Bid (Phase I Construction)					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
1505.1	Mobilization		Lump Sum	All Req'd	$20,000.00	$20,000.00
1570.1	Erosion and Sediment Control		Lump Sum	All Req'd	$12,000.00	$12,000.00
2201.1	Clearing and Grubbing		Lump Sum	All Req'd	$5,000.00	$5,000.00
2202.1	Excavation		CY	877	$10.00	$8,770.00
2204.1	2-Inch Minus Shot Rock w/ Base Course		CY	220	$50.00	$11,000.00
2204.2	Base Course, Grading D-1 for Driveways and Shouldering		TON	88	$30.00	$2,640.00
2204.3	Shot Rock Borrow		CY	749	$35.00	$26,215.00
2204.4	6" Ditch Lining		CY	134	$35.00	$4,690.00
2401.1	Sanitary Sewer Pipe, 8-Inch PVC		LF	697	$70.00	$48,790.00
2401.2	Sanitary Sewer Service Lateral, 4-Inch SDR35 PVC		EA	20	$1,650.00	$33,000.00
2402.1	Sanitary Sewer Manhole, Type I		EA	2	$5,000.00	$10,000.00
2402.2	Connect to Existing Sanitary Sewer Manhole		EA	1	$750.00	$750.00
2501.1	18-Inch CPP Pipe Culvert		LF	502	$45.00	$22,590.00
2502.1	Catch Basin, Type IV		EA	3	$2,000.00	$6,000.00
2502.2	Storm Drain Manhole, Type I		EA	1	$4,500.00	$4,500.00
2601.1	10-Inch HDPE Water Pipe		LF	328	$75.00	$24,600.00
2601.2	Connect to Existing Water Pipe		EA	1	$1,500.00	$1,500.00
2601.3	Corrosion Protection		EA	1	$600.00	$600.00
2602.1	10-Inch Gate Valve		EA	1	$3,000.00	$3,000.00
2603.1	Fire Hydrant Assembly With Access Pad		EA	1	$7,000.00	$7,000.00
2605.1	1-Inch Poly Water Service		EA	14	$1,800.00	$25,200.00
2607.1	Pipe Insulation Boards		Board	72	$30.00	$2,160.00
2702.1	Construction Surveying		Lump Sum	All Req'd	$10,000.00	$10,000.00
2709.1	Topsoil		CY	42	$65.00	$2,730.00
2709.2	Topsoil Finish Grading		MH	10	$85.00	$850.00
2710.1	Seeding, Hydraulic Method, Type III		Slurry Unit	1.5	$1,200.00	$1,800.00
2801.1	A.C. Pavement, Type II-A, Class B		TON	137	$185.00	$25,345.00
2801.2	A.C. Pavement for Sidewalks		TON	23	$210.00	$4,830.00
3302.1	Concrete Headwall without Trash Rack		EA	9	$600.00	$5,400.00
3302.2	Concrete Area Drains		EA	1	$800.00	$800.00
3303.1	Curb and Gutter, Type I		LF	358	$35.00	$12,530.00
16000.1	Street Lighting and Utility Coordiantion		Lump Sum	All Req'd	$56,476.30	$56,476.30
					Total Construction Cost=	**$400,766.30**
	Alternate A (Cul-De-Sac Construciton)					
2202.1.A	Excavation		CY	179	$10.00	$1,790.00
2204.1.A	2-Inch Minus Shot Rock w/ Base Course		CY	144	$50.00	$7,200.00
2204.3.A	Shot Rock Borrow		CY	287	$35.00	$10,045.00
2801.1.A	A.C. Pavement, Type II-A, Class B		TON	89	$185.00	$16,465.00
					Total Construction Cost=	**$35,500.00**

Total (Phase I + Cul-De-Sac)= $436,266.30

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
1505.1	Mobilization		Lump Sum	All Req'd	$20,000.00	$20,000.00

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work items and locations taken into consideration. Unit price set at approx. 5% overall construction cost. CBJ F Street Reconstruciton 2017, CBJ Blueberry Hills Road Reconstruction 2017, Front Street Douglas Reconstruction 2016.

Total Contract Price	5%	Approx. MOB, Cost
$400,766.30	$20,038.32	$20,000.00

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	L. Chambers					
Checked By:	G. Gladsjo					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
1570.1	Erosion and Sediment Control		Lump Sum	All Req'd	$12,000.00	$12,000.00

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work items and locations taken into consideration. CBJ F Street Reconstruciton 2017, CBJ Blueberry Hills Road Reconstruction 2017, Front Street Douglas Reconstruction 2016.

Total Contract Price	3%	Approx. ESC, Cost
$400,766.30	$12,022.99	$13,000.00

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2201.1	Clearing & Grubbing		Lump Sum	All Req'd	$5,000.00	$5,000.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: N/A

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Kaxdigoowu Heen Deis Trail Relocation 2019, Hooter Lane Phase I ROW 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2202.1	Excavation		CY	877	$10.00	$8,770.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-EXCAV

Quantity			
Location	**Surface Area (SQFT)**	**Depth (FT)**	**Volume (CY)**
Hillcrest Ave Extension (from CAD volumes dashboard)			714
Ditch Around Cul-De-Sac and Hooter			163
		Total =	**877**

*Excavation required for installation of roadway and sidewalk structural section. Excavaton limit bottom of shot rock borrow rock under road and bottom of D-1 under sidewalk.

* Does not account for over excavation of unsuitable materials.

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, CBJ Kaxdigoowu Heen Dei Trail 2019, Hooter Lane Phase I ROW 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2202.1A	Excavation		CY	179	$10.00	$1,790.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-EXCAV

Quantity			
Location	**Surface Area (SQFT)**	**Depth (FT)**	**Volume (CY)**
Cul-De-Sac (25% of Hillcrest Excavation)			179
		Total =	**179**

*Excavation required for installation of roadway structural section. Excavaton limit bottom of shot rock borrow rock under road.

* Does not account for over excavation of unsuitable materials.

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, CBJ Kaxdigoowu Heen Dei Trail 2019, Hooter Lane Phase I ROW 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2204.1	2-Inch Minus Shot Rock Borrow w/ Base Course, Grading D-1		CY	220.00	$50.00	$11,000.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-2INCH MINUS

Quantity			
Location	**Surface Area (SQFT)**	**Depth (FT)**	**Volume (CY)**
Hillcrest Ave Extension Roadway	7,917	0.75	220
		Total =	**220**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Rd Reconstruction 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2204.1.A	2-Inch Minus Shot Rock Borrow w/ Base Course, Grading D-1		CY	144.00	$50.00	$7,200.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-2INCH MINUS

Quantity			
Location	**Surface Area (SQFT)**	**Depth (FT)**	**Volume (CY)**
Cul-De-Sac	5,171	0.75	144
		Total =	**144**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Road Reconstruction 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2204.2	Base Course, Grading D-1 for Shouldering and Sidewalk		TON	88	$30.00	$2,640.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-D-1

Quantity			
Location	**Area (SQFT)**	**Depth (Inch)**	**Volume (CY)**
SIDEWALK/CURB/SHOULDER (LT)	3,083	4	38.1
RT SHOULDER (1+50-1+90)	99	2.5	0.8
RT SHOULDER (2+00-2+50)	86	2.5	0.7
RT SHOULDER (2+75-3+25)	86	2.5	0.7
RT SHOULDER (3+30-3+80)	86	2.5	0.7
RT SHOULDER (3+90-4+40)	88	2.5	0.7
RT SHOULDER (4+60-4+80)	43	2.5	0.3
Access Road	756	2	4.7
		Total =	**46 CY**
			88 Tons

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Road Reconstruction 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2204.3	Shot Rock Borrow		CY	749	$35.00	$26,215.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-Shot Rock

Quantity			
Location	**Area (SQFT)**	**Depth (Feet)**	**Volume (CY)**
Hillcrest Ave Extension Roadway	12,725	1.50	707
Access Road	756	1.50	42
		Total =	**749 CY**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Kaxdigoowu Heen Dei Trail Relocation 2019, CBJ Hospital Drive Reconstruction 2020, Hooter Lane Phase I ROW 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2204.3.A	Shot Rock Borrow		CY	287	$35.00	$10,045.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-Shot Rock

Quantity			
Location	**Area (SQFT)**	**Depth (Feet)**	**Volume (CY)**
Cul-De-Sac	5,171	1.50	287
		Total =	**287 CY**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Kaxdigoowu Heen Dei Trail Relocation 2019, CBJ Hospital Drive Reconstruction 2020, Hooter Lane Phase I ROW 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2204.4	6" Ditch Lining		CY	134	$35.00	$4,690.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-Ditch

Quantity			
Location	**Area (SQFT)**	**Depth (Feet)**	**Volume (CY)**
Bop/Lot 10	316	0.50	6
Lot 10/11	594	0.50	11
Lot 11/12	595	0.50	11
Lot 12/13	594	0.50	11
Lot 13/14	605	0.50	11
	4,529	0.50	84
Cul-De-Sac/Access Rd/Stand-Alone		**Total =**	**134 CY**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. Calvary Fellowship Subdivision 2018, Hooter Lane Phase I ROW 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2401.1	Sanitary Sewer Pipe, 8-Inch PVC		LF	697	$70.00	$48,790.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-SS-MAIN

Quantity	
Location	**Length (FT)**
Hillcrest Ave Extension to Hooter Ln	697
Total =	**697**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Hooter Lane Phase I ROW 2020, Aspen Ave 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2401.2	Sanitary Sewer Service Lateral, 4-Inch SDR35 PVC		EA	20	$1,650.00	$33,000.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-SS-LAT

Quantity	
Location	**Each**
Lot 1	1
Lot 2	1
Lot 3	1
Lot 4	1
Lot 5	1
Lot 6	1
Lot 7	1
Lot 8	1
Lot 9	1
Lot 10	1
Lot 11	1
Lot 12	1
Lot 13	1
Lot 14	1
Stub-Outs for Future Lots	6
Total =	**20**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Aspen Ave 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2402.1	Sanitary Sewer Manhole, Type I		EA	2	$5,000.00	$10,000.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Linework

DWG Layer: C-SS-STRC

Quantity	
Location	**Each**
6+49 (Utility Access Road)	1
2+00	1
Total =	**2**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Hooter Lane Phase I ROW 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2402.2	Connect to Existing Sanitary Sewer Manhole		EA	1	$750.00	$750.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-SS-STRC

Quantity	
Location	**Each**
STA 8+30 (Hooter Ln)	1
Total =	**1**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Aspen Ave 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2501.1	18-Inch CPP Pipe		LF	502	$45.00	$22,590.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-STRM-18CPP

Quantity	
Location	**Length (FT)**
P-1	161
P-2	156
P-3	22
P-4	22
P-5	22
P-6	22
P-7	25
P-8	32
P-9	40
Total =	**502**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Kaxdigoowu Heen Dei Train Relocation 2019, CBJ Downtown Street improvements Phase IIIA 2019, Columbia Blvd and Poplar Ave Reconstruction 2019, Savikko Rd 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2502.1	Catch Basin, Type IV		EA	3	$2,000.00	$6,000.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-SS-STRC

Quantity	
Location (STA)	**EA**
Sta: 1+67 (PROJECT LT)	1
Sta: 3+30 (PROJECT LT)	1
Sta: 4+67 (PROJECT RT)	1
Total =	**3**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Lane Reconstruction 2019, Savikko Rd 2020

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2502.3	Storm Drain Manhole, Type I		EA	1	$4,500.00	$4,500.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-SS-STRC

Quantity	
Location (STA)	**EA**
Sta: 4+88 (PROJECT LT)	1
Total =	**1**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019 Hospital Drive Reconstruction 2020, Savikko Rd 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2601.1	10-Inch HDPE Water Pipe		LF	328	$75.00	$24,600.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-WATR-PIPE

Quantity	
Location	**Length (FT)**
Hillcrest Ave Extension	328
Total =	**328**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Rd 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2601.2	Connect to Existing Water Pipe		EA	1	$1,500.00	$1,500.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-WATR-PIPE

Quantity	
Location	**EA**
BOP	1
Total =	**1**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Rd 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2601.3	Corrosion Protection		EA	1	$600.00	$600.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-WATR-VALVE

Quantity	
Location	**EA**
BOP	1
Total =	**1**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Sitka Street Reconstruction, CBJ D&H Street Reconstruction, CBJ Birch Lane Pavement and Drainage Improvements, Savikko Rd 2020

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2602.1	10-Inch Gate Valve		EA	1	$3,000.00	$3,000.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-WATR-STRC

Quantity	
Location	**Each**
1+69	1
Total =	**1**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Rd 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2603.1	Fire Hydrant Assembly with Access Pad		EA	1	$7,000.00	$7,000.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-WATR-STRC

Quantity	
Location	**Each**
Sta: 5+03 (Project LT)	1
Total =	**1**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Rd 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2605.1	1-Inch Poly Water Service		EA	14	$1,800.00	$25,200.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-WATR-PIPE

Quantity	
Location	**EA**
Lot 1	1
Lot 2	1
Lot 3	1
Lot 4	1
Lot 5	1
Lot 6	1
Lot 7	1
Lot 8	1
Lot 9	1
Lot 10	1
Lot 11	1
Lot 12	1
Lot 13	1
Lot 14	1
Total =	**14**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Rd 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2607.1	Pipe Insulation Boards		Board	72	$30.00	$2,160.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-PIPE-INS

Quantity			
Location	**Plan View Area**	**3D Area**	**Boards**
Lot 1	40	60	12
Lot 2	40	60	12
Lot 3	40	60	12
Lot 4	40	60	12
Lot 5	40	60	12
Lot 6/7	70	105	20
Lot 7/8	70	105	20
Lot 10	40	60	12
Lot 11	40	60	12
Lot 12	40	60	12
Lot 13	40	60	12
Lot 14	40	60	12
Road Crossing	40	60	12
		Total =	72

Unit Price

*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Rd 2020.

Assumptions: Accounts for 3 layers of 2" thick rigid insulation boards. 3D area assumes 150% of plan view area to account for vertical insulation on sides of of pipe.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2702.1	Construciton Surveying		Lump Sum	All Req'd	$10,000.00	$10,000.00

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Sitka Street Reconstruction, CBJ D&H Street Reconstruction, CBJ Birch Lane Pavement and Drainage Improvements, Savikko Rd 2020

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**			**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2709.1	Topsoil			CY	42	$65.00	$2,730.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Savikko RD Design\C3D Savikko Road\Source Drawings\Design\CBJ Savikko RD_Estimate

DWG Layer: C-ESTM-TOPSOIL

Quantity				
Location	**Linear Length**	**Surface Area (SQFT)**	**Depth (FT)**	**Volume (CY)**
Phase I ROW (Project RT)	328	984	0.25	9.11
Phase I ROW (Project LT)	328	984	0.25	9.11
Utility Access Road (Project RT)	425	1,275	0.25	11.81
Utility Access Road (Project LT)	425	1,275	0.25	11.81
			Total =	**42**

*Note: Estimate assumes 3 feet of disturbance along vegetated areas of project.

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Rd 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2709.2	Topsoil Finish Grading		MH	10	$85.00	$850.00

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2710.1	Seeding, Hydraulic Method, Type III		Slurry Unit	1.5	$1,200.00	$1,800.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-TOPSOIL

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2801.1	A.C. Pavement, Type II-A, Class B		TON	137.00	$185.00	$25,345.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-ASPHALT

Quantity						
Location	**Area (SQFT)**	**Depth (Inch)**	**Volume (CF)**	**Estimating Factor**	**LBS**	**Ton**
ROW	7,917	2.5	1,649	165	272,146.88	136.07
					Total =	**136.07**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Rd 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2801.1.A	A.C. Pavement, Type II-A, Class B		TON	89.00	$185.00	$16,465.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-ASPHALT

Quantity						
Location	**Area (SQFT)**	**Depth (Inch)**	**Volume (CF)**	**Estimating Factor**	**LBS**	**Ton**
Cul-De-Sac	5,171	2.5	1,077	165	177,753.13	88.88
					Total =	**88.88**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Rd 2020.

Engineers Estimate						
Project:	Michael & William Heumann					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2801.2	A.C. Pavement for Sidewalks		TON	23.00	$210.00	$4,830.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-ASPHALT

Quantity						
Location	**Area (SQFT)**	**Depth (Inch)**	**Volume (CF)**	**Estimating Factor**	**LBS**	**Ton**
Sidewalk (Project LT)	1,665	2.0	278	165	45,787.50	22.89
					Total =	**22.89**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, Savikko Rd 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
3302.1	Concrete Headwall without Hinged Trash Rack		EA	9	$600.00	$5,400.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Linework

DWG Layer: C-CONC

Quantity	
Location (STA)	**EA**
Lot 10	2
Lot 11	2
Lot 12	2
Lot 13	2
Lot 14	1
Total =	**9**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ McGinnis Subdivision 2019, Calvary Fellowship 2018.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
3302.1	Concrete Area Drain (Does Not Include Storm Structure)		EA	1	$800.00	$800.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Linework

DWG Layer: C-CONC

Quantity	
Location (STA)	**EA**
4+67	1
Total =	**1**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Savikko Rd Improvements 2020

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
3303.1	Curb and Gutter, Type I		LF	358	$35.00	$12,530.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: C-ESTM-C&G-TYPE-I

Quantity	
Location	**Length (FT)**
Hillcrest Ave Extension (Project LT)	341
Hillcrest Ave Extension (Project RT)	17
Total =	**358**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ D&H Street Reconstruction 2018, Savikko Rd 2020.

Engineers Estimate						
Project:	Chilkat Vistas Subdivision, Phase I - Hillcrest Ave Extension					
Date:	6/18/2020					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
16000.1	Street Lighting and Utility Coordination		Lump Sum	All Req'd	$56,476.30	$56,476.30

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivis\C3D Richland Manor\Source Drawings\Design\Hillcrest Extension_Estimate

DWG Layer: N/A

Item	Unit Price
Street Light & Base	$10,000.00
AEL&P Distribuition	$46,476.30
Total=	$56,476.30

Unit Price
*Unit price based on quote from AEL&P and Pat Gorman estimate.

Engineer's Estimate

Project:	Hooter Lane Phase I ROW Improvements
Owner:	Michael & William Heumann
Date:	12/27/2019
Prepared By:	C. Bydlon
Checked By:	L. Chambers

Pay Item	Pay Item Description	Pay Unit	Quantity	Unit Price	Amount
1505.1	Mobilization	Lump Sum	All Req'd	$7,000.00	$7,000.00
1550.1	Traffic Maintinance	Lump Sum	All Req'd	$2,000.00	$2,000.00
1570.1	Erosion and Sediment Control	Lump Sum	All Req'd	$4,000.00	$4,000.00
2201.1	Clearing and Grubbing	Lump Sum	All Req'd	$5,000.00	$5,000.00
2202.1	Excavation	CY	4750	$10.00	$47,500.00
2202.2	Shot Rock Borrow	CY	578	$35.00	$20,230.00
2202.3	6-Inch Minus Ditch Lining	CY	154	$35.00	$5,390.00
2401.1	Sanitary Sewer Pipe, 10-Inch PVC	LF	417	$80.00	$33,360.00
2402.1	Sanitary Sewer Manhole, Type I	EA	2	$5,000.00	$10,000.00
2501.1	12-Inch CPP Pipe Culvert	LF	63	$50.00	$3,150.00
2702.1	Construction Surveying	Lump Sum	All Req'd	$10,000.00	$10,000.00
			Total =		**$147,630.00**

Engineers Estimate						
Project:	Hooter Lane Phase I ROW Improvements					
Date:	12/27/2019					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
1505.1	Mobilization		Lump Sum	All Req'd	$7,000.00	$7,000.00

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, CBJ Kaxdigoowu Heen Dei Trail 2019.

Total Contract Price	5%	Approx. MOB, Cost
$147,630.00	$7,381.50	$8,000.00

Engineers Estimate						
Project:	Hooter Lane Phase I ROW Improvements					
Date:	12/27/2019					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
1550.1	Traffic Maintinance		Lump Sum	All Req'd	$2,000.00	$2,000.00

Unit Price
*Unit price based on anticipated work required to meet the conditions of the Project.

Engineers Estimate						
Project:	Hooter Lane Phase I ROW Improvements					
Date:	12/27/2019					
Prepared By:	L. Chambers					
Checked By:	G. Gladsjo					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
1570.1	Erosion and Sediment Control		Lump Sum	All Req'd	$4,000.00	$4,000.00

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, CBJ Kaxdigoowu Heen Dei Trail 2019.

Total Contract Price	3%	Approx. ESC, Cost
$147,630.00	$4,428.90	$5,000.00

Engineers Estimate						
Project:	Hooter Lane Phase I ROW Improvements					
Date:	12/27/2019					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2201.1	Clearing and Grubbing		Lump Sum	All Req'd	$5,000.00	$5,000.00

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Pederson Hill Sub Phase I 2017, CBJ Kaxdigoowu Heen Dei Trail 2019.

Engineers Estimate						
Project:	Hooter Lane Phase I ROW Improvements					
Date:	12/27/2019					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2202.1	Excavation		CY	4,750	$10.00	$47,500.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Source Drawings\Corridor\Richland Manor_CM

Quanitity derived from AutoCAD C3D volumes dashboard calculation. Calculation compares limit of excavation (datum surface) to existing ground surface from Sta: 2+70 to 6+90. Limit of excavation is Phase I bottom of Shot Rock Borrow and 6-Inch Ditch Lining. Excavation does not accound for over excavation of unsuitable materials.

Total CY = 4,750

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. Calvary Fellowship Subdivision, CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019, CBJ Kaxdigoowu Heen Dei Trail 2019.

Engineers Estimate						
Project:	Hooter Lane Phase I ROW Improvements					
Date:	12/27/2019					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2202.2	Shot Rock Borrow		CY	578.00	$35.00	$20,230.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Source Drawings\Corridor\Richland Manor Hooter_Linework

DWG Layer: C-ESTM-BORROW

Quantity			
Location	**Surface Area (SQFT)**	**Depth (FT)**	**Volume (CY)**
Hooter LN Sta 2+70 - 6+90	10,400	1.50	578
		Total =	**578**

Unit Price

*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019.

Engineers Estimate						
Project:	Hooter Lane Phase I ROW Improvements					
Date:	12/27/2019					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2202.3	6-Inch Minus Ditch Lining		CY	154	$35.00	$5,390.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Source Drawings\Corridor\Richland Manor Hooter Lane_Linework

DWG Layer: C-ESTM-D-1

Quantity			
Location	**Area (SQFT)**	**Length (FT)**	**Volume (CY)**
Hooter LN Sta: 2+70 - 6+90 RT	4.82	430	77
Hooter LN Sta: 2+70 - 6+90 LT	5.92	350	77
		Total =	**154**

Unit Price

*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019.

Engineers Estimate						
Project:	Hooter Lane Phase I ROW Improvements					
Date:	12/27/2019					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2401.1	Sanitary Sewer Pipe, 10-Inch PVC		LF	417	$80.00	$33,360.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Source Drawings\Corridor\Richland Manor Hooter Lane_Linework

DWG Layer: C-ESTM-SS-PIPE

Quantity	
Location	**Length (FT)**
Hooter LN SP-1	407
Hooter LN SP-2	5
Hooter LN SP-3	5
Total =	**417**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Peserson Hill Sub Phase I, Calavary Fellowship Subdivision

Engineers Estimate						
Project:	Hooter Lane Phase I ROW Improvements					
Date:	12/27/2019					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2402.1	Sanitary Sewer Manhole, Type I		EA	2	$5,000.00	$10,000.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Source Drawings\Corridor\Richland Manor Hooter Lane_Linework

DWG Layer: C-ESTM-SS-MH

Quantity	
Location	**Each**
Hooter LN SS-1	1
Hooter LN SS-2	1
Total =	**2**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. Calvary Fellowship Subdivision, CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ Birch Ln Reconstruction 2019.

Engineers Estimate						
Project:	Hooter Lane Phase I ROW Improvements					
Date:	12/27/2019					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2501.1	12-Inch CPP Pipe		LF	63	$50.00	$3,150.00

Quantities from AutoCAD DWG - C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Source Drawings\Corridor\Richland Manor Hooter Lane_Linework

DWG Layer: C-ESTM-STRM-12CPP

Quantity	
Location	**Length (FT)**
Hooter LN Sta: 2+90 - 3+50	63
Total =	**63**

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Columbia Blvd and Poplar Ave Reconstruction 2019, CBJ D&H Street Reconstruction 2018

Engineers Estimate						
Project:	Hooter Lane Phase I ROW Improvements					
Date:	12/27/2019					
Prepared By:	C. Bydlon					
Checked By:	L. Chambers					
Pay Item	**Pay Item Description**		**Pay Unit**	**Quantity**	**Unit Price**	**Amount**
2702.1	Construciton Surveying		Lump Sum	All Req'd	$10,000.00	$10,000.00

Unit Price
*Unit price based on similar projects bid prices. Project sizes, work item quantities and locations taken into consideration. CBJ Sitka Street Reconstruction, CBJ D&H Street Reconstruction, CBJ Birch Lane Pavement and Drainage Improvements, CBJ Columbia Blvd and Poplar Ave Reconstruction

RECONVEYANCE AGREEMENT

THIS AGREEMENT, entered into this 22 day of June, 2020 and between **WILLIAM HEUMANN AND MICHAEL HEUMANN,** of 6000 Thane Road, Juneau, Alaska 99801, ("Grantor") and the **CITY AND BOROUGH OF JUNEAU**, 155 South Seward St, Juneau, Alaska 99801 ("Grantee").

WHEREAS, the Grantor is developing a subdivision entitled Chilkat Vistas Subdivision, Phase I within Tract B, Richland Manor Subdivision, according to Plat 97-47, Juneau Recording District according and according to Community Development Department file number SMP20190004 and SMF20200001.

WHEREAS, the Grantor is required to maintain, repair, or install certain improvements consistent with City and Borough of Juneau code namely,

1. **Installation of public improvements for Chilkat Vistas Subdivision, Ph I, to include the extension of Hillcrest Drive with sidewalk on one side, storm drain, sewer, water, driveways, and street lighting.** Pursuant to CBJ Code 49.35 and in accordance with CBJ ROW Permit Number 202000023 and any conditions thereof.

WHEREAS, Pursuant to CBJ 49.55.010(5), the Grantor has elected to convey property as collateral in lieu of posting a bond to guarantee the installation of required improvements.

WHEREAS, the estimated cost of installing the required improvements is $357,411.30.

WHEREAS, Tract A, Chilkat Vistas Subdivision Phase I according to Plat 2020-___, Juneau Recording District, first Judicial District, State of Alaska, has a preliminary assessed value of $386,700.

WHEREAS, the Grantor has paid for and provided the Grantee with a title report naming the City and Borough of Juneau as an insured.

WHEREAS, the Grantor did convey and warrant unto Grantee by Warranty Deed the following lot ("Property"), legally described as:

Tract A, Chilkat Vistas Subdivision Phase I according to Plat 2020-____ Juneau Recording District, first Judicial District, State of Alaska

as guarantee for the installation of the required improvements.

WHEREAS, the terms and conditions under which the Grantee shall hold title to the Property and the manner by which the Property will be reconveyed to the Grantor must be set forth below;

THEREFORE, IT IS HEREBY AGREED:

I. AGREEMENT

1. Conditions to be performed by Grantor:

a. **Installation of public improvements for Chilkat Vistas Subdivision, Ph I, to include the extension of Hillcrest Drive with sidewalk on one side, storm drain, sewer, water, driveways, and street lighting**

i. **Installation Completion**: The Grantor shall inform the Grantee of the completion of the subdivision improvements within a sufficient period of time prior to the expiration of the installation period of one year subsequent to the filing of the subdivision plat so that the engineer for the Grantee can review the subdivision improvements for conformance with the subdivision construction standards and construction plans. In the event the Grantor receives a written memorandum from the Grantee that the subdivision improvements do not conform, Grantor shall forthwith take whatever action is necessary to comply with the subdivision construction standards and construction plans, and upon completion of the modifications of the improvements, it shall again notify the engineer of the Grantee that the subdivision improvements have been completed and are again ready for inspection.

ii. **Maintenance**: Upon final acceptance of the subdivision improvements by the Grantee, the Grantor will post a maintenance bond as required by CBJ 49.55.010. Until final acceptance, Grantor is responsible for maintenance of all subdivision improvements.

iii. **Acceptance**: Upon receipt of notice of completion of the subdivision improvements required in order to receive subdivision approval from the Grantee, the engineer or community development director for the Grantee will review the subdivision improvements and advise the Grantor of its

acceptance or refusal to accept the subdivision improvements as they exist. If the decision by the engineer or director for the Grantee is not to accept the subdivision improvements, the modifications required to bring the subdivision improvements up to the subdivision construction standards and construction plans shall be transmitted to the Grantor in a written memorandum. After the Grantor notifies the engineer or director for the Grantee that the subdivision improvements have been so modified the engineer or director for Grantee shall re-inspect the subdivision improvements. If and when the Grantee accepts the subdivision improvements, acceptance will be in writing to the Grantor

b. **Reconveyance**: Simultaneous with the Grantor's posting of the maintenance bond required in CBJ 49.55.010, the Grantee shall reconvey to Grantor the remaining above-described property by quitclaim deed.

c. **Property Taxes**: The Grantor will pay all real property taxes on the above-described property as if the conveyance to the Grantee has not occurred.

d. **Administrative Costs**: To reimburse the Grantee for its administrative costs in utilizing reconveyance agreements, Grantor will pay an administrative fee of $140.00 for the first lot and $25.00 for each additional lot conveyed, substituted or reconveyed to Grantee.

2. **Conditions to be performed by Grantee:**

a. **Encumber:** The Grantee will not pledge, encumber, transfer, or otherwise hypothecate the above-described property except in the event of default by Grantor pursuant to 49.55.010.

b. **Forfeiture**: If all required subdivision improvements have not been installed in accordance with Grantee's standards and requirements within the installation period, pursuant to 49.55.010 the Grantee may declare the guarantee forfeited, sell the Property, and use the proceeds derived therefrom for the purpose of maintenance, repair, and construction of the required subdivision improvements. Proceeds of the sale not used for the maintenance, repair, or construction of the subdivision improvements will be returned to the Grantor after all direct and indirect costs of the sale have been deducted. An accounting of the costs incurred shall accompany the return of the excess proceeds.

c. **Restrictions**: Grantee shall not be subject to any covenants, conditions, or restrictions applicable by private agreement to owners of property in Tract A,

Chilkat Vistas Subdivision Phase I according to Plat 2020-___, District, First Judicial District, State of Alaska. Granter shall indemnify, defend, and hold Grantee harmless against any claim for liability under any such covenants, conditions, or restrictions.

3. Severability

If a court of competent jurisdiction renders any part of this agreement invalid or unenforceable, that part will be severed and the remainder of this agreement will continue in full force and effect.

4. Binding Agreement

The parties to this agreement mutually agree that it shall be binding upon them and each of their respective heirs, executors, administrators, successors, and assigns and that this agreement and the deeds mentioned herein contain the final and entire agreement between the parties hereto and that they shall not be bound by any terms, conditions, statements, warranties, or representations oral or written, not contained herein.

5. Construction

The parties agree that this agreement shall be construed according to the laws of the State of Alaska, and that the parties have jointly participated in the negotiations and drafting of this agreement.

DATED in Juneau, Alaska, the day, month, and year hereinabove first mentioned.

GRANTOR:

WILLIAM HEUMANN AND MICHAEL HEUMANN

By: _____
William Heumann

By: _____
Michael Heumann

GRANTEE:

CITY AND BOROUGH OF JUNEAU

By: _____
Duncan Rorie Watt, Manager
City and Borough of Juneau

Approved as to content, CDD

By: _____

STATE OF ALASKA)
: ss
FIRST JUDICIAL DISTRICT)

On this 22 day of June, 2020, before me, the undersigned, a Notary Public in and for the State of Alaska, duly commissioned and sworn, personally appeared William Heumann and Michael Heumann represented to me to be the grantors executed the foregoing instrument, and they acknowledged the said instrument to be the free and voluntary act and deed of said individuals, for the uses and purposes therein mentioned, and on oath stated that they are authorized to execute the said instrument and that the seal affixed (if any) is the corporate seal of said corporation.

Witness my hand and official seal hereto affixed the day and year first above-written.

STATE OF ALASKA
OFFICIAL SEAL
Chelsea Wallace
NOTARY PUBLIC
My Commission Expires July 30, 2023

_____
Notary Public for Alaska
My Commission Expires: July 30, 2023

STATE OF ALASKA)
: ss
FIRST JUDICIAL DISTRICT)

On this 26th day of June, 2020, before me, the undersigned, a Notary Public in and for the State of Alaska, duly commissioned and sworn, personally appeared Duncan Rorie Watt, represented to me to be the City and Borough Manager, of the City and Borough of Juneau the municipal corporation that executed the foregoing instrument, and he acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes

therein mentioned, and on oath stated that he is authorized to execute the said instrument and that the seal affixed (if any) is the corporate seal of said corporation.

Witness my hand and official seal hereto affixed the day and year first above-written.

STATE OF ALASKA
OFFICIAL SEAL
Susan B. Phillips
NOTARY PUBLIC
My Commission Expires 1/10/22

Susan B. Phillips
Notary Public for Alaska
My Commission Expires: 1/10/22

After recording return to:

William and Michael Heumann
6000 Thane Road
Juneau, Alaska 99801

proHNS LLC
1945 Alex Holden Way #101 | Juneau, AK 99801 | 907-780-4004 | solutions@proHNS.com
219 Main Street #13 | Haines, AK 99827 | 907-419-6070 | www.proHNS.com

January 23, 2020

Michael and William Heumann
6000 Thane Rd
Juneau, AK 99801
mpheumann@hotmail.com
(971) 261-8014

RE: Hooter Lane Phase I ROW Improvements - Drainage Report

To Whom It May Concern,

The following Drainage Plan has been prepared for the Richland Manor Subdivision in Juneau, AK, a proposed multi-phase major subdivision on a 30-acre site at 4506, 4508, and 4510 Hillcrest Avenue. This drainage report addresses the improvements to Hooter Lane ROW and supplements the Richland Manor Subdivision – Drainage Report dated 10/31/19, attached in Appendix G, by providing an in-depth analysis of the improvements specific to this phase of the development. Improvements include excavating over burden material, constructing a shot rock base and ditches for a future paved street and installing a sanitary sewer main. The 2010 CBJ Manual of Stormwater Best Management Practices was used to evaluate if the proposed and existing drainage features could convey runoff during the 25-year storm event.

Attached sheets depict survey data, proposed ROW improvements, as-built information, calculations and rainfall data used for the proposed drainage analysis for the Hooter Lane ROW improvements.

Site Runoff Calculation Method:

A total of five catchment areas were analyzed representing the existing and proposed drainage conveyance systems relevant to the project. The catchment areas include: the existing 18" cpp culvert draining into Glacier Highways roadside ditch, the existing Tamarack Trails Condos driveway ditch that drains into the 18" cpp, the proposed 12" cpp culvert, the proposed Hooter Lane left roadside ditch, and the proposed Hooter Lane right roadside ditch. The five catchment areas we determined using the proposed design model, Lidar data and aerial photos in AutoCAD C3D and were verify by several site visits. A delineation of the catchment areas can be found in Appendix A.

To calculate the site runoff we have elected to use the Rational Method. The Rational Method is most appropriate for evaluating drainage basins less than 10 acres. Appendix D of the "2010 CBJ Manual of

Stormwater Best Management Practices" was utilized as a guide[1]. The calculations and supporting documentation can be found in Appendix B, C, D&E of this Report.

Anticipated Site Runoff (Q):

Using the Rational Method, the amount of stormwater runoff during the 25-year storm event per catchment area was determined. See Table 1.1 below for results, the calculations can be found in Appendix B.

Catchment Area	Q (cfs)
Existing 18" CPP Culvert	**1.81**
Existing Driveway Ditch	**1.81**
Proposed 12" CPP	**1.04**
Proposed Roadway Ditch Left	**0.42**
Proposed Roadway Ditch Right	**0.47**
Table 1.1	

Conveyance/Discharge Structure Capacities:

The capacity of the existing and proposed drainage systems was calculated using the Manning's Equation to determine if proposed 25-year storm event flows could be conveyed. See Table 1.2 below for results, the calculations can be found in Appendix F.

Catchment Area	Q (cfs)
Existing 18" CPP Culvert	**16.73**
Existing Driveway Ditch	**10.58**
Proposed 12" CPP	**10.68**
Proposed Roadway Ditch Left	**13.61**
Proposed Roadway Ditch Right	**7.16**
Table 1.2	

[1] There are no current municipal code requirements dictating adherence with the "2010 CBJ Manual of Stormwater Best Management Practices" when preparing a drainage plan that complies with 49.35.510. Regardless, we have elected to utilize portions of this Manual as a guide in the preparation of this Drainage Plan for the proposed development.

Summary:

Table 1.3 below compares anticipated 25-year runoff in the proposed and existing conveyance systems to their available hydraulic capacity.

Drainage Basin	Anticipated Runoff Q (cfs)	Capacity Check	Available Capacity Q (cfs)
Existing 18" CPP Culvert	1.81	<	16.73
Existing Driveway Ditch	1.81	<	10.58
Proposed 12" CPP	1.04	<	10.68
Proposed Roadway Ditch Left	0.42	<	13.61
Proposed Roadway Ditch Right	0.47	<	7.16
Table 1.3			

Our analysis shows that there is enough capacity in the existing and proposed drainage structures to handle flows from the altered drainage patterns as a result of the proposed Hooter Lane Phase I ROW improvements.

Respectfully,

Lucas Chambers

Lucas Chambers, P.E.
Principal Engineer – proHNS LLC Juneau



Appendixes:

A – Catchment Areas
B – Rational Method
C – Runoff Coefficient
D – Time of Concentration
E – Rainfall Intensity
F – Existing & Proposed Capacity Calcs
G – Richland Manor Subdivision – Drainage Report dated 10/31/19

Appendix A
Catchment Areas

HOOTER LANE PHASE I ROW IMPROVEMENTS DRAINAGE MAP

JUNEAU, AK

PREPARED FOR:

MICHAEL & WILLIAM HEUMANN

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	EXISTING 18" CPP CATCHMENT AREA
3	EXISTING DRIVEWAY DITCH CATCHMENT AREA
4	PROPOSED 12" CPP CATCHMENT AREA
5	PROPOSED ROADWAY DITCH LEFT CATCHMENT AREA
6	PROPOSED ROADWAY DITCH RIGHT CATCHMENT AREA



PROJECT LOCATION MAP

NTS



ALASKA

Attachment F - SMP21-04 – Phase 2

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

HOOTER LANE PHASE I ROW IMPROVEMENTS

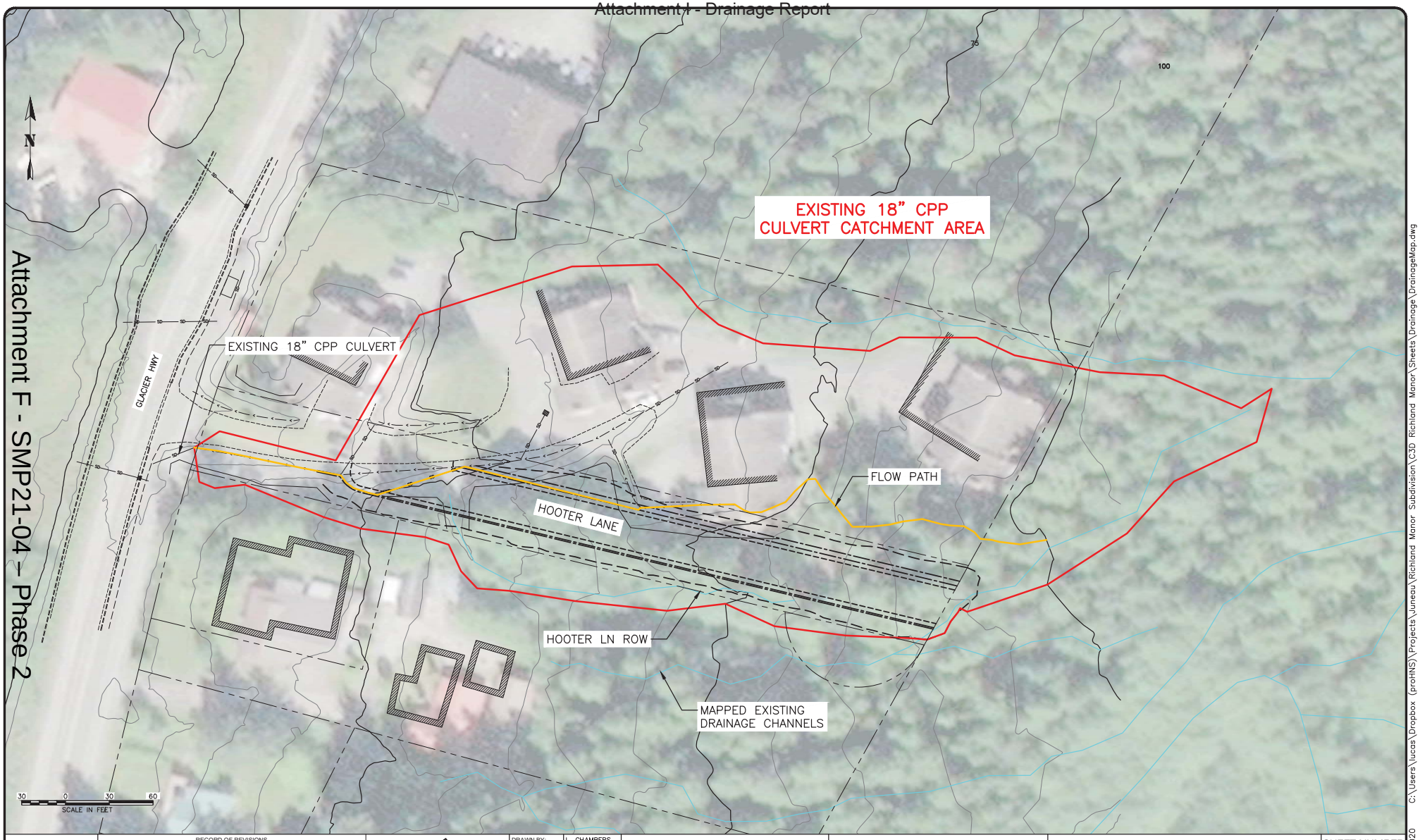
WILLIAM & MICHAEL HUMEAN

COVER SHEET

SHEET NUMBER 1 OF 6

January 21, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Drainage\DrainageMap_TITLE.dwg

Attachment F - SMP21-04 – Phase 2



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

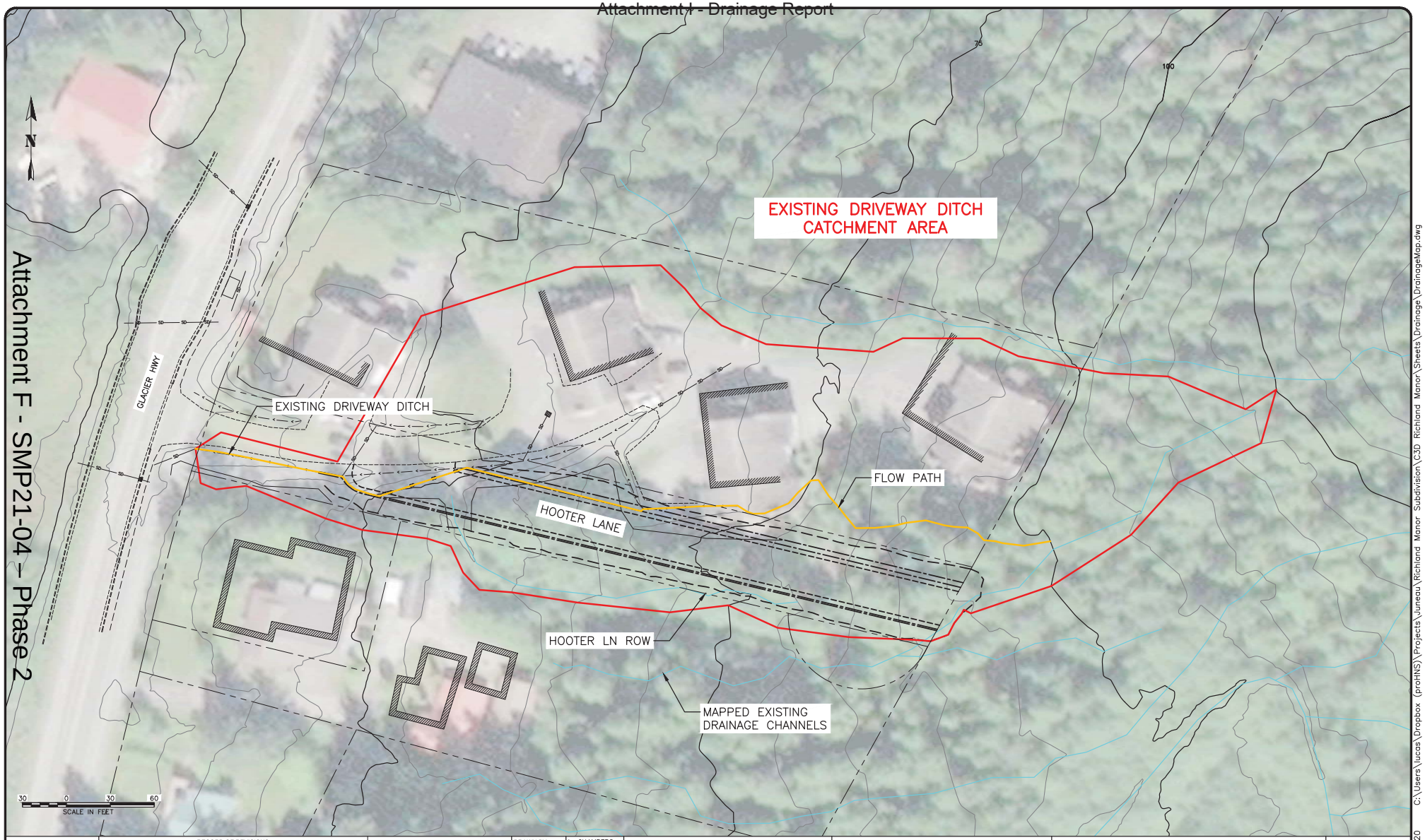
HOOTER LANE PHASE I
ROW IMPROVEMENTS

WILLIAM & MICHAEL HUMEANN

EXISTING 18" CPP CATCHMENT AREA

SHEET NUMBER 2 OF 6

January 21, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Drainage\DrainageMap.dwg



Attachment F - SMP21-04 – Phase 2

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

HOOTER LANE PHASE I
ROW IMPROVEMENTS

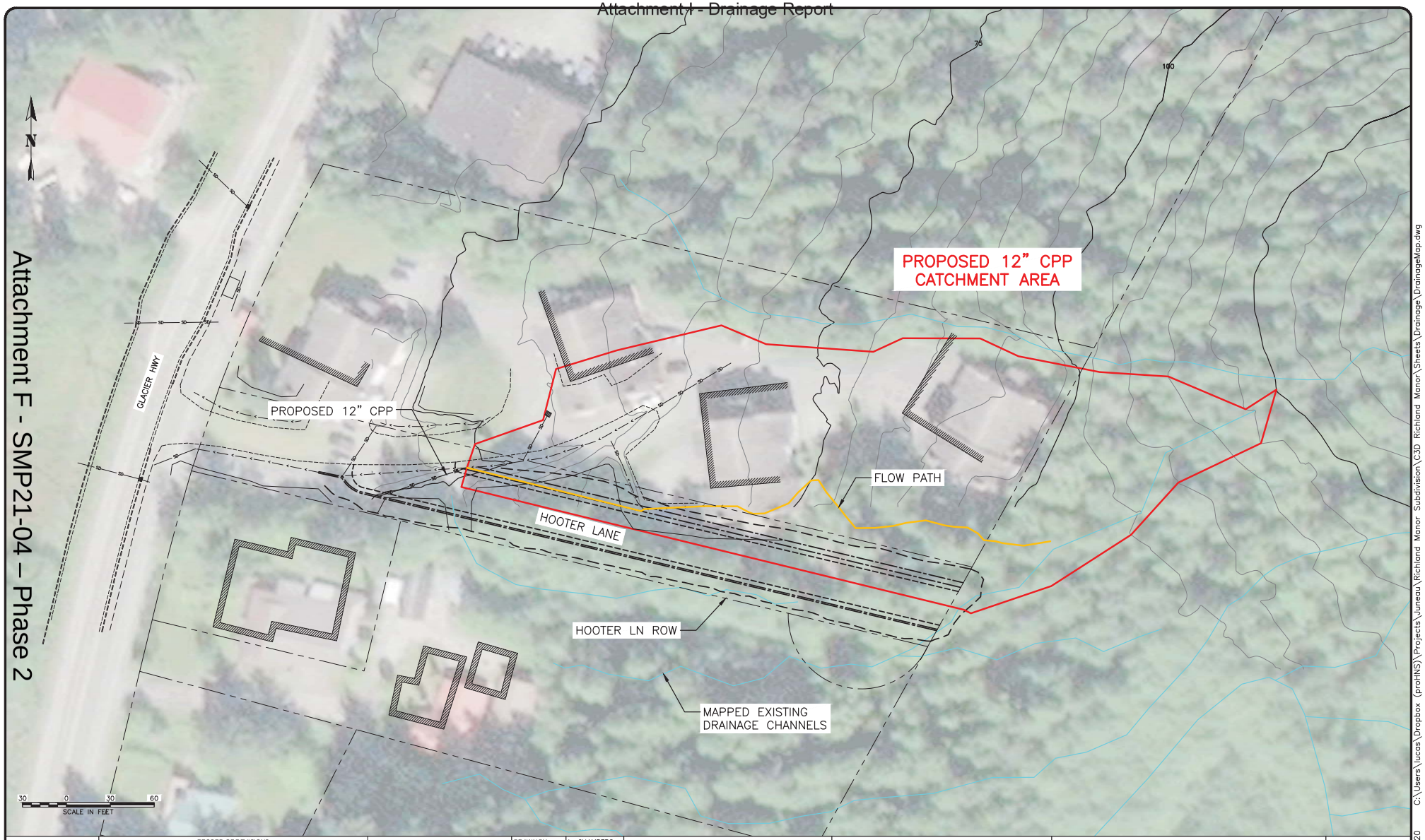
WILLIAM & MICHAEL HUMEANN

EXISTING DRIVEWAY DITCH CATCHMENT AREA

SHEET NUMBER 3 OF 6

January 21, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Drainage\DrainageMap.dwg

Attachment F - SMP21-04 – Phase 2



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

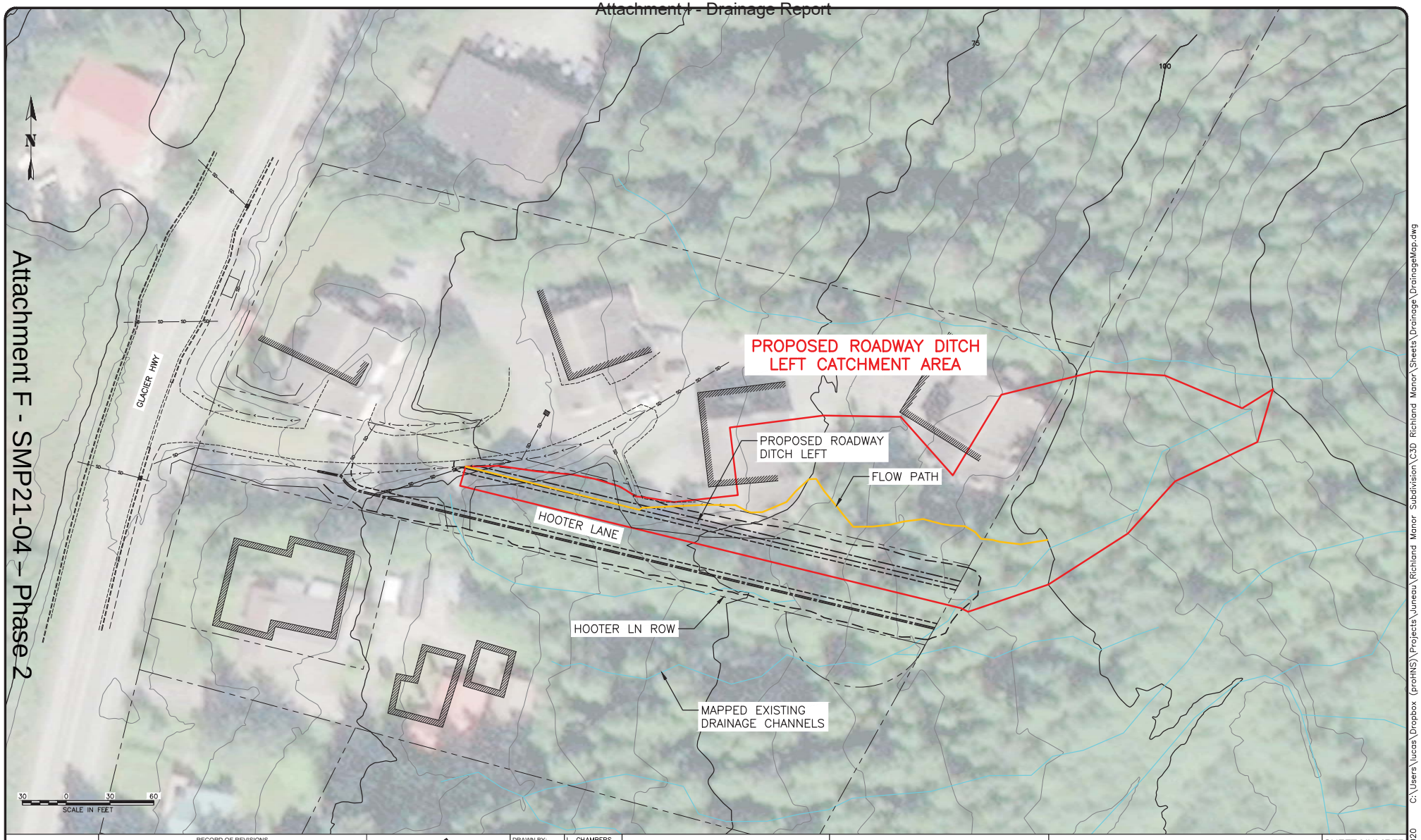
HOOTER LANE PHASE I
ROW IMPROVEMENTS

WILLIAM & MICHAEL HUMEANN

PROPOSED 12" CPP CATCHMENT AREA

SHEET NUMBER 4 OF 6

January 21, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Drainage\DrainageMap.dwg



Attachment F - SMP21-04 – Phase 2

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

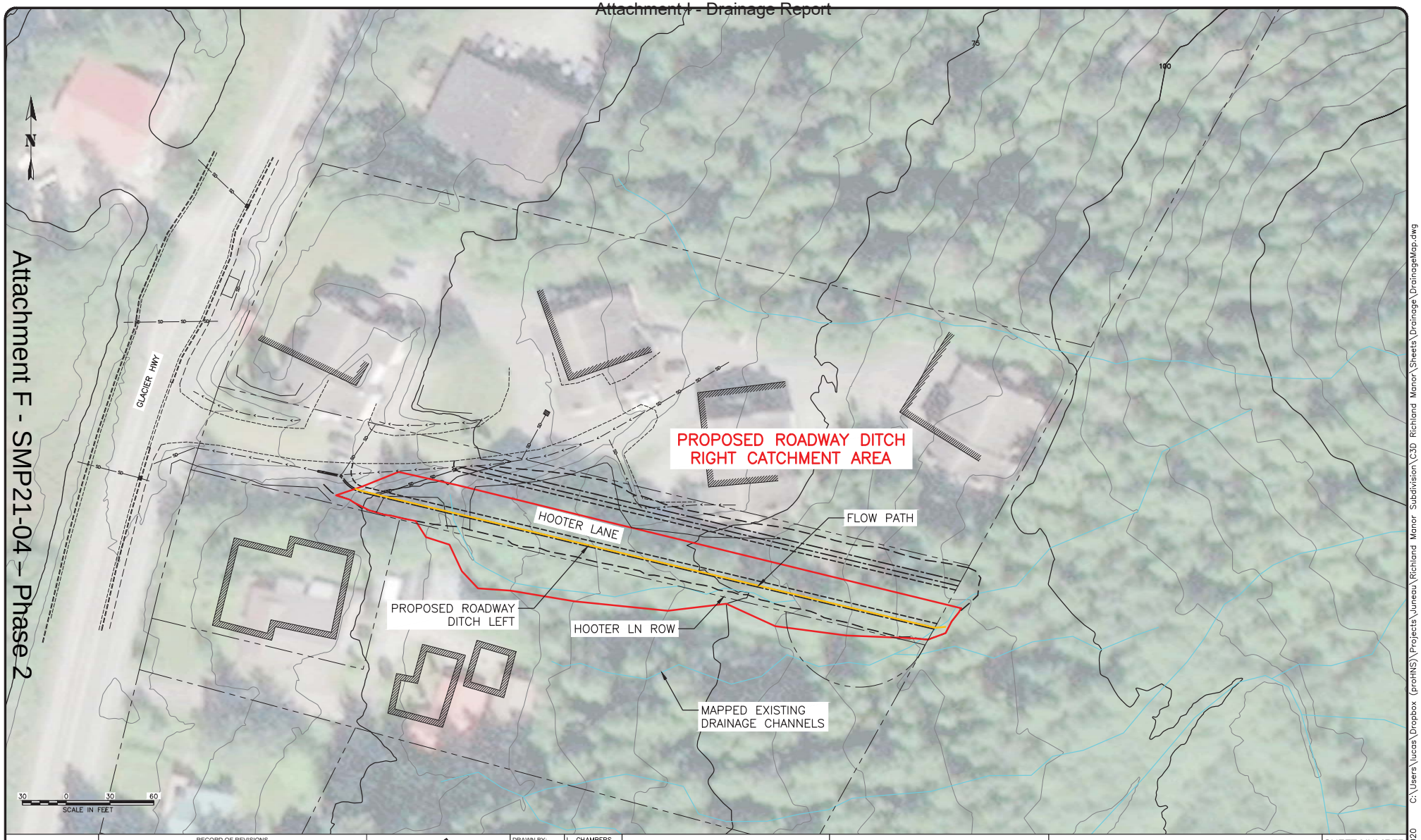
HOOTER LANE PHASE I
ROW IMPROVEMENTS

WILLIAM & MICHAEL HUMEANN

PROPOSED ROADWAY DITCH LT CATCHMENT AREA

SHEET NUMBER 5 OF 6

January 21, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Drainage\DrainageMap.dwg



Attachment F - SMP21-04 – Phase 2

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	L. CHAMBERS
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSJO

HOOTER LANE PHASE I
ROW IMPROVEMENTS

WILLIAM & MICHAEL HUMEANN

PROPOSED ROADWAY DITCH RT CATCHMENT AREA

SHEET NUMBER 6 OF 6

January 21, 2020 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Drainage\DrainageMap.dwg

Appendix B
Rational Method

Rational Method Site Runoff Existing 18" CPP		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Gladsjo	

$$Q = CIA$$

Q = peak flow in cubic feet per second (cfs)
C = runoff coefficient
I = rainfall intensity (inches per hour)
A = catchment area (acres)

$$C_c = (C_1A_1 + C_2A_2)/A_t$$

C_c = composite runoff coefficient
$C_{1,2}$ = runoff coefficient for each area land cover type
A_t = total area (acres)
$A_{1,2}$ = areas of land cover types (acres)
***Cc = 0.55**, See Appendix C for calculation*

$$T_c = T_1 + T_2 + \cdots + T_n$$

T_c = time of concentration (min)
$T_{1,2}$ = travel time across separate flow path segments (min)
***Tc = 22.61 min.**, See Appendix D for calculation*

$$T_t = L/60V$$

T_t = travel time (min)
L= the distance of flow across a given segment (feet)
$V=k_R Sqrt(S_0)$=average velocity (feet/sec) across land cover
k_R = time of concentration velocity factor (CBJ Manual of Storm Water BMP 2010, Table D-5, PG. D-10)
S_0 = slope of flow path (feet/feet)

Per CBJ Manual of Storm Water BMP 2010, Table 5-1, page. 5-1, design event frequencies are specified. For driveway culvert, a 25-year storm event is the required design return period. We will base our analysis on a 25-year design return period for all drainage structures and catchment areas. Per CBJ Manual of Storm Water BMP 2010, page. D-9, Basins with a time and concentration 10 minutes or less shall use the 10 minute intensity. Basins with a time of concentration greater than 10 minutes and less than 30 minutes shall interpolate between the 10 and 10 minute values. Rainfall intensity for the site was sourced from the NOAA Atlas 14, Point Precipitation Frequency Estimates, see Appendix E, and is summarized as follows:

		Design Return Period
	Tc 22.61(min)	25-year
Interpolated Intensity (in/hr) =		**1.33**

There is an existing 18" CPP culvert that drains into the existing Glacier Highway ditch system at the location where the new subdivision access will tie into the shoulder of the Highway. The area currently contributing runoff to this culvert was delinated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ.

A = 107513 sqft / 43,560 **= 2.47 acres**

	Cc	**I**	**A**		
Q (cfs)=	0.55	1.33	2.47	**=**	**1.81**

Rational Method Site Runoff Existing Driveway Ditch		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Gladsjo	

$$Q = CIA$$

Q = peak flow in cubic feet per second (cfs)
C = runoff coefficient
I = rainfall intensity (inches per hour)
A = catchment area (acres)

$$C_c = (C_1A_1 + C_2A_2)/A_t$$

C_c = composite runoff coefficient
$C_{1,2}$ = runoff coefficient for each area land cover type
A_t = total area (acres)
$A_{1,2}$ = areas of land cover types (acres)
***Cc = 0.55**, See Appendix B for calculation*

$$T_c = T_1 + T_2 + \cdots + T_n$$

T_c = time of concentration (min)
$T_{1,2}$ = travel time across separate flow path segments (min)
***Tc = 22.61 min.**, See Appendix C for calculation*

$$T_t = L/60V$$

T_t = travel time (min)
L= the distance of flow across a given segment (feet)
$V=k_R Sqrt(S_0)$=average velocity (feet/sec) across land cover
k_R = time of concentration velocity factor (CBJ Manual of Storm Water BMP 2010, Table D-5, PG. D-10)
S_0 = slope of flow path (feet/feet)

Per CBJ Manual of Storm Water BMP 2010, Table 5-1, page. 5-1, design event frequencies are specified. For driveway culvert, a 25-year storm event is the required design return period. We will base our analysis on a 25-year design return period for all drainage structures and catchment areas. Per CBJ Manual of Storm Water BMP 2010, page. D-9, Basins with a time and concentration 10 minutes or less shall use the 10 minute intensity. Basins with a time of concentration greater than 10 minutes and less than 30 minutes shall interpolate between the 10 and 10 minute values. Rainfall intensity for the site was sourced from the NOAA Atlas 14, Point Precipitation Frequency Estimates, see Appendix D, and is summarized as follows:

		Design Return Period
	Tc 22.61(min)	25-year
Interpolated Intensity (in/hr) =		**1.33**

There is an existing 18" CPP culvert that drains into the existing Glacier Highway ditch system at the location where the new subdivision access will tie into the shoulder of the Highway. The driveway ditch leading into the 18" CPP was evaluated at the bottom of the ditch run. The area currently contributing runoff to this culvert was delinated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ.

A = 107513 sqft / 43,560 **= 2.47 acres**

	Cc	**I**	**A**		
Q (cfs)=	0.55	1.33	2.47	**=**	**1.81**

Rational Method Site Runoff Proposed 12" CPP		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Gladsjo	

$$Q = CIA$$

Q = peak flow in cubic feet per second (cfs)
C = runoff coefficient
I = rainfall intensity (inches per hour)
A = catchment area (acres)

$$C_c = (C_1A_1 + C_2A_2)/A_t$$

C_c = composite runoff coefficient
$C_{1,2}$ = runoff coefficient for each area land cover type
A_t = total area (acres)
$A_{1,2}$ = areas of land cover types (acres)
***Cc = 0.51**, See Appendix C for calculation*

$$T_c = T_1 + T_2 + \cdots + T_n$$

T_c = time of concentration (min)
$T_{1,2}$ = travel time across separate flow path segments (min)
***Tc = 22.31 min.**, See Appendix D for calculation*

$$T_t = L/60V$$

T_t = travel time (min)
L= the distance of flow across a given segment (feet)
$V=k_R Sqrt(S_0)$=average velocity (feet/sec) across land cover
k_R = time of concentration velocity factor (CBJ Manual of Storm Water BMP 2010, Table D-5, PG. D-10)
S_0 = slope of flow path (feet/feet)

Per CBJ Manual of Storm Water BMP 2010, Table 5-1, page. 5-1, design event frequencies are specified. For driveway culvert, a 25-year storm event is the required design return period. We will base our analysis on a 25-year design return period for all drainage structures and catchment areas. Per CBJ Manual of Storm Water BMP 2010, page. D-9, Basins with a time and concentration 10 minutes or less shall use the 10 minute intensity. Basins with a time of concentration greater than 10 minutes and less than 30 minutes shall interpolate between the 10 and 10 minute values. Rainfall intensity for the site was sourced from the NOAA Atlas 14, Point Precipitation Frequency Estimates, see Appendix E, and is summarized as follows:

		Design Return Period
	Tc 22.31(min)	25-year
Interpolated Intensity (in/hr) =		**1.32**

The proposed 12" CPP is being installed to maintain existing a proposed ditch flow along Tamarak Condos driveway at the begining of the proposed Hooter Lane Phase I ROW improvements. The area currently contributing runoff to this culvert was delinated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ.

A = 67066 sqft / 43,560 **= 1.54 acres**

	Cc	**I**	**A**		
Q (cfs)=	0.51	1.32	1.54	**=**	**1.04**

Rational Method Site Runoff Proposed Roadway Ditch Left		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Gladsjo	

$$Q = CIA$$

Q = peak flow in cubic feet per second (cfs)
C = runoff coefficient
I = rainfall intensity (inches per hour)
A = catchment area (acres)

$$C_c = (C_1A_1 + C_2A_2)/A_t$$

C_c = composite runoff coefficient
$C_{1,2}$ = runoff coefficient for each area land cover type
A_t = total area (acres)
$A_{1,2}$ = areas of land cover types (acres)
***Cc = 0.33**, See Appendix C for calculation*

$$T_c = T_1 + T_2 + \cdots + T_n$$

T_c = time of concentration (min)
$T_{1,2}$ = travel time across separate flow path segments (min)
***Tc = 22.31 min.**, See Appendix D for calculation*

$$T_t = L/60V$$

T_t = travel time (min)
L= the distance of flow across a given segment (feet)
$V=k_R Sqrt(S_0)$=average velocity (feet/sec) across land cover
k_R = time of concentration velocity factor (CBJ Manual of Storm Water BMP 2010, Table D-5, PG. D-10)
S_0 = slope of flow path (feet/feet)

Per CBJ Manual of Storm Water BMP 2010, Table 5-1, page. 5-1, design event frequencies are specified. For driveway culvert, a 25-year storm event is the required design return period. We will base our analysis on a 25-year design return period for all drainage structures and catchment areas. Per CBJ Manual of Storm Water BMP 2010, page. D-9, Basins with a time and concentration 10 minutes or less shall use the 10 minute intensity. Basins with a time of concentration greater than 10 minutes and less than 30 minutes shall interpolate between the 10 and 10 minute values. Rainfall intensity for the site was sourced from the NOAA Atlas 14, Point Precipitation Frequency Estimates, see Appendix E, and is summarized as follows:

		Design Return Period
	Tc 22.31(min)	25-year
Interpolated Intensity (in/hr) =		**1.32**

The proposed ditch is on the left side of the proposed roadway and was evaluated at the bottom of the ditch run. The area currently contributing runoff to this ditch was delinated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ.

A = 41749 sqft / 43,560 **= 0.96 acres**

	Cc	**I**	**A**		
Q (cfs)=	0.33	1.32	0.96	**=**	**0.42**

Rational Method Site Runoff Proposed Roadway Ditch Right			
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054		
Owner:	Michael and William Heumann		
Date:	1/20/2020		
Prepared By:	L. Chambers		
Checked By:	G. Gladsjo		

$$Q = CIA$$

Q = peak flow in cubic feet per second (cfs)
C = runoff coefficient
I = rainfall intensity (inches per hour)
A = catchment area (acres)

$$C_c = (C_1A_1 + C_2A_2)/A_t$$

C_c = composite runoff coefficient
$C_{1,2}$ = runoff coefficient for each area land cover type
A_t = total area (acres)
$A_{1,2}$ = areas of land cover types (acres)
***Cc = 0.55**, See Appendix C for calculation*

$$T_c = T_1 + T_2 + \cdots + T_n$$

T_c = time of concentration (min)
$T_{1,2}$ = travel time across separate flow path segments (min)
***Tc = 5.22 min.**, See Appendix D for calculation*

$$T_t = L/60V$$

T_t = travel time (min)
L= the distance of flow across a given segment (feet)
$V=k_R Sqrt(S_0)$=average velocity (feet/sec) across land cover
k_R = time of concentration velocity factor (CBJ Manual of Storm Water BMP 2010, Table D-5, PG. D-10)
S_0 = slope of flow path (feet/feet)

Per CBJ Manual of Storm Water BMP 2010, Table 5-1, page. 5-1, design event frequencies are specified. For driveway culvert, a 25-year storm event is the required design return period. We will base our analysis on a 25-year design return period for all drainage structures and catchment areas. Per CBJ Manual of Storm Water BMP 2010, page. D-9, Basins with a time and concentration 10 minutes or less shall use the 10 minute intensity. Basins with a time of concentration greater than 10 minutes and less than 30 minutes shall interpolate between the 10 and 10 minute values. Rainfall intensity for the site was sourced from the NOAA Atlas 14, Point Precipitation Frequency Estimates, see Appendix E, and is summarized as follows:

		Design Return Period
	Tc 10(min)	25-year
Interpolated Intensity (in/hr) =		**2.07**

The proposed ditch is on the right side of the proposed roadway and was evaluated at the bottom of the ditch run. The area currently contributing runoff to this culvert was delinated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ.

A = 18055 sqft / 43,560 **= 0.41 acres**

	Cc	**I**	**A**		
Q (cfs)=	0.55	2.07	0.41	**=**	**0.47**

Appendix C
Runoff Coefficient

Runoff Coefficient Existing 18" CPP		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Glasdsjo	

Total Basin Area(SQFT)=	**107806**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Runoff Coefficient**
Pavement	Tamarack Trails Condos	24950				
			24950	0.572773186	23.14%	0.9
Building Roofs	Tamarack Trail Condos	15130				
			15130	0.347337006	14.03%	0.9
Lawns	Tamarack Trails	6690				
			6690	0.153581267	6.21%	0.25
Shot Rock Base & Ditch	Hooter Lane ROW	21355				
			21355	0.490243343	19.81%	0.8
Woods	Every where else	39681				
			39681	0.910950413	36.81%	0.1
		Total=	107806	2.474885216	100.00%	**0.55**

Runoff Coefficient Existing Driveway Ditch		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Glasdsjo	

Total Basin Area(SQFT)=	**107806**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Runoff Coefficient**
Pavement	Tamarack Trails Condos	24950				
			24950	0.572773186	23.14%	0.9
Building Roofs	Tamarack Trail Condos	15130				
			15130	0.347337006	14.03%	0.9
Lawns	Tamarack Trails	6690				
			6690	0.153581267	6.21%	0.25
Shot Rock Base & Ditch	Hooter Lane ROW	21355				
			21355	0.490243343	19.81%	0.8
Woods	Every where else	39681				
			39681	0.910950413	36.81%	0.1
		Total=	107806	2.474885216	100.00%	**0.55**

Runoff Coefficient Proposed 12" CPP		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Glasdsjo	

Total Basin Area(SQFT)=	**67066**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Runoff Coefficient**
Pavement	Tamarack Trails Condos	14935				
			14935	0.342860422	22.27%	0.9
Building Roofs	Tamarack Trail Condos	11730				
			11730	0.269283747	17.49%	0.9
Shot Rock Base & Ditch	Hooter Lane ROW	8585				
			8585	0.197084481	12.80%	0.8
Woods	Every where else	31816				
			31816	0.730394858	47.44%	0.1
		Total=	67066	1.539623508	100.00%	**0.51**

Runoff Coefficient Proposed Roadway Ditch Left		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Glasdsjo	

Total Basin Area(SQFT)=	**41749**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Runoff Coefficient**
Pavement	Tamarack Trails Condos	547				
			547	0.012557392	1.31%	0.9
Building Roofs	Tamarack Trail Condos	3902				
			3902	0.089577594	9.35%	0.9
Shot Rock Base & Ditch	Hooter Lane ROW	8585				
			8585	0.197084481	20.56%	0.8
Woods	Every where else	28715				
			28715	0.659205693	68.78%	0.1
		Total=	41749	0.958425161	100.00%	**0.33**

Runoff Coefficient Proposed Roadway Ditch Right		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Glasdsjo	

Total Basin Area(SQFT)=	**18055**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Runoff Coefficient**
Shot Rock Base & Ditch	Hooter Lane ROW	11500				
			11500	0.264003673	63.69%	0.8
Woods	Every where else	6555				
			6555	0.150482094	36.31%	0.1
		Total=	18055	0.414485767	100.00%	**0.55**

Appendix D
Time of Concentration

Existing 18" CPP TOC


```
SCS TR-55 Time of Concentration Computations Report
===================================================

Sheet Flow Equation
-------------------

        Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

        Where:

        Tc = Time of Concentration (hrs)
        n  = Manning's Roughness
        Lf = Flow Length (ft)
        P  = 2 yr, 24 hr Rainfall (inches)
        Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation
----------------------------------

        V  = 16.1345 * (Sf^0.5) (unpaved surface)
        V  = 20.3282 * (Sf^0.5) (paved surface)
        V  = 15.0 * (Sf^0.5) (grassed waterway surface)
        V  = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
        V  = 9.0 * (Sf^0.5) (cultivated straight rows surface)
        V  = 7.0 * (Sf^0.5) (short grass pasture surface)
        V  = 5.0 * (Sf^0.5) (woodland surface)
        V  = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
        Lf = Flow Length (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)

Channel Flow Equation
---------------------

        V  = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
        R  = Aq / Wp
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
```

Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

==========
Subbasin Existing18cmp
==========

Sheet Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.8	0.00	0.00
Flow Length (ft):	87.3	0.00	0.00
Slope (%):	6.9	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.97	0.00	0.00
Velocity (ft/sec):	0.07	0.00	0.00
Computed Flow Time (minutes):	21.21	0.00	0.00

Shallow Concentrated Flow Computations

-	Subarea A	Subarea B	Subarea C
Flow Length (ft):	260	0.00	0.00
Slope (%):	11.9	0.00	0.00
Surface Type:	Grassed waterway	Unpaved	Unpaved
Velocity (ft/sec):	5.17	0.00	0.00
Computed Flow Time (minutes):	0.84	0.00	0.00

Channel Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.033	.01	.03
Flow Length (ft):	122	63	132
Channel Slope (%):	12	10.4	7.02
Cross Section Area (ft²):	2	.63	3.42
Wetted Perimeter (ft):	5.6	2.1	6.12
Velocity (ft/sec):	7.87	21.53	8.93
Computed Flow Time (minutes):	0.26	0.05	0.25

Total TOC (minutes):	22.61

Existing Driveway Ditch TOC


```
SCS TR-55 Time of Concentration Computations Report
===================================================

Sheet Flow Equation
-------------------

        Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

        Where:

        Tc = Time of Concentration (hrs)
        n  = Manning's Roughness
        Lf = Flow Length (ft)
        P  = 2 yr, 24 hr Rainfall (inches)
        Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation
----------------------------------

        V  = 16.1345 * (Sf^0.5) (unpaved surface)
        V  = 20.3282 * (Sf^0.5) (paved surface)
        V  = 15.0 * (Sf^0.5) (grassed waterway surface)
        V  = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
        V  = 9.0 * (Sf^0.5) (cultivated straight rows surface)
        V  = 7.0 * (Sf^0.5) (short grass pasture surface)
        V  = 5.0 * (Sf^0.5) (woodland surface)
        V  = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
        Lf = Flow Length (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)

Channel Flow Equation
---------------------

        V  = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
        R  = Aq / Wp
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
```

Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

==========
Subbasin Existing18cmp
==========

Sheet Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.8	0.00	0.00
Flow Length (ft):	87.3	0.00	0.00
Slope (%):	6.9	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.97	0.00	0.00
Velocity (ft/sec):	0.07	0.00	0.00
Computed Flow Time (minutes):	21.21	0.00	0.00

Shallow Concentrated Flow Computations

-	Subarea A	Subarea B	Subarea C
Flow Length (ft):	260	0.00	0.00
Slope (%):	11.9	0.00	0.00
Surface Type:	Grassed waterway	Unpaved	Unpaved
Velocity (ft/sec):	5.17	0.00	0.00
Computed Flow Time (minutes):	0.84	0.00	0.00

Channel Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.033	.01	.03
Flow Length (ft):	122	63	132
Channel Slope (%):	12	10.4	7.02
Cross Section Area (ft²):	2	.63	3.42
Wetted Perimeter (ft):	5.6	2.1	6.12
Velocity (ft/sec):	7.87	21.53	8.93
Computed Flow Time (minutes):	0.26	0.05	0.25

Total TOC (minutes):	22.61

Proposed 12" CPP TOC


```
SCS TR-55 Time of Concentration Computations Report
==================================================

Sheet Flow Equation
-------------------

        Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

        Where:

        Tc = Time of Concentration (hrs)
        n  = Manning's Roughness
        Lf = Flow Length (ft)
        P  = 2 yr, 24 hr Rainfall (inches)
        Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation
----------------------------------

        V  = 16.1345 * (Sf^0.5) (unpaved surface)
        V  = 20.3282 * (Sf^0.5) (paved surface)
        V  = 15.0 * (Sf^0.5) (grassed waterway surface)
        V  = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
        V  = 9.0 * (Sf^0.5) (cultivated straight rows surface)
        V  = 7.0 * (Sf^0.5) (short grass pasture surface)
        V  = 5.0 * (Sf^0.5) (woodland surface)
        V  = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
        Lf = Flow Length (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)

Channel Flow Equation
---------------------

        V  = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
        R  = Aq / Wp
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
```

Proposed 12" CPP TOC

Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

==========
Subbasin DitchLT
==========

Sheet Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.8	0.00	0.00
Flow Length (ft):	87.3	0.00	0.00
Slope (%):	6.9	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.97	0.00	0.00
Velocity (ft/sec):	0.07	0.00	0.00
Computed Flow Time (minutes):	21.21	0.00	0.00

Shallow Concentrated Flow Computations

-	Subarea A	Subarea B	Subarea C
Flow Length (ft):	260	0.00	0.00
Slope (%):	11.9	0.00	0.00
Surface Type:	Grassed waterway	Unpaved	Unpaved
Velocity (ft/sec):	5.17	0.00	0.00
Computed Flow Time (minutes):	0.84	0.00	0.00

Channel Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.033	0.00	0.00
Flow Length (ft):	122	0.00	0.00
Channel Slope (%):	12	0.00	0.00
Cross Section Area (ft²):	2	0.00	0.00
Wetted Perimeter (ft):	5.6	0.00	0.00
Velocity (ft/sec):	7.87	0.00	0.00
Computed Flow Time (minutes):	0.26	0.00	0.00

Total TOC (minutes):	22.31

```
SCS TR-55 Time of Concentration Computations Report
==================================================

Sheet Flow Equation
-------------------

        Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

        Where:

        Tc = Time of Concentration (hrs)
        n  = Manning's Roughness
        Lf = Flow Length (ft)
        P  = 2 yr, 24 hr Rainfall (inches)
        Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation
----------------------------------

        V  = 16.1345 * (Sf^0.5) (unpaved surface)
        V  = 20.3282 * (Sf^0.5) (paved surface)
        V  = 15.0 * (Sf^0.5) (grassed waterway surface)
        V  = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
        V  = 9.0 * (Sf^0.5) (cultivated straight rows surface)
        V  = 7.0 * (Sf^0.5) (short grass pasture surface)
        V  = 5.0 * (Sf^0.5) (woodland surface)
        V  = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
        Lf = Flow Length (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)

Channel Flow Equation
---------------------

        V  = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
        R  = Aq / Wp
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
```

Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

==========
Subbasin DitchLT
==========

Sheet Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.8	0.00	0.00
Flow Length (ft):	87.3	0.00	0.00
Slope (%):	6.9	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.97	0.00	0.00
Velocity (ft/sec):	0.07	0.00	0.00
Computed Flow Time (minutes):	21.21	0.00	0.00

Shallow Concentrated Flow Computations

-	Subarea A	Subarea B	Subarea C
Flow Length (ft):	260	0.00	0.00
Slope (%):	11.9	0.00	0.00
Surface Type:	Grassed waterway	Unpaved	Unpaved
Velocity (ft/sec):	5.17	0.00	0.00
Computed Flow Time (minutes):	0.84	0.00	0.00

Channel Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.033	0.00	0.00
Flow Length (ft):	122	0.00	0.00
Channel Slope (%):	12	0.00	0.00
Cross Section Area (ft²):	2	0.00	0.00
Wetted Perimeter (ft):	5.6	0.00	0.00
Velocity (ft/sec):	7.87	0.00	0.00
Computed Flow Time (minutes):	0.26	0.00	0.00

Total TOC (minutes):	22.31

```
SCS TR-55 Time of Concentration Computations Report
===================================================

Sheet Flow Equation
-------------------

        Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

        Where:

        Tc = Time of Concentration (hrs)
        n  = Manning's Roughness
        Lf = Flow Length (ft)
        P  = 2 yr, 24 hr Rainfall (inches)
        Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation
----------------------------------

        V  = 16.1345 * (Sf^0.5) (unpaved surface)
        V  = 20.3282 * (Sf^0.5) (paved surface)
        V  = 15.0 * (Sf^0.5) (grassed waterway surface)
        V  = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
        V  = 9.0 * (Sf^0.5) (cultivated straight rows surface)
        V  = 7.0 * (Sf^0.5) (short grass pasture surface)
        V  = 5.0 * (Sf^0.5) (woodland surface)
        V  = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
        Lf = Flow Length (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)

Channel Flow Equation
---------------------

        V  = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
        R  = Aq / Wp
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
```

Proposed Roadway Ditch RT TOC

Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

==========
Subbasin DitchRT
==========

Sheet Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.8	0.00	0.00
Flow Length (ft):	16	0.00	0.00
Slope (%):	10	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.97	0.00	0.00
Velocity (ft/sec):	0.06	0.00	0.00
Computed Flow Time (minutes):	4.71	0.00	0.00

Channel Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.033	0.00	0.00
Flow Length (ft):	400	0.00	0.00
Channel Slope (%):	12	0.00	0.00
Cross Section Area (ft²):	5.67	0.00	0.00
Wetted Perimeter (ft):	7.5	0.00	0.00
Velocity (ft/sec):	12.98	0.00	0.00
Computed Flow Time (minutes):	0.51	0.00	0.00

Total TOC (minutes):	5.22

Appendix E
Rainfall Intensity

NOAA Atlas 14, Volume 7, Version 2
Location name: Juneau, Alaska, USA*
Latitude: 58.346°, Longitude: -134.4904°
Elevation: 101.4 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Douglas Kane, Sarah Dietz, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Svetlana Stuefer, Amy Tidwell, Carl Trypaluk, Dale Unruh, Michael Yekta, Erica Betts, Geoffrey Bonnin, Sarah Heim, Lillian Hiner, Elizabeth Lilly, Jayashree Narayanan, Fenglin Yan, Tan Zhao

NOAA, National Weather Service, Silver Spring, Maryland
and
University of Alaska Fairbanks, Water and Environmental Research Center

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.58 (1.27-2.02)	1.86 (1.48-2.40)	2.27 (1.75-3.00)	2.62 (1.99-3.52)	3.08 (2.29-4.25)	3.44 (2.51-4.82)	3.80 (2.72-5.42)	4.30 (3.02-6.23)	4.94 (3.41-7.33)	5.42 (3.67-8.17)
10-min	1.06 (0.852-1.36)	1.25 (0.984-1.61)	1.52 (1.18-2.02)	1.75 (1.33-2.35)	2.07 (1.54-2.85)	2.31 (1.69-3.23)	2.56 (1.83-3.64)	2.89 (2.03-4.18)	3.32 (2.29-4.92)	3.64 (2.47-5.49)
15-min	0.828 (0.664-1.06)	0.972 (0.768-1.26)	1.19 (0.920-1.57)	1.37 (1.04-1.84)	1.62 (1.20-2.22)	1.80 (1.32-2.53)	2.00 (1.43-2.84)	2.25 (1.59-3.26)	2.59 (1.78-3.84)	2.84 (1.93-4.29)
30-min	0.550 (0.440-0.702)	0.646 (0.510-0.836)	0.788 (0.610-1.04)	0.908 (0.690-1.22)	1.07 (0.796-1.47)	1.20 (0.874-1.68)	1.32 (0.950-1.89)	1.49 (1.05-2.17)	1.72 (1.18-2.54)	1.89 (1.28-2.84)
60-min	0.377 (0.302-0.481)	0.442 (0.349-0.571)	0.540 (0.418-0.713)	0.622 (0.473-0.836)	0.734 (0.545-1.01)	0.820 (0.598-1.15)	0.907 (0.650-1.29)	1.02 (0.721-1.48)	1.18 (0.810-1.74)	1.29 (0.875-1.95)
2-hr	0.278 (0.223-0.356)	0.326 (0.258-0.422)	0.399 (0.308-0.527)	0.460 (0.350-0.618)	0.543 (0.403-0.747)	0.606 (0.442-0.850)	0.670 (0.480-0.954)	0.756 (0.532-1.10)	0.869 (0.598-1.29)	0.954 (0.646-1.44)
3-hr	0.245 (0.196-0.312)	0.286 (0.226-0.370)	0.351 (0.271-0.463)	0.404 (0.307-0.543)	0.477 (0.354-0.657)	0.533 (0.389-0.746)	0.588 (0.422-0.838)	0.664 (0.468-0.962)	0.763 (0.525-1.13)	0.838 (0.568-1.26)
6-hr	0.197 (0.158-0.251)	0.231 (0.182-0.298)	0.282 (0.218-0.372)	0.324 (0.247-0.436)	0.383 (0.284-0.527)	0.428 (0.312-0.600)	0.473 (0.339-0.675)	0.534 (0.376-0.774)	0.614 (0.423-0.910)	0.675 (0.457-1.02)
12-hr	0.147 (0.118-0.188)	0.172 (0.136-0.223)	0.210 (0.162-0.277)	0.241 (0.183-0.323)	0.284 (0.211-0.391)	0.319 (0.233-0.447)	0.356 (0.255-0.507)	0.402 (0.283-0.582)	0.462 (0.318-0.686)	0.508 (0.344-0.767)
24-hr	0.107 (0.096-0.119)	0.125 (0.111-0.142)	0.151 (0.132-0.175)	0.172 (0.148-0.203)	0.203 (0.171-0.245)	0.229 (0.189-0.281)	0.256 (0.208-0.320)	0.289 (0.230-0.367)	0.332 (0.259-0.431)	0.365 (0.280-0.482)
2-day	0.073 (0.066-0.081)	0.084 (0.075-0.096)	0.101 (0.088-0.117)	0.114 (0.098-0.134)	0.133 (0.111-0.160)	0.148 (0.122-0.182)	0.164 (0.133-0.205)	0.183 (0.146-0.233)	0.209 (0.162-0.271)	0.227 (0.174-0.300)
3-day	0.057 (0.052-0.064)	0.066 (0.059-0.075)	0.079 (0.069-0.091)	0.088 (0.076-0.104)	0.102 (0.086-0.123)	0.113 (0.094-0.139)	0.125 (0.101-0.156)	0.139 (0.110-0.176)	0.156 (0.122-0.203)	0.170 (0.130-0.224)
4-day	0.049 (0.044-0.054)	0.056 (0.050-0.063)	0.066 (0.058-0.076)	0.074 (0.063-0.087)	0.085 (0.071-0.103)	0.094 (0.078-0.115)	0.103 (0.084-0.129)	0.114 (0.091-0.145)	0.128 (0.100-0.166)	0.139 (0.106-0.183)
7-day	0.035 (0.032-0.040)	0.040 (0.036-0.046)	0.047 (0.041-0.055)	0.053 (0.046-0.062)	0.061 (0.051-0.073)	0.067 (0.055-0.082)	0.074 (0.060-0.092)	0.081 (0.064-0.103)	0.091 (0.071-0.118)	0.098 (0.075-0.130)
10-day	0.029 (0.026-0.033)	0.033 (0.030-0.038)	0.039 (0.034-0.045)	0.043 (0.037-0.051)	0.049 (0.041-0.060)	0.054 (0.045-0.067)	0.060 (0.048-0.074)	0.066 (0.052-0.083)	0.073 (0.057-0.095)	0.079 (0.061-0.105)
20-day	0.022 (0.020-0.024)	0.025 (0.022-0.028)	0.029 (0.025-0.033)	0.032 (0.027-0.038)	0.036 (0.030-0.044)	0.040 (0.033-0.048)	0.043 (0.035-0.054)	0.047 (0.037-0.059)	0.052 (0.040-0.067)	0.056 (0.043-0.073)
30-day	0.019 (0.017-0.021)	0.022 (0.019-0.025)	0.025 (0.022-0.029)	0.028 (0.024-0.033)	0.031 (0.026-0.038)	0.034 (0.028-0.042)	0.037 (0.030-0.046)	0.040 (0.032-0.051)	0.044 (0.034-0.057)	0.047 (0.036-0.062)
45-day	0.017 (0.015-0.019)	0.019 (0.017-0.022)	0.022 (0.019-0.026)	0.025 (0.021-0.029)	0.028 (0.023-0.033)	0.030 (0.025-0.037)	0.032 (0.026-0.040)	0.034 (0.027-0.043)	0.037 (0.029-0.048)	0.039 (0.030-0.052)
60-day	0.015 (0.014-0.017)	0.017 (0.016-0.020)	0.020 (0.018-0.024)	0.022 (0.019-0.026)	0.025 (0.021-0.030)	0.027 (0.022-0.033)	0.028 (0.023-0.035)	0.030 (0.024-0.038)	0.032 (0.025-0.042)	0.034 (0.026-0.044)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

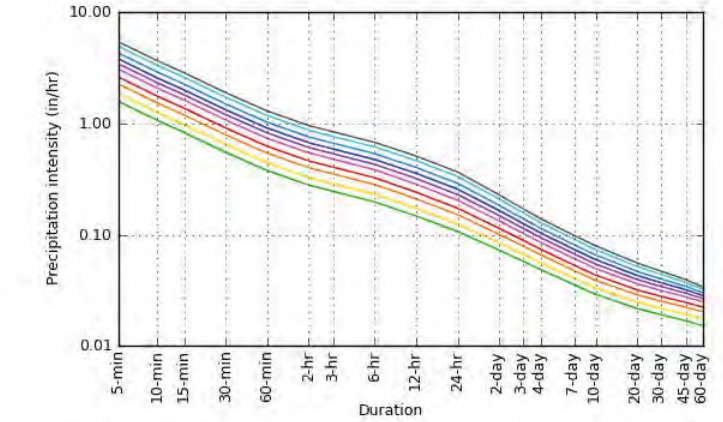
Back to Top

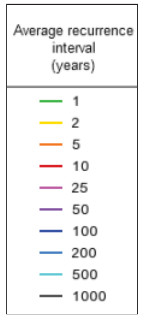
PF graphical

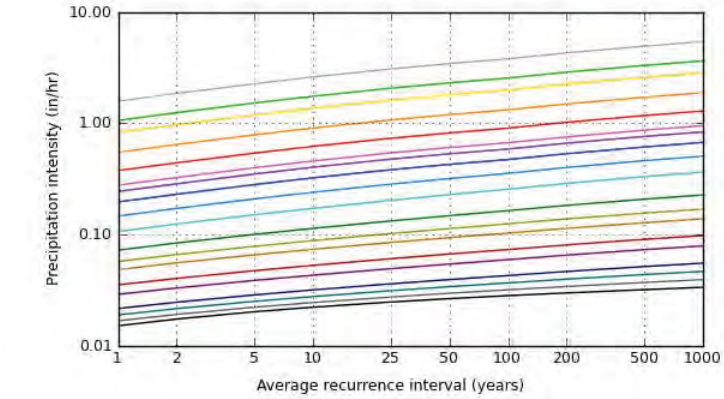
Attachment 1 - Drainage Report

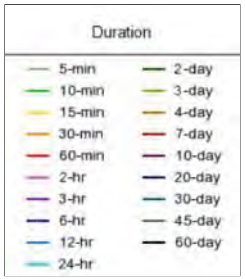
Attachment F - SMP21-04 – Phase 2

PDS-based intensity-duration-frequency (IDF) curves
Latitude: 58.3460°, Longitude: -134.4904°









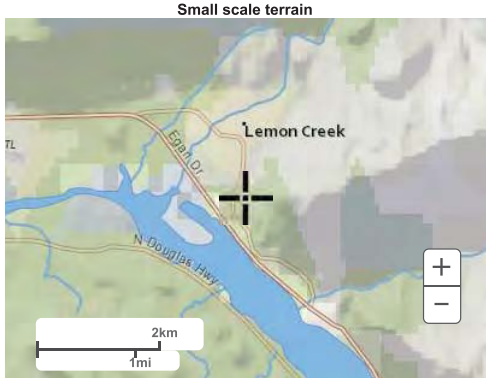
NOAA Atlas 14, Volume 7, Version 2

Created (GMT): Fri Nov 1 21:25:38 2019

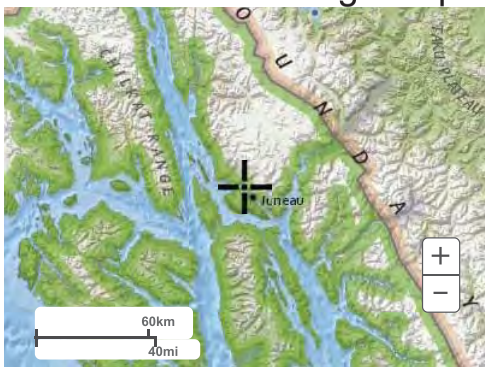
Back to Top

Maps & aerials

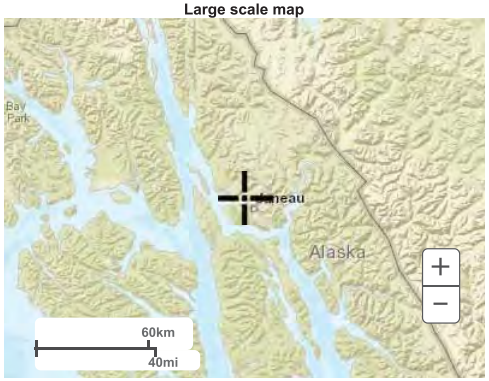
Small scale terrain



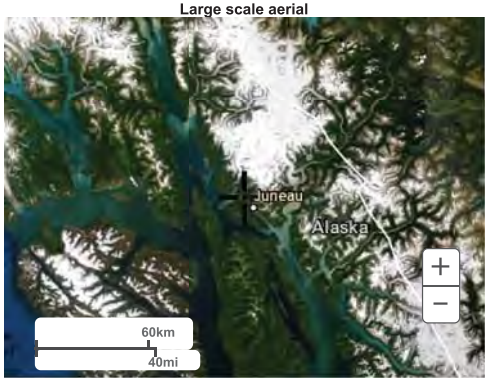
Large scale terrain



Large scale map



Large scale aerial



Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Appendix F
Existing & Proposed Capacity Calcs

Existing 18" CPP Discharge Capacity			
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054		
Owner:	Michael and William Heumann		
Date:	1/20/2020		
Prepared By:	L. Chambers		
Checked By:	G. Gladsjo		

The following equations were used to calculate the existing 18" CPP culvert that drains into the existing Glacier Highway ditch system at the location where the new subdivision access will tie into the shoulder of the Highway and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table 5-3, Page 5-5, of the CBJ Stormwater Manual
A = cross sectional area in ft^2, from survey basemap
R = hydraulic radius, from survey basemap
S = slope, from survey basemap

Existing 18" Ditch Culvert; Inlet Invert =30.0 ', Outlet Invert =29.0', Length =40 ', n = 0.014. The Manning's n value of 0.014 was determined by the pipe type (CPP-smooth interior) Table 5-3.

	K	n	A	R	S		
Q (cfs)	1.486	0.014	1.77	0.42446	0.025	=	16.72958

Existing Driveway Ditch Discharge Capacity			
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054		
Owner:	Michael and William Heumann		
Date:	1/20/2020		
Prepared By:	L. Chambers		
Checked By:	G. Gladsjo		

The following equations were used to calculate the capacity of the driveway ditch leading into the 18" CPP at the bottom of the ditch run and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table D-10, Page D-19, of the CBJ Stormwater Manual
A = cross sectional area in ft^2, from survey basemap
R = hydraulic radius, from survey basemap
S = slope, from survey basemap

Existing driveway ditch; Top Elev. = 37.0', Bottom Elev. = 30.0', Length = 80', n = 0.03. The Manning's n value of 0.03 comes from Table D-10 (grass, some weeds), elevation and length data are from survey basemap.

	K	n	A	R	S		
Q (cfs)	1.486	0.03	1.55	0.319588	0.0875	=	10.57569

Proposed 12" CPP Discharge Capacity		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Gladsjo	

The following equations were used to calculate the capacity of the proposed 12" CPP being installed to maintain existing a proposed ditch flow along Tamarak Condos driveway at the begining of the proposed Hooter Lane Phase I ROW improvements and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table 5-3, Page 5-5, of the CBJ Stormwater Manual
A = cross sectional area in ft^2, from construciton plans
R = hydraulic radius, from construction plans
S = slope, from construction plans

Proposed 12" CPP; Top Invert Elev. = 46.25', Bottom Invert Elev. = 39.70', Length = 63', n = 0.014. The Manning's n value of 0.014 comes from Table 5-3 (CPP, smooth), elevation and length data are from construction plans.

	K	n	A	R	S		
Q (cfs)	1.486	0.014	0.79	0.25	0.104	=	10.68204

Proposed Roadway Ditch Left Discharge Capacity		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Gladsjo	

The following equations were used to calculate the capacity of a proposed roadway ditch left side where it ties into the existing Tamarack Condo driveway and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table D-10, Page D-19, of the CBJ Stormwater Manual
A = cross sectional area in ft^2, from construciton plans
R = hydraulic radius, from construction plans
S = slope, from construction plans

Proposed Roadway Ditch; Slope matches roadway slope 12.0%, n = 0.04. The Manning's n value of 0.040 comes from Table D-10 (Rock lined, jagged), slope from construction plans.

	K	n	A	R	S		
Q (cfs)	1.486	0.04	2.06	0.36983842	0.12	=	13.61397

Proposed Roadway Ditch Right Discharge Capacity		
Project:	Hooter Lane ROW Improvements Phase I Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	1/20/2020	
Prepared By:	L. Chambers	
Checked By:	G. Gladsjo	

The following equations were used to calculate the capacity of a proposed roadway ditch right side where it ties into the existing Tamarack Condo driveway and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table D-10, Page D-19, of the CBJ Stormwater Manual
A = cross sectional area in ft^2, from construciton plans
R = hydraulic radius, from construction plans
S = slope, from construction plans

Proposed Roadway Ditch; Slope matches roadway slope 12.0%, n = 0.04. The Manning's n value of 0.040 comes from Table D-10 (Rock lined, jagged), slope from construction plans.

	K	n	A	R	S		
Q (cfs)	1.486	0.04	1.16	0.33429395	0.12	=	7.164296

Appendix G

Richland Manor Subdivision – Drainage Report dated 10/31/19

proHNS LLC
1945 Alex Holden Way #101 | Juneau, AK 99801 | 907-780-4004 | solutions@proHNS.com
219 Main Street #13 | Haines, AK 99827 | 907-419-6070 | www.proHNS.com

October 31, 2019

Michael and William Heumann
6000 Thane Rd
Juneau, AK 99801
mpheumann@hotmail.com
(971) 261-8014

RE: Richland Manor Subdivision - Drainage Report

To Whom It May Concern,

The following Drainage Plan has been prepared for the Richland Manor Subdivision in Juneau, AK, a proposed multi-phase major subdivision on a 30-acre site at 4506, 4508, and 4510 Hillcrest Avenue. This drainage report addresses the first phase of the project referred to as Phase A that includes the development of 14 Lots and the construction of a gravel access road up the Hooter Lane right-of-way. Runoff from Phase A will be directed to an existing 24" CMP that crosses Glacier Hwy at the bottom of Hooter Lane. The 2010 CBJ Manual of Stormwater Best Management Practices and the AKDOT&PF Highway Drainage Manual requires that the existing 24" CMP culvert can handle the 25-year storm event flows and will be the standard used for this analysis.

Attached sheets depict survey data, proposed Phase A development, as-built information, calculations and rainfall data used for the proposed drainage analysis for this subdivision.

NOTE The intent of this report is to show that the increased runoff due to Phase A of the development and the initial gravel access road up the Hooter Lane right-of-way of the site can be handled by the existing drainage system on Glacier Highway. This report will be revised and updated as necessary during the design and layout of the roadway and conveyance system.

Site Runoff Calculation Method:

A total of three catchment areas were analyzed as part of this report. The first was the area currently contributing to the existing 24" CMP culvert crossing glacier Hwy at the bottom of Hooter Lane. The second was the predeveloped area of the proposed Phase A of the subdivision and the last was the post developed area of the proposed Phase A of the Subdivision. The three catchment areas we determined using Lidar data and aerial photos in AutoCAD C3D and were verify by several site visits. A delineation of the catchment areas can be found in Appendix A.

To calculate the site runoff through existing drainage structure on Glacier Hwy, we have elected to use the Rational Method. The Rational Method is most appropriate for evaluating drainage basins less than 10 acres. Appendix D of the "2010 CBJ Manual of Stormwater Best Management Practices" was utilized as a guide[1]. The calculations can be found in Appendix B of this Report.

To calculate site runoff for the pre and post developed area of Phase A, we have elected to use the SCS Unit Hydrograph method. The SCS Unit Hydrograph method is appropriate for evaluating drainage basins greater than 10 acres and less than 1,300 acres. Appendix D of the "2010 CBJ Manual of Stormwater Best Management Practices" was utilized as a guide. Per the Guide, "The SCS method is based on a 24-hour storm event with a 10-minute temporal distribution. The Type IA storm distribution is a "typical" time distribution that the SCS has prepared from rainfall records for the Pacific maritime climate." The Hydraflow Hydrographs Extension for Autodesk was utilized to develop the Hydrographs for determining peak discharge. The Hydrographs can be found in Appendix F of this Report.

Anticipated Site Runoff (Q):

Using the Rational Method and SCS Unit Hydrograph, the amount of stormwater runoff during the 25-year storm event per catchment area was determined:

Catchment Area	Q (cfs)
Existing 24" CMP Culvert	2.30
Phase A Predeveloped	6.31
Proposed Phase A Subdivision	8.24

Conveyance/Discharge Structure Capacities:

The capacity of the existing 24" CMP culvert was calculated to determine if proposed 25-year storm event flows could be handled without making modifications. The analysis found that the culvert can handle 8.87 cfs, the calculations can be found in Appendix G.

[1] There are no current municipal code requirements dictating adherence with the "2010 CBJ Manual of Stormwater Best Management Practices" when preparing a drainage plan that complies with 49.35.510. Regardless, we have elected to utilize portions of this Manual as a guide in the preparation of this Drainage Plan for the proposed development.

Summary:

Drainage Basin	Post Development Runoff Q (cfs)	Capacity Check	24" CMP Flow Capacity Q (cfs)
Proposed Subdivision	**8.24**	**<**	**8.87**

The proposed Phase A of the development will redirect a significant amount of the water currently exiting the lower southwest corner of the property and will redirect them down Hooter Lane and into the existing 24" CMP culvert crossing Glacier Hwy. Our analysis shows that there is enough capacity in the existing Glacier Hwy. drainage system to handle increased flows during the 25 year storm event from the proposed development.

Respectfully,



Lucas Chambers, P.E.
Principal Engineer – proHNS LLC Juneau

Appendixes:

A – Catchment Areas
B – Rational Method
C – SCS Hydrograph
D – Runoff Coefficient
E – Time of Concentration
F – Rainfall Intensity
G – Existing 24" CMP Culvert Capacity
H - Existing 24" CMP Culvert As-builts

Appendix A
Catchment Areas

RICHLAND MANOR SUBDIVISION PHASE A DRAINAGE MAP

JUNEAU, AK

PREPARED FOR:

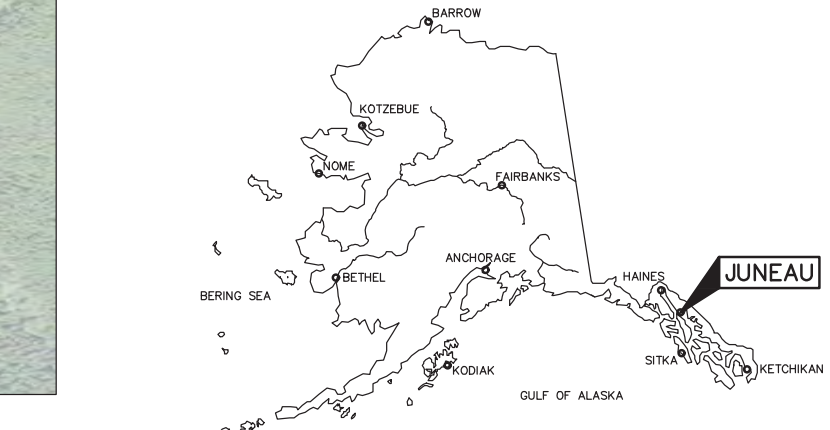
MICHAEL HUEMANN

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	EXISTING 24 CMP CATCHMENT AREA
3	PHASE A PREDEVELOPMENT CATCHMENT AREA
4	PROPOSED PHASE A SUBDIVISION CATCHMENT AREA



PROJECT LOCATION MAP

NTS



ALASKA

Attachment F - SMP21-04 – Phase 2

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	S. MOLLER
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

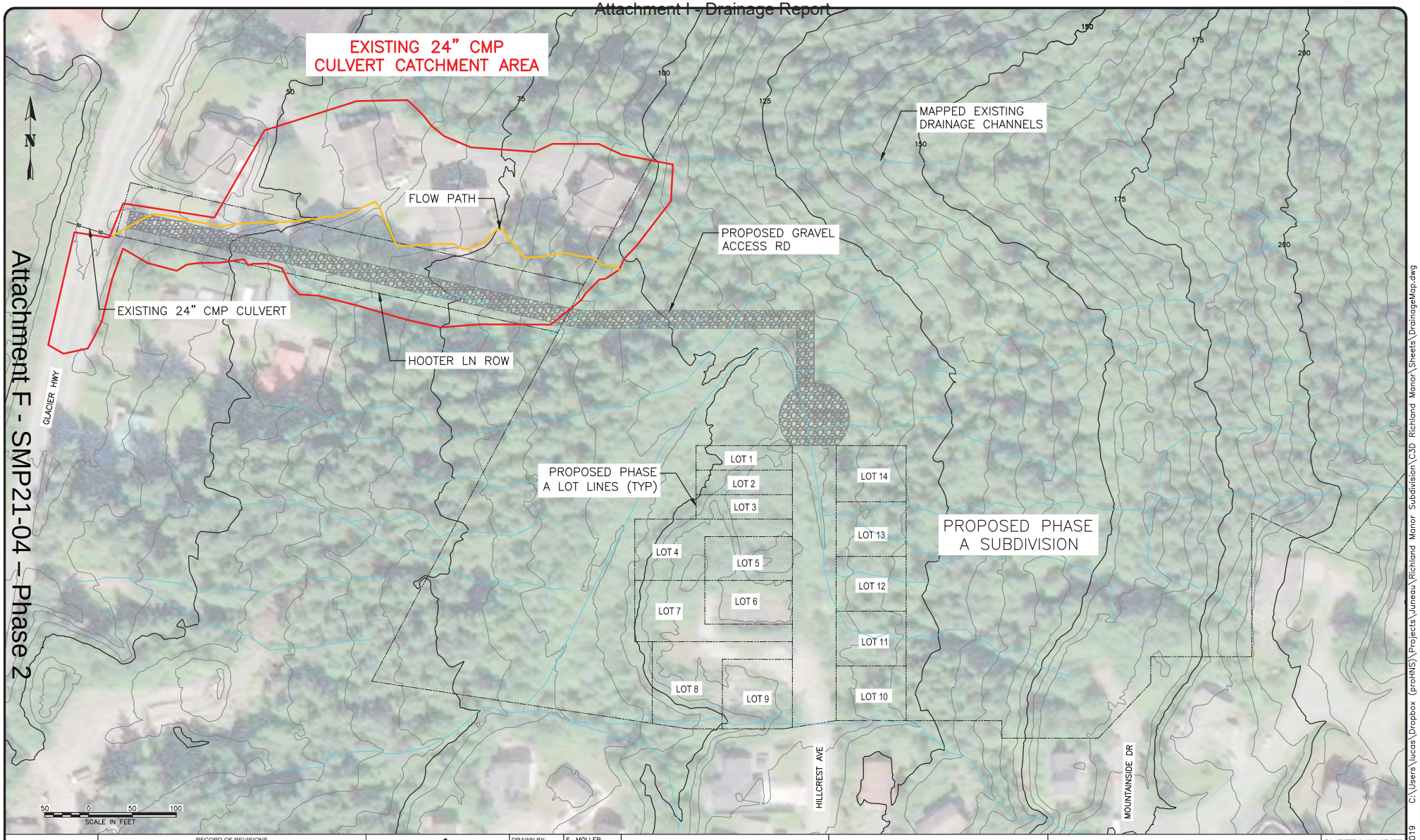
RICHLAND MANOR SUBDIVISION

WILLIAM & MICHAEL HUMEAN

COVER SHEET

SHEET NUMBER 1 OF 4

November 1, 2019 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\DrainageMap_TITLE.dwg



Attachment F - SMP21-04 – Phase 2

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	S. MOLLER
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

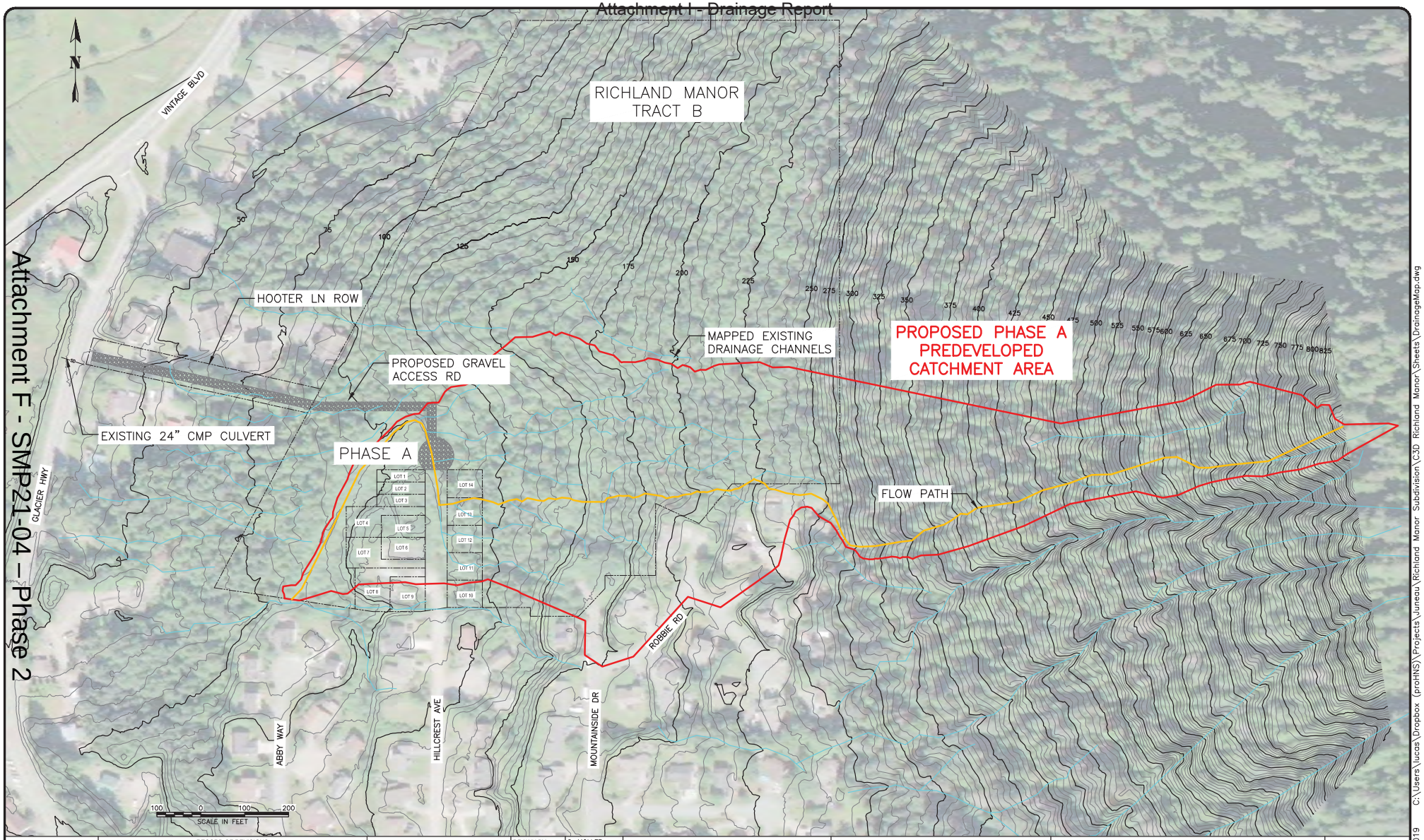
RICHLAND MANOR SUBDIVISION

WILLIAM & MICHAEL HUMEAN

EXISTING 24" CMP CATCHMENT AREA

SHEET NUMBER 2 OF 4

November 1, 2019 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\DrainageMap.dwg



Attachment F - SMP21-04 – Phase 2

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	S. MOLLER
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

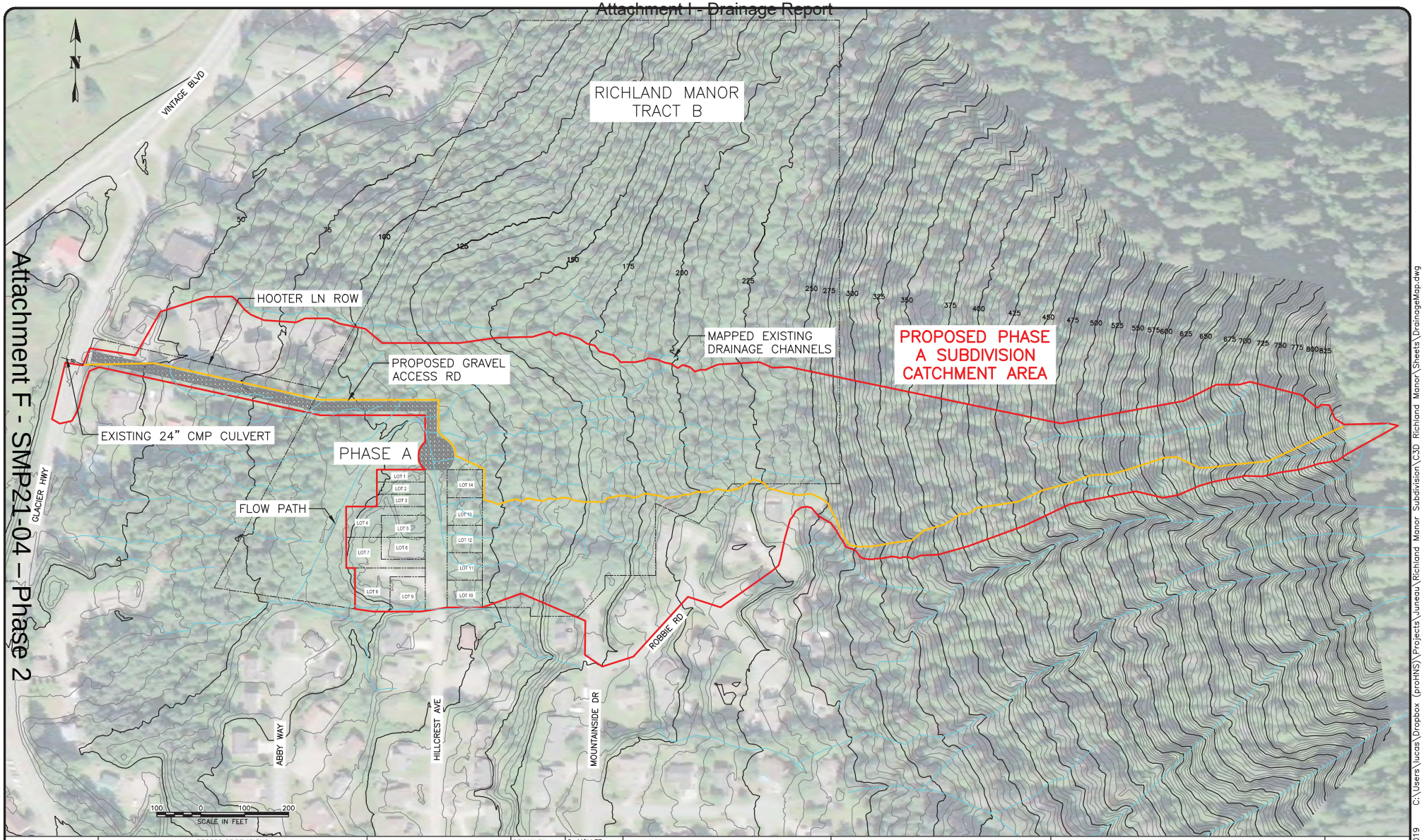
RICHLAND MANOR SUBDIVISION

WILLIAM & MICHAEL HUMEAN

PHASE A PREDEVELOPED CATCHMENT AREA

SHEET NUMBER
3
OF
4

November 1, 2019 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\DrainageMap.dwg



Attachment F - SMP21-04 – Phase 2

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	S. MOLLER
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

RICHLAND MANOR SUBDIVISION

WILLIAM & MICHAEL HUMEAN

PROPOSED PHASE A SUBDIVISION CATCHMENT AREA

SHEET NUMBER 4 OF 4

November 1, 2019 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\DrainageMap.dwg

Appendix B
Rational Method

Rational Method Site Runoff Existing 24" CMP		
Project:	Richland Manor Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	10/30/2019	
Prepared By:	S. Moller	
Checked By:	L. Chambers	

$$Q = CIA$$

Q = peak flow in cubic feet per second (cfs)
C = runoff coefficient
I = rainfall intensity (inches per hour)
A = catchment area (acres)

$$C_c = (C_1A_1 + C_2A_2)/A_t$$

C_c = composite runoff coefficient
$C_{1,2}$ = runoff coefficient for each area land cover type
A_t = total area (acres)
$A_{1,2}$ = areas of land cover types (acres)
***Cc = 0.45**, See Appendix D for calculation*

$$T_c = T_1 + T_2 + \cdots + T_n$$

T_c = time of concentration (min)
$T_{1,2}$ = travel time across separate flow path segments (min)
***Tc = 8.71 min.**, See Appendix E for calculation*

$$T_t = L/60V$$

T_t = travel time (min)
L= the distance of flow across a given segment (feet)
$V=k_R Sqrt(S_0)$=average velocity (feet/sec) across land cover
k_R = time of concentration velocity factor (CBJ Manual of Storm Water BMP 2010, Table D-5, PG. D-10)
S_0 = slope of flow path (feet/feet)

Per CBJ Manual of Storm Water BMP 2010, Table 5-1, page. 5-1, design event frequencies are specified. For storm sewer feeder lines, a 25-year storm event is the required design return period. We will base our analysis on a 25-year design return period for all drainage structures and catchment areas. Per CBJ Manual of Storm Water BMP 2010, page. D-9, Basins with a time and concentration 10 minutes or less shall use the 10 minunte intensity. Rainfall intensity for the site was sourced from the NOAA Atlas 14, Point Precipitation Frequency Estimates, see Appendix F, and is summarized as follows:

	Design Return Period
Tc 10(min)	25-year
Intensity (in/hr) =	**2.07**

There is an existing 24" CMP culvert that crosses Glacier Highway at the location where the new subdivision access will tie into the shoulder of the Highway. The area currently contributing runoff to this culvert was delinated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ, see Appendix A.

A = 107513 sqft / 43,560 **= 2.47 acres**

	Cc	**I**	**A**		
Q (cfs)=	0.45	2.07	2.47	**=**	**2.30**

Appendix C
SCS Hydrograph

Hydrograph Report

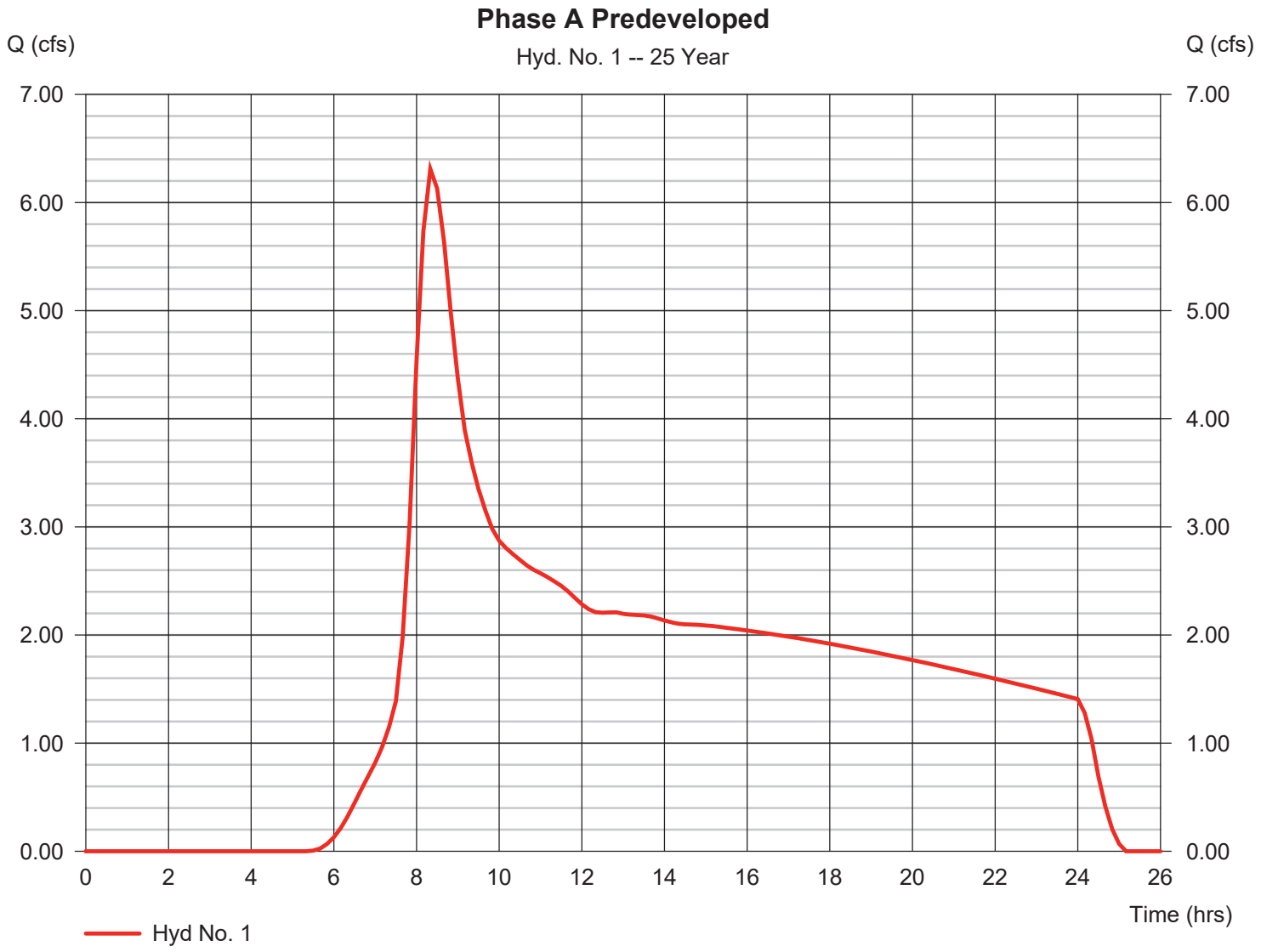
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v12 — Friday, 11 / 1 / 2019

Hyd. No. 1

Phase A Predeveloped

Hydrograph type	= SCS Runoff	Peak discharge	= 6.311 cfs
Storm frequency	= 25 yrs	Time to peak	= 8.33 hrs
Time interval	= 10 min	Hyd. volume	= 143,272 cuft
Drainage area	= 19.920 ac	Curve number	= 71*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 41.57 min
Total precip.	= 4.82 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.540 x 89) + (0.320 x 98) + (0.250 x 89) + (0.330 x 74) + (18.480 x 70)] / 19.920



Hydrograph Report

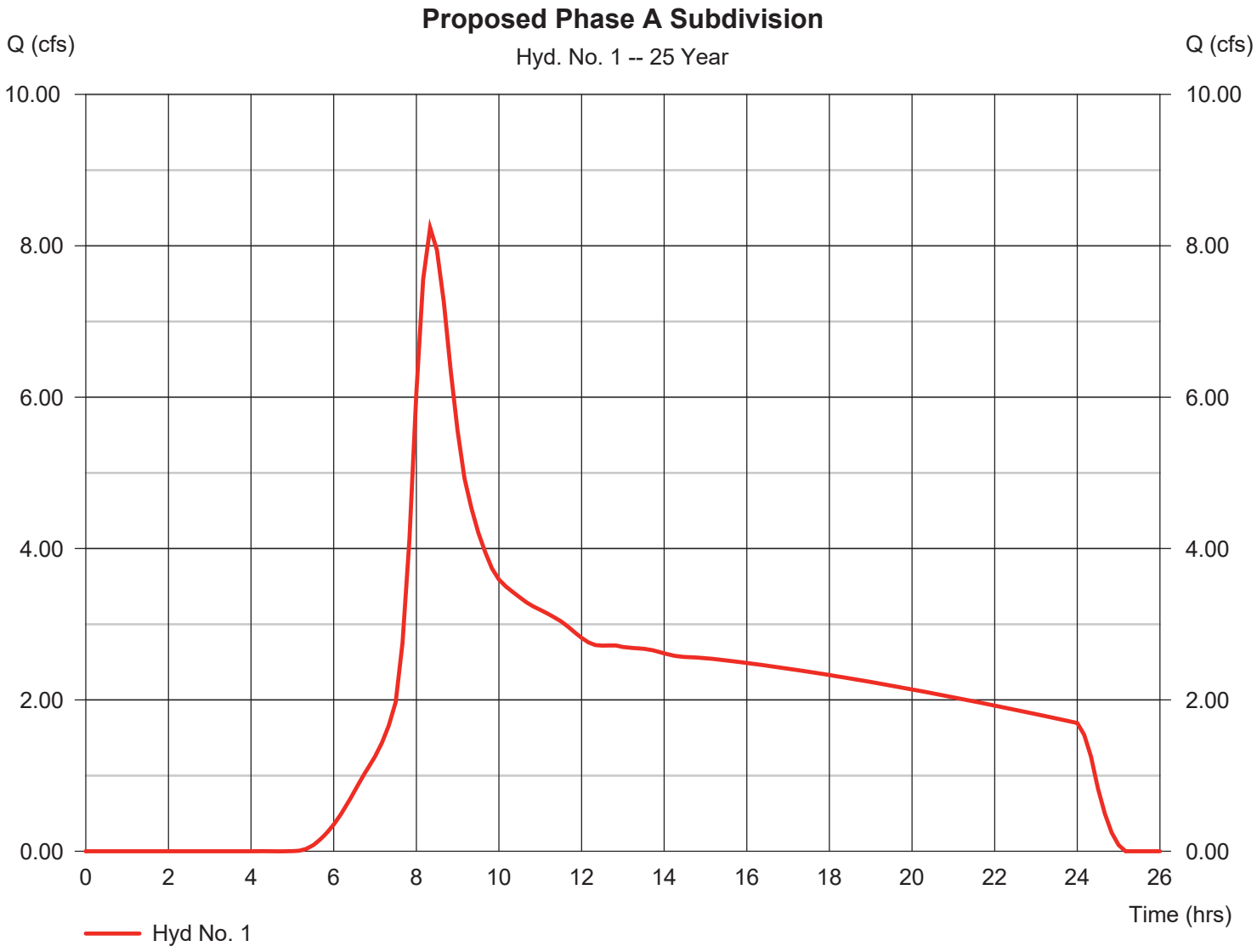
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v12 — Friday, 11 / 1 / 2019

Hyd. No. 1

Proposed Phase A Subdivision

Hydrograph type	= SCS Runoff	Peak discharge	= 8.239 cfs
Storm frequency	= 25 yrs	Time to peak	= 8.33 hrs
Time interval	= 10 min	Hyd. volume	= 179,151 cuft
Drainage area	= 23.060 ac	Curve number	= 73*
Basin Slope	= 26.0 %	Hydraulic length	= 3231 ft
Tc method	= User	Time of conc. (Tc)	= 39.30 min
Total precip.	= 4.82 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.610 x 89) + (1.080 x 98) + (0.720 x 89) + (1.480 x 74) + (18.170 x 70)] / 23.060



Appendix D
Runoff Coefficient

Runoff Coefficient Existing 24" CMP		
Project:	Richland Manor Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	10/25/2019	
Prepared By:	Chris Bydlon	
Checked By:	Lucas Chambers	

Total Basin Area(SQFT)=	**107513**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Runoff Coefficient**
Pavement	Tamarack Trails Condos	24950				
	Glacier Hwy	5587				
			30537	0.701033058	28.40%	0.9
Building Roofs	Tamarack Trail Condos	15130				
			15130	0.347337006	14.07%	0.9
Lawns	Tamarack Trails	6690				
			6690	0.153581267	6.22%	0.25
Woods	Every where else	55156				
			55156	1.26620753	51.30%	0.1
		Total=	107513	2.468158861	100.00%	**0.45**

SCS Curve Number Phase A Predeveloped		
Project:	Richland Manor Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	10/25/2019	
Prepared By:	Chris Bydlon	
Checked By:	Lucas Chambers	

Total Basin Area(SQFT)=	**867827**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Unit Hydrograph CN***
Pavement	Mountianside/ Robbie Rd	23565				
			23565	0.540977961	2.72%	89
Building Roofs	Robbie Rd Homes	14048				
			14048	0.322497704	1.62%	98
Gravel	Existing Hillcrest Pads	10824				
			10824	0.248484848	1.25%	89
Lawns	Robbie Rd Homes	14230				
			14230	0.326675849	1.64%	74
Woods	Every where else	805160				
			805160	18.48393021	92.78%	70
		Total=	867827	19.92256657	100.00%	**71.27**

*Unit Hydrograph curve numbers were developed from Table D-6 & D-7 of the CBJ Manual of Stormwater BMP Manual. NRCS's online GIS database does not have data for the project location. I looked at adjacent areas with similar slopes and ground cover and the hydraulic soil group was C or D. For this analysis I am assuming the project location falls under soil group C.

SCS Curve Number Proposed Phase A Subdivision		
Project:	Richland Manor Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	10/25/2019	
Prepared By:	Chris Bydlon	
Checked By:	Lucas Chambers	

Total Basin Area(SQFT)=	**1004005**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Unit Hydrograph CN***
Pavement	Tamarack Trails Condos	24950				
	Glacier Hwy	5587				
	Proposed Hillcrest Phase I	15920				
	Mountianside/ Robbie Rd	23565				
			70022	1.60748393	6.97%	89
Building Roofs	Tamarack Trail Condos	15130				
*Areas from Developer	Lot 1 Roof +Deck	988				
	Lot 2 Roof +Deck	988				
	Lot 3 Roof +Deck	988				
	Lot 4 Roof +Deck	1350				
	Lot 5 Roof +Deck	1350				
	Lot 6 Roof +Deck	1350				
	Lot 7 Roof +Deck	1350				
	Lot 8 Roof +Deck	1350				
	Lot 9 Roof +Deck	1350				
	Lot 10 Roof +Deck	1350				
	Lot 11 Roof+Deck	1350				
	Lot 12 Roof+Deck	1350				
	Lot 13 Roof+Deck	1350				
	Lot 14 Roof+Deck	1350				
	Robbie Rd Homes	14048				
			46992	1.078787879	4.68%	98
Gravel	Hooter Access Rd	21940				
*Areas from Developer	Lot 1 Drive	400				
	Lot 2 Drive	400				
	Lot 3 Drive	400				
	Lot 4 Drive	1600				
	Lot 5 Drive	500				
	Lot 6 Drive	400				
	Lot 7 Drive	1600				
	Lot 8 Drive	1600				
	Lot 9 Drive	400				
	Lot 10 Drive	400				
	Lot 11 Drive	400				
	Lot 12 Drive	400				
	Lot 13 Drive	400				
	Lot 14 Drive	400				
			31240	0.717171717	3.11%	89
Lawns	Tamarack Trails	6690				
	Robbie Rd Homes	14230				
*Areas from Developer	Lot 1	1692				
	Lot 2	1692				
	Lot 3	1692				
	Lot 4	4650				
	Lot 5	3150				
	Lot 6	3250				
	Lot 7	4650				
	Lot 8	1738				
	Lot 9	4605				
	Lot 10 Lawn	3250				
	Lot 11 Lawn	3250				
	Lot 12 Lawn	3250				
	Lot 13 Lawn	3250				
	Lot 14 Lawn	3250				
			64289	1.47587236	6.40%	74
Woods	Every where else	791462				
			791462	18.1694674	78.83%	70
		Total=	1004005	23.04878329	100.00%	**73.48**

*Unit Hydrograph curve numbers were developed from Table D-6 & D-7 of the CBJ Manual of Stormwater BMP Manual. NRCS's online GIS database does not have data for the project location. I looked at adjacent areas with similar slopes and ground cover and the hydraulic soil group was C or D. For this analysis I am assuming the project location falls under soil group C.

Appendix E
Time of Concentration

Existing 24" CMP


```
SCS TR-55 Time of Concentration Computations Report
===================================================

Sheet Flow Equation
-------------------

        Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

        Where:

        Tc = Time of Concentration (hrs)
        n  = Manning's Roughness
        Lf = Flow Length (ft)
        P  = 2 yr, 24 hr Rainfall (inches)
        Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation
----------------------------------

        V  = 16.1345 * (Sf^0.5) (unpaved surface)
        V  = 20.3282 * (Sf^0.5) (paved surface)
        V  = 15.0 * (Sf^0.5) (grassed waterway surface)
        V  = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
        V  = 9.0 * (Sf^0.5) (cultivated straight rows surface)
        V  = 7.0 * (Sf^0.5) (short grass pasture surface)
        V  = 5.0 * (Sf^0.5) (woodland surface)
        V  = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
        Lf = Flow Length (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)

Channel Flow Equation
---------------------

        V  = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
        R  = Aq / Wp
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
```

Existing 24" CMP


```
        Lf = Flow Length (ft)
        R  = Hydraulic Radius (ft)
        Aq = Flow Area (ft²)
        Wp = Wetted Perimeter (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)
        n  = Manning's Roughness

==============
Subbasin existing24cmp
==============

Shallow Concentrated Flow Computations
--------------------------------------
        -                               Subarea A       Subarea B       Subarea C
        Flow Length (ft):               341.5           0.00            0.00
        Slope (%):                      12.3            0.00            0.00
        Surface Type:                   Forest          Unpaved         Unpaved
        Velocity (ft/sec):              0.88            0.00            0.00
        Computed Flow Time (minutes):   6.47            0.00            0.00

Channel Flow Computations
-------------------------
        -                               Subarea A       Subarea B       Subarea C
        Manning's Roughness:            .1              0.00            0.00
        Flow Length (ft):               312             0.00            0.00
        Channel Slope (%):              8.33            0.00            0.00
        Cross Section Area (ft²):       1.5             0.00            0.00
        Wetted Perimeter (ft):          3.8             0.00            0.00
        Velocity (ft/sec):              2.31            0.00            0.00
        Computed Flow Time (minutes):   2.25            0.00            0.00

        ================================================================
        Total TOC (minutes):            8.71
        ================================================================
```

```
SCS TR-55 Time of Concentration Computations Report
===================================================

Sheet Flow Equation
-------------------

        Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

        Where:

        Tc = Time of Concentration (hrs)
        n  = Manning's Roughness
        Lf = Flow Length (ft)
        P  = 2 yr, 24 hr Rainfall (inches)
        Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation
----------------------------------

        V  = 16.1345 * (Sf^0.5) (unpaved surface)
        V  = 20.3282 * (Sf^0.5) (paved surface)
        V  = 15.0 * (Sf^0.5) (grassed waterway surface)
        V  = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
        V  = 9.0 * (Sf^0.5) (cultivated straight rows surface)
        V  = 7.0 * (Sf^0.5) (short grass pasture surface)
        V  = 5.0 * (Sf^0.5) (woodland surface)
        V  = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
        Lf = Flow Length (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)

Channel Flow Equation
---------------------

        V  = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
        R  = Aq / Wp
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
```

Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

==========
Subbasin PhaseAPreDevelop
==========

Sheet Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.8	0.00	0.00
Flow Length (ft):	188	0.00	0.00
Slope (%):	79.80	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.97	0.00	0.00
Velocity (ft/sec):	0.21	0.00	0.00
Computed Flow Time (minutes):	14.72	0.00	0.00

Shallow Concentrated Flow Computations

-	Subarea A	Subarea B	Subarea C
Flow Length (ft):	2046	0.00	0.00
Slope (%):	29.86	0.00	0.00
Surface Type:	Forest	Unpaved	Unpaved
Velocity (ft/sec):	1.37	0.00	0.00
Computed Flow Time (minutes):	24.89	0.00	0.00

Channel Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.05	0.00	0.00
Flow Length (ft):	715	0.00	0.00
Channel Slope (%):	3.48	0.00	0.00
Cross Section Area (ft²):	13	0.00	0.00
Wetted Perimeter (ft):	11.4	0.00	0.00
Velocity (ft/sec):	6.07	0.00	0.00
Computed Flow Time (minutes):	1.96	0.00	0.00

Total TOC (minutes):	41.57

```
SCS TR-55 Time of Concentration Computations Report
==================================================

Sheet Flow Equation
-------------------

        Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

        Where:

        Tc = Time of Concentration (hrs)
        n  = Manning's Roughness
        Lf = Flow Length (ft)
        P  = 2 yr, 24 hr Rainfall (inches)
        Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation
----------------------------------

        V  = 16.1345 * (Sf^0.5) (unpaved surface)
        V  = 20.3282 * (Sf^0.5) (paved surface)
        V  = 15.0 * (Sf^0.5) (grassed waterway surface)
        V  = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
        V  = 9.0 * (Sf^0.5) (cultivated straight rows surface)
        V  = 7.0 * (Sf^0.5) (short grass pasture surface)
        V  = 5.0 * (Sf^0.5) (woodland surface)
        V  = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
        Lf = Flow Length (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)

Channel Flow Equation
---------------------

        V  = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
        R  = Aq / Wp
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
```

Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

==========
Subbasin HooterLane
==========

Sheet Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.8	0.00	0.00
Flow Length (ft):	187.94741751	0.00	0.00
Slope (%):	79.8	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.97	0.00	0.00
Velocity (ft/sec):	0.21	0.00	0.00
Computed Flow Time (minutes):	14.72	0.00	0.00

Shallow Concentrated Flow Computations

-	Subarea A	Subarea B	Subarea C
Flow Length (ft):	1943.03879748	0.00	0.00
Slope (%):	30.8	0.00	0.00
Surface Type:	Forest	Paved	Paved
Velocity (ft/sec):	1.39	0.00	0.00
Computed Flow Time (minutes):	23.34	0.00	0.00

Channel Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.040	0.00	0.00
Flow Length (ft):	1100.21245053	0.00	0.00
Channel Slope (%):	8.18	0.00	0.00
Cross Section Area (ft²):	24	0.00	0.00
Wetted Perimeter (ft):	15.42	0.00	0.00
Velocity (ft/sec):	14.31	0.00	0.00
Computed Flow Time (minutes):	1.28	0.00	0.00

Total TOC (minutes):	39.34

Appendix F
Rainfall Intensity

NOAA Atlas 14, Volume 7, Version 2
Location name: Juneau, Alaska, USA*
Latitude: 58.3454°, Longitude: -134.4896°
Elevation: 120.33 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Douglas Kane, Sarah Dietz, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Svetlana Stuefer, Amy Tidwell, Carl Trypaluk, Dale Unruh, Michael Yekta, Erica Betts, Geoffrey Bonnin, Sarah Heim, Lillian Hiner, Elizabeth Lilly, Jayashree Narayanan, Fenglin Yan, Tan Zhao

NOAA, National Weather Service, Silver Spring, Maryland
and
University of Alaska Fairbanks, Water and Environmental Research Center

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.131 (0.106-0.166)	0.153 (0.122-0.197)	0.187 (0.146-0.246)	0.215 (0.165-0.287)	0.253 (0.189-0.346)	0.282 (0.207-0.393)	0.312 (0.225-0.442)	0.350 (0.248-0.505)	0.400 (0.277-0.590)	0.438 (0.299-0.657)
10-min	0.176 (0.142-0.223)	0.206 (0.164-0.265)	0.251 (0.195-0.330)	0.288 (0.220-0.385)	0.339 (0.253-0.464)	0.379 (0.278-0.528)	0.418 (0.302-0.592)	0.470 (0.333-0.678)	0.537 (0.372-0.792)	0.588 (0.401-0.882)
15-min	0.206 (0.166-0.261)	0.241 (0.192-0.310)	0.293 (0.228-0.385)	0.337 (0.258-0.450)	0.397 (0.297-0.543)	0.443 (0.325-0.617)	0.490 (0.353-0.694)	0.549 (0.389-0.791)	0.629 (0.436-0.927)	0.689 (0.470-1.03)
30-min	0.273 (0.220-0.346)	0.320 (0.255-0.411)	0.389 (0.303-0.511)	0.447 (0.342-0.597)	0.527 (0.394-0.721)	0.588 (0.432-0.819)	0.650 (0.469-0.921)	0.729 (0.517-1.05)	0.834 (0.578-1.23)	0.914 (0.623-1.37)
60-min	0.374 (0.302-0.474)	0.438 (0.349-0.563)	0.533 (0.415-0.700)	0.613 (0.469-0.819)	0.722 (0.539-0.988)	0.806 (0.592-1.12)	0.890 (0.642-1.26)	0.999 (0.708-1.44)	1.14 (0.792-1.69)	1.25 (0.853-1.88)
2-hr	0.552 (0.445-0.700)	0.647 (0.515-0.832)	0.789 (0.614-1.04)	0.906 (0.693-1.21)	1.07 (0.798-1.46)	1.19 (0.875-1.66)	1.32 (0.949-1.86)	1.48 (1.05-2.13)	1.69 (1.17-2.49)	1.85 (1.26-2.77)
3-hr	0.729 (0.588-0.925)	0.854 (0.680-1.10)	1.04 (0.811-1.37)	1.20 (0.915-1.60)	1.41 (1.05-1.93)	1.57 (1.15-2.19)	1.73 (1.25-2.46)	1.95 (1.38-2.81)	2.23 (1.54-3.29)	2.44 (1.66-3.66)
6-hr	1.17 (0.944-1.48)	1.37 (1.09-1.76)	1.67 (1.30-2.19)	1.92 (1.47-2.56)	2.26 (1.69-3.09)	2.52 (1.85-3.51)	2.78 (2.01-3.94)	3.13 (2.22-4.51)	3.58 (2.48-5.27)	3.92 (2.67-5.88)
12-hr	1.76 (1.42-2.23)	2.06 (1.64-2.65)	2.50 (1.95-3.29)	2.87 (2.19-3.83)	3.38 (2.53-4.62)	3.79 (2.78-5.27)	4.21 (3.04-5.96)	4.73 (3.35-6.82)	5.42 (3.76-7.99)	5.94 (4.05-8.91)
24-hr	2.54 (2.30-2.84)	2.97 (2.65-3.37)	3.59 (3.14-4.16)	4.10 (3.52-4.83)	4.82 (4.05-5.81)	5.41 (4.46-6.64)	6.04 (4.90-7.54)	6.78 (5.41-8.61)	7.76 (6.05-10.1)	8.51 (6.52-11.2)
2-day	3.45 (3.12-3.87)	4.01 (3.58-4.55)	4.79 (4.19-5.55)	5.42 (4.65-6.38)	6.29 (5.28-7.59)	7.00 (5.77-8.59)	7.74 (6.28-9.66)	8.59 (6.85-10.9)	9.72 (7.57-12.6)	10.6 (8.10-13.9)
3-day	4.10 (3.70-4.58)	4.73 (4.22-5.36)	5.61 (4.90-6.49)	6.30 (5.41-7.42)	7.26 (6.09-8.75)	8.03 (6.62-9.85)	8.82 (7.15-11.0)	9.72 (7.75-12.3)	10.9 (8.51-14.2)	11.8 (9.06-15.6)
4-day	4.63 (4.18-5.18)	5.32 (4.75-6.04)	6.28 (5.49-7.27)	7.03 (6.04-8.28)	8.07 (6.77-9.72)	8.88 (7.33-10.9)	9.73 (7.89-12.1)	10.7 (8.51-13.6)	11.9 (9.30-15.5)	12.9 (9.87-17.0)
7-day	5.98 (5.40-6.69)	6.84 (6.10-7.75)	8.02 (7.00-9.28)	8.94 (7.68-10.5)	10.2 (8.57-12.3)	11.2 (9.25-13.8)	12.3 (9.93-15.3)	13.4 (10.7-17.0)	15.0 (11.7-19.4)	16.1 (12.4-21.3)
10-day	7.07 (6.39-7.92)	8.07 (7.20-9.15)	9.44 (8.24-10.9)	10.5 (9.02-12.4)	12.0 (10.0-14.4)	13.1 (10.8-16.1)	14.3 (11.6-17.8)	15.6 (12.5-19.8)	17.4 (13.6-22.6)	18.7 (14.4-24.7)
20-day	10.6 (9.59-11.9)	12.1 (10.8-13.7)	14.1 (12.3-16.3)	15.6 (13.4-18.3)	17.6 (14.8-21.2)	19.2 (15.8-23.5)	20.7 (16.8-25.9)	22.4 (17.9-28.5)	24.7 (19.3-32.1)	26.4 (20.2-34.8)
30-day	14.0 (12.6-15.6)	15.9 (14.2-18.1)	18.5 (16.2-21.4)	20.4 (17.5-24.0)	22.9 (19.3-27.7)	24.9 (20.5-30.5)	26.8 (21.7-33.4)	28.8 (23.0-36.6)	31.5 (24.6-40.9)	33.5 (25.7-44.2)
45-day	18.5 (16.7-20.7)	21.1 (18.8-23.9)	24.5 (21.4-28.4)	27.0 (23.2-31.8)	30.1 (25.3-36.3)	32.5 (26.8-39.8)	34.8 (28.2-43.4)	37.1 (29.5-47.1)	40.1 (31.3-52.0)	42.4 (32.5-55.9)
60-day	22.1 (19.9-24.7)	25.4 (22.6-28.8)	29.5 (25.7-34.1)	32.3 (27.8-38.1)	35.9 (30.1-43.3)	38.4 (31.7-47.1)	40.8 (33.1-50.9)	43.0 (34.2-54.5)	45.8 (35.7-59.5)	48.0 (36.8-63.4)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

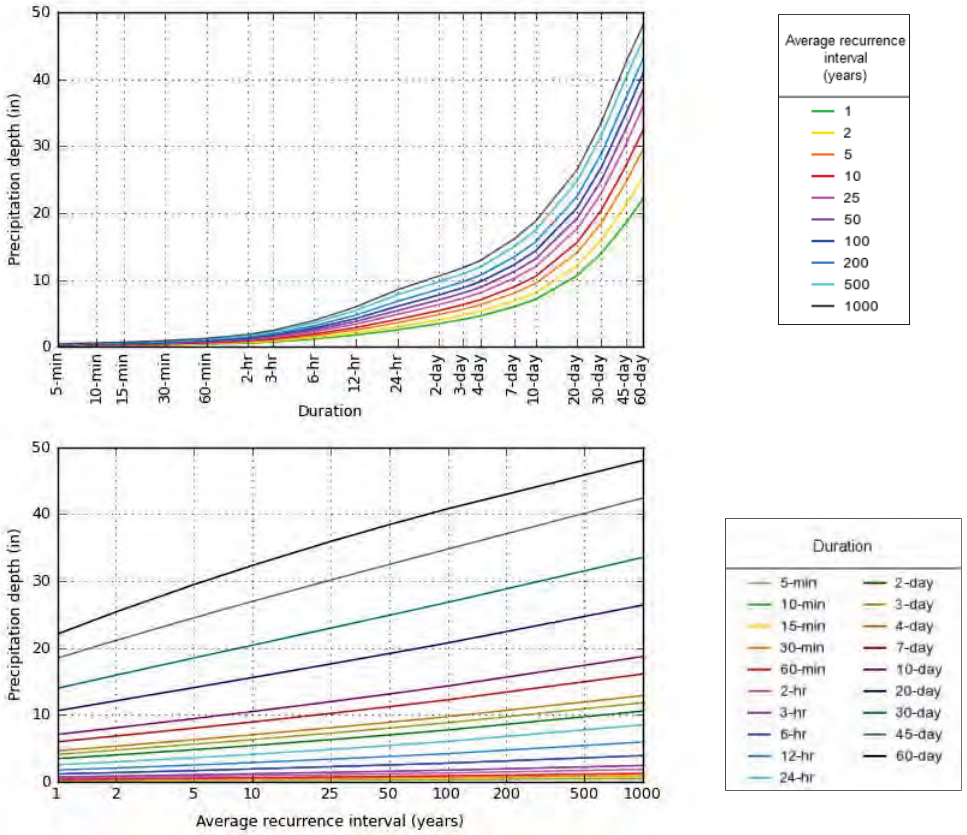
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

PDS-based depth-duration-frequency (DDF) curves
Latitude: 58.3454°, Longitude: -134.4896°



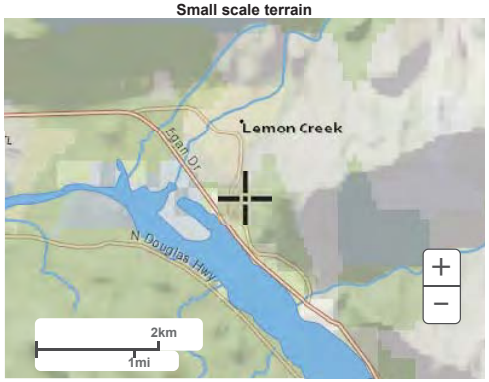
NOAA Atlas 14, Volume 7, Version 2

Created (GMT): Fri Oct 18 00:03:14 2019

Back to Top

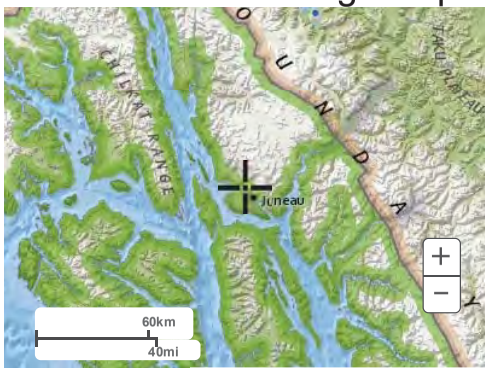
Maps & aerials

Small scale terrain

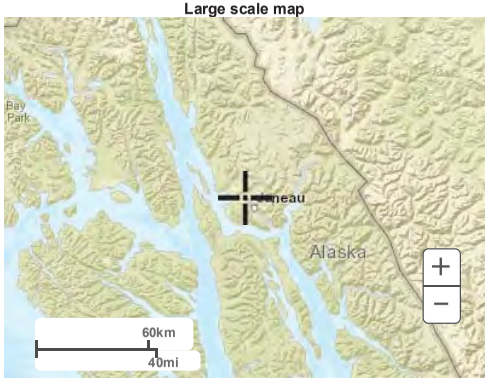


Large scale terrain

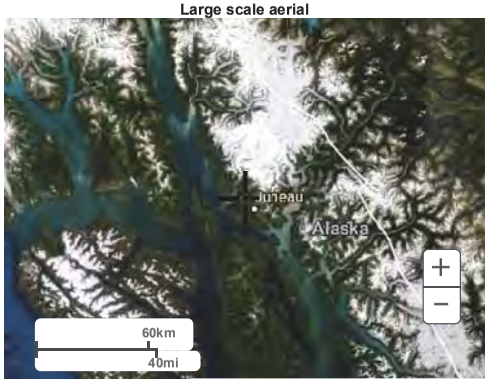
Attachment F - Drainage Report



Large scale map



Large scale aerial



Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Attachment F - SMP21-04 – Phase 2

NOAA Atlas 14, Volume 7, Version 2
Location name: Juneau, Alaska, USA*
Latitude: 58.346°, Longitude: -134.4904°
Elevation: 101.4 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Douglas Kane, Sarah Dietz, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Svetlana Stuefer, Amy Tidwell, Carl Trypaluk, Dale Unruh, Michael Yekta, Erica Betts, Geoffrey Bonnin, Sarah Heim, Lillian Hiner, Elizabeth Lilly, Jayashree Narayanan, Fenglin Yan, Tan Zhao

NOAA, National Weather Service, Silver Spring, Maryland
and
University of Alaska Fairbanks, Water and Environmental Research Center

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.58 (1.27-2.02)	1.86 (1.48-2.40)	2.27 (1.75-3.00)	2.62 (1.99-3.52)	3.08 (2.29-4.25)	3.44 (2.51-4.82)	3.80 (2.72-5.42)	4.30 (3.02-6.23)	4.94 (3.41-7.33)	5.42 (3.67-8.17)
10-min	1.06 (0.852-1.36)	1.25 (0.984-1.61)	1.52 (1.18-2.02)	1.75 (1.33-2.35)	2.07 (1.54-2.85)	2.31 (1.69-3.23)	2.56 (1.83-3.64)	2.89 (2.03-4.18)	3.32 (2.29-4.92)	3.64 (2.47-5.49)
15-min	0.828 (0.664-1.06)	0.972 (0.768-1.26)	1.19 (0.920-1.57)	1.37 (1.04-1.84)	1.62 (1.20-2.22)	1.80 (1.32-2.53)	2.00 (1.43-2.84)	2.25 (1.59-3.26)	2.59 (1.78-3.84)	2.84 (1.93-4.29)
30-min	0.550 (0.440-0.702)	0.646 (0.510-0.836)	0.788 (0.610-1.04)	0.908 (0.690-1.22)	1.07 (0.796-1.47)	1.20 (0.874-1.68)	1.32 (0.950-1.89)	1.49 (1.05-2.17)	1.72 (1.18-2.54)	1.89 (1.28-2.84)
60-min	0.377 (0.302-0.481)	0.442 (0.349-0.571)	0.540 (0.418-0.713)	0.622 (0.473-0.836)	0.734 (0.545-1.01)	0.820 (0.598-1.15)	0.907 (0.650-1.29)	1.02 (0.721-1.48)	1.18 (0.810-1.74)	1.29 (0.875-1.95)
2-hr	0.278 (0.223-0.356)	0.326 (0.258-0.422)	0.399 (0.308-0.527)	0.460 (0.350-0.618)	0.543 (0.403-0.747)	0.606 (0.442-0.850)	0.670 (0.480-0.954)	0.756 (0.532-1.10)	0.869 (0.598-1.29)	0.954 (0.646-1.44)
3-hr	0.245 (0.196-0.312)	0.286 (0.226-0.370)	0.351 (0.271-0.463)	0.404 (0.307-0.543)	0.477 (0.354-0.657)	0.533 (0.389-0.746)	0.588 (0.422-0.838)	0.664 (0.468-0.962)	0.763 (0.525-1.13)	0.838 (0.568-1.26)
6-hr	0.197 (0.158-0.251)	0.231 (0.182-0.298)	0.282 (0.218-0.372)	0.324 (0.247-0.436)	0.383 (0.284-0.527)	0.428 (0.312-0.600)	0.473 (0.339-0.675)	0.534 (0.376-0.774)	0.614 (0.423-0.910)	0.675 (0.457-1.02)
12-hr	0.147 (0.118-0.188)	0.172 (0.136-0.223)	0.210 (0.162-0.277)	0.241 (0.183-0.323)	0.284 (0.211-0.391)	0.319 (0.233-0.447)	0.356 (0.255-0.507)	0.402 (0.283-0.582)	0.462 (0.318-0.686)	0.508 (0.344-0.767)
24-hr	0.107 (0.096-0.119)	0.125 (0.111-0.142)	0.151 (0.132-0.175)	0.172 (0.148-0.203)	0.203 (0.171-0.245)	0.229 (0.189-0.281)	0.256 (0.208-0.320)	0.289 (0.230-0.367)	0.332 (0.259-0.431)	0.365 (0.280-0.482)
2-day	0.073 (0.066-0.081)	0.084 (0.075-0.096)	0.101 (0.088-0.117)	0.114 (0.098-0.134)	0.133 (0.111-0.160)	0.148 (0.122-0.182)	0.164 (0.133-0.205)	0.183 (0.146-0.233)	0.209 (0.162-0.271)	0.227 (0.174-0.300)
3-day	0.057 (0.052-0.064)	0.066 (0.059-0.075)	0.079 (0.069-0.091)	0.088 (0.076-0.104)	0.102 (0.086-0.123)	0.113 (0.094-0.139)	0.125 (0.101-0.156)	0.139 (0.110-0.176)	0.156 (0.122-0.203)	0.170 (0.130-0.224)
4-day	0.049 (0.044-0.054)	0.056 (0.050-0.063)	0.066 (0.058-0.076)	0.074 (0.063-0.087)	0.085 (0.071-0.103)	0.094 (0.078-0.115)	0.103 (0.084-0.129)	0.114 (0.091-0.145)	0.128 (0.100-0.166)	0.139 (0.106-0.183)
7-day	0.035 (0.032-0.040)	0.040 (0.036-0.046)	0.047 (0.041-0.055)	0.053 (0.046-0.062)	0.061 (0.051-0.073)	0.067 (0.055-0.082)	0.074 (0.060-0.092)	0.081 (0.064-0.103)	0.091 (0.071-0.118)	0.098 (0.075-0.130)
10-day	0.029 (0.026-0.033)	0.033 (0.030-0.038)	0.039 (0.034-0.045)	0.043 (0.037-0.051)	0.049 (0.041-0.060)	0.054 (0.045-0.067)	0.060 (0.048-0.074)	0.066 (0.052-0.083)	0.073 (0.057-0.095)	0.079 (0.061-0.105)
20-day	0.022 (0.020-0.024)	0.025 (0.022-0.028)	0.029 (0.025-0.033)	0.032 (0.027-0.038)	0.036 (0.030-0.044)	0.040 (0.033-0.048)	0.043 (0.035-0.054)	0.047 (0.037-0.059)	0.052 (0.040-0.067)	0.056 (0.043-0.073)
30-day	0.019 (0.017-0.021)	0.022 (0.019-0.025)	0.025 (0.022-0.029)	0.028 (0.024-0.033)	0.031 (0.026-0.038)	0.034 (0.028-0.042)	0.037 (0.030-0.046)	0.040 (0.032-0.051)	0.044 (0.034-0.057)	0.047 (0.036-0.062)
45-day	0.017 (0.015-0.019)	0.019 (0.017-0.022)	0.022 (0.019-0.026)	0.025 (0.021-0.029)	0.028 (0.023-0.033)	0.030 (0.025-0.037)	0.032 (0.026-0.040)	0.034 (0.027-0.043)	0.037 (0.029-0.048)	0.039 (0.030-0.052)
60-day	0.015 (0.014-0.017)	0.017 (0.016-0.020)	0.020 (0.018-0.024)	0.022 (0.019-0.026)	0.025 (0.021-0.030)	0.027 (0.022-0.033)	0.028 (0.023-0.035)	0.030 (0.024-0.038)	0.032 (0.025-0.042)	0.034 (0.026-0.044)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

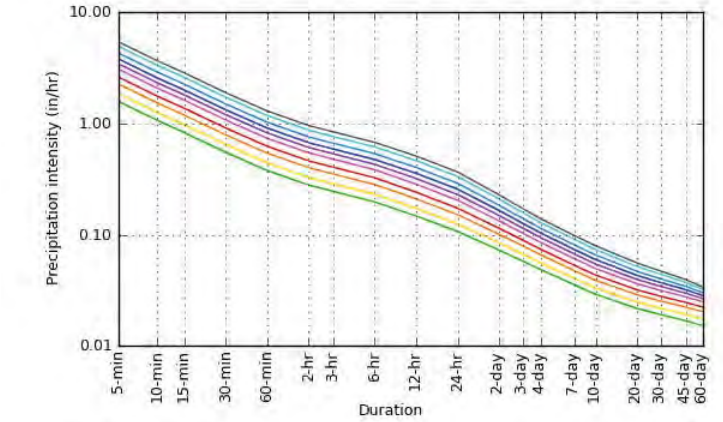
Back to Top

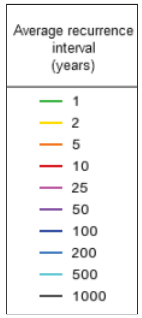
PF graphical

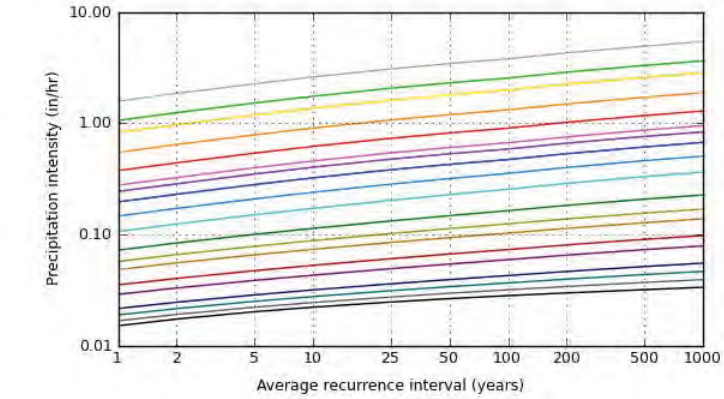
Attachment 1 - Drainage Report

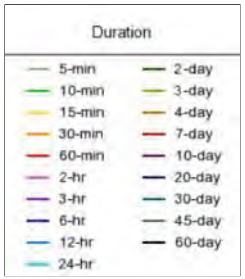
Attachment F - SMP21-04 – Phase 2

PDS-based intensity-duration-frequency (IDF) curves
Latitude: 58.3460°, Longitude: -134.4904°









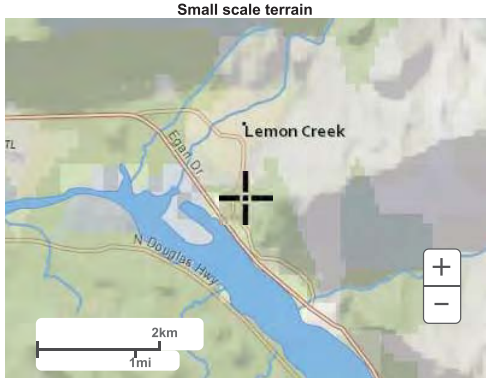
NOAA Atlas 14, Volume 7, Version 2

Created (GMT): Fri Nov 1 21:25:38 2019

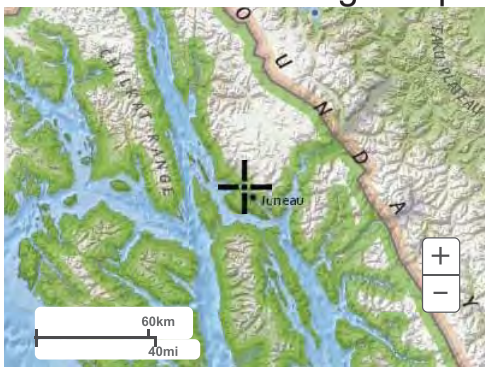
Back to Top

Maps & aerials

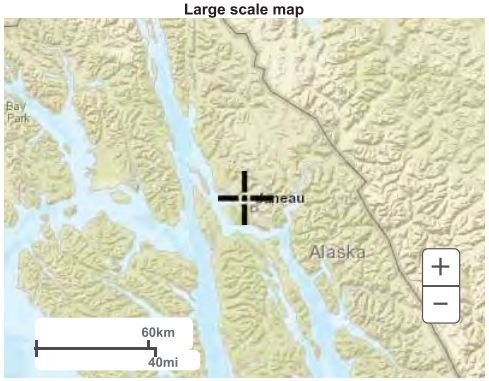
Small scale terrain



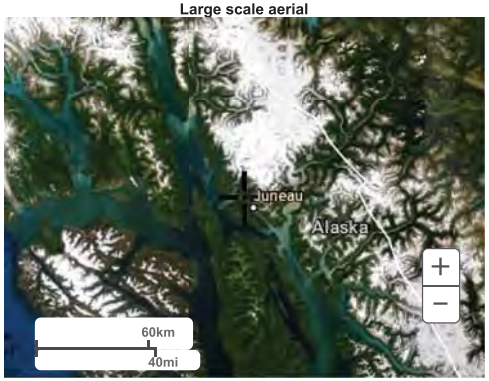
Large scale terrain



Large scale map



Large scale aerial



Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Appendix G
Existing 24” CMP Culvert Capacity

Existing 24" CMP Discharge Capacity		
Project:	Richland Manor Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	10/30/2019	
Prepared By:	S. Moller	
Checked By:	L. Chambers	

The following equations were used to calculate the capacity of an existing AK DOT & PF owned drainage system on Glacier Highway at the bottom of Hooter Lane and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table 5-3, Page 5-5, of the CBJ Stormwater Manual
A = cross sectional area in ft^2
R = hydraulic radius
S = slope

Existing 24" CMP Cross Culvert; Inlet Invert = 24.33', Outlet Invert = 24', Length = 46', n = 0.028. The Manning's n value of 0.028 was determined by the pipe type (Annular Corrugated Metal Pipe: plain or fully coated), all other values obtained from the attached DOT & PF Salmon Creek to Vanderbilt Hill Storm Drain System Summary (Project No. 70469; Sheets 10, 27, and 83), see Appendix H Existing 24" CMP As-built Drawings.

$$A = \pi \times \frac{d^2}{4} \qquad A_{culvert} = 3.14 \times \frac{2^2}{4} = 3.14\ ft^2$$

d = diameter in ft

$$R = \frac{d}{4} \qquad R = \frac{2}{4} = 0.5\ ft$$

$$S = \frac{\Delta z}{L} \qquad S = \frac{24.33 - 24}{46} = 0.717\%$$

S = slope
Δz = change in elevation
L = length of pipe in ft

$$Q_{culvert} = \frac{1.486}{0.028} \times 3.14 \times 0.5^{0.67} \times 0.00717^{0.5} = 8.87\ ft^3/sec$$

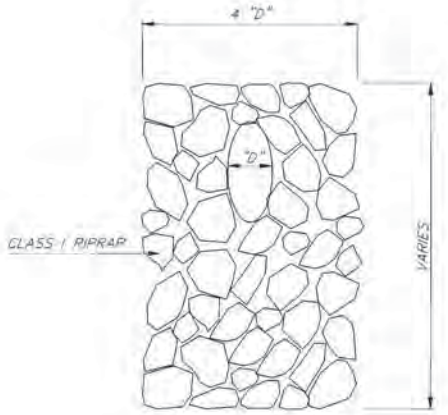
Appendix H
Existing 24” CMP Culvert
As-builts

STORM DRAIN SYSTEM SUMMARY

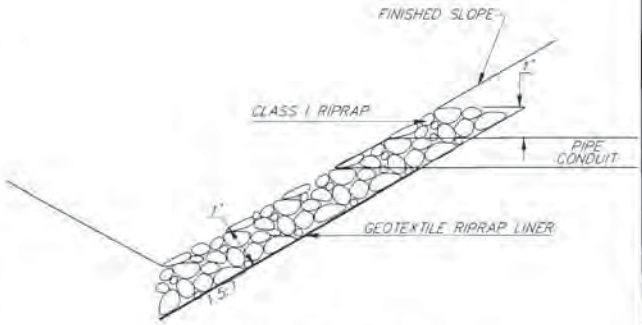
STRUCTURE NO.	INLET TYPE	LOCATION STATION	LOCATION OFFSET	TOP OF GRATE ELEVATION	INVERT ELEVATION	HGL Elev.	REMARKS	Elev.	PIPE NO.	DESIGN LENGTH	PIPE SIZE	FROM STRUCTURE NO.	FROM INVERT ELEVATION	TO STRUCTURE NO.	TO INVERT ELEVATION	REMARKS
S-1	A	140+37	RT	~~32.77~~	23.52	~~25.22~~		~~25.22~~	P-1	~~8~~ 19'	18"	S-1	~~25.02~~ 11	OUTFALL		SPILLWAY
S-2	A	142+18	LT	26.11	21.36			19.22	P-2	~~54~~ 66'	24"	S-2	22.86	OUTFALL		SPILLWAY
S-3	A	142+35	LT	27.23	22.48			20.76	P-3	56'	24"	S-3	23.98	OUTFALL		
S-4	A	146+58	LT	28.66	24.41				P-4	10'	18"	S-4	25.91	OUTFALL		
S-5	A	148+38	LT	30.48	26.23			25.23	P-5	~~24~~ 13'	18"	S-5	26~~22~~.73	OUTFALL	25.9	
S-6	A	148+39	RT	30.67	25.92			25.97	~~P-6~~	~~32'~~	~~24"~~	S-6	27.42	S-7	27.32	
S-7	A	148+72	RT	30.~~75~~61	25.~~72~~45				P-7	10'	24"	S-7	27.22	S-8	26.25	
S-8	FIELD	"W" 10+28	LT	29.00	25.60				P-8	~~62~~ 60'	24"	S-8	26.20	OUTFALL		DELETED
S-9	FIELD	"W"11+65	LT	49.00	44.30				P-9	~~138~~'	18"	S-9	45.80	S-7	27.42	
									P-10	~~28~~ 29'	24"	DITCH		S-9	46.00	
S-10	A	152+00	LT	30.43	26.18			25.18	P-11	~~12~~ 6'	18"	S-10	26~~27~~.68	OUTFALL		SPILLWAY
S-11	A	153+16	LT	29.96	25.71			27.71	P-12	~~12~~ 8'	18"	S-11	26~~27~~.21	OUTFALL		SPILLWAY
S-12	A	154+93	RT	29.85	25.40				P-13	~~30~~ 35'	24"	S-12	26~~28~~40	S-13	26~~40~~	
S-13	A	154+93	LT	29.85	24.70			24.66	P-14	~~12~~ 4'	24"	S-13	26~~27~~90	OUTFALL	24.30	SPILLWAY
S-14	A	156+42	RT	20.50	26.25			25.17	P-15	~~9~~ 11'	18"	S-14	27~~25~~21	OUTFALL	27.00	
S-15	A	158+05	LT	30.86	26.61				P-16	~~14~~ 11'	18"	S-15	28.11	OUTFALL	27.80	SPILLWAY
S-16	A	160+20	RT	31.08	26.83			26.21	P-17	~~10~~ 13'	18"	S-16	28.33	OUTFALL	25.00	
S-17	A	161+98	LT	30.46	26.21			25.21	P-18	~~12~~ 10'	18"	S-17	26~~22~~.71	OUTFALL	26.50	SPILLWAY
S-18	A	163+88	RT	29.96	25.21				P-19	48'	24"	S-18	26.71	OUTFALL	26.00	SPILLWAY
									P-19A	~~16~~ 20'	18"	DITCH	28.00	S-18	28.40	
S-19	A	165+29	LT	29.42	25.17			24.17	P-20	~~20~~ 13'	18"	S-19	25~~.30~~.67	OUTFALL	25.30	SPILLWAY
S-20	A	167+02	LT	29.83	25.58			24.68	P-21	~~14~~ 10'	18"	S-20	26~~27~~.08	OUTFALL	25.90	
S-21	A	169+48	LT	30.52	26.27			25.27	P-22	~~16~~ 9'	18"	S-21	26~~27~~.77	OUTFALL	26.50	SPILLWAY
S-22	A	172+04	LT	29.70	25.45			24.47	P-23	~~14~~ 9'	18"	S-22	25~~.30~~.95	OUTFALL	25.70	
S-23	A	173+33	LT	29.70	24.60			23.60	P-24	~~40~~ 9'	24"	S-23	25~~.20~~.10	S-23	24.90	
S-24	A	173+48	RT	29.71	24.96				P-25	38'	24"	S-24	26.46	S-23	26.20	
S-25	A	174+02	LT	29.63	25.38			24.38	P-26	~~12~~ 11'	18"	S-25	2~~.30~~5.88	OUTFALL	25.60	SPILLWAY
S-26	A	175+52	RT	30.17	25.42				P-27	36'	24"	S-26	26.92	S-27	26.75	SPILLWAY
S-27	A	175+52	LT	30.17	25.15			24.15	P-28	~~12~~ 11'	24"	S-27	25~~.30~~.55	OUTFALL	25.30	
									~~P-27A~~	~~10'~~	~~18"~~	~~DITCH~~	~~29.00~~	~~S-26~~	~~27.50~~	
S-28	A	177+98	RT	30.07	25.32			25.04	P-29	~~12~~ 50'	24"	S-28	26.~~00~~54	OUTFALL	25.50	SPILLWAY
S-28A	A	"B"10+34	RT	28.66	23.70			24.40	P-29B	~~54~~ 36'	24"	S-28A	25.~~30~~40	S-28B	25.~~10~~	
S-28B	A	"B"10+34	LT	28.49	23.60			24.50	P-29C	~~6~~ 7'	24"	S-28B	25.~~40~~30	DITCH	25.~~05~~	
									P-29A	10'	24"	DITCH	25.30	S-28A	25.25	
S-29	A	180+85	RT	28.56	23.81			23.81	P-30	~~84~~ 58'	24"	S-29	25.31	OUTFALL		
S-30	B	182+56	RT	29.13	22.40				P-31	~~54~~ 71'	24"	S-30	23.90	OUTFALL	19.20	
									P-32	~~12~~ 11'	18"	INLET	24.~~25~~5	S-30	24.00	
S-31	A	185+00	RT	30.96	26.21				P-33	~~45~~ 56'	24"	S-31	27.71	OUTFALL	20.70	SPILLWAY
S-32	A	185+88	RT	31.29	27.04			26.04	P-34	~~10~~ 9'	18"	S-32	27.~~28~~.45 54	OUTFALL	27.30	SPILLWAY
S-33	A	187+22	LT	31.35	27.10			26.10	P-35	~~10~~ 8'	18"	S-33	27.~~28~~.60	OUTFALL	27.30	SPILLWAY
S-34	A	188+98	LT	31.54	27.29			26.29	P-36	~~12~~ 9'	18"	S-34	27.~~28~~.79	OUTFALL	27.50	SPILLWAY
S-35	A	191+00	LT	31.07	26.22			25.22	P-37	~~26~~ 8'	18"	S-35	26.~~27~~.72	OUTFALL	26.50	
									P-37A	~~46~~ 40'	24"	DITCH	30.00	S-35	~~27~~.82	
S-36	A	192+72	LT	30.03	25.78			24.78	P-38	~~12~~ 6'	18"	S-36	26.~~27~~.28	OUTFALL	26.00	SPILLWAY
S-37	A	194+39	RT	31.11	26.16				P-39	36'	24"	S-37	27.86	S-38	27.31	
S-38	A	194+39	LT	31.11	26.06			25.06	P-40	~~14~~ 9'	18"	S-38	26.~~27~~.56	OUTFALL	26.30	SPILLWAY
S-39	A	198+00	RT	30.86	26.11				P-41	36'	24"	S-39	26.~~27~~.61	S-40	27.~~41~~3	
S-40	A	198+00	LT	30.86	25.81			24.81	P-42	~~14~~ 8'	18"	S-40	26.~~27~~.31	OUTFALL	26.00	
S-41	A	200+70	RT	29.62	24.87				P-43	36'	24"	S-41	26.37	S-42	26.20	
S-42	A	200+70	LT	29.62	24.67			23.67	P-44	~~10~~ 8'	24"	S-42	25.~~26~~.17	OUTFALL	25.00	SPILLWAY
									P-45	~~8~~10'	18"	DITCH	27.00	S-41	26.50	
~~S-43~~	~~A~~	~~201+32~~	~~LT~~	~~29.59~~	~~25.14~~	DELETED										
S-44	A	203+13	RT	32.93	27.98				P-46	36'	24"	S-44	29.68	S-45	29.48	
S-45	A	203+13	LT	32.93	27.88			26.88	P-47	20'	18"	S-45	28.~~29~~.38	OUTFALL	28.00	SPILLWAY
S-44A	A	"C"10+43	RT	33.26	29.01	1'+ Sump			P-47A	12'	18"	S-44A	29.80	OUTFALL		
S-46A	A	"C"10+50	LT	33.38	29.13				P-47B	~~26.5~~	18"	S-46A	30.43	S-44A	30.00	
									~~P-47C~~	~~6'~~	~~18"~~	~~DITCH~~	~~30.70~~	~~S-46A~~	~~30.23~~	
S-46	A	204+18	RT	36.40	31.65				~~P-48~~	~~56'~~	~~24"~~	~~S-46~~	~~33.15~~	~~OUTFALL~~		SPILLWAY
									P-49	~~12~~ 16'	18"	INLET S-46	33.15	~~S-46 OUTFALL~~	~~33.65~~ 38.70	
S-47	A	206+50	RT	45.64	41.39				P-50	10'	18"	S-47	43~~42~~.89	OUTFALL	43.00	
S-48	A	212+60	RT	45.60	41.35				P-51	~~14~~ 12'	18"	S-48	42.85	OUTFALL	42.00	
S-49	A	216+00	RT	32.80	28.55				P-52	~~14~~ 12'	18"	S-49	30.05	OUTFALL	28.50	
S-50	A	217+47	LT	29.33	25.00			24.00	P-53	~~12~~ 19'	18"	S-50	25~~.50~~.~~25.50~~	OUTFALL	25.00	
S-51	A	218+53	RT	27.58	22.83				P-54	~~52.46~~	24"	S-51	24.33	OUTFALL	24.00	
S-52	A	220+65	RT	26.09	21.34				P-55	~~48~~ 60'	24"	S-52	22.84	OUTFALL	18.00	
S-53	A	223+~~26~~00	RT	~~25.33~~	~~21.00~~	23.21		21.02	P-56	14'	18"	S-53	22.~~52~~52	OUTFALL	22.00	
S-54	A	223+26	LT	24.71	20.38	24.~~65~~		20.32	P-57	~~18~~ 11'	18"	S-54	21.68	OUTFALL	21.00	

TOTALS: 54- A 1- B 2- F

TOTALS: 18" - ~~675'~~ 534' 24" - ~~1,132'~~ 1,099'



SPILLWAY PLAN



SPILLWAY SECTION

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

ENGINEER'S SEAL

STATE OF ALASKA 49th

BY	DATE	DESCRIPTION OF CHANGE

RECORD OF REVISIONS

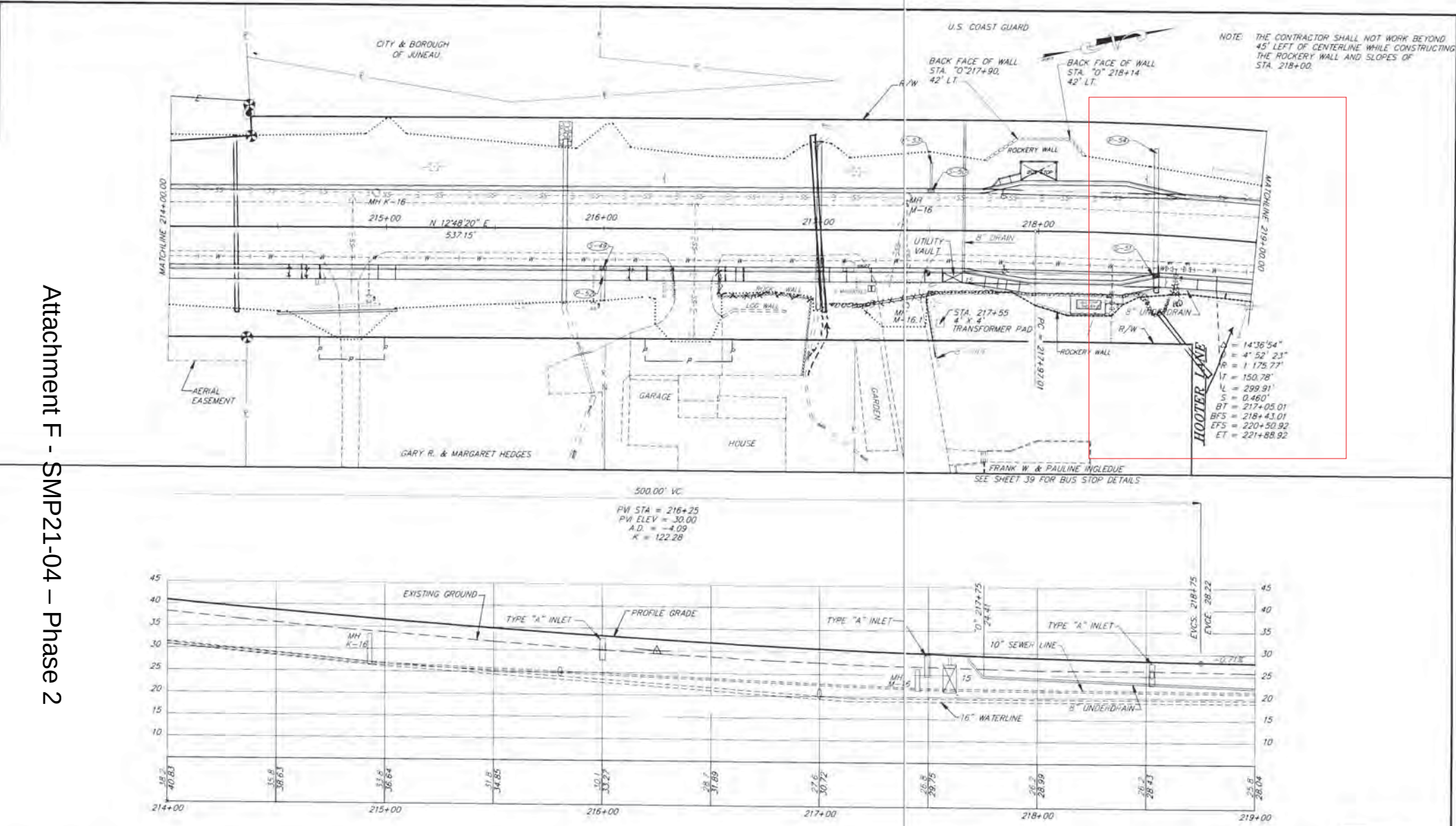
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

JUNEAU ALASKA

SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-(955(8) (70469)
STORM DRAIN SYSTEM SUMMARY

DESIGNED BY: D. KROMAREK	PROJECT NO. 70469
DRAWN BY: C. ANDERSON	DATE: 6/1993
CHECKED BY: P. BEDNAROWICZ	SHEET 10 OF 85

Attachment F - SMP21-04 – Phase 2



Attachment F - SMP21-04 – Phase 2

NO:	DATE:	DESCRIPTION OF CHANGE:

RECORD OF REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

JUNEAU ALASKA

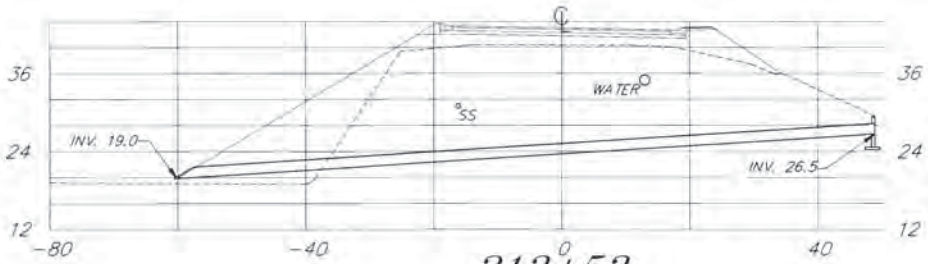
SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-0955(8) (70469)
STA. "0" 214+00.00 TO STA. "0" 219+00.00

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

DESIGNED BY: D. KROMAREK	PROJECT NO. 70469
DRAWN BY: C. ANDERSON	DATE: 6/1993
CHECKED BY: P. BEDNAROWICZ	SHEET 27 OF 85

ENGINEER'S SEAL
STATE OF ALASKA
49th
PETER BEDNAROWICZ
CE-5104
REGISTERED PROFESSIONAL ENGINEER

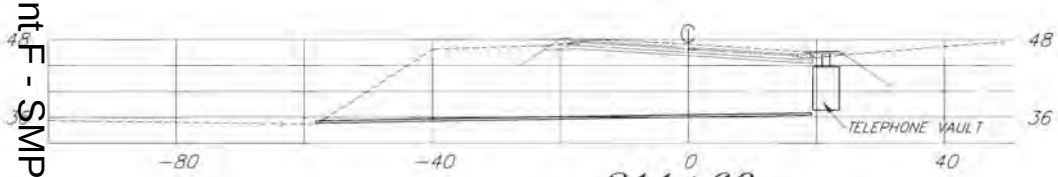
P:\JNU\SALMON\DR\P214 - 1=20
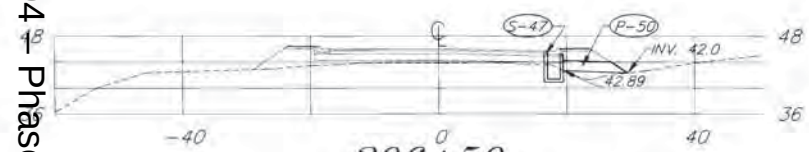


213+53



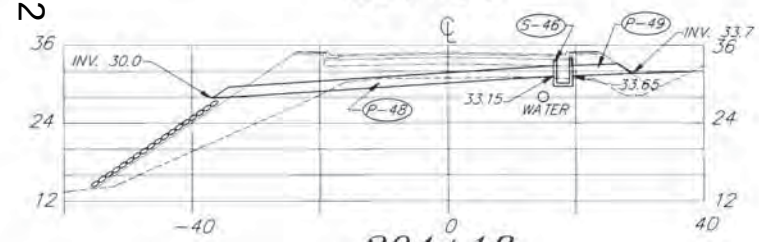
212+60



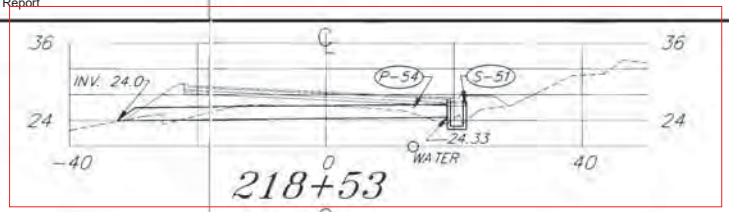
211+60



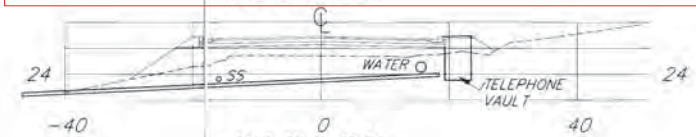
206+50



204+18



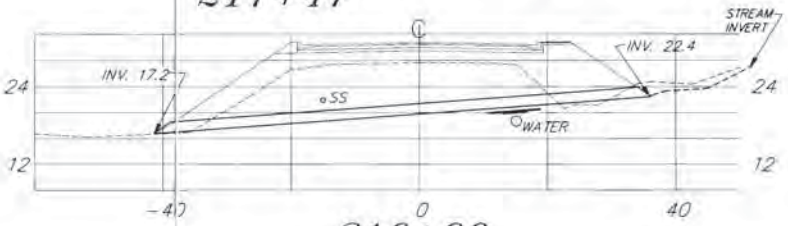
218+53



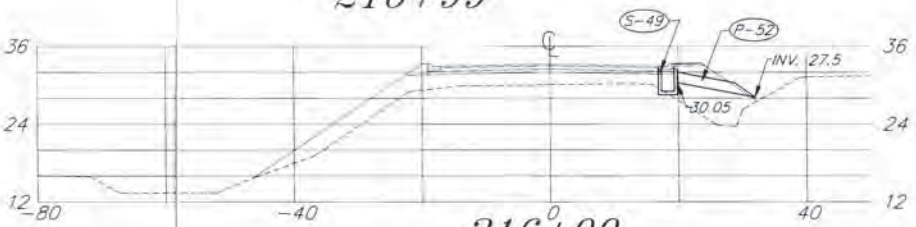
217+58



217+47



216+99



216+00



215+82

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

ENGINEER'S SEAL

STATE OF ALASKA 49th P. BEDNAROWICZ CE 5104 REGISTERED PROFESSIONAL ENGINEER

PATH: P:\JNU\SALMON\DR\PIPE9 1=10		
BY:	DATE:	DESCRIPTION OF CHANGE:

RECORD OF REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

JUNEAU ALASKA

SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-0955(8) 70469

PIPE CROSS SECTIONS-204+18 TO 218+53

DESIGNED BY: D. KROMAREK	PROJECT NO. 70469
DRAWN BY: C. ANDERSON	DATE: 6/1993
CHECKED BY: P. BEDNAROWICZ	SHEET 83 OF 85

Attachment F - SMP21-04 - Phase 2

BEFORE THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU

MOUNTAINSIDE ESTATES
NEIGHBORHOOD ASSOCIATION, ET AL.,

Appellant,

vs.

CBJ PLANNING COMMISSION, and
MICHAEL AND WILLIAM HEUMANN,

Appellees,

Appeal of:
Notice of Decision
CDD File No. SMP2018-0002

STIPULATED SETTLEMENT AGREEMENT

The parties to this Agreement are the Appellants, consisting of the Mountainside Estates Neighborhood Association and 17 individuals,[1] ("MENA"); the CBJ Planning Commission ("PC"), and Michael and William Heumann, ("Heumanns"). The parties are executing this Stipulated Settlement Agreement in order to resolve this appeal in its entirety, after the Assembly granted their joint motion for a 90 day stay of the appeal for such intended purpose.

Background Information:

The Heumanns applied for approval of a preliminary plat to subdivide and develop the first 12 lots of a phased major subdivision on a 30.67 acre parcel named Richland Manor, which is adjacent to the existing Mountainside Estates subdivision. During the planning process and at the February 26, 2019 hearing on the Heumanns' application, many of the appellants testified against the application, raising concerns that included and related to increased traffic, including construction traffic, pedestrian and child safety, decreased home values, crime and quality of life.

1 In the interests of space, the individual appellants are not listed here but will sign this document at the bottom. Collectively the appellants will be designated as MENA.

Attachment - APL2019-0001 - SMP2018-0002 Settlement Agreement

On February 28, 2019 the PC issued its decision approving the preliminary plat requested by the Heumanns, with conditions. This appeal followed. The parties then entered into settlement negotiations which have resulted in the following agreements, intended to fully resolve all issues raised in MENA's appeal.

Agreements of the Parties:

The parties agree to the following terms of settlement:

1. SMP 2018 0002 is the preliminary plat approved with conditions, by the PC's February 28, 2019 Notice of Decision ("NOD"), both of which are attached as Exhibit A.
2. Within 30 days of executing this Agreement, the Heumanns will submit an application for the alternative preliminary plat depicted in Attachment B ("alternative plat"). The application will be for approval of Phase 1 of the alternative plat and conditions set out in Exhibit B. For clearer illustration, the features of the alternative plat establishing greenbelt separation on the individual lots between Richland Manor and Mountainside Estates are set out in Exhibit C, ("greenbelt buffers").
3. The parties acknowledge that the alternative preliminary plat application will include the sketch plat in Exhibit D, showing future proposed phases of the Richland Manor subdivision, as required by CBJ 49.15.410, but the application and intended PC action is limited to approval of Phase 1.
4. The following subdivision features, conditions and actions are agreed to between or accepted by the parties as a condition of the dismissal of the appeal and complete settlement of this dispute. To the extent that any of the subdivision features, conditions, or required actions may be included on the alternative plat or the associated conditions, they shall be. The appellants and Heumanns acknowledge, however, that not all features, conditions, notes or

Attachment A-APL2019 0001 Settlement Agreement

other information appearing on the alternative plat are legally required or enforceable by the Planning Commission and/or the CBJ.

The subdivision features and conditions listed below shall be included or referenced on the plat. To the extent any features, conditions, notes or actions, including, but not limited to, density conditions, are not subject to PC authority or CBJ enforcement jurisdiction, they are indicated with an asterisk* and considered contractual obligations between the Heumanns and Appellants enforceable by direct private legal action to enforce this agreement, or any other lawful process.

(a) Hooter Lane will be developed as a public two-way street, as set out in the alternative plat, subject to CBJ public improvement standards, in CBJ 49.35.

(b) Hooter Lane from Glacier Highway to Hillcrest Avenue, and Hillcrest Avenue and Mountainside Drive shall be developed with a a sidewalk on one side. The number of sidewalks in the remainder of Richland Manor will be determined at the time of future development applications.

(c) *Density: It is agreed that the loop road of Hillcrest Ave. and Mountainside Drive will be developed as single family homes, as depicted on the attached alternative plat.

(d) *Robbie Road development that is connected to Mountainside Estates shall be limited to not more than 7 single family homes, 3 of which may have accessory apartments.

(e) Robbie Road shall terminate and shall not be a point of access to Richland Manor, unless required, and gated, for fire/emergency service access only.

(f) Hillcrest Avenue shall terminate at Hooter Lane. Hillcrest Avenue may connect to Hooter Lane west of the existing Hillcrest alignment as shown in the alternative plat (Exhibit C). Alternatively road access to the northeast portion of Tract B-1 may connect

Attachment A-APL 2019 0021 Settlement Agreement

to the east/west portion of Mountainside Drive across from the entrance to the "pocket" between Hillcrest and Mountainside.

(g) *Greenbelt buffers will be implemented and privately maintained by lot owners as delineated on the alternative plat, Exhibit B (and as more clearly drawn for illustrative purposes in Exhibit C) to separate single family homes from multi-family development. Excavation for purposes of slope stabilization may take place in the greenbelt buffers provided they are allowed to revegetate following construction. In the event this becomes necessary Heumann will consult with adjacent homeowners about the impacts.

5. The following subdivision features, conditions and requirements will not be included or referenced on the plat and are also not matters for PC and/or CBJ enforcement through the platting process, but rather are created by and subject to this contractual agreement as between Heumanns and appellants, and are thus subject to private enforcement by direct private legal action or any other lawful process:

(a) Construction traffic that will utilize roads within Mountainside Estates will be limited to the development and build out of the Hillcrest Avenue extension to Hooter Lane and any development of the seven homes allowed on Robbie Road.

(b) Hooter Lane will be constructed "from the bottom up", meaning that construction will start at Glacier Highway and proceed uphill.

(c) On Tract A, the "pocket" in the loop between Hillcrest Avenue and Mountainside Avenue, there shall be no more than 16 dwelling units, which shall be contained in buildings of no more than 4 units per building, not to exceed two stories each.

(d) Construction traffic for Richland Manor which flows through Mountainside Estates will be limited to the hours between 7:00 a.m. and 7:00 p.m. On days when children are in school in the Juneau School District there will be no construction traffic through

Attachment A - APL 2019 0021 Settlement Agreement

Mountainside Estates between the hours of 7:00 a.m. to 8:15 a.m. and 2:30 p.m. to 3:45 p.m.

(e) Traffic calming measures will be incorporated as part of the CBJ's public right of way adoption process to address changes in traffic patterns or density that may arise from the construction of Richland Manor, subject to CBJ approval. The Heumanns will be responsible for stop signs at all appropriate locations; a 20 MPH posted speed limit; and "Children at Play" warning signs in all appropriate locations within Richland Manor Subdivision. CBJ shall be responsible for similar measures, as appropriate, on Hillcrest Avenue and Mountainside Drive to Craig Street, within Mountainside Estates.

(f) *Water System: As soon as feasible, but in any event prior to connecting up to 80 new residential units to the existing water system and prior to the completion of Mountainside Drive, the Heumanns will connect the water supply system in a loop that encompasses Mountainside Drive and Hillcrest Street or more directly between Hillcrest Avenue and Mountainside Drive. For all units beyond 80, there will be a separate additional water supply developed. Should a unit be disconnected from the water system it may be replace with another.

6. The alternative plat application will be processed in the normal course of business by Community Development Department ("CDD"), followed by the PC's review at a regular PC meeting.

7. CDD has reviewed Attachments B and C, the sketch plat in Exhibit D, and the conditions set out above, and has determined it can conceptually support and recommend approval of the application to the PC, with the associated conditions.

8. Appellants will support the proposed application and agree to timely submit a statement of such support to CDD for inclusion in the packet before the PC.

Attachment - APL-2019-0001 - Settlement Agreement

9. No individual Appellant(s), member of Appellant MENA, MENA representative or Appellee will speak against, obstruct or oppose the alternative plat application or related CBJ, State of Alaska and Federal permits in writing or in public testimony.

10. The Heumanns and Appellants agree that the application is a good faith compromise to settle this appeal, and that if the application is not approved as submitted, either party may request that the stay be lifted to proceed with the appeal of SMP2018 0002. The request must be made within 10 days of the Notice of Decision.

11. The PC has not reviewed, and is not authorized to commit its support and/or approval of the application prior to reviewing it through the normal hearing process, but acknowledges that the application will not automatically supersede or replace SMP2018 0002 unless the PC issues a NOD approving the application as submitted and no appeal is filed by a third party not subject to this agreement.

12. Nothing in this Agreement shall operate or be interpreted to supersede or waive any CBJ Code provision or requirement, including technical plat requirements.

13. If the PC issues a NOD approving the application as submitted and no appeal has been filed by a 3rd party Appellants will file an executed dismissal of the appeal with prejudice, within 3 business days of the expiration of the time limit within to appeal the NOD.

14. Appellants individually and jointly expressly waive their individual and associational rights to appeal to the Assembly under CBJ 01.50, or to otherwise challenge, an NOD that approves the application as submitted. This waiver does not apply to an NOD that alters the terms of this agreement in any significant respect.

15. Should the PC issue a NOD approving the application as submitted which is not appealed by any party, all parties understand that this Agreement shall operate as a full

and final mutual release and discharge of all parties against each other on behalf of themselves, their members, officers, agents, successors, assigns, attorneys, and anyone who can claim through or on behalf of the parties from the current appeal and from any and all past, present, and future appeals or claims relating to SMP 2018 0002 and the approved application. The parties understand and acknowledge that this release and discharge is made for the purpose of settlement and that it may not be construed as an admission of liability.

16. If a third party appeals a Notice Of Decision that approves the alternative plat,, the Heumanns and MENA shall immediately meet and confer (with or without the involvement of the third party appellants) to determine whether there is a solution that is consistent with this Agreement. If an agreement cannot be reached, the Heumanns will have the right to elect to defend against the appeal of the approved alternative plat, in which case MENA will support the Heumanns to the extent necessary to preserve this Agreement, or to abandon the approved alternative plat, lift the stay and defend the original preliminary plat in this appeal brought by MENA.
17. In executing this Agreement, each member of each party fully, completely, and unconditionally acknowledges and agrees that it has had the opportunity to consult with, and have the advice of, duly licensed and competent attorneys, and that it has executed this Agreement after independent investigation, voluntarily and without fraud, duress, or undue influence. Each party expressly consents that this Agreement be given full force and effect according to each and every of its express terms and provisions.
18. Each person executing this Agreement on behalf of another person or organization represents and warrants to each member of all other parties that he or she is fully authorized to execute and deliver this Agreement on behalf of such person or

organization. Each member of each party represents and warrants to all members of all other parties that no consent of any person not a party to this Agreement is necessary in order for this Agreement to be fully and completely binding upon each member of the parties hereto.

19. The parties agree to bear their own costs and attorney fees in this appeal.

Respectfully submitted this 23 day of ~~August~~ Sept 2019.

APPELLANTS, MENA, et al

By: _____
Paul H. Grant, Esq. /Libby Bakalar, Esq.
Alaska Bar No. 7710124

APPELLEE WILLIAM HEUMANN

By: _____
William Heumann

APPELLEE MICHAEL HEUMANN

By: _____
Michael Heumann

APPELLEE PC

By: Jane S. Mores 9/30/19
Jane S, Mores, Esq.
Alaska Bar No. 9011115

Attachment 1 to SMP 21-04 Settlement Agreement

SIGNATURES OF INDIVIDUAL APPELLANTS

The following are the individual Appellants in the CBJ Planning Commission appeal designated as No. SMP2018-0002. By signing below each of them certifies that he or she has reviewed the Stipulated Settlement Agreement and the associated exhibits, and agrees that the appeal should be resolved as set out in the Agreement. It is understood that this is a compromise agreement, and that not every Appellant agrees with every term. However, each of the signing Appellants endorses the Settlement as his or her voluntary act, without coercion or undue influence. Each of the signing Appellants agrees that he or she will not oppose the application for approval of the modified plat before the planning commission, and each of them understands that MENA will provide a statement of support for the application.

Dawn Wolfe 9/6/19
Dawn Wolfe date

Eugene Huang 9/11/19
Eugene Huang date

Steve Iha 9/5/2019
Steve Iha date

Katherine Sullivan 9/11/19
Katherine Sullivan date

Euming Suewing 9-12-19
Euming Suewing date

Luciana Alinson 9-14-19
Luciana Alinson date

Kerrie Suewing 9-12-19
Kerrie Suewing date

Dave Tallmon 9/12/19
Dave Tallmon date

Kelli Manchester 9/5/19
Kelli Manchester date

Dane Lenaker 9/9/19
Dane Lenaker date

Noelle Blanc 9-12-19
Noelle Blanc date

Tom Rutecki 9-5-2019
Tom Rutecki date

Mary Noreross 9/12/2019
Mary Noreross date

Bob Janes 9/6/2019
Bob Janes date

Kris Coffee 9/5/19
Kris Coffee date

Rhonda Biles 9/5/19
Rhonda Biles date

Mathew Pegues 9/5/19
Mathew Pegues date

EXHIBIT A

Planning Commission
(907) 586-0715
PC_Comments@juneau.org
www.juneau.org/plancomm
155 S. Seward Street • Juneau, AK 99801

PLANNING COMMISSION
NOTICE OF DECISION

Date: February 28, 2019
File No.: SMP2018 0002

Michael & William Heumann
6000 Thane Road
Juneau, AK 99801

Proposal:	A Preliminary Plat for a phased major subdivision to include 12 single-family lots and 1 large tract (13 lots total).
Property Address:	4506, 4508, 4510 Hillcrest Avenue
Legal Description:	Richland Manor Tract B
Parcel Code No.:	7B1001160010
Hearing Date:	February 26, 2019

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated February 14, 2019, and approved the preliminary plat to be conducted as described in the project description and project drawings submitted with the application and with the following conditions:

1. Prior to final plat approval, the following changes shall be made to the preliminary plat:
    a. Complete all 22 requested plat changes listed in the MEMO dated January 31, 2019, from CBJ Engineering & Public Works.
    b. On sheet one (1), label Laurie Lane.
    c. On sheet two (2), label the western lot line with bearing and distances described.
    d. On sheet one (1), show all five (5) lots on the south side of Coogan Drive, created Plat 2009-18.
    e. Through the review process, Blocks A and B have gotten switched. Plat Notes 9 & 10 do not match the plat when referencing the bungalow lots and panhandle lots. Change the plat graphic to match the plat notes or vice versa.
    f. Prior to final plat recording, remove setbacks, wetlands, drainage, and contours from plat graphic and legend.

Attachment A - SMP2018 0002 Plat Agreement

g. On all pages, use a dashed font to label the original TRACT B.
h. Add the following Plat Note: "Further Subdivision of Tract B-1, Richland Manor 2 Subdivision shall require City & Borough of Juneau Preliminary Platting Requirements indicating adequate access for all lots created in Phase 1, Richland Manor Subdivision 2, and all future Phases."

2. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.

3. The developer shall use Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.

4. The average daily trips (ADT) generated by Phase 1, Richland Manor 2 Subdivision, and all future phases will be included in the ADT's generated by any future development of Tract B1.

5. A Hillside Development Permit may be required if triggered by CBJ 49.70.210(a)(1-5).

6. Sidewalks on both sides of the street are required for Phase 1.

7. All future phases of development may require wetlands delineation.

8. For each pair of panhandle lots sharing a driveway, the applicant must provide a maintenance agreement that is recorded with the subdivision, on forms acceptable to the director, ensuring the required access and parking areas will be constructed and maintained by all future property owners. The applicant shall also create a plat note referencing the easements.

9. The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway shall be paved, whichever length is greater, for all panhandle lots created with this subdivision.

10. The applicant shall construct, or bond for, street lights at each intersection in this subdivision with spacing between lights not to exceed 250 feet.

11. Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.

12. A driveway and parking plan that shows the feasibility of off-street parking shall be submitted and approved by the Director prior to recording the plat.

13. The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue requirements in each dwelling unit within this subdivision.

Attachment A-1 to AR 2019-04 - SMP2018 04 Plat Agreement

14. The sketch plat shall be amended to show a future connection to Hooter Lane from Hillcrest Avenue.

15. The applicant must submit a drainage plan showing how drainage will flow from the subdivision to Glacier Highway; this drainage plan must be approved by the CBJ Engineering & Public Works Department. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

16. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to CDD for review by the Director of Engineering & Public Works for compliance with 49.35.140.

17. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to CDD and reviewed and approved by CDD and CBJ Engineering & Public Works.

18. Prior to final plat approval, the applicant must construct, and/or bond for, all required public utilities and improvements.

Attachment: February 14, 2019 memorandum from Laurel Bruggeman, Community Development, to the CBJ Planning Commission regarding SMP2018 0002.

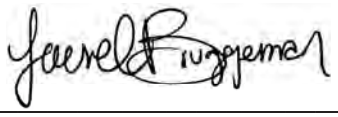
This Notice of Decision does not authorize any construction. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance to CBJ 01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ 01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ 49.20.120).

Effective Date: The permit is effective upon approval by the Commission, February 26, 2019.

Expiration Date: The permit will expire five (5) years after the effective date, or February 26, 2024, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the subdivision permit was authorized or no final plat has been approved. Application for permit extension must be submitted thirty days prior to the expiration date.

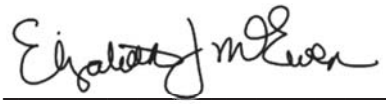
Attachment A - SMP2018 0002 Settlement Agreement

Project Planner: 

Laurel Bruggeman, Planner
Community Development Department



Benjamin Haight, Chair
Planning Commission



Filed With Municipal Clerk

3/5/2019
Date

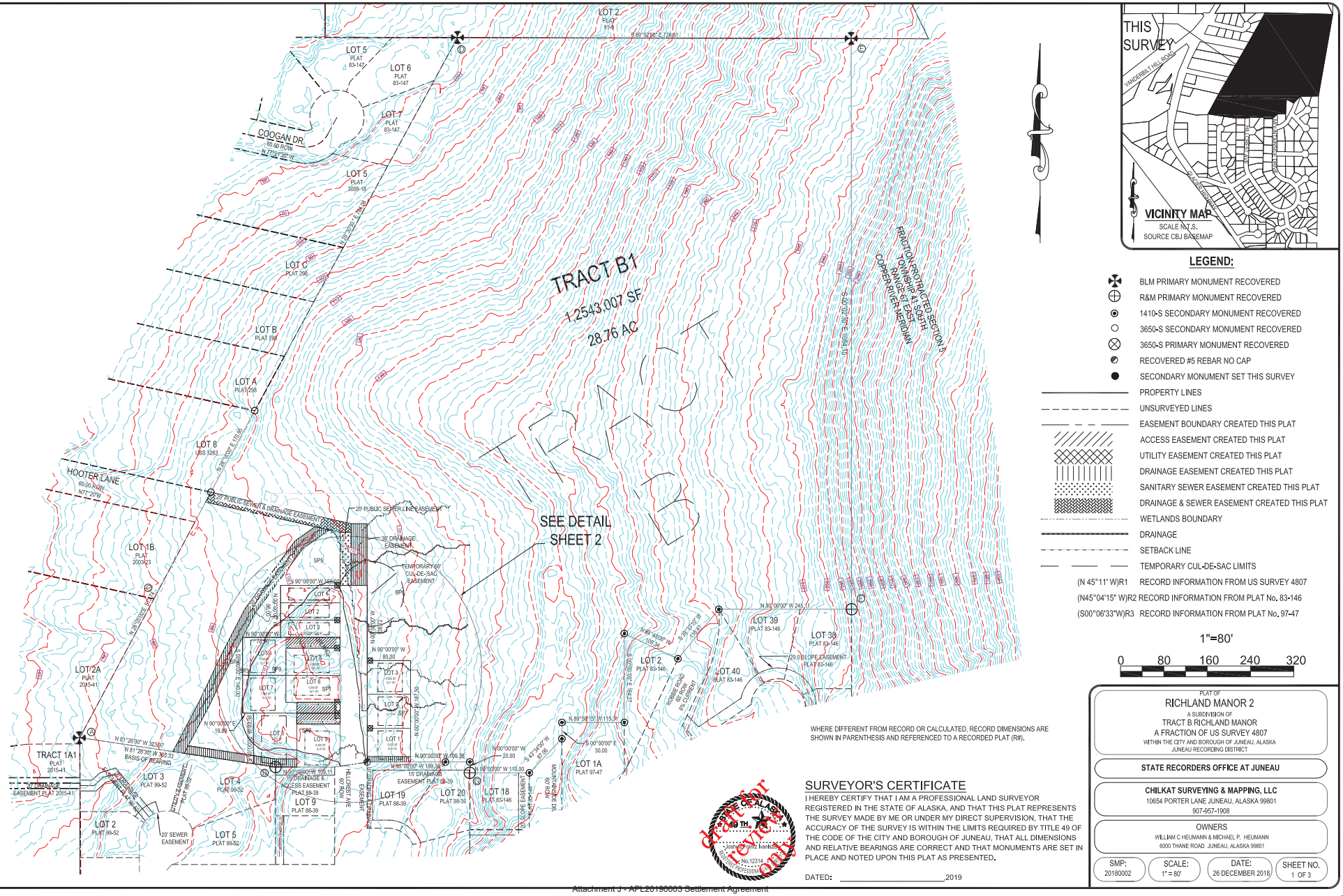
cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this subdivision. ADA regulations have access requirements above and beyond CBJ - adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.

Attachment A - SMP2018 0002 Settlement Plat Agreement

EXHIBIT A

Attachment F - SMP21-04 – Phase 2



LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 3650-S SECONDARY MONUMENT RECOVERED
- 3650-S PRIMARY MONUMENT RECOVERED
- RECOVERED #5 REBAR NO CAP
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY CREATED THIS PLAT
- ACCESS EASEMENT CREATED THIS PLAT
- UTILITY EASEMENT CREATED THIS PLAT
- DRAINAGE EASEMENT CREATED THIS PLAT
- SANITARY SEWER EASEMENT CREATED THIS PLAT
- DRAINAGE & SEWER EASEMENT CREATED THIS PLAT
- WETLANDS BOUNDARY
- DRAINAGE
- SETBACK LINE
- TEMPORARY CUL-DE-SAC LIMITS
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47

1"=80'

0 80 160 240 320

WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

Josh Lorentz Hanks
No. 12314
PROFESSIONAL LAND SURVEYOR

PLAT OF
RICHLAND MANOR 2
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

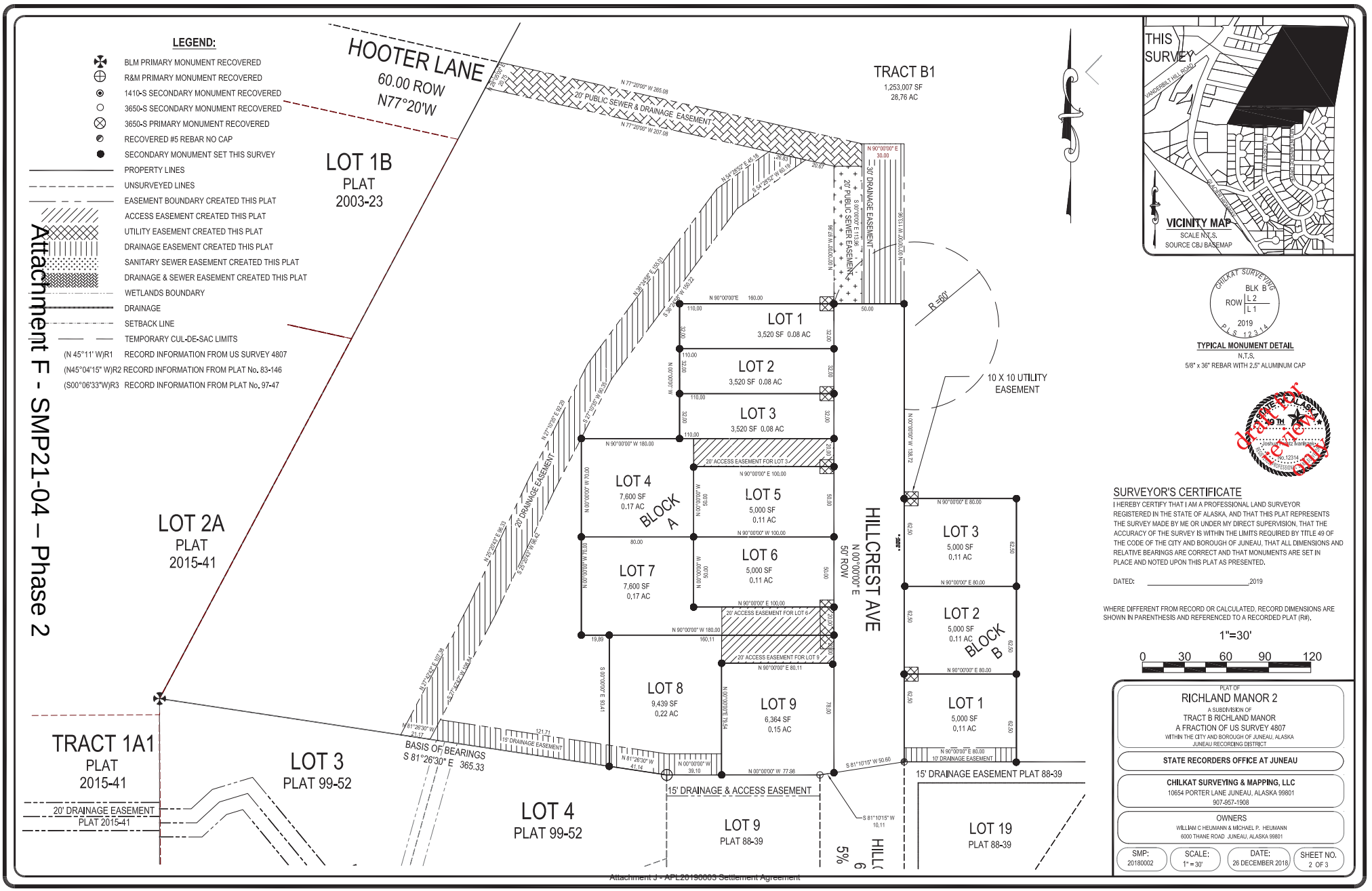
STATE RECORDERS OFFICE AT JUNEAU

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20180002	1" = 80'	26 DECEMBER 2018	1 OF 3

Clerk's Review Only

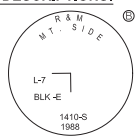

LEGEND:
BLM PRIMARY MONUMENT RECOVERED
R&M PRIMARY MONUMENT RECOVERED
1410-S SECONDARY MONUMENT RECOVERED
3650-S SECONDARY MONUMENT RECOVERED
3650-S PRIMARY MONUMENT RECOVERED
RECOVERED #5 REBAR NO CAP
SECONDARY MONUMENT SET THIS SURVEY
PROPERTY LINES
UNSURVEYED LINES
EASEMENT BOUNDARY CREATED THIS PLAT
ACCESS EASEMENT CREATED THIS PLAT
UTILITY EASEMENT CREATED THIS PLAT
DRAINAGE EASEMENT CREATED THIS PLAT
SANITARY SEWER EASEMENT CREATED THIS PLAT
DRAINAGE & SEWER EASEMENT CREATED THIS PLAT
WETLANDS BOUNDARY
DRAINAGE
SETBACK LINE
TEMPORARY CUL-DE-SAC LIMITS
(N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
(N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
(S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
HOOTER LANE
60.00 ROW
N77°20'W
LOT 1B
PLAT
2003-23
TRACT B1
1,253,007 SF
28.76 AC
20' PUBLIC SEWER & DRAINAGE EASEMENT
30' DRAINAGE EASEMENT
20' PUBLIC SEWER EASEMENT
LOT 1
3,520 SF 0.08 AC
LOT 2
3,520 SF 0.08 AC
LOT 3
3,520 SF 0.08 AC
LOT 4
7,600 SF
0.17 AC
BLOCK A
LOT 5
5,000 SF
0.11 AC
LOT 6
5,000 SF
0.11 AC
LOT 7
7,600 SF
0.17 AC
LOT 8
9,439 SF
0.22 AC
LOT 9
6,364 SF
0.15 AC
20' ACCESS EASEMENT FOR LOT 3
20' ACCESS EASEMENT FOR LOT 6
20' ACCESS EASEMENT FOR LOT 8
HILLCREST AVE
N 00°00'00" E
50' ROW
10 X 10 UTILITY EASEMENT
R=50'
LOT 3
5,000 SF
0.11 AC
LOT 2
5,000 SF
0.11 AC
BLOCK B
LOT 1
5,000 SF
0.11 AC
10' DRAINAGE EASEMENT
15' DRAINAGE EASEMENT PLAT 88-39
LOT 19
PLAT 88-39
TRACT 1A1
PLAT
2015-41
20' DRAINAGE EASEMENT
PLAT 2015-41
LOT 3
PLAT 99-52
LOT 4
PLAT 99-52
LOT 2A
PLAT
2015-41
BASIS OF BEARINGS
S 81°26'30" E 365.33
15' DRAINAGE EASEMENT
15' DRAINAGE & ACCESS EASEMENT
LOT 9
PLAT 88-39
5%
Attachment F - SMP21-04 – Phase 2
THIS SURVEY
VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP
CHILKAT SURVEYING
BLK B
ROW L 2 L 1
2019
P L S 12314
TYPICAL MONUMENT DETAIL
N.T.S.
5/8" x 36" REBAR WITH 2.5" ALUMINUM CAP
draft for review only
SURVEYOR'S CERTIFICATE
I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.
DATED: _____,2019
WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).
1"=30'
0 30 60 90 120
PLAT OF
RICHLAND MANOR 2
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT
STATE RECORDERS OFFICE AT JUNEAU
CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908
OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801
SMP: 20180002
SCALE: 1" = 30'
DATE: 26 DECEMBER 2018
SHEET NO. 2 OF 3

Attachment F - SMP21-04 – Phase 2

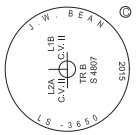
FOUND MONUMENT DESCRIPTIONS:



2.5" BRASS CAP MONUMENT



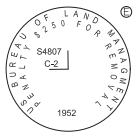
3.25" ALUMINUM CAP MONUMENT



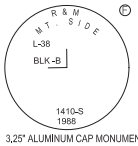
3.25" ALUMINUM CAP MONUMENT



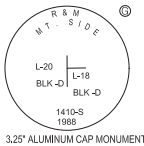
2.5" BRASS CAP MONUMENT



2.5" BRASS CAP MONUMENT



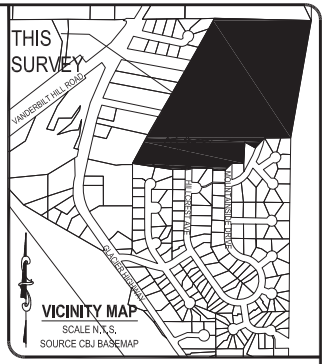
3.25" ALUMINUM CAP MONUMENT



3.25" ALUMINUM CAP MONUMENT

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 3650-S SECONDARY MONUMENT RECOVERED
- 3650-S PRIMARY MONUMENT RECOVERED
- RECOVERED #5 REBAR NO CAP
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY CREATED THIS PLAT
- ACCESS EASEMENT CREATED THIS PLAT
- UTILITY EASEMENT CREATED THIS PLAT
- DRAINAGE EASEMENT CREATED THIS PLAT
- SANITARY SEWER EASEMENT CREATED THIS PLAT
- DRAINAGE & SEWER EASEMENT CREATED THIS PLAT
- WETLANDS BOUNDARY
- DRAINAGE
- SETBACK LINE
- TEMPORARY CUL-DE-SAC LIMITS
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47



NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015 ON FILE WITH IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER RICHLAND MANOR II SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET AS APPROVED BY CBJ ENGINEERING. . ALL REQUIRED RICHLAND MANOR II SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12 EXCAVATION AND GRADING CODE.

8) OTHER THAN AS SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10FT IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

9) LOTS 1 , 2, AND 3 BLOCK B ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 1 & 2 & 3 BLOCK B ARE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT: OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

10) LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B ARE PANHANDLE LOTS. AT THE TIME OF PLAT RECORDING, FURTHER SUBDIVISION OF LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B IS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

11) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

11) TOPOGRAPHY DERIVED FROM WATERSHED SCIENCES, INC CBJ LIDAR AND IMAGERY PROJECT DATA COLLECTED MAY 2013 2" CONTOURS.

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____ , DATED _____ , 2019_____ , AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, JUNEAU, ALASKA.

_____DATED _____ , 2019

CHAIRMAN OF THE PLANNING COMMISSION

CITY AND BOROUGH OF JUNEAU

ATTEST:

_____

MUNICIPAL CLERK

CITY AND BOROUGH OF JUNEAU

OWNERSHIP CERTIFICATE:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____,2019

_____ _____

WILLIAM C. HEUMANN MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS___ DAY OF _____, 2019, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF N 81°26'30" W AS DELINEATED ON THE OFFICIAL PLAT OF VANDERBILT HILL SUBDIVISION, DATED 29 OCTOBER 1999, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK THE NW CORNER OF LOT 3 AND THE NE CORNER OF LOT 4, VANDERBILT HILL SUBDIVISION AS SHOWN ON THIS PLAT.

0 80 160 240 320

1"=80'

PLAT OF
RICHLAND MANOR 2
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT JUNEAU

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20180002	1" = 30'	26 DECEMBER 2018	3 OF 3

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____2019



GRAPHIC SCALE ONLY

Attachment J - APL20190003 Settlement Agreement

Date: 24 JANUARY 2019

To: CBJ COMMUNITY DEVELPOMENT DEPARTMENT
155 SOUTH SEWARD ST.
Juneau, Alaska 99801

Subject: Lot closure reports

Remarks: The lot closure reflects the proposed subdivision of Richland Manor II

BLOCK A
Lot 1

Northing	Easting	Bearing	Distance
2379490.480	2527711.091		
		N 90°00'00" W	110.000
2379490.480	2527601.091		
		N 00°00'00" W	32.000
2379522.480	2527601.091		
		N 90°00'00" E	110.000
2379522.480	2527711.091		
		S 00°00'00" E	32.000
2379490.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 284.000
Polyline Area: 3520 sq ft, 0.08 acres

Lot 2

Northing	Easting	Bearing	Distance
2379458.480	2527711.091		
		N 90°00'00" W	110.000
2379458.480	2527601.091		
		N 00°00'00" W	32.000
2379490.480	2527601.091		
		N 90°00'00" E	110.000
2379490.480	2527711.091		
		S 00°00'00" E	32.000
2379458.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 284.000
Polyline Area: 3520 sq ft, 0.08 acres

Attachment A - SMP21-04 Settlement Agreement

Lot 3

Northing	Easting	Bearing	Distance
2379426.480	2527711.091		
		N 90°00'00" W	110.000
2379426.480	2527601.091		
		N 00°00'00" W	32.000
2379458.480	2527601.091		
		N 90°00'00" E	110.000
2379458.480	2527711.091		
		S 00°00'00" E	32.000
2379426.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 284.000
Polyline Area: 3520 sq ft, 0.08 acres

Lot4

Northing	Easting	Bearing	Distance
2379406.480	2527711.091		
		N 90°00'00" W	100.000
2379406.480	2527611.091		
		S 00°00'00" E	50.000
2379356.480	2527611.091		
		N 90°00'00" W	80.000
2379356.480	2527531.091		
		N 00°00'00" W	70.000
2379426.480	2527531.091		
		N 90°00'00" E	180.000
2379426.480	2527711.091		
		S 00°00'00" E	20.000
2379406.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 500.000
Polyline Area: 7600 sq ft, 0.17 acres

Lot 5

Northing	Easting	Bearing	Distance
2379356.480	2527611.091		
		N 00°00'00" W	50.000
2379406.480	2527611.091		
		N 90°00'00" E	100.000
2379406.480	2527711.091		
		S 00°00'00" E	50.000
2379356.480	2527711.091		
		N 90°00'00" W	100.000
2379356.480	2527611.091		

Closure Error Distance> 0.00000
Total Distance> 300.000
Polyline Area: 5000 sq ft, 0.11 acres

Attachment 1 - SMP21-041 Settlement Agreement

Lot 6

Northing	Easting	Bearing	Distance
2379306.480	2527611.091		
		N 90°00'00" E	100.000
2379306.480	2527711.091		
		N 00°00'00" W	50.000
2379356.480	2527711.091		
		N 90°00'00" W	100.000
2379356.480	2527611.091		
		S 00°00'00" E	50.000
2379306.480	2527611.091		

Closure Error Distance> 0.00000
Total Distance> 300.000
Polyline Area: 5000 sq ft, 0.11 acres

Lot 7

Northing	Easting	Bearing	Distance
2379286.480	2527711.091		
		N 90°00'00" W	180.000
2379286.480	2527531.091		
		N 00°00'00" W	70.000
2379356.480	2527531.091		
		N 90°00'00" E	80.000
2379356.480	2527611.091		
		S 00°00'00" E	50.000
2379306.480	2527611.091		
		N 90°00'00" E	100.000
2379306.480	2527711.091		
		S 00°00'00" E	20.000
2379286.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 500.000
Polyline Area: 7600 sq ft, 0.17 acres

Lot 8

Northing	Easting	Bearing	Distance
2379266.480	2527711.091		
		N 00°00'00" W	20.000
2379286.480	2527711.091		
		N 90°00'00" W	160.109
2379286.480	2527550.982		
		S 00°00'00" E	93.380
2379193.100	2527550.982		
		S 81°26'30" E	41.359
2379186.946	2527591.880		
		N 90°00'00" E	39.100
2379186.946	2527630.980		
		N 00°00'00" W	79.535
2379266.480	2527630.980		
		N 90°00'00" E	80.111
2379266.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 513.594
Polyline Area: 9439 sq ft, 0 acres

Lot 9

Northing	Easting	Bearing	Distance
2379186.946	2527701.100		
		N 90°00'00" W	70.120
2379186.946	2527630.980		
		N 00°00'00" W	79.535
2379266.480	2527630.980		
		N 90°00'00" E	80.111
2379266.480	2527711.091		
		S 00°00'00" E	77.983
2379188.497	2527711.091		
		S 81°10'15" W	10.110
2379186.946	2527701.100		

Closure Error Distance> 0.00000
Total Distance> 317.859
Polyline Area: 6364 sq ft, 0 acres

Attachment 1 - SMP21-041 Settlement Agreement

BLOCK B
Lot 1

Northing	Easting	Bearing	Distance
2379196.264	2527761.091		
		N 00°00'00" W	62.500
2379258.764	2527761.091		
		N 90°00'00" E	80.000
2379258.764	2527841.091		
		S 00°00'00" E	62.500
2379196.264	2527841.091		
		N 90°00'00" W	80.000
2379196.264	2527761.091		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0 acres

Lot 2

Northing	Easting	Bearing	Distance
2379258.764	2527761.091		
		N 00°00'00" W	62.500
2379321.264	2527761.091		
		N 90°00'00" E	80.000
2379321.264	2527841.091		
		S 00°00'00" E	62.500
2379258.764	2527841.091		
		N 90°00'00" W	80.000
2379258.764	2527761.091		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0 acres

Lot 3

Northing	Easting	Bearing	Distance
2379321.264	2527761.091		
		N 00°00'00" W	62.500
2379383.764	2527761.091		
		N 90°00'00" E	80.000
2379383.764	2527841.091		
		S 00°00'00" E	62.500
2379321.264	2527841.091		
		N 90°00'00" W	80.000
2379321.264	2527761.091		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0 acres

Attachment 1 - SMP21-041 - Plat Agreement

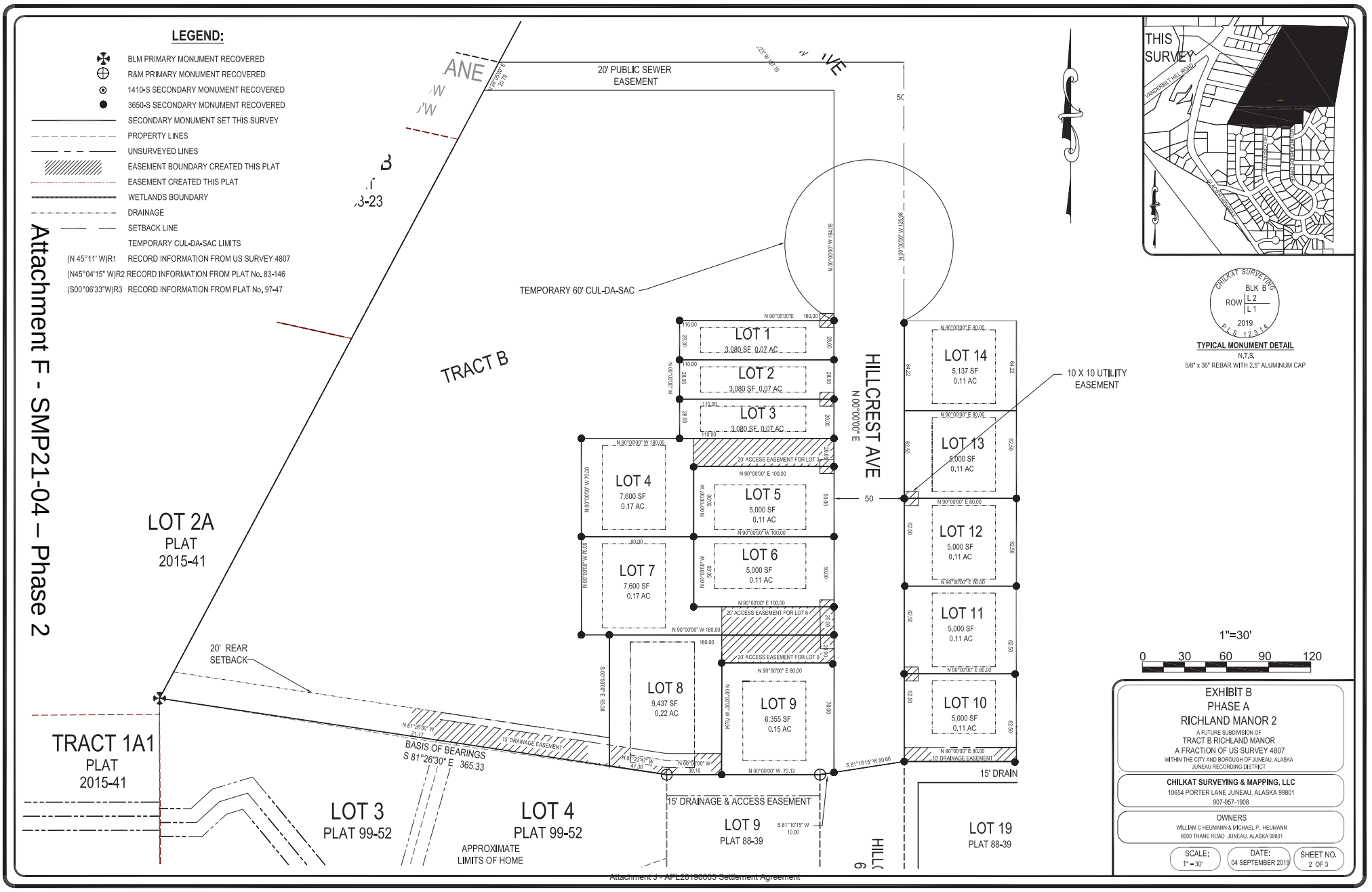
Tract B1

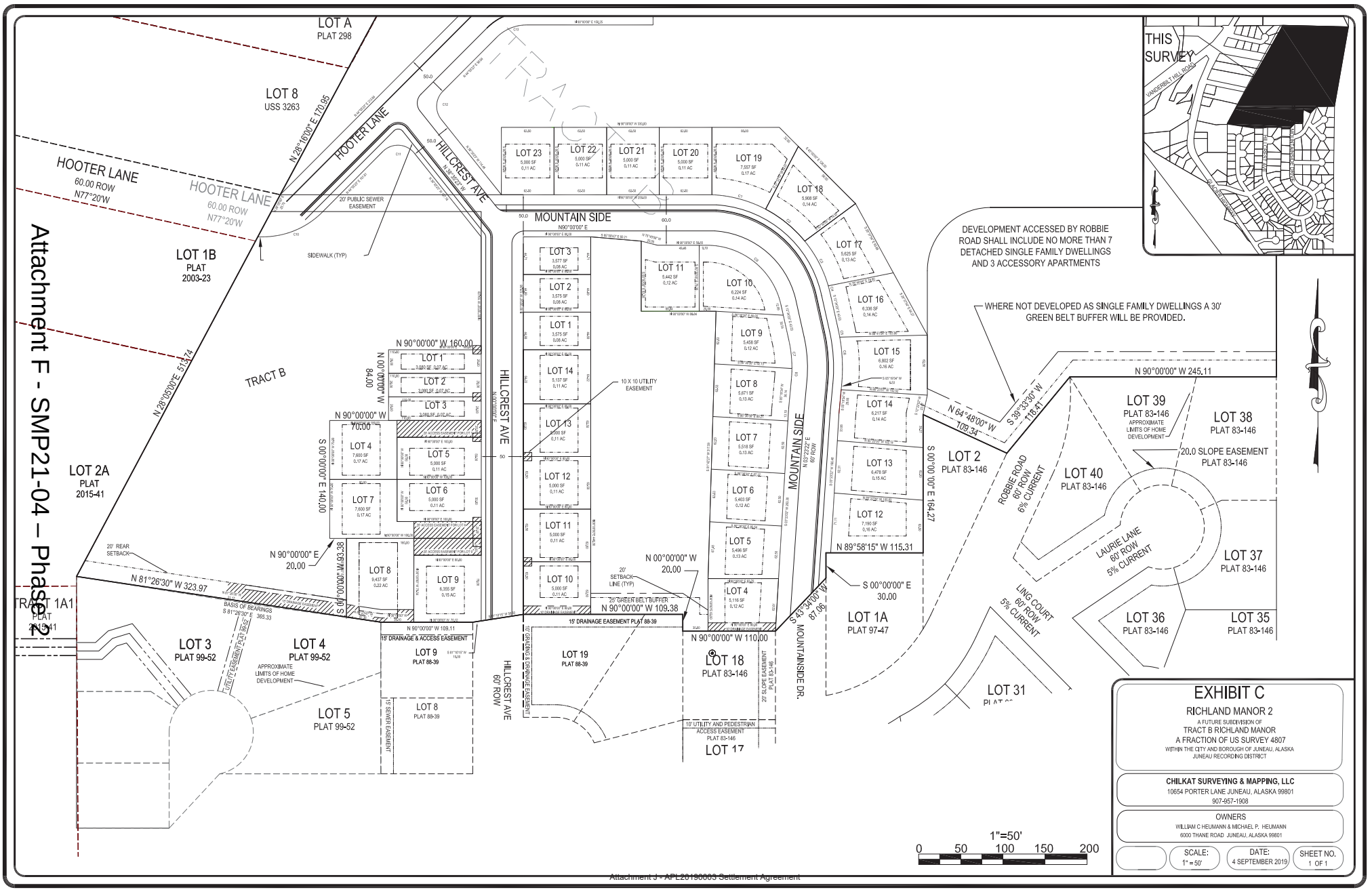
Northing	Easting	Bearing	Distance
2379193.100	2527550.982		
		N 81°26'30" W	323.971
2379241.313	2527230.618		
		N 28°05'00" E	513.740
2379694.567	2527472.464		
		N 28°16'00" E	170.950
2379845.132	2527553.422		
		N 28°30'30" E	784.080
2380534.140	2527927.653		
		S 89°52'00" E	726.810
2380532.449	2528654.461		
		S 00°02'30" E	1054.150
2379478.299	2528655.227		
		N 90°00'00" W	245.110
2379478.299	2528410.117		
		S 39°33'10" W	118.408
2379387.002	2528334.716		
		N 64°48'00" W	109.340
2379433.556	2528235.782		
		S 00°00'00" E	164.270
2379269.286	2528235.782		
		N 89°58'15" W	115.310
2379269.345	2528120.472		
		S 00°00'00" E	30.000
2379239.345	2528120.472		
		S 43°34'00" W	87.060
2379176.264	2528060.471		
		N 90°00'00" W	110.000
2379176.264	2527950.471		
		N 00°00'00" W	20.000
2379196.264	2527950.471		
		N 90°00'00" W	109.380
2379196.264	2527841.091		
		N 00°00'00" W	187.500
2379383.764	2527841.091		
		N 90°00'00" W	80.000
2379383.764	2527761.091		
		N 00°00'00" W	138.720
2379522.484	2527761.091		
		N 90°00'00" W	160.000
2379522.484	2527601.091		
		S 00°00'00" E	96.000
2379426.484	2527601.091		
		N 90°00'00" W	70.000
2379426.484	2527531.091		
		S 00°00'00" E	140.000
2379286.484	2527531.091		
		N 90°00'00" E	19.890
2379286.484	2527550.981		
		S 00°00'00" E	93.383
2379193.101	2527550.981		

Attachment 1 - SMP21-041 Settlement Agreement

Closure Error Distance> 0.00090 Error Bearing> S 81°26'30" E
Closure Precision> 1 in 6266245.1 Total Distance> 5668.072
Polyline Area: 1253007 sq ft, 29 acres

Attachment 1 - SMP21-04 Settlement Phase Agreement


LEGEND:
BLM PRIMARY MONUMENT RECOVERED
R&M PRIMARY MONUMENT RECOVERED
1410-S SECONDARY MONUMENT RECOVERED
3650-S SECONDARY MONUMENT RECOVERED
SECONDARY MONUMENT SET THIS SURVEY
PROPERTY LINES
UNSURVEYED LINES
EASEMENT BOUNDARY CREATED THIS PLAT
EASEMENT CREATED THIS PLAT
WETLANDS BOUNDARY
DRAINAGE
SETBACK LINE
TEMPORARY CUL-DA-SAC LIMITS
(N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
(N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
(S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
Attachment F - SMP21-04 – Phase 2
20' PUBLIC SEWER EASEMENT
TEMPORARY 60' CUL-DA-SAC
TRACT B
HILLCREST AVE
N 00°00'00" E
LOT 1 3,080 SF 0.07 AC
LOT 2 3,080 SF 0.07 AC
LOT 3 3,080 SF 0.07 AC
LOT 4 7,600 SF 0.17 AC
LOT 5 5,000 SF 0.11 AC
LOT 6 5,000 SF 0.11 AC
LOT 7 7,600 SF 0.17 AC
LOT 8 9,437 SF 0.22 AC
LOT 9 6,355 SF 0.15 AC
LOT 10 5,000 SF 0.11 AC
LOT 11 5,000 SF 0.11 AC
LOT 12 5,000 SF 0.11 AC
LOT 13 5,000 SF 0.11 AC
LOT 14 5,137 SF 0.11 AC
20' ACCESS EASEMENT FOR LOT 3
20' ACCESS EASEMENT FOR LOT 6
20' ACCESS EASEMENT FOR LOT 8
10 X 10 UTILITY EASEMENT
10' DRAINAGE EASEMENT
15' DRAIN
15' DRAINAGE & ACCESS EASEMENT
20' REAR SETBACK
15' DRAINAGE EASEMENT
BASIS OF BEARINGS S 81°26'30" E 365.33
LOT 2A PLAT 2015-41
TRACT 1A1 PLAT 2015-41
LOT 3 PLAT 99-52
LOT 4 PLAT 99-52
LOT 9 PLAT 88-39
LOT 19 PLAT 88-39
APPROXIMATE LIMITS OF HOME
THIS SURVEY
VANDERBILT HILL ROAD
TYPICAL MONUMENT DETAIL
N.T.S.
5/8" x 36" REBAR WITH 2.5" ALUMINUM CAP
1"=30'
0 30 60 90 120
EXHIBIT B
PHASE A
RICHLAND MANOR 2
A FUTURE SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT
CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908
OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801
SCALE: 1" = 30'
DATE: 04 SEPTEMBER 2019
SHEET NO. 2 OF 3



Attachment F - SMP21-04 – Phase 2

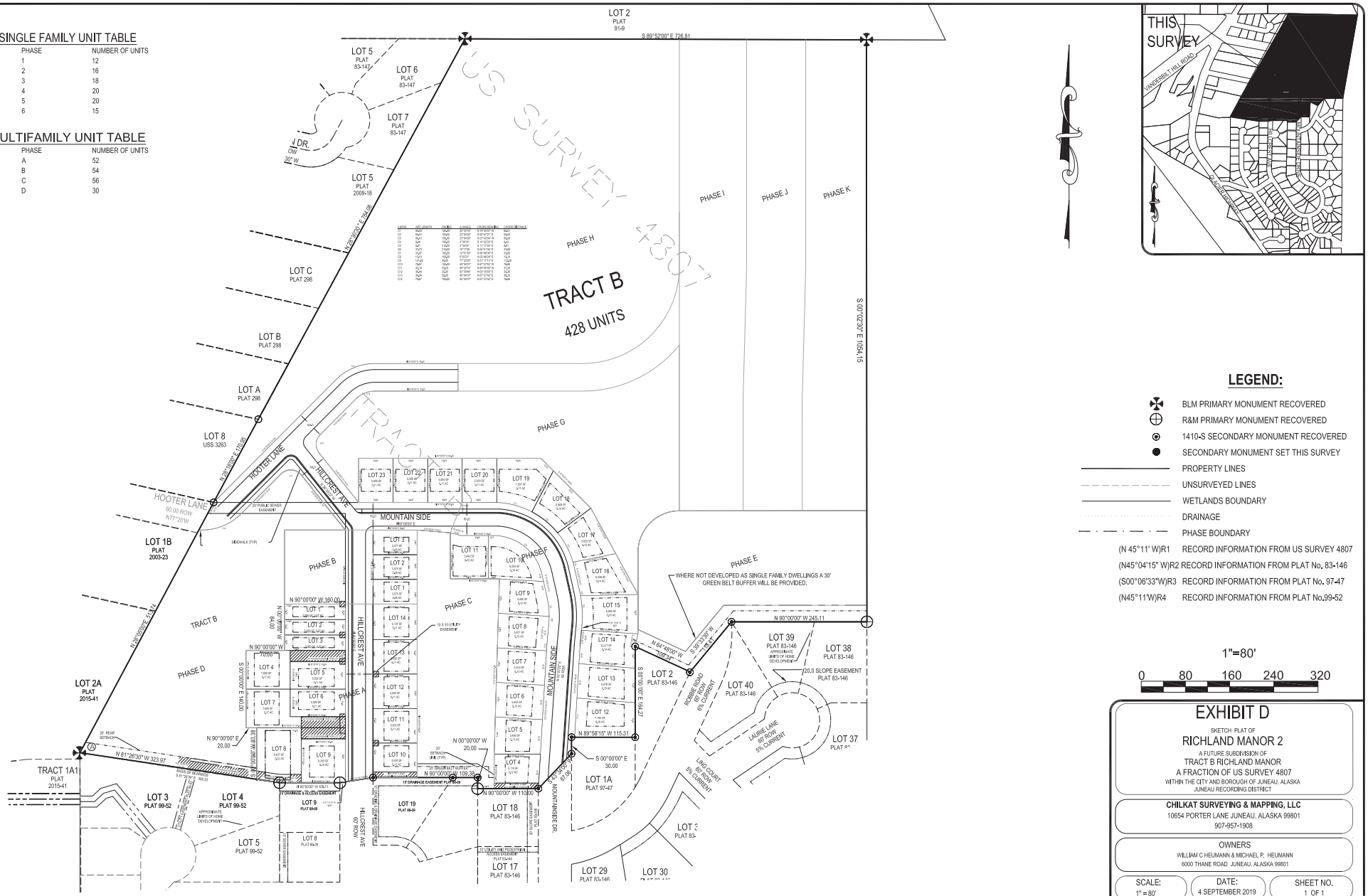
Attachment F - SMP21-04 – Phase 2

SINGLE FAMILY UNIT TABLE

PHASE	NUMBER OF UNITS
1	12
2	16
3	18
4	20
5	20
6	15

MULTIFAMILY UNIT TABLE

PHASE	NUMBER OF UNITS
A	52
B	54
C	56
D	30



LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- WETLANDS BOUNDARY
- DRAINAGE
- PHASE BOUNDARY

(N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
(N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
(S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
(N45°11'W)R4 RECORD INFORMATION FROM PLAT No.99-52

1"=80'

0 80 160 240 320

EXHIBIT D

SKETCH PLAT OF
RICHLAND MANOR 2
A FUTURE SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SCALE:	DATE:	SHEET NO.
1" = 80'	4 SEPTEMBER 2019	1 OF 1

Minutes
Planning Commission
Regular Meeting
CITY AND BOROUGH OF JUNEAU
Michael LeVine, Chairman
July 28, 2020

I. ROLL CALL

Michael LeVine, Chairman, called the Regular Meeting of the City and Borough of Juneau (CBJ) Planning Commission (PC), held in the Assembly Chambers of the Municipal Building, to order at 7:08 p.m.

Commissioners present: All Commissioners present via video conferencing – Michael LeVine, Chairman; Nathaniel Dye, Vice Chairman; Paul Voelckers, Clerk; Travis Arndt, Assistant Clerk; Ken Alper; Dan Hickok; Weston Eiler; Josh Winchell; Erik Pedersen

Commissioners absent: None

Staff present: Jill Maclean, CDD Director; Emily Wright, Law; Allison Eddins, CDD; Laurel Christian, CDD

Assembly members: None

II. REQUEST FOR AGENDA CHANGES AND APPROVAL OF AGENDA - None

III. APPROVAL OF MINUTES

A. June 23, 2020 Draft Minutes – Planning Commission Meeting

MOTION: *by Mr. Voelckers to approve the Planning Commission June 23, 2020, Planning Commission Committee of the Whole Meeting minutes.*

The motion passed with no objection.

IV. BRIEF REVIEW OF THE RULES FOR PUBLIC PARTICIPATION – Mr. LeVine explained the rules and process for public participation.

V. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS - None

VI. ITEMS FOR RECONSIDERATION - None

VII. CONSENT AGENDA

Mr. Pedersen announced a conflict of interest as he is employed by the Applicant and has worked on the project. He did not participate in the vote for CSP2020 0005.

CSP2020 0005:	Asphalt rehabilitation and reconstruction of the Juneau Douglas Bridge, roundabout, and a portion of the South Douglas Highway
Applicant:	State of Alaska Department of Transportation & Public Facilities
Location:	Juneau Douglas Bridge, Douglas Roundabout, a little ways south on Douglas Highway

Staff Recommendation

Staff recommends the Planning Commission adopt the Director's analysis and findings and **APPROVE** the proposed asphalt rehabilitation and reconstruction of the Juneau Douglas Bridge, roundabout, and a portion of South Douglas Highway.

MOTION: *by Mr. Dye to accept staff's findings, analysis and recommendations and approve CSP2020 0005. Mr. Dye recognized a comment had been received regarding new construction of bicycle facilities. Mr. Dye felt comfortable with the motion since new construction was outside of the scope of the project.*

The motion passed with no objection.

CSP2020 0006 moved to Regular Agenda by Mr. Dye

~~**CSP2020 0006:**~~	~~Land disposal and sale of land to Taku Terrace Condos~~
~~**Applicant:**~~	~~City & Borough of Juneau~~
~~**Location:**~~	~~1220 Glacier Avenue~~

~~**Staff Recommendation**~~

~~Staff recommends the Planning Commission adopt the Director's analysis and findings and forward a recommendation of **APPROVAL** with one advisory condition to the CBJ Assembly for the sale of CBJ-owned land (1-C03-0-J01-000-1) to the Taku Terrace Condo Association.~~

~~Advisory Condition:~~

~~1. If any human remains are discovered during development activity, the individual responsible for managing the property should immediately notify the State Historic Preservation Officer at the Department of Natural Resources and all work should cease~~

~~until work is authorized by the agency with jurisdiction. Destruction or removal of human remains may be a crime.~~

SMF2020 0001:	Final Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels)
Applicant:	William & Michael Heumann
Location:	4506 Hillcrest Avenue

Staff Recommendation

Staff recommends the Planning Commission adopt the Director's analysis and findings and APPROVE the requested final plat. The final plat approval allows for the Chilkat Vistas Subdivision Phase I – a phased major subdivision – creating 14 lots and 1 large tract for future development (15 lots total). This approval allows the applicant to record the final plat with the State Recorder's Office.

MOTION: *by Mr. Dye to accept staff's findings, analysis and recommendations and approve SMF2020 0001.*

The motion passed with no objection.

VIII. UNFINISHED BUSINESS - None

IX. REGULAR AGENDA

CSP 2020 0006 moved from Consent Agenda by Mr. Dye

CSP2020 0006:	Land disposal and sale of land to Taku Terrace Condos
Applicant:	City & Borough of Juneau
Location:	1220 Glacier Avenue

Staff Recommendation

Staff recommends the Planning Commission adopt the Director's analysis and findings and forward a recommendation of **APPROVAL** with one advisory condition to the CBJ Assembly for the sale of CBJ-owned land (1-C03-0-J01-000-1) to the Taku Terrace Condo Association.

Advisory Condition:

1. If any human remains are discovered during development activity, the individual responsible for managing the property should immediately notify the State Historic Preservation Officer at the Department of Natural Resources and all work should cease

until work is authorized by the agency with jurisdiction. Destruction or removal of human remains may be a crime.

Staff Presentation

Ms. Eddins presented CSP2020 0006.

Questions from Commissioners

Commissioners and staff discussed concerns that the CBJ would have no way to enforce the Advisory Condition regarding human remains. Mr. Voelckers asked why the CBJ had added the Advisory Condition regarding human remains. Ms. Eddins explained that adding it as a Condition allows it to be displayed on the first page of the packet and ensures applicant awareness that there may be unknown or unmarked graves on the property.

Mr. Dye asked whether a replat of the lot would be an option to get rid of the nonconforming situation as the property is nonconforming for setbacks. Ms. Eddins explained that the property is nonconforming for several items including density, parking and access as well as setbacks and a replat would not correct all of those. Overall, she said, nonconforming for setback is not a big deal.

Commissioners noted the 2016 Lands Management Plan map is mislabeled. Mr. LeVine had concerns that since the Land Management plan was mislabeled, they could not actually say it is in accordance with the Comprehensive Plan. Ms. Wright confirmed that in order to make things as clear as possible, the Commission should make a two-part recommendation to correct the Plan and then to approve the CSP.

Applicant Testimony

Mr. Bleidorn, CBJ Lands Manager, spoke to Commission concerns regarding an easement for the utilities on the property and explained that there would be one when the land sold. Mr. Dye asked whether CBJ would be willing to sell more land with this parcel to remove the nonconforming setback situation. Mr. Bleidorn said he could look into that but did not know if it would encroach on any graves. He added that there would likely be resistance from the Parks department if they did attempt to enlarge the parcel.

Public Testimony

Tom Locher, 933 C Street, told the Commission he has served on the Home Owners Association Board and he said he thinks they have covered the subject well.

Martin Stepetin, W Juneau, urged the Commission to take care to ensure any remains are protected.

Questions for Staff

Mr. Dye asked for clarification as to why the Advisory Condition was included and asked what was CBJ intent in including it. Ms. Maclean explained that it was included as a notice to inform the purchaser of the process to be followed in case human remains or undocumented gravesites were discovered. Mr. Dye felt that the notice was made by including it in the staff report and by documentation of the discussion in the minutes of this meeting.

Mr. Pedersen asked whether the sale would be accomplished via quit-claim deed or a warranty deed. Ms. Wright answered that would be a decision made by the Lands Department. She added the Lands Department tends to use quit-claim deeds.

At approximately 8:00 p.m. it was noted that Mr. Winchell was no longer in the Zoom meeting and it was unclear when the connection had been lost.

MOTION: *by Mr. Voelckers to accept staff's findings, analysis and recommendations and approve CSP2020 0006 with 2 recommendations the first being to correct the 2016 Lands Management Plan and the second to approve the sale of the property.*

MOTION to Amend Original Motion: *by Mr. Dye to amend by removing the Advisory Condition and make it a Condition.*

Mr. Voelckers asked for Legal advice from Ms. Wright who explained that it is cleaner to leave it as an advisory condition.

Roll Call Vote: Yes: Mr. Dye, Mr. Alper, Mr. LeVine; No: Mr. Hickok, Mr. Pedersen, Mr. Eiler, Mr. Arndt, Mr. Voelckers

The motion to amend failed.

MOTION to Amend Original Motion: *by Mr. LeVine to amend the finding to read: In accordance with CBJ 49.15.580, staff finds the proposed land sale to the Taku Terrace Condo Association complies with the Title 49 Land use Code and is in general conformity with* ***the intent of*** *adopted plans, specifically the 2013 Compr*ehensive Plan and the goals and objectives in the 2016 Lands Management Plan. ***Based on staff assurances, the Planning Commission is confident that the retain designation for the subject parcel is in error.***

Roll Call Vote: Yes: Mr. LeVine, Mr. Arndt, Mr. Eiler, Mr. Pedersen, Mr. Hickok, Mr. Alper, Mr. Voelckers, Mr. Dye

The motion to amend passed.

MOTION to Amend Original Motion: ~~*by Mr. LeVine to strike the advisory condition and make it a finding adding the clause* ***the Planning Commission emphasizes the fact that*** *to the beginning of it.*~~

~~*Mr. Arndt was concerned that removing the advisory condition would remove it from the letter. Ms. MacLean said that in this particular case, since it would be an amendment to findings, it would appear on the face of the letter. Normally, however, findings are not included in the letter of recommendation.*~~

Mr. LeVine rescinded the amendment.

Mr. Voelckers asked if there was particular concern with the term 'advisory condition' that was causing them to struggle with CSP. Mr. Dye answered that advisory conditions often don't work well because there is no enforceability and they can be ignored. If the Commission feels strongly that it should be stated then it should be a condition and it should be justified. Mr. Arndt added that the reasoning given for including the advisory condition was to inform the purchaser. However, the recommendation will go to the Lands Department as the applicant and to the Assembly but will not be given directly to the purchaser.

MOTION to Amend Original Motion: *by Mr. Arndt to amend to strike the advisory condition and to add* ***The Planning Commission recommends notifying to the end user that if any human remains are discovered during development activity, the individual responsible for managing the property should immediately notify the State Historic Preservation Officer at the Department of Natural Resources and all work should cease until work is authorized by the agency with jurisdiction. Destruction or removal of human remains may be a crime*** *as a third recommendation to the Assembly.*

Roll Call Vote: Yes: Mr. Arndt, Mr. Eiler, Mr. Pedersen, Mr. Dye, Mr. Voelckers, Mr. Alper, Mr. Hickok, Mr. LeVine

The motion to amend passed.

AMENDED MOTION: to *accept staff's findings, analysis and recommendations and approve CSP2020 0006 with three (3) recommendations and a finding to read:*

Finding: In accordance with CBJ 49.15.580, staff finds the proposed land sale to the Taku Terrace Condo Association complies with the Title 49 Land use Code and is in general conformity with the intent of adopted plans, specifically the 2013 Comprehensive Plan and the goals and objectives in the 2016 Lands Management Plan. Based on staff assurances, the Planning Commission is confident that the retain designation for the subject parcel is in error.

Recommendations:

1) *Correct the 2016 Lands Management Plan*
2) *Approve the sale of the property*
3) *The Planning Commission recommends notifying to the end user that if any human remains are discovered during development activity, the individual responsible for managing the property should immediately notify the State Historic Preservation Officer at the Department of Natural Resources and all work should cease until work is authorized by the agency with jurisdiction. Destruction or removal of human remains may be a crime.*

The motion as amended passed with no objection.

X. BOARD OF ADJUSTMENT – None

XI. OTHER BUSINESS None

XII. STAFF REPORTS

- Ms. Wright reported on the status of pending appeals.

Ms. Maclean reported:

- She is working to schedule Title 49 meeting.
- She will join the CBJ Chief Housing Officer in presenting to the Assembly Public Works Committee on August 10th.
- She will also be presenting to Lands Committee on August 10th.
- The next Blue Print meeting will be August 13th.
- Tim Felstead has resigned from CDD and interviewing for his replacement will begin in upcoming weeks.
- She will be scheduling to meet with the Governance committee soon.
- The next Planning Commission meeting will be August 11thand it will be a full agenda.

At 8:48 P.M., Mr. LeVine noted for the record that Mr. Winchell had contacted him and was been unable to reconnect with the Zoom meeting. Mr. LeVine stated this should not count toward the count of absences allowed.

XIII. COMMITTEE REPORTS – None

XIV. LIAISON REPORTS – None

XV. CONTINUATION OF PUBLIC PARTICIPATION ON NON-AGENDA ITEMS –None

XVI. PLANNING COMMISSION COMMENTS AND QUESTIONS

Mr. Voelckers complimented Mr. LeVine on another successful Zoom meeting.

Mr. Arndt spoke to the need to find an alternate way to convey information to applicants other than through the use of conditions. Mr. LeVine agreed with Mr. Arndt and suggested there could be other ways to inform applicants.

XVII. **EXECUTIVE SESSION** – None

XVIII. **ADJOURNMENT** – 8:55 P.M.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

PLANNING COMMISSION STAFF REPORT
MAJOR SUBDIVISION SMF2022 0003
HEARING DATE: FEBRUARY 14, 2023

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/community-development
155 S. Seward Street • Juneau, AK 99801

DATE: February 3, 2023

TO: Michael LeVine, Chair, Planning Commission

BY: Irene Gallion, Senior Planner

THROUGH: Jill Maclean, Director, AICP

PROPOSAL: Applicant requests a final plat review for Chilkat Vistas Phase II creating 13 lots and 3 tracts in a D15 zone.

STAFF RECOMMENDATION: Approval with Conditions

KEY CONSIDERATIONS FOR REVIEW:

- Preliminary plat approved (SMP2021 0004)
- Bonding is in progress.
- Comments from CBJ's General Engineering (GE) will be addressed before plat finalization.

GENERAL INFORMATION	
Property Owner	Michael and William Heumann
Applicant	Michael and William Heumann
Property Address	Hillcrest Ave.
Legal Description	Chilkat Vistas Tract A
Parcel Number	7B1001160011
Zoning	D15- Multi-Family (MF)
Lot Size	1,242,513 square feet, 28.5242 acres
Water/Sewer	CBJ
Access	Hillcrest Ave
Existing Land Use	Vacant
Associated Applications	BLD2022 0665 (Grading)

ALTERNATIVE ACTIONS:

1. **Amend:** amend the approval to require conditions.
2. **Deny:** deny the permit and adopt new findings for items 1-3 below that support the denial.
3. **Continue:** to a future meeting date if determined that additional information or analysis is needed to make a decision, or if additional testimony is warranted.

ASSEMBLY ACTION REQUIRED:

Assembly action is not required for this permit.

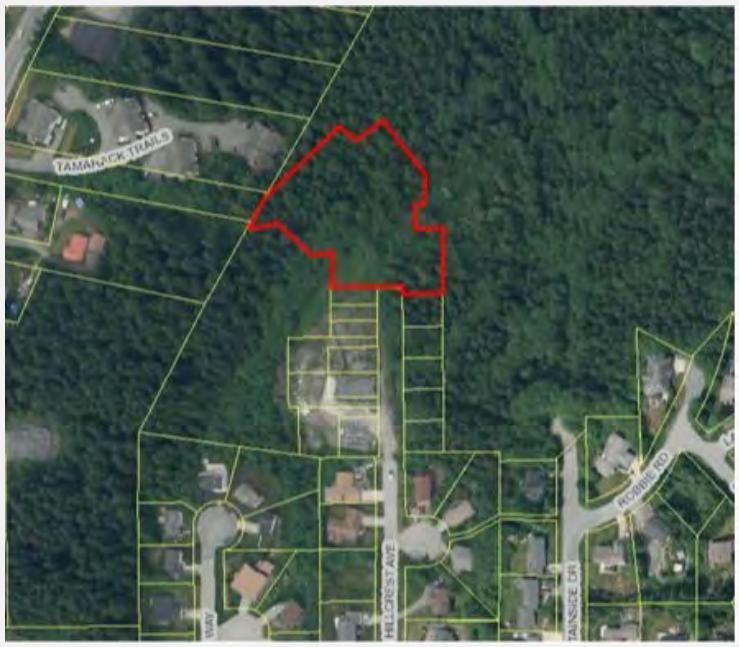
STANDARD OF REVIEW:

- Quasi-judicial decision
- Requires five (5) affirmative votes for approval
- Code Provisions:
  - CBJ 49.15
  - CBJ 49.55
  - CBJ 49.80

The Commission shall hear and decide the case per CBJ 49.15.400(a) - Purpose and applicability. *The purpose of this article is to facilitate the subdivision of land to promote the public health, safety, and general welfare of the citizens of the CBJ in accordance with the Comprehensive Plan of the City and Borough of Juneau, Alaska.*

And per CBJ49.15.402(a) - *A major subdivision permit is required for subdivisions resulting in 14 or more lots.*

SITE FEATURES AND ZONING



SURROUNDING ZONING AND LAND USES	
North (D18)	Vacant
South (D15)	Residential
East (RR)	Vacant
West (D15)	Residential

SITE FEATURES	
Anadromous	No
Flood Zone	No
Hazard	None mapped
Hillside	Yes
Wetlands	Yes (fill is permitted)
Parking District	No
Historic District	No
Overlay Districts	No

BACKGROUND INFORMATION

Project Description – The Applicant proposes a final plat creating 13 lots and 3 tracts (**Attachment A**). Subdivision had preliminary approval under SMP2022 0004 (**Attachment B**).

Conditions are proposed for two outstanding items:

- Bonding is in process. The final plat (Mylar) cannot be signed by the Chair of the Planning Commission until the bonding is completed [CBJ 49.15.402(g)(1)].
- Comments from GE need to be addressed, and do not impact Title 49 decisions.

Background -

The table below summarizes relevant history for the lot and proposed development.

Item	Summary
PAC2020 0064	Pre-application conference for Phase II
SMP2019 0004/SMF2020 0001	Phase I of Chilkat Vistas subdivision
SMP2021 0004	Preliminary Plat Approval for Phase II
BLD2022 0665	Grading permit for initial Phase II work: remainder will be covered under bonding.

ANALYSIS

Compliance with Title 49 - No substantive changes were made to the plat since approval of SMP2021 0004. The plat complies with Title 49.

Preliminary Plat Conditions of Approval -

Condition	Status	Summary
1. Provide a wetlands fill permit from the United States Army Corps of Engineers.	☒Met ☐Unmet ☐On-going	Attachment A, Page 5
2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.	☒Met ☐Unmet ☐On-going	Attachment C
3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the Director of Engineering & Public Works for compliance with CBJ 49.35.140.	☒Met ☐Unmet ☐On-going	Attachment D
4. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.	☒Met ☐Unmet ☐On-going	Attachment E, in process.
5. Prior to approval of the final plat, the developer shall submit a final drainage plan to be approved by CBJ Engineering & Public Works. This drainage plan must be prepared by an Alaskan licensed engineer in accordance with CBJ 49.35.510.	☒Met ☐Unmet ☐On-going	Attachment F

GE proposed plat edits during review of the draft dated January 24, 202 . (**Attachment G**). Proposed edits regard plat legibility.

By January 30, 2023 the Applicant anticipates rough excavation and placement of base rock. Utilities to lots 15-19 were installed prior to required Phase 1 paving. Bonding will be required for the remainder of the improvements. A flow chart for required bonding is presented in **Attachment H**.

The Applicant has expressed interest in using lots created under this subdivision for bond surety. CBJ cannot yet accept the lots created from this subdivision for surety because the lots do not legally exist until a final plat has

been recorded. The Department of Law has reviewed and approved documents for cash surety under a performance bond or deposit in escrow [CBJ 49.55.010(3),(4)], (Attachment E). A reconveyance agreement [CBJ 49.55.010(5)] can be entered into after the subdivision is recorded and a CBJ parcel number assigned.

The Commission Chair will sign the final plat after the requirements of Title 49 have been met, including edits required by GE and bonding documentation [CBJ 49.15.402(g)(1)].

Conditions:

Condition 1: Bonding will be fully executed before the Chair of the Planning Commission signs the final plat.

Condition 2: CBJ General Engineering comments on the Applicant's draft plat dated January 24, 2023 must meet GE's requirements before the Chair of the Planning Commission signs the final plat.

AGENCY REVIEW

CDD conducted an agency review comment period between December 21, 2022 and January 23, 2023. Proposed final plat edits are included in **Attachment G**. Fire Marshall comments are in **Attachment I.**

Agency	Summary
CBJ GE	Edits to the final plat submitted.
CBJ CCFR	Nothing to add at this time

PUBLIC COMMENTS

CDD conducted a public comment period between January 4, 2023 and January 30, 2023. Public notice was mailed to property owners within 500 feet of the proposed subdivision (**Attachment J**). A web site was created to share basic information with the public (https://juneau.org/community-development/short-term-projects). A public notice sign was also posted on-site two weeks prior to the scheduled hearing (**Attachment K**). There were no public comments submitted at time of writing this staff report.

FINDINGS

Final plat approval criteria - Per CBJ 49.15.402(f)(3) the Director makes the following findings:

1. ***Has the applicant complied with any conditions or plat notes as required in the notice of decision approving the preliminary plat?***

   Analysis: GE proposed revisions to the final plat are not substantive to Title 49 decisions. The inter-departmental bonding process is under way.

   Finding: Yes. All conditions of preliminary plat approval can be met.

2. ***Has the applicant constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010?***

   Analysis: Rough excavation and placement of base is competed. Utilities to lots 15-19 were constructed under Phase 1. The inter-departmental bonding process is under way.

   Finding: Yes. The applicant is in the process of providing a financial guarantee for construction of required improvements.

3. ***Does the final plat meet the standards set forth in CBJ 49.15.412 for final plats?***

   Analysis: No additional analysis needed.

   Finding: Yes. The final plat complies with CBJ 49.15.415 Final Plat Standards.

RECOMMENDATION

Staff recommends the Planning Commission adopt the Director's analysis and findings and **APPROVE WITH CONDITIONS** the requested final plat. The permit would allow the final plat approval for the final plat review for Chilkat Vistas Phase II creating 13 lots and 3 tracts in a D15 zone.

The approval is subject to the following conditions:

1. Bonding will be fully executed before the Chair of the Planning Commission signs the final plat.
2. CBJ General Engineering comments on the Applicant's draft plat dated January 24, 2023 must meet GE's requirements before the Chair of the Planning Commission signs the final plat.

Proposed Motions:

If the Commissioner would like to discuss conditions or findings differing from those staff has proposed:

I move SMF2022 0003 for discussion.

If the Commissioner would like to accept staff's analysis and findings:

I move the Commission accept staff findings and analysis, and approve SMF2022 0003, final plat review for Chilkat Vistas Phase II creating 13 lots and 3 tracts in a D15 zone. I ask unanimous consent.

STAFF REPORT ATTACHMENTS

Item	Description
Attachment A	Application Packet
Attachment B	Notice of Decision SMP2021 0004
Attachment C	Certificate of Taxes Paid, Copy
Attachment D	Approved Construction Plan
Attachment E	Bonding paperwork
Attachment F	Approved Drainage Plan
Attachment G	Revised final plat, and comments from GE
Attachment H	Bonding flow chart
Attachment I	Abutters Notice
Attachment J	Public Notice Sign

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

DEVELOPMENT PERMIT APPLICATION

NOTE: Development Permit Application forms must accompany all other Community Development Department land use applications.

To be completed by Applicant

PROPERTY LOCATION

Physical Address

Legal Description(s) (Subdivision, Survey, Block, Tract, Lot)
Chilkat Vistas Tract A

Parcel Number(s)
7B1001160011

☐ This property located in the downtown historic district
☐ This property located in a mapped hazard area, if so, which _____

LANDOWNER/ LESSEE

Property Owner	Contact Person
Michael Heumann Wm Heumann	Michael Heumann
Mailing Address: 6000 Thane Rd. Juneau, Ak. 99801	Phone Number(s): 971-261-8014
E-mail Address: chilkatvistas@gmail.com	

LANDOWNER/ LESSEE CONSENT Required for Planning Permits, not needed on Building/ Engineering Permits

I am (we are) the owner(s)or lessee(s) of the property subject to this application and I (we) consent as follows:
A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission.
B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application.

X _____ Landowner/Lessee Signature — 12-23-22 Date

X _____ Landowner/Lessee Signature — 12/23/22 Date

NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.

APPLICANT If the same as OWNER, write "SAME"

Applicant: SAME	Contact Person
Mailing Address	Phone Number(s)
E-mail Address	

X _____ Applicant's Signature — 12-23-22 Date of Application

----------DEPARTMENT USE ONLY BELOW THIS LINE----------

This form and all documents associated with it are public record once submitted.

Intake Initials	
Case Number	Date Received

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

SUBDIVISION AND DEVELOPMENT PLAN APPLICATION

See subdivision hand-outs for more information regarding the permitting process and the materials required for a complete application.
NOTE: Must be accompanied by a DEVELOPMENT PERMIT APPLICATION form.

To be completed by Applicant

PROJECT SUMMARY

Number of Existing Parcels 1 Total Land Area 28.52 acres Number of Resulting Parcels 13 lots 3 tracts

HAS THE PARCEL BEEN CREATED BY A MINOR SUBDIVISION IN THE PRECEDING 24 MONTHS

◉ NO ○ YES Case Number _____

TYPE OF SUBDIVISION OR PLATTING APPROVAL REQUESTED

MINOR DEVELOPMENT
(changing or creating 13 or fewer lots)

- ○ Preliminary Plat (MIP)
- ◉ Final Plat (MIF)
- ○ Panhandle Subdivision
- ○ Accretion Survey
- ○ Boundary Adjustment
- ○ Lot Consolidation (SLC)
- ○ Bungalow Lot Subdivision
- ○ Common Wall/Zero Lot Subdivision
- ○ Other _____

MAJOR DEVELOPMENT
(changing or creating 14 or more lots)

- ○ Preliminary Plat (SMP)
- ◉ Final Plat (SMF)
- ○ Preliminary Development Plan – PUD (PDP)
- ○ Final Development Plan – PUD (PDF) Preliminary
- ○ Development Plan – ARS (ARP) Final
- ○ Development Plan – ARS (ARF)
- ○ Bungalow Lot Subdivision
- ○ Common Wall/Zero Lot Subdivision
- ○ Other _____

ALL REQUIRED DOCUMENTS ATTACHED

- ☐ **Pre-application conference notes**
- ☐ **Narrative including:**
  - ☐ Legal description(s) of property to be subdivided
  - ☐ Existing structures on the land
  - ☐ Zoning district
  - ☐ Density
  - ☐ Access
  - ☐ Current and proposed use of any structures
  - ☐ Utilities available
  - ☐ Unique characteristics of the land or structure(s)
- ☐ **Preliminary Plat checklist**

----------**DEPARTMENT USE ONLY BELOW THIS LINE**----------

SUBDIVISION/PLATTING FEES	Fees	Check No.	Receipt	Date
Application Fees	$_____			
Admin. of Guarantee	$_____			
Adjustment	$_____			
Total Fee	$_____			

For assistance filling out this form, contact the Permit Center at 586-0770.

Case Number	Date Received

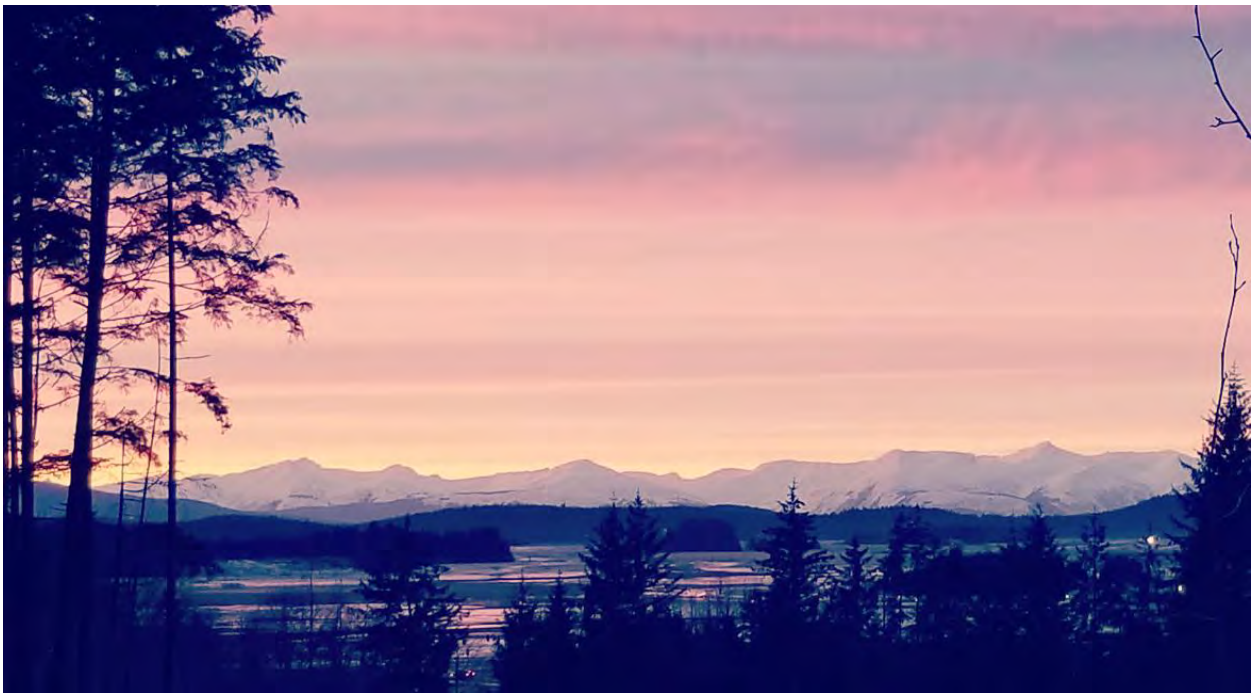
INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

Chilkat Vistas LLC

6000 Thane Rd

Juneau, AK 99801

Chilkat Vistas Subdivision Phase Two



Final Plat Narrative:

Chilkat Vistas Subdivision Phase Two is a major subdivision of a 28 acre tract, Chilkat Vistas Tract A, into 13 single family lots and 3 large tracts. Of the 13 lots, 4 are standard lots and 9 are bungalow lots. There are no existing structures one the land. Chilkat Vistas Tract A is located in a D-15 Zoning District which allows up to 15 units per acre. Existing access to the tract is available from Glacier Highway via the presently undeveloped Hooter Lane ROW, Hillcrest Avenue, Mountainside Drive, and Robbie Road. Utilities, including water, sewer, power and telecom are available from all access points. There are no unique characteristics of the land. Chilkat Vistas Tract A is a on a gentle hillside of varying slopes covered by 2nd/3rd growth forest.

As required by the preliminary plat SMP 2021 0001 Notice of Decision, we have substantially completed the following conditions:

1. Provide a wetlands fill permit from the United States Army Corps of Engineers.
   Please see that attached permit, POA-2019-00066-M1.
2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.
   2022 taxes have been paid, a check for the estimated 2023 taxes has been sent out.

3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the Director of Engineering & Public Works for compliance with CBJ 49.35.140.

   Completed construction plans have been approved by EPW, construction of the improvement have begun.

4. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.

   Improvements are partially constructed and we will be bonding for the rest. We have obtained an appraisal for the Chilkat Vistas Tract A2, resulting from this final plat, that we are working towards using for bonding as part of a conveyance agreement. We also have sufficient cash reserves to bond for the remaining subdivision improvements should the need arise. At present time we understand that CBJ is working through finalizing these agreements.

5. Prior to approval of the final plat, the developer shall submit a final drainage plan to be approved by CBJ Engineering & Public Works. This drainage plan must be prepared by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

   An engineered drainage plan was created by ProHNS as part of our design work for subdivision improvements. It has been approved by EPW.

DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
44669 STERLING HIGHWAY, SUITE B
SOLDOTNA, AK 99669-7915

July 18, 2022

Regulatory Division
POA-2019-00066-M1

Mr. William Heumann
6000 Thane Road
Juneau, Alaska 99801

Dear Mr. Heumann:

Enclosed is the signed Department of the Army (DA) permit modification, file number POA-2019-00066-M1, Gastineau Channel. This is the 1st permit modification of the original permit. Also enclosed is a Notice of Authorization that should be posted in a prominent location near the authorized work.

If changes to the plans or location of the work are necessary for any reason, plans must be submitted to us immediately. Federal law requires approval of any changes before construction begins.

Nothing in this letter excuses you from compliance with other Federal, State, or local statutes, ordinances, or regulations.

Please contact Matthew Brody via email at Matthew.T.Brody@usace.army.mil, by mail at the address above, or by phone at (907) 201-5023, if you have questions. For more information about the Regulatory program, please visit our website at www.poa.usace.army.mil/Missions/Regulatory.

Sincerely,

Michael R. Salyer

Michael Salyer
Chief, Southeast Section

Enclosures

DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
44669 STERLING HIGHWAY, SUITE B
SOLDOTNA, AK 99669-7915

July 18, 2022

Regulatory Division
POA-2019-00066-M1

DEPARTMENT OF THE ARMY
PERMIT MODIFICATION

Department of the Army permit number POA-2019-00066, Gastineau Channel, was issued to Mr. William Heumann on December 10, 2019, authorizing the placement of fill material into 2.21 acres of forested wetlands to facilitate the construction of a residential subdivision.

This is the 1st modification of the original permit. The permit is hereby modified as follows: The development of 13 additional single-family lots and one larger multi-family lot resulting in the placement of fill material into 0.31-acres of wetlands.

The work will be performed in accordance with the enclosed plans, sheets 1-7, dated November, 2021, which are incorporated in and made a part of this Permit Modification.

The project site is located within Section 5, T. 41 S., R. 67 E., Copper River Meridian; USGS Quad Map Juneau B-2; Latitude 58.345352º N., Longitude -134.490486º W.; located at the end of Hillcrest Avenue, in Juneau, Alaska.

The time limit for completing the work authorized ends on **July 18, 2027**. If you find that you need more time to complete the authorized activity, please submit your request for a time extension to the U.S. Army Corps of Engineers for consideration at least one month before permit expiration.

The following conditions apply to this permit modification:

1. Natural drainage patterns shall be maintained using appropriate ditching, culverts, storm drain systems, and other measures to ensure hydrology is not altered.

2. The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete blocks with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.

3. The Permittee shall install erosion control measures along the perimeter of all work areas to prevent the displacement of fill material outside the authorized work area. The erosion control measures shall remain in place and be maintained until all authorized work is completed and the work areas are stabilized. Immediately after completion of the final grading of the land surface, all slopes, land surfaces, and filled areas shall be stabilized using sod, degradable mats, barriers, or a combination of similar stabilizing materials to prevent erosion.

4. Within 60 days of completion of the work authorized by this permit, the Permittee shall complete the attached "Self-Certification Statement of Compliance" form (Attachment 3) and submit it to the Corps (U.S. Army Corps of Engineers, Regulatory Division, CEPOA-RD, Kenai Field Office, 44669 Sterling Highway, Suite B, Soldotna, AK 99669-7915). In the event that the completed work deviates in any manner from the authorized work, the Permittee shall describe the deviations between the work authorized by this permit and the work as constructed on the "Self-Certification Statement of Compliance" form. The description of any deviations on the "Self-Certification Statement of Compliance" form does not constitute approval of any deviations by the Corps.

All other conditions under which the subject authorization was made remain in full force and effect.

This authorization and the enclosed modified plans should be attached to the original permit. Also enclosed is a Notice of Authorization that should be posted in a prominent location near the authorized work.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

Michael R. Salyer

Michael Salyer
Chief, Southeast Section

This notice of authorization must be conspicuously displayed at the site of work.

United States Army Corps of Engineers
Gastineau Channel

A permit to: The development of 13 additional single-family lots and one larger multi-family lot resulting in the placement of fill material into 0.31-acres of wetlands.

at: The project site is located within Section 5, T. 41 S., R. 67 E., Copper River Meridian; USGS Quad Map Juneau B-2; Latitude 58.345352º N., Longitude -134.490486º W.; located at the end of Hillcrest Avenue, in Juneau, Alaska.

has been issued to: Mr. William Heumann

on: July 18, 2022 **and expires on:** July 18, 2027

Address of Permittee: Mr. William Heumann, 6000 Thane Road ,Juneau, Alaska 99801

Permit Number:

POA-2019-00066-M1

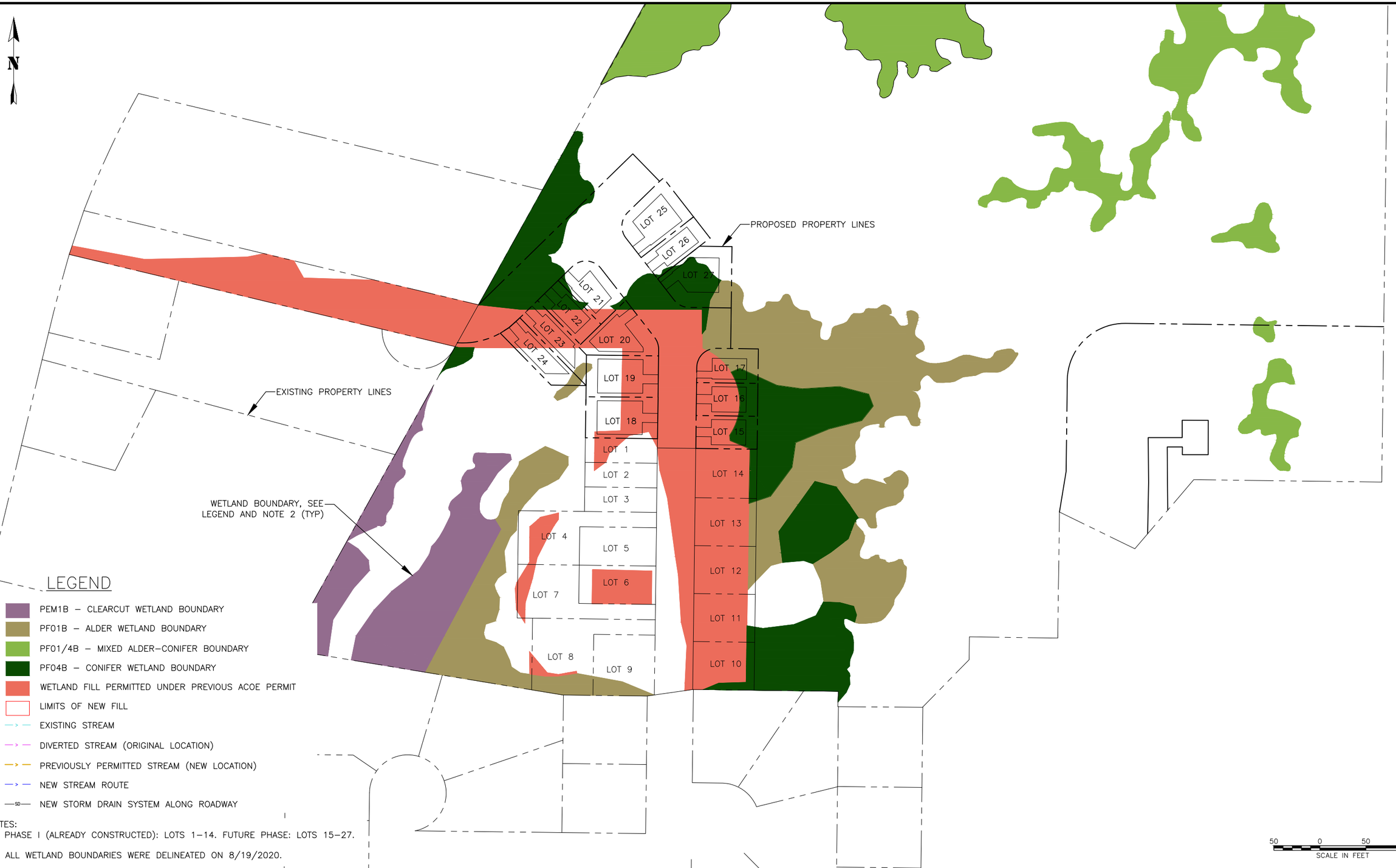
Michael R. Salyer

FOR: ***District Commander***
Michael Salyer
Chief, Southeast Section
REGULATORY DIVISION

ENG FORM 4336, Jul 81 (33 CFR 320-330) EDITION OF JUL 70 MAY BE USED (Proponent: CECW-O)

Vicinity Map:
Chilkat Vistas South





NOTES:
1. PHASE I (ALREADY CONSTRUCTED): LOTS 1–14. FUTURE PHASE: LOTS 15–27.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS WETLAND IMPACTS

SHEET NUMBER 1 OF 6

November 4, 2021 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\ACOR Permit\Conceptual Layout_11.4.21.dwg



NOTES:
1. PHASE I (ALREADY CONSTRUCTED): LOTS 1–14. FUTURE PHASE: LOTS 15–27
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
Info@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS EXISTING STREAMS

SHEET NUMBER 2 OF 6

November 4, 2021

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\ACOR Permit\Conceptual Layout_11.4.21.dwg

Attachment C - SMF22-03 – Phase 2 Report and Final Plat



NOTES:
1. PHASE I (ALREADY CONSTRUCTED): LOTS 1–14. FUTURE PHASE: LOTS 15–27.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS EXISTING STREAMS TO BE DIVERTED

SHEET NUMBER 3 OF 6

November 4, 2021

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\ACOR Permit\Conceptual Layout_11.4.21.dwg



NOTES:
1. PHASE I (ALREADY CONSTRUCTED): LOTS 1–14. FUTURE PHASE: LOTS 15–27.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS NEW STREAM ROUTES

SHEET NUMBER 4 OF 6

November 4, 2021

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\ACOR Permit\Conceptual Layout_11.4.21.dwg

Attachment C - SMF22-03 – Phase 2 Report and Final Plat



PHASE I (ALREADY CONSTRUCTED): LOTS 1–14
FUTURE PHASE: LOTS 15–27

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
Info@proHNS.com
www.proHNS.com

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

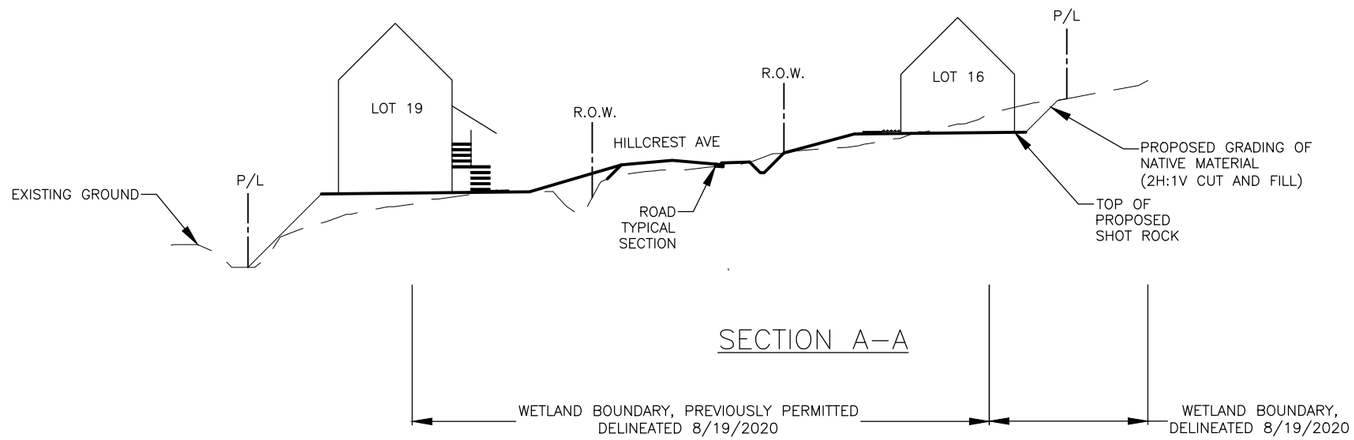
CHILKAT VISTAS CONCEPTUAL LOT LAYOUT

SHEET NUMBER 5 OF 6

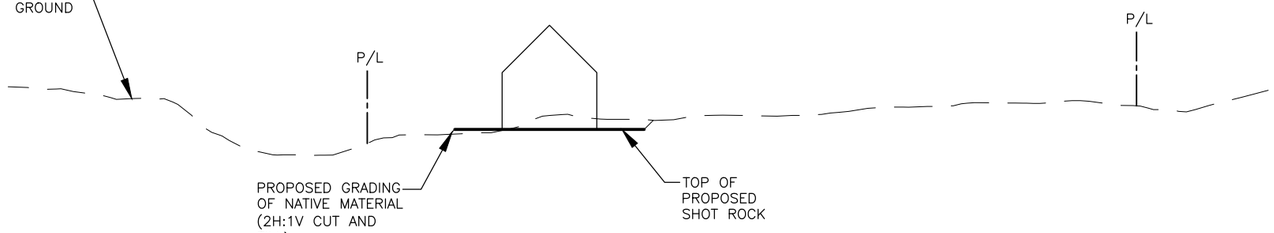
November 4, 2021

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\ACOR Permit\Conceptual Layout_11.4.21.dwg

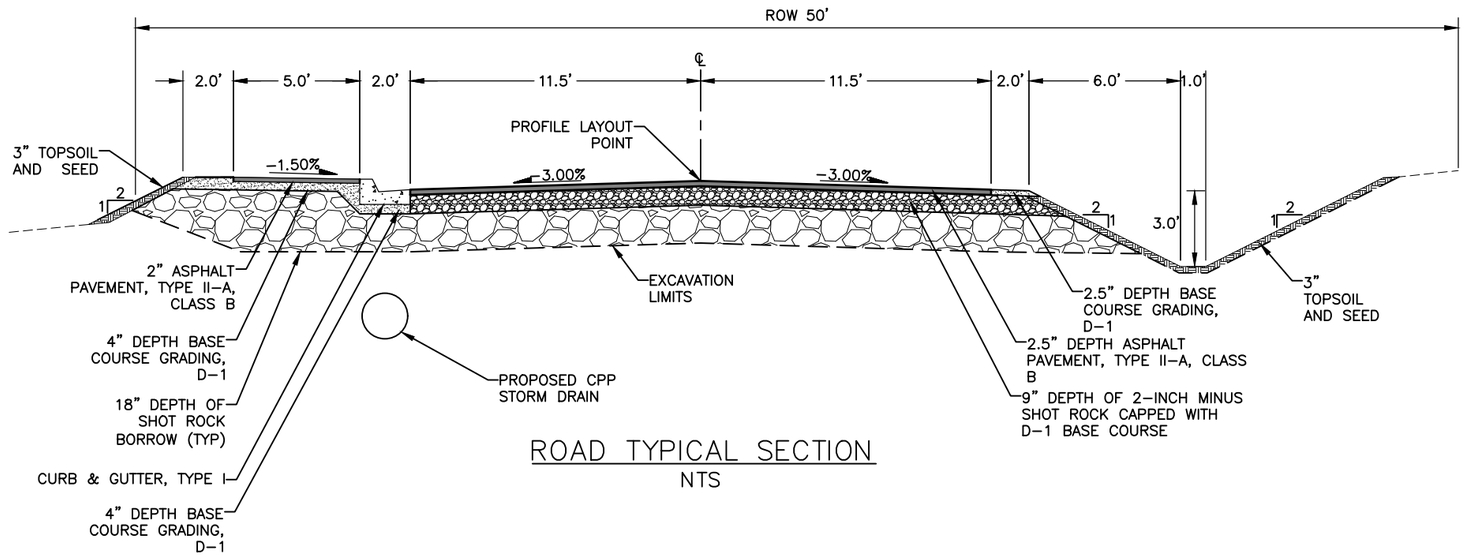
Attachment C - SMF22-03 – Phase 2 Report and Final Plat



SECTION A–A

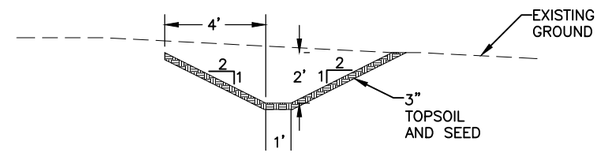


SECTION B–B



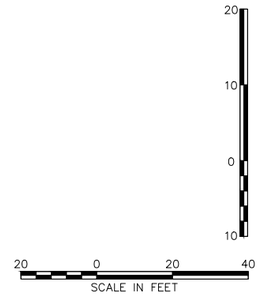
ROAD TYPICAL SECTION

NTS



REROUTED STREAM DITCH DETAIL

NTS



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
proHNS@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS SECTIONS

SHEET NUMBER
6
OF
6

November 4, 2021 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\ACOR Permit\Conceptual Layout_11.4.21.dwg

Lot #	Total Lot Area (sf)	Building Pad (sf)	Excavation Depth (ft)	Excavation Volume (cy)	Shot Rock Depth (ft)	Shot Rock Volume (cy)	2-Inch Depth (ft)	2-Inch Volume (cy)	Concrete/ Asphalt Depth (ft)	Concrete/Asphalt Volume (cy)
15	3429	1719	1	63.67	2	127.33				
16	3435	1717	1	63.59	2	127.19				
17	3465	1454	1	53.85	2	107.70				
18	5046	2826	1	104.67	2	209.33				
19	5091	2847	1	105.44	2	210.89				
20	4408	2201	1	81.52	2	163.04				
21	3795	1646	1	60.96	2	121.93				
22	3004	1480	1	54.81	2	109.63				
23	3416	1702	1	63.04	2	126.07				
24	3492	1722	1	63.78	2	127.56				
25	5035	2391	1	88.56	2	177.11				
26	3027	1527	1	56.56	2	113.11				
27	5177	2493	1	92.33	2	184.67				
Drivveway and Building Pad	5490	5490	1	203.33	2	406.67				
Combined Lots				1156.11		2312.22				
Roads (hooter/mountainside)	64,722	21600	1	800.00	1.5	1200.00	0.75	600.00	0.21	168.00

Totals:

Excavation (cy)	**1,956**
Shot Rock (cy)	**3,512**
2-Inch Rock (cy)	**600**
Asphalt/ Concrete (cy)	**168**

SELF-CERTIFICATION STATEMENT OF COMPLIANCE

Permit Number: POA-2019-00066

Permittee's Name & Address (please print or type):_____

_____

_____

Telephone Number:_____

Location of the Work:_____

_____

Date Work Started:_____ Date Work Completed:_____

PROPERTY IS INACCESSIBLE WITHOUT PRIOR NOTIFICATION: YES _____ NO_____
TO SCHEDULE AN INSPECTION PLEASE CONTACT _____
AT _____

Description of the Work (e.g. bank stabilization, residential or commercial filling, docks, dredging, etc.):_____

_____

_____

Acreage or Square Feet of Impacts to Waters of the United States: _____

Describe Mitigation completed (if applicable): _____

_____

_____

Describe any Deviations from Permit (attach drawing(s) depicting the deviations):

_____

_____

I certify that all work and mitigation (if applicable) was done in accordance with the limitations and conditions as described in the permit. Any deviations as described above are depicted on the attached drawing(s).

_____
Signature of Permittee

_____
Full Name of Permittee (printed or typed)

_____
Date

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Mr. William Heumann	File Number: POA-2019-00066	Date: July 18, 2022
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
X	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
Matthew Brody, RS Alaska District Corps of Engineers Juneau Regulatory Field Office (CEPOA-RD-SE) Post Office Box 22270 Juneau, Alaska 99802-2270 (907) 790-4493	Regulatory Program Manager U.S. Army Corps of Engineers, Pacific Ocean Division CEPOD-PDC, Bldg 525 Fort Shafter, HI 96858-5440

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation
DIVISION OF WATER
Wastewater Discharge Authorization Program

555 Cordova Street
Anchorage, Alaska 99501-2617
Main: 907.269.6285
Fax: 907.334.2415
www.dec.alaska.gov/water/wwdp

February 15, 2022

Michael Heumann
6000 Thane Rd.
Juneau, AK, 99801

Re: Chilkat Vistas Residential Subdivision
POA-2019-00066 Gastineau Channel

Mr. Heumann:

In accordance with Section 401 of the Federal Clean Water Act of 1977 and provisions of the Alaska Water Quality Standards, the Department of Environmental Conservation (DEC) is issuing the enclosed water quality certification that the discharge from the proposed project will comply with water quality requirements for the placement of dredged and/or fill material in waters of the U.S., including wetlands and streams, associated with the development of property for residential lots.

DEC regulations provide that any person who disagrees with this decision may request an informal review by the Division Director in accordance with 18 AAC 15.185 or an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. An informal review request must be delivered to the Director, Division of Water, 555 Cordova Street, Anchorage, AK 99501, within 20 days of the permit decision. Visit http://dec.alaska.gov/commish/review-guidance/ for information on Administrative Appeals of Department decisions.

An adjudicatory hearing request must be delivered to the Commissioner of the Department of Environmental Conservation, PO Box 111800, Juneau, AK 99811-1800; Location: 410 Willoughby Avenue, Suite 303, Juneau within 30 days of the permit decision. If a hearing is not requested within 30 days, the right to appeal is waived.

By copy of this letter, we are advising the U.S. Army Corps of Engineers of our actions and enclosing a copy of the certification for their use.
Sincerely,

James Rypkema
Program Manager, Storm Water and Wetlands

Enclosure: 401 Water Quality Certificate

cc: (with encl.)
Mathew Brody, USACE, Anchorage
Kate Kanouse, ADF&G/Habitat, Anchorage
Juneau USFWS Field Office
Matthew LaCroix, EPA, AK Operations

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Water Quality Certification

In accordance with Section 401 of the Federal Clean Water Act (CWA) and the Alaska Water Quality Standards (18 AAC 70), a water quality certification is issued to Michael Heumann, 6000 Thane Rd. Juneau, AK, 99801 that the discharge from the proposed project will comply with water quality requirements for the placement of dredged and/or fill material in waters of the U.S. including wetlands and streams. The project proponent is proposing to develop portions of their property consisting of the connection of Hooter Lane and Hillcrest Avenue, the development of 13 single family lots, and one larger multi-family lot. The proposed development would result in the placement of approximately 1,378 cubic yards (CY) of material into 0.39-acres of wetlands. All work would be performed in accordance with the enclosed plan (sheets 1-7), dated November 2021.

A state issued water quality certification is required under Section 401 because the proposed activity will be authorized by a U.S. Army Corps of Engineers permit (POA-2019-00066-M1) and a discharge of pollutants to waters of the U.S. located in the State of Alaska may result from the proposed activity. Public notice of the application for this certification was given as required by 18 AAC 15.180 in the DEC Public Notice from October 13, 2021 to October 29, 2021 and a joint USACE & DEC Public Notice POA-2019-00066 posted from December 23, 2021, to January 21, 2022.

Project Description and Location

The applicant's stated purpose is to subdivide a large tract to provide small single family residential lots and multi-family lots to help meet the current need for housing.

The proposed activity is located within Section 5, T. 41 S., R. 67 E., Copper River Meridian; USGS Quad Map Juneau B-2; Latitude 58.345352º N., Longitude -134.490486º W.; located at the end of Hillcrest Avenue, in Juneau, Alaska.

Antidegradation Analysis Finding

Pursuant to the Department's Antidegradation Policy and Implementation Methods at 18 AAC 70.015 and 18 AAC 70.016, DEC finds that the project would comply with the requirements for Tiers 1 and 2 regarding water quality impacts to receiving water immediately surrounding the dredge or fill material pursuant to the Corps evaluation and findings of no significant degradation under 33 U.S.C. 1344 and under 40 CFR 230. The use of appropriate best management practices and erosion and sediment control measures would adequately protect the existing water uses and the level of water quality necessary to protect existing uses. Any potential water quality degradation is expected to be temporary and limited and necessary to accommodate important social and/or economic development in the area.

Conditions Necessary to Ensure Compliance with Water Quality Standards or Other Appropriate Water Quality Requirements of State Law

The Department of Environmental Conservation (DEC) reviewed the application and certifies that there is reasonable assurance that the proposed activity, as well as any discharge which may result, will comply with applicable provisions of Section 401 of the CWA and the Alaska Water Quality Standards, 18 AAC 70, provided that the following additional measures are adhered to.

Pursuant to 18 AAC 70.020(a) and the Toxics and Other Deleterious Organic and Inorganic Substances in 18 AAC 70.020(b), the following conditions are designed to reduce pollutants from construction activity to ensure compliance with the applicable water quality standards.

Pollutants/Toxics

1. Fuel storage and handling activities for equipment must be sited and conducted so there is no petroleum contamination of the ground, subsurface, or surface waterbodies.
2. During construction, spill response equipment and supplies such as sorbent pads shall be available and used immediately to contain and cleanup oil, fuel, hydraulic fluid, antifreeze, or other pollutant spills. Any spill amount must be reported in accordance with Discharge Notification and Reporting Requirements (AS 46.03.755 and 18 AAC 75 Article 3). The applicant must contact by telephone the DEC Area Response Team for Southeast Alaska 907-465-5340 during work hours or 1-800-478-9300 after hours. Also, the applicant must contact by telephone the National Response Center at 1-800-424-8802.
3. Construction equipment shall not be operated below the ordinary high-water mark if equipment is leaking fuel, oil, hydraulic fluid, or any other hazardous material. Equipment shall be inspected and recorded in a log daily for leaks. If leaks are found, the equipment shall not be used and pulled from service until the leak is repaired.

Turbidity, Erosion and Sediment Control

4. Runoff discharged to surface water (including wetlands) from a construction site disturbing one or more acres must be covered under Alaska's General Permit for Storm Water Discharges from Large and Small Construction Activities in Alaska (CGP, AKR100000, 18 AAC 83). The CGP requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For projects that disturb more than five acres, this SWPPP must also be submitted to DEC prior to construction along with the Notice of Intent (NOI). For more information see DEC's website for the CGP at http://dec.alaska.gov/water/wastewater/stormwater/construction, or call 907-269-6285.
5. Excavated or fill material, including overburden, shall be placed so that it is stable, meaning after placement the material does not show signs of excessive erosion. Indicators of excess erosion include gullying, head cutting, caving, block slippage, material sloughing, etc. The material must be contained with siltation best management practices (BMPs) to preclude reentry into any waters of the U.S., which includes wetlands.
6. Include the following BMPs to handle storm water and total storm water volume discharges as they apply to the site:
   a. Divert storm water from off-site around the site so that it does not flow onto the project site and cause erosion of exposed soils;
   b. Slow down or contain storm water that may collect and concentrate within a site and cause erosion of exposed soils;
   c. Place velocity dissipation devices (e.g., check dams, sediment traps, or riprap) along the length of any conveyance channel to provide a non-erosive flow velocity. Also place velocity dissipation devices where discharges from the conveyance channel or structure join a water course to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank slopes, and downstream waters.
7. Fill placed during winter construction within wetlands that during the summer contain surface water that is connected to natural bodies of water, must be stabilized, or contained in the spring prior to breakup. This action is to ensure that silts are not carried from the fill to the natural bodies of water in the spring and summer.

8. Prior to fill placement in the spring or summer, a silt fence or similar structure shall be installed on a line parallel to and within five feet of the proposed fill toe of slope within all wetland areas that contain standing water that is connected to any natural body of water or where the fill toe is within 25 feet of such a water body. This structure shall remain in place until the fill has been stabilized or contained in another manner.

Vegetation Protection and Restoration

9. Any disturbed ground and exposed soil not covered with fill must be stabilized and re-vegetated with endemic species, grasses, or other suitable vegetation in an appropriate manner to minimize erosion and sedimentation, so that a durable vegetative cover is established in a timely manner.

General

10. DEC coordinates with several regulatory programs to review the impacts of construction operations. A Section 401 Certification does not release the applicant from obtaining all necessary federal, state, and local permits, nor does it limit more restrictive requirements set through any such program. It does not eliminate, waive, or vary the applicant's obligation to comply with all state water statutes and rules through construction, installation, and operation of the project or mitigation, including, but not limited to the APDES permitting program 18 AAC 83 and 18 AAC 72.
11. USACE has stated that projects shall be reviewed under the federal rules in place at the time the application is received. This project and its mitigation were reviewed under the federal and state statutes and laws in place at the time the application was received. If the USACE determines any part or condition of this Certification is not lawful or is waived and unenforceable, the determination shall apply only to the part or condition so determined. The determination shall not apply to nor invalidate any remaining parts or conditions of this Certification. If the USACE makes such a determination, the applicant remains responsible for meeting state water quality statutes and rules, and if a violation occurs, may be subject to state enforcement (18 AAC 70.010).
12. This Certification does not release the applicant from any liability, penalty, or duty imposed by Alaska or federal statutes, regulations, rules, or local ordinances, and it does not convey a property right or an exclusive privilege.
13. If your project is not completed by the time limit specified under USACE Permit and will continue, or for a modification of the USACE permit, you must apply for renewal of this certification at least 60 days before the expiration date or any deadline established by USACE for certification action on the modification, or 60 days before the proposed effective date of the modification, whichever is sooner. (18 AAC 15.120(b), 18 AAC 15.130, 18 AAC 15.180).

Date: 2/15/2022

James Rypkema, Program Manager
Storm Water and Wetlands

PUBLIC NOTICE

Alaska Department of Environmental Conservation (DEC)
Wastewater Discharge Authorization Program/401 Certification
555 Cordova Street, Anchorage AK 99501-2617
Phone: 907-269-6285|Email: DEC-401Cert@alaska.gov

Notice of Application for State Water Quality Certification

Public Notice (PN) Date: 10/13/2021
PN Expiration Date: 10/29/2021
PN Reference Number: POA-2019-00066
Waterway: Gastineau Channel

Any applicant for a federal license or permit to conduct an activity that might result in a discharge into navigable waters, in accordance with Section 401 of the Clean Water Act (CWA) of 1977 (PL95-217), also must apply for and obtain certification from the Alaska Department of Environmental Conservation that the discharge will comply with the CWA, the Alaska Water Quality Standards, and other applicable State laws.

Notice is hereby given that a request for a CWA §401 Water Quality Certification of a Department of the Army Permit application, Corps of Engineers' Reference Number POA-2019-00066, Gastineau Channel, has been received for the discharge of dredged and/or fill materials into waters of the United States (WOUS), including wetlands, as described below, and shown on the enclosed project figures/drawings. The public notice and related project figures/drawings are also accessible from the DEC website at http://dec.alaska.gov/water/wastewater/.

Any person desiring to comment on the project with respect to water quality, may submit comments electronically via the DEC public notice site (preferred method) at https://water.alaskadec.commentinput.com/?id=5Fc3s

Alternatively, you may direct written comments or requests for public hearing via email or mail to the address listed above by the Public Notice (PN) expiration date. All comments submitted via mail or email should include the PN reference number listed above in the subject heading. Mailed comments must be postmarked on or before the expiration date of the public notice.

Applicant: Chilkat Vistas LLC, 6000 Thane Road Juneau Alaska 99801, Michael Heumann, Owner, (971) 261-8014, chilkatvistas@gmail.com

Project Name: ChilKat Vistas Phase 2

Location: The proposed activity is located within Section 34, T. 40 S., R. 66 E.; Latitude 58.356566° N., Longitude -134.488419° W.; in Juneau, Alaska.

Purpose: The applicant's stated purpose is to subdivide a large tract to provide small single family residential lots and multi-family lots to help meet the current need for housing.

Project Description: The Corps of Engineers approved the discharge of fill material into 2.21 acres of forested wetlands and the re-routing of 837-linear feet of stream to facilitate the construction of the Chilkat Vistas Phase 1 residential subdivision in 2019. This is the first modification to the original permit.

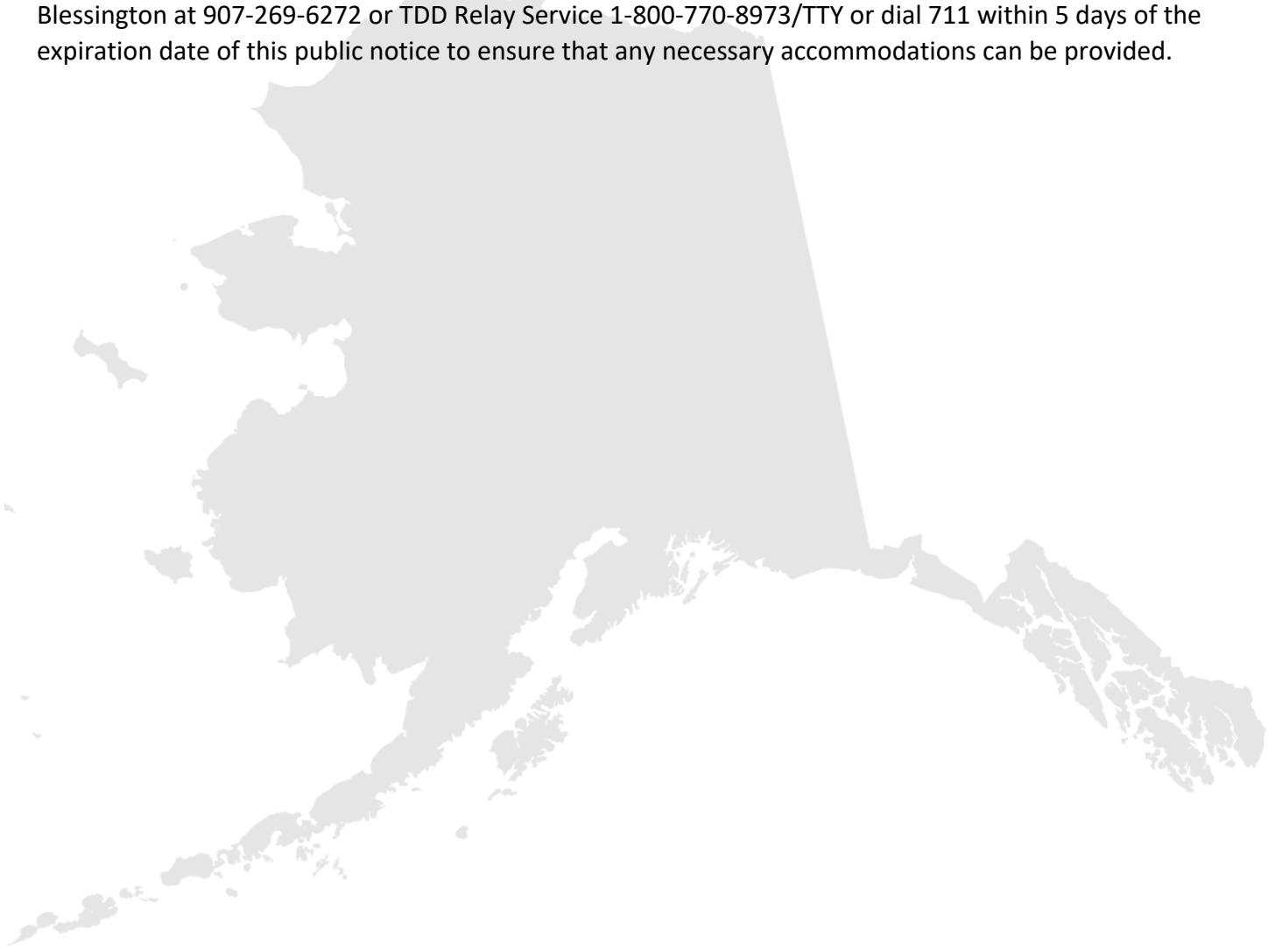
This project will complete construction of the Hillcrest Avenue extension and Hooter lane, as well as provide a roadway connection point to the uplands found in the Northern portion of the tract. This phase of the project includes 15 single family lots and a large multi-family lot which could contain up to 35 units or up to 70 efficiency units. The applicant proposes placement of approximately 1,378 cubic yards (CY) of material into 0.39 acres of WOUS, including wetlands, to construct residential lots to include access roads, utilities, and access to future development.

After reviewing the application, the Department may certify there is reasonable assurance the activity, and any discharge that might result, will comply with the CWA, the Alaska Water Quality Standards, and other applicable State laws. The Department also may deny or waive certification.

The permit application and associated documents are available for review. For inquires or to request copies of the documents, contact dec-401cert@alaska.gov, or call 907-269-6285.

Disability Reasonable Accommodation Notice

The State of Alaska, Department of Environmental Conservation complies with Title II of the Americans with Disabilities Act (ADA) of 1990. If you are a person with a disability who may need special accommodation in order to participate in this public process, please contact ADA Coordinator Brian Blessington at 907-269-6272 or TDD Relay Service 1-800-770-8973/TTY or dial 711 within 5 days of the expiration date of this public notice to ensure that any necessary accommodations can be provided.



Request for CWA §401 Water Quality Certification

Alaska Department of Environmental Conservation
Division of Water – Wastewater Discharge Authorization Program
555 Cordova Street, Anchorage AK 99501
email: dec-401Cert@alaska.gov Phone: 907-269-6285

I. Identify the applicable federal license or permit*

Permit License Number: _____ Federal Agency: ☒ USACE, ☐ FERC, or ☐ Other: _____

*A copy of the federal permit or license application is required to be submitted with the request for the water quality certification. (18 AAC 15.130, 18 AAC 15.180)

II. Project Proponent and Point of Contact

Applicant Information

Michael (First) | _____ (Middle) | Heumann (Last)

Chilkat Vistas LLC (Company) | Owner (Title)

6000 Thane Rd (Mailing Address Street or PO Box) | Juneau (City) | AK (State) | 99801 (Zip)

chilkatvistas@gmail.com (Email) | 9712618014 (Phone) | _____ (Fax (optional))

Point of Contact or Agent Information

_____ (First) | _____ (Middle) | _____ (Last)

_____ (Company) | _____ (Title)

_____ (Mailing Address or PO Box) | _____ (City) | _____ (State) | _____ (Zip)

_____ (Email) | _____ (Phone) | _____ (Fax (optional))

Statement of Authorization

I hereby authorize _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit/certification application.

_____ SIGNATURE OF APPLICANT _____ DATE

III. Name, Location, and Description of Project or Activity

Chilkat Vistas Phase 2
Project Name or Title

Hillcrest Avenue (Project Street Address (if applicable)) | Juneau (City) | AK (State) | 99801 (Zip) | 58.356566 (Latitude (Decimal Degrees, 6 places)) | -134.488419 (Longitude (Decimal Degrees, 6 places))

Other Location Descriptions if known:

_____ (State Tax Parcel ID) | _____ (Municipality) | _____ (Section) | _____ (Township) | _____ (Range) | 11/1/21 (Estimated Start Date) | 10/31/22 (Estimated End Date)

Primary Industrial Activity (if applicable): 237210 (NAICS Code)

Directions to the site:
Heading North on Egan HWY, Vanderbilt Hill exit, turn right on Old Glacier HWY, Turn Left on Craig Street, Turn Left on Hillcrest Avenue, site at end of street

Nature of Activity (Description of project, include all features)
See attachment (block 18)

Project Purpose (Describe the reason(s) for discharge)
See Attachment (block 19)

For fill material, identify the material source: Hidden Valley

Types of material being discharged and the amount of each type in cubic yards: Shot Rock (Type) 1026 (yd^3) | 2" Rock (Type) 352 (yd^3)

Surface area in acres of wetlands or other waters filled: Acres: 0.39 Or, linear feet: _____

Is dredging involved? ☐ Yes, ☑ No; If yes, how much? _____ acres and volume _____ yd^3.

a. Is the dredging considered a ☐new project, or is it ☐maintenance? If maintenance, how frequent? _____

b. Proposed Placement of dredged material: (provide center coordinates of placement area)

☐ Upland, Latitude _____ Longitude _____

☐ In water, Latitude _____ Longitude _____

☐ Other: _____ Latitude _____ Longitude _____

c. Has a Tier analysis been conducted of the dredged prism? ☐ Yes, ☐ No; If yes, attach tier analysis and sample results. Note, If marked no, this may later be required upon review of request.
(for example of Tier analysis, see EPA Inland Testing Manual or USACE Seattle District Civil Works DMMP User Manual)

Is any portion of the work already complete? ☐ Yes, ☐ No If yes, describe the completed work:

IV. Identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters;

Name and location of receiving waters, and geographical extent potentially affected by the proposed discharge:
Mendenhall Wetlands

Location of potential discharge (Decimal Degrees, 6 places), describe if necessary:

	Activity		Description	Receiving Waterbody Name	Latitude	Longitude
	Dredge	Fill				
a.	☐	☑	forested wetlands	unnamed forested wetland	58.356566	-134.488419
b.	☐	☐				
c.	☐	☐				
d.	☐	☐				
e.	☐	☐				

Is the project within 1,500 feet of a known contaminated site: ☐ Yes, ☑ No (see DEC Contaminated Sites Program website).
If yes, describe the identified contaminated site(s) or groundwater plume within 1,500 feet.

Parameter(s) of Concern: (check all that apply): ☑ Turbidity, ☑ Sediment, ☐ Petroleum Hydrocarbons, ☐ Metals, ☐ Other,
Identify the parameters of concern that may be present in your discharge. Consider if other parameters may be present from past activities in the area. Describe if known respective concentrations, persistence, and potential impacts to the receiving water and data on parameters that may alter the effects of the discharge to the receiving water.:

Impaired Waters: Does a discharge of any parameter identified above occur to an impaired waterbody listed as a Category 4 [304(b)] or Category 5 [303(d)] in the current EPA approved Alaska's Integrated Water Quality Monitoring and Assessment Report? (See http://dec.alaska.gov/water/water-quality/impaired-waters.aspx for the most recently approved report and category listings.) ☐ Yes, ☑ No

If determined necessary and requested by the Department, submit sufficient and credible baseline water quality information for the receiving water which meets the requirements of 18 AAC 70.016(a)(6)(A-C).

Social or Economic Importance (18 AAC 70.016(c)(5): Provide information that demonstrates the accommodation of important social or economic development. The applicant shall complete either a social OR economic importance analysis (or both) for each affected community in the area where the receiving water for the proposed discharge is located. (if additional space is needed, attach separate sheet)

(A) **Social Importance Analysis:**
(select one or more areas, and describe below)

- ☐ community services provided;
- ☐ public health or safety improvements;
- ☑ infrastructure improvements;
- ☐ education and training;
- ☐ cultural amenities;
- ☐ recreational opportunities

(B) **Economic Importance Analysis:**
(select one or more areas, and describe below)

- ☑ employment, job availability, and salary impacts;
- ☑ tax base impacts;
- ☐ expanded leases and royalties;
- ☐ commercial activities;
- ☐ access to resources;
- ☐ access to a transportation network

Describe (checked items above or attach as separate document)
This project involves the extension roadways and public utilities to new lots. The construction of the infrastructure as well as the construction of houses will provide jobs for local employees and the houses will add to the tax base of Juneau.

V. Include a description of any methods and means proposed to monitor the discharge and the equipment or measures planned to treat, control, or manage the discharge

(Example: Provide a brief explanation describing how impacts to waters of the United States are being avoided and minimized on the project site. Include best management practices (BMPs) for sediment and erosion controls that will be implemented to minimize the environmental impacts.)
Our work will be conducted using a Storm Water Polution Prevention Plan, put together by our civil engineers. Best Management practices will be put in place to limit the sediment leaving the site and turbidity of our storm water runoff. These BMPs include check damns, vegitative buffers, swales, and others where deemed necessary.

VI. Include a list of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the proposed project, including all approvals or denials already received.

List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in this Application.

Agency	Type of Approval*	Identification Number	Date Applied	Date Approved	Date Denied
USACE					

* Would include but is not restricted to zoning, building, and flood plain permits.

Addresses of Adjoining Property Owners, Lessees, Etc. Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list)

	Name	Address	City	State	Zip
a.	See attached				
b.					
c.					
d.					
e.					

VII. Attachments: Include documentation that a prefiling meeting request was submitted to the certifying authority at least 30 days prior to submitting the certification request; and include a copy of the federal license or permit application.

- ☑ Required: Prefiling meeting request documentation. (40 CFR 121.4)
- ☑ Required: Copy of the federal license or permit requiring certification under 33 U.S.C. 1341 (Clean Water Act, Section 401) to include all accompanying information, contemporaneous with the submission of the application to the federal licensing or permitting agency. (18 AAC 15.130, 18 AAC 15.180)
- ☑ Required: Figures and/or Drawings/Plan Sets
- ☐ Tier Analysis of dredged material
- ☐ Sampling Results
- ☐ Baseline Water Quality Information
- ☐ Other

VIII. Certification Statement:

As per 18 AAC 15.030 signing of applications, all permit or approval applications must be signed as follows:

1) in the case of corporations, by a principal executive officer of at least the level of vice president or his duly authorized representative, if the representative is responsible for the overall management of the project or operation;
2) in the case of a partnership, by a general partner;
3) in the case of a sole proprietorship, by the proprietor; and
4) in the case of a municipal, state, federal or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief. The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.

Company or Organization:	Name:	Title:
Chilkat Vistas LLC	Michael Heumann	Owner

Phone:	Fax (optional):	Email:
971-261-8014		chilkatvistas@gmail.com

Mailing Address: ☑ Check if same as Applicants Info	Street (PO Box):			
	City:		State:	Zip:

Signature

9-16-21
Date

Submit the CWA §401 Certification Request to DEC-401Cert@alaska.gov.

Include in the subject line the following:

"CWA §401 Certification Request - *<Insert Federal Agency and permit number or license number> - <insert project title>*".

Vicinity Map:
Chilkat Vistas South



U.S. Army Corps of Engineers (USACE)

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved - OMB No. 0710-0003 Expires: 02-28-2022

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Michael Middle - Last - Heumann	First - Middle - Last -
Company - Chilkat Vistas LLC	Company -
E-mail Address - chilkatvistas@gmail.com	E-mail Address -
6. APPLICANT'S ADDRESS:	**9. AGENT'S ADDRESS:**
Address- 1015 Otter Run	Address-
City - Juneau State - AK Zip - 99801 Country - USA	City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. w/AREA CODE	**10. AGENTS PHONE NOs. w/AREA CODE**
a. Residence b. Business 971-261-8014 c. Fax	a. Residence b. Business c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____ _____

SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)
Chilkat Vistas Phase 2

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
Mendenhall Wetlands	Address Hillcrest Avenue
15. LOCATION OF PROJECT	City - Juneau State- AK Zip- 99801
Latitude: ◦N 58°20'47.00" Longitude: ◦W 134°29'22.98"	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID Municipality City and Borough of Juneau

Section - Township - Range -

17. DIRECTIONS TO THE SITE

Heading north on Egan from downtown Juneau, take the Vanderbilt Hill exit, turn left to head South on Glacier Highway, turn Left on Craig Street, turn Left on Hillcrest Avenue. Site is at end of Hillcrest.

18. Nature of Activity (Description of project, include all features)

See attachment

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

See attachment

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Fill will be discharged for the construction of roadways, associated utilities and building pads. Shot rock or sandy gravel will be the primary fill placed directly in wetlands.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
Shot Rock/ Gravel : 1026	2-Inch Rock : 352	Asphalt/ Concrete: 98

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.39 (see disturbance table)

or

Linear Feet Net Reduction of 1192' of streams/ditches

23. Description of Avoidance, Minimization, and Compensation (see instructions)

See attachment

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- SEE ATTACHED

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

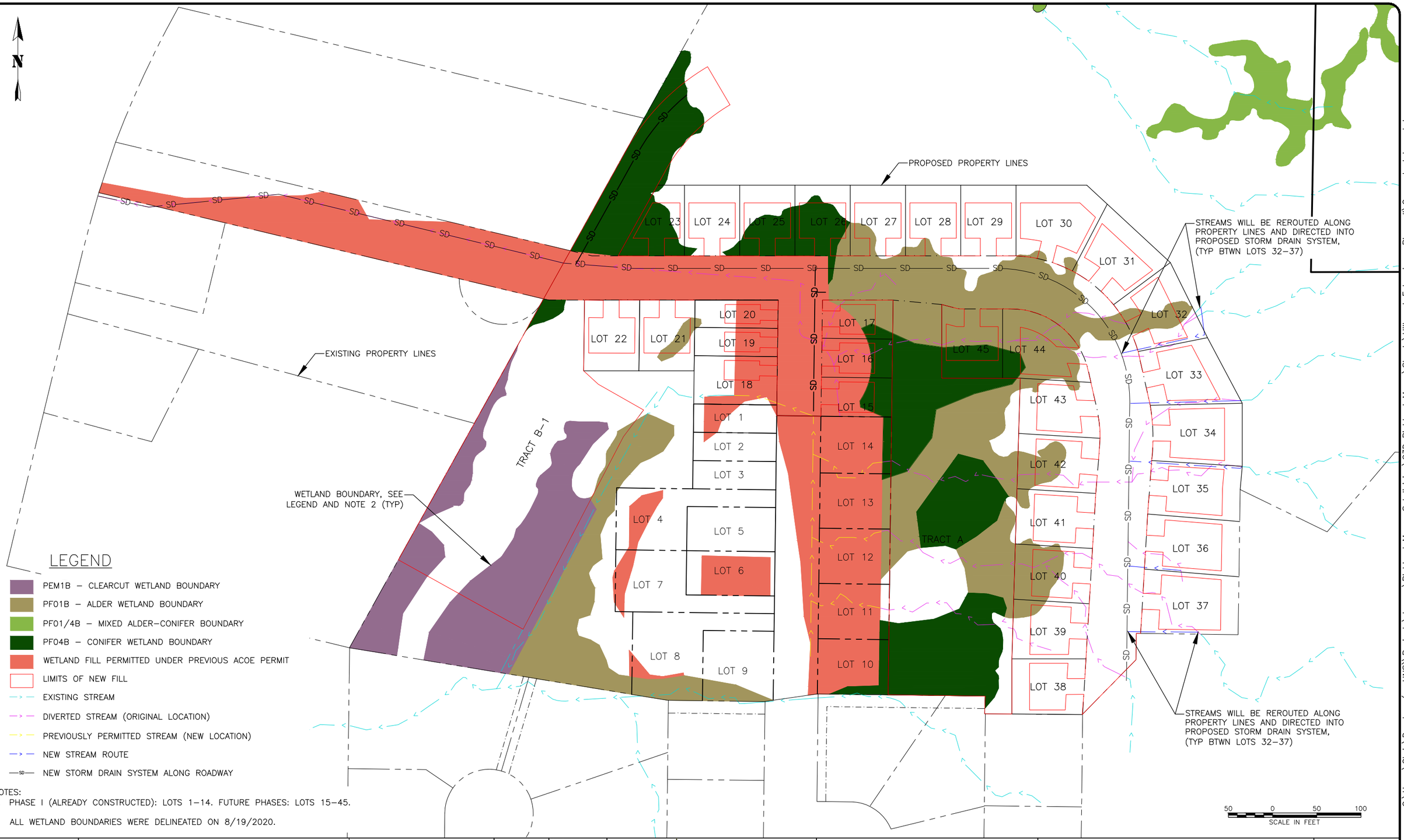
* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE
[signature]	7-26-21		

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.



LEGEND

- PEM1B – CLEARCUT WETLAND BOUNDARY
- PF01B – ALDER WETLAND BOUNDARY
- PF01/4B – MIXED ALDER–CONIFER BOUNDARY
- PF04B – CONIFER WETLAND BOUNDARY
- WETLAND FILL PERMITTED UNDER PREVIOUS ACOE PERMIT
- LIMITS OF NEW FILL
- EXISTING STREAM
- DIVERTED STREAM (ORIGINAL LOCATION)
- PREVIOUSLY PERMITTED STREAM (NEW LOCATION)
- NEW STREAM ROUTE
- NEW STORM DRAIN SYSTEM ALONG ROADWAY

NOTES:
1. PHASE I (ALREADY CONSTRUCTED): LOTS 1–14. FUTURE PHASES: LOTS 15–45.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
info@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

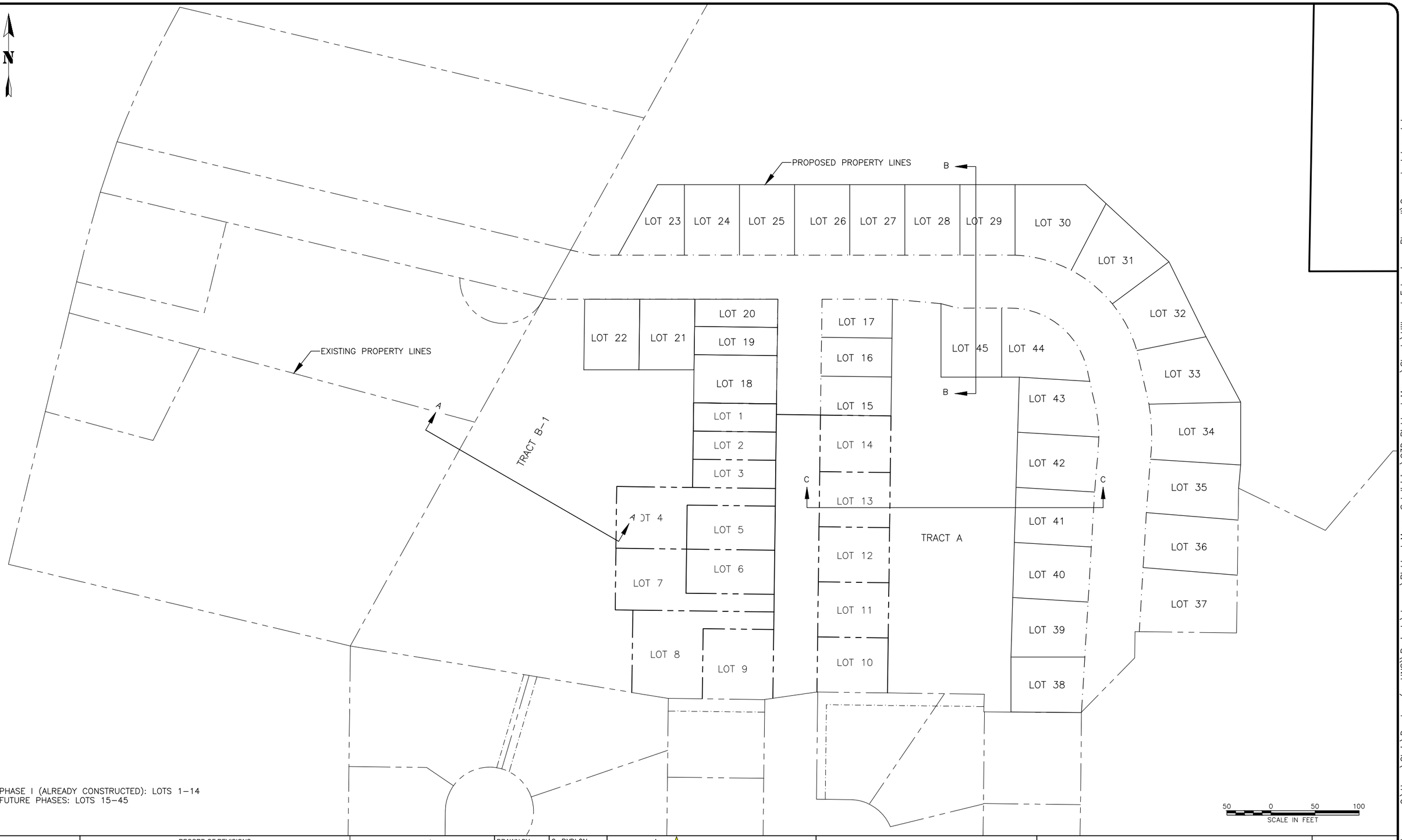
JUNEAU, AK

CHILKAT VISTAS CONCEPTUAL GRAPHIC

SHEET NUMBER 1 OF 3

March 22, 2021

C:\Users\Chris\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\Conceptual Layout.dwg



PHASE I (ALREADY CONSTRUCTED): LOTS 1–14
FUTURE PHASES: LOTS 15–45

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
info@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

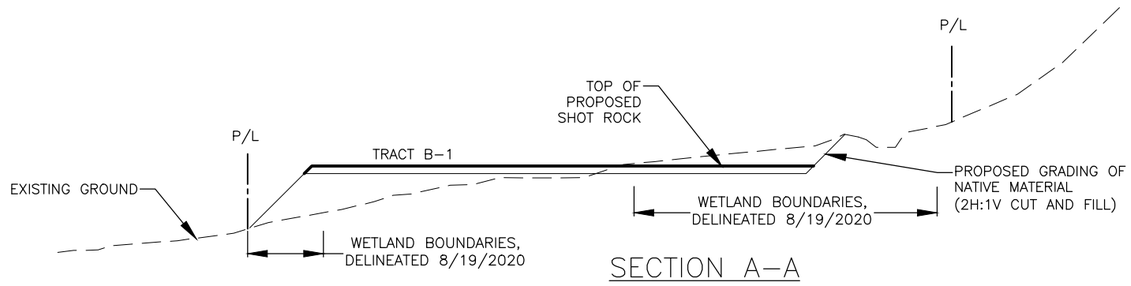
JUNEAU, AK

CHILKAT VISTAS CONCEPTUAL LOT LAYOUT

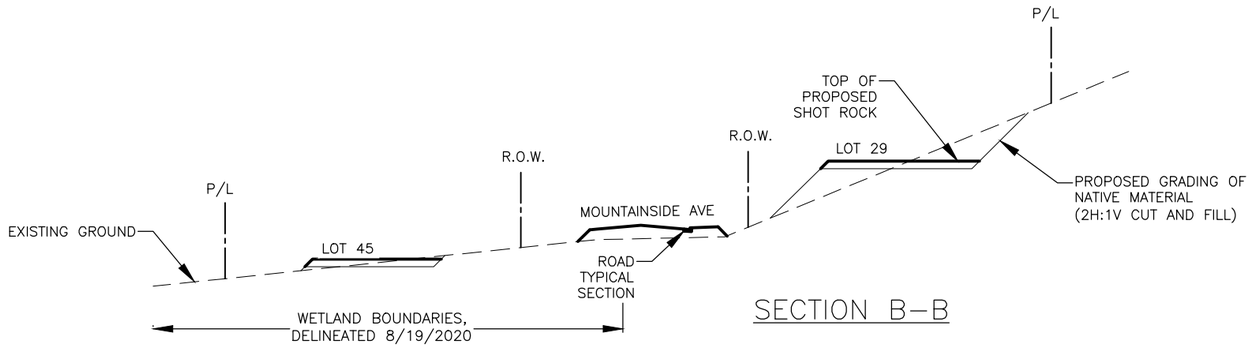
SHEET NUMBER 2 OF 3

March 22, 2021

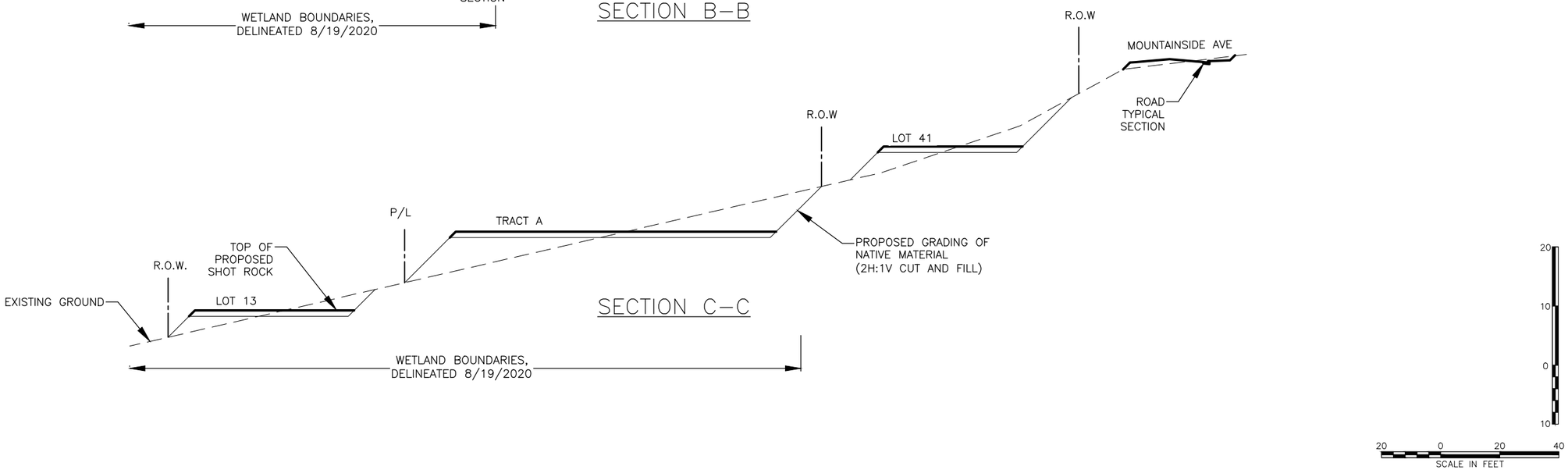
C:\Users\Chris\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\Conceptual Layout.dwg



SECTION A–A



SECTION B–B



SECTION C–C

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
info@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS SECTIONS

SHEET NUMBER 3
OF 3

Attachment G - SMF 22-03 – Phase 2 Report and Final Plat

C:\Users\Chris\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\Conceptual Layout.dwg
March 22, 2021

US Army Corps of Engineers
Alaska District

Public Notice of Application for Permit

JUNEAU FIELD OFFICE
Regulatory Division (1145)
CEPOA-RD
Post Office Box 22270
Juneau, Alaska 99802-2270

PUBLIC NOTICE DATE:	**December 23, 2021**
EXPIRATION DATE:	**January 21, 2022**
REFERENCE NUMBER:	**POA-2019-00066-M1**
WATERWAY:	**Gastineau Channel**

Interested parties are hereby notified that a Department of the Army permit application has been received for work in waters of the United States as described below and shown on the enclosed project drawings.

All comments regarding this Public Notice should be sent to the address noted above. If you desire to submit your comments by email, you should send it to the Project Manager's email as listed below or to regpagemaster@usace.army.mil. All comments should include the Public Notice reference number listed above.

All comments should reach this office no later than the expiration date of this Public Notice to become part of the record and be considered in the decision. Please contact Matthew Brody at (907) 201-5023, or by email at Matthew.T.Brody@usace.army.mil if further information is desired concerning this notice.

APPLICANT: Michael Heumann – Chilkat Vistas LLC

LOCATION: The project site is located within Section 5, T. 41 S., R. 67 E., Copper River Meridian; USGS Quad Map Juneau B-2; Latitude 58.345352º N., Longitude -134.490486º W.; located at the end of Hillcrest Avenue, in Juneau, Alaska.

PURPOSE: The applicant's stated purpose is to subdivide a large tract of property in order to provide small residential lots to help meet the current demand for affordable housing in Juneau, Alaska.

PROPOSED WORK: The applicant is proposing to develop portions of their property consisting of the connection of Hooter Lane and Hillcrest Avenue, the development of 13 single family lots, and one larger multi-family lot. The proposed development would result in the placement of fill into 0.31-acres of wetlands. All work would be performed in accordance with the enclosed plan (sheets 1-7), dated November 2021.

APPLICANT PROPOSED MITIGATION: The applicant proposes the following mitigation measures to avoid, minimize, and compensate for impacts to waters of the United States from activities involving discharges of dredged or fill material.

a. Avoidance: The applicant has avoided impacts to waters of the U.S. by situating their proposed project to have the minimum footprint in waters of the U.S. to meet their purpose and need. The proposed layout would impact wetlands to provide access to uplands on site for further development. Developing uplands on site without impacting waters was not possible.

b. Minimization: The applicant has minimized impacts to waters of the U.S. by redesigning their original proposal to fill the minimum area necessary to meet their purpose and need. Additionally, the proposed design would provide utilities and access to upland portions of the parcel that would be developed in the future.

c. Compensatory Mitigation: The applicant has proposed no compensatory mitigation.

WATER QUALITY CERTIFICATION: A permit for the described work will not be issued until a certification or waiver of certification, as required under Section 401 of the Clean Water Act (Public Law 95-217), has been received from the Alaska Department of Environmental Conservation.

CULTURAL RESOURCES: The latest published version of the Alaska Heritage Resources Survey (AHRS) has been consulted for the presence or absence of historic properties, including those listed in or eligible for inclusion in the National Register of Historic Places. There are no cultural resources in the permit area or within the vicinity of the permit area. The permit area has been determined to be the footprint of the proposed work consisting of 0.31 acres. Consultation of the AHRS constitutes the extent of cultural resource investigations by the U.S. Army Corps of Engineers (Corps) at this time, and we are otherwise unaware of the presence of such resources. The Corps has made a No Historic Properties Affected (No Effect) determination for the proposed project. This application is being coordinated with the State Historic Preservation Office (SHPO). Any comments SHPO may have concerning presently unknown archeological or historic data that may be lost or destroyed by work under the requested permit will be considered in our final assessment of the described work. The Corps is requesting the SHPO's concurrence with this determination.

ENDANGERED SPECIES: No threatened or endangered species are known to use the project area. We have determined the described activity would have no effect on any listed or proposed threatened or endangered species, and would have no effect on any designated or proposed critical habitat, under the Endangered Species Act of 1973 (87 Stat. 844). Therefore, no consultation with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service (NMFS) is required. However, any comments they may have concerning endangered or threatened wildlife or plants or their critical habitat will be considered in our final

assessment of the described work.

ESSENTIAL FISH HABITAT: The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the NMFS on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). There is no EFH located within or near the project area, therefore, we have determined the described activity would not adversely affect EFH.

TRIBAL CONSULTATION: The Alaska District fully supports tribal self-governance and government-to-government relations between Federally recognized Tribes and the Federal government. Tribes with protected rights or resources that could be significantly affected by a proposed Federal action (e.g., a permit decision) have the right to consult with the Alaska District on a government-to-government basis. Views of each Tribe regarding protected rights and resources will be accorded due consideration in this process. This Public Notice serves as notification to the Tribes within the area potentially affected by the proposed work and invites their participation in the Federal decision-making process regarding the protected Tribal right or resource. Consultation may be initiated by the affected Tribe upon written request to the District Commander during the public comment period.

PUBLIC HEARING: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, reasons for holding a public hearing.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity and its intended use on the public interest. Evaluation of the probable impacts, which the proposed activity may have on the public interest, requires a careful weighing of all the factors that become relevant in each particular case. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. The outcome of the general balancing process would determine whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur. The decision should reflect the national concern for both protection and utilization of important resources. All factors, which may be relevant to the proposal, must be considered including the cumulative effects thereof. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b)(l) guidelines. Subject to the preceding sentence and any other applicable guidelines or criteria (see Sections 320.2 and 320.3), a permit will be granted unless the District Commander determines that it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

AUTHORITY: This permit will be issued or denied under the following authority:

(X) Discharge dredged or fill material into waters of the United States – Section 404 Clean Water Act (33 U.S.C. 1344). Therefore, our public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).

Project drawings a Notice of Application for State Water Quality Certification are enclosed with this Public Notice.

District Commander
U.S. Army, Corps of Engineers

Enclosures

PUBLIC NOTICE

Alaska Department of Environmental Conservation (DEC)
Wastewater Discharge Authorization Program/401 Certification
555 Cordova Street, Anchorage AK 99501-2617
Phone: 907-269-6285|Email: DEC-401Cert@alaska.gov

Notice of Application for State Water Quality Certification

Any applicant for a federal license or permit to conduct an activity that might result in a discharge into navigable waters, in accordance with Section 401 of the Clean Water Act (CWA) of 1977 (PL95-217), also must apply for and obtain certification from the Alaska Department of Environmental Conservation that the discharge will comply with the CWA, the Alaska Water Quality Standards, and other applicable State laws.

Notice is hereby given that a request for a CWA §401 Water Quality Certification of a Department of the Army Permit application, Corps of Engineers' Reference Number POA-2019-00066-M1, Gastineau Channel, has been received for the discharge of dredged and/or fill materials into waters of the United States (WOUS), including wetlands, as described in the Corps public notice and project figures/drawings (18 AAC 15.180).

Any person desiring to comment on the project with respect to water quality, may submit comments electronically via email to DEC-401cert@alaska.gov by the expiration date of the Corps of Engineer's public notice. All comments need to include the Corps public notice reference number in the subject heading. Physically mailed comments must be postmarked on or before the expiration date of the public notice.

After reviewing the application, the Department may certify there is reasonable assurance the activity, and any discharge that might result, will comply with the CWA, the Alaska Water Quality Standards, and other applicable State laws. The Department also may deny or waive certification.

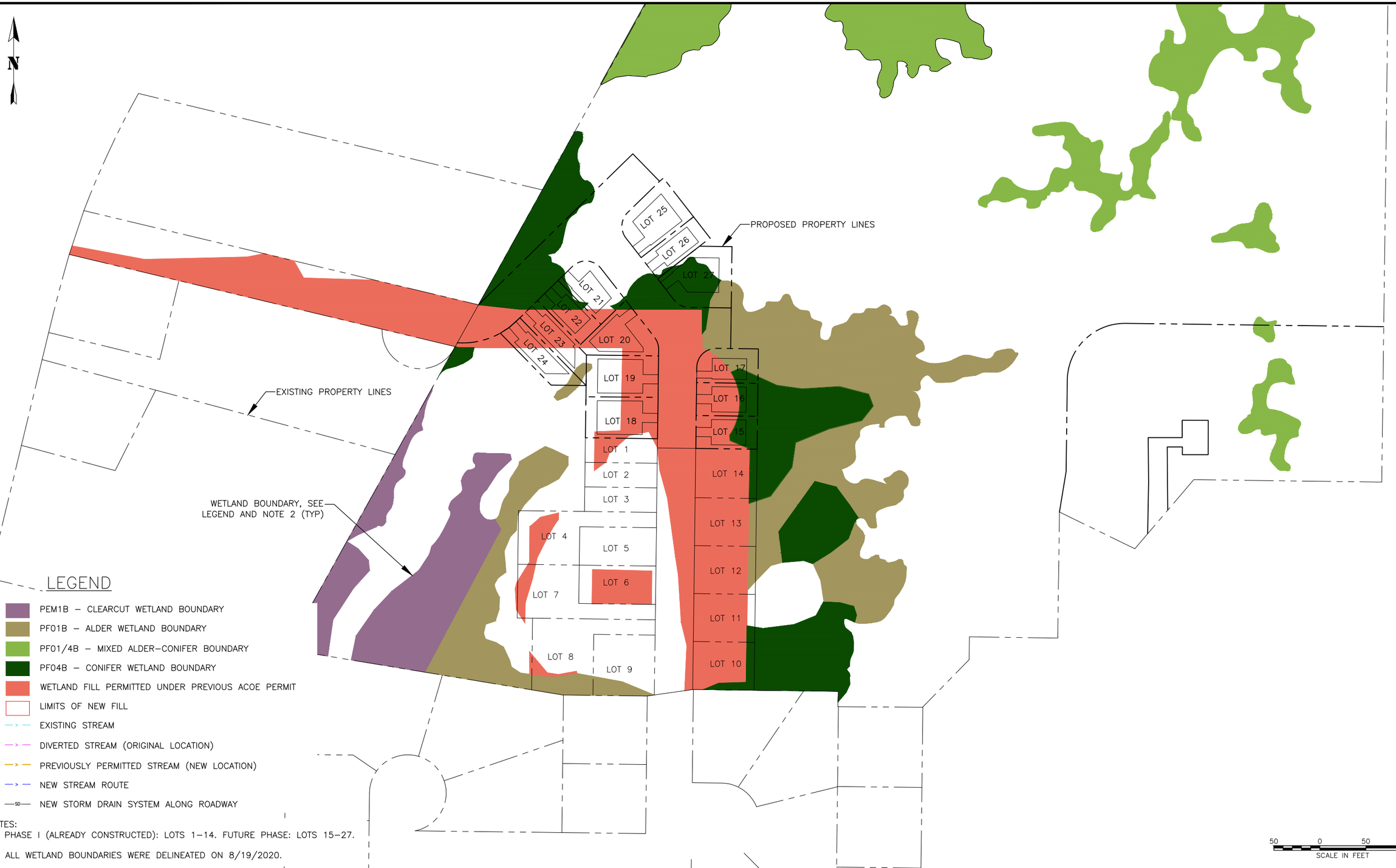
The permit application and associated documents are available for review. For inquires or to request copies of the documents, contact dec-401cert@alaska.gov, or call 907-269-6285.

Disability Reasonable Accommodation Notice

The State of Alaska, Department of Environmental Conservation complies with Title II of the Americans with Disabilities Act (ADA) of 1990. If you are a person with a disability who may need special accommodation in order to participate in this public process, please contact ADA Coordinator Brian Blessington at 907-269-6272 or TDD Relay Service 1-800-770-8973/TTY or dial 711 within 5 days of the expiration date of this public notice to ensure that any necessary accommodations can be provided.

Vicinity Map:
Chilkat Vistas South





NOTES:
1. PHASE I (ALREADY CONSTRUCTED): LOTS 1–14. FUTURE PHASE: LOTS 15–27.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS WETLAND IMPACTS

SHEET NUMBER 1 OF 6

November 4, 2021 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\ACOR Permit\Conceptual Layout_11.4.21.dwg



NOTES:
1. PHASE I (ALREADY CONSTRUCTED): LOTS 1–14. FUTURE PHASE: LOTS 15–27
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
Info@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS EXISTING STREAMS

SHEET NUMBER 2 OF 6

November 4, 2021

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\ACOR Permit\Conceptual Layout_11.4.21.dwg

Attachment C - SMF22-03 – Phase 2 Report and Final Plat



NOTES:
1. PHASE I (ALREADY CONSTRUCTED): LOTS 1–14. FUTURE PHASE: LOTS 15–27.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS EXISTING STREAMS TO BE DIVERTED

SHEET NUMBER 3 OF 6

November 4, 2021

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\ACOR Permit\Conceptual Layout_11.4.21.dwg



NOTES:
1. PHASE I (ALREADY CONSTRUCTED): LOTS 1–14. FUTURE PHASE: LOTS 15–27.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS NEW STREAM ROUTES

SHEET NUMBER 4 OF 6

November 4, 2021

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\ACOR Permit\Conceptual Layout_11.4.21.dwg

Attachment C - SMF22-03 – Phase 2 Report and Final Plat



PHASE I (ALREADY CONSTRUCTED): LOTS 1–14
FUTURE PHASE: LOTS 15–27

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
Info@proHNS.com
www.proHNS.com

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

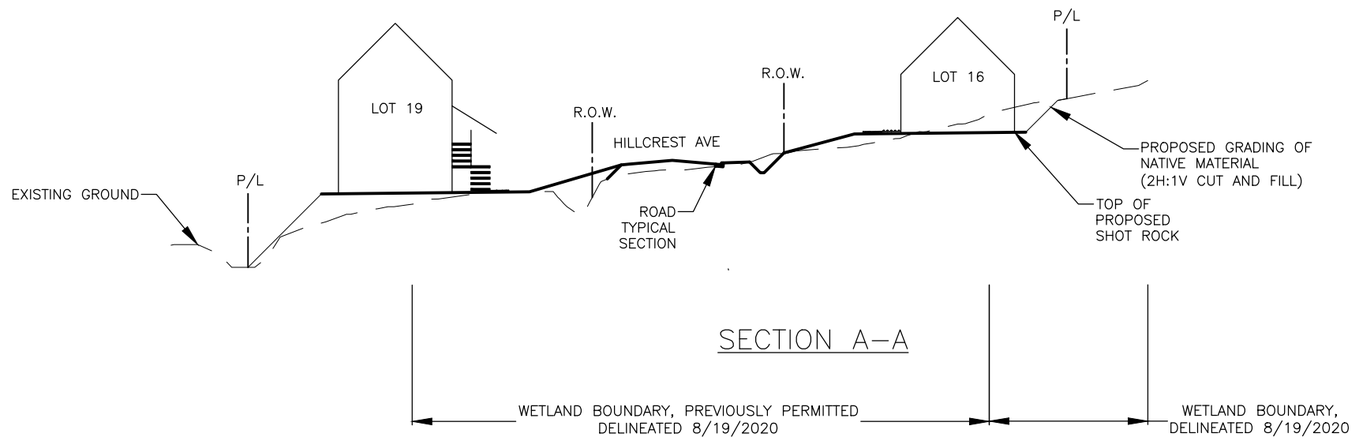
CHILKAT VISTAS CONCEPTUAL LOT LAYOUT

SHEET NUMBER 5 OF 6

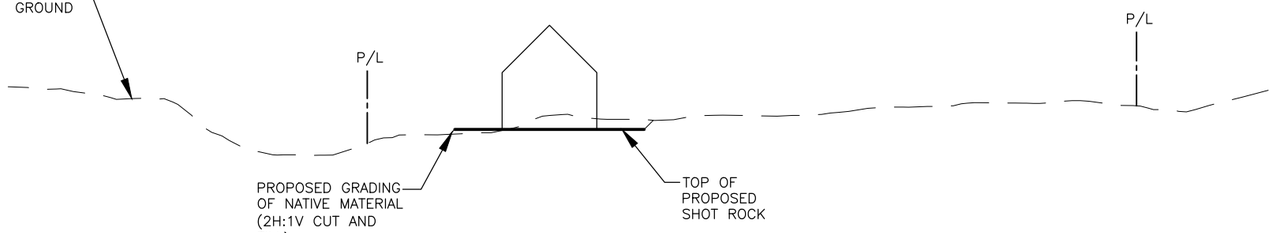
November 4, 2021

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\ACOR Permit\Conceptual Layout_11.4.21.dwg

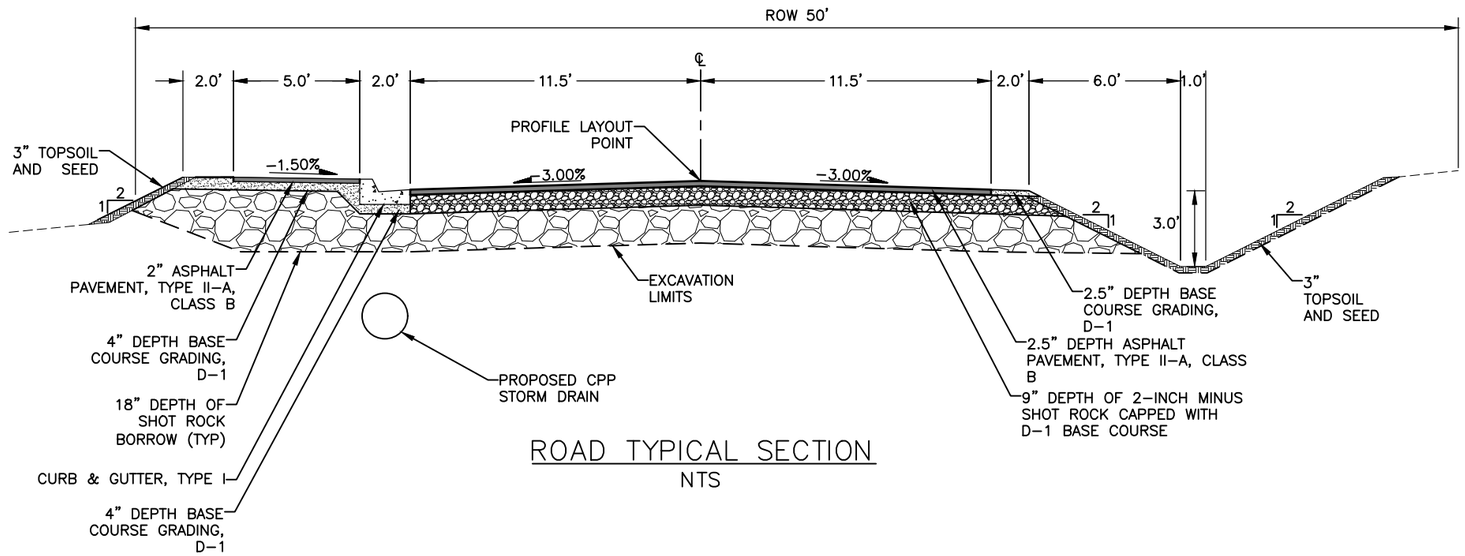
Attachment C - SMF22-03 – Phase 2 Report and Final Plat



SECTION A–A

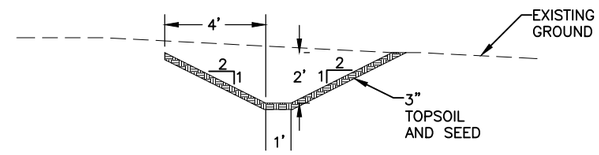


SECTION B–B



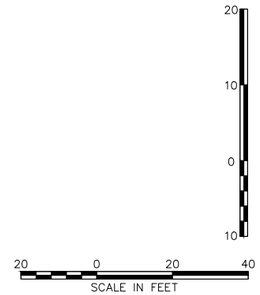
ROAD TYPICAL SECTION

NTS



REROUTED STREAM DITCH DETAIL

NTS



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
proHNS@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS SECTIONS

SHEET NUMBER
6
OF
6

November 4, 2021 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\ACOR Permit\Conceptual Layout_11.4.21.dwg

Lot #	Total Lot Area (sf)	Building Pad (sf)	Excavation Depth (ft)	Excavation Volume (cy)	Shot Rock Depth (ft)	Shot Rock Volume (cy)	2-Inch Depth (ft)	2-Inch Volume (cy)	Concrete/ Asphalt Depth (ft)	Concrete/Asphalt Volume (cy)
15	3429	1719	1	63.67	2	127.33				
16	3435	1717	1	63.59	2	127.19				
17	3465	1454	1	53.85	2	107.70				
18	5046	2826	1	104.67	2	209.33				
19	5091	2847	1	105.44	2	210.89				
20	4408	2201	1	81.52	2	163.04				
21	3795	1646	1	60.96	2	121.93				
22	3004	1480	1	54.81	2	109.63				
23	3416	1702	1	63.04	2	126.07				
24	3492	1722	1	63.78	2	127.56				
25	5035	2391	1	88.56	2	177.11				
26	3027	1527	1	56.56	2	113.11				
27	5177	2493	1	92.33	2	184.67				
Drivveway and Building Pad	5490	5490	1	203.33	2	406.67				
Combined Lots				1156.11		2312.22				
Roads (hooter/mountainside)	64,722	21600	1	800.00	1.5	1200.00	0.75	600.00	0.21	168.00

Totals:

Excavation (cy)	**1,956**
Shot Rock (cy)	**3,512**
2-Inch Rock (cy)	**600**
Asphalt/ Concrete (cy)	**168**

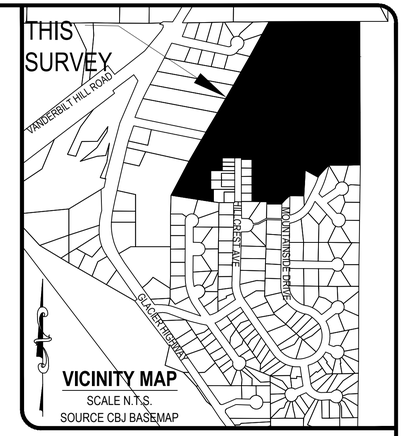
LOT 2
PLAT 91-9

BASIS OF BEARING
S 89°52'00" E 726.81 (726.81)R3

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF S 89° 52'00" E AS DELINEATED ON THE OFFICIAL PLAT OF US SURVEY 4807 SUBDIVISION, APPROVED 23 MARCH 1965, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK CORNER 1 AND CORNER 2, US SURVEY 4807 AS SHOWN ON THIS PLAT.

CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	100.00	52.17	51.58	S 75°03'17" W	29°53'26"
C2	100.00	26.51	26.43	S 52°30'58" W	15°11'11"
C3	25.00	42.10	37.30	N 86°50'00" W	96°29'14"
C4	25.00	16.84	16.52	S 19°17'41" E	38°35'23"
C5	25.00	39.27	35.36	N 45°00'00" E	90°00'00"
C6	25.00	21.55	20.88	N 63°13'53" W	49°22'48"
C7	25.00	36.44	33.30	S 03°10'00" W	83°30'46"



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R4 RECORD INFORMATION FROM PLAT No. 2020-27
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY

1"=80'
0 80 160 240 320

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTA SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20210004	1" = 80'	16 DECEMBER 2022	1 OF 3

SURVEYOR'S CERTIFICATE

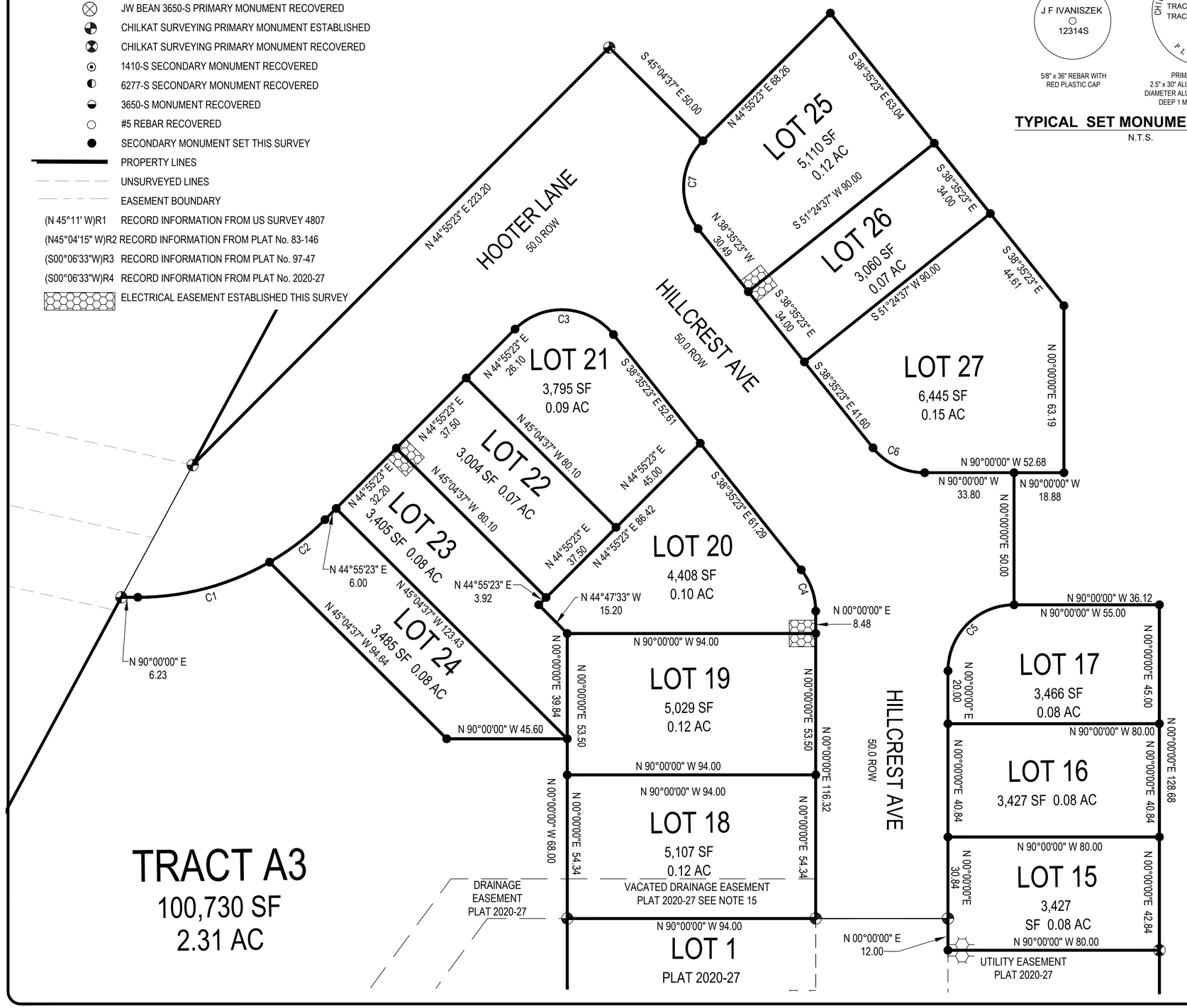
I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 16 DECEMBER 2022

STATE OF ALASKA 49TH
Joshua Frantz Ivaniszek
16 DECEMBER 2022
No. 12314
REGISTERED PROFESSIONAL LAND SURVEYOR

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R4 RECORD INFORMATION FROM PLAT No. 2020-27
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY



J F IVANISZEK
12314S

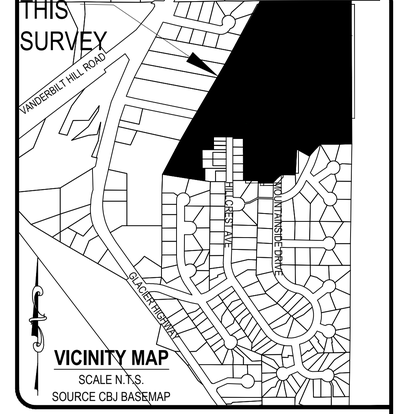
5/8" x 36" REBAR WITH
RED PLASTIC CAP

CHILKAT SURVEYING & MAPPING, LLC
TRACT A2
TRACT A1 | USS 1762
PLS 12314 2023

PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP WITH CLEAR
DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	100.00	52.17	51.58	S 75°03'17" W	29°53'26"
C2	100.00	26.51	26.43	S 52°30'58" W	15°11'11"
C3	25.00	42.10	37.30	N 86°50'00" W	96°29'14"
C4	25.00	16.84	16.52	S 19°17'41" E	38°35'23"
C5	25.00	39.27	35.36	N 45°00'00" E	90°00'00"
C6	25.00	21.55	20.88	N 63°13'53" W	49°22'48"
C7	25.00	36.44	33.30	S 03°10'00" W	83°30'46"

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 16 DECEMBER 2022

STATE OF ALASKA 49TH
Joshua Frantz Ivaniszek
16 DECEMBER 2022
No. 12314
REGISTERED PROFESSIONAL LAND SURVEYOR

1"=20'

0 20 40 60 80

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTA SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

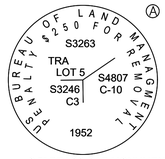
OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20210004	1" = 20'	16 DECEMBER 2022	2 OF 3

FOUND MONUMENT DESCRIPTIONS:

N.T.S.

Ⓐ



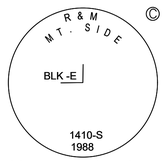
2.5" BRASS CAP MONUMENT

Ⓑ



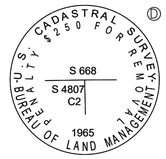
3.25" ALUMINUM CAP MONUMENT

Ⓒ



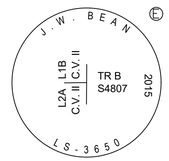
3.25" ALUMINUM CAP MONUMENT

Ⓓ



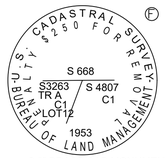
2.5" BRASS CAP MONUMENT

Ⓔ



3.25" ALUMINUM CAP MONUMENT
FOUND J.W. BEAN MONUMENT
S 61°38'46" E 0.37 FROM
US SURVEY 4807 BOUNDARY
MONUMENT NOT ACCEPTED

Ⓕ



2.5" BRASS CAP MONUMENT

Ⓖ

FOUND J.W. BEAN REBAR MONUMENT
S 01°34'23" W0.62 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE WITH
ALASKA DNR

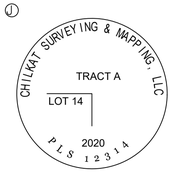
Ⓗ

FOUND JW BEAN REBAR
S 11°57'46"W 1.60 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓘ

FOUND #5 REBAR
S 04°55'56"W 1.29 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓙ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓚ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓛ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

OWNERSHIP CERTIFICATE:

WE, HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____,2023

_____
WILLIAM C. HEUMANN

DATE:_____,2023

_____
MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS____ DAY OF _____, 2023, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015; RAVENWOOD SUBDIVISION PLAT NO. 2019-3 RECORDED 28 JANUARY 2019; CHILKAT VISTAS SUBDIVISION PHASE 1 PLAT NO. 2020-27 RECORDED 11 AUGUST 2020 ON FILE WITH THE ALASKA DEPARTMENT OF NATURAL RESOURCES RECORDERS OFFICE IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER CHILKAT VISTAS SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET. ALL REQUIRED CHILKAT VISTAS SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12.120 BEST MANAGEMENT PRACTICES.

8) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY.
WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

9) HOOTER LANE WILL BE DEVELOPED AS A PUBLIC TWO-WAY STREET, AS SET OUT IN THE SKETCH PLAT SUBMITTED WITH SMP20190004, SUBJECT TO CBJ PUBLIC IMPROVEMENT STANDARDS IN CBJ 49.35.

10) HOOTER LANE FROM GLACIER HIGHWAY TO HILLCREST AVENUE, AND HILLCREST AVENUE AND MOUNTAINSIDE DRIVE SHALL BE DEVELOPED WITH A SIDEWALK ON ONE SIDE. THE NUMBER OF SIDEWALKS IN THE REMAINDER OF CHILKAT VISTAS WILL BE DETERMINED AT THE TIME OF FUTURE DEVELOPMENT APPLICATIONS.

11) ROBBIE ROAD SHALL TERMINATE AND SHALL NOT BE A POINT OF ACCESS TO CHILKAT VISTAS, UNLESS REQUIRED, AND GATED, FOR FIRE/EMERGENCY SERVICE ACCESS ONLY.

12) HILLCREST AVENUE SHALL TERMINATE AT HOOTER LANE. HILLCREST AVENUE MAY CONNECT TO HOOTER LANE WEST OF THE EXISTING HILLCREST ALIGNMENT AS SHOWN IN THE SKETCH PLAT SUBMITTED WITH SMP20190004. ALTERNATIVELY ROAD ACCESS TO THE NORTHEAST PORTION OF "TRACT A2" MAY CONNECT TO THE EAST/WEST PORTION OF MOUNTAINSIDE DRIVE ACROSS FROM THE ENTRANCE TO THE "POCKET" BETWEEN HILLCREST AND MOUNTAINSIDE.

13) OTHER THAN SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10 FEET IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

14) TEMPORARY CUL-DE-SAC EASEMENT SHALL BE VACATED UPON EXTENSION OF HILLCREST AVENUE UNLESS THE DIRECTOR DETERMINES ALL OR A PORTION OF THE CUL-DE-SAC MAY REMAIN.

15) PORTION OF 15' DRAINAGE EASEMENT FROM PLAT 2020-27 WITHIN THE BOUNDARY OF LOT 18 VACATED THIS PLAT.

16) LOTS 15, 16, 17, 20, 21, 22, 23, 24, AND 26 ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 15, 16, 17, 20, 21, 22, 23, 24, AND 26 RE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE FAMILY RESIDENCE PER LOT. OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____ , DATED _____ , 2023, AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, ANCHORAGE, ALASKA.

_____DATED _____ , 2023
CHAIRMAN OF THE PLANNING COMMISSION
CITY AND BOROUGH OF JUNEAU

ATTEST:

_____
MUNICIPAL CLERK
CITY AND BOROUGH OF JUNEAU



5/8" x 36" REBAR WITH
RED PLASTIC CAP



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP WITH CLEAR
DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 16 DECEMBER 2022



PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTA SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20210004	NTS	16 DECEMBER 2022	3 OF 3

Planning Commission

(907) 586-0715
PC_Comments@juneau.org
www.juneau.org/plancomm
155 S. Seward Street • Juneau, AK 99801

PLANNING COMMISSION
NOTICE OF DECISION
Date: February 22, 2022
File No.: SMP2021 0004

William & Michael Heumann
6000 Thane Road
Juneau, AK 99801

Proposal:	Preliminary plat review for Chilkat Subdivision Phase II: Proposing subdivision of one tract into 13 lots and three tracts of land at Hillcrest Avenue in a D15 zone.
Property Address:	Hillcrest Avenue
Legal Description:	Chilkat Vistas Tract A
Parcel Code No.:	7B1001160011
Hearing Date:	February 8, 2022

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated February 1, 2022, and APPROVED the preliminary plat to be conducted as described in the project description and project drawings submitted with the application and with the following conditions:

1. Provide a wetlands fill permit from the United States Army Corps of Engineers.
2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.
3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the Director of Engineering & Public Works for compliance with CBJ 49.35.140.
4. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.
5. Prior to approval of the final plat, the developer shall submit a final drainage plan to be approved by CBJ Engineering & Public Works. This drainage plan must be prepared by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

Attachment: February 1, 2022 memorandum from Irene Gallion, Community Development, to the CBJ Planning Commission regarding SMP2021 0004.

This Notice of Decision does not authorize any construction. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance to CBJ 01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ 01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ 49.20.120).

Effective Date: The permit is effective upon approval by the Commission, February 8, 2022.

Expiration Date: The permit will expire five (5) years after the effective date, or February 8, 2027, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the subdivision permit was authorized or no final plat has been approved. Application for permit extension must be submitted thirty days prior to the expiration date.

_____ _____

Michael LeVine, Chair
Planning Commission

Date

_____ _____

Filed With City Clerk

Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this subdivision. ADA regulations have access requirements above and beyond CBJ - adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.

COPY

CITY AND BOROUGH OF JUNEAU

Treasury Division
155 S Seward St
Juneau AK 99801
907.586.5215 x4907 Phone
907.586.5367 Fax

CERTIFICATION OF TAXES AND ASSESSMENTS PAID

I, the undersigned, being duly appointed, qualified Treasurer for the City and Borough of Juneau, First Judicial District, State of Alaska, do hereby certify that, according to the records of the City and Borough of Juneau, the following described real property is carried on the tax records in the name of:

William Heumann and Michael Heumann
Current Owner

CHILKAT VISTAS TR A
Legal Description

7B1001160011
Parcel Code Number

and that, all Real Property taxes and assessments levied by the City and Borough of Juneau against said Real Property have been paid in full. If approval is sought between January 1 and the date of levy, there is on deposit with the Treasury Department an amount sufficient to pay Real Property tax for the current year based on current available information; however, owner remains responsible for the balance of any taxes owed when billing occurs on July 1, 2023.

Angie Flick
Angie Flick

December 28, 2022
Date

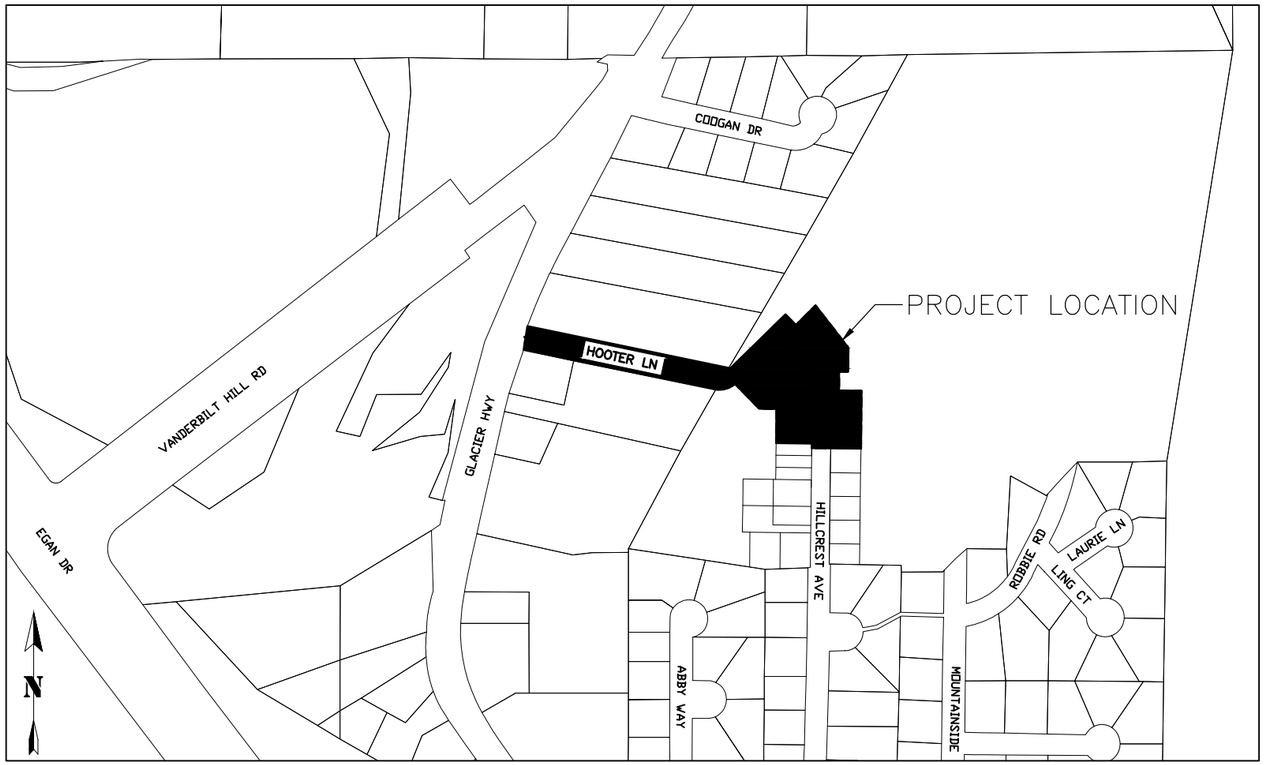
This Certification of Payment of Taxes is valid through December 31, 2023

CHILKAT VISTAS SUBDIVISION, PHASE II

JUNEAU, AK

PREPARED FOR:

MICHAEL & WILLIAM HEUMANN



PROJECT LOCATION MAP

NTS

SHEET INDEX	
SHEET NO.	DESCRIPTION
C–1	COVER SHEET
C–2	LEGEND, ABBREVIATIONS & GENERAL NOTES
C–3	TYPICAL SECTIONS – HOOTER LANE
C–4	TYPICAL SECTIONS – HILLCREST AVE
C–5	TYPICAL SECTIONS – GLACIER HWY
C6–C8	DETAIL SHEETS
C–9	SUMMARY TABLES
C–10	PLAN OVERVIEW
C11–C14	R.O.W. GRADING PLAN
C15	PRIVATE LOT GRADING PLAN
C16–C19	ROW PLAN & PROFILE
C–20	EROSION SEDIMENT CONTROL PLAN
C–21	SURVEY CONTROL
E–1	STREET LIGHTING & ELECTRICAL PLAN

CBJ STANDARD DRAWINGS	
CBJ STD NO.	CBJ STD NAME
103A	DRIVEWAY FOR STREETS WITHOUT CURB AND GUTTER
104A	CULVERT HEADWALL WITH HINGED TRASH RACK
104B	CULVERT HEADWALL WITHOUT HINGED TRASH RACK
105	DRIVEWAY CURB CUT
106	ACCESSIBLE SIDEWALK RAMP
111A	CONCRETE SIDEWALK, TYPE I CURB & GUTTER
111B	CURB & GUTTER TYPES II & III
113	UNDERDRAIN
118	STREET LIGHTING
125	PAVEMENT RESURFACING AND TRENCH DETAIL
127A	SIGN ASSEMBLY SINGLE–POST
203	SANITARY SEWER MANHOLE TYPES I&II
205	MANHOLE HEIGHTS
206A	STANDARD MANHOLE COVER AND FRAME
209	MANHOLE CONNECTION DETAILS
213	SANITARY SEWER SERVICE LATERAL
215	SANITARY SEWER CROSSING
303	STORM DRAIN MANHOLE TYPES I & II
304B	TYPE IV CATCH BASIN
307	STORM DRAIN SERVICE LATERAL
308	CURB INLET FRAME, GRATE & HOOD
309	LOCAL DEPRESSION AT CATCH BASIN
310	AREA DRAIN DETAIL
403	FIRE HYDRANT
404	HYDRANT GUARD POSTS
405	HYDRANT PAD
406A	WATER SERVICE
407	MAINLINE VALVE
412	RIGID INSULATION

AKDOT&PF STANDARD PLANS	
DOT STD NO.	AKDOT&PF STD NAME
D–06.10	CULVERT END SECTIONS
D–22.01	STORMDRAIN MANHOLE FRAME & GRATE DETAILS
D–31.01	HEADWALLS, CAST–IN–PLACE, TYPE II
T–20.04	PAVEMENT MARKING APPLICATIONS
T–21.04	PAVEMENT MARKING APPLICATIONS

STATE OF ALASKA 49TH
LUCAS M. CHAMBERS
08/11/2022
CE 106593
REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW

APPROVED:_____

DATE:

CHILKAT VISTAS SUBDIVISION, PHASE II

MICHAEL & WILLIAM HEUMANN

COVER SHEET

SHEET NUMBER C-1 OF 22

August 17, 2022

C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\Richland Mannor – Phase II – Cover.dwg

Attachment C - SME22-03 – Phase 2 Report and Final Plat
Attachment D - Approved Construction Plan

LEGEND

DESCRIPTION	EXISTING	REMOVE	PROPOSED
ASPHALT	EDGE OF ASPHALT		HATCHED AREA
BOLLARDS	● ●		● ●
CONCRETE			
CURB & GUTTER			
CUT (TOP)			
DITCH/DRAINAGE CHANNEL CENTERLINE			
EDGE GRAVEL			
FENCE			
FILL (TOE)			
FIRE HYDRANT			
PROPERTY EASEMENT LINE			
PROPERTY LINE			
SANITARY SEWER CLEANOUT			
SANITARY SEWER PIPE	PIPE SIZE & TYPE	PIPE SIZE & TYPE	PIPE SIZE & TYPE
SANITARY SEWER MANHOLE			SS-1
SIDEWALK RAMP			
SAWCUT & MTE LIMITS			
SIGN			
STORM DRAIN CATCH BASIN			S-1
STORM DRAIN PIPE	PIPE SIZE & TYPE SD SD	PIPE SIZE & TYPE SD SD SD	P-1 SD SD
STORM DRAIN MANHOLE, GRATE			S-1
STORM DRAIN UNDERDRAIN	UD UD UD		UD UD UD
TREES			
UNDERGROUND PIPE CAP			
UTILITY POLE			
UTILITY POLE WITH LUMINAIRE			
WATER LINE PIPE	PIPE SIZE & TYPE		PIPE SIZE & TYPE
HIGH PRESSURE WATERLINE PIPE	PIPE SIZE & TYPE HP HP		PIPE SIZE & TYPE HP HP
WATER VALVE BOX			

ABBREVIATIONS

AC	ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
BOP	BEGINNING OF PROJECT
BTM	BOTTOM
BVC	BEGIN VERTICAL CURVE
CB	CATCH BASIN
CBJ	CITY & BOROUGH OF JUNEAU
C/L	CENTERLINE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED POLYETHYENE PIPE
CONC	CONCRETE
CTE	CONNECT TO EXISTING
DI	DUCTILE IRON
DIA	DIAMETER
EL	ELEVATION
EOP	END OF PROJECT
EP	EDGE OF PAVEMENT
EVC	END VERTICAL CURVE
FG	FINISHED GRADE
GP	GRADE POINT
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
LG	LIP OF GUTTER
LP	LOW POINT
LT	LEFT
MH	MANHOLE
MIN	MINIMUM
MTE	MATCH TO EXISTING
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PRC	POINT OF REVERSE CURVATURE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENT
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECTION
RP	RADIUS POINT
RT	RIGHT
ROW	RIGHT-OF-WAY
STA	STATION
STD	STANDARD
TBC	TOP BACK OF CURB
TBG	TOP BACK OF GUTTER
TP	TOP OF PAVEMENT
TYP	TYPICAL
VPC	VERTICAL POINT OF CURVATURE
VPT	VERTICAL POINT OF TANGENCY

GENERAL NOTES

1. CBJ ENGINEERING STANDARD DETAILS BOOK FOR CIVIL ENGINEERING PROJECTS AND SUBDIVISION IMPROVEMENTS FOURTH ADDITION DATED AUGUST, 2011 AND CBJ ENGINEERING STANDARD SPECIFICATIONS DATED DECEMBER, 2003 ARE MADE A PART OF THIS CONTRACT, INCLUDING ALL ERRATA (NOS. 1–16) AND CURRENT REVISIONS AS APPLICABLE.

2. CALL 586-1333 BEFORE YOU DIG FOR UNDERGROUND POWER, TELEPHONE AND CABLE. CALL 811 ALASKA DIGLINE BEFORE YOU DIG FOR UNDERGROUND ACS & GCI. LOCATIONS AND ELEVATION OF EXISTING UNDERGROUND WATER, SEWER, POWER, TELEPHONE AND CABLE TELEVISION SHOWN ON THE PLANS WERE DERIVED FROM CBJ AS-BUILTS AND FIELD LOCATES. THE ACTUAL LOCATION OF UTILITIES MAY VARY FROM THOSE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, PROTECTING AND MAINTAINING THE UTILITIES THROUGHOUT THE CONSTRUCTION OF THE PROJECT. ANY DAMAGE TO THE UNDERGROUND UTILITIES DURING CONSTRUCTION SHALL BE PAID FOR BY THE CONTRACTOR AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

3. THE ESTIMATED TOTAL AREA OF DISTURBANCE RESULTING FROM THESE IMPROVEMENTS WILL BE OVER 1.00 ACRE. THE CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL DEVISES AS SPECIFIED IN THE PROJECT SPECIFIC SWPPP.

4. THE ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) HAS IDENTIFIED ONE "ACTIVE" CONTAMINATED SITE WITHIN 1,500 FEET OF THE PROJECT LIMITS. THE ACTIVE CONTAMINATED SITE IS AT 5165 GLACIER HWY (GAS N GO), SEE DEC.ALASKA.GOV FOR MORE INFO. THERE ARE NO SITES LISTED AS "INSTITUTIONAL CONTROL" WITHIN 1,500 OF THE PROJECT LIMITS. THERE ARE SEVERAL SITES LISTED AS "CLEANUP COMPLETE" WITHIN 1,500 FEET OF THE PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSULT DEC AND OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK.

5. FINISHED GRADE AND ALIGNMENT ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER. LOCATION OF PROPOSED WATER, SEWER AND STORM DRAINAGE FACILITIES ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER.

6. AEL&P, ACS AND GCI MAY CONDUCT WORK WITHIN THE PROJECT LIMITS TO RELOCATE UTILITIES AND TO UPGRADE THEIR RESPECTIVE SYSTEMS, THE CONTRACTOR SHALL COORDINATE ITS ACTIVITIES WITH EACH UTILITY COMPANY AND PROVIDE ACCESS AS NECESSARY FOR UTILITY COMPANIES TO COMPLETE THERE WORK.

7. THE CONTRACTOR SHALL PERFORM A CLOSED LEVEL LOOP THROUGH ALL TBM'S AS LISTED HEREON TO VERIFY ELEVATIONS PRIOR TO BEGINNING ANY WORK.

8. CONTRACTOR SHALL REFERENCE ALL EXISTING PROPERTY CORNER MONUMENTS (I.E. BRASS CAP MONUMENTS, REBARS, CONCRETE NAILS, CHISELED X'S) PRIOR TO CONSTRUCTION AND REMONUMENT AFTER SURFACING IS REPLACED. EXISTING SURVEY MONUMENTS MAY NOT BE SHOWN ON THE DRAWINGS. ALL WORK SHALL BE DONE BY, OR UNDER THE DIRECTION OF, AN ALASKA REGISTERED LAND SURVEYOR.

9. THE CONTRACTOR SHALL NOTIFY CBJ WATER UTILITIES (LONI VANKIRK AT 723-4975) OF PROPOSED WATER SERVICE INTERRUPTION AND SUBMIT THE "WATER SYSTEM SPECIAL USE PERMIT" TO CBJ WATER UTILITIES SUPERINTENDENT FOR APPROVAL AT LEAST 48 HOURS PRIOR TO SHUTDOWN OR FLUSHING OF MAINLINE WATER PIPE. NO WATER SERVICE INTERRUPTION MAY PROCEED UNTIL THIS APPROVAL IS OBTAINED. THE CONTRACTOR CANNOT SHUT OFF WATER SUPPLY TO SERVICES FOR MORE THAN 4 HOURS AT ONE TIME.

10. ALL MATERIALS PROPOSED FOR THE WATER SYSTEM THAT COME IN DIRECT CONTACT WITH THE WATER SHALL BE CERTIFIED BY AN ANSI ACCREDITED ORGANIZATION TO CONFORM WITH ANSI/NSF STANDARD 61 OR AN ANSI/NSF STANDARD WITH EQUIVALENT HEALTH REQUIREMENTS.

11. THE MATERIALS USED FOR THIS PROJECT SHALL COMPLY WITH THE NEW LEAD FREE REQUIREMENTS INCLUDING NOT MORE THAN 0.2% WHEN USED WITH RESPECT TO SOLDER AND FLUX AND NOT MORE THAN A WEIGHTED AVERAGE OF 0.25% LEAD WHEN USED WITH RESPECT TO THE WETTED SURFACES OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS AND FIXTURES.

12. ONLY HORIZONTAL ELBOW FITTINGS (BENDS) ARE SHOWN (NOT ALL ARE LABELED) ON DRAWINGS. ADDITIONAL FITTINGS WILL BE REQUIRED FOR VERTICAL DEFLECTIONS NEAR CONNECTIONS TO EXISTING PIPES, AND AT OTHER LOCATIONS REQUIRING GRADE CHANGES TO AVOID CONFLICTS.

13. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF OFF-SITE, EXCEPT AS NOTED IN THE CONTRACT DOCUMENTS.

14. PROVIDE KNOCKOUTS IN PRECAST STORM DRAIN STRUCTURES FOR ALL PIPES SHOWN ON THE PLANS.

15. "JUMPING JACK", OR SIMILAR TYPE COMPACTORS SHALL BE USED FOR COMPACTION WITHIN 18-INCHES OF THE OUTSIDE SURFACE OF ALL WATER VALVE BOXES, CATCH BASINS AND MANHOLES.

16. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF EXISTING WATER AND SEWER PIPES, INCLUDING ALL SERVICES ALONG THE STORM DRAIN AND WATER PIPE ALIGNMENTS TO DETERMINE PIPE INSULATION LOCATIONS AND TO ENSURE DAMAGE DOES NOT OCCUR TO THE PIPES.

17. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF BURIED ELECTRICAL AND COMMUNICATION CONDUITS & CABLES PRIOR TO INSTALLATION OF NEW STORM DRAIN AND SANITARY SEWER PIPES.

PERMITS

1. ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES DRIVEWAY AND APPROACH ROAD PERMIT NO. 30955 DATED 2-24-22.
2. ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES SPECIAL USE PERMIT NO. JNU SUP 21-007.
3. UNITED STATES ARMY CORPS OF ENGINEERS PERMIT NO. POA-2019-00066-M1.
4. ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION DRINKING WATER PERMIT NO. TBD.
5. ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION WASTEWATER PERMIT NO. TBD.
6. ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION STORM WATER POLLUTION PREVENTION PERMIT NO. AK10GE14.

STATE OF ALASKA 49TH — LUCAS M. CHAMBERS — 08/11/2022 — CE 10659 — REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW

APPROVED:_____

DATE:_____

CHILKAT VISTAS SUBDIVISION, PHASE II

MICHAEL & WILLIAM HEUMANN

LEGEND, ABBREVIATIONS AND GENERAL NOTES

SHEET NUMBER C-2 OF 22

August 11, 2022 C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension -Phase II\Richland Mannor - Phase II - Legend.dwg

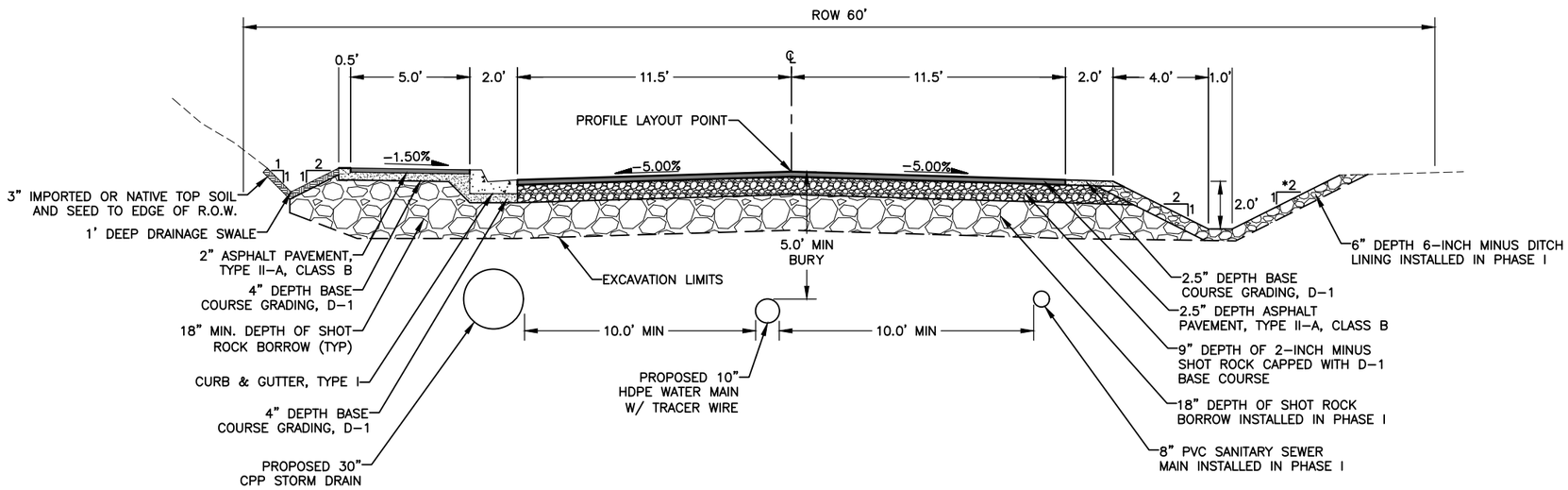
Attachment C - SME22-03 – Phase 2 Report and Final Plat
Attachment D - Approved Construction Plan

TYPICAL SECTION NOTES

1. BETWEEN ~STA: 13+00 TO STA 16+75 18" SHOTROCK BORROW, 8" PVC SANITARY SEWER MAIN, DITCH, BACKSLOPE CUT AND DITCH LINING ALREADY INSTALLED AS PART OF HOOTER LANE PHASE I ROW IMPROVEMENTS PROJECT.
2. NOT ALL UNDERGROUND UTILITIES SHOWN IN TYPICAL SECTIONS FOR CLARITY. SEE PLAN SHEETS FOR ADDITIONAL UTILITY LOCATION INFORMATION.
3. ENTIRE RIGHT-OF-WAY AND ROAD PRISM SHALL BE CLEARED AND GRUBBED. HOOTER LANE STA: 11+65 TO 16+75 HAS ALREADY BEEN CLEARED AND GRUBBED AS PART OF THE HOOTER LANE PHASE I ROW IMPROVEMENTS PROJECT.
4. CLEAR, GRUB AND INSTALL SHOT ROCK BORROW OR USABLE EXCAVATION, AS NECESSARY, WHERE EXISTING GROUND IS BELOW EXCAVATION LIMITS.
5. ADDITIONAL EXCAVATION BELOW THE NEATLINE SUBCUT LEVEL MAY BE REQUIRED IF ORGANIC OR OTHER UNSUITABLE MATERIALS ARE ENCOUNTERED. EXCAVATION AND REPLACEMENT OF UNSUITABLE MATERIALS SHALL BE APPROVED BY THE ENGINEER.
6. IF SUBGRADE BELOW EXCAVATION LIMITS IS CLAY INSTALL FILTER FABRIC, TYPE C PER CBJ STANDARD SPECIFICATION SECTION 02714 – FILTER CLOTH AT LOCATIONS AS DIRECTED BY THE ENGINEER.
7. LARGE BOULDERS, HARDPAN, STUMPS, LOGS, ORGANICS AND GROUND WATER MAY BE ENCOUNTERED AT VARIOUS DEPTHS DURING TRENCHING, DITCHING AND ROADWAY EXCAVATION OPERATIONS. THESE MATERIALS SHALL BE DISPOSED OF AS REQUIRED BY THE ENGINEER.
8. ALL CUT AND FILL SLOPES NOT STABILIZED WITH SHOT ROCK SHALL BE TOP/NATIVE SOILED AND SEEDED.
9. SEE R.O.W. PLAN SHEETS FOR DRIVEWAY CUT AND DEPRESSED CURB LOCATIONS.

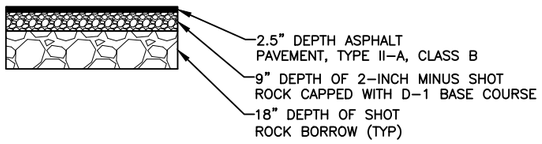
PAVING NOTES

1. LAYDOWN OPERATIONS SHALL BE CONDUCTED IN A MANNER WHICH ENSURES THAT THE MINIMUM TEMPERATURE ALONG THE CENTERLINE EDGE OF THE FIRST PAVED LANE DOES NOT FALL BELOW 200°F BEFORE THE SECOND LANE IS PAVED.

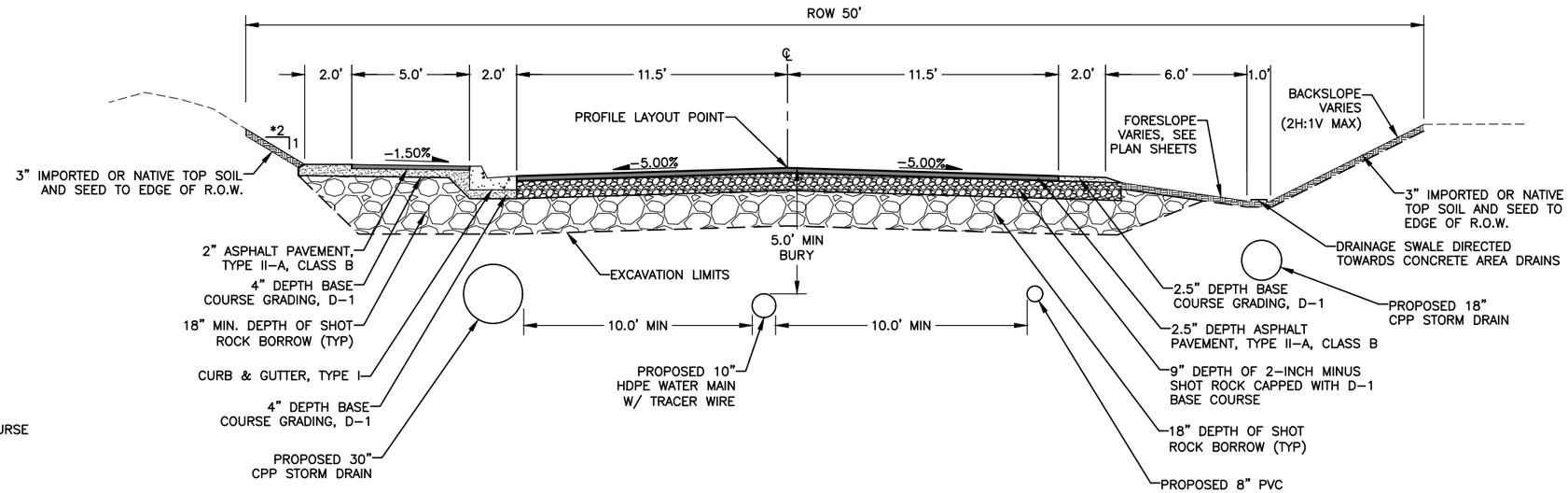


HOOTER LN STA 11+63 TO 16+75 TYPICAL SECTION
NTS

*BACKSLOPE VARIES, SEE NOTE 1
1:1 STA: 11+75 TO 13+00
1.5:1 STA: 13+00 TO 13+95
2:1 STA: 13+95 TO 16+75



TAMARACK TRAIL DRIVEWAYS
STRUCTURAL SECTION
NTS



HOOTER LN STA 17+42 TO 18+42 TYPICAL SECTION
NTS

*INSTALL 1' DEEP DRAINAGE SWALE OFF BACK OF SIDEWALK STA: 18+42 TO 19+41

STATE OF ALASKA 49TH — LUCAS M. CHAMBERS — 08/11/2022 — CE 106593 — REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
info@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW

APPROVED:_____
DATE:

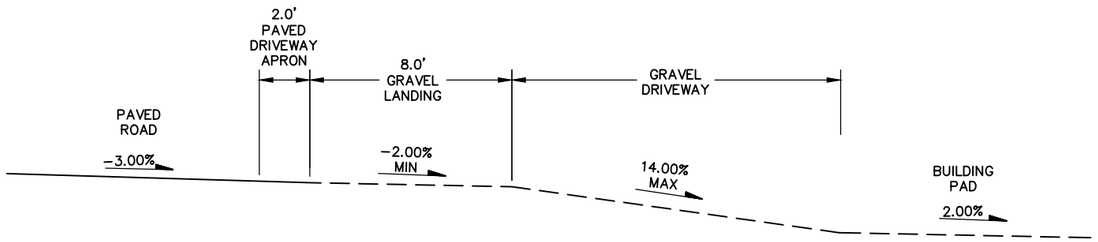
CHILKAT VISTAS SUBDIVISION, PHASE II
MICHAEL & WILLIAM HEUMANN

TYPICAL SECTIONS - HOOTER LANE

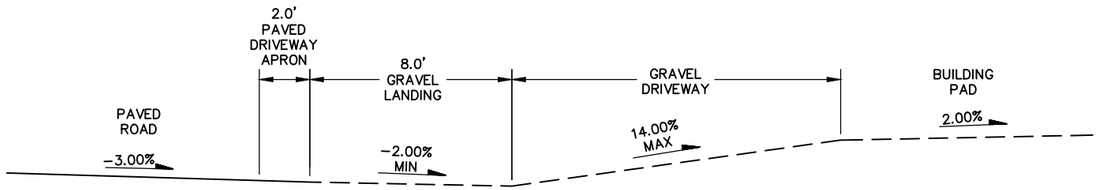
SHEET NUMBER C-3
OF 22

August 11, 2022 C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension -Phase II\Richland Mannor - Phase II - Typical.dwg

Attachment C - SME22-03 – Phase 2 Report and Final Plat
Attachment D - Approved Construction Plan



DRIVEWAY PROFILE FOR PRIVATE LOTS BELOW ROAD GRADE
LOTS (18,19&20)
NTS



DRIVEWAY PROFILE FOR PRIVATE LOTS ABOVE ROAD GRADE
LOTS (15,16,17,21,22,23,24,25,26&27)
NTS

DRIVEWAY PROFILE NOTES:

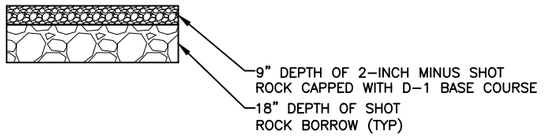
1. SEE STD 103A FOR ADDITIONAL DETAILS.
2. PROVIDE A SMOOTH TRANSITION BETWEEN GRADE BREAKS.
3. THE DRIVEWAY SHALL NOT EXCEED A 14% SLOPE.

TYPICAL SECTION NOTES

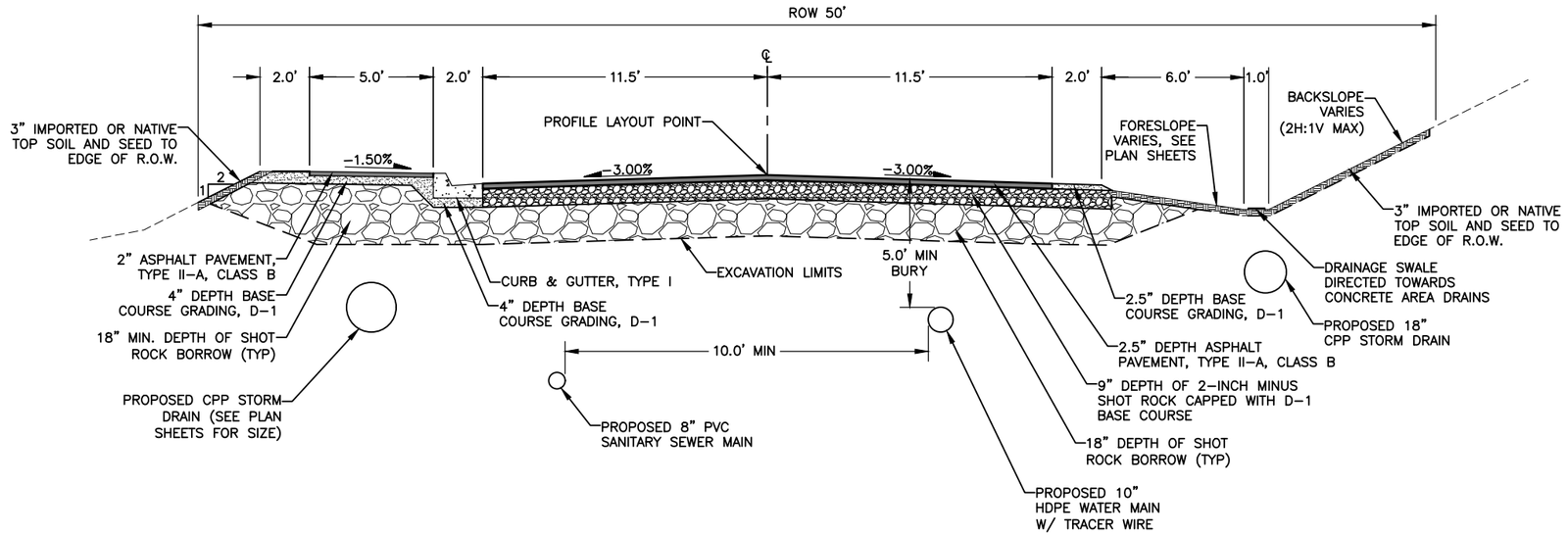
1. NOT ALL UNDERGROUND UTILITIES SHOWN IN TYPICAL SECTIONS FOR CLARITY. SEE PLAN SHEETS FOR ADDITIONAL UTILITY LOCATION INFORMATION.
2. ENTIRE RIGHT-OF-WAY AND ROAD PRISM SHALL BE CLEARED AND GRUBBED.
3. CLEAR, GRUB AND INSTALL SHOT ROCK BORROW OR USABLE EXCAVATION, AS NECESSARY, WHERE EXISTING GROUND IS BELOW EXCAVATION LIMITS.
4. ADDITIONAL EXCAVATION BELOW THE NEATLINE SUBCUT LEVEL MAY BE REQUIRED IF ORGANIC OR OTHER UNSUITABLE MATERIALS ARE ENCOUNTERED. EXCAVATION AND REPLACEMENT OF UNSUITABLE MATERIALS SHALL BE APPROVED BY THE ENGINEER.
5. IF SUBGRADE BELOW EXCAVATION LIMITS IS CLAY INSTALL FILTER FABRIC, TYPE C PER CBJ STANDARD SPECIFICATION SECTION 02714 – FILTER CLOTH AT LOCATIONS AS DIRECTED BY THE ENGINEER.
6. LARGE BOULDERS, HARDPAN, STUMPS, LOGS, ORGANICS AND GROUND WATER MAY BE ENCOUNTERED AT VARIOUS DEPTHS DURING TRENCHING, DITCHING AND ROADWAY EXCAVATION OPERATIONS. THESE MATERIALS SHALL BE DISPOSED OF AS REQUIRED BY THE ENGINEER.
7. ALL CUT AND FILL SLOPES NOT STABILIZED WITH SHOT ROCK SHALL BE TOP/NATIVE SOILED AND SEEDED.
8. SEE R.O.W. PLAN SHEETS FOR DRIVEWAY CUT AND DEPRESSED CURB LOCATIONS.
9. SEE GRADING SHEET FOR GRADING INFORMATION FROM HILLCREST STATION 5+91 TO 6+67.

PAVING NOTES

1. LAYDOWN OPERATIONS SHALL BE CONDUCTED IN A MANNER WHICH ENSURES THAT THE MINIMUM TEMPERATURE ALONG THE CENTERLINE EDGE OF THE FIRST PAVED LANE DOES NOT FALL BELOW 200°F BEFORE THE SECOND LANE IS PAVED.



STUB-STREET
STRUCTURAL SECTION
NTS



HILLCREST AVE STA 4+91 TO 5+54 & 6+49 TO 7+61 TYPICAL SECTION
NTS

No.	DATE	DESCRIPTION	BY

STATE OF ALASKA 49TH Lucas Chambers LUCAS M. CHAMBERS 08/11/2022 CE 10659 REGISTERED PROFESSIONAL ENGINEER

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
info@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW

APPROVED:_____

DATE:_____

CHILKAT VISTAS
SUBDIVISION, PHASE II

MICHAEL & WILLIAM HEUMANN

TYPICAL SECTIONS - HILLCREST AVE

SHEET NUMBER
C-4
OF
22

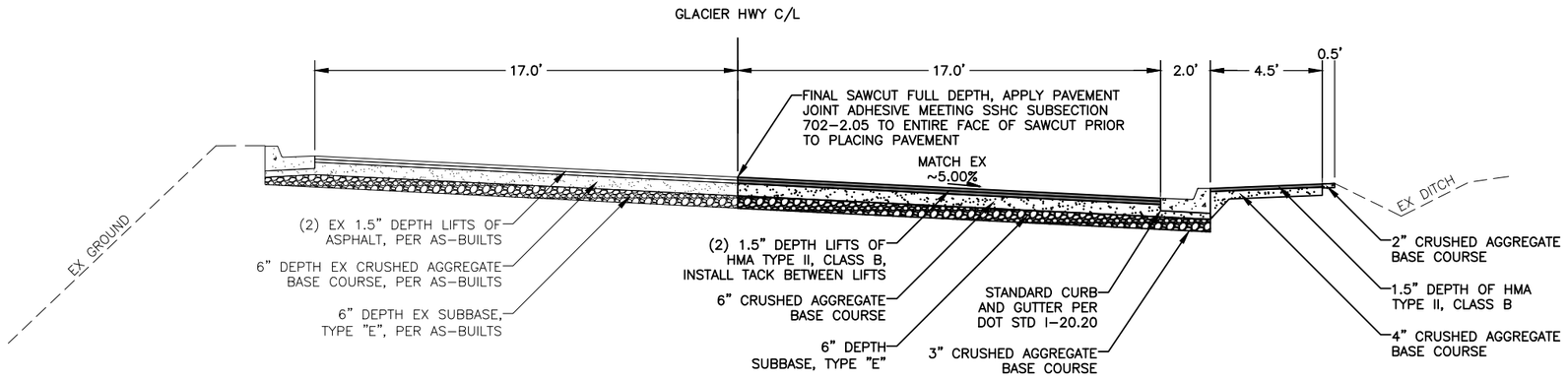
August 11, 2022 C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hilcrest Extension -Phase II\Richland Mannor - Phase II - Typical.dwg

TYPICAL SECTION NOTES

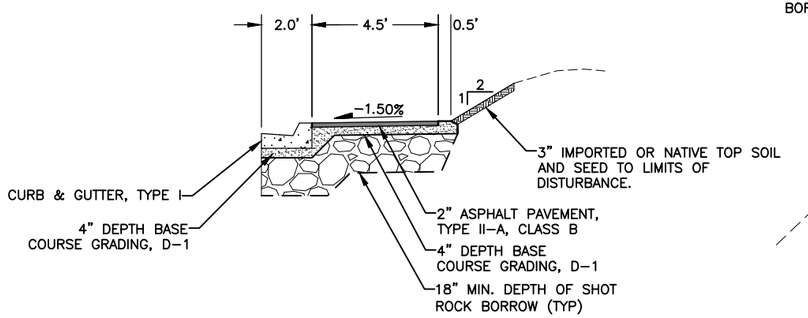
1. AKDOT&PF PERMIT JNU SUP 21-007 AND dw30955 IS MADE PART OF THIS PLAN SET. CONTRACTOR IS RESPONSIBLE FOR REVIEWING PERMIT AND ENSURING COMPLIANCE WITH ALL REQUIREMENTS INCLUDING APPROVED TRAFFIC CONTROL PLAN.
2. ALL MATERIALS AND CONSTRUCTION IN THE GLACIER HWY R.O.W. SHALL CONFORM TO AKDOT&PF "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2020 EDITION". PIPE BEDDING, BACKFILL AND ROADWAY STRUCTURAL SECTION COMPACTION RESULTS SHALL BE PROVIDED TO AKDOT&PF PRIOR TO PAVING ON GLACIER HWY.
3. PROPOSED STRUCTURAL SECTION DESIGNED TO MATCH EXISTING AS SHOWN ON THE "SALMON CREEK TO VANDERBILT HILL GRADING, PAVING & DRAINAGE – PROJECT NO. 70469" AS-BUILTS.
4. CONTRACTOR TO VERIFY A MINIMUM 0.5% SLOPE ALONG GUTTER FLOW LINE TOWARDS EX CATCH BASIN OR SPILLWAY BEFORE POURING CURB.
5. EXISTING GUARDRAIL, MAILBOXES, SIGNS, UTILITY POLES AND OTHER SITE FEATURES NOT SHOWN.
6. FINAL SAWCUT SHOWN IN PLANS. CONTRACTOR SHALL MAKE INITIAL SAWCUT LINE 6-12" FROM SAWCUT LINE. FINAL SAWCUT SHALL BE PERFORMED WITHIN 24 HOURS OF PAVING OPERATIONS.

PAVING NOTES

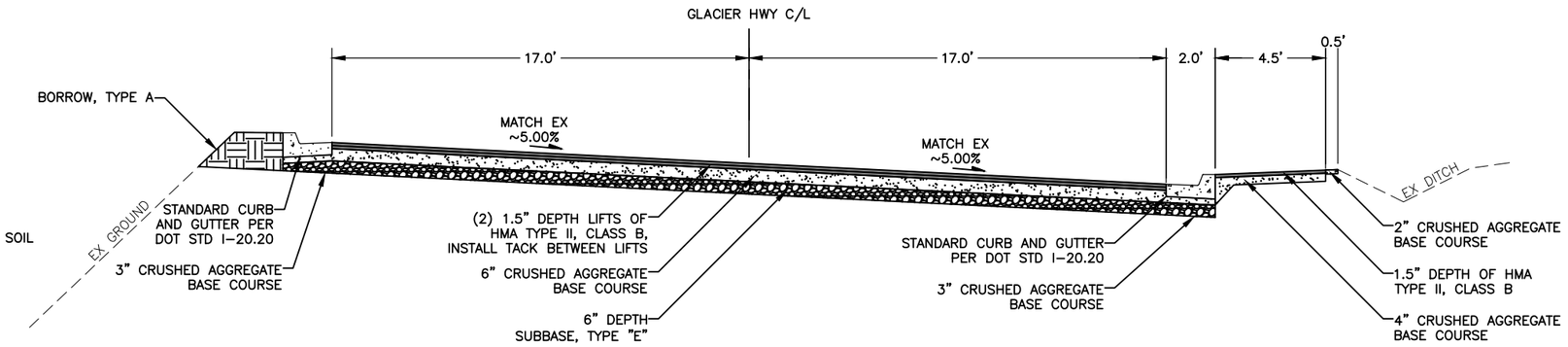
1. LAYDOWN OPERATIONS SHALL BE CONDUCTED IN A MANNER WHICH ENSURES THAT THE MINIMUM TEMPERATURE ALONG THE CENTERLINE EDGE OF THE FIRST PAVED LANE DOES NOT FALL BELOW 200°F BEFORE THE SECOND LANE IS PAVED.



SINGLE LANE TRENCH PATCH STRUCTURAL TYPICAL SECTION
NTS



SIDEWALK TYPICAL SECTION HOOTER/GLACIER INTERSECTION RIGHT
NTS



DOUBLE LANE TRENCH PATCH STRUCTURAL TYPICAL SECTION
NTS

STATE OF ALASKA 49 TH
LUCAS M. CHAMBERS
08/11/2022
CE 106593
REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW
APPROVED:_____
DATE:_____

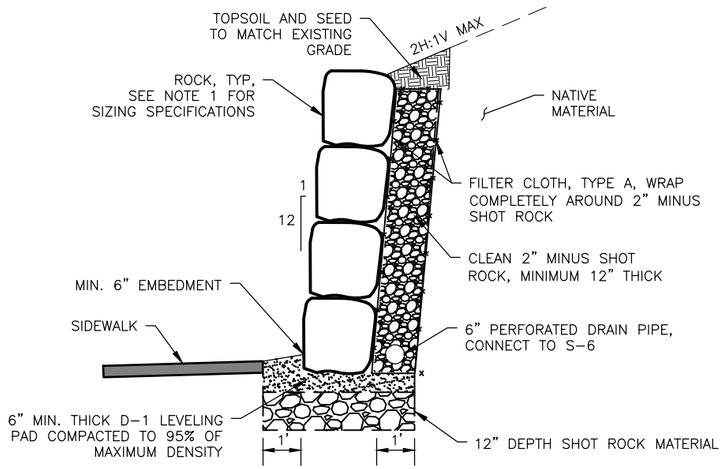
CHILKAT VISTAS SUBDIVISION, PHASE II
MICHAEL & WILLIAM HEUMANN

TYPICAL SECTIONS - GLACIER HWY

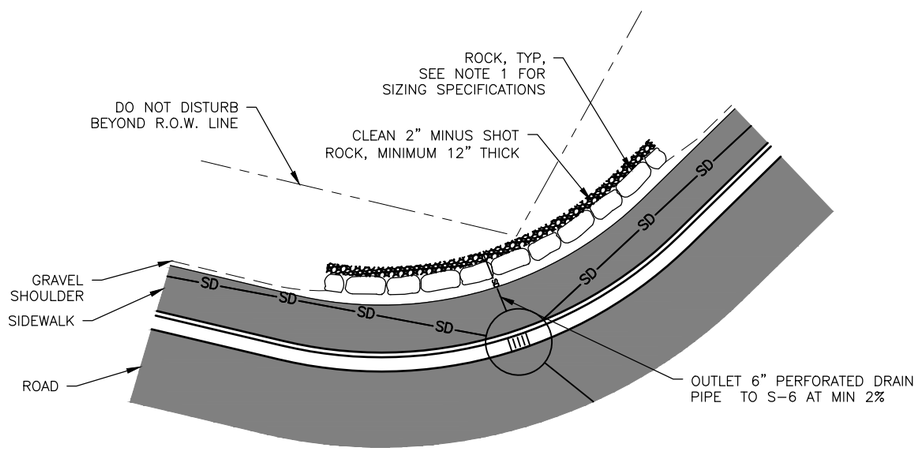
SHEET NUMBER C-5
OF 22

August 11, 2022 C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hilcrest Extension -Phase II\Richland Mannor - Phase II - Typical.dwg

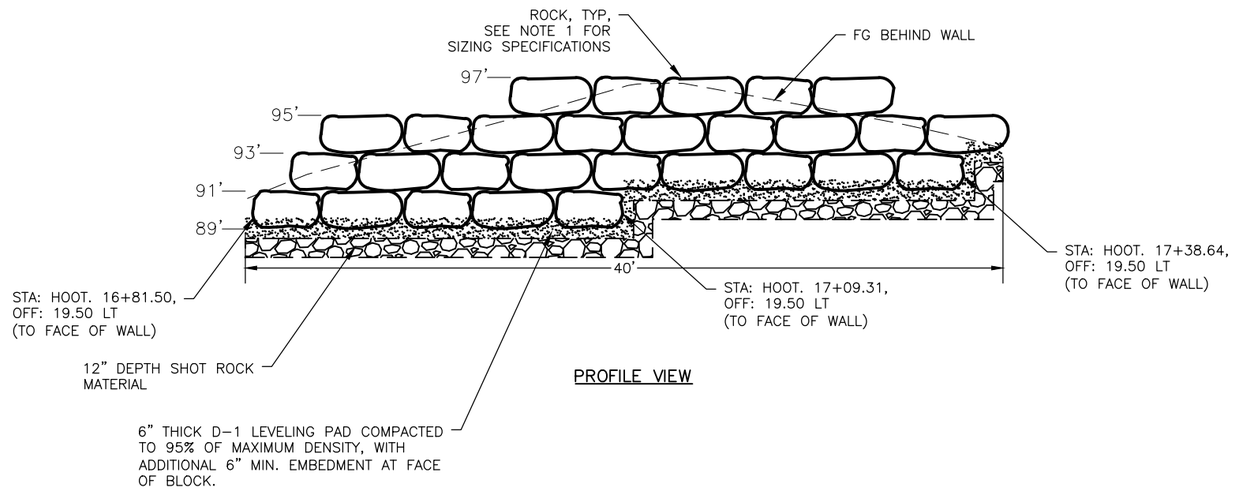
Attachment C - SME22-03 – Phase 2 Report and Final Plat
Attachment D - Approved Construction Plan



SECTION VIEW



PLAN VIEW



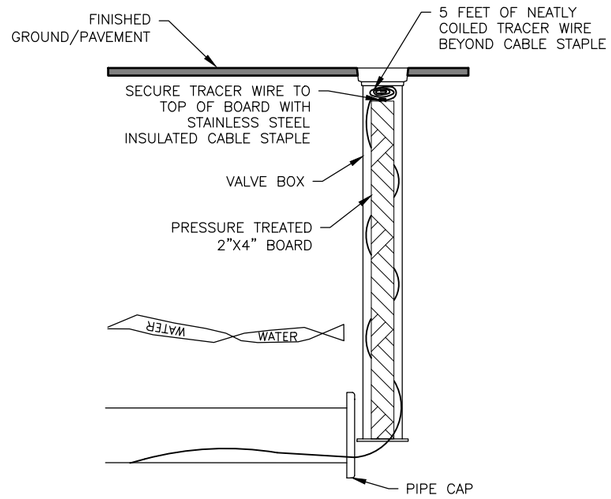
PROFILE VIEW

1/6 ROCK WALL DETAIL

SCALE: NOT TO SCALE

DETAIL 1/6 NOTES:

1. EACH ROCK SHALL HAVE A MINIMUM CIRCUMFERENCE OF 12 FEET ALONG THE PRIMARY AXIS, AND A MINIMUM CIRCUMFERENCE OF 8 FEET ALONG THE SECONDARY AXIS.
2. ROCKS SHALL BE PLACED IN A MANOR THAT MINIMIZES VOID SPACE BETWEEN ROCKS, AS DIRECTED BY THE ENGINEER.
3. DESIGN SUBJECT TO MINOR REVISIONS BY THE ENGINEER.
4. IF A CONSTRUCTION EASEMENT IS OBTAINED FROM THE ADJACENT PROPERTY OWNER, THE ROCK WALL MAY BE REPLACED WITH A 2H:1V CUT SLOPE, CONSISTENT WITH THE SURROUNDING RIGHT-OF-WAY. NO WORK OR DISTURBANCE SHALL OCCUR ON PRIVATE PROPERTY WITHOUT A WRITTEN AGREEMENT FROM THE PROPERTY OWNER AND APPROVAL OF THE ENGINEER.

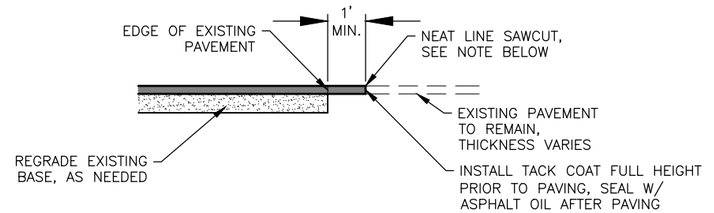


2/6 TRACER WIRE TERMINATION BOX

SCALE: NOT TO SCALE

DETAIL 2/6 NOTES:

1. DETAIL 2/6 IS INTENDED TO SHOW THE TRACER WIRE TERMINATION BOX PER ADDENDUM 16. NO CBJ STANDARDS HAVE BEEN MODIFIED BY THIS DETAIL. ALL OTHER ELEMENTS SHOWN (WATERLINE, WARNING TAPE, ETC.) SHALL BE INSTALLED PER APPLICABLE CBJ STANDARD SPECIFICATIONS AND STANDARD DETAILS.



3/6 PAVEMENT MATCH JOINT

SCALE: NOT TO SCALE

DETAIL 3/6 NOTES:

1. FINAL SAWCUT OF EXISTING ASPHALT SHALL NOT BE MADE UNTIL 24 HOURS PRIOR TO PAVING.

STATE OF ALASKA 49TH — LUCAS M. CHAMBERS — 08/11/2022 — CE 106593 — REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

CBJ REVIEW

APPROVED:_____

DATE:_____

CHILKAT VISTAS SUBDIVISION, PHASE II

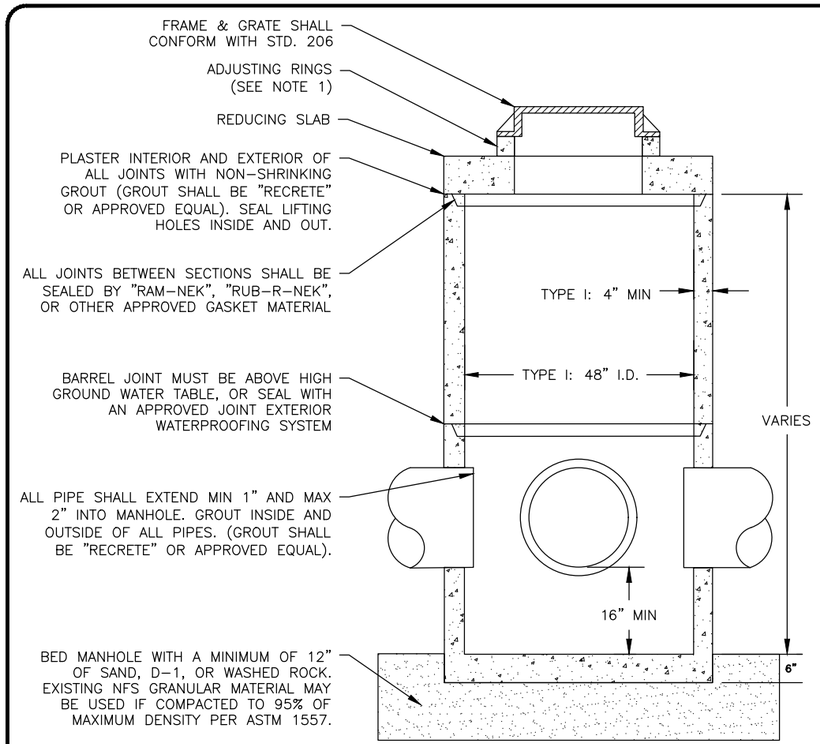
MICHAEL & WILLIAM HEUMANN

DETAILS - RETAINING WALL AND TRACER WIRE TERMINATION BOX

SHEET NUMBER C-6 OF 22

August 11, 2022 C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hilcrest Extension -Phase II\Richland Mannor - Phase II - Details.dwg

Attachment C - SME22-03 – Phase 2 Report and Final Plat
Attachment D - Approved Construction Plan

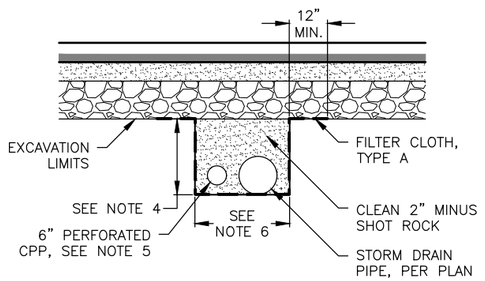


1/7 CONCENTRIC STORM DRAIN MANHOLE WITH REDUCING SLAB – TYPE I & II

SCALE: NOT TO SCALE

DETAIL 1/7 NOTES:

1. THE AREA BETWEEN THE TOP OF THE CATCH BASIN AND THE FRAME SHALL BE FILLED WITH CONCRETE MEETING THE REQUIREMENTS OF CBJ SPECIFICATION 03302-CONCRETE STRUCTURES. NO BRICKS, WOOD, STONES, ADJUSTING RINGS, OR OTHER GRADE ADJUSTMENT DEVICES SHALL BE USED. TEMPORARY FORM WORK SHALL BE CONSTRUCTED TO PROVIDE A SMOOTH INSIDE EXPOSED SURFACE FREE OF VOIDS AND PROJECTIONS. THE CONSTRUCTED FRAME SUPPORT MUST MATCH THE INTERIOR OF THE FRAME INSTALLED AS APPROVED BY THE ENGINEER.

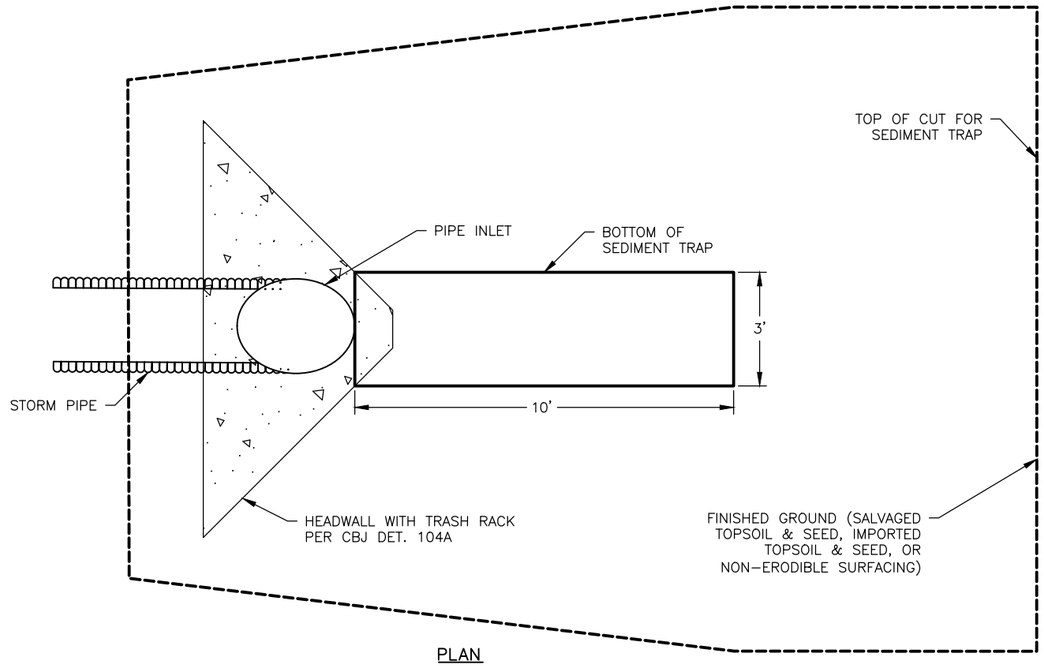


3/7 6-INCH CPP UNDERDRAIN

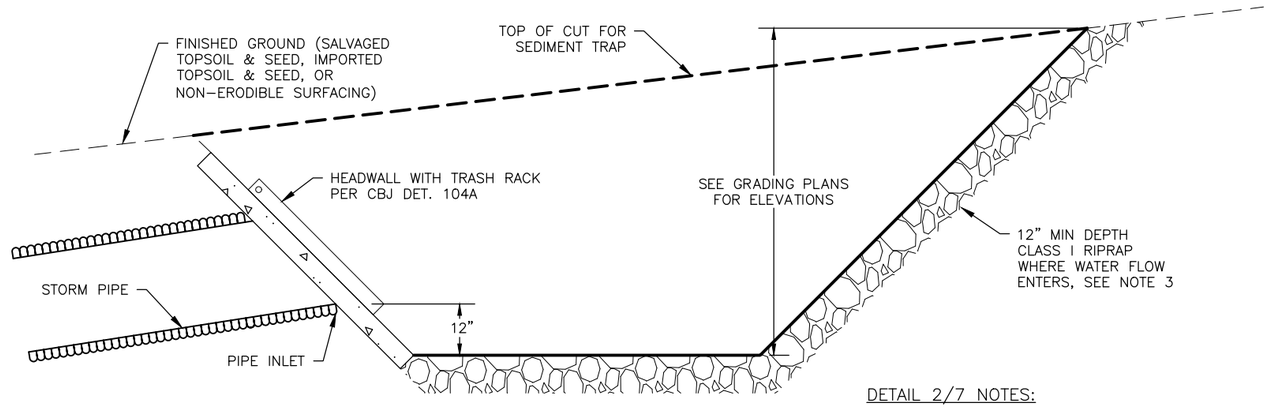
SCALE: NOT TO SCALE

DETAIL 3/7 NOTES:

1. OUTFALL CONNECTIONS WILL BE INTO CATCH BASINS.
2. BOTH ENDS OF PIPES SHALL BE CONNECTED IN STORM DRAIN STRUCTURES OR CAPPED, SEE PLANS. FILTER CLOTH SHALL BE FOLDED AND OVERLAPPED TO SEAL END OF DRAIN ROCK SECTION.
3. PROVIDE KNOCK OUTS IN STORM DRAIN STRUCTURES LARGE ENOUGH TO ACCOMMODATE BOTH UNDERDRAIN AND STORM DRAIN PIPE.
4. DEPTH VARIES SEE PLAN OR PROFILE SHEETS.
5. MINIMUM PIPE SLOPE SHALL BE 1.00%.
6. TRENCH WIDTH SHALL BE 3'-2" WIDE AT 18" STORM PIPE CROSSINGS AND 1'-6" WIDE WHEN NO STORM DRAIN PIPE IS PRESENT.
7. UNDERDRAIN NOT REQUIRED IF REMOVAL OF BEDROCK IS REQUIRED FOR UNDERDRAIN INSTALLATION.



PLAN



PROFILE

2/7 PIPE INLET SEDIMENT BASIN

SCALE: NOT TO SCALE

DETAIL 2/7 NOTES:

1. ALL DETAILS FROM CBJ STD. 104A SHALL BE FOLLOWED, EXCEPT WHERE MODIFIED BY THIS DETAIL.
2. ALL SIDESLOPES (INCLUDING HEADWALL) SHALL BE SLOPED AT 1H:1V OR FLATTER.
3. ALL SEDIMENT TRAP SIDESLOPES SHALL BE SURFACED WITH 6-INCH MINUS SHOT ROCK.

STATE OF ALASKA 49TH — LUCAS M. CHAMBERS — 08/11/2022 — CE 106593 — REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

CBJ REVIEW

APPROVED:_____

DATE:_____

CHILKAT VISTAS SUBDIVISION, PHASE II

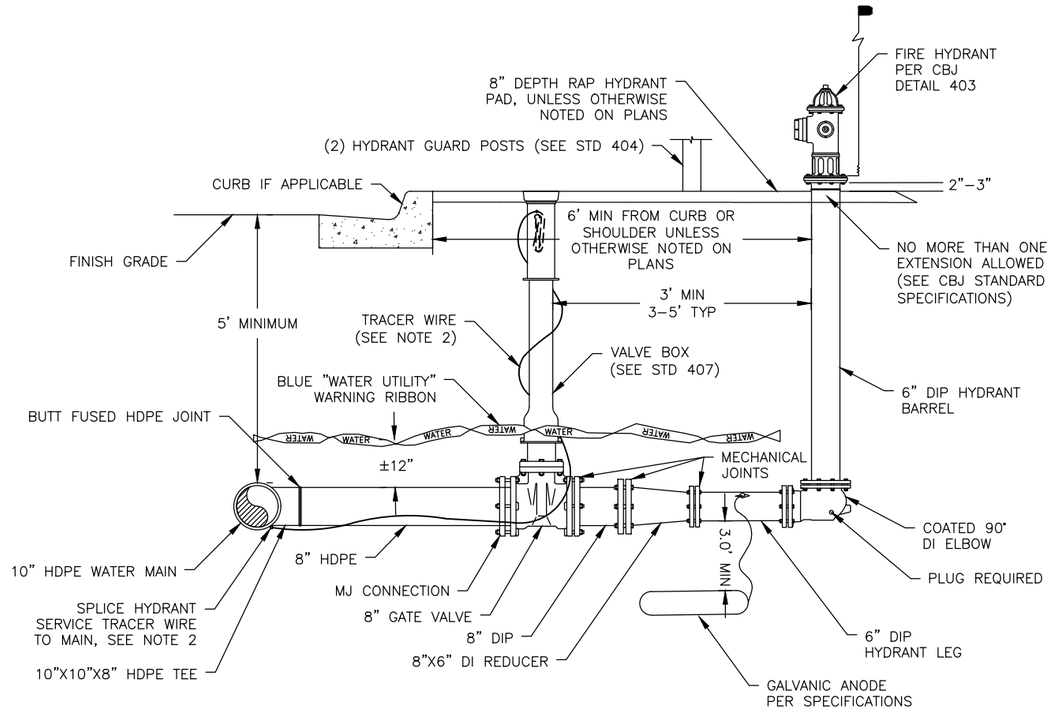
MICHAEL & WILLIAM HEUMANN

DETAILS - SEDIMENT TRAP

SHEET NUMBER C-7 OF 22

August 11, 2022

C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hilcrest Extension -Phase II\Richland Mannor - Phase II - Details.dwg

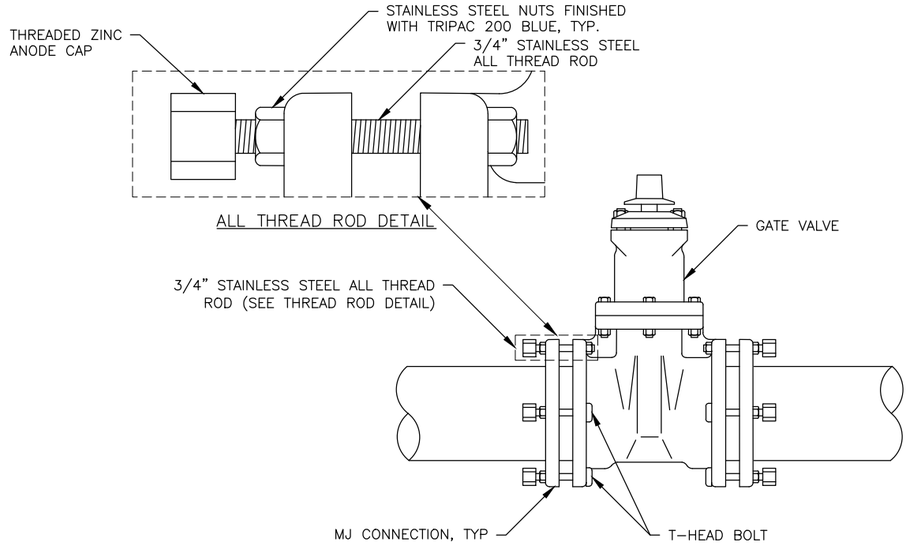


1/5 MODIFIED FIRE HYDRANT ASSEMBLY DETAIL

SCALE: NOT TO SCALE

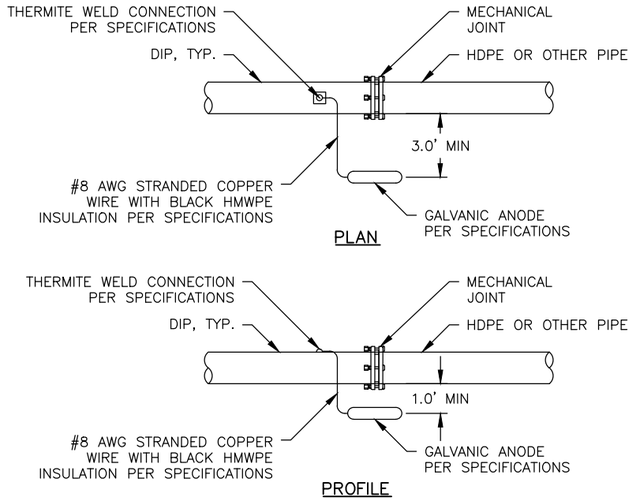
DETAIL 1/10 NOTES:

1. TRACER WIRE SHALL BE NO.10 AWG HIGH–STRENGTH COPPER CLAD STEEL WITH BLUE HDPE INSULATION JACKET. MAIN LINE TRACER WIRE SHALL NOT BE SPLICED AND SHALL BE CONTINUOUS BETWEEN VALVE BOXES. SERVICE AND HYDRANT LEGS SHALL USE WATERPROOF DIRECT BURY SPLICE CONNECTION LUGS. TRACER WIRE SHALL BE CONNECTED TO THE BOTTOM QUADRANT OF THE HDPE WATER PIPE. EACH END OF TRACER WIRE SHALL BE TERMINATED AT A VALVE BOX, TRACER WIRE SHALL RUN OUTSIDE THE VALVE BOX AND BE INSERTED INTO THE VALVE BOX THROUGH A 3/4" DRILLED HOLE WITHIN 9"–12" OF THE TOP. 5' OF ADDITIONAL TRACER WIRE SHALL BE NEATLY COILED WITHIN THE VALVE BOX.
2. HYDRANT LEG TRACER SPLICE CONNECTION INTO THE MAIN TRACE WIRE ARE TO BE CONSTRUCTED USING DRYCONN WATERPROOF DIRECT BURY LUGS AS MANUFACTURED BY KING INNOVATION OR APPROVED EQUAL.
3. HYDRANT BARREL AND VALVE BOX SHALL BE PLUMB.
4. GROUND COVER SHALL BE 5' MINIMUM. ADDITIONAL COVER (MORE THAN 5') MAY BE REQUIRED BY THE ENGINEER.
5. ALL HYDRANTS SHALL BE PAINTED CATEPILLAR YELLOW, AND THE NUMBER OF FEET TO THE VALVE SHALL BE PRINTED IN BLACK 1/2" BLOCK LETTERS JUST BELOW THE TOP BONNET. PORT CAPS SHALL BE COLOR CODED PER NFPA STANDARD 291 AS DIRECTED BY THE CBJ WATER UTILITIES DEPARTMENT.
6. HYDRANT SHALL BE MUELLER CENTURION 200 OR 250 WITH INTEGRAL STORZ PUMPER CONNECTION OR APPROVED EQUAL. CLOW F2500 SERIES HYDRANTS ARE NO LONGER ACCEPTED BY CBJ.



2/5 VALVE BOLT CONNECTION DETAIL

SCALE: NOT TO SCALE



3/5 GALVANIC ANODE INSTALLATION FOR PIPE MATERIAL TRANSITION DETAIL

SCALE: NOT TO SCALE

STATE OF ALASKA 49TH — LUCAS M. CHAMBERS — 08/11/2022 — CE 106593 — REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
info@proHNS.com
www.proHNS.com

CBJ REVIEW

APPROVED:_____

DATE:

CHILKAT VISTAS SUBDIVISION, PHASE II

MICHAEL & WILLIAM HEUMANN

DETAILS - WATER

SHEET NUMBER C-8 OF 22

C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hilcrest Extension –Phase II\Richland Mannor – Phase II – Details.dwg
August 11, 2022

Attachment C - SME22-03 – Phase 2 Report and Final Plat
Attachment D - Approved Construction Plan

WATER SERVICE SUMMARY

Lot #	STATION & OFFSET	SIZE/TYPE/NOTES
Lot 15	HILL. STA: 5+08.43, OFF: 26.50 RT	1" SIDR7 POLY
Lot 16	HILL. STA: 5+52.59, OFF: 26.50 RT	1" SIDR7 POLY
Lot 17	HILL. STA: 5+85.31, OFF: 26.50 RT	1" SIDR7 POLY
Lot 18	HILL. STA: 5+10.25, OFF: 19.50 LT	1" SIDR7 POLY
Lot 19	HILL. STA: 5+85.71, OFF: 19.50 LT	1" SIDR7 POLY
Lot 19	HILL. STA: 5+58.33, OFF: 19.50 LT	REMOVE CORP, PLUG MAIN WITH BRASS PLUG AT
Lot 20	HILL. STA: 6+94.85, OFF: 19.50 LT	1" SIDR7 POLY
Lot 21	HOOT. STA: 18+37.90, OFF: 23.00 RT	1" SIDR7 POLY
Lot 22	HOOT. STA: 18+03.90, OFF: 23.00 RT	1" SIDR7 POLY
Lot 23	HOOT. STA: 17+66.22, OFF: 23.00 RT	1" SIDR7 POLY
Lot 24	HOOT. STA: 17+34.74, OFF: 22.34 RT	1" SIDR7 POLY
Lot 25	HILL. STA: 7+73.87, OFF: 26.50 RT	1" SIDR7 POLY
Lot 26	HILL. STA: 7+20.25, OFF: 26.50 RT	1" SIDR7 POLY
Lot 27	HILL. STA: 6+86.28, OFF: 26.50 RT	1" SIDR7 POLY
4825 GLACIER HWY	HOOT. STA: 14+51.52, OFF: 28.00 RT	1" SIDR7 POLY
TRACT-A3	HOOT. STA: 16+98.92, OFF: 21.13 RT	10" HDPE

NOTES:
1:TRACER WIRE SHALL BE NO.10 AWG HIGH-STRENGTH COPPER CLAD STEEL WITH BLUE HDPE INSULATION JACKET. MAIN LINE TRACER WIRE SHALL NOT BE SPLICED AND SHALL BE CONTINUOUS BETWEEN VALVE BOXES. SERVICES SHALL USE WATERPROOF DIRECT BURY SPLICE CONNECTION LUGS. TRACER WIRE SHALL BE CONNECTED TO THE BOTTOM QUADRANT OF THE HDPE WATER PIPE. EACH END OF TRACER WIRE SHALL BE TERMINATED AT A VALVE BOX, TRACER WIRE SHALL RUN OUTSIDE THE VALVE BOX AND BE INSERTED INTO THE VALVE BOX THROUGH A 3/4" DRILLED HOLE WITHIN 9"-12" OF THE TOP. 5' OF ADDITIONAL TRACER WIRE SHALL BE NEATLY COILED WITHIN THE VALVE BOX.
2: SPLICE TRACER WIRE TO MAIN WITH DRYCONN WATERPROOF DIRECT BURY LUGS.
3: ATTACH TRACER WIRE TO SERVICE EVERY 5 FEET.
4: INSULATE WATER SERVICES PER STD 412 AT STORM DRAIN OR DITCH CROSSINGS WHERE 5 FEET OF COVER/SEPARATION CANNOT BE OBTAINED.

SEWER SERVICE SUMMARY

LOT#	STATION & OFFSET	SIZE/TYPE
Lot 15	HILL.: STA: 5+03.43, OFF: 26.50 RT	4" SDR 35 PVC
Lot 16	HILL. STA: 5+47.62, OFF: 26.50 RT	4" SDR 35 PVC
Lot 17	HILL. STA: 5+90.33, OFF: 26.50 RT	4" SDR 35 PVC
Lot 18	HILL. STA: 5+15.25, OFF: 19.50 LT	4" SDR 35 PVC
Lot 19	HILL. STA: 5+90.71, OFF: 19.50 LT	4" SDR 35 PVC
Lot 19	HILL. STA: 5+53.33, OFF: 19.50 LT	REMOVE EXTRA SERVICE
Lot 20	HILL. STA: 6+96.85, OFF: 19.50 LT	4" SDR 35 PVC
Lot 21	HOOT. STA: 18+35.90, OFF: 23.00 RT	4" SDR 35 PVC
Lot 22	HOOT. STA: 18+01.90, OFF: 23.00 RT	4" SDR 35 PVC
Lot 23	HOOT. STA: 17+64.22, OFF: 23.00 RT	4" SDR 35 PVC
Lot 24	HOOT. STA: 17+33.29, OFF: 22.23 RT	4" SDR 35 PVC
Lot 25	HILL. STA: 7+75.87, OFF: 26.50 RT	4" SDR 35 PVC
Lot 26	HILL. STA: 7+22.26, OFF: 26.50 RT	4" SDR 35 PVC
Lot 27	HILL. STA: 6+88.26, OFF: 26.50 RT	4" SDR 35 PVC
TRACT-A3	HOOT. STA: 17+10.28, OFF: 22.11 RT	8" SDR 35 PVC

NOTES:
1: ADJUST SEWER SERVICE SLOPES TO PROVIDE MAXIMUM SEPARATION UTILITY CROSSINGS. INSTALL SWEEPS AS REQUIRED UPON APPROVAL OF THE ENGINEER.
2: CONSTRUCT NEW 6" PVC SEWER SERVICE AND INSTALL NEW CLEANOUT NEAR PROPERTY LINE PER CBJ STANDARD DETAIL 213 AND CONNECT TO EXISTING SEWER SERVICE.
3: SEWER SERVICE CLEAN-OUTS TO HAVE METAL COVERS.

SIGN ASSEMBLY SUMMARY

SIGN NO.	STATION & OFFSET	MUTCD DESIGNATION	DIMENSIONS LxH (IN)	LEGEND & REMARKS
1	HOOTER STA: 11+55.10, OFF: 21.67 LT	R1-1, D3-1	36x36, Lx6	"STOP" SIGN W/ "HOOTER LN" STREET SIGN ABOVE
2	HOOTER STA: 18+63.78, OFF: 30.19 RT	(2) D3-1	Lx6	"HILLCREST AVE" & "HOOTER LN" STREET SIGNS
3	HOOTER STA: 19+43.28, OFF: 4.73 LT	MODIFIED W14-1, OM4-1	36x36, 18x18	"END" YELLOW DIAMOND WARNING SIGN W/ OBJECT MARKER SIGN BELOW
4	HILLCREST STA: 6+21.04, OFF 53.13 RT	MODIFIED W14-1, OM4-1	36x36, 18x18	"END" YELLOW DIAMOND WARNING SIGN W/ OBJECT MARKER SIGN BELOW
5	HOOTER STA: 15+02.41, OFF: 20.00 LT	R7-1 (LT/RT)	12x18	"NO PARKING ANY TIME" SIGN
6	HOOTER STA: 17+97.13, OFF: 20.00 LT	R7-1 (LT/RT)	12x18	"NO PARKING ANY TIME" SIGN
7	HILLCREST STA: 7+04.82, OFF 19.50 LT	R7-1 (LT/RT)	12x18	"NO PARKING ANY TIME" SIGN
8	HILLCREST STA: 4+95.50, OFF 19.50 LT	R7-1 (LT/RT)	12x18	"NO PARKING ANY TIME" SIGN
9	HOOTER STA: 17+85.54, OFF: 23.00 RT	MODIFIED R7-1 (LT/RT)	12x18	"NO PARKING NOVEMBER TO APRIL" SIGN
10	HILLCREST STA: 7+38.20, OFF 26.50 RT	MODIFIED R7-1 (LT/RT)	12x18	"NO PARKING NOVEMBER TO APRIL" SIGN
11	HILLCREST STA: 5+26.49, OFF 27.50 RT	MODIFIED R7-1 (LT/RT)	12x18	"NO PARKING NOVEMBER TO APRIL" SIGN

NOTE: INSTALL SIGNS PER CBJ STD DWG 127A SIGN ASSEMBLY SINGLE-POST.

STORM DRAIN FRAME & GRATE SUMMARY

STRUCTURE NO.	EAST JORDAN, OLYMPIC FOUNDRY CO., NEENAH FOUNDRY, CBJ STANDARD NO., OR APPROVED EQUAL
S-1	OFCO SM52VG *AKDOT STD D-22.01
S-2	OFCO SM52VG
S-3	OFCO SM52VG
S-4	OFCO SM52VG
S-5	OFCO SM52VG
S-6	OFCO SM52VG
S-7	OFCO MH34SCDI & SLOTTED COVER
S-8	OFCO MH34SCDI & SLOTTED COVER
S-9	OFCO MH34SCDI & SLOTTED COVER
S-10	OFCO SM52VG
S-11	OFCO SM52VG
S-12	OFCO MH34SCDI & SLOTTED COVER
S-13	OFCO MH34SCDI & SLOTTED COVER
S-14	OFCO MH34SCDI & SLOTTED COVER
S-15	OFCO SM52VG
S-16	OFCO MH34SCDI & SLOTTED COVER
S-17	OFCO MH34SCDI & SLOTTED COVER
S-18	OFCO MH34SCDI & SLOTTED COVER

NOTE: INSTALL MANHOLES WITH CONCENTRIC SLAB OR CONE & DO NOT INSTALL LADDER.

STORM DRAIN LATERAL SUMMARY

LOT#	STATION & OFFSET	SIZE/TYPE
Lot 15	HILL.: STA: 5-24.77, OFF: 26.50 RT	6" SDR 35 PVC
Lot 16	HILL. STA: 5+28.69, OFF: 26.50 RT	6" SDR 35 PVC
Lot 17	HILL. STA: 6+05.77, OFF: 33.12 RT	6" SDR 35 PVC
Lot 21	HOOT. STA: 18+42.18, OFF: 24.00 RT	6" SDR 35 PVC
Lot 22	HOOT. STA: 17+82.90, OFF: 24.00 RT	6" SDR 35 PVC
Lot 23	HOOT. STA: 17+70.34, OFF: 24.00 RT	6" SDR 35 PVC
Lot 24	HOOT. STA: 17+26.61, OFF: 22.82 RT	6" SDR 35 PVC
Lot 25	HILL. STA: 7+67.37, OFF: 26.50 RT	6" SDR 35 PVC
Lot 26	HILL. STA: 7+34.77, OFF: 26.50 RT	6" SDR 35 PVC
Lot 27	HILL. STA: 6+71.76, OFF: 26.50 RT	6" SDR 35 PVC

NOTES:
1: STORM DRAIN SERVICE LATERALS SHALL BE INSTALLED PER CBJ SDT 307.
2: INVERT ELEVATION OF LATERAL IN STRUCTURES SHALL BE SET 0.1' FEET HIGHER THAN THE OUTLET PIPE INVERT ELEVATION.

GALVANIC ANODE SUMMARY

INSTALLED ON	STATION & OFFSET
EX 8-INCH DIP WATER MAIN	HOOT. STA: 12+79.27, OFF: 0.75 LT
NEW FIRE HYDRANT LEG	HOOT. STA: 16+88.68, OFF: 20.14 RT
NEW FIRE HYDRANT LEG	HILL. STA: 6+81.75, OFF: 23.50 RT

MAINLINE VALVES

SIZE/TYPE	STATION & OFFSET
10" GATE VALVE	HOOTER: STA: 15+55.00, OFF: 1.00 LT
10" GATE VALVE	HOOTER: STA: 19+10.11, OFF: 1.00 LT
10" GATE VALVE	HOOTER: STA: 19+05.18, OFF: 2.90 RT
10" GATE VALVE	HILLCREST: STA: 6+36.30, OFF: 20.18 RT
10" GATE VALVE	HILLCREST: STA: 6+52.56, OFF: 6.30 RT
10" GATE VALVE	HILLCREST: STA: 4+96.00, OFF: 6.61 RT

HDPE PIPE FITTINGS

FITTING TYPE	STATION & OFFSET
10"x10"X8" HDPE TEE	HOOT. STA: 16+88.03, OFF: 1.00 LT
10"x10"X10" HDPE TEE	HOOT. STA: 16+98.40, OFF: 1.00 LT
10"x10"X10" HDPE TEE	HOOT. STA: 19+05.69, OFF: 1.00 LT
10"x10"X8" HDPE TEE	HILL. STA: 6+81.75, OFF: 6.98 RT
10" 45 DEGREE HDPE FITTING	HILL. STA: 6+44.50, OFF: 6.98 RT
10"x10"X10" HDPE TEE	HILL. STA: 6+37.92, OFF: 16.54 RT

NOTE: ONLY HORIZONTAL FITTINGS SHOWN IN TABLE. ADDITIONAL HORIZONTAL AND/OR VERTICAL FITTINGS MAY BE REQUIRED. CONTRACTOR TO VERIFY AND PROVIDE ALL NECESSARY FITTINGS.

STATE OF ALASKA 49 TH
LUCAS M. CHAMBERS
08/11/2022
CE 106593
REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

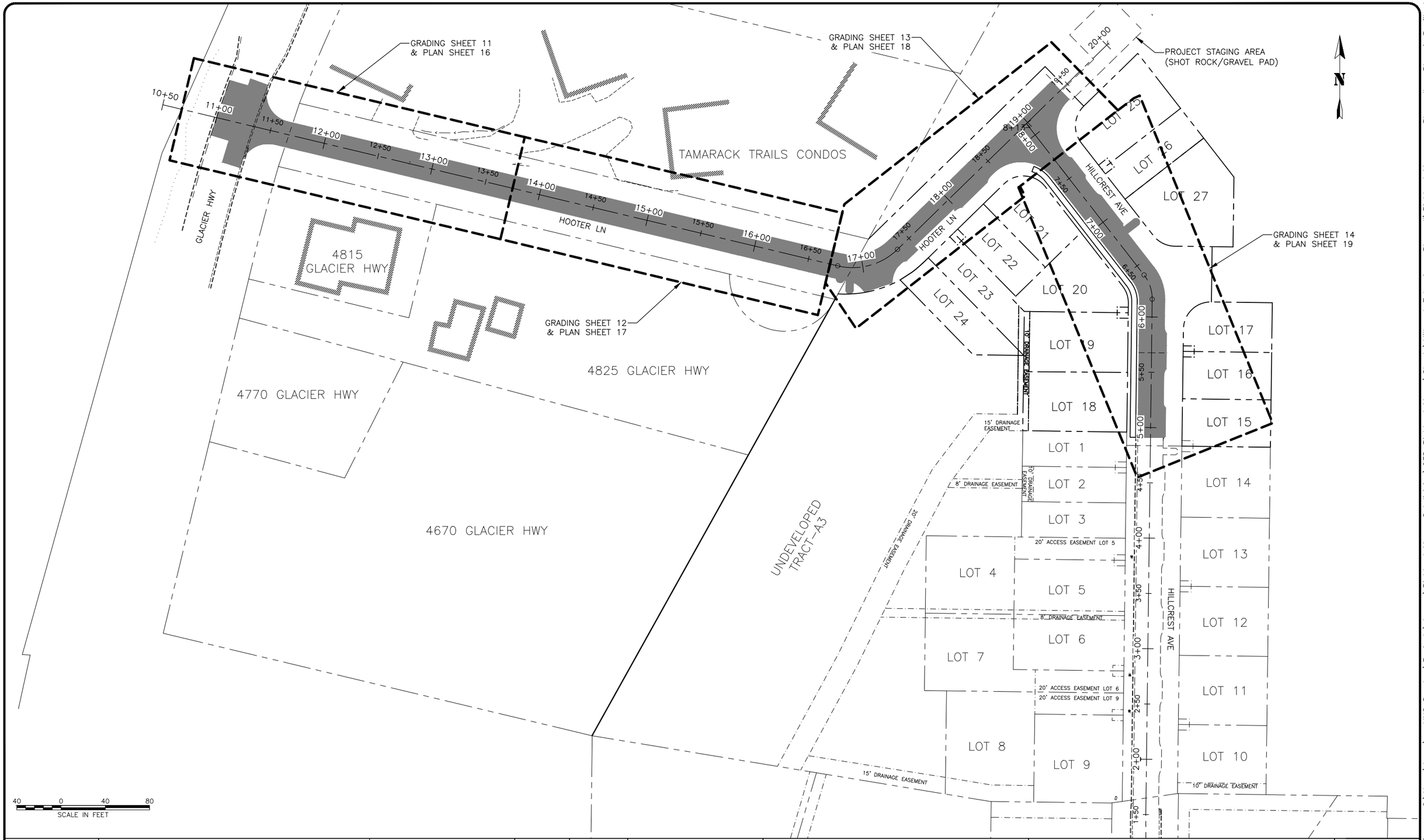
CBJ REVIEW
APPROVED:_____
DATE:_____

CHILKAT VISTAS
SUBDIVISION, PHASE II
MICHAEL & WILLIAM HEUMANN

SUMMARY TABLES

SHEET NUMBER C-9 OF 22

August 11, 2022 C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\Richland Mannor – Phase II – Summary.dwg



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

STATE OF ALASKA 49TH — LUCAS M CHAMBERS — 08/11/2022 — CE 106593 — REGISTERED PROFESSIONAL ENGINEER

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
info@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW

APPROVED:_____

DATE:

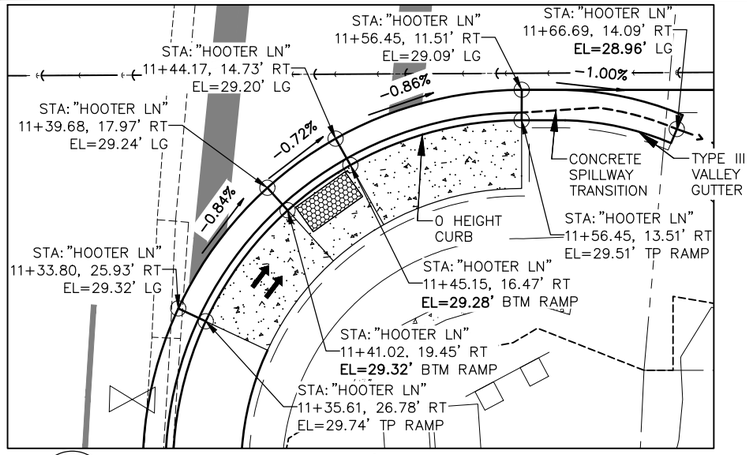
CHILKAT VISTAS
SUBDIVISION, PHASE II

MICHAEL & WILLIAM HEUMANN

PLAN OVERVIEW

SHEET NUMBER
C-10
OF
22

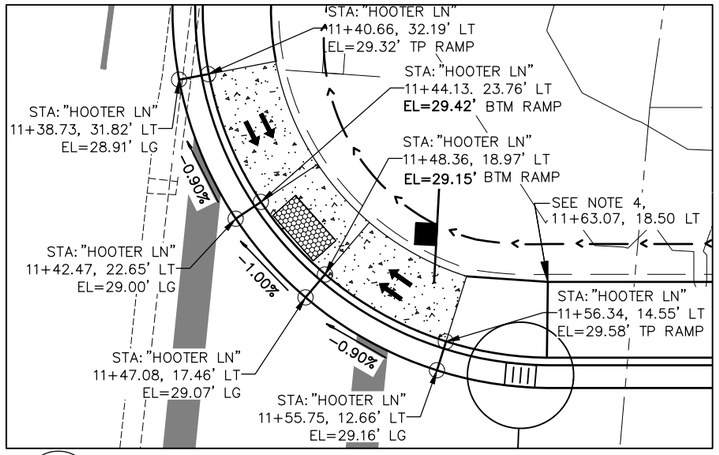
August 11, 2022 C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\Richland Mannor – Phase II – Plan & Profile.dwg



1
11

SOUTH GLACIER/HOOTER ADA RAMP

SCALE: NOT TO SCALE



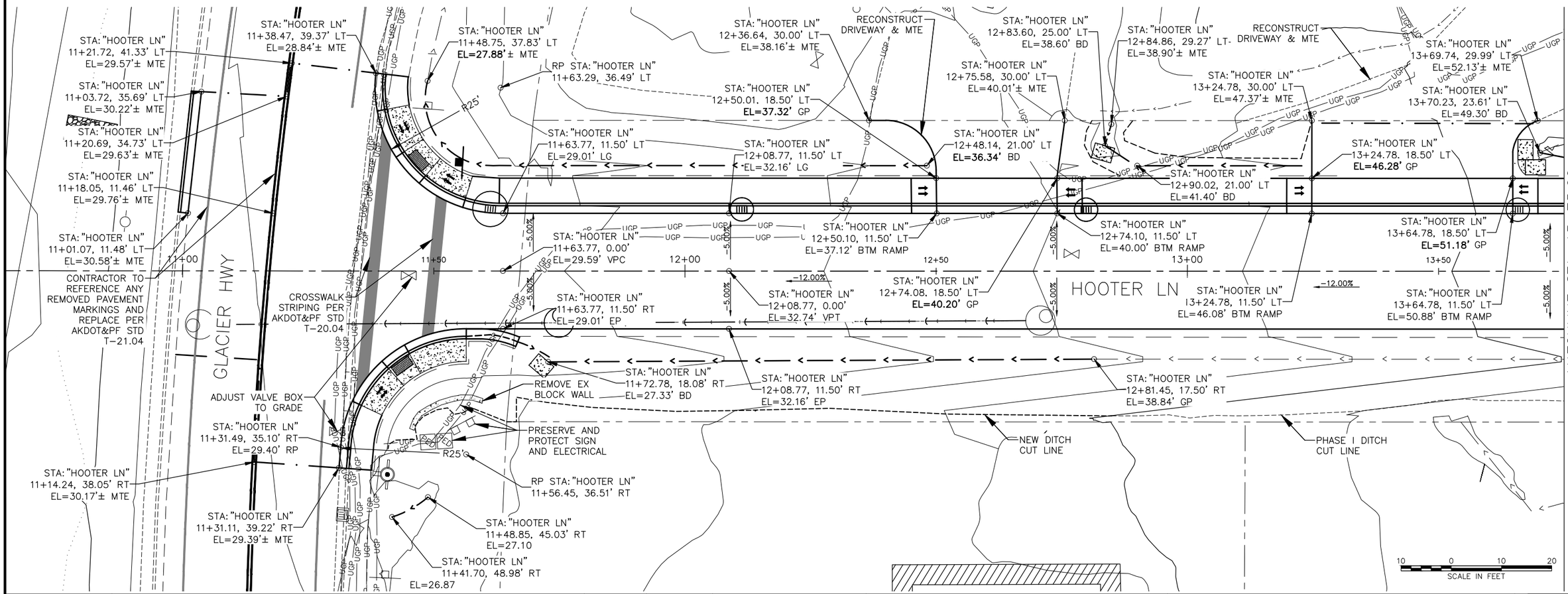
2
11

NORTH GLACIER/HOOTER ADA RAMP

SCALE: NOT TO SCALE

ADA RAMP NOTES:

1. AFTER PLACING THE FORMWORK, AND BEFORE PLACING CONCRETE, THE CONTRACTOR SHALL FIELD VERIFY THAT THE MAXIMUM SLOPES INDICATED IN NOTES 2–3 ARE NOT EXCEEDED. IF ANY SLOPES EXCEED THOSE SPECIFIED IN NOTES 2–3 THE CONTRACTOR SHALL VERIFY THAT THE GRADE POINTS MATCH THE PLANS. IF THIS DOES NOT RESOLVE THE ISSUE, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. CONCRETE SHALL NOT BE PLACED IF THE SLOPES EXCEED THOSE LISTED IN NOTES 2–3.
2. ADA LANDING SLOPES MAY NOT EXCEED 2.00% IN ANY DIRECTION.
3. ADA RAMP RUNNING SLOPES MAY NOT EXCEED 8.33%, AND ADA RAMP CROSS SLOPES SHALL NOT EXCEED 2.00%
4. 5' ASPHALT SIDEWALK ON HOOTER LANE TRANSITIONS TO 4.5' SIDEWALK ON GLACIER HWY.



STATE OF ALASKA 49TH
LUCAS M. CHAMBERS
08/11/2022
CE 106593
REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
info@proHNS.com
www.proHNS.com

CBJ REVIEW

APPROVED:_____

DATE:_____

CHILKAT VISTAS SUBDIVISION, PHASE II

MICHAEL & WILLIAM HEUMANN

R.O.W. GRADING PLAN HOOTER LN 10+80 TO 13+75

SHEET NUMBER C-11 OF 22

August 11, 2022

C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hilcrest Extension –Phase II\Richland Mannor – Phase II – Grading.dwg

10 0 10 20
SCALE IN FEET

STA: "HOOTER LN"
13+83.86, 20.99' LT
EL=52.70' BD

EX CUT LINE

MATCHLINE STA: 13+75.00

MATCHLINE STA: 16+70.00

-12.00%

-5.00%

14+00 14+50 15+00 HOOTER LN 15+50 16+00 16+50

STA: "
16+85.83

EX DITCH,
CONSTRUCTED
DURING PHASE I

EX CUT LINE

No.	DATE	DESCRIPTION	BY

STATE OF ALASKA
49 TH
LUCAS M. CHAMBERS
08/11/2022
CE 106593
REGISTERED PROFESSIONAL ENGINEER

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
info@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW

APPROVED:_____

DATE:_____

CHILKAT VISTAS
SUBDIVISION, PHASE II

MICHAEL & WILLIAM HEUMANN

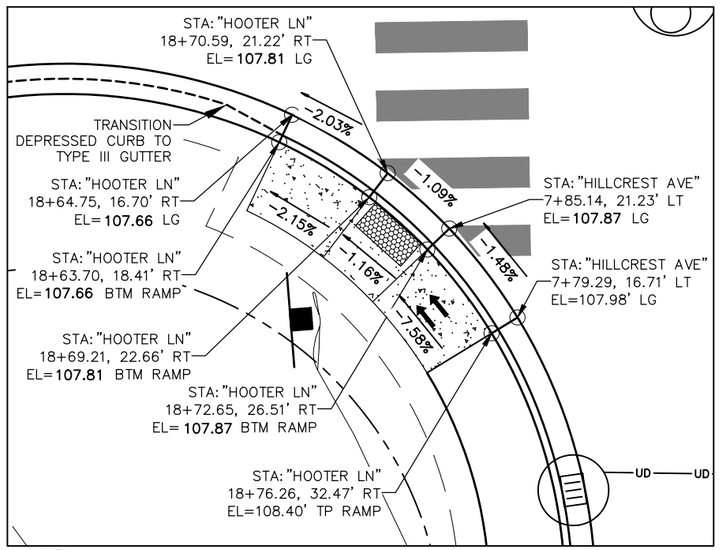
R.O.W. GRADING PLAN HOOTER LN 13+75 TO 16+70

SHEET NUMBER
C-12
OF
22

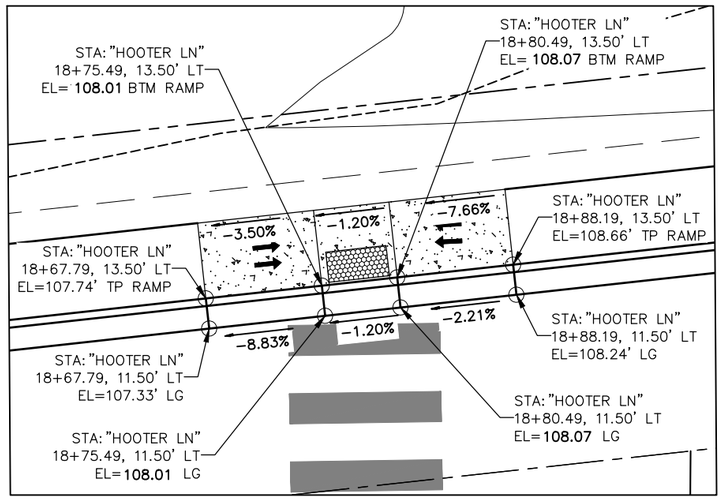
August 11, 2022 C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hilcrest Extension -Phase II\Richland Mannor - Phase II - Grading.dwg

ADA RAMP NOTES:

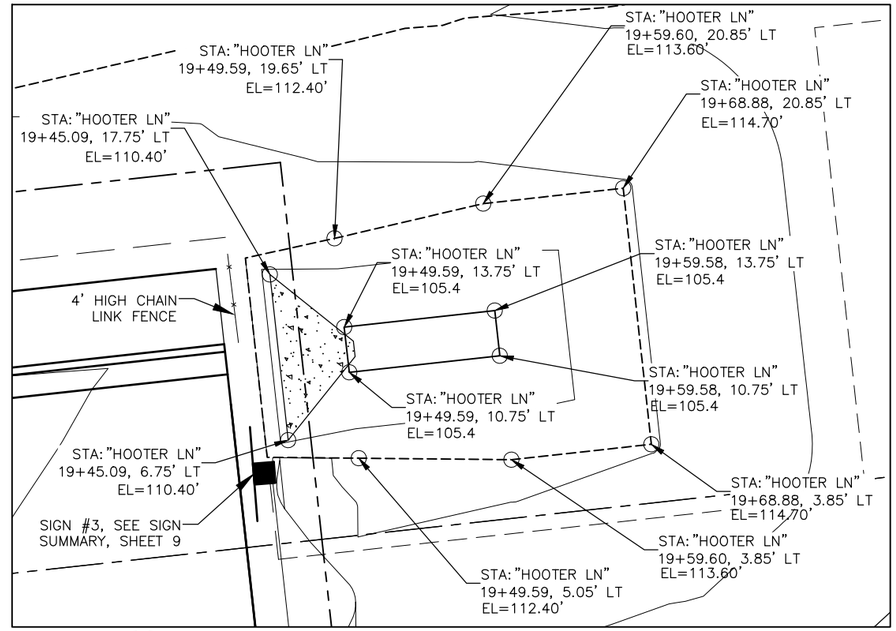
1. AFTER PLACING THE FORMWORK, AND BEFORE PLACING CONCRETE, THE CONTRACTOR SHALL FIELD VERIFY THAT THE MAXIMUM SLOPES INDICATED IN NOTES 2–3 ARE NOT EXCEEDED. IF ANY SLOPES EXCEED THOSE SPECIFIED IN NOTES 2–3 THE CONTRACTOR SHALL VERIFY THAT THE GRADE POINTS MATCH THE PLANS. IF THIS DOES NOT RESOLVE THE ISSUE, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. CONCRETE SHALL NOT BE PLACED IF THE SLOPES EXCEED THOSE LISTED IN NOTES 2–3.
2. ADA LANDING SLOPES MAY NOT EXCEED 2.00% IN ANY DIRECTION.
3. ADA RAMP RUNNING SLOPES MAY NOT EXCEED 8.33%, AND ADA RAMP CROSS SLOPES SHALL NOT EXCEED 2.00%



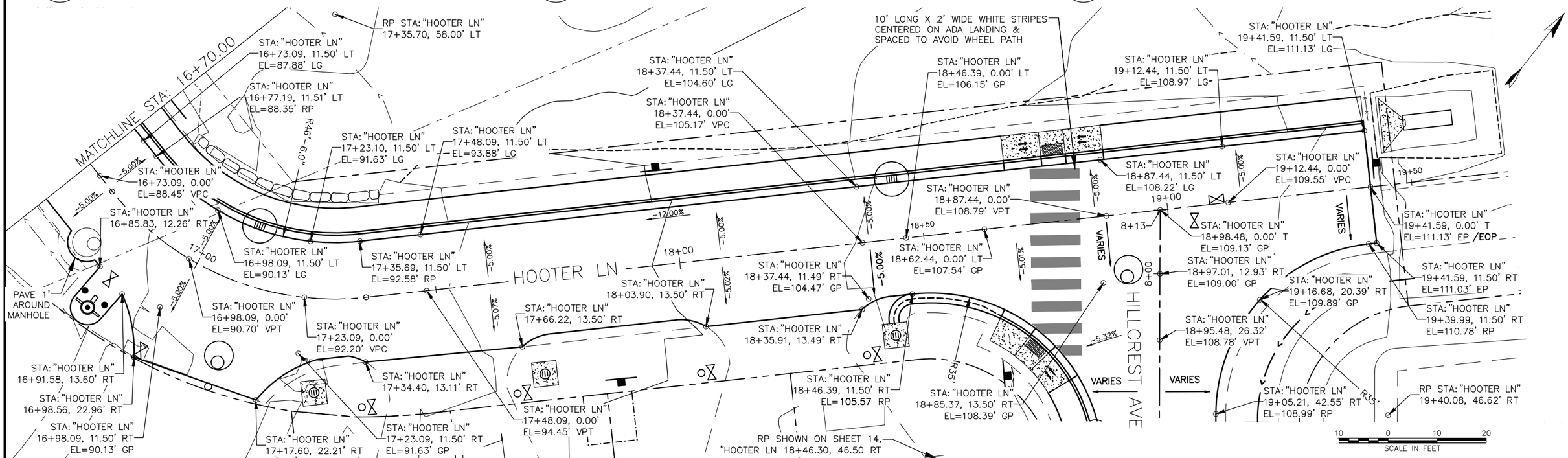
1/12 SOUTH HOOTER/HILLCREST ADA RAMP
SCALE: NOT TO SCALE



2/12 NORTH HOOTER/HILLCREST ADA RAMP
SCALE: NOT TO SCALE



3/12 HOOTER LANE SEDIMENT TRAP
SCALE: NOT TO SCALE



No.	DATE	DESCRIPTION	BY

STATE OF ALASKA 49TH — LUCAS M. CHAMBERS — 08/11/2022 — CE 106593 — REGISTERED PROFESSIONAL ENGINEER

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
info@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW
APPROVED:_____
DATE:

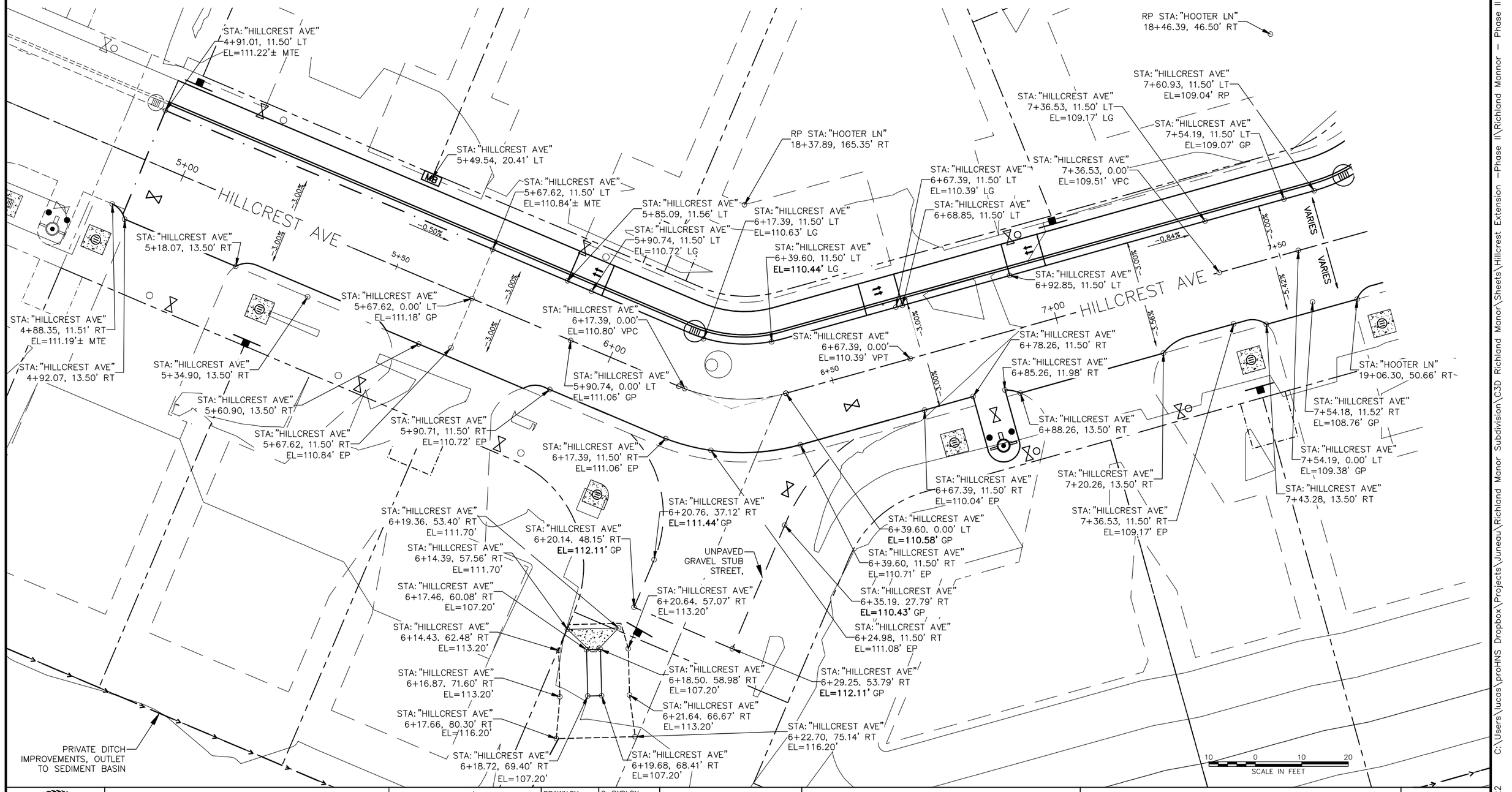
CHILKAT VISTAS SUBDIVISION, PHASE II
MICHAEL & WILLIAM HEUMANN

R.O.W. GRADING PLAN HOOTER LN 16+70 TO 19+65

SHEET NUMBER C-13 OF 22

C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\Richland Manor – Phase II – Grading.dwg
August 11, 2022

Attachment C - SMF22-03 – Phase 2 Report and Final Plat
Attachment D - Approved Construction Plan



No.	DATE	DESCRIPTION	BY

STATE OF ALASKA 49TH
LUCAS M. CHAMBERS
08/11/2022
CE 106593
REGISTERED PROFESSIONAL ENGINEER

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
Info@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW

APPROVED:_____

DATE_____

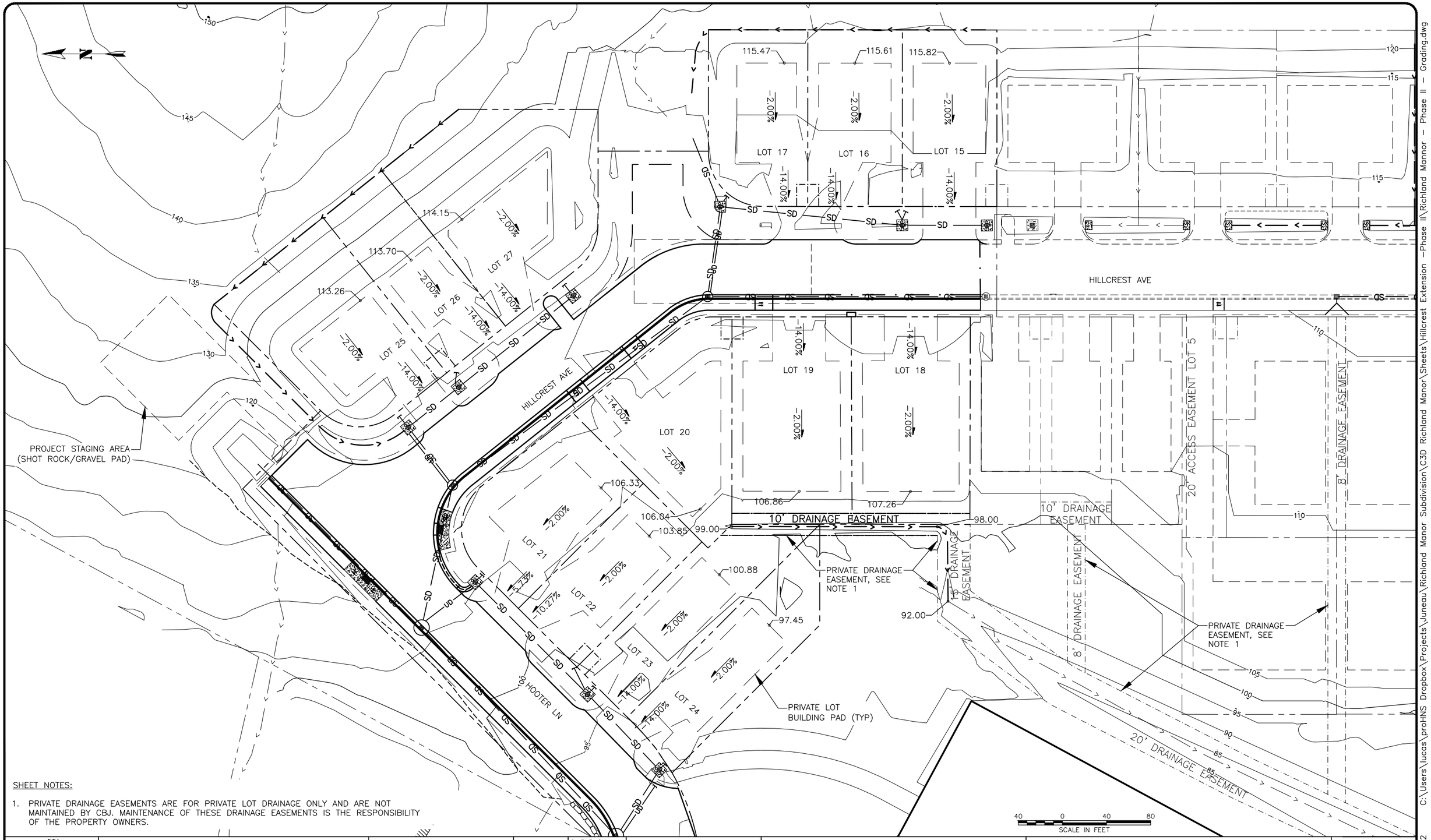
CHILKAT VISTAS SUBDIVISION, PHASE II

MICHAEL & WILLIAM HEUMANN

R.O.W. GRADING PLAN HILLCREST AVE 5+50 TO 8+15

SHEET NUMBER
C-14
OF
22

C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hilcrest Extension --Phase II\Richland Mannor -- Phase II -- Grading.dwg
August 17, 2022



SHEET NOTES:

1. PRIVATE DRAINAGE EASEMENTS ARE FOR PRIVATE LOT DRAINAGE ONLY AND ARE NOT MAINTAINED BY CBJ. MAINTENANCE OF THESE DRAINAGE EASEMENTS IS THE RESPONSIBILITY OF THE PROPERTY OWNERS.

STATE OF ALASKA
49 TH
LUCAS M. CHAMBERS
08/11/2022
CE 106593
REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW

APPROVED:_____

DATE:_____

CHILKAT VISTAS SUBDIVISION, PHASE II

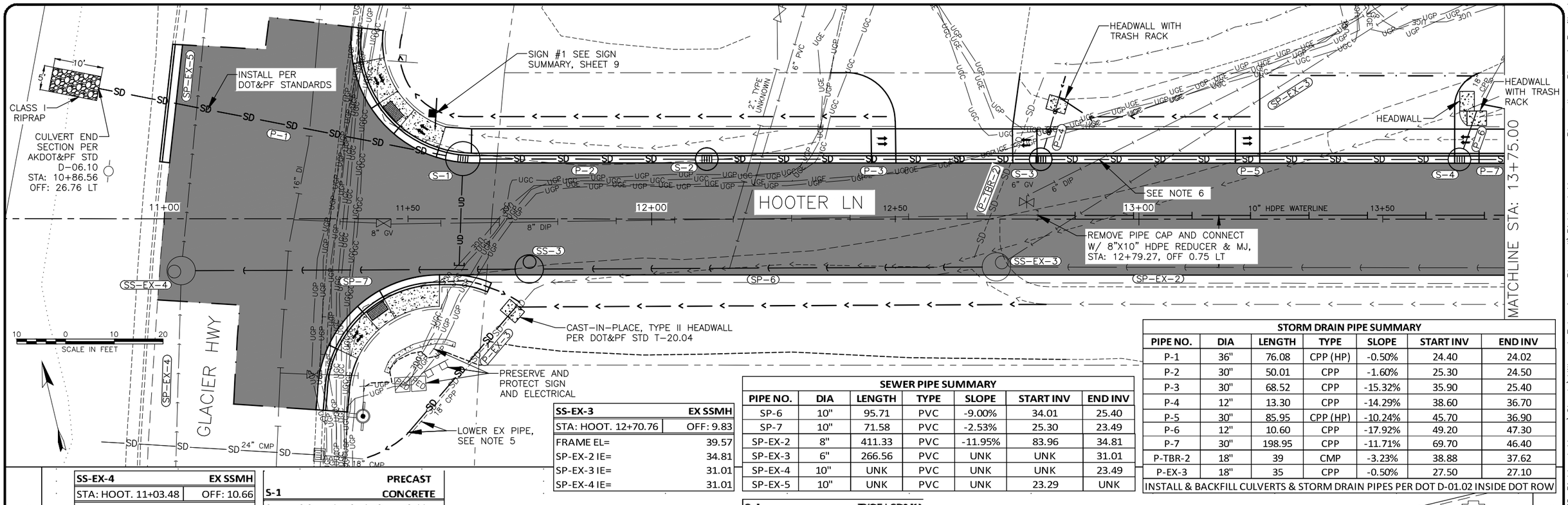
MICHAEL & WILLIAM HEUMANN

PRIVATE LOT GRADING PLAN

SHEET NUMBER C-15 OF 22

August 11, 2022

C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hilcrest Extension –Phase II\Richland Mannor – Phase II – Grading.dwg



SS-EX-3	EX SSMH
STA: HOOT. 12+70.76	OFF: 9.83
FRAME EL=	39.57
SP-EX-2 IE=	34.81
SP-EX-3 IE=	31.01
SP-EX-4 IE=	31.01

SEWER PIPE SUMMARY

PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START INV	END INV
SP-6	10"	95.71	PVC	-9.00%	34.01	25.40
SP-7	10"	71.58	PVC	-2.53%	25.30	23.49
SP-EX-2	8"	411.33	PVC	-11.95%	83.96	34.81
SP-EX-3	6"	266.56	PVC	UNK	UNK	31.01
SP-EX-4	10"	UNK	PVC	UNK	UNK	23.49
SP-EX-5	10"	UNK	PVC	UNK	23.29	UNK

STORM DRAIN PIPE SUMMARY

PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START INV	END INV
P-1	36"	76.08	CPP (HP)	-0.50%	24.40	24.02
P-2	30"	50.01	CPP	-1.60%	25.30	24.50
P-3	30"	68.52	CPP	-15.32%	35.90	25.40
P-4	12"	13.30	CPP	-14.29%	38.60	36.70
P-5	30"	85.95	CPP (HP)	-10.24%	45.70	36.90
P-6	12"	10.60	CPP	-17.92%	49.20	47.30
P-7	30"	198.95	CPP	-11.71%	69.70	46.40
P-TBR-2	18"	39	CMP	-3.23%	38.88	37.62
P-EX-3	18"	35	CPP	-0.50%	27.50	27.10

INSTALL & BACKFILL CULVERTS & STORM DRAIN PIPES PER DOT D-01.02 INSIDE DOT ROW

SS-EX-4	EX SSMH
STA: HOOT. 11+03.48	OFF: 10.66
FRAME EL=	30.68
SP-EX-3 IE=	23.49
SP-EX-5 IE=	23.49
SP-EX-6 IE=	23.29

S-1	PRECAST CONCRETE
STA: HOOT. - 11+61.27	OFF: 12.33 LT
FRAME EL=	29.03
P-1 IE=	24.40
P-2 IE=	24.50
UNDERDRAIN	25.90

SHALL MEET & BE INSTALLED PER DOT STD D-20.05 *OIL/WATER SEPARATOR PER CBJ STD 305

S-4	TYPE I SDMH
STA: HOOT. 13+99.51	OFF: 12.25 LT
FRAME EL=	50.82
P-5 E=	46.30
P-6 E=	47.70
P-7 E=	46.40

SUMP = 16"

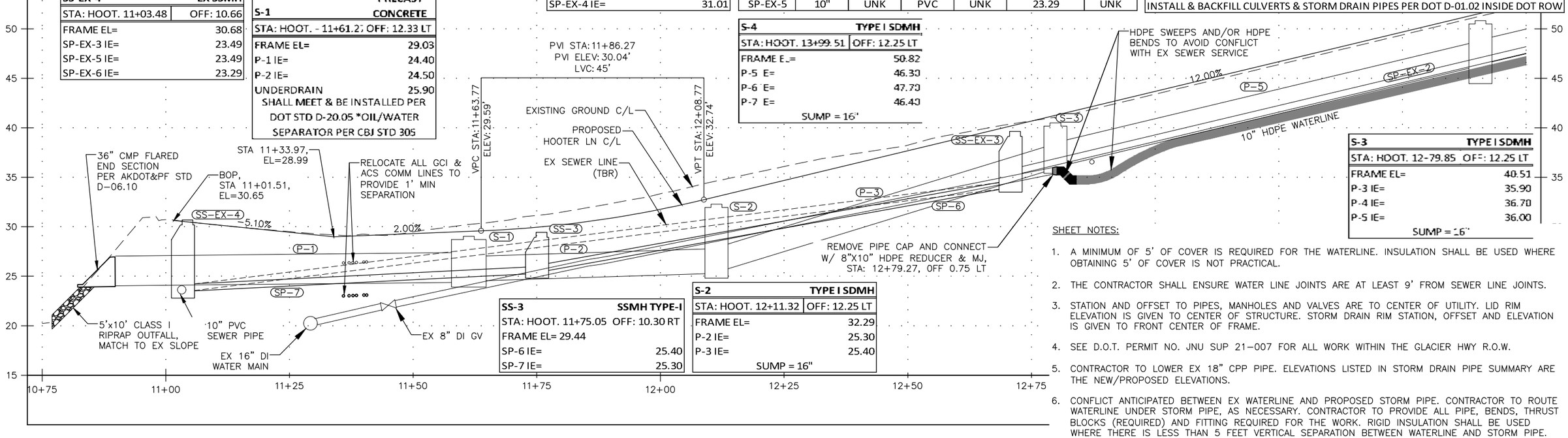
S-3	TYPE I SDMH
STA: HOOT. 12+79.85	OFF: 12.25 LT
FRAME EL=	40.51
P-3 IE=	35.90
P-4 IE=	36.70
P-5 IE=	36.00

SUMP = 16"

SS-3	SSMH TYPE-I
STA: HOOT. 11+75.05	OFF: 10.30 RT
FRAME EL= 29.44	
SP-6 IE=	25.40
SP-7 IE=	25.30

S-2	TYPE I SDMH
STA: HOOT. 12+11.32	OFF: 12.25 LT
FRAME EL=	32.29
P-2 IE=	25.30
P-3 IE=	25.40

SUMP = 16"



SHEET NOTES:

1. A MINIMUM OF 5' OF COVER IS REQUIRED FOR THE WATERLINE. INSULATION SHALL BE USED WHERE OBTAINING 5' OF COVER IS NOT PRACTICAL.
2. THE CONTRACTOR SHALL ENSURE WATER LINE JOINTS ARE AT LEAST 9' FROM SEWER LINE JOINTS.
3. STATION AND OFFSET TO PIPES, MANHOLES AND VALVES ARE TO CENTER OF UTILITY. LID RIM ELEVATION IS GIVEN TO CENTER OF STRUCTURE. STORM DRAIN RIM STATION, OFFSET AND ELEVATION IS GIVEN TO FRONT CENTER OF FRAME.
4. SEE D.O.T. PERMIT NO. JNU SUP 21-007 FOR ALL WORK WITHIN THE GLACIER HWY R.O.W.
5. CONTRACTOR TO LOWER EX 18" CPP PIPE. ELEVATIONS LISTED IN STORM DRAIN PIPE SUMMARY ARE THE NEW/PROPOSED ELEVATIONS.
6. CONFLICT ANTICIPATED BETWEEN EX WATERLINE AND PROPOSED STORM PIPE. CONTRACTOR TO ROUTE WATERLINE UNDER STORM PIPE, AS NECESSARY. CONTRACTOR TO PROVIDE ALL PIPE, BENDS, THRUST BLOCKS (REQUIRED) AND FITTING REQUIRED FOR THE WORK. RIGID INSULATION SHALL BE USED WHERE THERE IS LESS THAN 5 FEET VERTICAL SEPARATION BETWEEN WATERLINE AND STORM PIPE.

STATE OF ALASKA 49TH — LUCAS M. CHAMBERS — 08/11/2022 — CE 106593 — REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW

APPROVED:_____

DATE:

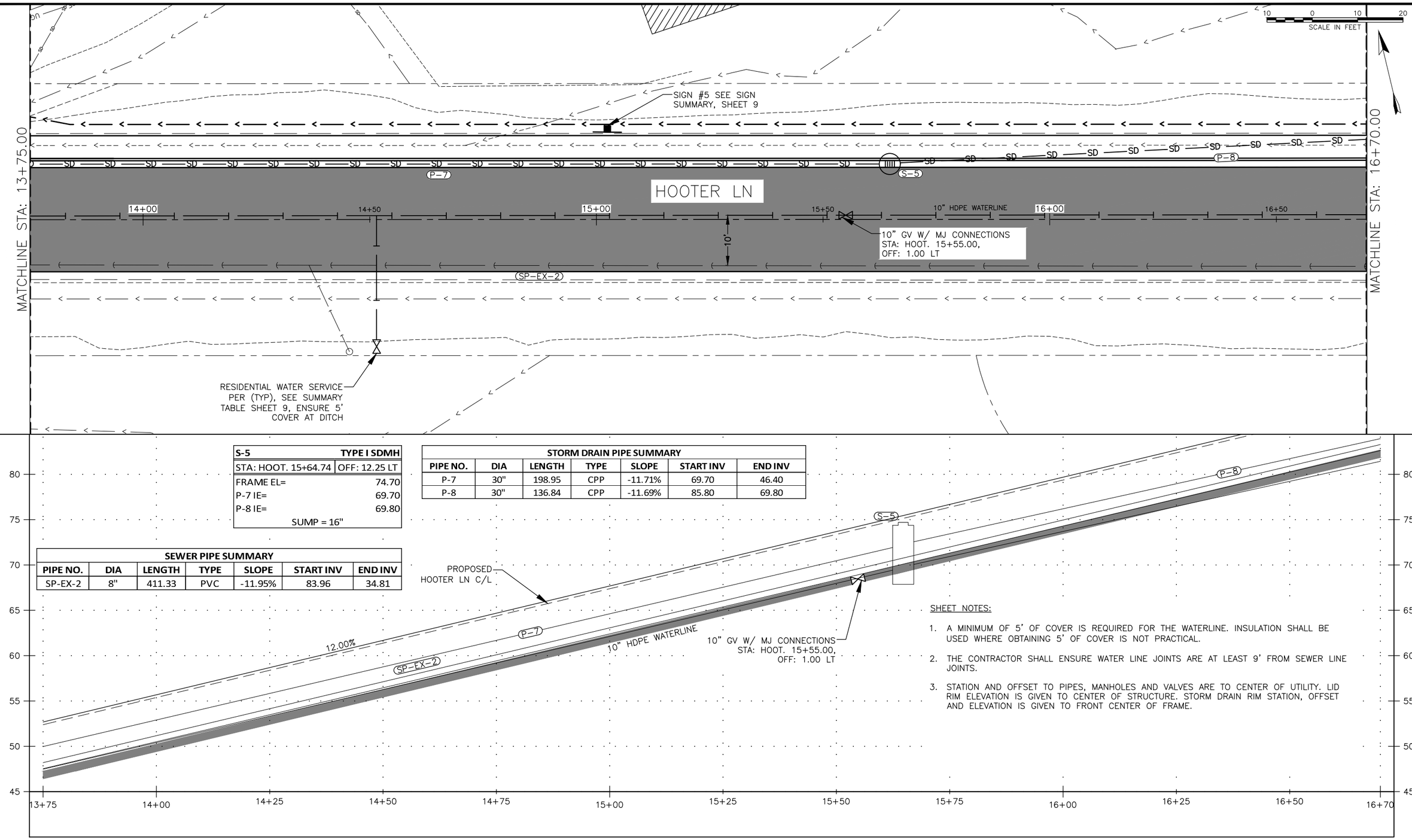
CHILKAT VISTAS SUBDIVISION, PHASE II

MICHAEL & WILLIAM HEUMANN

R.O.W. PLAN & PROFILE HOOTER LN 10+80 TO 13+75

SHEET NUMBER C-16 OF 22

August 11, 2022 C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hilcrest Extension -Phase II\Richland Mannor - Phase II - Plan & Profile.dw



S-5	TYPE I SDMH
STA: HOOT. 15+64.74	OFF: 12.25 LT
FRAME EL=	74.70
P-7 IE=	69.70
P-8 IE=	69.80
SUMP = 16"	

STORM DRAIN PIPE SUMMARY

PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START INV	END INV
P-7	30"	198.95	CPP	-11.71%	69.70	46.40
P-8	30"	136.84	CPP	-11.69%	85.80	69.80

SEWER PIPE SUMMARY

PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START INV	END INV
SP-EX-2	8"	411.33	PVC	-11.95%	83.96	34.81

SHEET NOTES:

1. A MINIMUM OF 5' OF COVER IS REQUIRED FOR THE WATERLINE. INSULATION SHALL BE USED WHERE OBTAINING 5' OF COVER IS NOT PRACTICAL.
2. THE CONTRACTOR SHALL ENSURE WATER LINE JOINTS ARE AT LEAST 9' FROM SEWER LINE JOINTS.
3. STATION AND OFFSET TO PIPES, MANHOLES AND VALVES ARE TO CENTER OF UTILITY. LID RIM ELEVATION IS GIVEN TO CENTER OF STRUCTURE. STORM DRAIN RIM STATION, OFFSET AND ELEVATION IS GIVEN TO FRONT CENTER OF FRAME.

STATE OF ALASKA 49TH — LUCAS M CHAMBERS — 08/11/2022 — CE 106593 — REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW

APPROVED:_____

DATE:_____

CHILKAT VISTAS SUBDIVISION, PHASE II

MICHAEL & WILLIAM HEUMANN

R.O.W. PLAN & PROFILE HOOTER LN 13+75 TO 16+70

SHEET NUMBER C-17 OF 22

August 11, 2022

C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hilcrest Extension -Phase II\Richland Mannor - Phase II - Plan & Profile.dw

SCALE IN FEET 10 0 10 20

SS-1	SSMH TYPE- I
STA: HOOT. 18+90.72	OFF: 11.38 RT
FRAME EL=	108.50
SP-2 IE=	99.00
SP-3 IE=	99.00
SP-4 IE=	98.9

SS-2	SSMH TYPE- I
STA: HOOT. 17+10.30	OFF: 15.43 RT
FRAME EL=	91.63
SP-4 IE=	87.50
SP-5 IE=	87.40

SS-EX-2	EX SSMH
STA: HOOT. 16+81.34	OFF: 10.58 RT
FRAME EL=	88.81
SP-5 IE=	84.06
SP-EX-2 IE=	83.96

S-10	TYPE II SDMH
STA: HOOT. 18+44.79	OFF: 12.25 LT
FRAME EL=	105.23
P-12 IE=	99.90
P-13 IE=	100.00
P-14 IE=	100.00
UNDERDRAIN	101.30
SUMP = 16"	

MATCHLINE STA: 16+70.00

ROCK WALL, PER DET. 1/6

SIGN #6 SEE SIGN SUMMARY, SHEET 9

ACCESSIBLE SIDEWALK RAMP PER CBJ STD 106

STA: HOOT. 19+49.59 OFF: 12.25 LT

SIGN #3, SEE SIGN SUMMARY, SHEET 9

HEADWALL & TRASH RACK

SEDIMENT BASIN PER DET. 1/7

GRAVEL ACCESS TO STAGING AREA

END OF PAVING, STA: HOOTER 19+41.59

10"x10"x8" HDPE TEE

10"x10"x10" HDPE TEE

HOOTER LN

10" HDPE WATERLINE

RESIDENTIAL DRIVEWAY PER CBJ STD 103B (TYP FOR DW'S WITH AREA DRAIN)

SIGN #9 SEE SIGN SUMMARY, SHEET 9

(2) 10" GV'S W/ MJ CONNECTIONS

HILLCREST AVE

EOP, STA 19+69.68, EL=114.30

10" HDPE CAP, TR WIRE TERMINATION BOX DETAIL 2/6, STA: HOOT.19 .50 OFF: 1.00 LT

8" PLUG INSTALLED IN BELL END OF PVC PIPE, MARKER POST STA: HOOT. 19+45.60 OFF: 13.24 RT

LOT 25

10" GATE VALVE FOR TRACT-A3

FIRE HYDRANT, PAD, AND GUARD POSTS, PER STD. 403, 404, & 405

8" PVC SEWER SERVICE FOR TRACT-A3

RESIDENTIAL WATER SERVICE PER (TYP), SEE SUMMARY TABLE SHEET 9

RESIDENTIAL SEWER SERVICE (TYP), SEE SUMMARY TABLE SHEET 9

SIGN #2, SEE SIGN SUMMARY, SHEET 9

ACCESSIBLE SIDEWALK RAMP PER CBJ STD 106

LOT 24 LOT 23 LOT 22 LOT 21

MATCHLINE – HILLCREST STA: 7+70.00

REMOVE PIPE WITHIN R.O.W., PIPE ON PRIVATE PROPERTY TO BE REMOVED OR SLURRIED.

S-8	TYPE IV CB
STA: HOOT. 17+50.20	OFF:19.50
FRAME EL=	96.23
P-10 IE=	92.20
P-11 IE=	93.00
SUMP = 16"	

S-7	TYPE IV CB
STA: HOOT. 17+23.89	OFF: 19.60 RT
FRAME EL=	90.70
P-9 IE=	86.10
P-10 IE=	86.20
UNDERDRAIN	86.90
SUMP = 15	

S-6	TYPE II SDMH
STA: HOOT. 17+09.54	OFF: 12.25
FRAME EL=	90.66
P-8 IE=	85.80
P-9 IE=	85.90
P-12 IE=	85.90
UNDERDRAIN =	87.20
WALL DRAIN =	87.2
SUMP = 16"	

PVI STA: 16+85.59
PVI ELEV: 89.95'
LVC: 25'
VPC STA: 16+73.09
ELEV: 88.45'
VPT STA: 16+98.09
ELEV: 90.70'

PVI STA: 17+35.59
PVI ELEV: 92.95'
LVC: 25'
VPC STA: 17+23.09
ELEV: 92.20'
VPT STA: 17+48.09
ELEV: 94.45'

PVI STA: 18+60.97
PVI ELEV: 108.00'
LVC: 50'
VPC STA: 18+35.97
ELEV: 105.00'
VPT STA: 18+85.97
ELEV: 108.75'

PVI STA: 19+35.97
PVI ELEV: 110.25'
LVC: 50'
VPC STA: 19+10.97
ELEV: 109.50'
VPT STA: 19+60.97
ELEV: 111.25'

EXISTING GROUND C/L

PROPOSED HOOTER LN C/L

6.00% 12.00% 3.00%

10" HDPE WATERLINE

INSTALL 8" PVC CAP ON SEWER PIPE

INSTALL 10" HDPE PIPE CAP ON WATERLINE

INSTALL 10" GV, CONNECT W/ MJ'S

INSTALL 10"X10"X10" HDPE TEE

10"X10"X8" HDPE TEE FOR FIRE HYDRANT

S-9	TYPE IV CB
STA: HOOT. 18+42.13	OFF: 19.50 RT
FRAME EL=	104.50
P-11 IE=	101.30
UNDERDRAIN	102.00
SUMP = 16"	

SEWER PIPE SUMMARY

PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START INV	END INV
SP-2	8"	173.64	PVC	-0.52%	99.90	99.00
SP-3	8"	54.91	PVC	-11.97%	105.57	99.00
SP-4	8"	186.19	PVC	-6.12%	98.90	87.50
SP-5	8"	35.39	PVC	-9.44%	87.40	84.06
SP-EX-2	8"	411.33	PVC	-11.95%	83.96	34.81
SP-TBR-1	8"	274.00	PVC	-5.78%	99.90	84.06

STORM DRAIN PIPE SUMMARY

PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START INV	END INV
P-8	30"	136.84	CPP	-11.69%	85.80	69.80
P-9	18"	35.09	CPP (HP)	-0.57%	86.10	85.90
P-10	18"	47.23	CPP	-14.19%	92.90	86.20
P-11	18"	71.91	CPP	-11.54%	101.30	93.00
P-12	30"	129.11	CPP	-10.84%	99.90	85.90
P-13	24"	100.78	CPP	-6.35%	106.40	100.00
P-14	24"	66.08	CPP (HP)	-1.51%	101.00	100.00

STATE OF ALASKA 49TH — Lucas Chambers — LUCAS M. CHAMBERS — 08/11/2022 — CE 10659 — REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
www.proHNS.com

CBJ REVIEW

APPROVED:_____
DATE:

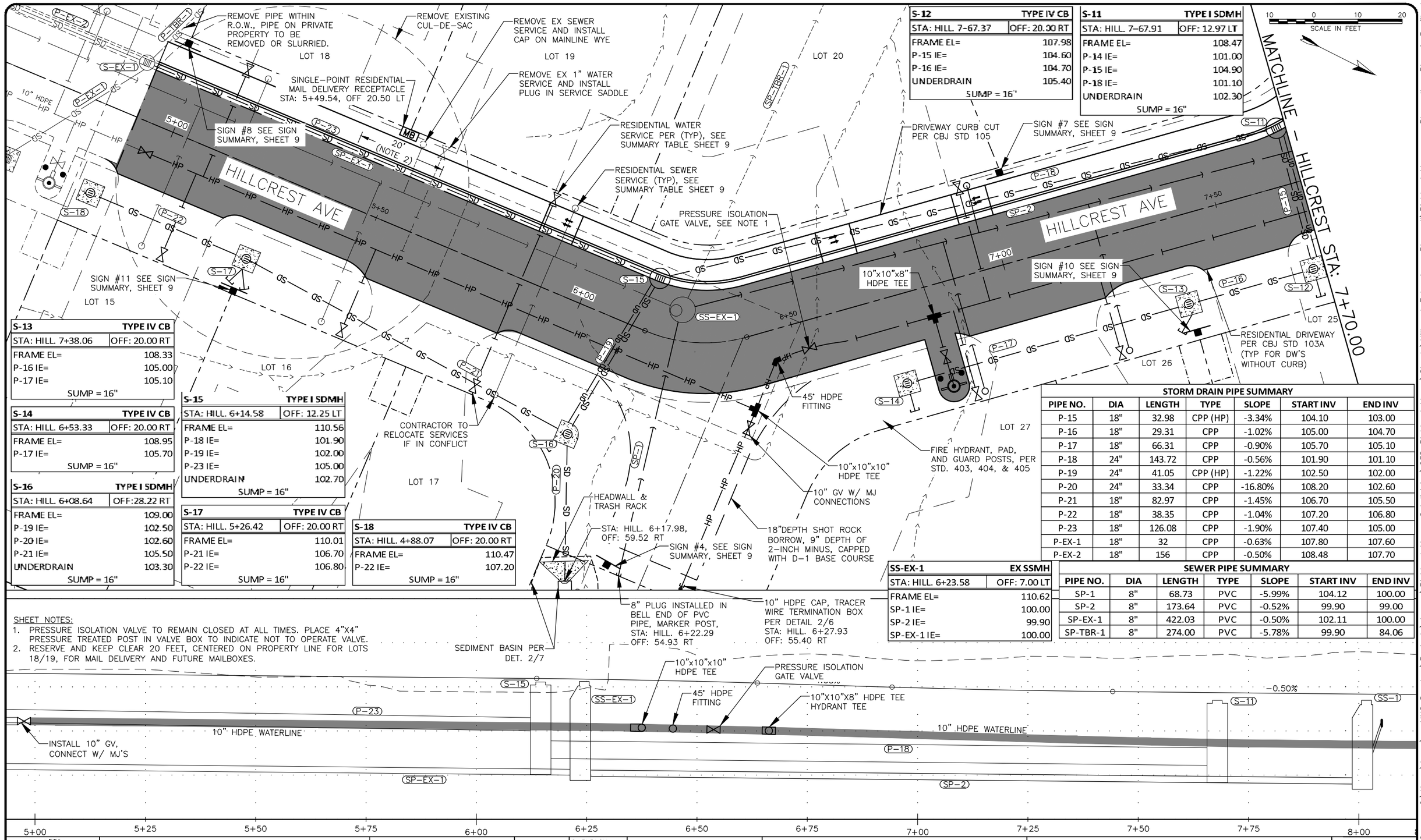
CHILKAT VISTAS SUBDIVISION, PHASE II
MICHAEL & WILLIAM HEUMANN

R.O.W. PLAN & PROFILE HOOTER LN 16+70 TO 19+65

SHEET NUMBER C-18 OF 22

August 11, 2022

C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension –Phase II\Richland Mannor – Phase II – Plan & Profile.dw



S-12	TYPE IV CB
STA: HILL. 7+67.37	OFF: 20.00 RT
FRAME EL=	107.98
P-15 IE=	104.60
P-16 IE=	104.70
UNDERDRAIN	105.40
SUMP = 16"	

S-11	TYPE I SDMH
STA: HILL. 7+67.91	OFF: 12.97 LT
FRAME EL=	108.47
P-14 IE=	101.00
P-15 IE=	104.90
P-18 IE=	101.10
UNDERDRAIN	102.30
SUMP = 16"	

S-13	TYPE IV CB
STA: HILL. 7+38.06	OFF: 20.00 RT
FRAME EL=	108.33
P-16 IE=	105.00
P-17 IE=	105.10
SUMP = 16"	

S-14	TYPE IV CB
STA: HILL. 6+53.33	OFF: 20.00 RT
FRAME EL=	108.95
P-17 IE=	105.70
SUMP = 16"	

S-16	TYPE I SDMH
STA: HILL. 6+08.64	OFF:28.22 RT
FRAME EL=	109.00
P-19 IE=	102.50
P-20 IE=	102.60
P-21 IE=	105.50
UNDERDRAIN	103.30
SUMP = 16"	

S-15	TYPE I SDMH
STA: HILL. 6+14.58	OFF: 12.25 LT
FRAME EL=	110.56
P-18 IE=	101.90
P-19 IE=	102.00
P-23 IE=	105.00
UNDERDRAIN	102.70
SUMP = 16"	

S-17	TYPE IV CB
STA: HILL. 5+26.42	OFF: 20.00 RT
FRAME EL=	110.01
P-21 IE=	106.70
P-22 IE=	106.80
SUMP = 16"	

S-18	TYPE IV CB
STA: HILL. 4+88.07	OFF: 20.00 RT
FRAME EL=	110.47
P-22 IE=	107.20
SUMP = 16"	

SS-EX-1	EX SSMH
STA: HILL. 6+23.58	OFF: 7.00 LT
FRAME EL=	110.62
SP-1 IE=	100.00
SP-2 IE=	99.90
SP-EX-1 IE=	100.00

STORM DRAIN PIPE SUMMARY

PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START INV	END INV
P-15	18"	32.98	CPP (HP)	-3.34%	104.10	103.00
P-16	18"	29.31	CPP	-1.02%	105.00	104.70
P-17	18"	66.31	CPP	-0.90%	105.70	105.10
P-18	24"	143.72	CPP	-0.56%	101.90	101.10
P-19	24"	41.05	CPP (HP)	-1.22%	102.50	102.00
P-20	24"	33.34	CPP	-16.80%	108.20	102.60
P-21	18"	82.97	CPP	-1.45%	106.70	105.50
P-22	18"	38.35	CPP	-1.04%	107.20	106.80
P-23	18"	126.08	CPP	-1.90%	107.40	105.00
P-EX-1	18"	32	CPP	-0.63%	107.80	107.60
P-EX-2	18"	156	CPP	-0.50%	108.48	107.70

SEWER PIPE SUMMARY

PIPE NO.	DIA	LENGTH	TYPE	SLOPE	START INV	END INV
SP-1	8"	68.73	PVC	-5.99%	104.12	100.00
SP-2	8"	173.64	PVC	-0.52%	99.90	99.00
SP-EX-1	8"	422.03	PVC	-0.50%	102.11	100.00
SP-TBR-1	8"	274.00	PVC	-5.78%	99.90	84.06

SHEET NOTES:
1. PRESSURE ISOLATION VALVE TO REMAIN CLOSED AT ALL TIMES. PLACE 4"X4" PRESSURE TREATED POST IN VALVE BOX TO INDICATE NOT TO OPERATE VALVE.
2. RESERVE AND KEEP CLEAR 20 FEET, CENTERED ON PROPERTY LINE FOR LOTS 18/19, FOR MAIL DELIVERY AND FUTURE MAILBOXES.

STATE OF ALASKA 49TH — LUCAS M. CHAMBERS — 08/11/2022 — CE 106593 — REGISTERED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
info@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW
APPROVED:_____
DATE:_____

CHILKAT VISTAS SUBDIVISION, PHASE II
MICHAEL & WILLIAM HEUMANN

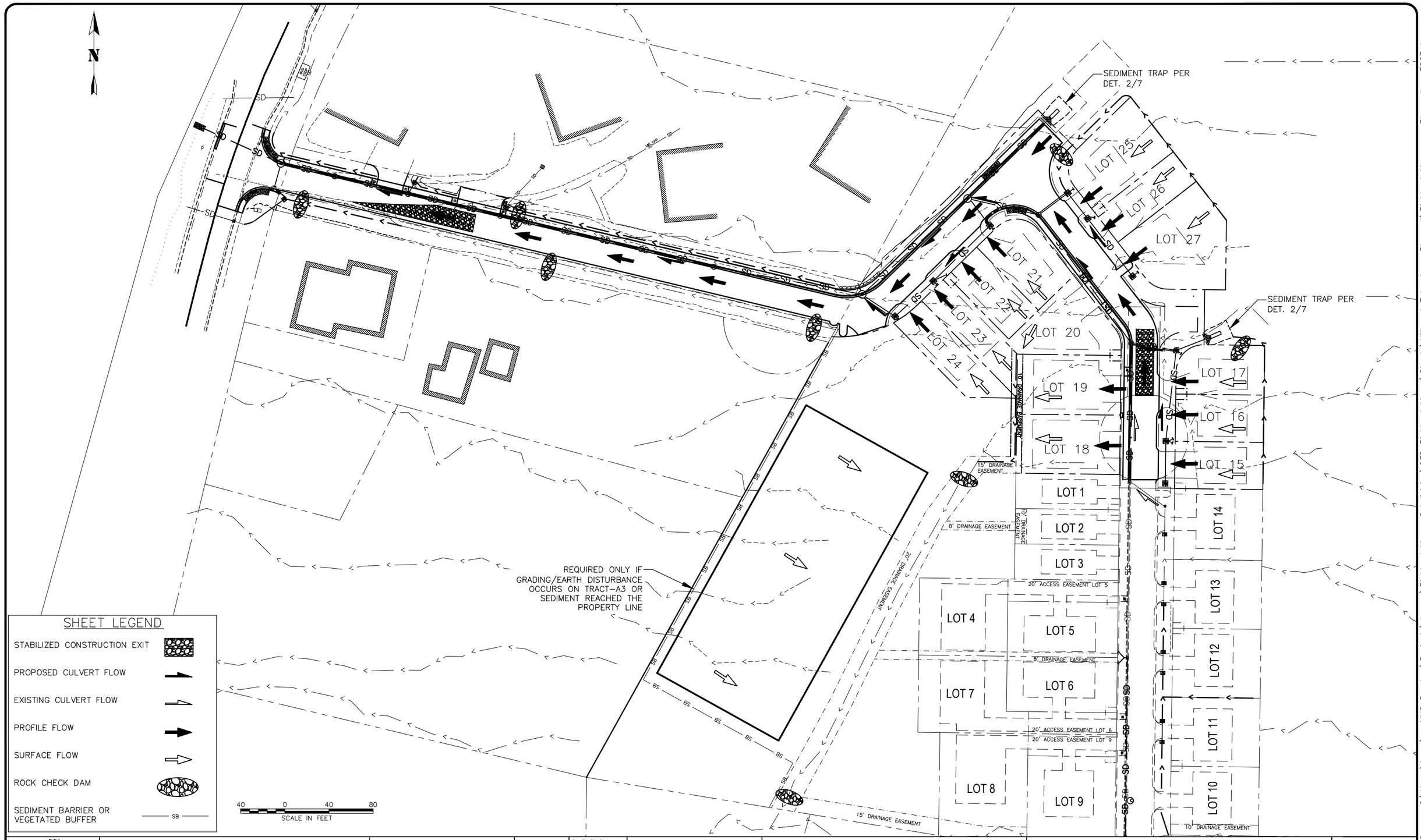
R.O.W. PLAN & PROFILE HILLCREST AVE 5+50 TO 8+15

SHEET NUMBER C-19 OF 22

August 15, 2022

C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hillcrest Extension -Phase II\Richland Mannor - Phase II - Plan & Profile.dw

Attachment C - SMF22-03 – Phase 2 Report and Final Plat
Attachment D - Approved Construction Plan



STATE OF ALASKA 49TH
LUCAS M. CHAMBERS
08/11/2022
CE 106593
REGISTERED PROFESSIONAL ENGINEER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHAMBERS

CBJ REVIEW

APPROVED:_____

DATE:

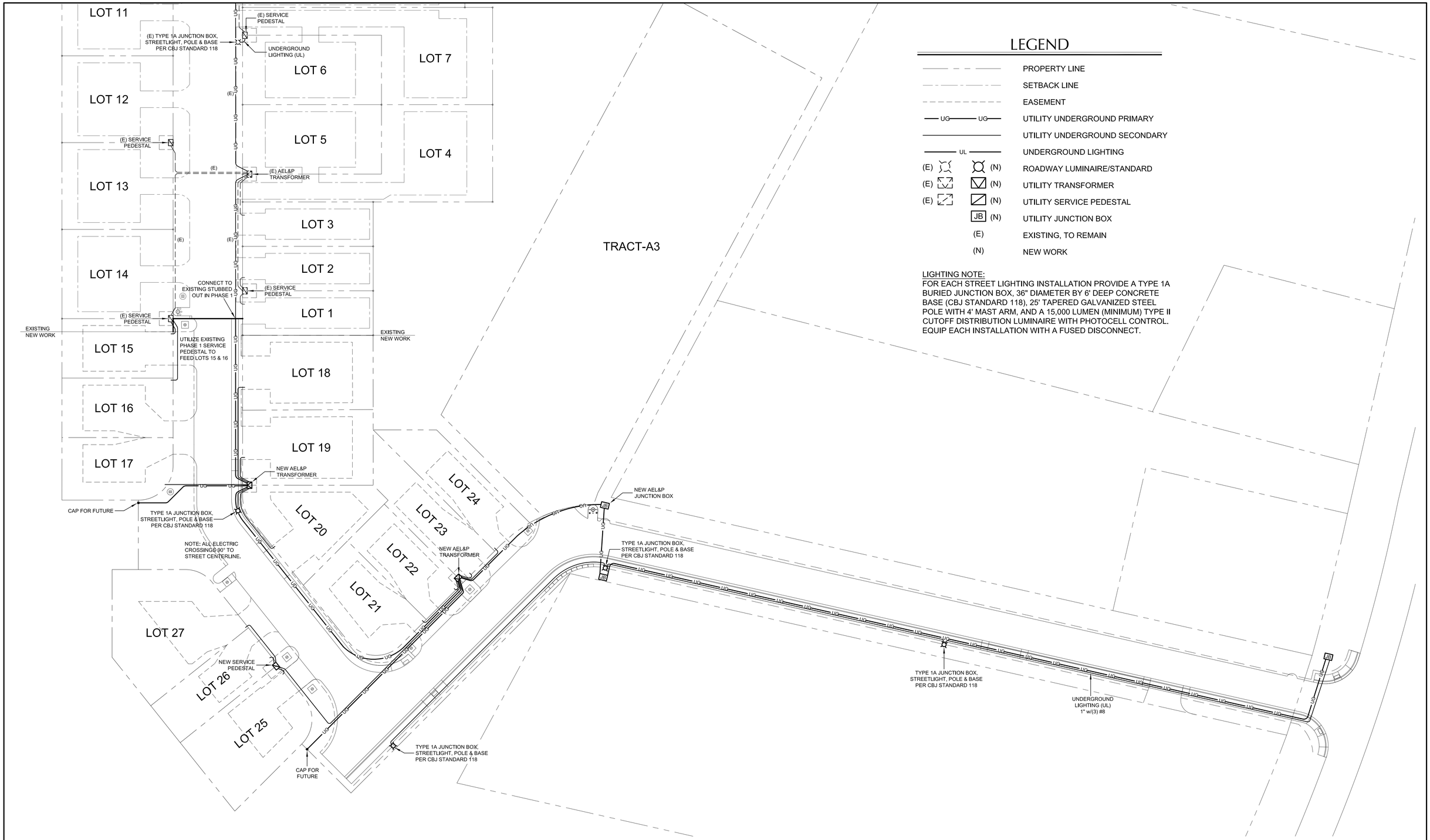
CHILKAT VISTAS SUBDIVISION, PHASE II

MICHAEL & WILLIAM HEUMANN

EROSION & SEDIMENT CONTROL PLAN

SHEET NUMBER C-20 OF 22

August 11, 2022 C:\Users\lucas\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Hilcrest Extension -Phase II\Richland Mannor - Phase II - ESCP.dwg



LEGEND

- PROPERTY LINE
- SETBACK LINE
- EASEMENT
- UTILITY UNDERGROUND PRIMARY
- UTILITY UNDERGROUND SECONDARY
- UNDERGROUND LIGHTING
- (E) (N) ROADWAY LUMINAIRE/STANDARD
- (E) (N) UTILITY TRANSFORMER
- (E) (N) UTILITY SERVICE PEDESTAL
- JB (N) UTILITY JUNCTION BOX
- (E) EXISTING, TO REMAIN
- (N) NEW WORK

LIGHTING NOTE:
FOR EACH STREET LIGHTING INSTALLATION PROVIDE A TYPE 1A BURIED JUNCTION BOX, 36" DIAMETER BY 6' DEEP CONCRETE BASE (CBJ STANDARD 118), 25' TAPERED GALVANIZED STEEL POLE WITH 4' MAST ARM, AND A 15,000 LUMEN (MINIMUM) TYPE II CUTOFF DISTRIBUTION LUMINAIRE WITH PHOTOCELL CONTROL. EQUIP EACH INSTALLATION WITH A FUSED DISCONNECT.

REV	DATE	BY	DESCRIPTION

SCALE GRAPHIC
DESIGNED LC/PG
DRAWN CB/PG
CHECKED MH/PG
DATE AUGUST 12, 2022

CHILKAT VISTAS LLC.
WILLIAM C. HEUMANN
MICHAEL P. HEUMANN
6000 THANE ROAD
JUNEAU, ALASKA 99801
(971) 261-8014

CHILKAT VISTAS
SUBDIVISION
PHASE II

STATE OF ALASKA 49TH Patrick Gorman AELE-7978 REGISTERED PROFESSIONAL ENGINEER
August 12, 2022

GORMAN ENGINEERS
10761 HORIZON DRIVE
JUNEAU, ALASKA 99801-7626
PHONE: 463-6721 CELL: 723-8884
e-mail: pgorman@gci.net

STREET LIGHTING and
ELECTRICAL PLAN
HILLCREST AVENUE & HOOTER LANE

DRAWING E-1
SHEET NO. 22 of 22

NOTES:

1) BASIS OF VERTICAL CONTROL IS NOAA TIDAL BENCHMARK 2200 M 2017.

2) BASIS OF BEARING IS BASED ON RECORD BEARING BETWEEN TWO MONUMENTS: ALL BEARINGS ARE ALASKA STATE PLANE BEARINGS AS ORIENTED TO THE BASIS OF BEARING.

3)SHOWN BEARINGS ARE ASP ZONE1 NAD83(2011)TO CONVERT THE SHOWN GRID DATA TO TRUE BEARINGS:
ROTATION TO -00°46'16.53"
SCALE FACTOR 0.99960490

4) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015; CHILKAT VISTAS SUBDIVISION PHASE 1 PLAT NO. 2020-27 RECORDED 11 AUGUST 2020 ON FILE WITH THE ALASKA DEPARTMENT OF NATURAL RESOURCES RECORDERS OFFICE IN THE JUNEAU RECORDING DISTRICT.

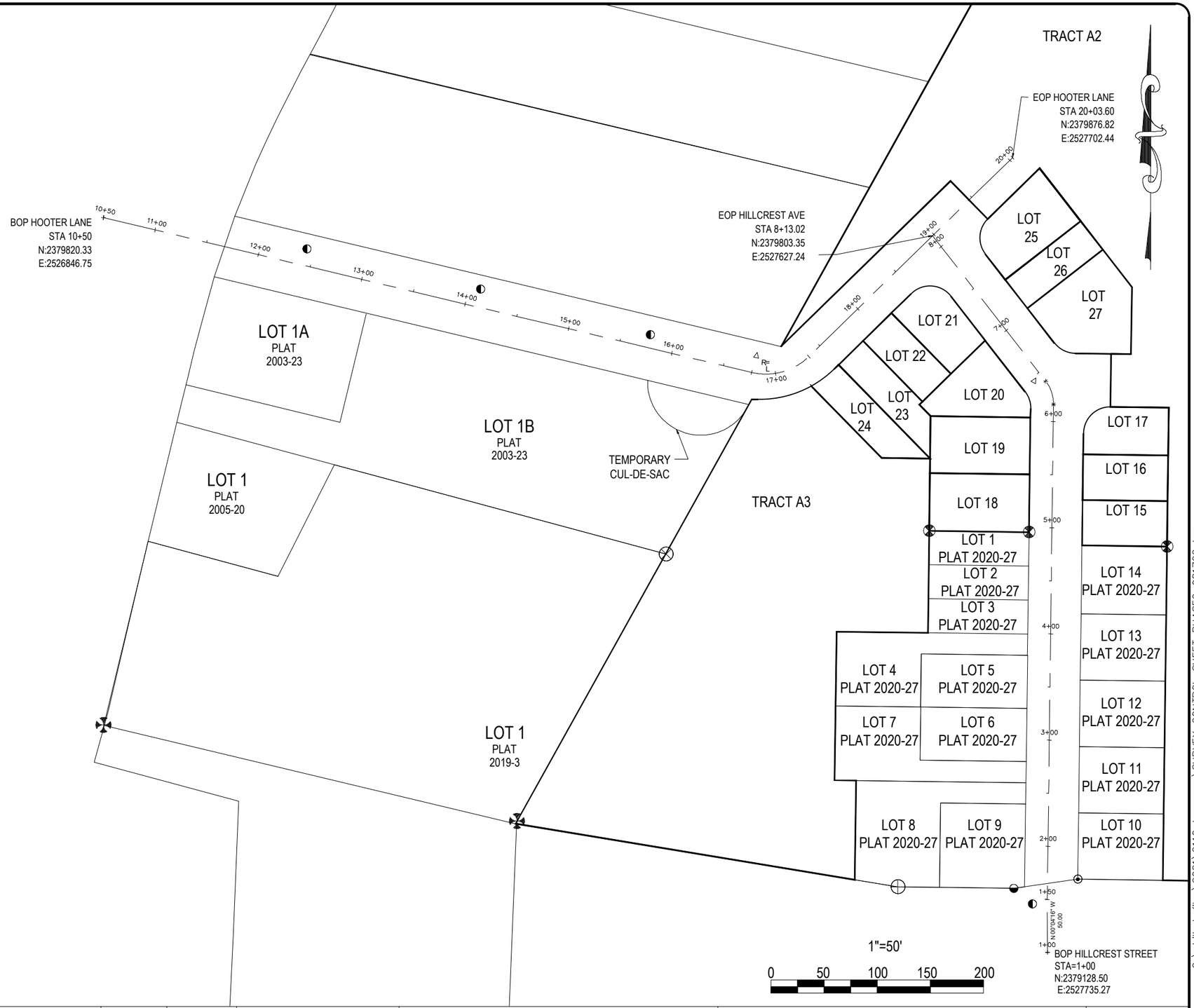
LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- CHILKAT SURVEYING SECONDARY MONUMENT RECOVERED
- CONTROL POINT

CONTROL POINT TABLE

POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
20	2379174.311	2527721.233	115.39	MAGNAIL IN TBC
21	2378836.424	2527742.531	132.66	MAGNAIL
70	2379710.160	2527361.584	80.97	SPIKE
71	2379753.086	2527201.789	62.59	SPIKE
73	2379790.949	2527038.329	37.72	MAGNAIL

*21 MAG NAIL ON THE EAST SIDE OF HILLCREST AVE SOUTH OF PHASE 1 WORK AREA



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

STATE OF ALASKA 49TH
Joshua Frantz Ivaniszek
17 AUGUST 2022
No.12314

CHILKAT
SURVEYING & MAPPING, LLC
10654 PORTER LANE
JUNEAU, AK 99801
(907)957-1908

CERTIFICATE OF AUTHORIZATION #164023

DRAWN BY:	J.IVANISZEK
CHECKED BY:	J.IVANISZEK

CBJ REVIEW

APPROVED:_____

DATE:_____

CHILKAT VISTAS
SUBDIVISION, PHASE II

CHILKAT VISTAS, LLC

SURVEY_CONTROL

SHEET NUMBER
C-21
OF
22

June 28, 2018

C:\chilkat_files\2021\2110_heumann\SURVEY_CONTROL_SHEET_PHASE2_081722.dwg

SMF20220003
ROW20220098 7B1001160011
Permit No. A.P.N.

BND20220033
Bond No.

CITY AND BOROUGH OF JUNEAU, ALASKA
IMPROVEMENT GUARANTEE

In order to ensure the restoration, and/or installation of improvements required by the Uniform Building Code, the City and Borough of Juneau ("CBJ") Community Development Department, Engineering and Public Works Department, and/or the above referenced permit, the property owner or developer hereby guarantees the installation of required improvements described as:

Project Description: Construction of Chilkat Vistas Subdivision, Phase II

Follow all approved engineered plans and specifications prepared by proHNS LLC, permit conditions, current CBJ Engineering Standard Details, Specifications, and associated erratum.

Located at: Hillcrest Avenue and Hooter Lane, Chilkat Vistas Subdivision, Phase II

This document is evidence that William Heumann and Michael Heumann
Has posted the sum of $1,328,606.30 to guarantee performance of the required work as described above and as required in CBJ permit No. SMF20220003, ROW20220098 and BND20220033 incorporated by reference herein. All work must be completed by October 31, 2023 unless extended in advance in writing by agreement of the CBJ and the Developer. Should the Owner/Applicant default or fail or neglect to satisfactorily complete the required permitted restoration and/or improvements by October 31, 2023. CBJ will give written notification and allow fourteen (14) calendar days for a response before the assembly may declare the bond, escrow deposit or other guarantee forfeited to the CBJ pursuant to CBJ 49.55.010. The CBJ may use the forfeited money to perform the completion of the permitted work to defray the expense thereof.

The owner or applicant shall notify the CBJ Engineering and Public Works department when the restoration or improvements are completed to schedule an inspection of the site. Conditional acceptance of the whole or a part of the restoration or improvements shall be given after completion by written approval from the Director of Engineering. The bond, escrow deposit, or other guarantee shall then be released in whole or in part turned upon such written approval of the required improvements. The bond, escrow deposit, or other guarantee is only for the work described above and is non-transferable to other properties or persons. The owner or applicant shall notify CBJ of address change prior to request of bond, escrow deposit, or other guarantee return.

Mailing Address for Bond Return/Release:		
Name/Company:		
Address:		
City:	State:	Zip:
Phone:		

DRAFT

CITY AND BOROUGH OF JUNEAU, ALASKA
IMPROVEMENT GUARANTEE

(Page 2)

Approved as to terms and conditions, and receipt is acknowledged by a copy hereof.

Dated this _____ day of _____, 2023, in Juneau, Alaska.

_____
(Owner / Applicant Signature)

_____
(Printed Name)

Dated this _____ day of _____, 2023, in Juneau, Alaska.

City and Borough of Juneau

_____
(Signature)

_____
(Printed Name, Title)

VERIFICATION GUARANTEE FUNDS

The owner/applicant, _____, has deposited the amount of $ 1,328,606.30, to guarantee the described restoration and/or improvements by:

_____1. Payment of a cash bond in the amount of $ _____, to the City and Borough of Juneau, Engineering Department, on _____, by cash/check no. _____, and a copy of the receipt is attached.

_____ 2. Posting of a corporate surety bond in the amount of $_____, a copy of which is attached, and which has been approved as to form by the City and Borough Attorney.

_____ 3. By depositing the amount of $_____, in an account established in the name of the City and Borough of Juneau, I.T.F._____, located at:_____, account no.:_____. A copy of the escrow agreement is attached which has been approved as to form by the City and Borough Attorney.

Dated this_____day of_____, 2023 in Juneau, Alaska.

_____
(CBJ Department)

_____
(Name)

_____
(Title)

Approved as to form:

_____
Assistant Municipal Attorney

DRAFT

1945 Alex Holden Way #101 | Juneau, AK 99801 | 907-780-4004 | solutions@proHNS.com
219 Main Street #13 | Haines, AK 99827 | 907-419-6070 | www.proHNS.com

August 11, 2022

Michael and William Heumann
6000 Thane Rd
Juneau, AK 99801
mpheumann@hotmail.com
(971) 261-8014

RE: Chilkat Vistas Subdivision, Phase II – Drainage Report

To Whom It May Concern,

The following Drainage Plan has been prepared for the Chilkat Vistas Subdivision, Phase II in Juneau, AK, a proposed multi-phase major subdivision on a 30-acre site at the 4500 block of Hillcrest Avenue. This drainage report addresses the second phase of the overall subdivision that will create 13 new single family lots, plus 3 tracts. Phase II of the subdivision will also include extending Hillcrest Avenue and improvement/extension of Hooter Lane, which will result in a looped connection between the two streets. This drainage report is independent of any previous drainage reports as it examines all on-site and upland stormwater that will be directed through the entire project area (phase I and phase II). Phase II of this subdivision will involve rerouting a stormdrain that currently flows across private property so that this stormwater will remain within the Hillcrest Ave and Hooter Lane right-of-way in the developed conditions. Improvements include extending Hillcrest Avenue and Hooter Lane by constructing new sidewalk, street, ditches, driveways and utilities along with building pads on the newly subdivided Lots. The 2010 CBJ Manual of Stormwater Best Management Practices was used to evaluate if the proposed and existing drainage features could convey runoff during the 25-year storm event.

Attachments to this report include sheets depicting survey data, proposed ROW improvements, as-built information, calculations and rainfall data used for the drainage analysis.

Site Runoff Calculation Method:

The existing conditions include 2 sub-basins and 2 discharge points, and the developed conditions will include 3 sub-basins and 3 discharge points. Though stormwater will be rerouted through the project area, all discharge points combine in the wetlands on the west side of Glacier Highway, which will preserve historic drainage patterns. It should be noted that the basin for Chilkat Vistas Subdivision phase I was used as the "pre-developed" condition. Since the phase I/pre-developed phase II conditions were analyzed in a previous drainage report, the existing conditions will not be discussed in detail in this report (see the Chilkat Vistas Phase I drainage report in appendix "G" for details on the existing conditions"). The catchment areas we determined using the proposed design model, Lidar data and aerial photos in AutoCAD C3D and were verify by several site visits. A delineation of the catchment areas can be found in Appendix A. Soil conditions were based on information from Shoephorster and Furbush (1974) and the National Engineering Handbook (see appendix E for more information about the on-site soils).

To calculate the site runoff for Drainage Basins A, B, and C we have elected to use the SCS TR-55 method. The SCS TR-55 is most appropriate for evaluating drainage basins of 10 acres to 1,300 acres. Appendix D of the "2010 CBJ Manual of Stormwater Best Management Practices" was utilized as a guide. The calculations and supporting documentation can be found in Appendix B, C & F of this Report.

Anticipated Site Runoff (Q):

Using the SCS Unit Hydrograph Method, the amount of stormwater runoff during the 25-year storm event per catchment area was determined. The analysis shows that approximately 1.13 cfs of runoff will be removed from the discharge point A due to the proposed development. See Table 1.1 below for results, the calculations can be found in Appendix B.

Catchment Area	Q (cfs)
Drainage Basin A, Discharge Point A	**11.58**
Drainage Basin B, Discharge Point B	**1.03**
Drainage Basin C, Discharge Point C	**3.24**
Table 1.1	

Conveyance/Discharge Structure Capacities:

The capacity of the existing and proposed drainage systems was calculated to determine if proposed 25-year storm event flows could be conveyed. The entire network was analyzed in AutoCAD SSA, and the most vulnerable drainage structures/conveyance systems to failure along the analyzed flow path were also evaluated using HY-8 software. See Table 1.2 below for results on the most vulnerable drainage element in each basin's conveyance system. The supporting calculations can be found in Appendix C.

Catchment Area	Q (cfs)
Drainage Basin A – (P-1) Proposed 36" CMP Culvert	**47.75**
Drainage Basin B – (P-EX-1) Existing 18" CPP	**8.89**
Drainage Basin C – No net increase over existing conditions.	**5.58**
Table 1.2	

Summary:

Table 1.3 below compares anticipated 25-year runoff in the proposed and existing conveyance systems to their available hydraulic capacity. To simplify and provide a conservative evaluation runoff from the entire drainage basin was used for comparison even though uphill conveyance systems would not need to handle all of the calculated runoff from the lower discharge point.

Drainage Basin/Discharge Point	Anticipated Runoff Q (cfs)	Capacity Check	Available Capacity Q (cfs)
Basin A/P-1	**11.58**	**<**	**47.75**
Basin B/P-EX-1	**1.03**	**<**	**8.89**
Basin C/Existing Ditch Near Tract-A3	**3.24**	**<**	**5.58**
Table 1.3			

Our analysis shows the proposed 36-inch CMP pipe under Glacier Highway will have an excess of capacity to accommodate the stormwater that will result from phase II of the Chilkat Vistas Subdivision, as well as potential future development. It demonstrates that there is excess capacity in the existing 18-inch CPP culvert on the southern side of Hooter Lane. Our analysis also shows that the drainage along the southern portion of Hooter Lane will see a reduction in water from the existing conditions due to a redirection of upland flows into the new 36-inch pipe on the opposite side of the street. Similarly, the existing ditch that leaves the project area at the southern portion of tract-A3 will see a net reduction in water due to the elimination of a stormdrain outfall from Hillcrest Ave in the ditch above Tract-A3.

Respectfully,



Lucas Chambers, P.E.
Principal Engineer – proHNS LLC Juneau
License #CE-106593

Appendices:

A – Catchment Areas & Flow Paths
B – SSA Calculations
C – HY-8 Calculations
D – Rainfall Intensity
E – Soil Data
F – SCS Hydrograph
G – Prior Drainage Reports "Richland Manor Subdivision – Drainage Report dated 10/31/19, Hooter Lane Phase I ROW Improvements – Drainage Report dated 1/23/20

App A - Catchment Areas & Flow Paths

N

NOTE: FLOW PATH REPRESENTS THE MOST HYDRAULICALLY DISTANT POINT IN A GIVEN DRAINAGE BASIN.

RICHLAND MANOR TRACT A

VINTAGE BLVD

ANALYSIS DISCHARGE POINT "PRE B" (1.90 CFS)

HOOTER LN ROW

TAMARACK TRAILS CONDOS

DRAINAGE BASIN "PRE B"

4815 GLACIER HWY

4825 GLACIER HWY

4770 GLACIER HWY

4670 GLACIER HWY

GLACIER HWY

UNDEVELOPED TRACT A-3

LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
LOT 12
LOT 13
LOT 14

PRIMARY FLOW PATH (TYP)

DRAINAGE BASIN "PRE A"

MAPPED EXISTING DRAINAGE CHANNELS

ROBBIE RD

ANALYSIS DISCHARGE POINT "PRE-A" (5.58 CFS)

ABBY WAY

HILLCREST AVE

MOUNTAINSIDE DR

100 0 100 200
SCALE IN FEET

C:\Users\Chris\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Drainage\DrainageMap_Hillcrest_Extension_Phase_II.dwg

June 16, 2022

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-6151
info@proHNS.com
www.proHNS.com

HILLCREST EXTENSION SUBDIVISION
WILLIAM & MICHAEL HUMEANN

PREDEVELOPED DRAINAGE BASIN CATCHMENT AREAS

SHEET NUMBER 1
OF 2

App A - Catchment Areas & Flow Paths

NOTE: FLOW PATH REPRESENTS THE MOST HYDRAULICALLY DISTANT POINT IN A GIVEN DRAINAGE BASIN.

N

VINTAGE BLVD

RICHLAND MANOR TRACT A

ANALYSIS DISCHARGE POINT A (11.58 CFS)

HOOTER LN ROW

TAMARACK TRAILS CONDOS

4815 GLACIER HWY

4770 GLACIER HWY

GLACIER HWY

DRAINAGE BASIN B

DRAINAGE BASIN C

DRAINAGE BASIN A

ANALYSIS DISCHARGE POINT B (1.03 CFS)

RICHLAND MANOR TRACT A3

ANALYSIS DISCHARGE POINT C (3.24 CFS)

CONTRIBUTING FLOW PATH (TYP)

RICHLAND MANOR TRACT A2

PRIMARY FLOW PATH (TYP)

MAPPED EXISTING DRAINAGE CHANNELS

ROBBIE RD

ABBY WAY

HILLCREST AVE

MOUNTAINSIDE DR

LOT 29 LOT 26 LOT 27 LOT 21 LOT 22 LOT 23 LOT 24 LOT 20 LOT 19 LOT 18 LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8 LOT 9 LOT 17 LOT 16 LOT 15 LOT 14 LOT 13 LOT 12 LOT 11 LOT 10

100 0 100 200
SCALE IN FEET

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 321-2020
www.proHNS.com

HILLCREST EXTENSION SUBDIVISION
WILLIAM & MICHAEL HUMEANN

DEVELOPED DRAINAGE BASIN CATCHMENT AREAS

SHEET NUMBER 2 OF 2

June 16, 2022

C:\Users\Chris\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Drainage\DrainageMap_Hillcrest_Extension_Phase_II.dwg

Attachment C - SMF22-03 – Phase 2 Report and Final Plat

App B - SSA Calculations

Element ID	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Inlet Invert Offset	Outlet Invert Elevation	Outlet Invert Offset	Total Drop	Average Slope	Pipe Shape	Pipe Diameter or Height	Pipe Width	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow	Peak Flow	Max Flow Velocity	Travel Time	Design Flow Capacity	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged	Max Flow Depth	Reported Condition
			(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(%)		(inches)	(inches)					(cfs)	(cfs)	(ft/sec)	(min)	(cfs)			(min)	(ft)	
P-1	S-1	END_OF_P-1	76.08	24.40	0.00	24.02	0.00	0.38	0.5000	CIRCULAR	36.000	36.00	0.0120	0.5000	0.5000	0.0000	0.00	11.58	5.84	0.22	51.07	0.23	0.32	0.00	0.97	Calculated
P-2	S-2	S-1	50.06	27.80	0.00	24.50	0.10	3.30	6.5900	CIRCULAR	30.000	30.00	0.0120	0.5000	0.5000	0.0000	0.00	11.60	14.96	0.06	114.09	0.10	0.22	0.00	0.54	Calculated
P-3	S-3	S-2	68.52	36.80	0.00	27.90	0.10	8.90	12.9900	CIRCULAR	30.000	30.00	0.0120	0.5000	0.5000	0.0000	0.00	11.60	19.00	0.06	160.14	0.07	0.18	0.00	0.45	Calculated
P-5	S-4	S-3	119.66	49.70	0.00	36.90	0.10	12.80	10.7000	CIRCULAR	30.000	30.00	0.0120	0.5000	0.5000	0.0000	0.00	11.61	17.78	0.11	145.33	0.08	0.19	0.00	0.48	Calculated
P-7	S-5	S-4	165.23	69.70	0.00	49.80	0.10	19.90	12.0400	CIRCULAR	30.000	30.00	0.0120	0.5000	0.5000	0.0000	0.00	10.12	17.67	0.16	154.21	0.07	0.17	0.00	0.44	Calculated
P-8	S-6	S-5	136.84	85.80	0.00	69.80	0.10	16.00	11.6900	CIRCULAR	30.000	30.00	0.0120	0.5000	0.5000	0.0000	0.00	9.96	17.40	0.13	151.94	0.07	0.17	0.00	0.43	Calculated
P-9	S-7	S-6	35.09	86.10	0.00	85.90	0.10	0.20	0.5700	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	0.47	2.61	0.22	8.59	0.06	0.16	0.00	0.24	Calculated
P-10	S-8	S-7	30.23	87.20	0.00	86.20	0.10	1.00	3.3100	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	0.47	4.69	0.11	20.70	0.02	0.11	0.00	0.16	Calculated
P-11	S-9	S-8	32.20	92.60	0.00	87.30	0.10	5.30	16.4600	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	0.47	8.42	0.06	46.17	0.01	0.07	0.00	0.11	Calculated
P-12	S-10	S-9	37.49	96.80	0.00	92.70	0.10	4.10	10.9400	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	0.47	7.34	0.09	37.63	0.01	0.08	0.00	0.12	Calculated
P-13	S-11	S-10	22.24	99.50	0.00	96.90	0.10	2.60	11.6900	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	0.47	7.50	0.05	38.91	0.01	0.08	0.00	0.12	Calculated
P-14	S-12	S-6	129.11	97.90	0.00	85.90	0.10	12.00	9.2900	CIRCULAR	30.000	30.00	0.0120	0.5000	0.5000	0.0000	0.00	9.64	16.00	0.13	135.47	0.07	0.18	0.00	0.45	Calculated
P-15	SED-TRAP-INLET_1	S-12	100.78	106.40	0.00	98.00	0.10	8.40	8.3400	CIRCULAR	24.000	24.00	0.0120	0.5000	0.5000	0.0000	0.00	0.36	5.80	0.29	70.76	0.01	0.05	0.00	0.10	Calculated
P-16	S-13	S-12	66.08	101.00	0.00	98.00	0.10	3.00	4.5400	CIRCULAR	24.000	24.00	0.0120	0.5000	0.5000	0.0000	0.00	9.44	12.58	0.09	52.22	0.18	0.29	0.00	0.58	Calculated
P-17	S-14	S-13	32.98	104.10	0.00	103.00	2.00	1.10	3.3400	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	0.57	5.12	0.11	20.78	0.03	0.11	0.00	0.17	Calculated
P-18	S-15	S-14	29.31	104.40	0.00	104.20	0.10	0.20	0.6800	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	0.57	2.93	0.17	9.40	0.06	0.17	0.00	0.25	Calculated
P-19	S-16	S-15	33.76	104.90	0.00	104.50	0.10	0.40	1.1800	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	0.57	3.57	0.16	12.39	0.05	0.15	0.00	0.22	Calculated
P-20	S-17	S-16	50.97	105.90	0.00	105.00	0.10	0.90	1.7700	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	0.57	4.09	0.21	15.12	0.04	0.13	0.00	0.20	Calculated
P-21	S-18	S-13	143.72	101.90	0.00	101.10	0.10	0.80	0.5600	CIRCULAR	24.000	24.00	0.0120	0.5000	0.5000	0.0000	0.00	9.03	5.80	0.41	18.28	0.49	0.50	0.00	0.99	Calculated
P-22	S-EX-1	S-18	126.08	106.00	0.00	105.00	3.10	1.00	0.7900	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	5.87	5.94	0.35	10.13	0.58	0.55	0.00	0.82	Calculated
P-23	S-19	S-18	43.47	102.50	0.00	102.00	0.10	0.50	1.1500	CIRCULAR	24.000	24.00	0.0120	0.5000	0.5000	0.0000	0.00	3.12	5.61	0.13	26.28	0.12	0.23	0.00	0.47	Calculated
P-24	SEDIMENT-TRAP_2	S-19	31.54	108.00	-0.20	102.50	0.00	5.50	17.4400	CIRCULAR	18.000	18.00	0.0150	0.5000	0.5000	0.0000	0.00	0.16	5.31	0.10	38.70	0.00	0.05	0.00	0.07	Calculated
P-25	S-20	S-19	40.45	106.00	0.00	105.50	3.00	0.50	1.2400	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	3.04	5.88	0.11	12.65	0.24	0.33	0.00	0.50	Calculated
P-26	S-21	S-20	42.85	106.40	0.00	106.10	0.10	0.30	0.7000	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	3.04	4.79	0.15	9.52	0.32	0.39	0.00	0.58	Calculated
P-27	S-22	S-21	38.35	106.90	0.00	106.50	0.10	0.40	1.0400	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	3.04	5.54	0.12	11.62	0.26	0.35	0.00	0.52	Calculated
P-EX-1	P-EX-1_INLET	END_OF_P-EX-1	34.92	27.50	0.00	27.10	0.00	0.40	1.1500	CIRCULAR	18.000	18.00	0.0120	0.5000	0.5000	0.0000	0.00	1.03	4.20	0.14	12.18	0.08	0.20	0.00	0.30	Calculated

SN	Element ID	X Coordinate	Y Coordinate	Description	Invert Elevation	Boundary Type	Flap Gate	Fixed Water Elevation	Peak Inflow	Peak Lateral Inflow	Maximum HGL Depth Attained	Maximum HGL Elevation Attained
					(ft)			(ft)	(cfs)	(cfs)	(ft)	(ft)
1	END_OF_P-1	2526888.51	2379837.82		24.02	FREE	NO		11.58	0.00	0.97	24.99
2	END_OF_P-EX-1	2526933.45	2379754.07		27.10	FREE	NO		1.03	0.00	0.30	27.40
3	SWALE_NEAR_TRACT_A3	2527489.84	2379116.91		0.00	FREE	NO		3.24	3.24	0.00	0.00

Element ID	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Ground/Rim (Max) Offset (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Surcharge Elevation (ft)	Surcharge Depth (ft)	Ponded Area (ft^2)	Minimum Pipe Cover (inches)	Peak Inflow (cfs)	Peak Lateral Inflow (cfs)	Maximum Surcharge Depth Attained (ft)	Minimum Freeboard Attained (ft)	Total Flooded Volume (ac-inches)	Total Time Flooded (minutes)
S-1	24.40	29.03	4.63	24.40	0.00	29.03	0.00	0.00	19.59	11.60	0.00	0.00	3.66	0.00	0.00
S-2	27.80	32.26	4.46	27.80	0.00	32.26	0.00	0.00	22.28	11.60	0.00	0.00	3.90	0.00	0.00
S-3	36.80	40.47	3.67	36.80	0.00	40.47	0.00	0.00	12.84	11.61	0.00	0.00	3.09	0.00	0.00
S-4	49.70	54.83	5.13	49.70	0.00	54.83	0.00	0.00	30.36	11.60	1.68	0.00	4.60	0.00	0.00
S-5	69.70	74.66	4.96	69.70	0.00	74.66	0.00	0.00	28.31	10.12	0.29	0.00	4.43	0.00	0.00
S-6	85.80	90.62	4.82	85.80	0.00	90.62	0.00	0.00	26.63	9.96	0.00	0.00	4.27	0.00	0.00
S-7	86.10	90.61	4.51	86.10	0.00	90.61	0.00	0.00	34.91	0.47	0.00	0.00	4.25	0.00	0.00
S-8	87.20	93.06	5.86	87.20	0.00	93.06	0.00	0.00	51.15	0.47	0.00	0.00	5.66	0.00	0.00
S-9	92.60	96.93	4.33	92.60	0.00	96.93	0.00	0.00	32.72	0.47	0.00	0.00	4.11	0.00	0.00
S-10	96.80	101.43	4.63	96.80	0.00	101.43	0.00	0.00	36.32	0.47	0.00	0.00	4.41	0.00	0.00
S-11	99.50	103.00	3.50	99.50	0.00	103.00	0.00	0.00	24.00	0.47	0.47	0.00	3.38	0.00	0.00
S-12	97.90	105.21	7.31	97.90	0.00	105.21	0.00	0.00	57.76	9.64	0.00	0.00	6.64	0.00	0.00
S-13	101.00	108.20	7.20	101.00	0.00	108.20	0.00	0.00	44.38	9.44	0.00	0.00	5.03	0.00	0.00
S-14	104.10	107.68	3.58	104.10	0.00	107.68	0.00	0.00	23.74	0.57	0.00	0.00	3.23	0.00	0.00
S-15	104.40	108.02	3.62	104.40	0.00	108.02	0.00	0.00	24.22	0.57	0.00	0.00	3.30	0.00	0.00
S-16	104.90	108.52	3.62	104.90	0.00	108.52	0.00	0.00	24.20	0.57	0.00	0.00	3.32	0.00	0.00
S-17	105.90	109.43	3.53	105.90	0.00	109.43	0.00	0.00	24.42	0.57	0.57	0.00	3.34	0.00	0.00
S-18	101.90	110.56	8.66	101.90	0.00	110.56	0.00	0.00	48.67	9.03	0.08	0.00	4.74	0.00	0.00
S-19	102.50	109.91	7.41	102.50	0.00	109.91	0.00	0.00	34.87	3.12	0.00	0.00	3.91	0.00	0.00
S-20	106.00	109.67	3.67	106.00	0.00	109.67	0.00	0.00	24.80	3.04	0.00	0.00	2.98	0.00	0.00
S-21	106.40	110.01	3.61	106.40	0.00	110.01	0.00	0.00	24.13	3.04	0.00	0.00	2.99	0.00	0.00
S-22	106.90	110.47	3.57	106.90	0.00	110.47	0.00	0.00	24.87	3.04	3.04	0.00	3.05	0.00	0.00
S-EX-1	106.00	108.47	2.47	106.00	0.00	108.47	0.00	0.00	11.60	5.88	5.88	0.00	1.65	0.00	0.00
P-EX-1_INLET	27.50	27.50	0.00	0.00	-27.50	6.00	-21.50	0.00	0.00	1.03	1.03	0.00	1.20	0.00	0.00
SEDIMENT-TRAP_2	108.20	108.20	0.00	0.00	-108.20	6.00	-102.20	0.00	0.00	0.16	0.16	0.00	1.43	0.00	0.00
SED-TRAP-INLET_1	106.40	106.40	0.00	0.00	-106.40	6.00	-100.40	0.00	0.00	0.36	0.36	0.00	1.90	0.00	0.00

App B - SSA Calculations

SN	Element ID	Description	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	MOUNTAINSIDE_RAIN		Time Series	TS-01	Cumulative	inches	Alaska	Juneau (B)	25	4.82	SCS Type IA 24-hr

App B - SSA Calculations

SN	Element ID	Description	Area (acres)	Drainage Node ID	Weighted Curve Number	Rain Gage ID	Peak Rate Factor	Total Precipitation (inches)	Total Runoff (inches)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
3	GRAVEL_A-1		0.07	SED-TRAP-INLET_1	91.00	MOUNTAINSIDE_RAIN	484	4.82	3.81	0.07	0 00:05:00
4	GRAVEL_A-2		0.16	SEDIMENT-TRAP_2	91.00	MOUNTAINSIDE_RAIN	484	4.82	3.81	0.16	0 00:05:00
5	LOTS_10-14		0.65	S-EX-1	92.00	MOUNTAINSIDE_RAIN	484	4.82	3.91	0.67	0 00:06:55
6	LOTS_15-17		0.27	S-22	92.00	MOUNTAINSIDE_RAIN	484	4.82	3.91	0.28	0 00:06:06
8	LOTS_22-25		0.33	S-11	92.00	MOUNTAINSIDE_RAIN	484	4.82	3.91	0.34	0 00:11:31
9	Lots_25-27		0.34	S-17	92.00	MOUNTAINSIDE_RAIN	484	4.82	3.91	0.35	0 00:05:00
10	ROAD_A-1		0.25	S-5	98.00	MOUNTAINSIDE_RAIN	484	4.82	4.58	0.29	0 00:05:00
11	ROAD_A-2		0.10	SED-TRAP-INLET_1	98.00	MOUNTAINSIDE_RAIN	484	4.82	4.58	0.12	0 00:05:00
12	ROAD_A-3		0.12	S-11	98.00	MOUNTAINSIDE_RAIN	484	4.82	4.58	0.14	0 00:05:00
13	ROAD_A-4		0.07	S-17	98.00	MOUNTAINSIDE_RAIN	484	4.82	4.58	0.08	0 00:05:00
14	ROAD_A-5		0.07	S-18	98.00	MOUNTAINSIDE_RAIN	484	4.82	4.58	0.08	0 00:05:00
15	ROAD_A-6		0.07	S-22	98.00	MOUNTAINSIDE_RAIN	484	4.82	4.58	0.08	0 00:05:00
16	ROAD_A-7		0.21	S-EX-1	98.00	MOUNTAINSIDE_RAIN	484	4.82	4.58	0.24	0 00:05:00
17	ROAD_A-8		0.12	S-22	98.00	MOUNTAINSIDE_RAIN	484	4.82	4.58	0.14	0 00:05:00
19	TAMARACK_TRAIL_APARTMENTS		1.54	S-4	95.00	MOUNTAINSIDE_RAIN	484	4.82	4.24	1.68	0 00:09:54
21	UPLANDS_A-1		10.90	S-EX-1	77.00	MOUNTAINSIDE_RAIN	484	4.82	2.47	5.36	0 00:32:45
22	UPLANDS_A-2		5.86	S-22	77.00	MOUNTAINSIDE_RAIN	484	4.82	2.47	2.79	0 00:36:34
23	UPLANDS_A-3		0.34	S-17	77.00	MOUNTAINSIDE_RAIN	484	4.82	2.47	0.17	0 00:27:44
24	UPLANDS_A-4		0.25	SED-TRAP-INLET_1	80.00	MOUNTAINSIDE_RAIN	484	4.82	2.74	0.17	0 00:05:00
18	ROAD_B-1		0.34	P-EX-1_INLET	98.00	MOUNTAINSIDE_RAIN	484	4.82	4.58	0.39	0 00:05:00
1	ADJACENT_RESIDENTIAL_B-1		0.63	P-EX-1_INLET	92.00	MOUNTAINSIDE_RAIN	484	4.82	3.91	0.64	0 00:05:00
20	TRACT_A3		1.18	SWALE_NEAR_TRACT_A3	95.00	MOUNTAINSIDE_RAIN	484	4.82	4.24	1.29	0 00:07:50
7	LOTS_1-9_18-20		1.35	SWALE_NEAR_TRACT_A3	92.00	MOUNTAINSIDE_RAIN	484	4.82	3.91	1.38	0 00:06:43
2	GRASS/DRAINGE_EASEMENT		0.86	SWALE_NEAR_TRACT_A3	80.00	MOUNTAINSIDE_RAIN	484	4.82	2.74	0.57	0 00:08:15

HY-8 Analysis Results

Crossing Summary Table

Calculated Flow During 25-Year Storm Event

Culvert Crossing: 36-INCH CMP (PROPOSED)

Headwater Elevation (ft)	Total Discharge (cfs)	P-1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
24.89	1.00	1.00	0.00	1
25.63	5.90	5.90	0.00	1
26.17	11.58	11.58	0.00	1
26.50	15.70	15.70	0.00	1
26.86	20.60	20.60	0.00	1
27.20	25.50	25.50	0.00	1
27.54	30.40	30.40	0.00	1
27.89	35.30	35.30	0.00	1
28.29	40.20	40.20	0.00	1
28.86	45.10	45.10	0.00	1
29.29	50.00	48.73	1.25	8
29.17	47.75	47.75	0.00	Overtopping

Discharge Needed to Overtop Top P-1

HY-8 Analysis Results

Crossing Summary Table

Calculated Flow During 25-Year Storm Event

Culvert Crossing: P-EX-1

Headwater Elevation (ft)	Total Discharge (cfs)	P-EX-1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
28.11	1.03	1.03	0.00	1
28.67	3.40	3.40	0.00	1
29.12	5.80	5.80	0.00	1
29.72	8.20	8.20	0.00	1
30.07	10.60	9.06	1.51	13
30.12	13.00	9.19	3.78	5
30.17	15.40	9.28	6.06	4
30.21	17.80	9.37	8.39	4
30.24	20.20	9.46	10.67	3
30.28	22.60	9.53	13.01	3
30.31	25.00	9.63	15.37	3
30.00	8.89	8.89	0.00	Overtopping

Discharge Needed to Overtop Top P-EX-1

App D - Rainfall Intensity

NOAA Atlas 14, Volume 7, Version 2
Location name: Juneau, Alaska, USA*
Latitude: 58.3454°, Longitude: -134.4896°
Elevation: 120.33 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Douglas Kane, Sarah Dietz, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Svetlana Stuefer, Amy Tidwell, Carl Trypaluk, Dale Unruh, Michael Yekta, Erica Betts, Geoffrey Bonnin, Sarah Heim, Lillian Hiner, Elizabeth Lilly, Jayashree Narayanan, Fenglin Yan, Tan Zhao

NOAA, National Weather Service, Silver Spring, Maryland
and
University of Alaska Fairbanks, Water and Environmental Research Center

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.131 (0.106-0.166)	0.153 (0.122-0.197)	0.187 (0.146-0.246)	0.215 (0.165-0.287)	0.253 (0.189-0.346)	0.282 (0.207-0.393)	0.312 (0.225-0.442)	0.350 (0.248-0.505)	0.400 (0.277-0.590)	0.438 (0.299-0.657)
10-min	0.176 (0.142-0.223)	0.206 (0.164-0.265)	0.251 (0.195-0.330)	0.288 (0.220-0.385)	0.339 (0.253-0.464)	0.379 (0.278-0.528)	0.418 (0.302-0.592)	0.470 (0.333-0.678)	0.537 (0.372-0.792)	0.588 (0.401-0.882)
15-min	0.206 (0.166-0.261)	0.241 (0.192-0.310)	0.293 (0.228-0.385)	0.337 (0.258-0.450)	0.397 (0.297-0.543)	0.443 (0.325-0.617)	0.490 (0.353-0.694)	0.549 (0.389-0.791)	0.629 (0.436-0.927)	0.689 (0.470-1.03)
30-min	0.273 (0.220-0.346)	0.320 (0.255-0.411)	0.389 (0.303-0.511)	0.447 (0.342-0.597)	0.527 (0.394-0.721)	0.588 (0.432-0.819)	0.650 (0.469-0.921)	0.729 (0.517-1.05)	0.834 (0.578-1.23)	0.914 (0.623-1.37)
60-min	0.374 (0.302-0.474)	0.438 (0.349-0.563)	0.533 (0.415-0.700)	0.613 (0.469-0.819)	0.722 (0.539-0.988)	0.806 (0.592-1.12)	0.890 (0.642-1.26)	0.999 (0.708-1.44)	1.14 (0.792-1.69)	1.25 (0.853-1.88)
2-hr	0.552 (0.445-0.700)	0.647 (0.515-0.832)	0.789 (0.614-1.04)	0.906 (0.693-1.21)	1.07 (0.798-1.46)	1.19 (0.875-1.66)	1.32 (0.949-1.86)	1.48 (1.05-2.13)	1.69 (1.17-2.49)	1.85 (1.26-2.77)
3-hr	0.729 (0.588-0.925)	0.854 (0.680-1.10)	1.04 (0.811-1.37)	1.20 (0.915-1.60)	1.41 (1.05-1.93)	1.57 (1.15-2.19)	1.73 (1.25-2.46)	1.95 (1.38-2.81)	2.23 (1.54-3.29)	2.44 (1.66-3.66)
6-hr	1.17 (0.944-1.48)	1.37 (1.09-1.76)	1.67 (1.30-2.19)	1.92 (1.47-2.56)	2.26 (1.69-3.09)	2.52 (1.85-3.51)	2.78 (2.01-3.94)	3.13 (2.22-4.51)	3.58 (2.48-5.27)	3.92 (2.67-5.88)
12-hr	1.76 (1.42-2.23)	2.06 (1.64-2.65)	2.50 (1.95-3.29)	2.87 (2.19-3.83)	3.38 (2.53-4.62)	3.79 (2.78-5.27)	4.21 (3.04-5.96)	4.73 (3.35-6.82)	5.42 (3.76-7.99)	5.94 (4.05-8.91)
24-hr	2.54 (2.30-2.84)	2.97 (2.65-3.37)	3.59 (3.14-4.16)	4.10 (3.52-4.83)	4.82 (4.05-5.81)	5.41 (4.46-6.64)	6.04 (4.90-7.54)	6.78 (5.41-8.61)	7.76 (6.05-10.1)	8.51 (6.52-11.2)
2-day	3.45 (3.12-3.87)	4.01 (3.58-4.55)	4.79 (4.19-5.55)	5.42 (4.65-6.38)	6.29 (5.28-7.59)	7.00 (5.77-8.59)	7.74 (6.28-9.66)	8.59 (6.85-10.9)	9.72 (7.57-12.6)	10.6 (8.10-13.9)
3-day	4.10 (3.70-4.58)	4.73 (4.22-5.36)	5.61 (4.90-6.49)	6.30 (5.41-7.42)	7.26 (6.09-8.75)	8.03 (6.62-9.85)	8.82 (7.15-11.0)	9.72 (7.75-12.3)	10.9 (8.51-14.2)	11.8 (9.06-15.6)
4-day	4.63 (4.18-5.18)	5.32 (4.75-6.04)	6.28 (5.49-7.27)	7.03 (6.04-8.28)	8.07 (6.77-9.72)	8.88 (7.33-10.9)	9.73 (7.89-12.1)	10.7 (8.51-13.6)	11.9 (9.30-15.5)	12.9 (9.87-17.0)
7-day	5.98 (5.40-6.69)	6.84 (6.10-7.75)	8.02 (7.00-9.28)	8.94 (7.68-10.5)	10.2 (8.57-12.3)	11.2 (9.25-13.8)	12.3 (9.93-15.3)	13.4 (10.7-17.0)	15.0 (11.7-19.4)	16.1 (12.4-21.3)
10-day	7.07 (6.39-7.92)	8.07 (7.20-9.15)	9.44 (8.24-10.9)	10.5 (9.02-12.4)	12.0 (10.0-14.4)	13.1 (10.8-16.1)	14.3 (11.6-17.8)	15.6 (12.5-19.8)	17.4 (13.6-22.6)	18.7 (14.4-24.7)
20-day	10.6 (9.59-11.9)	12.1 (10.8-13.7)	14.1 (12.3-16.3)	15.6 (13.4-18.3)	17.6 (14.8-21.2)	19.2 (15.8-23.5)	20.7 (16.8-25.9)	22.4 (17.9-28.5)	24.7 (19.3-32.1)	26.4 (20.2-34.8)
30-day	14.0 (12.6-15.6)	15.9 (14.2-18.1)	18.5 (16.2-21.4)	20.4 (17.5-24.0)	22.9 (19.3-27.7)	24.9 (20.5-30.5)	26.8 (21.7-33.4)	28.8 (23.0-36.6)	31.5 (24.6-40.9)	33.5 (25.7-44.2)
45-day	18.5 (16.7-20.7)	21.1 (18.8-23.9)	24.5 (21.4-28.4)	27.0 (23.2-31.8)	30.1 (25.3-36.3)	32.5 (26.8-39.8)	34.8 (28.2-43.4)	37.1 (29.5-47.1)	40.1 (31.3-52.0)	42.4 (32.5-55.9)
60-day	22.1 (19.9-24.7)	25.4 (22.6-28.8)	29.5 (25.7-34.1)	32.3 (27.8-38.1)	35.9 (30.1-43.3)	38.4 (31.7-47.1)	40.8 (33.1-50.9)	43.0 (34.2-54.5)	45.8 (35.7-59.5)	48.0 (36.8-63.4)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

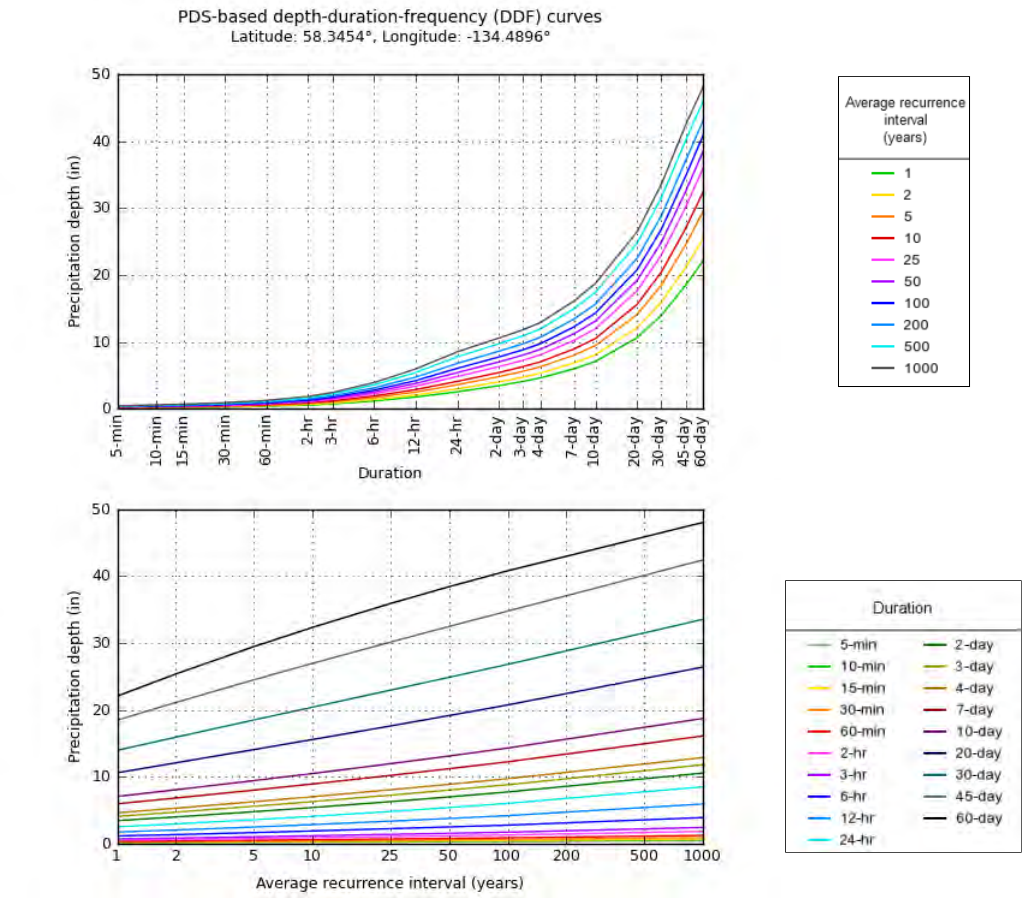
Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

Attachment G - SMF22-03 – Phase 2 Report and Final Plat

App D - Rainfall Intensity

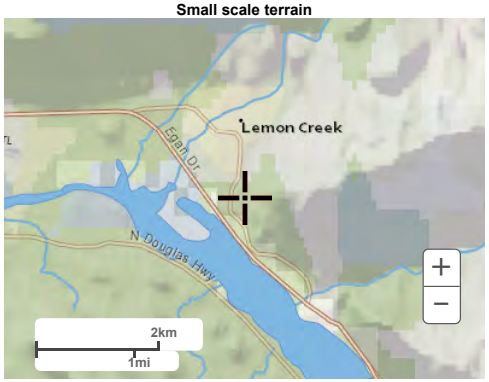


NOAA Atlas 14, Volume 7, Version 2 Created (GMT): Fri Oct 18 00:03:14 2019

Back to Top

Maps & aerials

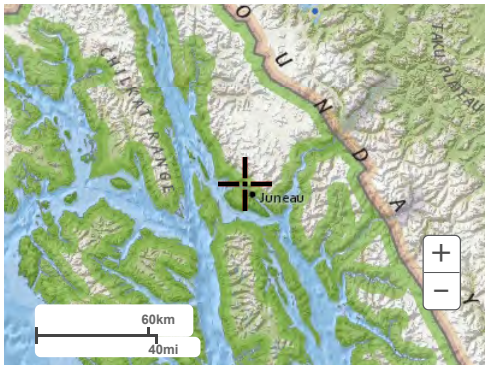
Small scale terrain



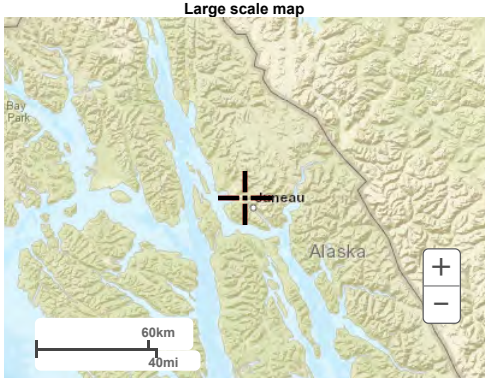
Large scale terrain

Attachment G - SMF22-03 – Phase 2 Report and Final Plat

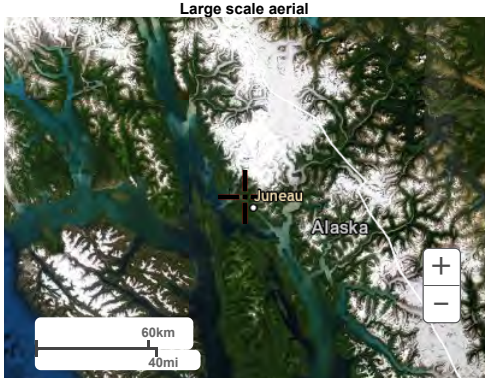
App D - Rainfall Intensity



Large scale map



Large scale aerial



Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Attachment G - SMF22-03 – Phase 2 Report and Final Plat

App E - Soil Data

Soil Map from from Shoephorster and Furbush 1974



JUNEAU SOIL SURVEY AREA
ALASKA
FEBRUARY 1974

0 ½ 1 Mile

Scale 1:15 840

USDA - SCS ADVANCE COPY - SUBJECT TO CHANGE

SHEET 8 of 14

Oi2	18-60"	Yellowish brown (10YR 5/6) peat, yellow (10YR 7/6) pressed; about 80 percent fiber, 50 percent after rubbing; largely sphagnum moss fibers; extremely acid.

The peat materials are more than 5 feet thick. They may be underlain by till, bedrock, or alluvial sediments. The water table is usually near the surface.

Mapping Units:

(KoA) - Kogish peat, 0 to 3 percent slopes
(KoB) - Kogish peat, 3 to 7 percent slopes
(KoC) - Kogish peat, 7 to 12 percent slopes
(KoD) - Kogish peat, 12 to 20 percent slopes

The Kogish soils in these mapping units are similar except for gradient. In places, small ponds and patches of Kina and Fu soils are included in the mapped areas.

Kupreanof Series

The Kupreanof series consists of well drained soils on moraines. These soils are formed in very gravelly loamy till. Beneath a layer of forest litter, they have a thin light brownish gray layer, fairly thick layers with dark reddish brown to dark grayish brown colors, and an olive gray substratum. They support a forest dominated by Sitka spruce and western hemlock.

Representative profile of Kupreanof gravelly silt loam; NW¼, NW¼, Sec. 11, T39S, R64E, Copper River Meridian.

01	7-2"	Black (10YR 2/1) partially decomposed forest litter; many roots; abrupt smooth boundary.
02	2-0"	Black (5YR 2/1) muck; many roots; extremely acid; abrupt smooth boundary.
A2	0-1½"	Light brownish gray (10YR 6/2) gravelly silt loam; massive; very friable; smeary; many fine roots; extremely acid; abrupt irregular boundary.

App E - Soil Data

Soil info for Kupreanof Series from from Shoephorster and Furbush 1974

B21 1½-4" Dark reddish brown (5YR 2/2) gravelly silt loam; weak fine granular structure; very friable; smeary; few roots; extremely acid; abrupt wavy boundary.

B22 4-9" Dark reddish brown (5YR 3/4) gravelly silt loam; weak fine subangular blocky structure; very friable; smeary; extremely acid; gradual boundary.

B23 9-18" Dark brown (7.5YR 4/4) gravelly silt loam; weak fine subangular blocky structure; very friable; smeary; few roots; very strongly acid; clear wavy boundary.

B3 18-24" Dark grayish brown (2.5Y 4/2) very gravelly sandy loam; few patches of dark brown (7.5YR 3/3); massive; friable; strongly acid; clear wavy boundary.

C1 24-60" Olive gray (5Y 4/2) very gravelly sandy loam; massive; friable; strongly acid.

The texture of the mineral surface layer ranges from gravelly silt loam to very gravelly sandy loam. The substratum ranges in texture from very gravelly loam to very gravelly sandy loam. Coarse fragments make up 40 to 60 percent of its volume. Large stones and boulders are common.

Mapping Units:

(KuA) - Kupreanof gravelly silt loam, 0 to 3 percent slopes
(KuB) - Kupreanof gravelly silt loam, 3 to 7 percent slopes
(KuC) - Kupreanof gravelly silt loam, 7 to 12 percent slopes
(KuD) - Kupreanof gravelly silt loam, 12 to 20 percent slopes

The Kupreanof soils in each of these mapping units are similar except for gradient. The mapped areas include small spots of Wadleigh, Maybeso, and Karta soils. There are also a few patches of Tolstoi soils.

(KuE) - Kupreanof gravelly silt loam, 20 to 35 percent slopes
(KuF) - Kupreanof gravelly silt loam, 35 to 75 percent slopes

Mapped, but not consistent with soils encountered on-site during phase I

These soils occur on moderately steep and steep uplands. In addition to small spots of Tolstoi and Karta soils, the mapped areas include a few nearly level to moderately sloping Kupreanof soils on narrow benches and rounded ridgetops.

Mapped and consistent with soils encountered on-site during phase I

In the Tolstoi soils, depth to bedrock ranges from 5 to 20 inches. The texture of the soil materials ranges from stony silt loam to very stony sandy loam.

In the McGilvery soils, the forest litter ranges from 6 to 20 inches in thickness. In places, 1 to 4 inches of loamy material occurs between the litter and the underlying bedrock.

Mapping Units:

(ToC) & (ToD) - Tolstoi-McGilvery complex, 12 to 20 percent slopes
(ToE) - Tolstoi-McGilvery complex, 20 to 35 percent slopes
(ToF) - Tolstoi-McGilvery complex, 35 to 75 percent slopes

The soils in these mapping units are similar except for gradient. They commonly have very rough irregular slopes. The mapped areas include many sheer rocky cliffs and other rock outcrops, and wet spots with Wadleigh, Maybeso, and Kaikli soils.

Wadleigh Series

The Wadleigh series consists of somewhat poorly drained soils that occur on lower slopes of hills and mountains. These soils are formed in very gravelly loamy materials underlain by firm glacial till that impedes internal drainage. They have a mat of forest litter, a thin grayish brown layer, and dark reddish brown to dark yellowish brown layers above the firm substratum. The vegetation is a forest of western hemlock and scattered Sitka spruce.

Representative profile of Wadleigh gravelly silt loam; NE¼ NW¼, Sec. 25, T37S, R63E, Copper River Meridian.

01 8-3" Dark reddish brown (5YR 2/2) partially decomposed forest litter; many roots; clear smooth boundary.

02 3-0" Black (5YR 2/1) finely divided organic matter; many roots; abrupt smooth boundary.

App E - Soil Data

Soil info for Wadleigh Series from from Shoephorster and Furbush 1974

A2	0-3"	Grayish brown (10YR 5/2) gravelly silt loam; few fine prominent (7.5YR 4/4) mottles; very weak medium subangular blocky structure; friable; roots common; abrupt wavy boundary.
B21	3-5"	Dark reddish brown (5YR 2/2) very gravelly silt loam; moderate fine granular structure; very friable; few soft fine concretions; few weakly cemented fragments; smeary when rubbed; roots common; very strongly acid; clear irregular boundary.
B22	5-10"	Dark brown (7.5YR 3/2) very gravelly sandy loam; weak fine subangular blocky structure; friable; slightly smeary; roots common; very strongly acid; clear wavy boundary.
B23	10-16"	Dark yellowish brown (10YR 3/4) very gravelly sandy loam; very weak medium subangular blocky structure; friable; roots common; very strongly acid; clear smooth boundary.
B3x	16-23"	Olive brown (2.5Y 4/4) very gravelly sandy loam; few fine prominent strong brown (7.5YR 5/6) mottles, and many streaks of dark brown (10YR 4/3); weak medium platy structure; weakly cemented; slightly brittle; clear smooth boundary.
C1x	23-30"	Patchy olive gray (5Y 4/2) and dark grayish brown (2.5Y 4/2) very gravelly sandy loam; few medium distinct olive brown (2.5Y 4/4) mottles; very weak medium platy structure; weakly cemented; slightly brittle; clear smooth boundary.
C2	30-60"	Olive gray (5Y 4/2) very gravelly loam; few medium faint dark gray (5Y 4/1) mottles; massive; slightly sticky, slightly plactic; very strongly acid.

The surface texture ranges from silt loam to very gravelly sandy loam. Below 10 inches coarse fragments, including cobblestones, make up 35 to 65 percent of the soil volume. Depth to the firm substratum ranges from 15 to 25 inches. Seepage water from adjacent higher areas is commonly perched above the very slowly permeable compact substratum.

Mapping Units:

(WaA) & (WaB) - Wadleigh gravelly silt loam, 3 to 7 percent slopes
(WaC) & (FoC) - Wadleigh gravelly silt loam, 7 to 12 percent slopes
(WaD) - Wadleigh gravelly silt loam, 12 to 20 percent slopes
(WaE) & (WaF) - Wadleigh gravelly silt loam, 20 to 50 percent slopes

Mapped and consistent with soils encountered on-site during phase I

App E - Soil Data

Estimated pysical property table from Shoephorster and Furbush 1974

Table 1. Estimated Physical and Chemical Properties of the Soils.

Soil series or land type	Map Symbol	Depth to seasonally high water table (feet)	Depth to bedrock (feet)	Depth from surface typical profile (inches)	Classification			Permeability 2/ (inches/hour)	Reaction pH	Shrink-swell potential	Corrosivity potential	
					USDA Texture 1/	Unified	AASHO				Untreated steel pipe	Concrete pipe
Am	AmA AmB	<2	>5	0-60	fsl	SM or ML	A-2 or A-4	0.6 -2.0	5.1-5.5	low	high	moderate
Au	AuA	>5	>5	0-9	vgsl	GM	A-1 or A-2	2.0 -6.0	4.0-5.0	low	moderate	moderate
	AuB			9-60	vgs	GP or GW	A-1	>6.0	4.0-5.0	low		
Be	BeA BeB BeC BeD	4 to 5	>5	0-60	vgs	GP or GW	A-1	>6.0	5.1-5.5	low	moderate	moderate
Co	CoA	<2	>5	0-60	sil	ML	A-4	0.6 -2.0	5.1-5.5	low	high	moderate
Fu	FuA	<1	>5	0-24	pt	Pt	A-8	-	5.1-5.5	high shrink, low swell	high	high
				24-60	si	ML	A-4	0.6 -2.0	5.5-6.0	low		
Gravelly beach	Gb	0	>5	0-60	vgs or vgsl	GW or GM	A-1	>6.0	-	low	high	high
Gravel pit	Gp	Variable material										
He	HeA	4 to 5	>5	0-52	fsl	SM or ML	A-2 or A-4	0.6 -2.0	5.1-5.5	low	high	moderate
				52-60	vgs	GP or GW	A-1	>6.0	5.1-5.5	low		
Kaikli	KaB KaC KaD	<1	1 to 3	0-19	pt	Pt	A-8	-	4.5-5.5	high shrink, low swell	high	moderate
	KaE			19-26	vgl	GM	A-1 or A-2	0.2 -0.6	4.5-5.5	low		
				26+	bedrock	-	-	-	-	-	-	-
Karheen	KhA KhC	<2	>5	0-60	very gravelly muck	GM	A-1	0.6 -2.0	5.1-5.5	low	high	high
Karta	KtC KtE KtF	>5	>5	0-11	gsil	ML	A-4	0.6 -2.0	4.5-5.0	low	high	moderate
				11-34	vgsl	GM	A-1	<0.06	4.5-5.0	low		
				34-60	vgsl	GM	A-1	0.2 -0.6	4.5-5.5	low		
Kina	KiA KiB KiC KiD	<1	>5	0-60	pt	Pt	A-8	-	4.5-5.0	high shrink, low swell	high	high
Kogish	KoA KoB KoC KoD	<1	>5	0-60	pt	Pt	A-8	-	<4.5	high shrink, low swell	high	high
Kupreanof	KuA,KuB, KuC,KuD, KuE,KuF	>5	>5	0-18	gsil	ML	A-4	0.6 -2.0	4.5-5.0	low	high	moderate
				18-60	vgsl	GM	A-1	0.6 -2.0	5.1-5.5	low		

App E - Soil Data

Estimated pysical property table from Shoephorster and Furbush 1974

Table 1. Estimated Physical and Chemical Properties of the Soils. (Continued)

Soil series or land type	Map Symbol	Depth to seasonally high water table (feet)	Depth to bedrock (feet)	Depth from surface typical profile (inches)	Classification USDA Texture 1/	Classification Unified	Classification AASHO	Permeability 2/ (inches/hour)	Reaction pH	Shrink-swell potential	Corrosivity potential Untreated steel pipe	Corrosivity potential Concrete pipe
Le	LeA	<1	>5	0-60	sil	ML	A-4	0.6 -2.0	5.1-5.5	low	high	moderate
Maybeso	MaA,MaB, MaC,MaD	<2	>5	0-27	pt	Pt	A- 8	-	4.5-5.5	high shrink, low swell	high	moderate
	MaE			27-60	vgl	GM	A-1 or A-2	0.06-0.2	5.1-5.5	low		
McGilvery-in complex with Tolstoi	-		½-1½	0-14	pt	Pt	A-8	-	4.5	high shrink, low swell	high	moderate
				14+	bedrock	-	-	-	-		-	-
Mh	MhB,MhC, MhD	>5	>5	0-60	gsl	GM	A-1	0.6 -2.0	5.1-5.5	low	high	moderate
Riverwash	Rw	0	>5	0-60	vgs	GP or GW	A-1	>6.0	-	low	high	moderate
Salt Chuck	SaA	4 to 5	>5	0-17	vgsil or vgsl	GM	A-1 or A-2	0.6-2.0	4.5-5.5	low	high	moderate
	SaB			17-60	vgls	GP-GM	A-1	2.0-6.0	4.5-5.5	low		
	SaC											
Tidal Flats	Tf	0	>5	0-60	variable material			-	-	-	-	-
Tolstoi	ToC	-	½ to 2	0-9	vstsil	ML	A-4	0.6 -2.0	4.5-5.0	low	-	-
	ToD			9+	bedrock	-	-	-	-	-		
	ToE											
	ToF											
Wadleigh	WaA,WaB	<1	>5	0-16	vgsil or vgsl	GM	A-1 or A-2	0.6 -2.0	4.5-5.0	low	high	moderate
	WaC,FoC,			16-30	vgsl	GM or SM	A-1	<0.06	4.5-5.5	low		
	WaD,WaE,			30-60	vgl	GM	A-1 or A-2	0.2 -0.6	4.5-5.5	low		
	WaF											

1/ Symbols have the following meanings (see glossary):

fsl - fine sandy loam
gsil - gravelly silt loam
pt - peat
si - silt
gsl - gravelly sandy loam
vgs - very gravelly sand
sil - silt loam
vgsil - very gravelly silt loam
vgsl - very gravelly sandy loam
vstsil - very stony silt loam

2/ Permeability is for soil without comapction; for wet soils, the permeability is that to be expected after removal of free water.

App E - Soil Data

Soil Classification Table from National Engineering Handbook

Table 7–1 Criteria for assignment of hydrologic soil group (HSG)

Depth to water impermeable layer 1/	Depth to high water table 2/	K_{sat} of least transmissive layer in depth range	K_{sat} depth range	HSG 3/
<50 cm [<20 in]	—	—	—	D
50 to 100 cm [20 to 40 in]	<60 cm [<24 in]	>40.0 µm/s (>5.67 in/h)	0 to 60 cm [0 to 24 in]	A/D
		>10.0 to ≤40.0 µm/s (>1.42 to ≤5.67 in/h)	0 to 60 cm [0 to 24 in]	B/D
		>1.0 to ≤10.0 µm/s (>0.14 to ≤1.42 in/h)	0 to 60 cm [0 to 24 in]	C/D
		≤1.0 µm/s (≤0.14 in/h)	0 to 60 cm [0 to 24 in]	D
	≥60 cm [≥24 in]	>40.0 µm/s (>5.67 in/h)	0 to 50 cm [0 to 20 in]	A
		>10.0 to ≤40.0 µm/s (>1.42 to ≤5.67 in/h)	0 to 50 cm [0 to 20 in]	B
		>1.0 to ≤10.0 µm/s (>0.14 to ≤1.42 in/h)	0 to 50 cm [0 to 20 in]	C
		≤1.0 µm/s (≤0.14 in/h)	0 to 50 cm [0 to 20 in]	D
>100 cm [>40 in]	<60 cm [<24 in]	>10.0 µm/s (>1.42 in/h)	0 to 100 cm [0 to 40 in]	A/D
		>4.0 to ≤10.0 µm/s (>0.57 to ≤1.42 in/h)	0 to 100 cm [0 to 40 in]	B/D
		>0.40 to ≤4.0 µm/s (>0.06 to ≤0.57 in/h)	0 to 100 cm [0 to 40 in]	C/D
		≤0.40 µm/s (≤0.06 in/h)	0 to 100 cm [0 to 40 in]	D
	60 to 100 cm [24 to 40 in]	>40.0 µm/s (>5.67 in/h)	0 to 50 cm [0 to 20 in]	A
		>10.0 to ≤40.0 µm/s (>1.42 to ≤5.67 in/h)	0 to 50 cm [0 to 20 in]	B
		>1.0 to ≤10.0 µm/s (>0.14 to ≤1.42 in/h)	0 to 50 cm [0 to 20 in]	C
		≤1.0 µm/s (≤0.14 in/h)	0 to 50 cm [0 to 20 in]	D
	>100 cm [>40 in]	>10.0 µm/s (>1.42 in/h)	0 to 100 cm [0 to 40 in]	A
		>4.0 to ≤ 10.0 µm/s (>0.57 to ≤1.42 in/h)	0 to 100 cm [0 to 40 in]	B
		>0.40 to ≤4.0 µm/s (>0.06 to ≤0.57 in/h)	0 to 100 cm [0 to 40 in]	C
		≤0.40 µm/s (≤0.06 in/h)	0 to 100 cm [0 to 40 in]	D

WaD Soil Type Classification

KuE Soil Type Classification

1/ An impermeable layer has a K_{sat} less than 0.01 µm/s [0.0014 in/h] or a component restriction of fragipan; duripan; petrocalcic; orstein; petrogypsic; cemented horizon; densic material; placic; bedrock, paralithic; bedrock, lithic; bedrock, densic; or permafrost.

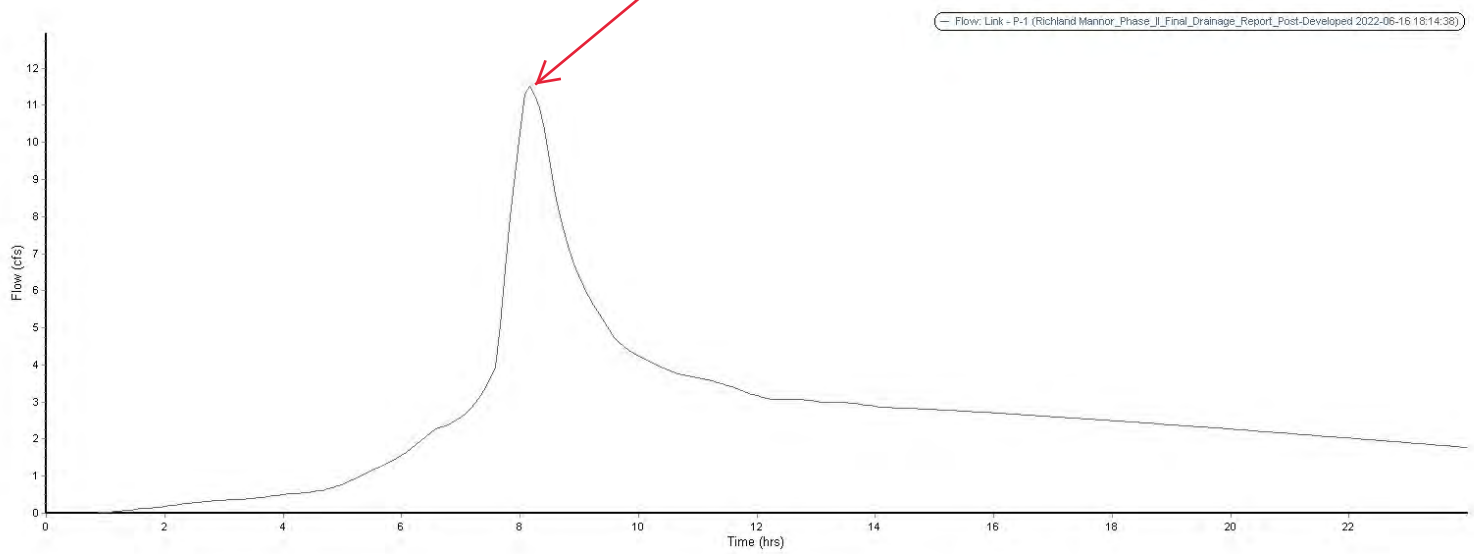
2/ High water table during any month during the year.

3/ Dual HSG classes are applied only for wet soils (water table less than 60 cm [24 in]). If these soils can be drained, a less restrictive HSG can be assigned, depending on the K_{sat}.

Attachment G - SMF22-03 – Phase 2 Report and Final Plat

Hydrograph for P-1

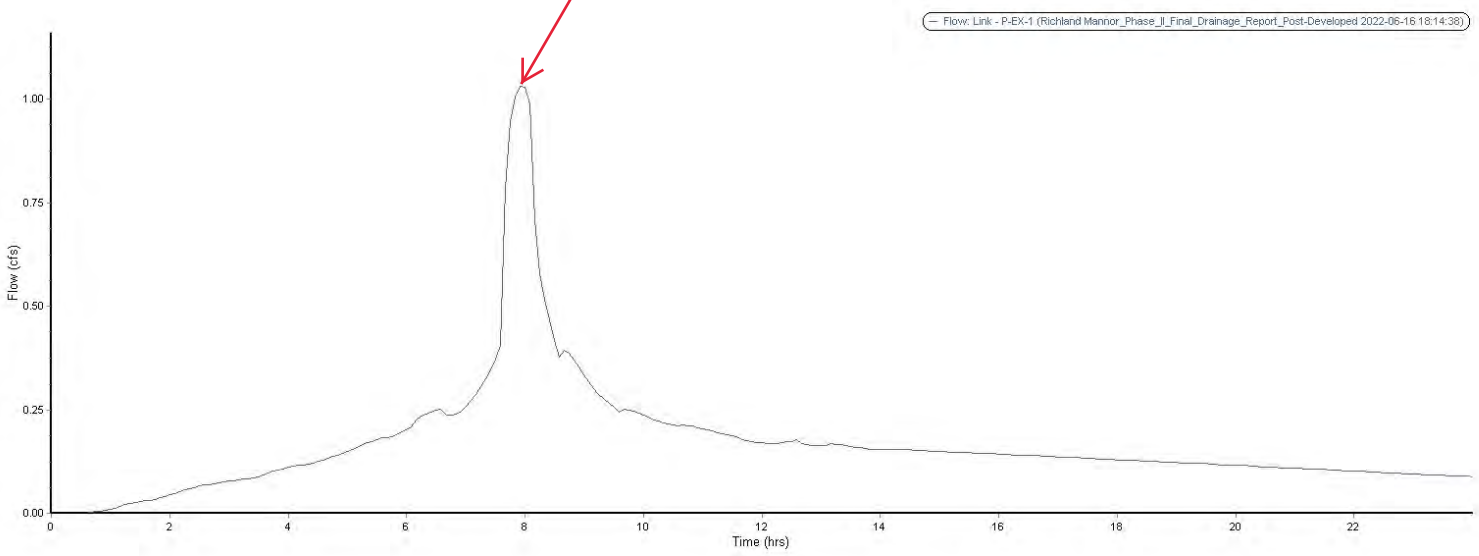
Peak at 11.58 CFS



Autodesk Storm and Sanitary Analysis

Hydrograph for P-EX-1

Peak at 1.03 CFS



Autodesk Storm and Sanitary Analysis

proHNS LLC
1945 Alex Holden Way #101 | Juneau, AK 99801 | 907-780-4004 | solutions@proHNS.com
219 Main Street #13 | Haines, AK 99827 | 907-419-6070 | www.proHNS.com

March 23, 2020

Michael and William Heumann
6000 Thane Rd
Juneau, AK 99801
mpheumann@hotmail.com
(971) 261-8014

RE: Hillcrest Extension Subdivision – Draft Drainage Report

To Whom It May Concern,

The following Drainage Plan has been prepared for the Richland Manor Subdivision in Juneau, AK, a proposed multi-phase major subdivision on a 30-acre site at 4506, 4508, and 4510 Hillcrest Avenue. This drainage report addresses the first phase of the overall subdivision that will create 14 new Lots and extend Hillcrest Avenue. The drainage report supplements the Richland Manor Subdivision – Drainage Report dated 10/31/19 and the Hooter Lane Phase I ROW Improvements – Drainage Report dated 1/23/20, attached in Appendix H, by providing an in-depth analysis of the improvements specific to this phase of the development. Improvements include extending Hillcrest Avenue by constructing new sidewalk, street, ditches, driveways and utilities along with building pads on the newly subdivided Lots. The 2010 CBJ Manual of Stormwater Best Management Practices was used to evaluate if the proposed and existing drainage features could convey runoff during the 25-year storm event.

Attachments to this report include sheets depicting survey data, proposed ROW improvements, as-built information, calculations and rainfall data used for the drainage analysis.

Site Runoff Calculation Method:

A total of three catchment areas were analyzed representing the existing and proposed drainage conveyance systems relevant to the project. The catchment areas include: the predeveloped subdivision labeled on the drainage map as Drainage Basin A, the post developed subdivision labeled on the drainage map as Drainage Basin C and, the post developed subdivision labeled on the drainage map as Drainage Basin D. The three catchment areas we determined using the proposed design model, Lidar data and aerial photos in AutoCAD C3D and were verify by several site visits. A delineation of the catchment areas can be found in Appendix A.

To calculate the site runoff for Drainage Basin D we have elected to use the Rational Method. The Rational Method is most appropriate for evaluating drainage basins less than 10 acres. Appendix D of the "2010 CBJ Manual of

Stormwater Best Management Practices" was utilized as a guide[1]. The calculations and supporting documentation can be found in Appendix B, C, D & E of this Report.

To calculate the site runoff for Drainage Basin A and C we have elected to use the SCS Unit Hydrograph Method. The SCS Unit Hydrograph Method is most appropriate for evaluating drainage basins of 10 acres to 1,300 acres. Appendix D of the "2010 CBJ Manual of Stormwater Best Management Practices" was utilized as a guide[2]. The calculations and supporting documentation can be found in Appendix B, C, D & F of this Report.

Anticipated Site Runoff (Q):

Using the Rational Method and SCS Unit Hydrograph Method, the amount of stormwater runoff during the 25-year storm event per catchment area was determined. The analysis shows that approximately 1.13 cfs will be removed from the discharge point due to the proposed development. See Table 1.1 below for results, the calculations can be found in Appendix E &F.

Catchment Area	Q (cfs)
Drainage Basin A	**6.71**
Drainage Basin C	**5.58**
Drainage Basin D	**1.90**
Table 1.1	

Conveyance/Discharge Structure Capacities:

The capacity of the existing and proposed drainage systems was calculated using the Manning's Equation to determine if proposed 25-year storm event flows could be conveyed. The most vulnerable drainage structures to failure along the analyzed flow path were evaluated. See Table 1.2 below for results, the calculations can be found in Appendix F.

Catchment Area	Q (cfs)
Existing 18" CPP Culvert (P-7)	**7.02**
Existing Driveway Ditch Hooter LN	**10.58**
Table 1.2	

[1] There are no current municipal code requirements dictating adherence with the "2010 CBJ Manual of Stormwater Best Management Practices" when preparing a drainage plan that complies with 49.35.510. Regardless, we have elected to utilize portions of this Manual as a guide in the preparation of this Drainage Plan for the proposed development.
[2] There are no current municipal code requirements dictating adherence with the "2010 CBJ Manual of Stormwater Best Management Practices" when preparing a drainage plan that complies with 49.35.510. Regardless, we have elected to utilize portions of this Manual as a guide in the preparation of this Drainage Plan for the proposed development.

Summary:

Table 1.3 below compares anticipated 25-year runoff in the proposed and existing conveyance systems to their available hydraulic capacity. Runoff from the entire drainage basin was used for comparison even though in some cases the conveyance system would not need to handle the entire runoff making the comparison a conservative evaluation.

Drainage Basin	Anticipated Runoff Q (cfs)	Capacity Check	Available Capacity Q (cfs)
Proposed 18" CPP Culvert (P-7)	**5.58**	**<**	**7.02**
Existing Driveway Ditch Hooter LN	**1.90**	**<**	**10.58**
Table 1.3			

Our analysis shows that there is enough capacity in the existing and proposed drainage structures to handle flows from the altered drainage patterns as a result of the proposed Hooter Lane Phase I ROW improvements.

Respectfully,



Lucas Chambers, P.E.
Principal Engineer – proHNS LLC Juneau

Appendixes:

A – Catchment Areas
B – Runoff Coefficient
C – Time of Concentration
D – Rainfall Intensity
E – Rational Method
F – SCS Hydrograph
G- Existing Capacity Calcs
H – Prior Drainage Reports "Richland Manor Subdivision – Drainage Report dated 10/31/19, Hooter Lane Phase I ROW Improvements – Drainage Report dated 1/23/20"

Appendix A

Catchment Areas

HILLCREST EXTENSION SUBDIVISION DRAINAGE MAP

JUNEAU, AK

PREPARED FOR:

MICHAEL & WILLIAM HEUMANN

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	PREDEVELOPED DRAINAGE BASIN CATCHMENT AREAS
3	DEVELOPED DRAINAGE BASIN CATCHMENT AREAS



PROJECT LOCATION MAP

NTS



ALASKA

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
907.957.1689
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

HILLCREST EXTENSION SUBDIVISION
WILLIAM & MICHAEL HUMEANN

COVER SHEET

SHEET NUMBER 1 OF 3

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Drainage\DrainageMap_TITLE.dwg
March 23, 2020

App G - Prior Drainage Reports

NOTE: FLOW PATH REPRESENTS THE MOST HYDRAULICALLY DISTANT POINT IN A GIVEN DRAINAGE BASIN.

N

VINTAGE BLVD

RICHLAND MANOR
TRACT B

50 75 100 125 150 175 200 225 250 275 300 325 350 375 400 425 450 475 500 525 550 575 600 625 650 675 700 725 750 775 800 825

ANALYSIS DISCHARGE POINT B

HOOTER LN ROW

FLOW PATH

DRAINAGE BASIN B

DRAINAGE BASIN A

FLOW PATH

GLACIER HWY

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8 LOT 9 LOT 10 LOT 11 LOT 12 LOT 13 LOT 14

MAPPED EXISTING DRAINAGE CHANNELS

ROBBIE RD

ANALYSIS DISCHARGE POINT A

ABBY WAY

HILLCREST AVE

MOUNTAINSIDE DR

100 0 100 200
SCALE IN FEET

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Drainage\DrainageMap_Hillcrest_Extension.dwg
March 23, 2020

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
907.957.4847 | info@proHNS.com
www.proHNS.com

HILLCREST EXTENSION SUBDIVISION
WILLIAM & MICHAEL HUMEANN

PREDEVELOPED DRAINAGE BASIN CATCHMENT AREAS

SHEET NUMBER 2 OF 3

App G - Prior Drainage Reports

NOTE: FLOW PATH REPRESENTS THE MOST HYDRAULICALLY DISTANT POINT IN A GIVEN DRAINAGE BASIN.

N

VINTAGE BLVD

RICHLAND MANOR
TRACT B

50 75 100 125 150 175 200 225 250 275 300 325 350 375 400 425 450 475 500 525 550 575 600 625 650 675 700 725 750 775 800 825

ANALYSIS DISCHARGE POINT B

HOOTER LN ROW

DRAINAGE BASIN D

FLOW PATH

FLOW PATH

DRAINAGE BASIN C

GLACIER HWY

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8 LOT 9 LOT 10 LOT 11 LOT 12 LOT 13 LOT 14

MAPPED EXISTING DRAINAGE CHANNELS

ROBBIE RD

ANALYSIS DISCHARGE POINT A

ABBY WAY

HILLCREST AVE

MOUNTAINSIDE DR

100 0 100 200
SCALE IN FEET

C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Drainage\DrainageMap_Hillcrest_Extension.dwg
March 23, 2020

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 957-1289
info@proHNS.com
www.proHNS.com

HILLCREST EXTENSION SUBDIVISION
WILLIAM & MICHAEL HUMEANN

DEVELOPED DRAINAGE BASIN CATCHMENT AREAS

SHEET NUMBER 3 OF 3

Appendix B

Runoff Coefficient

SCS Curve Number Hillcrest Extension Predeveloped		
Project:	Hillcrest Ext Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	3/21/2020	
Prepared By:	Chris Bydlon	
Checked By:	Lucas Chambers	

Total Basin Area(SQFT)=	**867827**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Unit Hydrograph CN***
Pavement	Mountianside/ Robbie Rd	23565				
			23565	0.540977961	2.72%	98
Building Roofs	Robbie Rd Homes	14048				
			14048	0.322497704	1.62%	98
Gravel	Existing Hillcrest Pads	10824				
			10824	0.248484848	1.25%	89
Lawns	Robbie Rd Homes	14230				
			14230	0.326675849	1.64%	74
Woods	Every where else	805160				
			805160	18.48393021	92.78%	70
		Total=	867827	19.92256657	100.00%	**71.52**

*Unit Hydrograph curve numbers were developed from Table D-6 & D-7 of the CBJ Manual of Stormwater BMP Manual. NRCS's online GIS database does not have data for the project location. I looked at adjacent areas with similar slopes and ground cover and the hydraulic soil group was C or D. For this analysis I am assuming the project location falls under soil group C.

SCS Curve Number Proposed Hillcrest Ext. Subdivision		
Project:	Hillcrest Ext. Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	3/21/2020	
Prepared By:	Chris Bydlon	
Checked By:	Lucas Chambers	

Total Basin Area(SQFT)=	**642649**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Unit Hydrograph CN***
Pavement	Hillcrest Extension	12788				
	Mountianside/ Robbie Rd	23565				
			36353	0.834550046	5.66%	98
Building Roofs	Lot 1 Roof +Deck	988				
*Areas from Developer	Lot 2 Roof +Deck	988				
	Lot 3 Roof +Deck	988				
	Lot 4 Roof +Deck	1350				
	Lot 5 Roof +Deck	1350				
	Lot 6 Roof +Deck	1350				
	Lot 7 Roof +Deck	1350				
	Lot 8 Roof +Deck	1350				
	Lot 9 Roof +Deck	1350				
	Lot 10 Roof +Deck	1350				
	Lot 11 Roof+Deck	1350				
	Lot 12 Roof+Deck	1350				
	Lot 13 Roof+Deck	1350				
	Lot 14 Roof+Deck	1350				
	Robbie Rd Homes	14048				
			31862	0.731450872	4.96%	98
Gravel	Driveways & Ditches	19536				
	Building Pad Lot 4	690				
	Building Pad Lot 5	1250				
	Building Pad Lot 6	1250				
	Building Pad Lot 7	690				
	Building Pad Lot 8	900				
	Building Pad Lot 9	900				
	Building Pad Lot 10	315				
	Building Pad Lot 11	315				
	Building Pad Lot 12	315				
	Building Pad Lot 13	315				
	Building Pad Lot 14	315				
			26791	0.615036731	4.17%	89
Lawns	Robbie Rd Homes	14230				
	Lot 1-14 Lawns & Fill Slopes	27815				
			42045	0.965220386	6.54%	74
Woods	Every where else	505598				
			505598	11.60693297	78.67%	70
		Total=	642649	14.753191	100.00%	**74.03**

*Unit Hydrograph curve numbers were developed from Table D-6 & D-7 of the CBJ Manual of Stormwater BMP Manual. NRCS's online GIS database does not have data for the project location. I looked at adjacent areas with similar slopes and ground cover and the hydraulic soil group was C or D. For this analysis I am assuming the project location falls under soil group C.

Runoff Coefficient Basin B Developed		
Project:	Hillcrest Extension Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	3/17/2020	
Prepared By:	C. Bydlon	
Checked By:	L. Chambers	

Total Basin Area(SQFT)=	**400337**					
Surface Type	**Location**	**Area (SQFT)**	**Total (SQFT)**	**Total (Acre)**	**% Overall Basin**	**Runoff Coefficient**
Pavement	Tamarack Trails Condos	24950				
			24950	0.572773186	6.23%	0.9
Building Roofs	Tamarack Trail Condos	15130				
			15130	0.347337006	3.78%	0.9
Lawns	Tamarack Trails	6690				
			6690	0.153581267	1.67%	0.25
Shot Rock Base & Ditch	Hooter Lane ROW	21355				
			21355	0.490243343	5.33%	0.8
Woods	Every where else	332212				
			332212	7.626538108	82.98%	0.1
		Total=	400337	9.190472911	100.00%	**0.22**

Appendix C

Time of Concentration

HILLCREST EXT PREDEVELOPED TOC

SCS TR-55 Time of Concentration Computations Report
==========

Sheet Flow Equation

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where:

Tc = Time of Concentration (hrs)
n = Manning's Roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)

HILLCREST EXT PREDEVELOPED TOC

Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

==========
Subbasin PhaseAPreDevelop
==========

Sheet Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.8	0.00	0.00
Flow Length (ft):	188	0.00	0.00
Slope (%):	79.80	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.97	0.00	0.00
Velocity (ft/sec):	0.21	0.00	0.00
Computed Flow Time (minutes):	14.72	0.00	0.00

Shallow Concentrated Flow Computations

-	Subarea A	Subarea B	Subarea C
Flow Length (ft):	2046	0.00	0.00
Slope (%):	29.86	0.00	0.00
Surface Type:	Forest	Unpaved	Unpaved
Velocity (ft/sec):	1.37	0.00	0.00
Computed Flow Time (minutes):	24.89	0.00	0.00

Channel Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.05	0.00	0.00
Flow Length (ft):	715	0.00	0.00
Channel Slope (%):	3.48	0.00	0.00
Cross Section Area (ft²):	13	0.00	0.00
Wetted Perimeter (ft):	11.4	0.00	0.00
Velocity (ft/sec):	6.07	0.00	0.00
Computed Flow Time (minutes):	1.96	0.00	0.00

Total TOC (minutes):	41.57

HILLCREST EXT POST DEVELOPED TOC

SCS TR-55 Time of Concentration Computations Report
==========

Sheet Flow Equation

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where:

Tc = Time of Concentration (hrs)
n = Manning's Roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)

HILLCREST EXT POST DEVELOPED TOC

Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

==========
Subbasin HillcrestExtPostDevelemonet
==========

Sheet Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.8	0.00	0.00
Flow Length (ft):	188	0.00	0.00
Slope (%):	79.8	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.97	0.00	0.00
Velocity (ft/sec):	0.21	0.00	0.00
Computed Flow Time (minutes):	14.72	0.00	0.00

Shallow Concentrated Flow Computations

-	Subarea A	Subarea B	Subarea C
Flow Length (ft):	1977	0.00	0.00
Slope (%):	30.65	0.00	0.00
Surface Type:	Forest	Unpaved	Unpaved
Velocity (ft/sec):	1.38	0.00	0.00
Computed Flow Time (minutes):	23.88	0.00	0.00

Channel Flow Computations

-	Subarea A	Subarea B	Subarea C
Manning's Roughness:	.035	.015	.035
Flow Length (ft):	91.6	82	489
Channel Slope (%):	6.10	1.22	5.32
Cross Section Area (ft²):	3.0	1.77	1.74
Wetted Perimeter (ft):	5.47	4.71	4.59
Velocity (ft/sec):	7.04	5.71	5.14
Computed Flow Time (minutes):	0.22	0.24	1.58

Total TOC (minutes):	40.64

HILLCREST EXT/ HOOTER LANE POST DEVELOPED TOC

```
SCS TR-55 Time of Concentration Computations Report
===================================================

Sheet Flow Equation
-------------------

        Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

        Where:

        Tc = Time of Concentration (hrs)
        n  = Manning's Roughness
        Lf = Flow Length (ft)
        P  = 2 yr, 24 hr Rainfall (inches)
        Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation
----------------------------------

        V  = 16.1345 * (Sf^0.5) (unpaved surface)
        V  = 20.3282 * (Sf^0.5) (paved surface)
        V  = 15.0 * (Sf^0.5) (grassed waterway surface)
        V  = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
        V  = 9.0 * (Sf^0.5) (cultivated straight rows surface)
        V  = 7.0 * (Sf^0.5) (short grass pasture surface)
        V  = 5.0 * (Sf^0.5) (woodland surface)
        V  = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
        Lf = Flow Length (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)

Channel Flow Equation
---------------------

        V  = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
        R  = Aq / Wp
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
```

HILLCREST EXT/ HOOTER LANE POST DEVELOPED TOC

```
        Lf = Flow Length (ft)
        R  = Hydraulic Radius (ft)
        Aq = Flow Area (ft²)
        Wp = Wetted Perimeter (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)
        n  = Manning's Roughness

==============
Subbasin HillcrestHooter
==============

Sheet Flow Computations
-----------------------
        -                              Subarea A        Subarea B        Subarea C
        Manning's Roughness:           .8               0.00             0.00
        Flow Length (ft):              234              0.00             0.00
        Slope (%):                     37.2             0.00             0.00
        2 yr, 24 hr Rainfall (in):     2.97             0.00             0.00
        Velocity (ft/sec):             0.16             0.00             0.00
        Computed Flow Time (minutes):  23.80            0.00             0.00

Shallow Concentrated Flow Computations
--------------------------------------
        -                              Subarea A        Subarea B        Subarea C
        Flow Length (ft):              1098             0.00             0.00
        Slope (%):                     21.54            0.00             0.00
        Surface Type:                  Forest           Unpaved          Unpaved
        Velocity (ft/sec):             1.16             0.00             0.00
        Computed Flow Time (minutes):  15.78            0.00             0.00

Channel Flow Computations
-------------------------
        -                              Subarea A        Subarea B        Subarea C
        Manning's Roughness:           .035             .035             .03
        Flow Length (ft):              361              439.5            141
        Channel Slope (%):             5.7              11.37            7.8
        Cross Section Area (ft²):      6                2                3.42
        Wetted Perimeter (ft):         7.71             5.6              6.12
        Velocity (ft/sec):             8.60             7.23             9.41
        Computed Flow Time (minutes):  0.70             1.01             0.25

        ========================================================================
        Total TOC (minutes):           41.53
        ========================================================================
```

Appendix D

Rainfall Intensity

App G - Prior Drainage Reports

NOAA Atlas 14, Volume 7, Version 2
Location name: Juneau, Alaska, USA*
Latitude: 58.3454°, Longitude: -134.4896°
Elevation: 120.33 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Douglas Kane, Sarah Dietz, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Svetlana Stuefer, Amy Tidwell, Carl Trypaluk, Dale Unruh, Michael Yekta, Erica Betts, Geoffrey Bonnin, Sarah Heim, Lillian Hiner, Elizabeth Lilly, Jayashree Narayanan, Fenglin Yan, Tan Zhao

NOAA, National Weather Service, Silver Spring, Maryland
and
University of Alaska Fairbanks, Water and Environmental Research Center

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.131 (0.106-0.166)	0.153 (0.122-0.197)	0.187 (0.146-0.246)	0.215 (0.165-0.287)	0.253 (0.189-0.346)	0.282 (0.207-0.393)	0.312 (0.225-0.442)	0.350 (0.248-0.505)	0.400 (0.277-0.590)	0.438 (0.299-0.657)
10-min	0.176 (0.142-0.223)	0.206 (0.164-0.265)	0.251 (0.195-0.330)	0.288 (0.220-0.385)	0.339 (0.253-0.464)	0.379 (0.278-0.528)	0.418 (0.302-0.592)	0.470 (0.333-0.678)	0.537 (0.372-0.792)	0.588 (0.401-0.882)
15-min	0.206 (0.166-0.261)	0.241 (0.192-0.310)	0.293 (0.228-0.385)	0.337 (0.258-0.450)	0.397 (0.297-0.543)	0.443 (0.325-0.617)	0.490 (0.353-0.694)	0.549 (0.389-0.791)	0.629 (0.436-0.927)	0.689 (0.470-1.03)
30-min	0.273 (0.220-0.346)	0.320 (0.255-0.411)	0.389 (0.303-0.511)	0.447 (0.342-0.597)	0.527 (0.394-0.721)	0.588 (0.432-0.819)	0.650 (0.469-0.921)	0.729 (0.517-1.05)	0.834 (0.578-1.23)	0.914 (0.623-1.37)
60-min	0.374 (0.302-0.474)	0.438 (0.349-0.563)	0.533 (0.415-0.700)	0.613 (0.469-0.819)	0.722 (0.539-0.988)	0.806 (0.592-1.12)	0.890 (0.642-1.26)	0.999 (0.708-1.44)	1.14 (0.792-1.69)	1.25 (0.853-1.88)
2-hr	0.552 (0.445-0.700)	0.647 (0.515-0.832)	0.789 (0.614-1.04)	0.906 (0.693-1.21)	1.07 (0.798-1.46)	1.19 (0.875-1.66)	1.32 (0.949-1.86)	1.48 (1.05-2.13)	1.69 (1.17-2.49)	1.85 (1.26-2.77)
3-hr	0.729 (0.588-0.925)	0.854 (0.680-1.10)	1.04 (0.811-1.37)	1.20 (0.915-1.60)	1.41 (1.05-1.93)	1.57 (1.15-2.19)	1.73 (1.25-2.46)	1.95 (1.38-2.81)	2.23 (1.54-3.29)	2.44 (1.66-3.66)
6-hr	1.17 (0.944-1.48)	1.37 (1.09-1.76)	1.67 (1.30-2.19)	1.92 (1.47-2.56)	2.26 (1.69-3.09)	2.52 (1.85-3.51)	2.78 (2.01-3.94)	3.13 (2.22-4.51)	3.58 (2.48-5.27)	3.92 (2.67-5.88)
12-hr	1.76 (1.42-2.23)	2.06 (1.64-2.65)	2.50 (1.95-3.29)	2.87 (2.19-3.83)	3.38 (2.53-4.62)	3.79 (2.78-5.27)	4.21 (3.04-5.96)	4.73 (3.35-6.82)	5.42 (3.76-7.99)	5.94 (4.05-8.91)
24-hr	2.54 (2.30-2.84)	2.97 (2.65-3.37)	3.59 (3.14-4.16)	4.10 (3.52-4.83)	4.82 (4.05-5.81)	5.41 (4.46-6.64)	6.04 (4.90-7.54)	6.78 (5.41-8.61)	7.76 (6.05-10.1)	8.51 (6.52-11.2)
2-day	3.45 (3.12-3.87)	4.01 (3.58-4.55)	4.79 (4.19-5.55)	5.42 (4.65-6.38)	6.29 (5.28-7.59)	7.00 (5.77-8.59)	7.74 (6.28-9.66)	8.59 (6.85-10.9)	9.72 (7.57-12.6)	10.6 (8.10-13.9)
3-day	4.10 (3.70-4.58)	4.73 (4.22-5.36)	5.61 (4.90-6.49)	6.30 (5.41-7.42)	7.26 (6.09-8.75)	8.03 (6.62-9.85)	8.82 (7.15-11.0)	9.72 (7.75-12.3)	10.9 (8.51-14.2)	11.8 (9.06-15.6)
4-day	4.63 (4.18-5.18)	5.32 (4.75-6.04)	6.28 (5.49-7.27)	7.03 (6.04-8.28)	8.07 (6.77-9.72)	8.88 (7.33-10.9)	9.73 (7.89-12.1)	10.7 (8.51-13.6)	11.9 (9.30-15.5)	12.9 (9.87-17.0)
7-day	5.98 (5.40-6.69)	6.84 (6.10-7.75)	8.02 (7.00-9.28)	8.94 (7.68-10.5)	10.2 (8.57-12.3)	11.2 (9.25-13.8)	12.3 (9.93-15.3)	13.4 (10.7-17.0)	15.0 (11.7-19.4)	16.1 (12.4-21.3)
10-day	7.07 (6.39-7.92)	8.07 (7.20-9.15)	9.44 (8.24-10.9)	10.5 (9.02-12.4)	12.0 (10.0-14.4)	13.1 (10.8-16.1)	14.3 (11.6-17.8)	15.6 (12.5-19.8)	17.4 (13.6-22.6)	18.7 (14.4-24.7)
20-day	10.6 (9.59-11.9)	12.1 (10.8-13.7)	14.1 (12.3-16.3)	15.6 (13.4-18.3)	17.6 (14.8-21.2)	19.2 (15.8-23.5)	20.7 (16.8-25.9)	22.4 (17.9-28.5)	24.7 (19.3-32.1)	26.4 (20.2-34.8)
30-day	14.0 (12.6-15.6)	15.9 (14.2-18.1)	18.5 (16.2-21.4)	20.4 (17.5-24.0)	22.9 (19.3-27.7)	24.9 (20.5-30.5)	26.8 (21.7-33.4)	28.8 (23.0-36.6)	31.5 (24.6-40.9)	33.5 (25.7-44.2)
45-day	18.5 (16.7-20.7)	21.1 (18.8-23.9)	24.5 (21.4-28.4)	27.0 (23.2-31.8)	30.1 (25.3-36.3)	32.5 (26.8-39.8)	34.8 (28.2-43.4)	37.1 (29.5-47.1)	40.1 (31.3-52.0)	42.4 (32.5-55.9)
60-day	22.1 (19.9-24.7)	25.4 (22.6-28.8)	29.5 (25.7-34.1)	32.3 (27.8-38.1)	35.9 (30.1-43.3)	38.4 (31.7-47.1)	40.8 (33.1-50.9)	43.0 (34.2-54.5)	45.8 (35.7-59.5)	48.0 (36.8-63.4)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

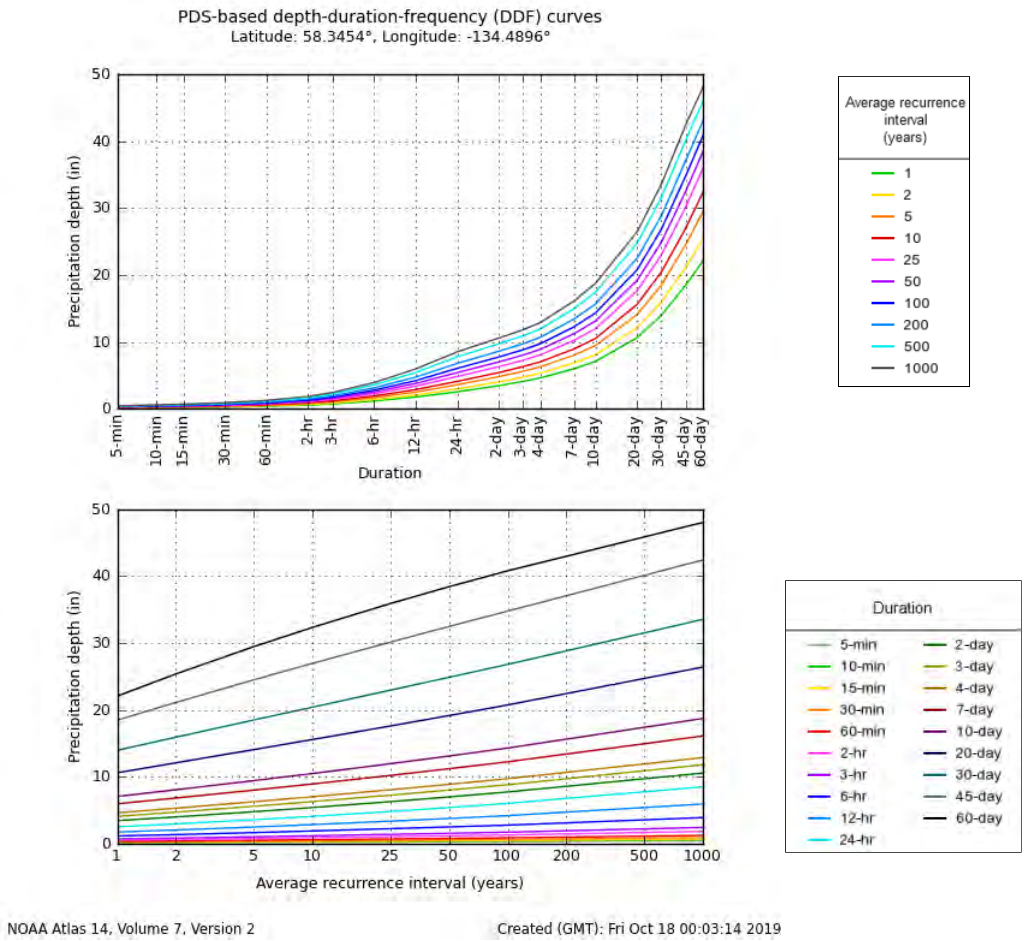
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

App G - Prior Drainage Reports

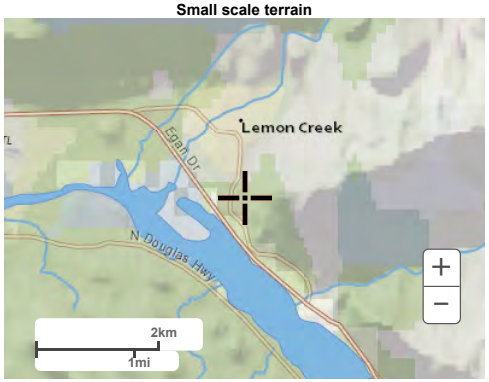


NOAA Atlas 14, Volume 7, Version 2 Created (GMT): Fri Oct 18 00:03:14 2019

Back to Top

Maps & aerials

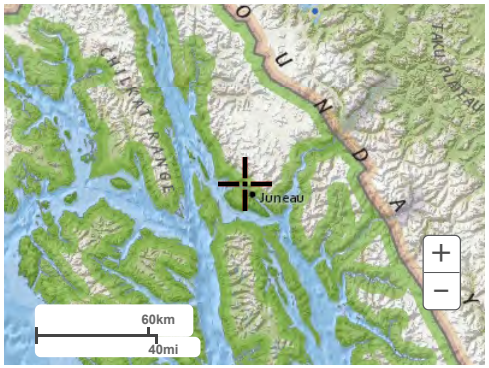
Small scale terrain



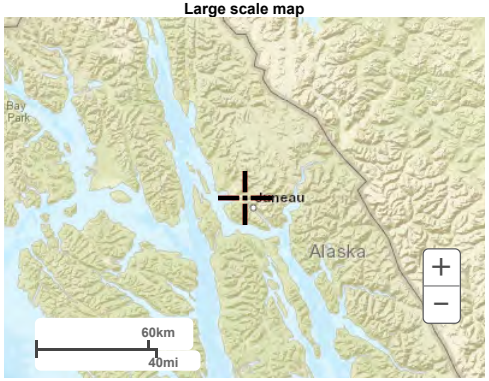
Large scale terrain

Attachment G - SMF22-03 – Phase 2 Report and Final Plat

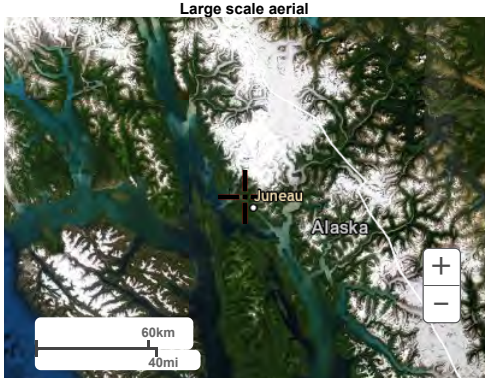
App G - Prior Drainage Reports



Large scale map



Large scale aerial



Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Attachment G - SMF22-03 – Phase 2 Report and Final Plat

App G - Prior Drainage Reports

NOAA Atlas 14, Volume 7, Version 2
Location name: Juneau, Alaska, USA*
Latitude: 58.346°, Longitude: -134.4904°
Elevation: 101.4 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Douglas Kane, Sarah Dietz, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Svetlana Stuefer, Amy Tidwell, Carl Trypaluk, Dale Unruh, Michael Yekta, Erica Betts, Geoffrey Bonnin, Sarah Heim, Lillian Hiner, Elizabeth Lilly, Jayashree Narayanan, Fenglin Yan, Tan Zhao

NOAA, National Weather Service, Silver Spring, Maryland
and
University of Alaska Fairbanks, Water and Environmental Research Center

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.58 (1.27-2.02)	1.86 (1.48-2.40)	2.27 (1.75-3.00)	2.62 (1.99-3.52)	3.08 (2.29-4.25)	3.44 (2.51-4.82)	3.80 (2.72-5.42)	4.30 (3.02-6.23)	4.94 (3.41-7.33)	5.42 (3.67-8.17)
10-min	1.06 (0.852-1.36)	1.25 (0.984-1.61)	1.52 (1.18-2.02)	1.75 (1.33-2.35)	2.07 (1.54-2.85)	2.31 (1.69-3.23)	2.56 (1.83-3.64)	2.89 (2.03-4.18)	3.32 (2.29-4.92)	3.64 (2.47-5.49)
15-min	0.828 (0.664-1.06)	0.972 (0.768-1.26)	1.19 (0.920-1.57)	1.37 (1.04-1.84)	1.62 (1.20-2.22)	1.80 (1.32-2.53)	2.00 (1.43-2.84)	2.25 (1.59-3.26)	2.59 (1.78-3.84)	2.84 (1.93-4.29)
30-min	0.550 (0.440-0.702)	0.646 (0.510-0.836)	0.788 (0.610-1.04)	0.908 (0.690-1.22)	1.07 (0.796-1.47)	1.20 (0.874-1.68)	1.32 (0.950-1.89)	1.49 (1.05-2.17)	1.72 (1.18-2.54)	1.89 (1.28-2.84)
60-min	0.377 (0.302-0.481)	0.442 (0.349-0.571)	0.540 (0.418-0.713)	0.622 (0.473-0.836)	0.734 (0.545-1.01)	0.820 (0.598-1.15)	0.907 (0.650-1.29)	1.02 (0.721-1.48)	1.18 (0.810-1.74)	1.29 (0.875-1.95)
2-hr	0.278 (0.223-0.356)	0.326 (0.258-0.422)	0.399 (0.308-0.527)	0.460 (0.350-0.618)	0.543 (0.403-0.747)	0.606 (0.442-0.850)	0.670 (0.480-0.954)	0.756 (0.532-1.10)	0.869 (0.598-1.29)	0.954 (0.646-1.44)
3-hr	0.245 (0.196-0.312)	0.286 (0.226-0.370)	0.351 (0.271-0.463)	0.404 (0.307-0.543)	0.477 (0.354-0.657)	0.533 (0.389-0.746)	0.588 (0.422-0.838)	0.664 (0.468-0.962)	0.763 (0.525-1.13)	0.838 (0.568-1.26)
6-hr	0.197 (0.158-0.251)	0.231 (0.182-0.298)	0.282 (0.218-0.372)	0.324 (0.247-0.436)	0.383 (0.284-0.527)	0.428 (0.312-0.600)	0.473 (0.339-0.675)	0.534 (0.376-0.774)	0.614 (0.423-0.910)	0.675 (0.457-1.02)
12-hr	0.147 (0.118-0.188)	0.172 (0.136-0.223)	0.210 (0.162-0.277)	0.241 (0.183-0.323)	0.284 (0.211-0.391)	0.319 (0.233-0.447)	0.356 (0.255-0.507)	0.402 (0.283-0.582)	0.462 (0.318-0.686)	0.508 (0.344-0.767)
24-hr	0.107 (0.096-0.119)	0.125 (0.111-0.142)	0.151 (0.132-0.175)	0.172 (0.148-0.203)	0.203 (0.171-0.245)	0.229 (0.189-0.281)	0.256 (0.208-0.320)	0.289 (0.230-0.367)	0.332 (0.259-0.431)	0.365 (0.280-0.482)
2-day	0.073 (0.066-0.081)	0.084 (0.075-0.096)	0.101 (0.088-0.117)	0.114 (0.098-0.134)	0.133 (0.111-0.160)	0.148 (0.122-0.182)	0.164 (0.133-0.205)	0.183 (0.146-0.233)	0.209 (0.162-0.271)	0.227 (0.174-0.300)
3-day	0.057 (0.052-0.064)	0.066 (0.059-0.075)	0.079 (0.069-0.091)	0.088 (0.076-0.104)	0.102 (0.086-0.123)	0.113 (0.094-0.139)	0.125 (0.101-0.156)	0.139 (0.110-0.176)	0.156 (0.122-0.203)	0.170 (0.130-0.224)
4-day	0.049 (0.044-0.054)	0.056 (0.050-0.063)	0.066 (0.058-0.076)	0.074 (0.063-0.087)	0.085 (0.071-0.103)	0.094 (0.078-0.115)	0.103 (0.084-0.129)	0.114 (0.091-0.145)	0.128 (0.100-0.166)	0.139 (0.106-0.183)
7-day	0.035 (0.032-0.040)	0.040 (0.036-0.046)	0.047 (0.041-0.055)	0.053 (0.046-0.062)	0.061 (0.051-0.073)	0.067 (0.055-0.082)	0.074 (0.060-0.092)	0.081 (0.064-0.103)	0.091 (0.071-0.118)	0.098 (0.075-0.130)
10-day	0.029 (0.026-0.033)	0.033 (0.030-0.038)	0.039 (0.034-0.045)	0.043 (0.037-0.051)	0.049 (0.041-0.060)	0.054 (0.045-0.067)	0.060 (0.048-0.074)	0.066 (0.052-0.083)	0.073 (0.057-0.095)	0.079 (0.061-0.105)
20-day	0.022 (0.020-0.024)	0.025 (0.022-0.028)	0.029 (0.025-0.033)	0.032 (0.027-0.038)	0.036 (0.030-0.044)	0.040 (0.033-0.048)	0.043 (0.035-0.054)	0.047 (0.037-0.059)	0.052 (0.040-0.067)	0.056 (0.043-0.073)
30-day	0.019 (0.017-0.021)	0.022 (0.019-0.025)	0.025 (0.022-0.029)	0.028 (0.024-0.033)	0.031 (0.026-0.038)	0.034 (0.028-0.042)	0.037 (0.030-0.046)	0.040 (0.032-0.051)	0.044 (0.034-0.057)	0.047 (0.036-0.062)
45-day	0.017 (0.015-0.019)	0.019 (0.017-0.022)	0.022 (0.019-0.026)	0.025 (0.021-0.029)	0.028 (0.023-0.033)	0.030 (0.025-0.037)	0.032 (0.026-0.040)	0.034 (0.027-0.043)	0.037 (0.029-0.048)	0.039 (0.030-0.052)
60-day	0.015 (0.014-0.017)	0.017 (0.016-0.020)	0.020 (0.018-0.024)	0.022 (0.019-0.026)	0.025 (0.021-0.030)	0.027 (0.022-0.033)	0.028 (0.023-0.035)	0.030 (0.024-0.038)	0.032 (0.025-0.042)	0.034 (0.026-0.044)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

Appendix E

Rational Method

Rational Method Site Runoff Drainage Basin D			
Project:	Hillcrest Extension Drainage Analysis, PAC2018 0054		
Owner:	Michael and William Heumann		
Date:	3/23/2020		
Prepared By:	L. Chambers		
Checked By:	G. Gladsjo		

$$Q = CIA$$

Q = peak flow in cubic feet per second (cfs)
C = runoff coefficient
I = rainfall intensity (inches per hour)
A = catchment area (acres)

$$C_c = (C_1A_1 + C_2A_2)/A_t$$

C_c = composite runoff coefficient
$C_{1,2}$ = runoff coefficient for each area land cover type
A_t = total area (acres)
$A_{1,2}$ = areas of land cover types (acres)
***Cc = 0.22**, See Appendix C for calculation*

$$T_c = T_1 + T_2 + \cdots + T_n$$

T_c = time of concentration (min)
$T_{1,2}$ = travel time across separate flow path segments (min)
***Tc = 41.51 min.**, See Appendix D for calculation*

$$T_t = L/60V$$

T_t = travel time (min)
L= the distance of flow across a given segment (feet)
$V=k_R Sqrt(S_0)$=average velocity (feet/sec) across land cover
k_R = time of concentration velocity factor (CBJ Manual of Storm Water BMP 2010, Table D-5, PG. D-10)
S_0 = slope of flow path (feet/feet)

Per CBJ Manual of Storm Water BMP 2010, Table 5-1, page. 5-1, design event frequencies are specified. For driveway culvert, a 25-year storm event is the required design return period. We will base our analysis on a 25-year design return period for all drainage structures and catchment areas. Per CBJ Manual of Storm Water BMP 2010, page. D-9, Basins with a time and concentration 10 minutes or less shall use the 10 minute intensity. Basins with a time of concentration greater than 10 minutes and less than 30 minutes shall interpolate between the 10 and 10 minute values. Rainfall intensity for the site was sourced from the NOAA Atlas 14, Point Precipitation Frequency Estimates, see Appendix E, and is summarized as follows:

		Design Return Period
	Tc 41.51(min)	25-year
Interpolated Intensity (in/hr) =		**0.94**

There is an existing 24" CMP culvert that drains into the existing Glacier Highway ditch system at the location where the new subdivision access will tie into the shoulder of the Highway. The area currently contributing runoff to this culvert was delinated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ.

A = 400337 sqft / 43,560 **= 9.19 acres**

	Cc	**I**	**A**		
Q (cfs)=	0.22	0.94	9.19	**=**	**1.90**

Appendix F

SCS Hydrograph

Hydrograph Report

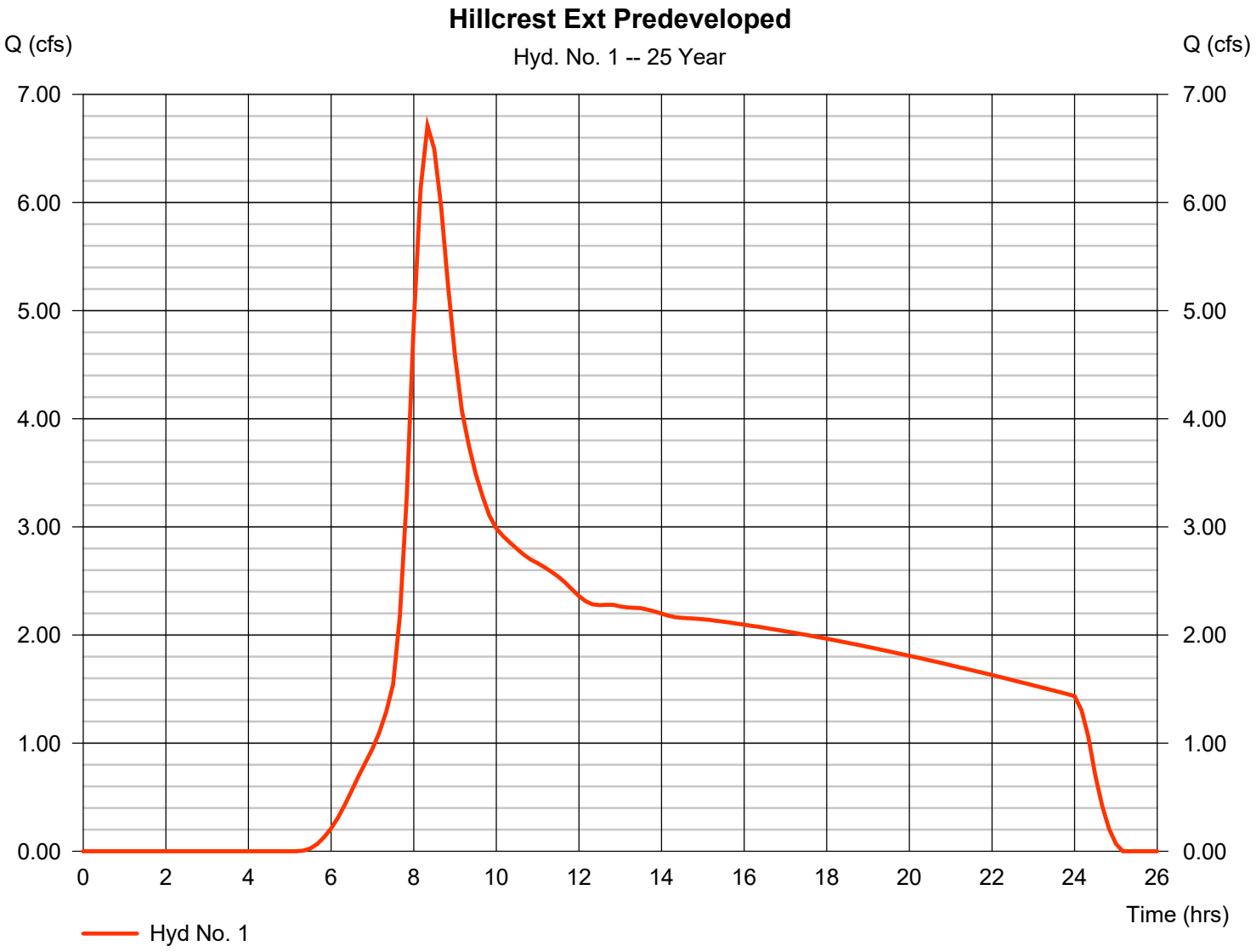
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020 — Saturday, 03 / 21 / 2020

Hyd. No. 1

Hillcrest Ext Predeveloped Drainage Basin A

Hydrograph type	= SCS Runoff	Peak discharge	= 6.711 cfs
Storm frequency	= 25 yrs	Time to peak	= 8.33 hrs
Time interval	= 10 min	Hyd. volume	= 148,969 cuft
Drainage area	= 19.920 ac	Curve number	= 72*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 41.60 min
Total precip.	= 4.82 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.540 x 98) + (0.320 x 98) + (0.250 x 89) + (0.330 x 74) + (18.480 x 70)] / 19.920



Hydrograph Report

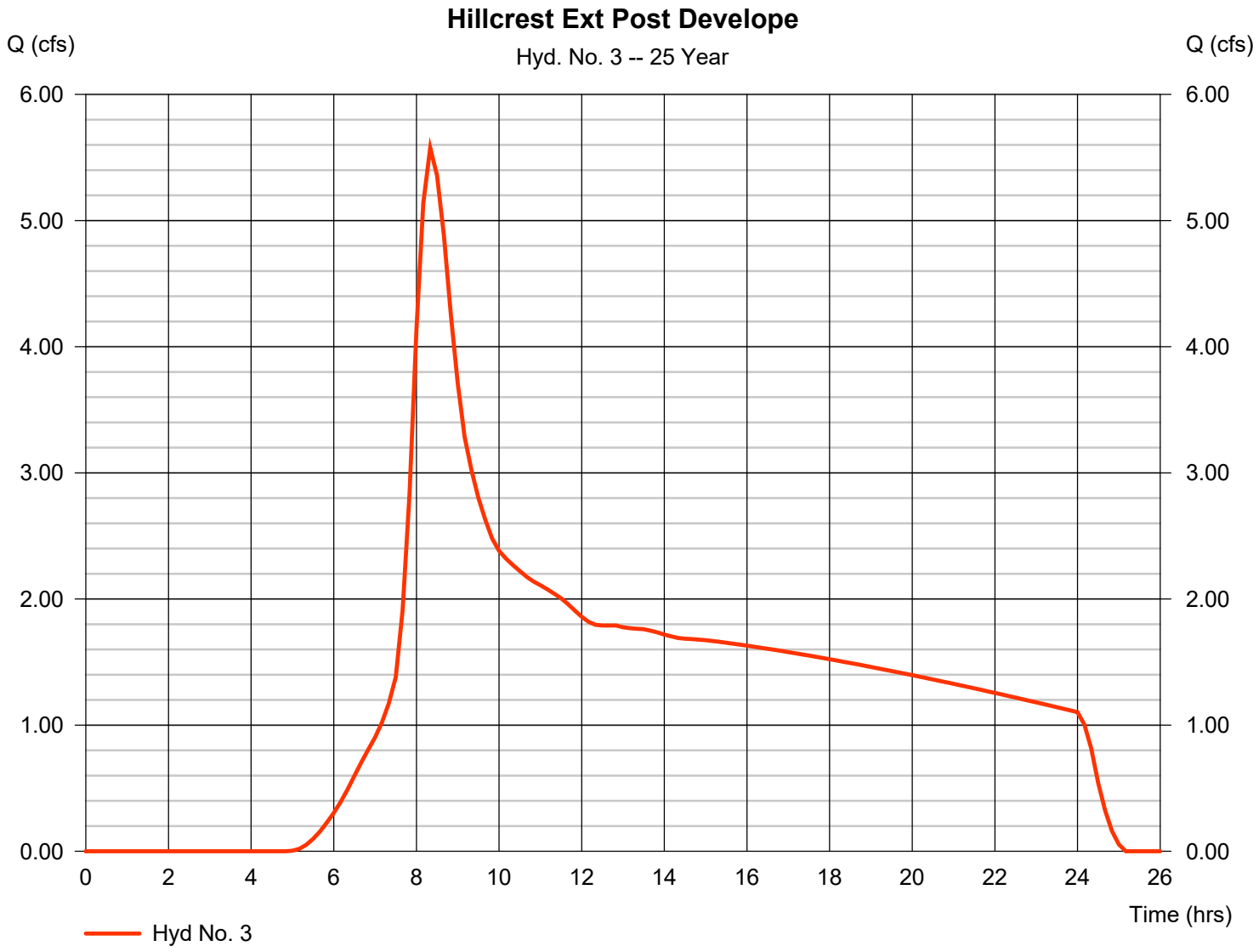
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020 — Saturday, 03 / 21 / 2020

Hyd. No. 3

Hillcrest Ext Post Develope Drainage Basin C

Hydrograph type	= SCS Runoff	Peak discharge	= 5.576 cfs
Storm frequency	= 25 yrs	Time to peak	= 8.33 hrs
Time interval	= 10 min	Hyd. volume	= 118,944 cuft
Drainage area	= 14.750 ac	Curve number	= 74*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 40.60 min
Total precip.	= 4.82 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.835 x 98) + (0.731 x 98) + (0.615 x 89) + (0.965 x 74) + (11.607 x 70)] / 14.750



Appendix G

Existing Capacity

Proposed 18" CPP Discharge Capacity		
Project:	Hillcrest Ext. Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	3/23/2020	
Prepared By:	L. Chambers	
Checked By:	G. Gladsjo	

The following equations were used to calculate the proposed 18" CPP culvert P-7 acts as the driveway culvert to Lot 14 and is the first pipe in the proposed storm drain system and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table 5-3, Page 5-5, of the CBJ Stormwater Manual
A = cross sectional area in ft^2
R = hydraulic radius
S = slope

Existing 18" Ditch Culvert; Inlet Invert =30.0 ', Outlet Invert =29.0', Length =40 ', n = 0.014. The Manning's n value of 0.014 was determined by the pipe type (CPP-smooth interior) Table 5-3.

	K	n	A	R	S		
Q (cfs)	1.486	0.014	1.77	0.375	0.0052	=	7.022094

Existing Driveway Ditch Discharge Capacity		
Project:	Hillcrest Ext. Subdivision Drainage Analysis, PAC2018 0054	
Owner:	Michael and William Heumann	
Date:	3/23/2020	
Prepared By:	L. Chambers	
Checked By:	G. Gladsjo	

The following equations were used to calculate the capacity of the driveway ditch leading into the 18" CPP at the bottom of the ditch run and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

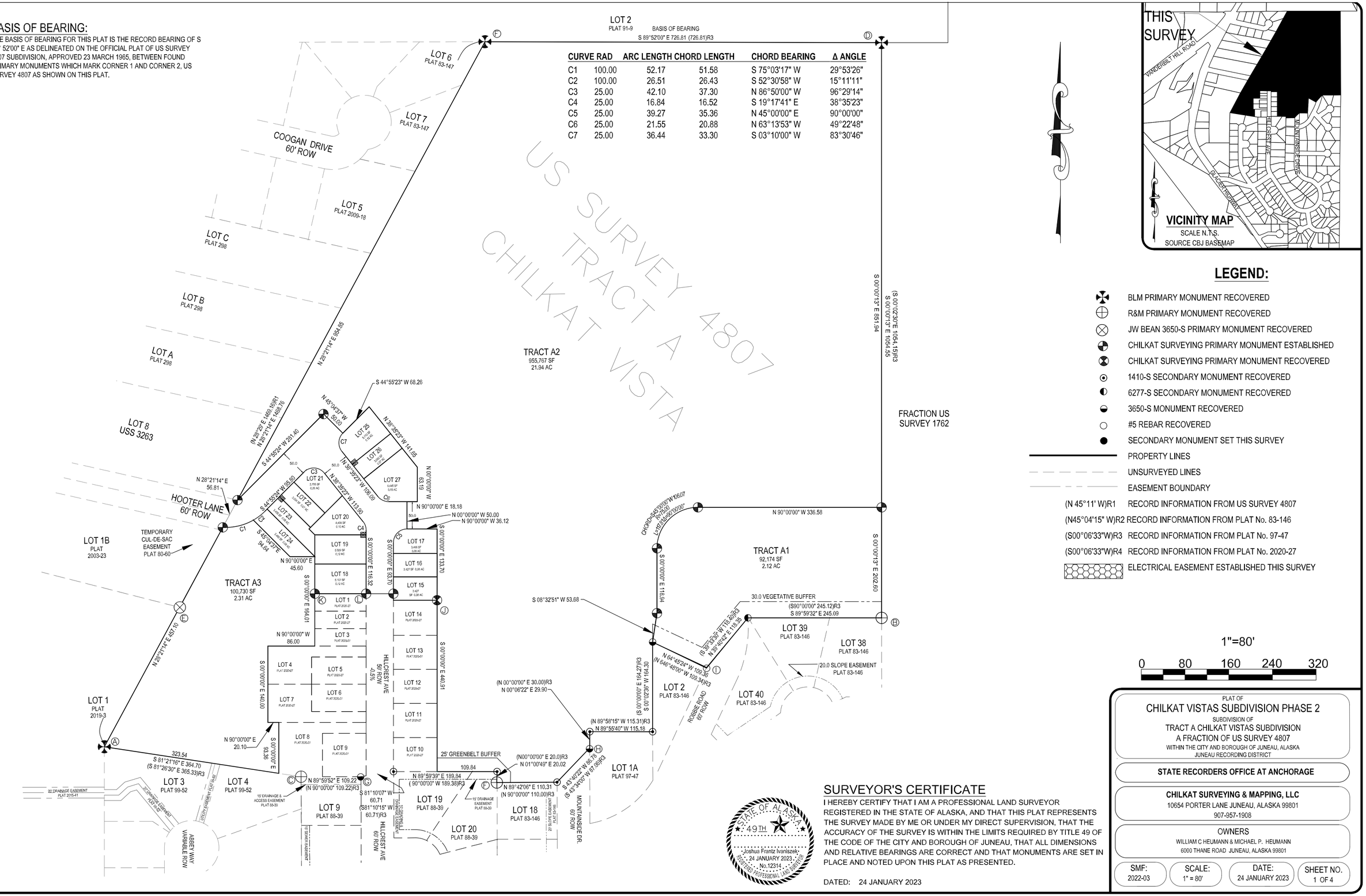
Q = discharge rate in ft^3/sec
K = coefficient for English units (1.486)
n = Manning's coefficient of roughness, obtained from Table D-10, Page D-19, of the CBJ Stormwater Manual
A = cross sectional area in ft^2, from survey basemap
R = hydraulic radius, from survey basemap
S = slope, from survey basemap

Existing driveway ditch; Top Elev. = 37.0', Bottom Elev. = 30.0', Length = 80', n = 0.03. The Manning's n value of 0.03 comes from Table D-10 (grass, some weeds), elevation and length data are from survey basemap.

	K	n	A	R	S		
Q (cfs)	1.486	0.03	1.55	0.319588	0.0875	=	10.57569

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF S 89° 52'00" E AS DELINEATED ON THE OFFICIAL PLAT OF US SURVEY 4807 SUBDIVISION, APPROVED 23 MARCH 1965, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK CORNER 1 AND CORNER 2, US SURVEY 4807 AS SHOWN ON THIS PLAT.



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R4 RECORD INFORMATION FROM PLAT No. 2020-27
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY

1"=80'

0 80 160 240 320

CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	100.00	52.17	51.58	S 75°03'17" W	29°53'26"
C2	100.00	26.51	26.43	S 52°30'58" W	15°11'11"
C3	25.00	42.10	37.30	N 86°50'00" W	96°29'14"
C4	25.00	16.84	16.52	S 19°17'41" E	38°35'23"
C5	25.00	39.27	35.36	N 45°00'00" E	90°00'00"
C6	25.00	21.55	20.88	N 63°13'53" W	49°22'48"
C7	25.00	36.44	33.30	S 03°10'00" W	83°30'46"

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTAS SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMF:	SCALE:	DATE:	SHEET NO.
2022-03	1" = 80'	24 JANUARY 2023	1 OF 4

SURVEYOR'S CERTIFICATE

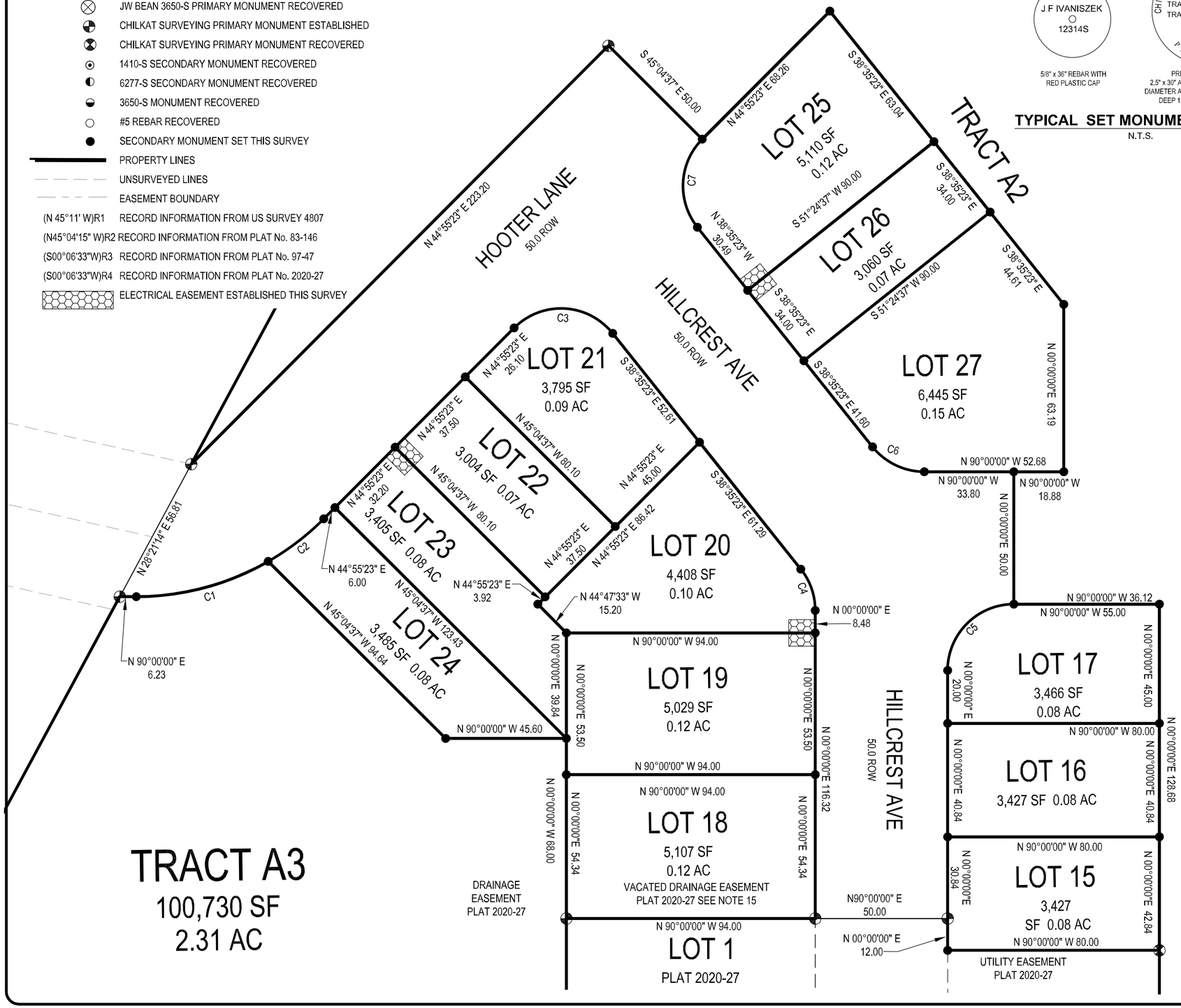
I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

STATE OF ALASKA
49TH
Joshua Frantz Ivaniszek
24 JANUARY 2023
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

DATED: 24 JANUARY 2023

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R4 RECORD INFORMATION FROM PLAT No. 2020-27
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY



J F IVANISZEK
12314S

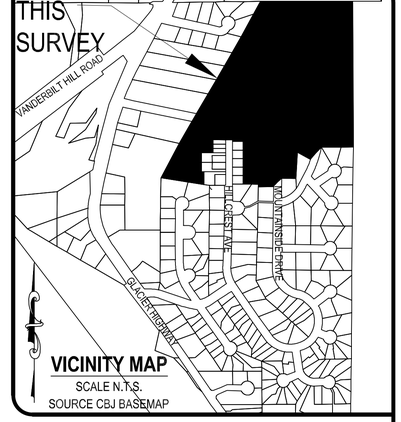
5/8" x 36" REBAR WITH
RED PLASTIC CAP

CHILKAT SURVEYING & MAPPING, LLC
TRACT A2
TRACT A1
USS 1762
2023
PLS 12314

PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP WITH CLEAR
DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	100.00	52.17	51.58	S 75°03'17" W	29°53'26"
C2	100.00	26.51	26.43	S 52°30'58" W	15°11'11"
C3	25.00	42.10	37.30	N 86°50'00" W	96°29'14"
C4	25.00	16.84	16.52	S 19°17'41" E	38°35'23"
C5	25.00	39.27	35.36	N 45°00'00" E	90°00'00"
C6	25.00	21.55	20.88	N 63°13'53" W	49°22'48"
C7	25.00	36.44	33.30	S 03°10'00" W	83°30'46"

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 23 JANUARY 2023

STATE OF ALASKA
49TH
Joshua Frantz Ivaniszek
23 JANUARY 2023
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

1"=20'

0 20 40 60 80

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTAS SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

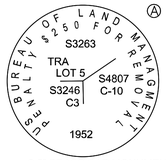
OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMF:	SCALE:	DATE:	SHEET NO.
2022-03	1" = 20'	24 JANUARY 2023	2 OF 4

FOUND MONUMENT DESCRIPTIONS:

N.T.S.

Ⓐ



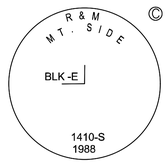
2.5" BRASS CAP MONUMENT

Ⓑ



3.25" ALUMINUM CAP MONUMENT

Ⓒ



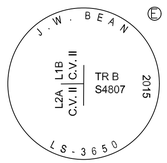
3.25" ALUMINUM CAP MONUMENT

Ⓓ



2.5" BRASS CAP MONUMENT

Ⓔ



3.25" ALUMINUM CAP MONUMENT
FOUND J.W. BEAN MONUMENT
S 61°38'46" E 0.37 FROM
US SURVEY 4807 BOUNDARY
MONUMENT NOT ACCEPTED

Ⓕ



2.5" BRASS CAP MONUMENT

Ⓖ

FOUND J.W. BEAN REBAR MONUMENT
S 01°34'23" W0.62 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE WITH
ALASKA DNR

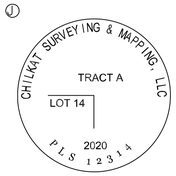
Ⓗ

FOUND JW BEAN REBAR
S 11°57'46"W 1.60 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓘ

FOUND #5 REBAR
S 04°55'56"W 1.29 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓙ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓚ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓛ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

OWNERSHIP CERTIFICATE:

WE, HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____,2023

_____
WILLIAM C. HEUMANN

DATE: _____,2023

_____
MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS___ DAY OF _____, 2023, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015; RAVENWOOD SUBDIVISION PLAT NO. 2019-3 RECORDED 28 JANUARY 2019; CHILKAT VISTAS SUBDIVISION PHASE 1 PLAT NO. 2020-27 RECORDED 11 AUGUST 2020 ON FILE WITH THE ALASKA DEPARTMENT OF NATURAL RESOURCES RECORDERS OFFICE IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER CHILKAT VISTAS SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET. ALL REQUIRED CHILKAT VISTAS SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12.120 BEST MANAGEMENT PRACTICES.

8) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY.
WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

9) HOOTER LANE WILL BE DEVELOPED AS A PUBLIC TWO-WAY STREET, AS SET OUT IN THE SKETCH PLAT SUBMITTED WITH SMP20190004, SUBJECT TO CBJ PUBLIC IMPROVEMENT STANDARDS IN CBJ 49.35.

10) HOOTER LANE FROM GLACIER HIGHWAY TO HILLCREST AVENUE, AND HILLCREST AVENUE AND MOUNTAINSIDE DRIVE SHALL BE DEVELOPED WITH A SIDEWALK ON ONE SIDE. THE NUMBER OF SIDEWALKS IN THE REMAINDER OF CHILKAT VISTAS WILL BE DETERMINED AT THE TIME OF FUTURE DEVELOPMENT APPLICATIONS.

11) ROBBIE ROAD SHALL TERMINATE AND SHALL NOT BE A POINT OF ACCESS TO CHILKAT VISTAS, UNLESS REQUIRED, AND GATED, FOR FIRE/EMERGENCY SERVICE ACCESS ONLY.

12) HILLCREST AVENUE SHALL TERMINATE AT HOOTER LANE. HILLCREST AVENUE MAY CONNECT TO HOOTER LANE WEST OF THE EXISTING HILLCREST ALIGNMENT AS SHOWN IN THE SKETCH PLAT SUBMITTED WITH SMP20190004. ALTERNATIVELY ROAD ACCESS TO THE NORTHEAST PORTION OF "TRACT A2" MAY CONNECT TO THE EAST/WEST PORTION OF MOUNTAINSIDE DRIVE ACROSS FROM THE ENTRANCE TO THE "POCKET" BETWEEN HILLCREST AND MOUNTAINSIDE.

13) OTHER THAN SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10 FEET IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

14) TEMPORARY CUL-DE-SAC EASEMENT SHALL BE VACATED UPON EXTENSION OF HILLCREST AVENUE UNLESS THE DIRECTOR DETERMINES ALL OR A PORTION OF THE CUL-DE-SAC MAY REMAIN.

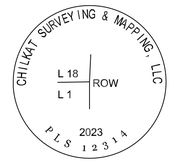
15) PORTION OF 15' DRAINAGE EASEMENT FROM PLAT 2020-27 WITHIN THE BOUNDARY OF LOT 18 VACATED THIS PLAT.

16) LOTS 15, 16, 17, 20, 21, 22, 23, 24, AND 26 ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 15, 16, 17, 20, 21, 22, 23, 24, AND 26 RE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE FAMILY RESIDENCE PER LOT. OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

17) DRAINAGE AND SEWER EASEMENT GRANTED WITH PLAT 2020-27 TO BE ELIMINATED WHEN PHASE II SEWER CONNECTION IS COMPLETED.



5/8" x 36" REBAR WITH
RED PLASTIC CAP



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP WITH CLEAR
DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 23 JANUARY 2023



PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____ , DATED _____ , 2023, AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, ANCHORAGE, ALASKA.

_____DATED _____ , 2023
CHAIRMAN OF THE PLANNING COMMISSION
CITY AND BOROUGH OF JUNEAU

ATTEST:

_____
MUNICIPAL CLERK
CITY AND BOROUGH OF JUNEAU

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTAS SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

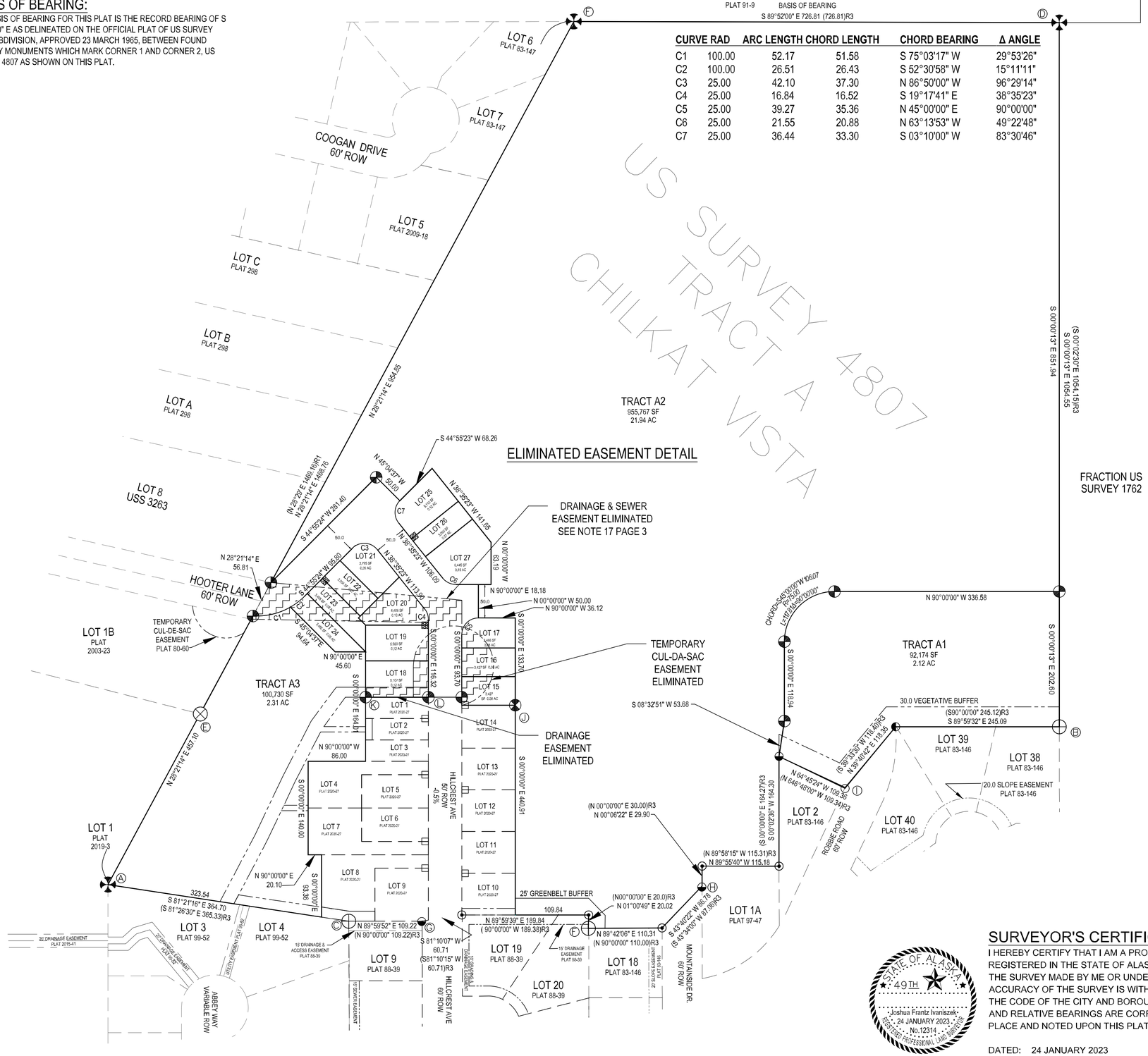
SMF:	SCALE:	DATE:	SHEET NO.
2022-03	NTS	24 JANUARY 2023	3 OF 4

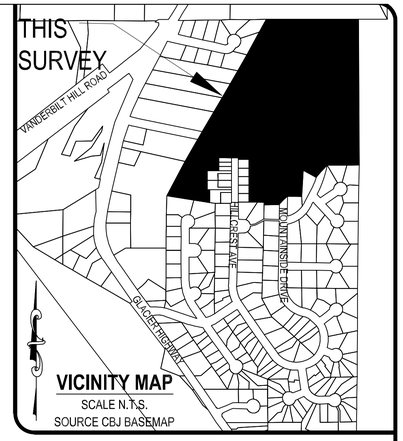
BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF S 89° 52'00" E AS DELINEATED ON THE OFFICIAL PLAT OF US SURVEY 4807 SUBDIVISION, APPROVED 23 MARCH 1965, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK CORNER 1 AND CORNER 2, US SURVEY 4807 AS SHOWN ON THIS PLAT.

LOT 2
PLAT 91-9
BASIS OF BEARING
S 89°52'00" E 726.81 (726.81)R3

CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	100.00	52.17	51.58	S 75°03'17" W	29°53'26"
C2	100.00	26.51	26.43	S 52°30'58" W	15°11'11"
C3	25.00	42.10	37.30	N 86°50'00" W	96°29'14"
C4	25.00	16.84	16.52	S 19°17'41" E	38°35'23"
C5	25.00	39.27	35.36	N 45°00'00" E	90°00'00"
C6	25.00	21.55	20.88	N 63°13'53" W	49°22'48"
C7	25.00	36.44	33.30	S 03°10'00" W	83°30'46"





VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R4 RECORD INFORMATION FROM PLAT No. 2020-27
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY
- EASEMENTS VACATED THIS SURVEY

VACATED EASEMENT DETAIL
1"=80'

0 80 160 240 320

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 24 JANUARY 2023

STATE OF ALASKA 49TH
Joshua Frantz Ivanizsek
24 JANUARY 2023
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTAS SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

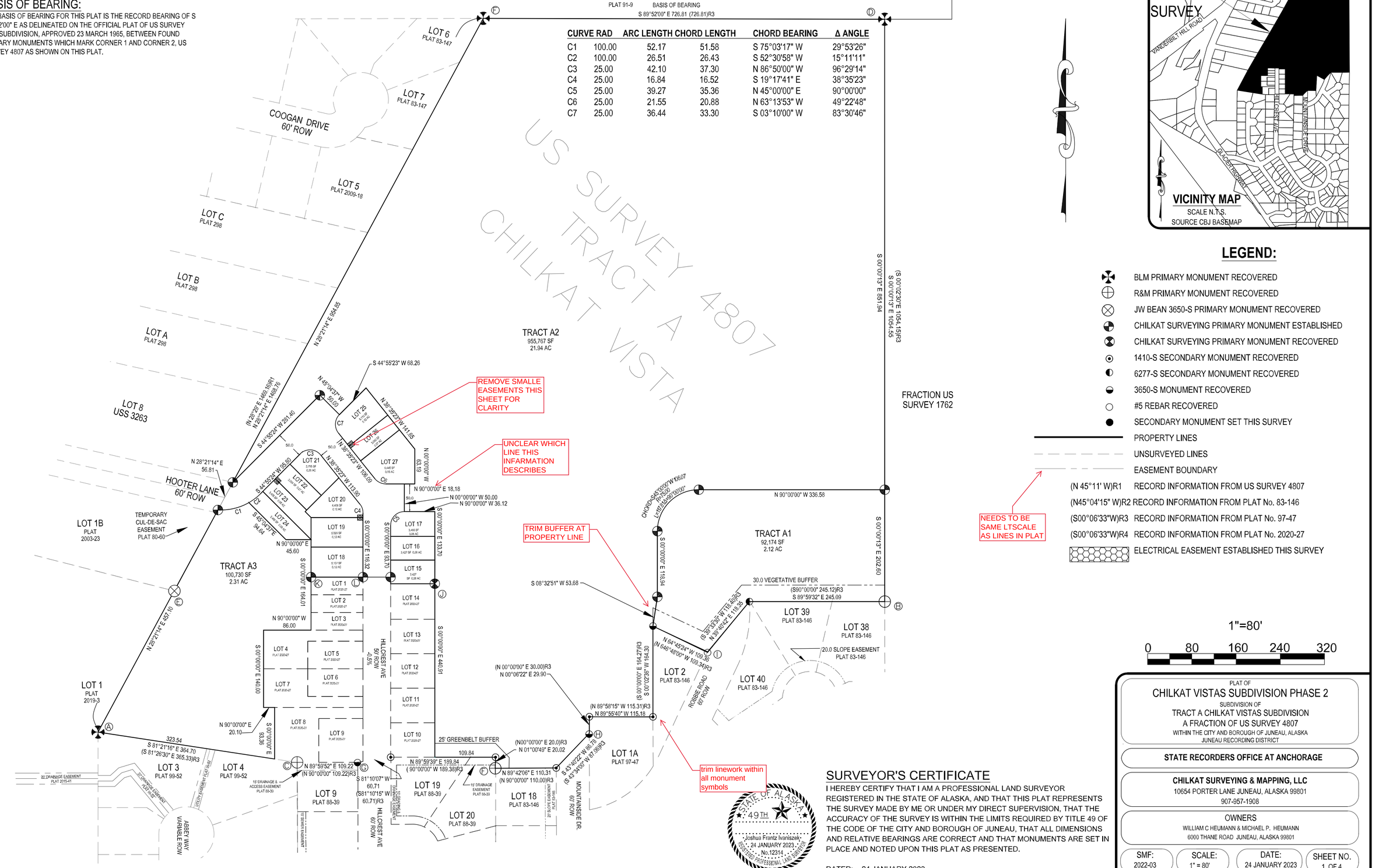
SMF:	SCALE:	DATE:	SHEET NO.
2022-03	1" = 80'	24 JANUARY 2023	4 OF 4

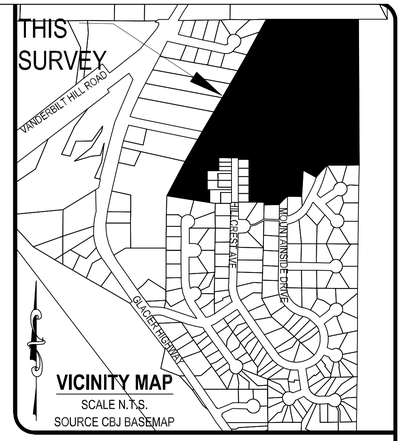
BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF S 89° 52'00" E AS DELINEATED ON THE OFFICIAL PLAT OF US SURVEY 4807 SUBDIVISION, APPROVED 23 MARCH 1965, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK CORNER 1 AND CORNER 2, US SURVEY 4807 AS SHOWN ON THIS PLAT.

LOT 2
PLAT 91-9
BASIS OF BEARING
S 89°52'00" E 726.81 (726.81)R3

CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	100.00	52.17	51.58	S 75°03'17" W	29°53'26"
C2	100.00	26.51	26.43	S 52°30'58" W	15°11'11"
C3	25.00	42.10	37.30	N 86°50'00" W	96°29'14"
C4	25.00	16.84	16.52	S 19°17'41" E	38°35'23"
C5	25.00	39.27	35.36	N 45°00'00" E	90°00'00"
C6	25.00	21.55	20.88	N 63°13'53" W	49°22'48"
C7	25.00	36.44	33.30	S 03°10'00" W	83°30'46"





LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R4 RECORD INFORMATION FROM PLAT No. 2020-27
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY

1"=80'

0 80 160 240 320

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 24 JANUARY 2023

STATE OF ALASKA
49TH
Joshua Frantz Ivaniszek
24 JANUARY 2023
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTAS SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

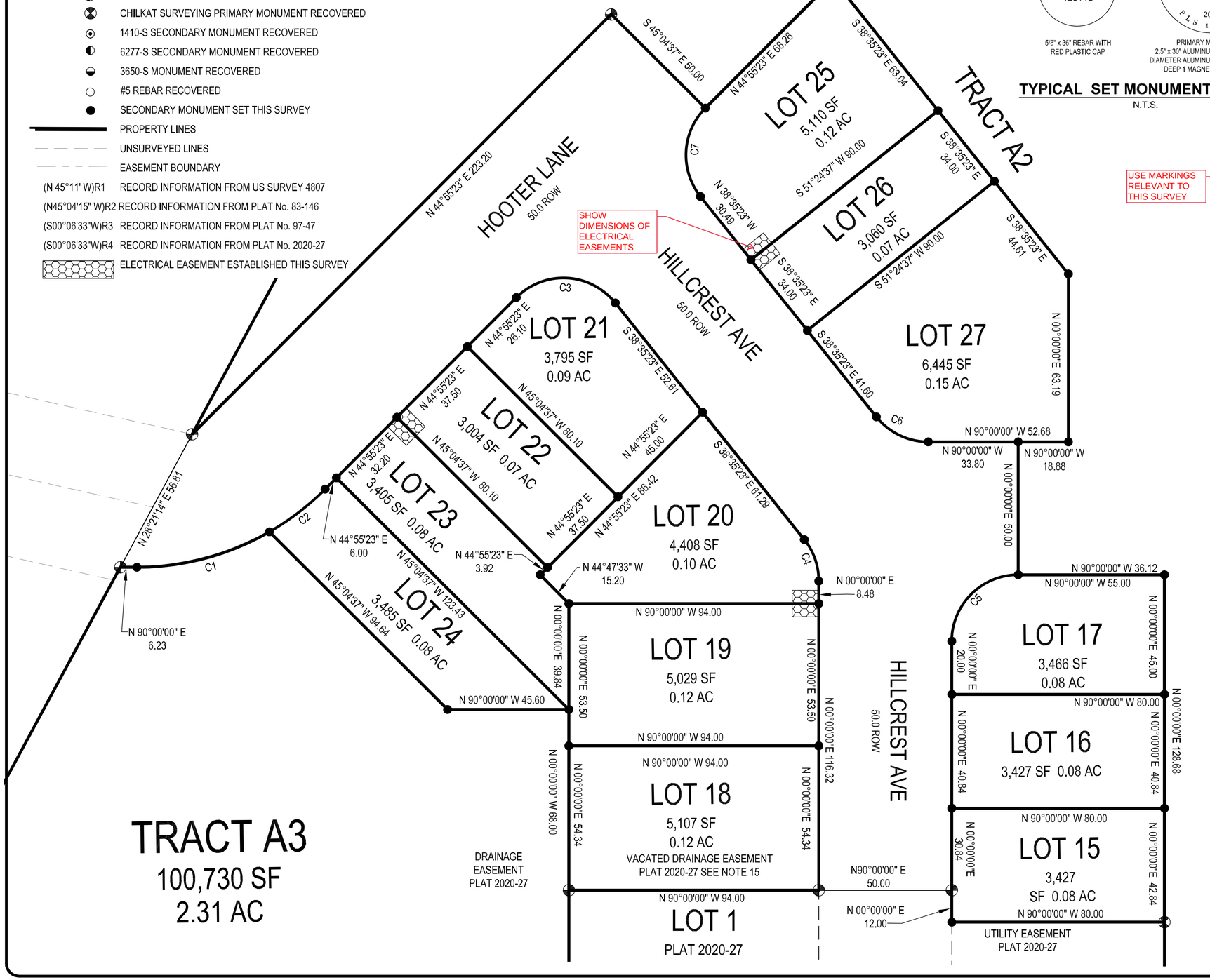
CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMF:	SCALE:	DATE:	SHEET NO.
2022-03	1" = 80'	24 JANUARY 2023	1 OF 4

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R4 RECORD INFORMATION FROM PLAT No. 2020-27
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY



J F IVANISZEK
12314S

5/8" x 36" REBAR WITH RED PLASTIC CAP

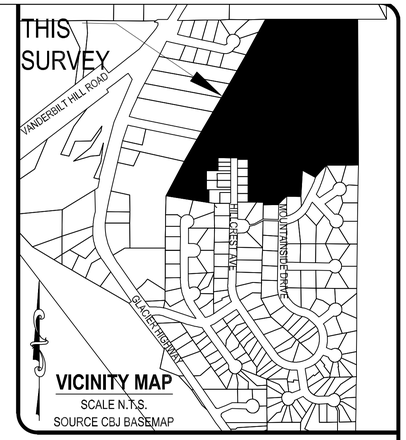
CHILKAT SURVEYING & MAPPING, LLC
TRACT A2
TRACT A1 USS 1762
2023
PLS 12314

PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP WITH CLEAR DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.

USE MARKINGS RELEVANT TO THIS SURVEY



CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	100.00	52.17	51.58	S 75°03'17" W	29°53'26"
C2	100.00	26.51	26.43	S 52°30'58" W	15°11'11"
C3	25.00	42.10	37.30	N 86°50'00" W	96°29'14"
C4	25.00	16.84	16.52	S 19°17'41" E	38°35'23"
C5	25.00	39.27	35.36	N 45°00'00" E	90°00'00"
C6	25.00	21.55	20.88	N 63°13'53" W	49°22'48"
C7	25.00	36.44	33.30	S 03°10'00" W	83°30'46"

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 23 JANUARY 2023

STATE OF ALASKA 49TH
Joshua Frantz Ivaniszek
23 JANUARY 2023
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

1"=20'

0 20 40 60 80

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTAS SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

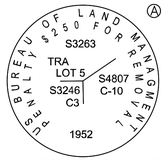
OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMF:	SCALE:	DATE:	SHEET NO.
2022-03	1" = 20'	24 JANUARY 2023	2 OF 4

FOUND MONUMENT DESCRIPTIONS:

N.T.S.

Ⓐ



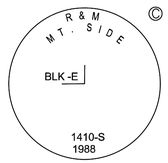
2.5" BRASS CAP MONUMENT

Ⓑ



3.25" ALUMINUM CAP MONUMENT

Ⓒ



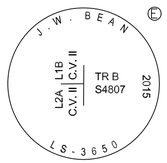
3.25" ALUMINUM CAP MONUMENT

Ⓓ



2.5" BRASS CAP MONUMENT

Ⓔ



3.25" ALUMINUM CAP MONUMENT
FOUND J.W. BEAN MONUMENT
S 61°38'46" E 0.37 FROM
US SURVEY 4807 BOUNDARY
MONUMENT NOT ACCEPTED

Ⓕ



2.5" BRASS CAP MONUMENT

Ⓖ

FOUND J.W. BEAN REBAR MONUMENT
S 01°34'23" W0.62 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE WITH
ALASKA DNR

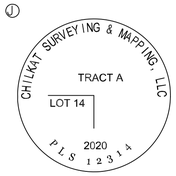
Ⓗ

FOUND JW BEAN REBAR
S 11°57'46"W 1.60 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓘ

FOUND #5 REBAR
S 04°55'56"W 1.29 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓙ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓚ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓛ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

OWNERSHIP CERTIFICATE:

WE, HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____,2023

_____
WILLIAM C. HEUMANN

DATE: _____,2023

_____
MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS___ DAY OF _____, 2023, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015; RAVENWOOD SUBDIVISION PLAT NO. 2019-3 RECORDED 28 JANUARY 2019; CHILKAT VISTAS SUBDIVISION PHASE 1 PLAT NO. 2020-27 RECORDED 11 AUGUST 2020 ON FILE WITH THE ALASKA DEPARTMENT OF NATURAL RESOURCES RECORDERS OFFICE IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER CHILKAT VISTAS SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET. ALL REQUIRED CHILKAT VISTAS SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12.120 BEST MANAGEMENT PRACTICES.

8) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY.
WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

9) HOOTER LANE WILL BE DEVELOPED AS A PUBLIC TWO-WAY STREET, AS SET OUT IN THE SKETCH PLAT SUBMITTED WITH SMP20190004, SUBJECT TO CBJ PUBLIC IMPROVEMENT STANDARDS IN CBJ 49.35.

10) HOOTER LANE FROM GLACIER HIGHWAY TO HILLCREST AVENUE, AND HILLCREST AVENUE AND MOUNTAINSIDE DRIVE SHALL BE DEVELOPED WITH A SIDEWALK ON ONE SIDE. THE NUMBER OF SIDEWALKS IN THE REMAINDER OF CHILKAT VISTAS WILL BE DETERMINED AT THE TIME OF FUTURE DEVELOPMENT APPLICATIONS.

11) ROBBIE ROAD SHALL TERMINATE AND SHALL NOT BE A POINT OF ACCESS TO CHILKAT VISTAS, UNLESS REQUIRED, AND GATED, FOR FIRE/EMERGENCY SERVICE ACCESS ONLY.

12) HILLCREST AVENUE SHALL TERMINATE AT HOOTER LANE. HILLCREST AVENUE MAY CONNECT TO HOOTER LANE WEST OF THE EXISTING HILLCREST ALIGNMENT AS SHOWN IN THE SKETCH PLAT SUBMITTED WITH SMP20190004. ALTERNATIVELY ROAD ACCESS TO THE NORTHEAST PORTION OF "TRACT A2" MAY CONNECT TO THE EAST/WEST PORTION OF MOUNTAINSIDE DRIVE ACROSS FROM THE ENTRANCE TO THE "POCKET" BETWEEN HILLCREST AND MOUNTAINSIDE.

13) OTHER THAN SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10 FEET IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

14) TEMPORARY CUL-DE-SAC EASEMENT SHALL BE VACATED UPON EXTENSION OF HILLCREST AVENUE UNLESS THE DIRECTOR DETERMINES ALL OR A PORTION OF THE CUL-DE-SAC MAY REMAIN.

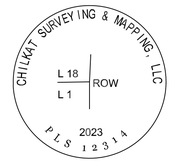
15) PORTION OF 15' DRAINAGE EASEMENT FROM PLAT 2020-27 WITHIN THE BOUNDARY OF LOT 18 VACATED THIS PLAT.

16) LOTS 15, 16, 17, 20, 21, 22, 23, 24, AND 26 ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 15, 16, 17, 20, 21, 22, 23, 24, AND 26 RE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE FAMILY RESIDENCE PER LOT. OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

17) DRAINAGE AND SEWER EASEMENT GRANTED WITH PLAT 2020-27 TO BE ELIMINATED WHEN PHASE II SEWER CONNECTION IS COMPLETED.



5/8" x 36" REBAR WITH
RED PLASTIC CAP



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP WITH CLEAR
DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 23 JANUARY 2023



PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____ , DATED _____ , 2023, AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, ANCHORAGE, ALASKA.

_____DATED _____ , 2023
CHAIRMAN OF THE PLANNING COMMISSION
CITY AND BOROUGH OF JUNEAU

ATTEST:

_____
MUNICIPAL CLERK
CITY AND BOROUGH OF JUNEAU

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTAS SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

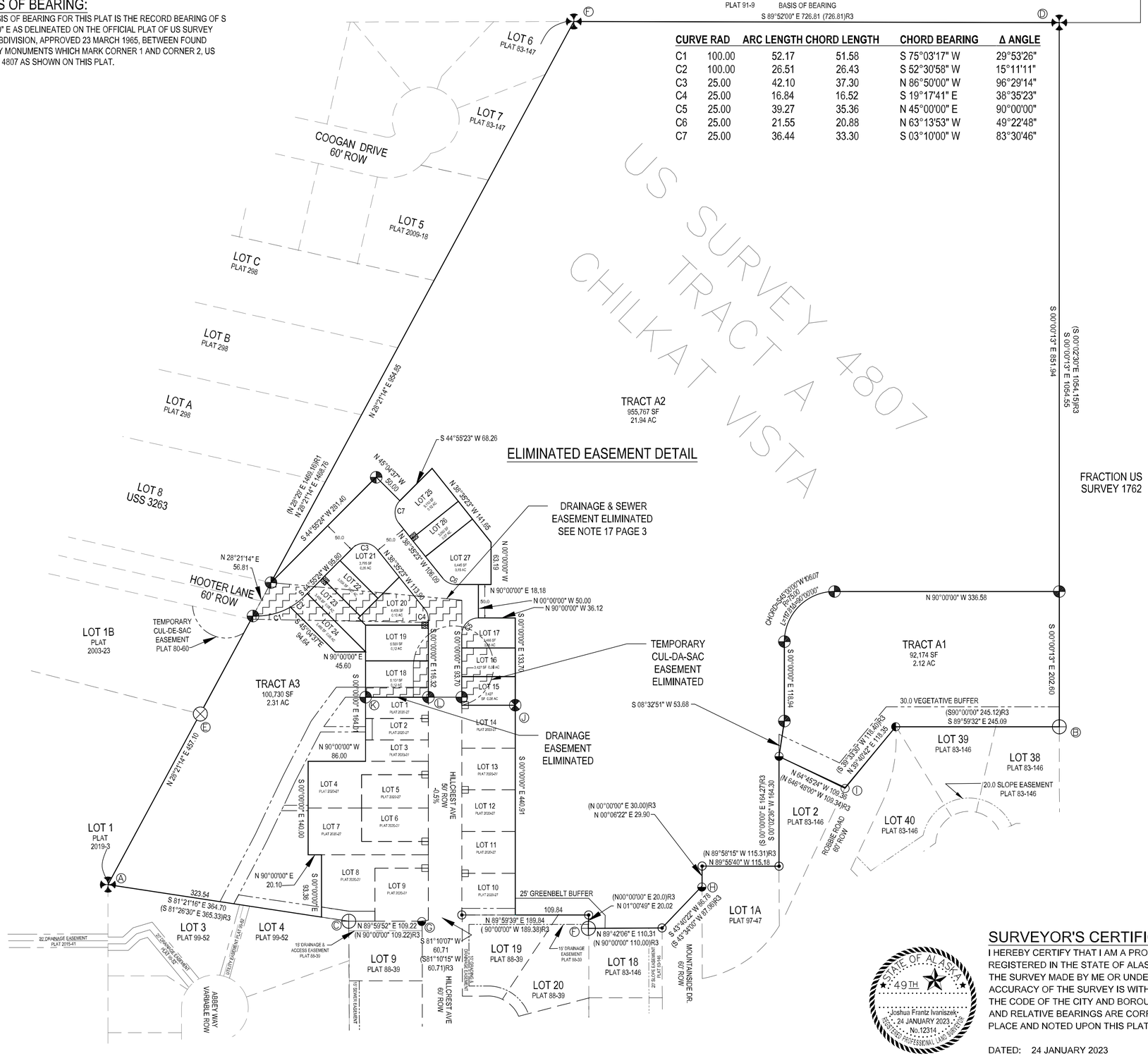
SMF:	SCALE:	DATE:	SHEET NO.
2022-03	NTS	24 JANUARY 2023	3 OF 4

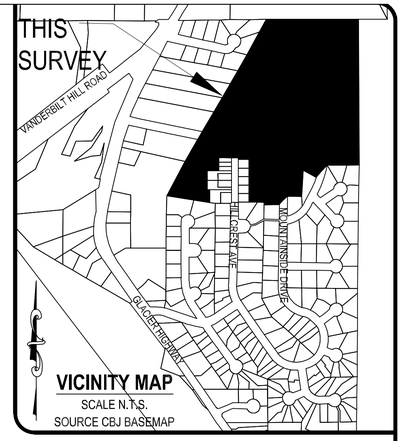
BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF S 89° 52'00" E AS DELINEATED ON THE OFFICIAL PLAT OF US SURVEY 4807 SUBDIVISION, APPROVED 23 MARCH 1965, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK CORNER 1 AND CORNER 2, US SURVEY 4807 AS SHOWN ON THIS PLAT.

LOT 2
PLAT 91-9
BASIS OF BEARING
S 89°52'00" E 726.81 (726.81)R3

CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	100.00	52.17	51.58	S 75°03'17" W	29°53'26"
C2	100.00	26.51	26.43	S 52°30'58" W	15°11'11"
C3	25.00	42.10	37.30	N 86°50'00" W	96°29'14"
C4	25.00	16.84	16.52	S 19°17'41" E	38°35'23"
C5	25.00	39.27	35.36	N 45°00'00" E	90°00'00"
C6	25.00	21.55	20.88	N 63°13'53" W	49°22'48"
C7	25.00	36.44	33.30	S 03°10'00" W	83°30'46"





VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R4 RECORD INFORMATION FROM PLAT No. 2020-27
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY
- EASEMENTS VACATED THIS SURVEY

VACATED EASEMENT DETAIL
1"=80'

0 80 160 240 320

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 24 JANUARY 2023

STATE OF ALASKA 49TH
Joshua Frantz Ivanizsek
24 JANUARY 2023
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

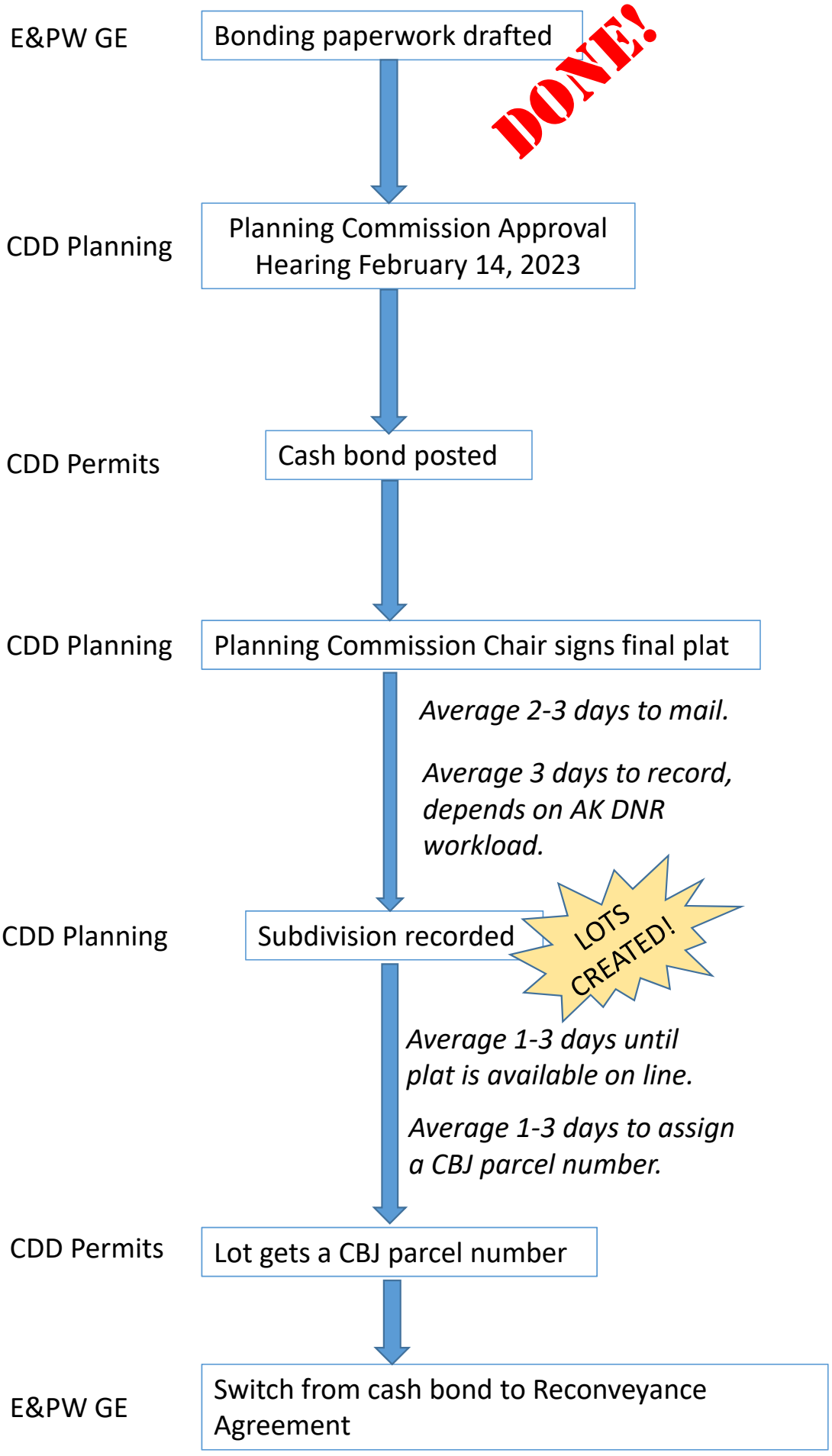
PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTAS SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMF:	SCALE:	DATE:	SHEET NO.
2022-03	1" = 80'	24 JANUARY 2023	4 OF 4



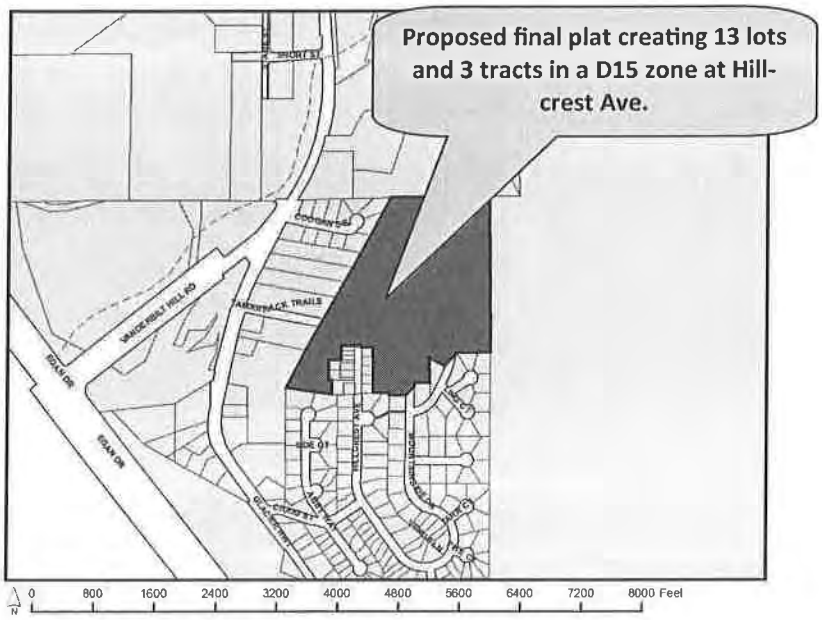
Attachment G - SMF22-03 – Phase 2 Report and Final Plat

Attachment H - Bonding flow chart

Invitation to Comment

On a proposal to be heard by the CBJ Planning Commission

Your Community, Your Voice



CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT
155 S. Seward Street Juneau, Alaska 99801

TO:

An application has been submitted for consideration and public hearing by the Planning Commission. Applicant requests a final plat review for Chilkat Vistas Phase II creating 13 (thirteen) lots and 3 (three) tracts at **Hillcrest Ave** in a **D15 zone**.

PROJECT INFORMATION:
Project Information can be found at:
https://juneau.org/community-development/short-term-projects

PLANNING COMMISSION DOCUMENTS:
Staff Report expected to be posted **February 6, 2023** at
https://juneau.org/community-development/planning-commission
Find hearing results, meeting minutes, and more here, as well.

Now through Jan. 23	Jan. 23— noon, Feb. 10	HEARING DATE & TIME: 7:00 pm, Feb. 14 2023	Feb. 15, 2023
Comments received during this period will be sent to the Planner, **Irene Gallion,** to be included as an attachment in the staff report.	Comments received during this period will be sent to Commissioners to read in preparation for the hearing.	This meeting will be held in person and by remote participation. For remote participation: join the Webinar by visiting https://juneau.zoom.us/j/82195817761 and use the Webinar ID: 821 9581 7761 OR join by telephone, calling: 1-253-215-8782 and enter the Webinar ID (above). You may also participate in person in City Hall Assembly Chambers, 155 S. Seward Street, Juneau, Alaska.	The results of the hearing will be posted online.

FOR DETAILS OR QUESTIONS,

Phone: **(907)586-0753 ext. 4130**◆
Email: **pc_comments@juneau.gov**
Mail: **Community Development, 155 S. Seward Street, Juneau AK 99801**

Case No.: SMF2022 0003
Parcel No.: 7B1101110011
CBJ Parcel Viewer: http://epv.juneau.org

Printed January 4, 2023

Attachment G - SMF22-03 - Phase 2 Report and Final Plat
Attachment I - Abutters Notice

Irene Gallion

From: Dan Jager
Sent: Wednesday, December 28, 2022 1:29 PM
To: Irene Gallion
Subject: RE: SMP22-04/ SMF?: Final Plat Review

Hi Irene, I don't think there is anything to add from the fire side. Thanks!

Daniel M. Jager
Fire Marshal

Capital City Fire Rescue
820 Glacier Avenue
Juneau, Alaska 99801
907-586-5322 Ext. 4323 (Office)
907-586-8323 (Fax)

"If it is predictable, then it is preventable.
If it is preventable then it is not an accident".

From: Irene Gallion <Irene.Gallion@juneau.gov>
Sent: Wednesday, December 21, 2022 10:56 AM
To: General Engineering <General_Engineering@juneau.gov>; Quinn Tracy <Quinn.Tracy@juneau.gov>; Dan Jager <Dan.Jager@juneau.gov>
Subject: SMP22-04/ SMF?: Final Plat Review

Hello all,

Chilkat is getting ready to apply for the final plat for their subdivision. Attached is their latest subdivision submission. I've also attached our review notes from previous iterations, ideally to make it easier to double check them. Please review and let me know if this is ready to be finalized.

This is one of multiple items they are working on for finalization, including bonding and paying taxes.

If you are unable to review by December 30, let me know and we can work out a date.

Thanks!

Irene Gallion | Senior Planner
Community Development Department | City & Borough of Juneau, AK
Location: 230 S. Franklin Street | 4th Floor Marine View Building
Office: 907.586.0753 X2

Fostering excellence in development for this generation and the next.

Irene Gallion

From: Chilkat Vistas <chilkatvistas@gmail.com>
Sent: Monday, January 30, 2023 2:43 PM
To: Irene Gallion
Subject: Notice sign posted
Attachments: 20230130_144154.jpg

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Its posted at the end of hillcrest Ave.

Thanks!


PUBLIC NOTICE

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/community-development
155 S. Seward Street • Juneau, AK 99801

August 30, 2023

MEMORANDUM

To: **Michael Heumann, Chilkat Vistas**

From: **David Matthew Peterson, Planner II, CBJ**

Case Number: **SMP2023-0001**

Legal Description: **Chilkat Vistas Tract A2**

Parcel No.: **7B1001160013**

RE: The subdivision resulting in: 19 single family dwelling lots, and 2 large tracts.

The following consolidated review comments should be addressed prior to the plat being approved for preliminary plat approval/as a condition of preliminary plat approval. A further review of the preliminary plat may result in additional comments if new issues arise from changes made to the draft plat reviewed for this memorandum.

CCFR

1. No revisions needed.

CBJ Cartography

1. Call out "THIS SURVEY" in the vicinity map.
2. Label Hillcrest Ave. and Hooter Ln.
3. Add the "L" in "LOT" for Lot 10.
4. Use a heavier line weight for TRACT A2A that is consistent with other surveyed lots.
5. Use a dashed line type for adjacent property boundaries, such as +west boundary of TRACT A3 and north boundary of Lot 2, Lot 40, Lot 39, Lot 38, etc.
6. In the title block on both sheets, add "PHASE 2" after "TRACT A2 CHILKAT VISTAS SUBDIVISION".
7. On sheet 2, revise the title block from "PHASE 2" to "PHASE 3".
8. Label "PLAT 2020-27" and "PLAT 2023-0" with a consistent font size on adjacent lots. Some of the lots also are missing the label. It would also be ok to just remove the plat labels from all the adjacent lots.
9. Move electrical easement symbol in the legend down so it doesn't overlap with the record information text.

10. Add a vacated lot line symbol for the lot lines across Mountainside Drive that were vacated.
11. Label adjacent LOT DESERET SUBD. to the north of Tract A2A, FRACTION US SURVEY 1762 to the east, and USS 3263 lots to the west.
12. (See Attached Plat Mark-up)

General Engineering

1. (See Attached Plat Mark-up)

Zoning

1. Add CBJ Case number “SMP2023-0001”.

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF S 89° 52'00" E AS DELINEATED ON THE OFFICIAL PLAT OF US SURVEY 4807 SUBDIVISION, APPROVED 23 MARCH 1965, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK CORNER 1 AND CORNER 2, US SURVEY 4807 AS SHOWN ON THIS PLAT.

LINE TYPE

REMOVE IF NOT NEEDED

IF THESE WERE ESTABLISHED THIS SURVEY, PLEASE PROVIDE DIMENSIONS AND LOCATION RELATIVE TO SOMETHING.

CHANGE TO EASEMENT LINE TYPE

LINE TYPE

USE CONSISTENT LEADER SCALE THROUGHOUT

WERE THE ELECTRICAL EASEMENTS SHOWN ACTUALLY ESTABLISHED THIS SURVEY?

NEED CONSISTENCY IN LINE TYPES. SHOULD ALL UNSURVEYED LINES BE GREY?

BASIS OF BEARING
S 89°52'00" E 726.81 (726.81)R3

S 00°00'13" E 851.94

N 28°21'14" E 854.85

N 90°00'00" W 308.86

N 90°00'00" W 336.57

N 38°35'23" W 19.58

S 44°55'23" W 68.26

N 45°04'37" W 50.00

S 44°55'24" W 223.20

N 38°35'23" W 122.07

N 90°00'00" W 379.55

N 89°59'39" E 189.84
(90°00'00" W 189.38)R3

N 89°42'06" E 110.31
(N 90°00'00" E 110.00)R3

N 01°00'49" E 20.02
(N 00°00'00" E 20.00)R3

S 89°55'40" E 115.18
(N 89°58'15" W 115.31)R3

N 00°06'22" E 29.90
(N 00°00'00" E 30.00)R3

S 63°40'22" W 86.78
(S 63°34'09" W 87.00)R3

N 64°46'34" W 109.36
(N 64°48'00" W 109.34)R3

S 00°00'13" E 164.27(R2
S00°06'33"W 164.30

N 80°19'16" W 59.64

N 90°00'00" E 84.83

N 90°00'00" E 98.32

N 90°00'00" E 336.57

N 90°00'00" E 110.31

N 90°00'00" E 103.42

N 90°00'00" E 100.52

N 90°00'00" E 103.60

N 90°00'00" E 106.68

S 35°20'52" W 111.66

N 51°48'58" E 93.34

S 56°20'36" W 111.93

N 41°00'00" W 217.28

L=170.91(S90°00'00" R=75.00 CHORD=S45°00'00"W 106.07

TRACT A3

TRACT A2B
57,055 SF
1.31 AC

TRACT A1

TRACT A2
751,006 SF
17.24 AC

LOT 1 PLAT 2020-07
LOT 2 PLAT 2020-07
LOT 3 PLAT 2020-07
LOT 4 PLAT 2020-07
LOT 5 PLAT 2020-07
LOT 6 PLAT 2020-07
LOT 7 PLAT 2020-07
LOT 8 PLAT 2020-07
LOT 9 PLAT 2020-07
LOT 10 PLAT 2020-07
LOT 11 PLAT 2020-07
LOT 13 PLAT 2020-07
LOT 14 PLAT 2020-07
LOT 15 PLAT 2023-07
LOT 16 PLAT 2023-07
LOT 17 PLAT 2023-07
LOT 18
LOT 19
LOT 20 PLAT 2023-07
LOT 21
LOT 22
LOT 23
LOT 24
LOT 27 PLAT 2023-07
LOT 28 6,844 SF 0.16 AC
LOT 29 6,831 SF 0.16 AC
LOT 30 7,795 SF 0.18 AC
LOT 31 7,794 SF 0.18 AC
LOT 32 7,832 SF 0.18 AC
LOT 33 8,993 SF 0.21 AC
LOT 34 6,272 SF 0.14 AC
LOT 35 5,167 SF 0.12 AC
LOT 36 5,173 SF 0.12 AC
LOT 37 5,362 SF 0.12 AC
LOT 38 5,530 SF 0.13 AC 109.77
LOT 39 5,026 SF 0.12 AC
LOT 40 5,159 SF 0.12 AC
LOT 41 5,396 SF 0.12 AC
LOT 42 5,633 SF 0.13 AC
LOT 43 5,866 SF 0.13 AC
LOT 44 5,609 SF 0.13 AC
LOT 45 5,739 SF 0.13 AC
LOT 46 5,186 SF 0.12 AC
LOT 25 PLAT 2023-07
LOT 26 PLAT 2023-07
LOT 1A PLAT 97-47
LOT 2 PLAT 83-146
LOT 18 PLAT 83-146
LOT 19 PLAT 88-39
LOT 20 PLAT 88-39
LOT 38 PLAT 83-146
LOT 39 PLAT 83-146
LOT 40 PLAT 83-146

MOUNTAINSIDE DR. S 03°24'59" W 60' ROW

ROBBIE ROAD 60' ROW

MOUNTAINSIDE DR. 60' ROW

25' GREENBELT BUFFER 109.84

30.0 VEGETATIVE BUFFER

(S90°00'00" 245.12)R3
S 89°59'32" E 245.09

S 39°33'58" W 118.40(R3
N 39°40'42" E 118.35

20.0 SLOPE EASEMENT PLAT 83-146

15' DRAINAGE EASEMENT PLAT 88-39

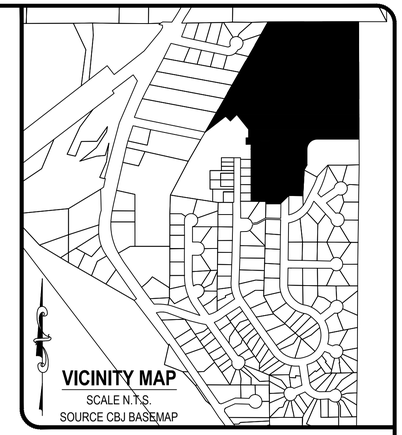
25' SLOPE EASEMENT PLAT 83-146

CURVE TABLE

CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	150.00	60.69	60.28	N 78°24'30" W	23°10'59"
C2	150.00	65.06	64.56	N 54°23'26" W	24°51'11"
C3	150.00	76.35	75.53	N 27°22'53" W	29°09'54"
C4	210.00	59.43	59.24	N 04°41'28" W	16°12'56"
C5	210.00	4.63	4.63	N 03°24'59" E	1°15'50"
C6	150.00	20.91	20.89	N 01°06'28" E	7°59'10"
C7	150.00	26.19	26.15	N 07°53'09" W	10°00'09"
C8	90.00	121.27	112.30	S 51°23'58" E	77°12'04"

LINE TABLE

LINE	BEARING	LENGTH
L1	S 08°32'51" W	13.72
L2	S 08°32'51" W	40.00
L3	S 00°02'36" W	11.45
L4	N12°47'56" W	43.27
L5	N12°47'56" W	38.04
L6	S12°47'56" E	5.23
L7	N 90°00'00" E	9.40



LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 12314-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (S00°06'33"W)R4 RECORD INFORMATION FROM PLAT No. 2020-27
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY

1"=80'

0 80 160 240 320

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 21 JULY 2023

STATE OF ALASKA 49TH
Joshua Frantz Ivaniszek
21 JULY 2023
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 3
SUBDIVISION OF
TRACT A2 CHILKAT VISTAS SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

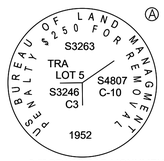
OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMF:	SCALE:	DATE:	SHEET NO.
2023-XX	1" = 80'	21 JULY 2023	1 OF 2

RECOVERED MONUMENT DESCRIPTIONS:

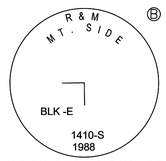
N.T.S.

Ⓐ



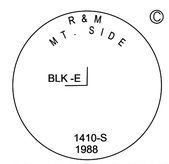
2.5" BRASS CAP MONUMENT

Ⓑ



3.25" ALUMINUM CAP MONUMENT

Ⓒ



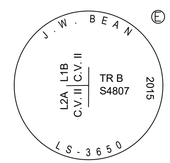
3.25" ALUMINUM CAP MONUMENT

Ⓓ



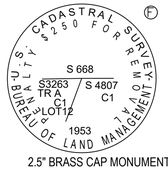
2.5" BRASS CAP MONUMENT

Ⓔ



3.25" ALUMINUM CAP MONUMENT
FOUND J.W. BEAN MONUMENT
S 61°38'46" E 0.37 FROM
US SURVEY 4807 BOUNDARY
MONUMENT NOT ACCEPTED

Ⓕ



2.5" BRASS CAP MONUMENT

Ⓖ

FOUND J.W. BEAN REBAR MONUMENT
S 01°34'23" W0.62 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE WITH
ALASKA DNR

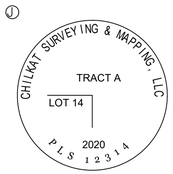
Ⓗ

FOUND JW BEAN REBAR
S 11°57'46"W 1.60 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓘ

FOUND #5 REBAR
S 04°55'56"W 1.29 FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE
WITH ALASKA DNR

Ⓙ



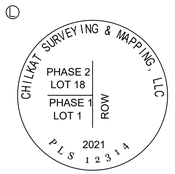
PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓚ



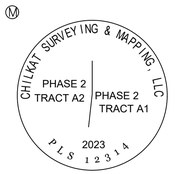
PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓛ



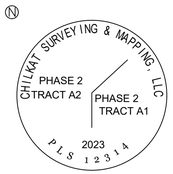
PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓜ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓝ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓞ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓟ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

Ⓠ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP

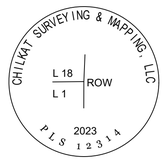
Ⓡ



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP



5/8" x 36" REBAR WITH
RED PLASTIC CAP



PRIMARY MONUMENT
2.5" x 30" ALUMINUM PIPE WITH 3.25"
DIAMETER ALUMINUM CAP WITH CLEAR
DEEP 1 MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015; RAVENWOOD SUBDIVISION PLAT NO. 2019-3 RECORDED 28 JANUARY 2019; CHILKAT VISTAS SUBDIVISION PHASE 1 PLAT NO. 2020-27 RECORDED 11 AUGUST 2020; CHILKAT VISTAS SUBDIVISION PHASE 2 PLAT NO. 2023-7 RECORDED 13 MARCH 2023 ON FILE WITH THE ALASKA DEPARTMENT OF NATURAL RESOURCES RECORDERS OFFICE IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER CHILKAT VISTAS SUBDIVISION PHASE 3 DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET. ALL REQUIRED CHILKAT VISTAS SUBDIVISION PHASE 3 PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12.120 BEST MANAGEMENT PRACTICES.

8) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY.
WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

9) OTHER THAN SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10 FEET IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____ , DATED _____ , 2023, AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, ANCHORAGE, ALASKA.

_____DATED _____ , 2023

CHAIRMAN OF THE PLANNING COMMISSION

CITY AND BOROUGH OF JUNEAU

ATTEST:

_____

MUNICIPAL CLERK

CITY AND BOROUGH OF JUNEAU

OWNERSHIP CERTIFICATE:

WE, HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____,2023

_____
WILLIAM C. HEUMANN

DATE:_____,2023

_____
MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS___ DAY OF _____, 2023, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 21 JULY 2023



PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 2
SUBDIVISION OF
TRACT A CHILKAT VISTAS SUBDIVISION
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMF:	SCALE:	DATE:	SHEET NO.
2023-xx	NTS	21 JULY 2023	2 OF 2

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Date: 21 JULY 2023

To: CBJ COMMUNITY DEVELPOMENT DEPARTMENT
155 SOUTH SEWARD ST.
Juneau, Alaska 99801

Subject: Lot closure reports

Remarks: The lot closure reflects the proposed subdivision of Chilkat Vistas Phase 3

Lot 28

Northing	Easting	Bearing	Distance
2379759.312	2527812.564		
		N 90°00'00" E	98.213
2379759.312	2527910.777		
		S 00°00'00" E	78.495
2379680.817	2527910.777		
		N 90°00'00" W	86.000
2379680.817	2527824.777		
		N 00°00'00" W	63.190
2379744.007	2527824.777		
		N 38°35'23" W	19.581
2379759.312	2527812.564		

Closure Error Distance> 0.00000
Total Distance> 345.479
Polyline Area: 6844 sq ft, 0.1571 acres

Lot 29

Northing	Easting	Bearing	Distance
2379680.817	2527997.803		
		N 90°00'00" W	87.026
2379680.817	2527910.777		
		N 00°00'00" W	78.495
2379759.312	2527910.777		
		N 90°00'00" E	87.026
2379759.312	2527997.803		
		S 00°00'00" E	78.495
2379680.817	2527997.803		

Closure Error Distance> 0.00000
Total Distance> 331.041
Polyline Area: 6831 sq ft, 0.1568 acres

Lot 30

Northing	Easting	Bearing	Distance
2379668.705	2528056.853		

Radius: 150.000 Chord: 60.280 Degree: 38°11'50" Dir: Left
Length: 60.693 Delta: 23°10'59" Tangent: 30.768

```
  Chord BRG: N 78°24'30" W  Rad-In: S 23°10'59" W  Rad-Out: S 00°00'00"
W
  Radius Point: 2379530.817,2527997.803
2379680.817   2527997.803
                            N 00°00'00" W 78.495
2379759.312   2527997.803
                            N 90°00'00" E 123.618
2379759.312   2528121.421
                            S 35°28'27" W 111.259
2379668.705   2528056.853

Closure Error Distance> 0.00000
Total Distance> 374.066
Polyline Area: 7795 sq ft, 0.1789 acres

Lot 31
Northing      Easting       Bearing       Distance
2379631.117   2528109.337
  Radius: 150.000   Chord: 64.556     Degree: 38°11'50"  Dir: Left
  Length: 65.065    Delta: 24°51'11"  Tangent: 33.052
  Chord BRG: N 54°23'26" W  Rad-In: S 48°02'10" W  Rad-Out: S 23°10'59"
W
  Radius Point: 2379530.817,2527997.803
2379668.705   2528056.853
                            N 35°28'27" E 111.259
2379759.312   2528121.421
                            S 41°00'00" E 93.409
2379688.816   2528182.702
                            S 51°48'58" W 93.336
2379631.117   2528109.337

Closure Error Distance> 0.00000
Total Distance> 363.069
Polyline Area: 7794 sq ft, 0.1789 acres
```

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

```
Lot 32
Northing      Easting       Bearing       Distance
2379564.047   2528144.076
  Radius: 150.000   Chord: 75.532     Degree: 38°11'50"  Dir: Left
  Length: 76.354    Delta: 29°09'54"  Tangent: 39.023
  Chord BRG: N 27°22'53" W  Rad-In: S 77°12'04" W  Rad-Out: S 48°02'10"
W
  Radius Point: 2379530.817,2527997.803
2379631.117   2528109.337
                            N 51°48'58" E 93.336
2379688.816   2528182.702
                            S 41°00'00" E 83.129
2379626.078   2528237.240
                            S 56°20'36" W 111.926
2379564.047   2528144.076

Closure Error Distance> 0.00000
Total Distance> 364.745
Polyline Area: 7832 sq ft, 0.1798 acres

Lot 33
Northing      Easting       Bearing       Distance
2379564.047   2528144.076
                            S 12°47'56" E 43.266
2379521.856   2528153.660
                            N 90°00'00" E 110.308
2379521.856   2528263.969
                            N 00°00'00" W 73.474
2379595.330   2528263.969
                            N 41°00'00" W 40.741
2379626.078   2528237.240
                            S 56°20'36" W 111.926
2379564.047   2528144.076

Closure Error Distance> 0.00000
Total Distance> 379.715
Polyline Area: 8993 sq ft, 0.2064 acres
```

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

```
Lot 34
Northing      Easting       Bearing       Distance
2379462.820   2528158.505
  Radius: 210.000   Chord: 59.235     Degree: 27°17'01"  Dir: Left
  Length: 59.433    Delta: 16°12'56"  Tangent: 29.916
  Chord BRG: N 04°41'28" W  Rad-In: N 86°35'01" W  Rad-Out: S 77°12'04"
W
  Radius Point: 2379475.335,2527948.878
2379521.856   2528153.660
                            N 90°00'00" E 110.308
2379521.856   2528263.969
                            S 00°00'00" E 45.471
2379476.385   2528263.969
                            S 08°32'51" W 13.717
2379462.820   2528261.930
                            N 90°00'00" W 103.425
2379462.820   2528158.505

Closure Error Distance> 0.00000
Total Distance> 332.355
Polyline Area: 6272 sq ft, 0.1440 acres

LOT 35
Northing      Easting       Bearing       Distance
2379462.820   2528158.505
                            N 90°00'00" E 103.425
2379462.820   2528261.930
                            S 08°32'51" W 39.996
2379423.268   2528255.985
                            S 00°02'36" W 11.448
2379411.820   2528255.977
                            N 90°00'00" W 100.517
2379411.820   2528155.460
                            N 03°24'59" E 46.459
2379458.196   2528158.229
  Radius: 210.000   Chord: 4.632      Degree: 27°17'01"  Dir: Left
  Length: 4.632     Delta: 1°15'50"   Tangent: 2.316
  Chord BRG: N 03°24'59" E  Rad-In: N 85°57'06" W  Rad-Out: N 87°12'55"
W
  Radius Point: 2379473.022,2527948.753
2379462.820   2528158.505

Closure Error Distance> 0.00000
Total Distance> 306.477
Polyline Area: 5167 sq ft, 0.1186 acres
```

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

LOT 36

Northing	Easting	Bearing	Distance
2379361.135	2528256.032		
		N 90°00'00" W	103.598
2379361.135	2528152.434		
		N 03°24'59" E	50.775
2379411.820	2528155.460		
		N 90°00'00" E	100.534
2379411.820	2528255.994		
		S 00°02'36" E	50.685
2379361.135	2528256.032		

Closure Error Distance> 0.00000
Total Distance> 305.593
Polyline Area: 5173 sq ft, 0.1188 acres

Lot 37

Northing	Easting	Bearing	Distance
2379310.138	2528256.071		
		N 90°00'00" W	106.681
2379310.138	2528149.390		
		N 03°24'59" E	51.087
2379361.135	2528152.434		
		N 90°00'00" E	103.598
2379361.135	2528256.032		
		S 00°02'36" E	50.996
2379310.138	2528256.071		

Closure Error Distance> 0.00000
Total Distance> 312.363
Polyline Area: 5362 sq ft, 0.1231 acres

Lot 38

Northing	Easting	Bearing	Distance
2379259.107	2528146.343		
		S 89°55'40" E	109.767
2379258.969	2528256.110		
		N 00°02'36" W	51.170
2379310.138	2528256.071		
		N 90°00'00" W	106.681
2379310.138	2528149.390		
		S 03°24'59" W	51.122
2379259.107	2528146.343		

Closure Error Distance> 0.00000
Total Distance> 318.740
Polyline Area: 5530 sq ft, 0.1270 acres

Lot 39

Northing	Easting	Bearing	Distance
2379166.484	2528080.708		
		S 89°42'06" W	76.170
2379166.088	2528004.539		
		N 00°00'00" W	64.570
2379230.658	2528004.539		
		N 90°00'00" E	80.000
2379230.658	2528084.539		
		S 03°24'59" W	64.288
2379166.484	2528080.708		

Closure Error Distance> 0.00000
Total Distance> 285.028
Polyline Area: 5026 sq ft, 0.1154 acres

Lot 40

Northing	Easting	Bearing	Distance
2379293.658	2528088.299		
		N 90°00'00" W	83.763
2379293.658	2528004.536		
		S 00°00'00" E	63.000
2379230.658	2528004.536		
		N 90°00'00" E	80.002
2379230.658	2528084.538		
		N 03°24'59" E	63.112
2379293.658	2528088.299		

Closure Error Distance> 0.00000
Total Distance> 289.878
Polyline Area: 5159 sq ft, 0.1184 acres

Lot 41

Northing	Easting	Bearing	Distance
2379356.658	2528092.060		
		N 90°00'00" W	87.525
2379356.658	2528004.536		
		S 00°00'00" E	63.000
2379293.658	2528004.536		
		N 90°00'00" E	83.763
2379293.658	2528088.299		
		N 03°24'59" E	63.112
2379356.658	2528092.060		

Closure Error Distance> 0.00000
Total Distance> 297.400
Polyline Area: 5396 sq ft, 0.1239 acres

```
Lot 42
Northing      Easting       Bearing       Distance
2379419.658   2528095.821
                            S 03°24'59" W 63.112
2379356.658   2528092.060
                            N 90°00'00" W 87.525
2379356.658   2528004.536
                            N 00°00'00" W 63.000
2379419.658   2528004.536
                            N 90°00'00" E 91.286
2379419.658   2528095.821

Closure Error Distance> 0.00000
Total Distance> 304.922
Polyline Area: 5633 sq ft, 0.1293 acres

Lot 43
Northing      Easting       Bearing       Distance
2379482.658   2528098.739
                            N 90°00'00" W 94.204
2379482.658   2528004.536
                            S 00°00'00" E 63.000
2379419.658   2528004.536
                            N 90°00'00" E 91.286
2379419.658   2528095.821
                            N 03°24'59" E 42.188
2379461.772   2528098.335
  Radius: 150.000   Chord: 20.890     Degree: 38°11'50"  Dir: Left
  Length: 20.907    Delta: 7°59'10"   Tangent: 10.471
  Chord BRG: N 01°06'28" E  Rad-In: N 84°53'57" W  Rad-Out: S 87°06'54"
W
  Radius Point: 2379475.108,2527948.929
2379482.658   2528098.739

Closure Error Distance> 0.00000
Total Distance> 311.585
Polyline Area: 5866 sq ft, 0.1347 acres
```

```
Lot 44
Northing      Easting       Bearing       Distance
2379508.564   2528095.151
                            N 12°47'56" W 38.039
2379545.658   2528086.724
                            N 90°00'00" W 82.189
2379545.658   2528004.536
                            S 00°00'00" E 63.000
2379482.658   2528004.536
                            N 90°00'00" E 94.204
2379482.658   2528098.739
  Radius: 150.000   Chord: 26.153     Degree: 38°11'50"  Dir: Left
  Length: 26.186    Delta: 10°00'09"  Tangent: 13.127
  Chord BRG: N 07°53'09" W  Rad-In: S 87°06'55" W  Rad-Out: S 77°06'46"
W
  Radius Point: 2379475.109,2527948.929
2379508.564   2528095.151

Closure Error Distance> 0.00000
Total Distance> 303.618
Polyline Area: 5609 sq ft, 0.1288 acres

LOT 45
Northing      Easting       Bearing       Distance
2379620.817   2527988.407
                            N 90°00'00" E 9.396
2379620.817   2527997.803
  Radius: 90.000    Chord: 112.300    Degree: 63°39'43"  Dir: Right
  Length: 121.267   Delta: 77°12'04"  Tangent: 71.847
  Chord BRG: S 51°23'58" E  Rad-In: S 00°00'00" E  Rad-Out: S 77°12'04"
W
  Radius Point: 2379530.817,2527997.803
2379550.755   2528085.566
                            S 12°47'56" E 5.226
2379545.658   2528086.724
                            N 90°00'00" W 98.320
2379545.658   2527988.404
                            N 00°00'00" W 75.160
2379620.818   2527988.404

Closure Error Distance> 0.00277 Error Bearing> S 61°57'16" E
Closure Precision> 1 in 111589.9 Total Distance> 309.369
Polyline Area: 5739 sq ft, 0.1317 acres
```

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

Lot 46

Northing	Easting	Bearing	Distance
2379620.817	2527919.407		
		N 90°00'00" E	69.000
2379620.817	2527988.407		
		S 00°00'00" E	75.159
2379545.658	2527988.407		
		N 90°00'00" W	69.000
2379545.658	2527919.407		
		N 00°00'00" W	75.159
2379620.817	2527919.407		

Closure Error Distance> 0.00000
Total Distance> 288.317
Polyline Area: 5186 sq ft, 0.1191 acres

TRACT A2B

Northing	Easting	Bearing	Distance
2379165.908	2527970.383		
		N 89°42'06" E	34.140
2379166.086	2528004.523		
		N 00°00'00" W	379.550
2379545.636	2528004.523		
		N 90°00'00" W	84.830
2379545.636	2527919.693		
		N 00°00'00" W	75.160
2379620.796	2527919.693		
		N 80°19'16" W	59.644
2379630.824	2527860.897		
		S 00°00'00" E	444.910
2379185.914	2527860.897		
		N 89°59'39" E	109.840
2379185.925	2527970.737		
		S 01°00'49" W	20.020
2379165.908	2527970.383		

Closure Error Distance> 0.00000
Total Distance> 1208.094
Polyline Area: 57055 sq ft, 1.3098 acres

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, AK 99801
907 957-1908 chilkat.surveying@gmail.com

```
Tract A2A
Northing      Easting       Bearing       Distance
2379595.330   2528263.969
                            N 41°00'00" W 217.279
2379759.312   2528121.421
                            N 90°00'00" W 308.857
2379759.312   2527812.564
                            N 38°35'23" W 122.069
2379854.725   2527736.425
                            S 44°55'23" W 68.262
2379806.392   2527688.221
                            N 45°04'36" W 50.000
2379841.700   2527652.818
                            S 44°55'24" W 223.202
2379683.661   2527495.202
                            N 28°21'14" E 954.853
2380523.961   2527948.677
                            S 89°52'00" E 726.810
2380522.270   2528675.485
                            S 00°00'13" E 851.940
2379670.330   2528675.539
                            N 90°00'00" W 336.570
2379670.330   2528338.969
  Radius: 75.000    Chord: 106.066    Degree: 76°23'40"  Dir: Left
  Length: 117.810   Delta: 90°00'00"  Tangent: 75.000
  Chord BRG: S45°00'00" W  Rad-In: S00°00'00" E  Rad-Out: N 90°00'00" E
  Radius Point: 2379595.330,2528338.969
2379595.330   2528263.969

Closure Error Distance> 0.00000
Total Distance> 3977.651
Polyline Area: 751006 sq ft, 17.2407 acres
```

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF S 89° 52'00" E AS DELINEATED ON THE OFFICIAL PLAT OF US SURVEY 4807 SUBDIVISION, APPROVED 23 MARCH 1965, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK CORNER 1 AND CORNER 2, US SURVEY 4807 AS SHOWN ON THIS PLAT.

LOT 2 DESERET SUBD.

heavier line weight

FRACTION US SURVEY 1762

Fairweather Subd.

LOT 6 LOT 7 LOT 5 LOT C LOT D LOT A LOT 8

USS 3263

TRACT A3

TRACT A2A
751,808 SF
17.24 AC

TRACT A2B
57,866 SF
1.31 AC

TRACT A1

HOOTER LN.

HILLCREST AVE

MOUNTAINSIDE DR.

dashed line type

lot line vacated

lot line vacated

25' GREENBELT BUFFER

30.0 VEGETATIVE BUFFER

20.0 SLOPE EASEMENT PLAT 83-146

LOT 39 PLAT 83-146

LOT 38 PLAT 83-146

LOT 40 PLAT 83-146

LOT 2 PLAT 83-146

LOT 19 PLAT 88-39

LOT 20 PLAT 88-39

LOT 18 PLAT 83-146

LOT 1A PLAT 87-47

use dash line type

move easement symbol down

CURVE TABLE

CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	150.00	60.69	60.28	N 78°24'30" W	23°10'59"
C2	150.00	65.06	64.56	N 54°23'26" W	24°51'11"
C3	150.00	76.35	75.53	N 27°22'53" W	29°09'54"
C4	210.00	59.43	59.24	N 04°41'28" W	16°12'56"
C5	210.00	4.63	4.63	N 03°24'59" E	1°15'50"
C6	150.00	20.91	20.89	N 01°06'28" E	7°59'10"
C7	150.00	26.19	26.15	N 07°53'09" W	10°00'09"
C8	90.00	121.27	112.30	S 51°23'58" E	77°12'04"

LINE TABLE

LINE	BEARING	LENGTH
L1	S 08°32'51" W	13.72
L2	S 08°32'51" W	40.00
L3	S 00°02'36" W	11.45
L4	N12°47'56" W	43.27
L5	N12°47'56" W	38.04
L6	S12°47'56" E	5.23
L7	N 90°00'00" E	9.40

This Survey

VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- JW BEAN 3650-S PRIMARY MONUMENT RECOVERED
- CHILKAT SURVEYING PRIMARY MONUMENT ESTABLISHED
- CHILKAT SURVEYING PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 12314-S SECONDARY MONUMENT RECOVERED
- 6277-S SECONDARY MONUMENT RECOVERED
- 3650-S MONUMENT RECOVERED
- #5 REBAR RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- RECORD INFORMATION FROM PLAT No. 2020-27
- ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY

1"=80'

0 80 160 240 320

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 3
SUBDIVISION OF
TRACT A2 CHILKAT VISTAS SUBDIVISION Phase 2
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMF	SCALE	DATE	SHEET NO.
2023-XX	1" = 80'	21 JULY 2023	1 OF 2

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 21 JULY 2023

STATE OF ALASKA 49TH — Joshua Frantz Ivaniszek, 21 JULY 2023, No. 12314, REGISTERED PROFESSIONAL LAND SURVEYOR

RECOVERED MONUMENT DESCRIPTIONS:

N.T.S.

Ⓐ 2.5" BRASS CAP MONUMENT

Ⓑ 3.25" ALUMINUM CAP MONUMENT

Ⓒ 3.25" ALUMINUM CAP MONUMENT

Ⓓ 2.5" BRASS CAP MONUMENT

Ⓔ 3.25" ALUMINUM CAP MONUMENT FOUND J.W. BEAN MONUMENT S 61°38'46" E 0.37 FROM US SURVEY 4807 BOUNDARY MONUMENT NOT ACCEPTED

Ⓕ 2.5" BRASS CAP MONUMENT

Ⓖ FOUND J.W. BEAN REBAR MONUMENT S 01°34'23" W0.62 FROM CORNER LOCATION MONUMENT NOT ACCEPTED NO RECORD FOUND ON FILE WITH ALASKA DNR

Ⓗ FOUND JW BEAN REBAR S 11°57'46"W 1.60 FROM CORNER LOCATION MONUMENT NOT ACCEPTED NO RECORD FOUND ON FILE WITH ALASKA DNR

Ⓘ FOUND #5 REBAR S 04°55'56"W 1.29 FROM CORNER LOCATION MONUMENT NOT ACCEPTED NO RECORD FOUND ON FILE WITH ALASKA DNR

Ⓙ PRIMARY MONUMENT 2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP

Ⓚ PRIMARY MONUMENT 2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP

Ⓛ PRIMARY MONUMENT 2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP

Ⓜ PRIMARY MONUMENT 2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP

Ⓝ PRIMARY MONUMENT 2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP

Ⓞ PRIMARY MONUMENT 2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP

Ⓟ PRIMARY MONUMENT 2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP

Ⓠ PRIMARY MONUMENT 2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP

Ⓡ PRIMARY MONUMENT 2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP

Ⓢ 5/8" x 30" REBAR WITH RED PLASTIC CAP — J F IVANISZEK O 12314S

Ⓣ PRIMARY MONUMENT 2.5" x 30" ALUMINUM PIPE WITH 3.25" DIAMETER ALUMINUM CAP WITH CLEAR DEEP I MAGNET AT THE BASE

TYPICAL SET MONUMENT DETAIL

N.T.S.

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 288 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015; RAVENWOOD SUBDIVISION PLAT NO. 2019-3 RECORDED 28 JANUARY 2019; CHILKAT VISTAS SUBDIVISION PHASE 1 PLAT NO. 2020-27 RECORDED 11 AUGUST 2020; CHILKAT VISTAS SUBDIVISION PHASE 2 PLAT NO. 2023-7 RECORDED 13 MARCH 2023 ON FILE WITH THE ALASKA DEPARTMENT OF NATURAL RESOURCES RECORDERS OFFICE IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER CHILKAT VISTAS SUBDIVISION PHASE 3 DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET. ALL REQUIRED CHILKAT VISTAS SUBDIVISION PHASE 3 PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12.129 BEST MANAGEMENT PRACTICES.

8) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

9) OTHER THAN SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10 FEET IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

OWNERSHIP CERTIFICATE:

WE, HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____ 2023 DATE: _____ 2023

WILLIAM C. HEUMANN MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS ___ DAY OF _____, 2023, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____, DATED _____, 2023, AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, ANCHORAGE, ALASKA.

_____ DATED _____, 2023
CHAIRMAN OF THE PLANNING COMMISSION
CITY AND BOROUGH OF JUNEAU

ATTEST:

_____
MUNICIPAL CLERK
CITY AND BOROUGH OF JUNEAU

SURVEYOR'S CERTIFICATE

I, JOSHUA FRANTZ IVANISZEK, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: 21 JULY 2023

STATE OF ALASKA 49TH — Joshua Frantz Ivaniszek, 21 JULY 2023, No. 12314, REGISTERED PROFESSIONAL LAND SURVEYOR

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 3
SUBDIVISION OF
TRACT A CHILKAT VISTAS SUBDIVISION phase 2
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

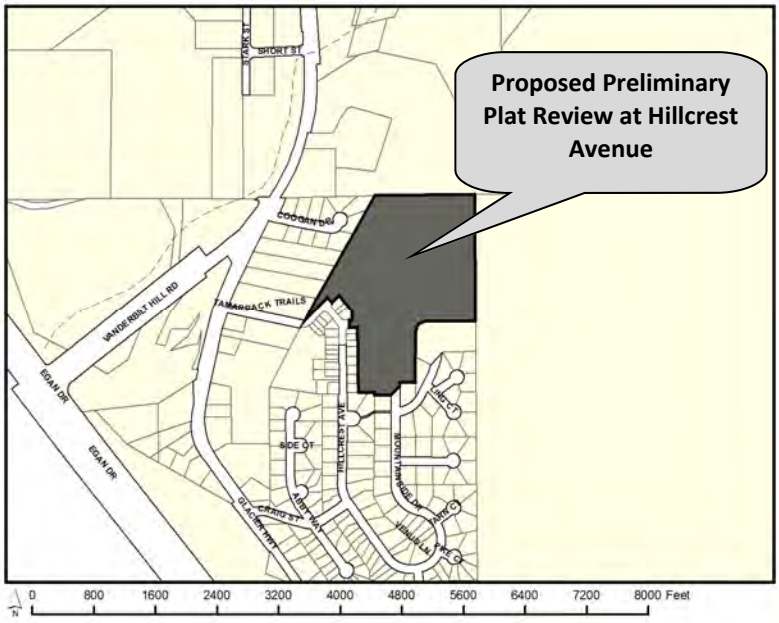
OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMF	SCALE	DATE	SHEET NO.
2023-xx	NTS	21 JULY 2023	2 OF 2

Invitation to Comment

On a proposal to be heard by the CBJ Planning Commission

Your Community, Your Voice



CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT
155 Heritage Way Juneau, Alaska 99801

TO

A **Preliminary Plat Review** has been submitted for consideration and public hearing by the Planning Commission for **the subdivision of Tract A2, Chilkat Vistas Subdivision Phase 3, which will result in 19 single family lots, and two (2) large tracts** at **Hillcrest Avenue** in a **D15** zoning district.

PROJECT INFORMATION:
Project Information can be found at:
https://juneau.org/community-development/short-term-projects

PLANNING COMMISSION DOCUMENTS:
Staff Report expected to be posted **March 18, 2024** at
https://juneau.org/community-development/planning-commission
Find hearing results, meeting minutes, and more here, as well.

Now through March 4	March 5 — noon, March 22	HEARING DATE & TIME: 7:00 pm, March 26, 2024	March 27
Comments received during this period will be sent to the Planner, **David Peterson,** to be included as an attachment in the staff report.	Comments received during this period will be sent to Commissioners to read in preparation for the hearing.	This meeting will be held in person and by remote participation. For remote participation: join the Webinar by visiting https://juneau.zoom.us/j/86797019746 and use the Webinar ID: 867 9701 9746 OR join by telephone, calling: 1-253-215-8782 and enter the Webinar ID (above). You may also participate in person in City Hall Assembly Chambers, 155 Heritage Way Juneau, Alaska.	The results of the hearing will be posted online.

FOR DETAILS OR QUESTIONS,

Phone: **(907)586-0753 ext. 4132**
Email: **pc_comments@juneau.gov or David.peterson@juneau.gov**
Mail: **Community Development, 155 Heritage Way, Juneau AK 99801**

Case No.: SMP2023 0001
Parcel No.: 7B1001160013
CBJ Parcel Viewer: http://epv.juneau.org

Printed February 28, 2024

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF S 89° 52'00" E AS DELINEATED ON THE OFFICIAL PLAT OF US SURVEY 4807 SUBDIVISION, APPROVED 23 MARCH 1965, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK CORNER 1 AND CORNER 2, US SURVEY 4807 AS SHOWN ON THIS PLAT.

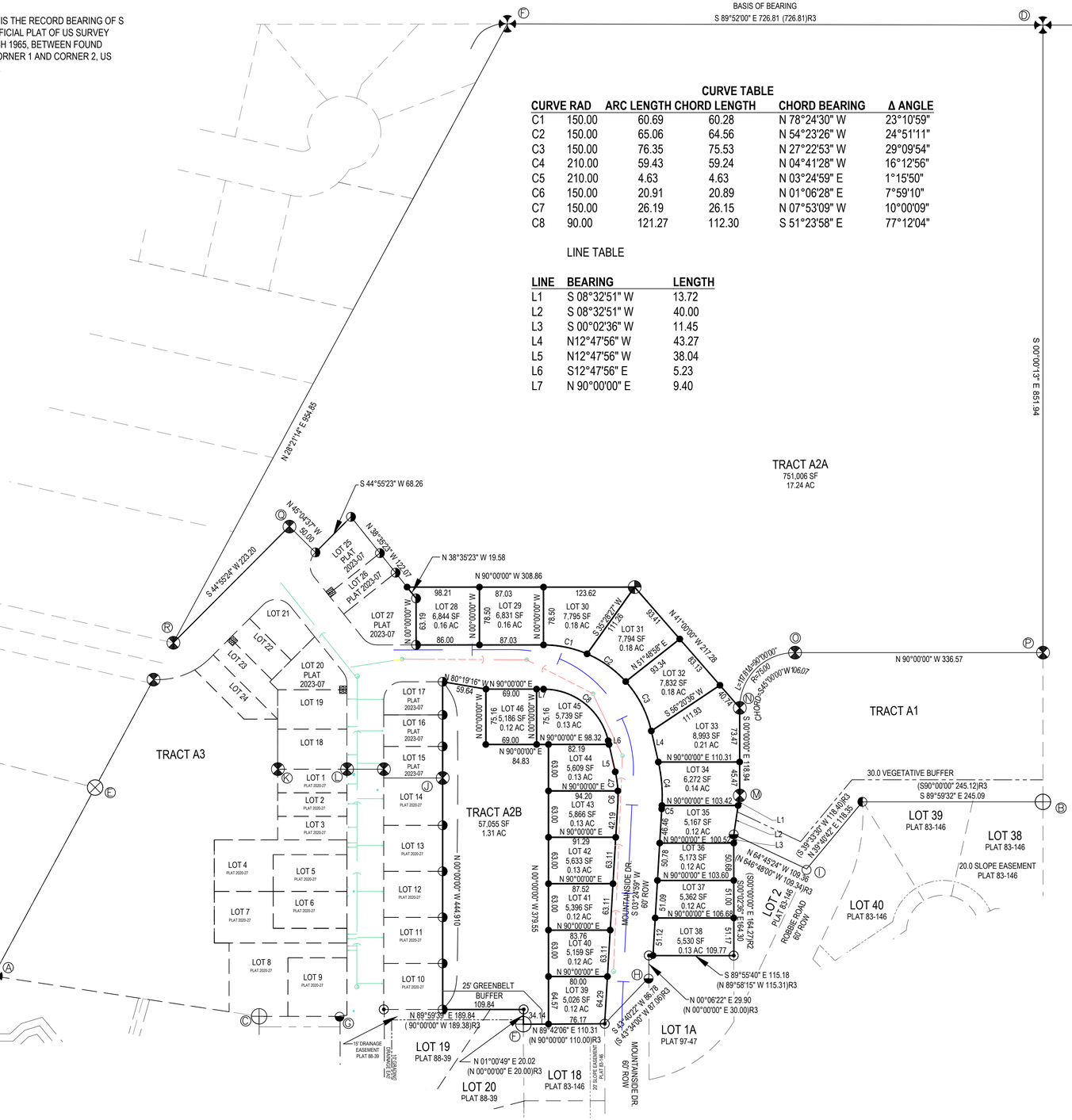
BASIS OF BEARING
S 89°52'00" E 726.81 (726.81)R3

CURVE TABLE

CURVE	RAD	ARC LENGTH	CHORD LENGTH	CHORD BEARING	Δ ANGLE
C1	150.00	60.69	60.28	N 78°24'30" W	23°10'59"
C2	150.00	65.06	64.56	N 54°23'26" W	24°51'11"
C3	150.00	76.35	75.53	N 27°22'53" W	29°09'54"
C4	210.00	59.43	59.24	N 04°41'28" W	16°12'56"
C5	210.00	4.63	4.63	N 03°24'59" E	1°15'50"
C6	150.00	20.91	20.89	N 01°06'28" E	7°59'10"
C7	150.00	26.19	26.15	N 07°53'09" W	10°00'09"
C8	90.00	121.27	112.30	S 51°23'58" E	77°12'04"

LINE TABLE

LINE	BEARING	LENGTH
L1	S 08°32'51" W	13.72
L2	S 08°32'51" W	40.00
L3	S 00°02'36" W	11.45
L4	N12°47'56" W	43.27
L5	N12°47'56" W	38.04
L6	S12°47'56" E	5.23
L7	N 90°00'00" E	9.40



MEMORANDUM

DATE: February 28, 2020

TO: William Heumann, Owner

FROM: Michael Read, PE, Principal, TENW

SUBJECT: Richland Manor- Traffic Impact Analysis
TENW Project No. 3709

This memorandum summarizes a traffic impact analysis of *Richland Manor*, a proposed residential development in the vicinity of Hooter Lane and Craig Street north of Glacier Highway in Juneau, Alaska. This memo includes a summary of the project, a description of existing transportation conditions within the immediate site vicinity, methodology used to derive the trip generation estimate, traffic operational traffic impact analysis at key study intersections, review of site access, and identification of any transportation mitigation measures.

Project Description

The proposed *Richland Manor r*esidential development would consist of up to 47 single family homes (detached) and approximately 356 multifamily homes in the vicinity of Hooter Lane and Craig Street north of Glacier Highway in Juneau, Alaska. A site vicinity map is provided in Figure 1. The proposed development would be constructed in phases, beginning in 2020, with full build-out and occupancy anticipated by 2029.

Primary vehicular access would be provided via construction of a public roadway within the undeveloped right-of-way of Hooter Lane, with secondary vehicular access via Hillcrest Drive and Abey Way via Craig Street. Additional gated access would be provided onto Robbie Road for emergency vehicles only. A conceptual site plan has been developed for the project and is shown in Figure 2.

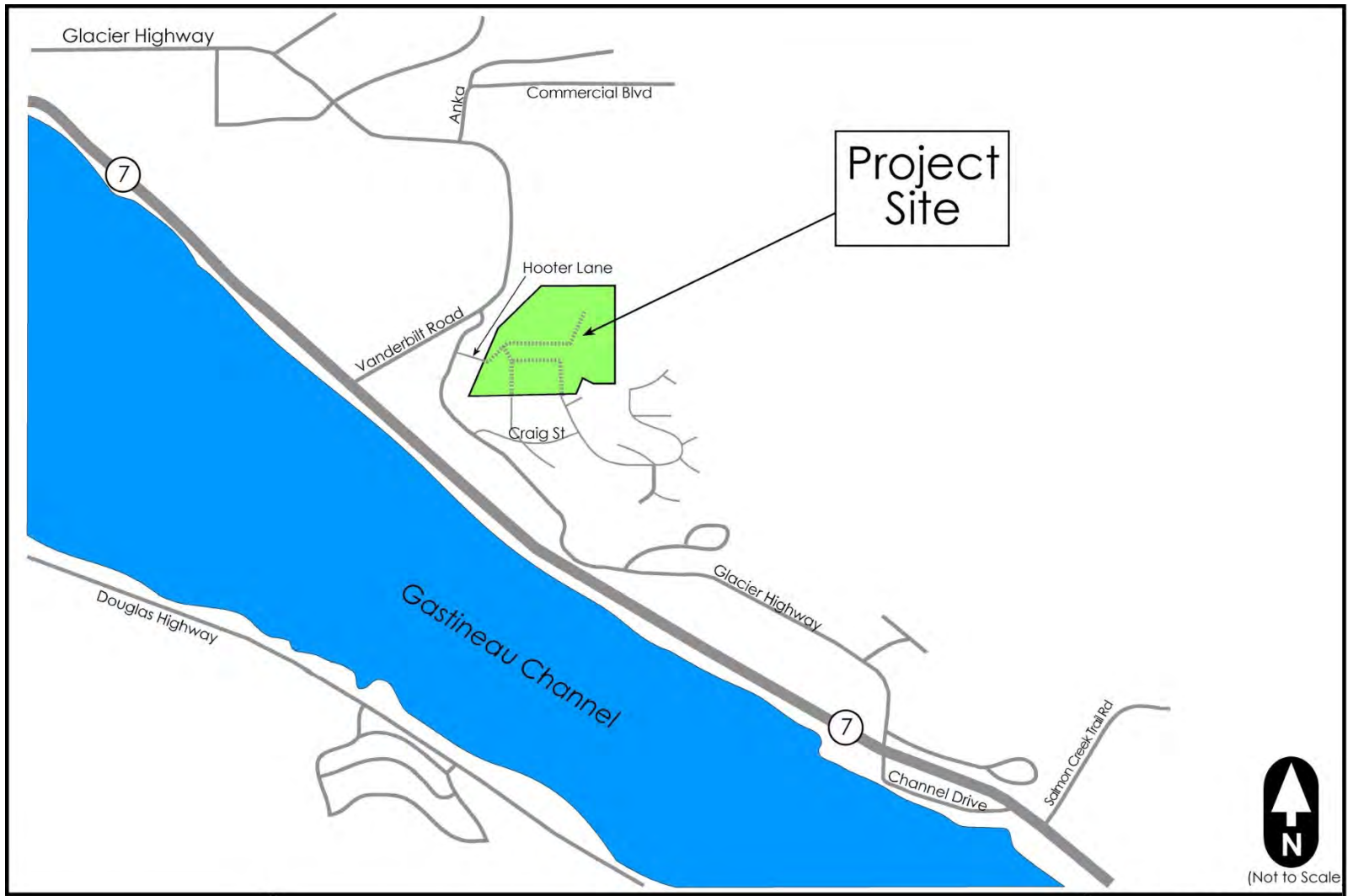
Existing Transportation Conditions

This section includes an inventory of existing roadway conditions, traffic volumes, levels of service and planned roadway improvements.

Roadway Conditions

The following paragraphs describe existing arterial roadways that would be used for site access. Roadway characteristics are described in terms of number of lanes, speed limits, shoulder types and widths.

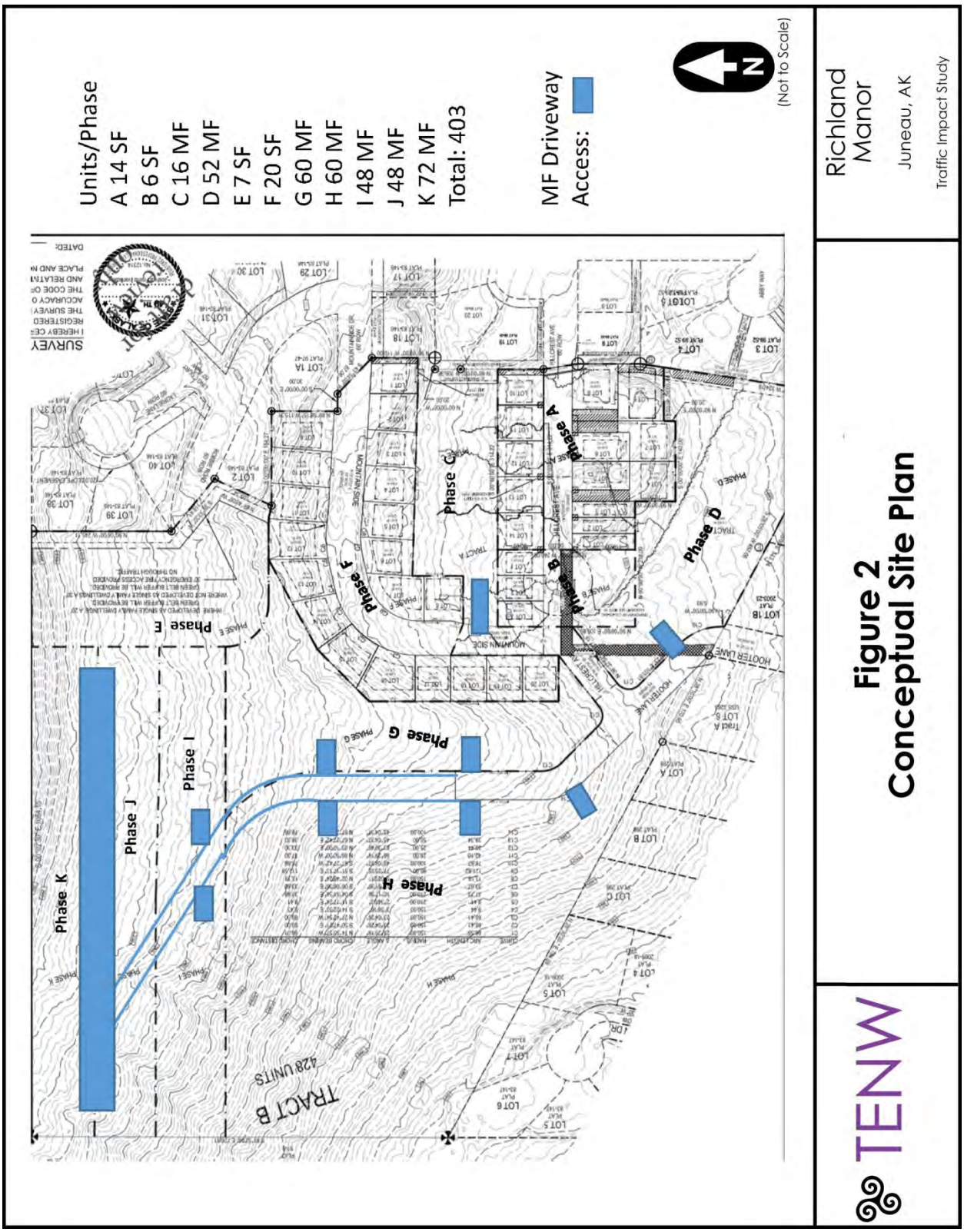
Glacier Highway is a three-lane roadway with a center southbound left-turn lane north of Glacier Highway. East of Vanderbilt Road and Glacier Highway, the roadway consists of two lanes with curbs and gutters on both sides of the street, and a sidewalk on the north side of street. Bicycle lanes are provided on both sides of the street. The posted speed limit is 40 mph.



TENW

Figure 1
Project Site Vicinity

Richland Manor
Juneau, AK
Traffic Impact Study



Attachment K - Final Traffic Impact Analysis

Vanderbilt Road is a three-lane roadway with a center refuge lane, which transitions into a left turn lane at Egan Drive. Bicycle lanes are provided on both sides of the street. The posted speed limit is 45 mph south of Glacier Highway.

Hillcrest Drive is a local street approximately 26 feet in width. The roadway is unchannelized with two travel lanes, curbs, and gutters, but no sidewalks. There is no posted speed.

Traffic Counts

Peak hour traffic volumes represent the highest hourly volume of vehicles passing through an intersection during a typical 7-9 a.m. and 4-6 p.m. weekday peak period. Peak period turning movement counts at several study intersections during the afternoon p.m. peak period were conducted by PDC Engineers early December 2019 (Attachment 1). Figure 3 overviews channelization/traffic control at study intersections. Figure 4 summarizes the existing p.m. peak period turning movements at study intersections determined in scoping discussions with the Alaska Department of Transportation and Public Facilities (DOT&PF).

Intersection Levels of Service

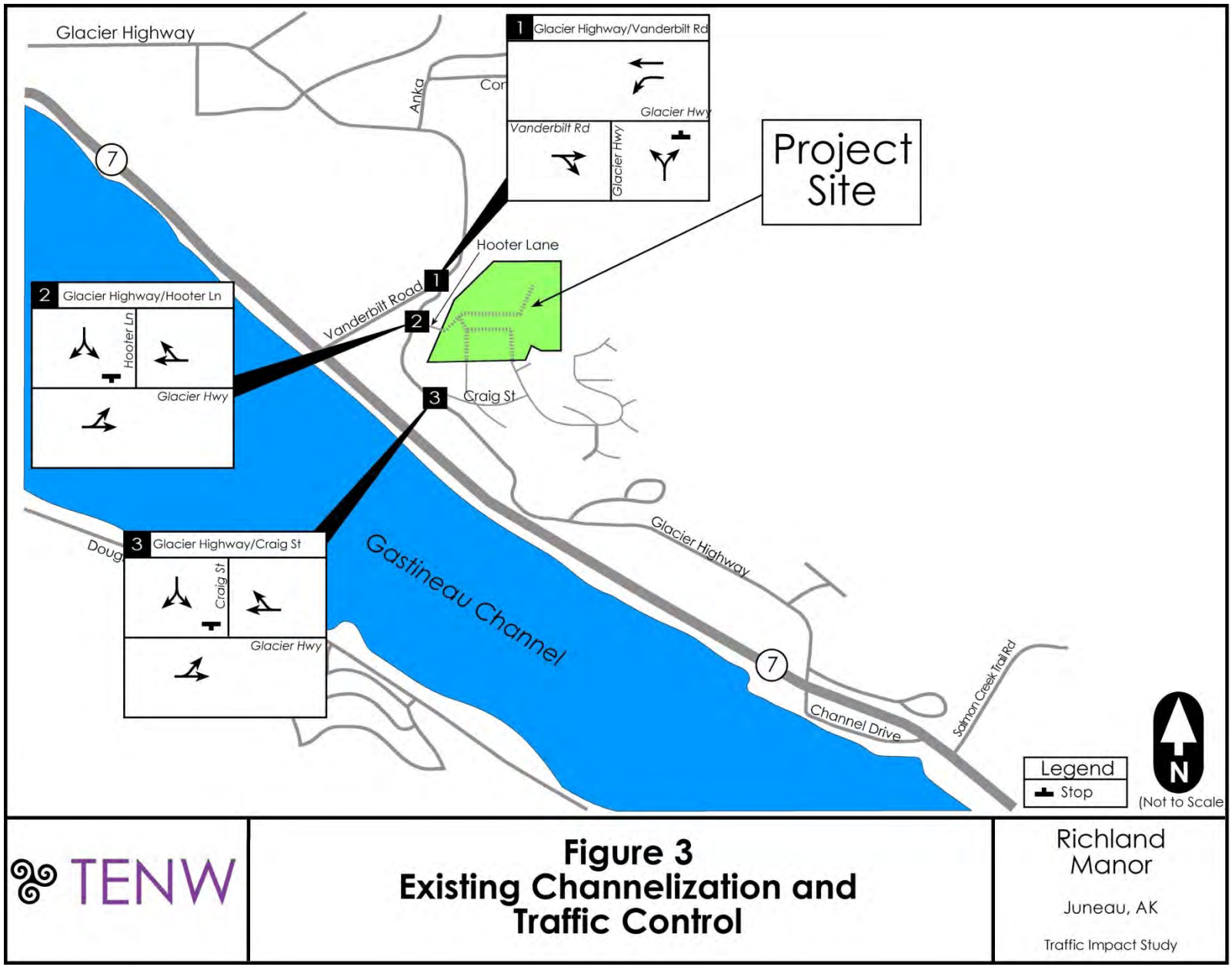
Intersection level of service (LOS) analyses were conducted at the study intersections during the weekday p.m. peak hour of existing conditions and with and without project traffic generated by the proposed development. LOS refers to the degree of congestion on a roadway or intersection. It is a measure of vehicle operating speed, travel time, travel delays, and driving comfort. A letter scale from A to F generally describes LOS. At signalized intersections, LOS A represents free-flow conditions-motorists experience little or no delays, and LOS F represents forced-flow conditions-motorists experience an average delay in excess of 80 seconds per vehicle. The LOS reported for signalized intersections represents the average control delay per vehicle entering the intersection. The LOS reported at stop-controlled intersections is also based on the average control delay (sec/veh) and is reported for each movement. Therefore, the reported LOS at unsignalized intersections does not represent a measure of the overall operations of the intersection.

LOS calculations for both signalized and stop-controlled intersections were calculated using the methodologies and procedures outlined in the 2000 and 2010 *Highway Capacity Manual (HCM)*, Special Report 209, Transportation Research Board (TRB), using the *Synchro 10* software program. Table 1 outlines the LOS criteria for signalized and unsignalized intersections based on these methodologies. ADOT&PF maintains a level of service standard of LOS D for development review. Existing p.m. peak hour LOS analyses are summarized in Table 2. As shown, all intersections or critical movements operate at LOS B or better under existing conditions. Detailed LOS summary worksheets are included in Attachment 2.

Table 1: Level of Service Criteria for Signalized and Unsignalized Intersections

Level of Service	Signalized Intersection Average Delay Range (sec)	Unsignalized Intersection Delay Range (sec)
A	≤ 10	≤ 10
B	> 10 to ≤ 20	> 10 to ≤ 15
C	> 20 to ≤ 35	> 15 to ≤ 25
D	> 35 to ≤ 55	> 25 to ≤ 35
E	> 55 to ≤ 80	> 35 to ≤ 50
F	> 80	> 50

Source: "Highway Capacity Manual", Special Report 209, Transportation Research Board, 2000.


Glacier Highway
1 Glacier Highway/Vanderbilt Rd
Glacier Hwy
Vanderbilt Rd
Glacier Hwy
Project Site
Hooter Lane
Vanderbilt Road
2 Glacier Highway/Hooter Ln
Hooter Ln
Glacier Hwy
3 Craig St
3 Glacier Highway/Craig St
Craig St
Glacier Hwy
Gastineau Channel
Glacier Highway
Channel Drive
Salmon Creek Trail Rd
Legend
Stop
N
(Not to Scale)
TENW
Figure 3
Existing Channelization and
Traffic Control
Richland
Manor
Juneau, AK
Traffic Impact Study

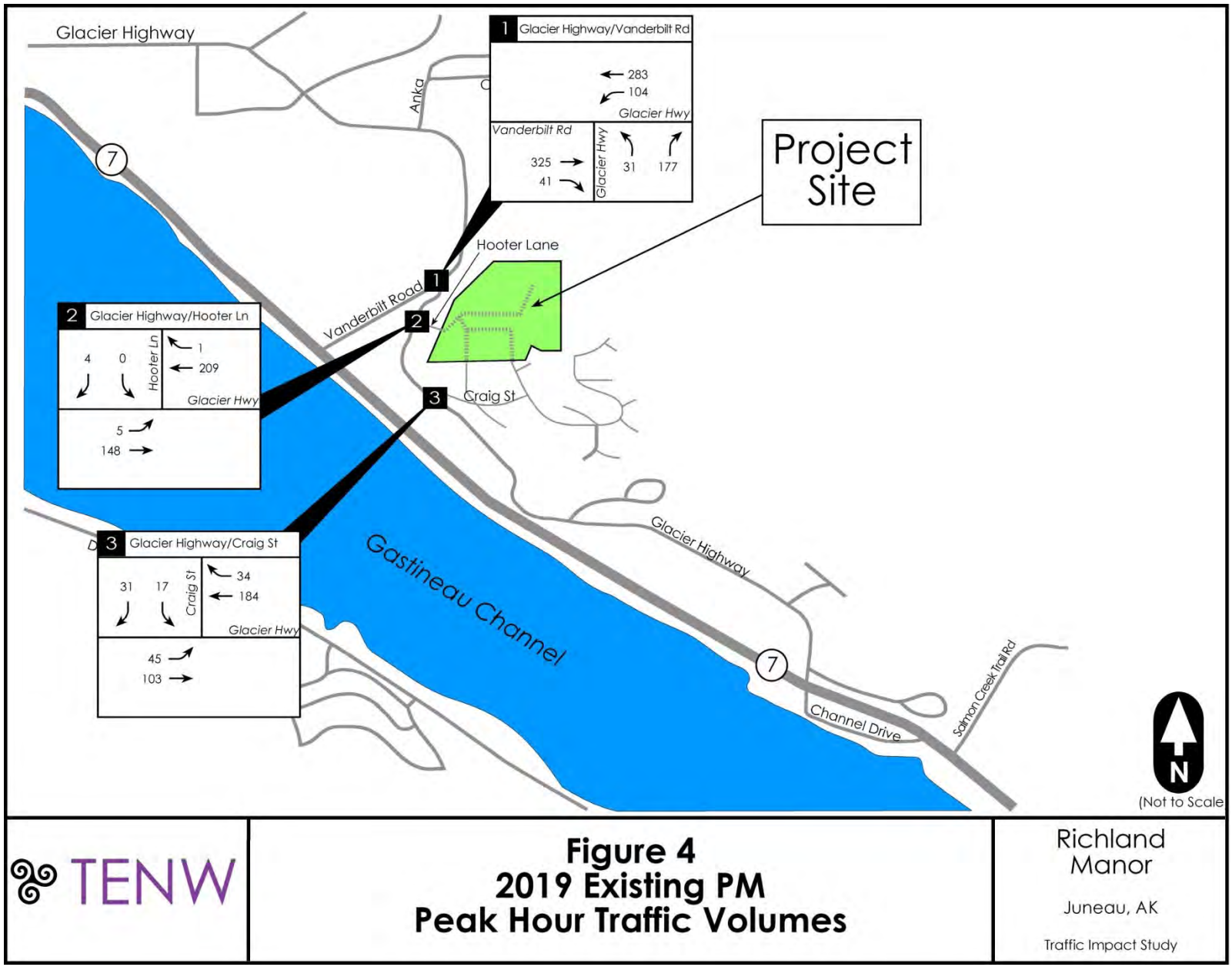

Glacier Highway
1 Glacier Highway/Vanderbilt Rd
283
104
Glacier Hwy
Vanderbilt Rd
325
41
Glacier Hwy
31
177
Project Site
Hooter Lane
Vanderbilt Road
1
2
2 Glacier Highway/Hooter Ln
4
0
Hooter Ln
1
209
Glacier Hwy
5
148
3
Craig St
3 Glacier Highway/Craig St
31
17
Craig St
34
184
Glacier Hwy
45
103
Gastineau Channel
Glacier Highway
7
Channel Drive
Salmon Creek Trail Rd
N
(Not to Scale)
TENW
Figure 4
2019 Existing PM
Peak Hour Traffic Volumes
Richland Manor
Juneau, AK
Traffic Impact Study

Table 2: Existing PM Peak Hour Intersection Levels of Service

Study Intersection		PM Peak Hour LOS	PM Peak Hour Delay (sec)	PM Peak Hour V/C Ratio
Stop Controlled Intersections				
#1 – Glacier Highway at Vanderbilt Road	(NB – Stop)	B	14.2	0.37
	(WB – Left)	A	8.4	0.10
#2 – Glacier Highway at Hooter Lane	(SB – Stop)	A	9.6	0.01
#3 – Glacier Highway at Craig Street	(SB – Stop)	B	10.4	0.07

Source: TENW.

Planned Transportation Improvements

ADOT&PF has a programmed improvement at the intersection of Glacier Highway and Vanderbilt Road intersection. The improvement is part of a larger regional trail/bicycle plan and would involve installation of a pedestrian/bicycle crossing treatment west side of the intersection to include a median refuge island and pedestrian-activated rectangular rapid flashing beacon (RRFB) system. The currently planned improvement would eliminate the existing median refuge lane for northbound left turning movements from Glacier Highway onto Vanderbilt Road.

Traffic Impact Analysis

The following section describes projected future baseline traffic growth, new trips generated by the proposed development, distribution and assignment of new project trips, intersection level of service impacts, site access, safety and circulation issues, and identification of transportation mitigation to offset impacts.

2029 Baseline Traffic Volumes

To evaluate project traffic impacts at full buildout, traffic counts obtained in 2019 were factored by a 1 percent annual background growth rate to forecast 2029 future baseline traffic volumes.

Project Trip Generation

Documented trip rate equations compiled by the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*, 2017, were used to estimate daily, a.m. peak hour and p.m. peak hour traffic that would be generated by the proposed residential uses within *Richland Manor,* assuming new detached single-family homes (ITE Land Use Code 210) and Low-Rise Multifamily uses (LUC 220).

As shown in Table 3, total site trip generation of the project is estimated to generate a approximately 3,050 new weekday daily trips, 199 new a.m. peak hour trips (46 entering and 153 exiting), and 246 new p.m. peak hour trips (155 entering and 91 new exiting).

Table 3: Richland Manor - Trip Generation

Time Period	In	Out	Total
Weekday Daily	1,525	1,525	3,050
Weekday AM Peak Hour	46	153	199
Weekday PM Peak Hour	155	91	246

Source: TENW. See also Attachment 3.

Trip Distribution and Assignment

To distribute trips onto the vicinity-street and arterial network, trip distribution patterns were determined based on review of existing travel patterns, and the relative distribution of employment and residential density in the vicinity (see also Attachment 4). Generally, average distribution and assignment of project trips were assumed as:

- 45 percent easterly via Glacier Highway; and
- 55 percent westerly and northwesterly via Glacier Highway and Vanderbilt Road.

Figure 5 shows p.m. peak hour trip distribution, while Figure 6 summarizes p.m. peak hour trip assignment. Figure 7 summarizes p.m. peak hour traffic volume forecasts without and with the proposed *Richland Manor* project for the 2029 horizon year.

Intersection Level of Service Impacts

Table 4 summarizes level of service impacts in 2029 with and without completion of the proposed project. All study intersections and site access driveways would operate at LOS D or better with and without the project in the 2029 horizon year. Per the footnote in Table 4, the Alaska DOT&PF's proposal to remove the median refuge lane for vehicular capacity would drop the future level of service with buildout of *Richland Manor* to LOS D by 2029. If the existing intersection capacity is maintained, buildout of *Richland Manor* would operate at LOS C and not require any mitigation. Detailed LOS summary worksheets are included in Attachment 1.

Table 4: 2029 PM Intersection Level of Service Impacts

		PM Without Project			PM With Project		
Study Intersection		LOS	Delay (sec)	V/C Ratio	LOS	Delay (sec)	V/C Ratio
Stop Controlled Intersections							
#1 – Glacier Highway at Vanderbilt Road	(NB – Stop)	C	18.3	0.48	D*	25.8	0.65
	(WB – Left)	A	8.6	0.11	A	9.0	0.19
#2 – Glacier Highway at Hooter Lane	(SB – Stop)	A	9.8	0.01	B	11.9	0.14
#3 – Glacier Highway at Craig Street	(SB – Stop)	B	10.7	0.09	B	19.3	0.55

Source: TENW. * - At the intersection of Glacier Highway and Vanderbilt Road, the DOT&PF project to remove intersection capacity to install the RRFB results in a LOS D condition in at buildout of *Richland Manor* by 2029. If the median refuge lane remains available for left turns, with buildout of the project in 2029 this approach would operate at LOC C with an average delay of 19.3 Seconds per vehicle.

Site Access and Circulation

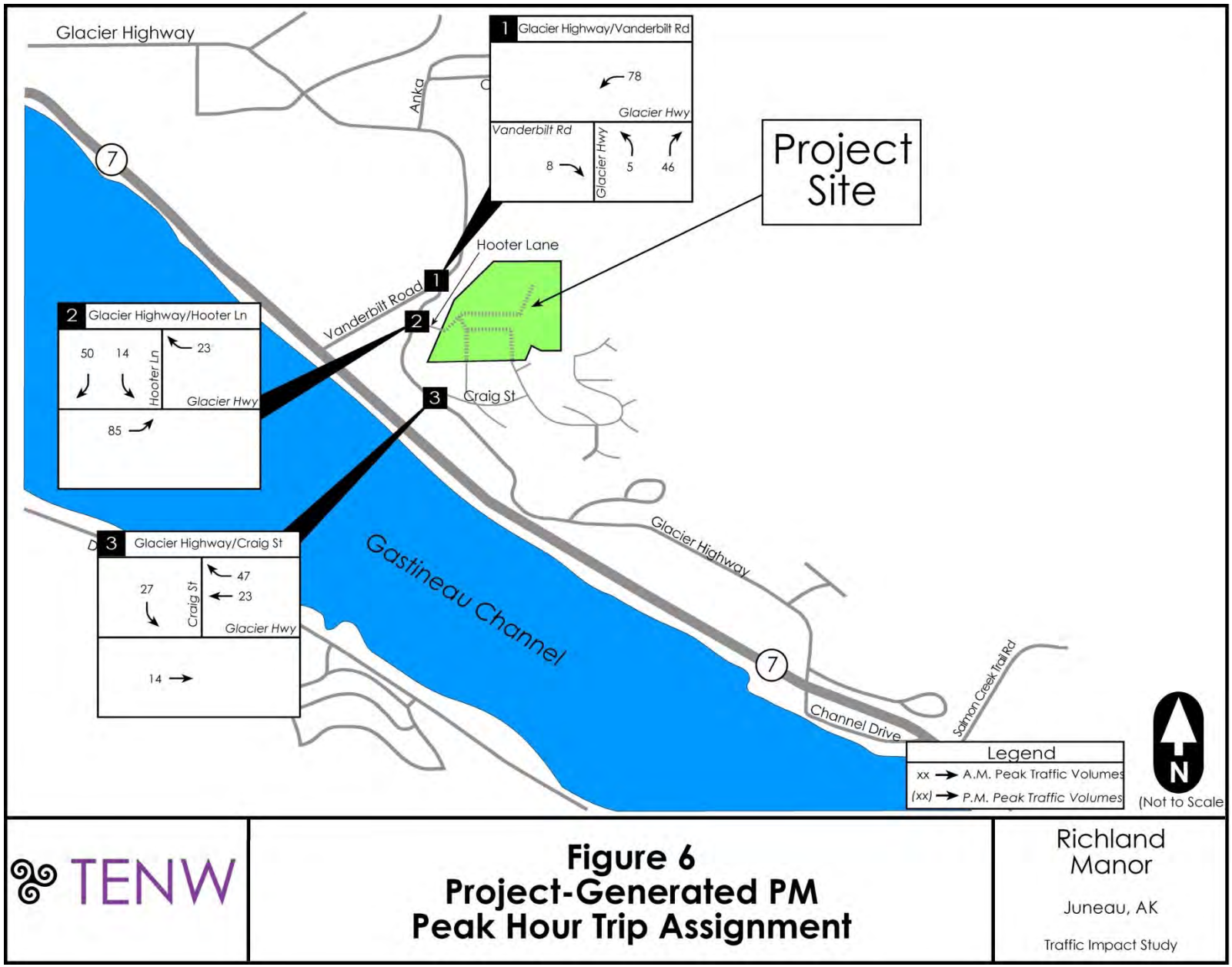
Primary vehicular access would be provided via construction of a public roadway within the undeveloped right-of-way of Hooter Lane, with secondary vehicular access via Hillcrest Drive and Abey Way via Craig Street. Additional gated access would be provided onto Robbie Road for emergency vehicles only to meet the minimum fire accessibility codes (above 200 multifamily housing units) per the International Fire Code to provide for secondary access beyond the Hooter Lane and Abey Way intersection.

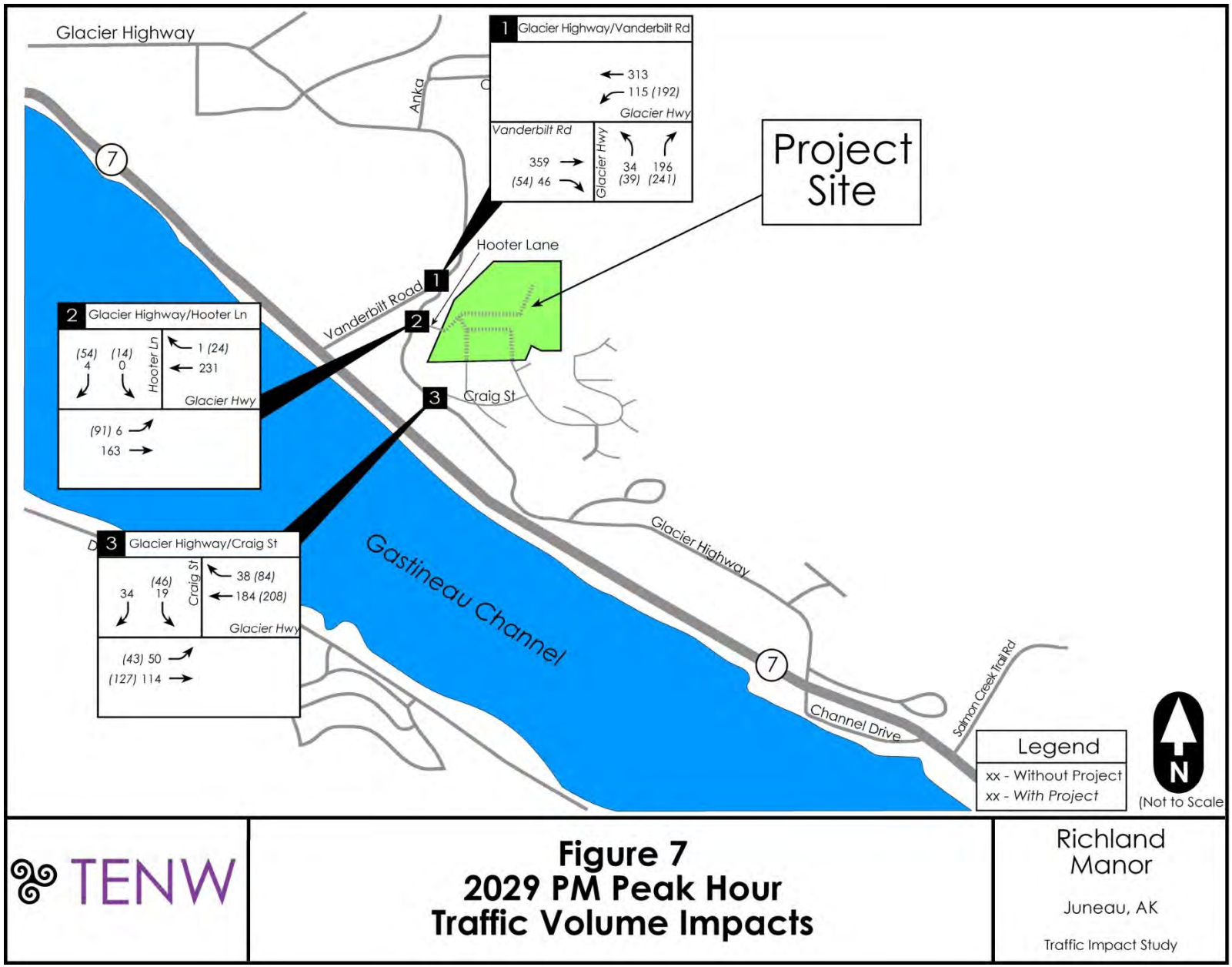
The main access points to the site would be located on Glacier Highway at Hooter Lane and Craig Street. As identified previously, all critical stop-controlled movements at these two intersections are anticipated to operate at LOS B or better with the proposed development in 2029, with little or no vehicular queuing.

TENW

Figure 5
Project Trip Distribution

Richland Manor
Juneau, AK
Traffic Impact Study


Glacier Highway
1 Glacier Highway/Vanderbilt Rd
78
Glacier Hwy
Vanderbilt Rd
8
Glacier Hwy
5
46
Project Site
Hooter Lane
Vanderbilt Road
1
2
2 Glacier Highway/Hooter Ln
50
14
Hooter Ln
23
Glacier Hwy
85
3
Craig St
3 Glacier Highway/Craig St
27
Craig St
47
23
Glacier Hwy
14
Gastineau Channel
Glacier Highway
7
Channel Drive
Salmon Creek Trail Rd
Legend
xx A.M. Peak Traffic Volumes
(xx) P.M. Peak Traffic Volumes
N
(Not to Scale)
TENW
Figure 6
Project-Generated PM
Peak Hour Trip Assignment
Richland Manor
Juneau, AK
Traffic Impact Study



TENW

Figure 7
2029 PM Peak Hour
Traffic Volume Impacts

Richland Manor
Juneau, AK
Traffic Impact Study

Sight Distance

The American Association of State and Highway Transportation Officials (AASHTO) was used to determine entering and stopping sight distance requirements. AASHTO requires 555 feet of entering sight distance and 425 feet of stopping sight distance for a 50 mph design speed (10 mph over posted speed limit of 40 mph) on Glacier Highway. Field-measured sight distances by TENW in 2006 on Glacier Highway east and west of Hooter Lane are estimated to be greater than 700 feet, and are estimated to be greater than 1,000 feet east of and more than 700 feet west of Craig Street. Therefore, entering sight distance at the main site access points onto Glacier Highway at Hooter Lane and Craig Street would exceed AASHTO requirements.

Left-Turn Lane Warrants

Left-turn movements represent critical turning movements at unsignalized intersections, increasing the potential for intersection delay and safety issues. Therefore, the potential need for a left-turn lane onto Glacier Highway at Hooter Lane was analyzed considering typical evening commute periods.

Based upon procedures and guideline's found in Volume Warrants for Left-Turn Storage Lanes at Unsignalized Intersections (Highway Research Record 211), an eastbound left-turn lane is not warranted based upon approximately 35 percent of eastbound left-turns, a 40 mph posted speed limit, advancing volume of approximately 255 vehicles and an opposing volume of 255 vehicles (Attachment 5).

Project Mitigation

A traffic analysis and review was conducted of vehicular trip generation, intersection impacts, and site access, circulation, and safety issues for the proposed *Richland Manor* residential development in Juneau, AK. No direct mitigation measures were found to be necessary as a result of the proposed project. To meet level of service objectives of DOT&PF, the planned pedestrian/bicycle crossing treatment should be modified to preserve existing intersection capacity at its intersection with Vanderbilt Road or review of traffic operational impacts consider that level of service standards would not trigger any project mitigation if existing intersection capacity was maintained under existing conditions per 17 AAC 10.070.

As part of the development, the development would pay for the improvement and/or construction of all new site public access roadways and access connections including construction of Hooter Lane the extension of Abey Way and Hillcrest Drive, and Robbie Road (to serve as secondary fire/emergency vehicle access). A gated control for fire/emergency vehicles utilizing Opticom pre-emption is recommended for ease of fire/emergency vehicle access via Robbie Road.

If you have any questions regarding the information presented in this memo, please call me at (206) 361-7333 x 101 or mikeread@tenw.com.

Attachments:
1. 2019 Traffic Counts
2. Level of Service Summary Sheets
3. Trip Generation Estimates
4. Trip Distribution Observations
5. Turn Lane Warrant per HRR 211

Attachment 1
2019 Traffic Counts

TABULAR SUMMARY OF TURNING MOVEMENT COUNTS

Name: PDC **Date:** 9/25/2019 **City:** Juneau

Project: Richland Manor

Intersection of: Craig Street **and** Glacier Highway

Street:	Craig Street			Craig Street			Glacier Highway			Glacier Highway			Total All	Hour Total
Time	East Bound			West Bound			North Bound			South Bound				
Begins	L	T	R	L	T	R	L	T	R	L	T	R		
3:00 PM													0	
3:15 PM													0	
3:30 PM													0	
3:45 PM													0	0
4:00 PM				3		12		39	12	14	17		97	97
4:15 PM				4		10		36	16	8	27		101	198
4:30 PM				3		8		45	10	9	33		108	306
4:45 PM				3		3		35	11	12	24		88	394
5:00 PM				8		13		50	8	12	21		112	409
5:15 PM				3		7		37	5	12	25		89	397
5:30 PM				1		5		24	11	12	19		72	361
5:45 PM				3		7		37	5	12	25		89	362
Peak Hour	0	0	0	18	0	34	0	166	45	41	105	0		1506

Peak Hour Factor $= \frac{409}{4 \quad 112} =$ 0.913

Transportation Engineering Northwest MJR

TABULAR SUMMARY OF TURNING MOVEMENT COUNTS

Name: PDC **Date:** 9/25/2019 **City:** Juneau

Project: Richland Manor

Intersection of: Hooter Lane **and** Glacier Highway

Street:	Hooter Lane			Hooter Lane			Glacier Highway			Glacier Highway			Total All	Hour Total
Time	East Bound			West Bound			North Bound			South Bound				
Begins	L	T	R	L	T	R	L	T	R	L	T	R		
3:00 PM													0	
3:15 PM													0	
3:30 PM													0	
3:45 PM													0	0
4:00 PM				0		0		52	1	1	30		84	84
4:15 PM				0		1		42	1	0	37		81	165
4:30 PM				0		0		65	1	2	45		113	278
4:45 PM				0		0		34	0	1	30		65	343
5:00 PM				0		2		62	0	2	34		100	359
5:15 PM				0		2		48	0	0	39		89	367
5:30 PM				1		0		35	1	1	29		67	321
5:45 PM				0		1		33	0	0	27		61	317
Peak Hour	0	0	0	0	0	4	0	209	1	5	148	0		1347

Peak Hour Factor = $\frac{367}{4 \quad 113}$ = 0.812

Transportation Engineering Northwest MJR

TABULAR SUMMARY OF TURNING MOVEMENT COUNTS

Name: PDC **Date:** 9/26/2019 **City:** Juneau

Project: Richland Manor

Intersection of: Glacier Highway **and** Vanderbilt Road

Street:	Glacier Highway			Glacier Highway			Vanderbilt Road			Vanderbilt Road			Total All	Hour Total
Time Begins	East Bound			West Bound			North Bound			South Bound				
	L	T	R	L	T	R	L	T	R	L	T	R		
3:00 PM													0	
3:15 PM													0	
3:30 PM													0	
3:45 PM													0	0
4:00 PM				15		47		97	5	25	56		245	245
4:15 PM				11		46		85	10	26	61		239	484
4:30 PM				8		53		80	8	27	61		237	721
4:45 PM				7		36		84	8	20	65		220	941
5:00 PM				12		40		74	15	28	89		258	954
5:15 PM				4		48		87	11	29	68		247	962
5:30 PM				10		32		45	9	18	55		169	894
5:45 PM				12		16		45	10	18	38		139	813
Peak Hour	0	0	0	31	0	177	0	325	42	104	283	0		3578

Peak Hour Factor = $\frac{962}{4 \quad 258}$ = 0.932

Transportation Engineering Northwest MJR

Attachment 2
Intersection LOS Summary Sheets

Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	31	177	325	42	104	283
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	190	349	45	112	304

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	900	372	0	0	395	0
Stage 1	372	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	309	674	-	-	1164	-
Stage 1	697	-	-	-	-	-
Stage 2	592	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	279	674	-	-	1164	-
Mov Cap-2 Maneuver	400	-	-	-	-	-
Stage 1	697	-	-	-	-	-
Stage 2	535	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	2.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	612	1164	-
HCM Lane V/C Ratio	-	-	0.365	0.096	-
HCM Control Delay (s)	-	-	14.2	8.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.7	0.3	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	5	148	209	1	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	183	258	1	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	259	0	-	0	454	259
Stage 1	-	-	-	-	259	-
Stage 2	-	-	-	-	195	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1306	-	-	-	564	780
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	838	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1306	-	-	-	561	780
Mov Cap-2 Maneuver	-	-	-	-	561	-
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	834	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1306	-	-	-	780
HCM Lane V/C Ratio	0.005	-	-	-	0.006
HCM Control Delay (s)	7.8	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	45	103	167	34	17	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	113	184	37	19	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	221	0	-	0	414	202
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	212	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1348	-	-	-	595	839
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1348	-	-	-	572	839
Mov Cap-2 Maneuver	-	-	-	-	572	-
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	791	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1348	-	-	-	720
HCM Lane V/C Ratio	0.037	-	-	-	0.073
HCM Control Delay (s)	7.8	0	-	-	10.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	34	196	359	46	115	313
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	211	386	49	124	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	995	411	0	0	435	0
Stage 1	411	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	271	641	-	-	1125	-
Stage 1	669	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	241	641	-	-	1125	-
Mov Cap-2 Maneuver	241	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	496	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.3	0	2.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	515	1125	-
HCM Lane V/C Ratio	-	-	0.48	0.11	-
HCM Control Delay (s)	-	-	18.3	8.6	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	2.6	0.4	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	6	163	231	1	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	201	285	1	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	286	0	-	0	502	286
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	216	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1276	-	-	-	529	753
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	820	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1276	-	-	-	526	753
Mov Cap-2 Maneuver	-	-	-	-	526	-
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	815	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1276	-	-	-	753
HCM Lane V/C Ratio	0.006	-	-	-	0.007
HCM Control Delay (s)	7.8	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	50	114	185	38	19	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	125	203	42	21	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	245	0	-	0	459	224
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	235	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1321	-	-	-	560	815
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	804	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1321	-	-	-	535	815
Mov Cap-2 Maneuver	-	-	-	-	535	-
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	768	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1321	-	-	-	686
HCM Lane V/C Ratio	0.042	-	-	-	0.085
HCM Control Delay (s)	7.8	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	7.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	39	241	359	54	192	313
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	259	386	58	206	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1164	415	0	0	444	0
Stage 1	415	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	215	637	-	-	1116	-
Stage 1	666	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	175	637	-	-	1116	-
Mov Cap-2 Maneuver	175	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	381	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.8	0	3.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	466	1116	-
HCM Lane V/C Ratio	-	-	0.646	0.185	-
HCM Control Delay (s)	-	-	25.8	9	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	4.5	0.7	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	91	163	231	24	14	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	112	201	285	30	17	67

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	315	0	-	0	726	300
Stage 1	-	-	-	-	300	-
Stage 2	-	-	-	-	426	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1245	-	-	-	391	740
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	659	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1245	-	-	-	352	740
Mov Cap-2 Maneuver	-	-	-	-	352	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	592	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1245	-	-	-	603
HCM Lane V/C Ratio	0.09	-	-	-	0.139
HCM Control Delay (s)	8.2	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	50	127	208	84	46	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	140	229	92	51	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	321	0	-	0	524	275
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	249	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1239	-	-	-	514	764
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	792	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1239	-	-	-	489	764
Mov Cap-2 Maneuver	-	-	-	-	489	-
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	754	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1239	-	-	-	577
HCM Lane V/C Ratio	0.044	-	-	-	0.152
HCM Control Delay (s)	8	0	-	-	12.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	5.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	39	241	359	54	192	313
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	259	386	58	206	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1164	415	0	0	444	0
Stage 1	415	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	215	637	-	-	1116	-
Stage 1	666	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	175	637	-	-	1116	-
Mov Cap-2 Maneuver	292	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	381	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.3	0	3.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	547	1116	-
HCM Lane V/C Ratio	-	-	0.55	0.185	-
HCM Control Delay (s)	-	-	19.3	9	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	3.3	0.7	-

Attachment 3
Trip Generation Estimates

Richland Manor Site Plan (47 SF and 356 MF units) October 2019

	Land Use			AM Peak			PM Peak			Daily	
New	**Code**	**Size**	**X**	**Enter**	**Exit**	**Trips**	**Enter**	**Exit**	**Trips**	**Trips**	Method
Single Family Detached Housing	210	47	Units	9	26	35	30	17	47	444	average
Residential Condominiums/Townhouses/Apartments	220	356	Units	38	126	164	125	74	199	2,606	average
Total Trip Generation				**46**	**153**	**199**	**155**	**91**	**246**	**3,050**	

Attachment 4
Trip Distribution Observations

Neighborhood Traffic Distribution along Glacier Highway

AM Peak 2006

To/From West	69	57%
To/From East	52	43%
	122	

PM Peak 2006

To/From West	93	56%
To/From East	72	44%
	165	

PM Peak 2019

To/From West	94	62%
To/From East	57	38%
	151	

Study Assumptions Were:		Average From Observations Above:
To/From West	55%	58%
To/From East	45%	42%

Attachment 5
Turn Lane Warrants per HRR 211

Contents

VOLUME WARRANTS FOR LEFT-TURN STORAGE LANES AT UNSIGNALIZED GRADE INTERSECTIONS
M.D. Harmelink 1

A PRACTICAL COMPUTER PROGRAM FOR DESIGNING TRAFFIC-SIGNAL-SYSTEM TIMING PLANS
Robert L. Bleyl 19

USE OF A COMPUTER AND VEHICLE LOOP DETECTORS TO MEASURE QUEUES AND DELAYS AT SIGNALIZED INTERSECTIONS
A. Christensen 34

THE EFFECTS OF STREET GEOMETRICS AND SIGNALIZATION ON TRAVEL TIME AND THEIR RELATIONSHIPS TO TRAFFIC OPERATIONS EVALUATION
J. F. Torres 54

Volume Warrants for Left-Turn Storage Lanes At Unsignalized Grade Intersections

M. D. HARMELINK, Project Research Engineer (Traffic), Department of Highways, Ontario

This paper describes the derivation of volume warrants and design charts for left-turn storage lanes at unsignalized grade intersections on four-lane and two-lane highways. The design charts are based on a theoretical analysis and on a series of field studies of traffic behavior at intersections.

The analysis is based on a queuing model in which arrival and service times are assumed to follow a negative exponential distribution. The arrival rates are determined by the volumes of left-turning, through or "advancing," and opposing traffic, and by the time interval required by the left-turning vehicle to clear the advancing lane. The service rates are determined by the volume of opposing traffic, and by the time interval required to make a left-turn maneuver.

Field studies of traffic behavior conducted at seven unsignalized Ontario intersections provided average values of the time interval required by a left-turning vehicle to make a left turn and to clear the advancing lane, the delay experienced by a left-turning vehicle because of opposing traffic, gap acceptance and rejection behavior, and actual arrival rates and headway distributions at various volume levels.

•THIS study was undertaken because of the lack of consistent volume warrants for left-turn storage lanes at unsignalized intersections. The usual method of analyzing such intersections individually on the basis of past experience, accident records, complaints from the traveling public, and engineering judgment has led to inconsistency from location to location.

It was felt that the volume warrants developed should be consistent in their evaluation of traffic parameters from location to location; they should provide reasonable recommendations for specific intersections; and they should be based on traffic and operational considerations, rather than on a benefit-cost analysis, because of the difficulty of translating the benefits received to a monetary value on a suitable rational basis.

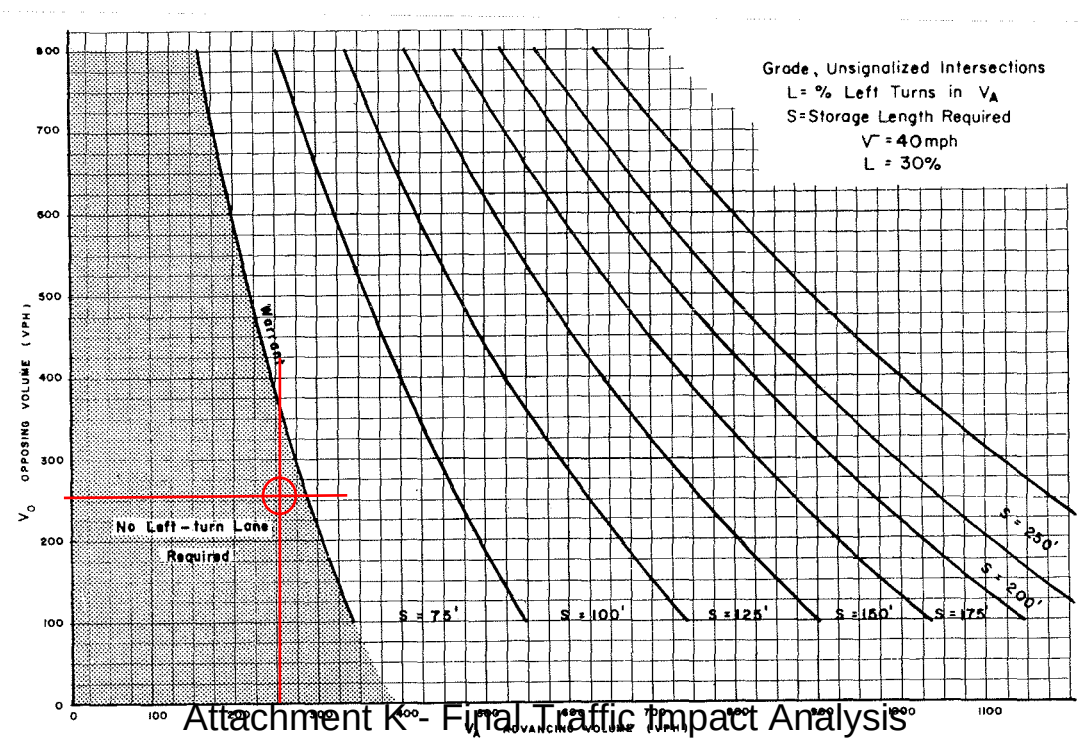
The study contained three phases: a theoretical analysis, a series of field studies of traffic behavior, and analysis of a series of questionnaires completed for specific intersections by Department of Highways regional traffic engineers.

THEORETICAL ANALYSIS

Queuing theory may be used to analyze operational flow problems where the state of the system changes from time to time and which have elements that follow this basic behavior: A sequence of units arrives at some facility which services each unit and eventually discharges it (1). In our problem, a sequence of left-turning vehicles arrives at some intersection that permits each left-turning vehicle to proceed if and when there is a suitable gap in the opposing traffic stream, and then discharges the vehicle from the intersection. Morse (1) explains that instead of trying to predict in detail how the state of the system changes with time, we can calculate the probabilities that the system is in each of the possible states.

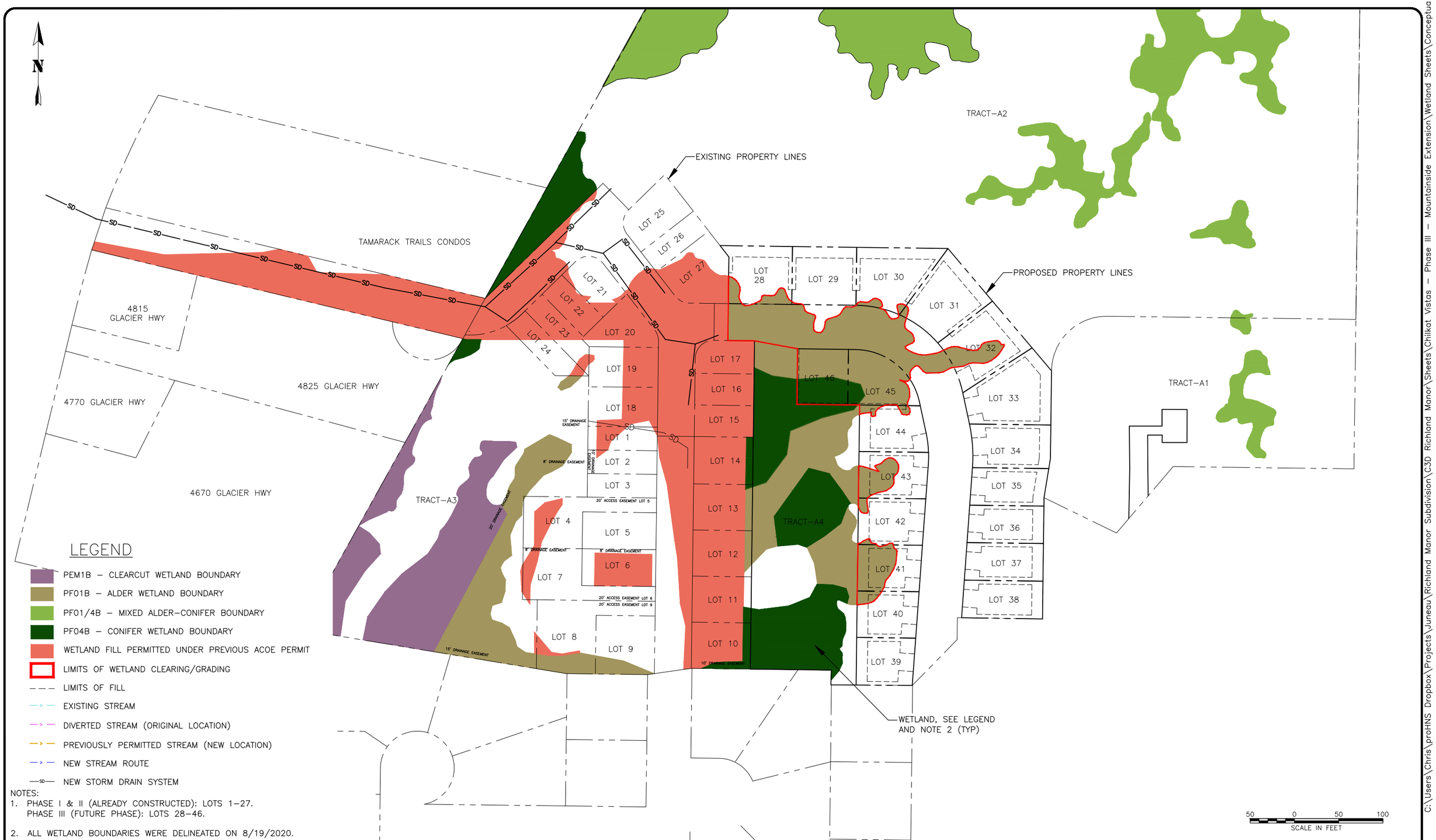
Paper sponsored by Committee on Traffic Control Devices.

Attachment K - Final Traffic Impact Analysis



Attachment K- Final Traffic Impact Analysis

Figure 6. Warrant for left-turn storage lanes on two-lane highways.



LEGEND

- PEM1B – CLEARCUT WETLAND BOUNDARY
- PF01B – ALDER WETLAND BOUNDARY
- PF01/4B – MIXED ALDER–CONIFER BOUNDARY
- PF04B – CONIFER WETLAND BOUNDARY
- WETLAND FILL PERMITTED UNDER PREVIOUS ACOE PERMIT
- LIMITS OF WETLAND CLEARING/GRADING
- LIMITS OF FILL
- EXISTING STREAM
- DIVERTED STREAM (ORIGINAL LOCATION)
- PREVIOUSLY PERMITTED STREAM (NEW LOCATION)
- NEW STREAM ROUTE
- —SD— NEW STORM DRAIN SYSTEM

NOTES:
1. PHASE I & II (ALREADY CONSTRUCTED): LOTS 1–27.
   PHASE III (FUTURE PHASE): LOTS 28–46.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

50 0 50 100
SCALE IN FEET

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS WETLAND IMPACTS

SHEET NUMBER 1 OF 6

April 27, 2023

C:\Users\Chris\proHNS Dropbox\Projects\Juneau\Richland Manor\Sheets\Chilkat Vistas – Phase III – Mountainside Extension\Wetland Sheets\C3D Richland



LEGEND

- PEM1B – CLEARCUT WETLAND BOUNDARY
- PF01B – ALDER WETLAND BOUNDARY
- PF01/4B – MIXED ALDER–CONIFER BOUNDARY
- PF04B – CONIFER WETLAND BOUNDARY
- WETLAND FILL PERMITTED UNDER PREVIOUS ACOE PERMIT
- LIMITS OF WETLAND CLEARING/GRADING
- LIMITS OF FILL
- EXISTING STREAM
- DIVERTED STREAM (ORIGINAL LOCATION)
- PREVIOUSLY PERMITTED STREAM (NEW LOCATION)
- NEW STREAM ROUTE
- SD NEW STORM DRAIN SYSTEM

NOTES:
1. PHASE I & II (ALREADY CONSTRUCTED): LOTS 1–27.
   PHASE III (FUTURE PHASE): LOTS 28–46.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS EXISTING STREAMS

SHEET NUMBER 2 OF 6

April 27, 2023

C:\Users\Chris\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Chilkat Vistas – Phase III – Mountainside Extension\Wetland Sheets\Conceptua



LEGEND

- PEM1B – CLEARCUT WETLAND BOUNDARY
- PF01B – ALDER WETLAND BOUNDARY
- PF01/4B – MIXED ALDER–CONIFER BOUNDARY
- PF04B – CONIFER WETLAND BOUNDARY
- WETLAND FILL PERMITTED UNDER PREVIOUS ACOE PERMIT
- LIMITS OF WETLAND CLEARING/GRADING
- LIMITS OF FILL
- EXISTING STREAM
- DIVERTED STREAM (ORIGINAL LOCATION)
- PREVIOUSLY PERMITTED STREAM (NEW LOCATION)
- NEW STREAM ROUTE
- —SD— NEW STORM DRAIN SYSTEM

NOTES:
1. PHASE I & II (ALREADY CONSTRUCTED): LOTS 1–27.
   PHASE III (FUTURE PHASE): LOTS 28–46.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

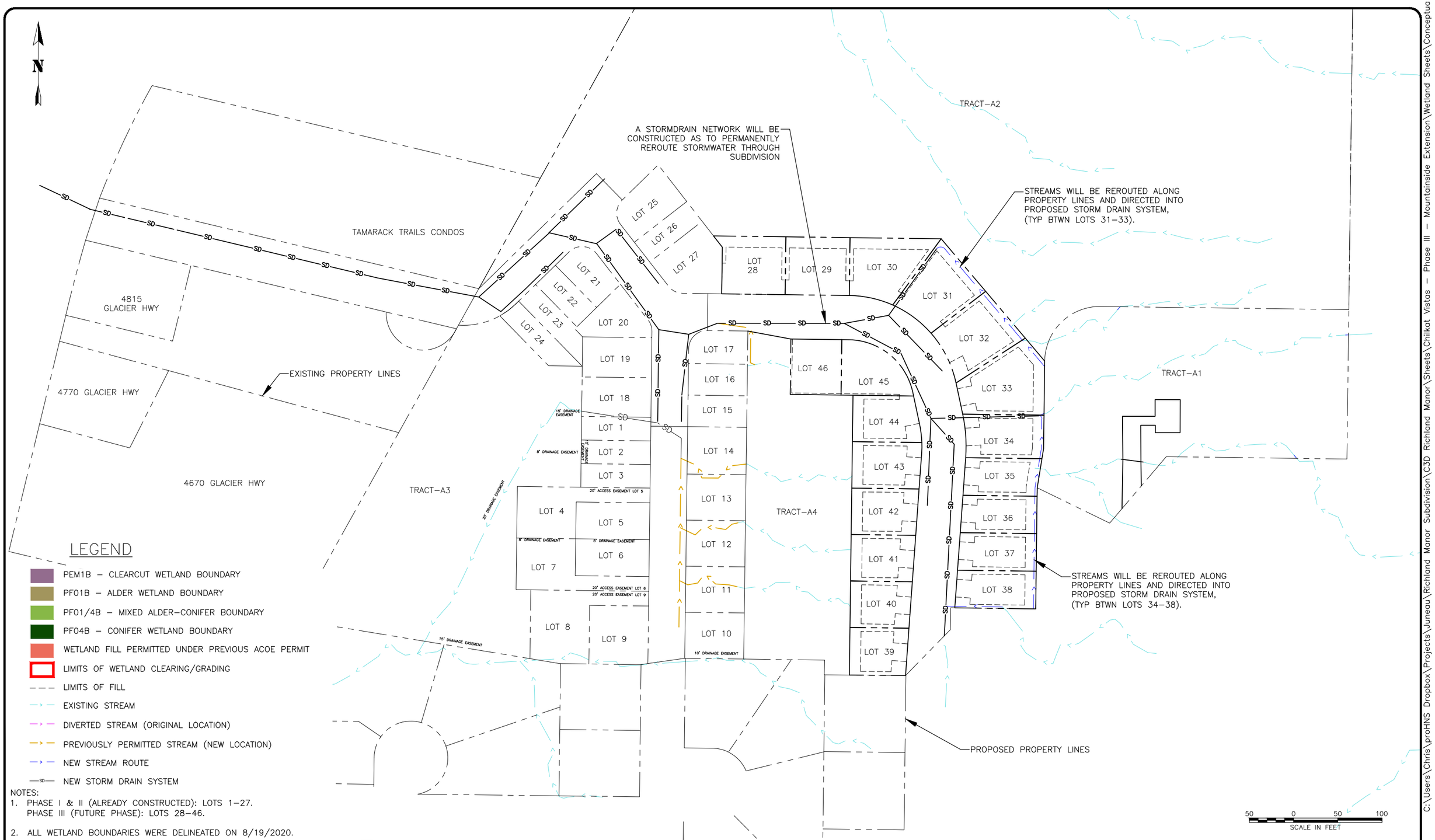
JUNEAU, AK

CHILKAT VISTAS EXISTING STREAMS TO BE DIVERTED

SHEET NUMBER 3 OF 6

April 27, 2023

C:\Users\Chris\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Chilkat Vistas – Phase III – Mountainside Extension\Wetland Sheets\Conceptua



LEGEND

- PEM1B – CLEARCUT WETLAND BOUNDARY
- PF01B – ALDER WETLAND BOUNDARY
- PF01/4B – MIXED ALDER–CONIFER BOUNDARY
- PF04B – CONIFER WETLAND BOUNDARY
- WETLAND FILL PERMITTED UNDER PREVIOUS ACOE PERMIT
- LIMITS OF WETLAND CLEARING/GRADING
- LIMITS OF FILL
- EXISTING STREAM
- DIVERTED STREAM (ORIGINAL LOCATION)
- PREVIOUSLY PERMITTED STREAM (NEW LOCATION)
- NEW STREAM ROUTE
- —SD— NEW STORM DRAIN SYSTEM

NOTES:
1. PHASE I & II (ALREADY CONSTRUCTED): LOTS 1–27.
   PHASE III (FUTURE PHASE): LOTS 28–46.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS NEW STREAM ROUTES

SHEET NUMBER 4 OF 6

April 27, 2023

C:\Users\Chris\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Chilkat Vistas – Phase III – Mountainside Extension\Wetland Sheets\Conceptua



LEGEND

- PEM1B – CLEARCUT WETLAND BOUNDARY
- PF01B – ALDER WETLAND BOUNDARY
- PF01/4B – MIXED ALDER–CONIFER BOUNDARY
- PF04B – CONIFER WETLAND BOUNDARY
- WETLAND FILL PERMITTED UNDER PREVIOUS ACOE PERMIT
- LIMITS OF WETLAND CLEARING/GRADING
- LIMITS OF FILL
- EXISTING STREAM
- DIVERTED STREAM (ORIGINAL LOCATION)
- PREVIOUSLY PERMITTED STREAM (NEW LOCATION)
- NEW STREAM ROUTE
- NEW STORM DRAIN SYSTEM

NOTES:
1. PHASE I & II (ALREADY CONSTRUCTED): LOTS 1–27.
   PHASE III (FUTURE PHASE): LOTS 28–46.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

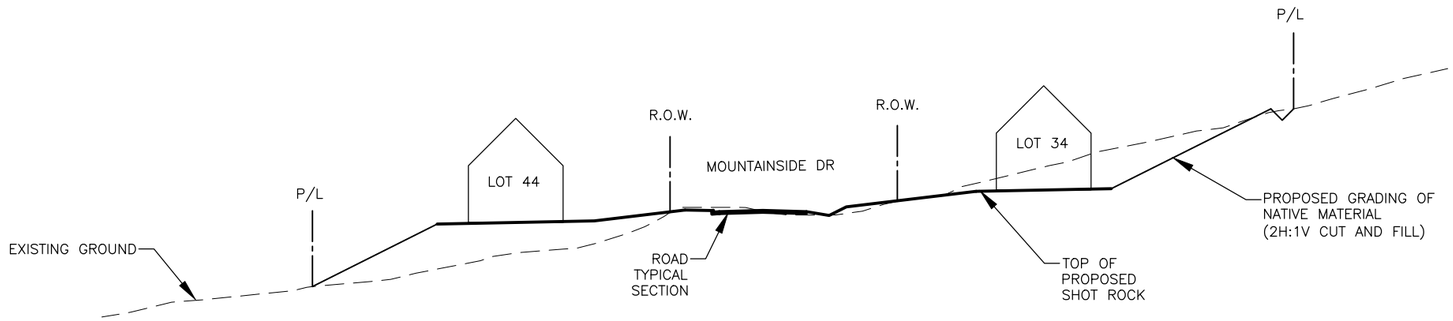
JUNEAU, AK

CHILKAT VISTAS CONCEPTUAL LOT LAYOUT

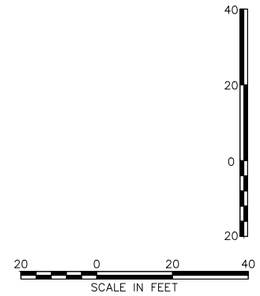
SHEET NUMBER 5 OF 6

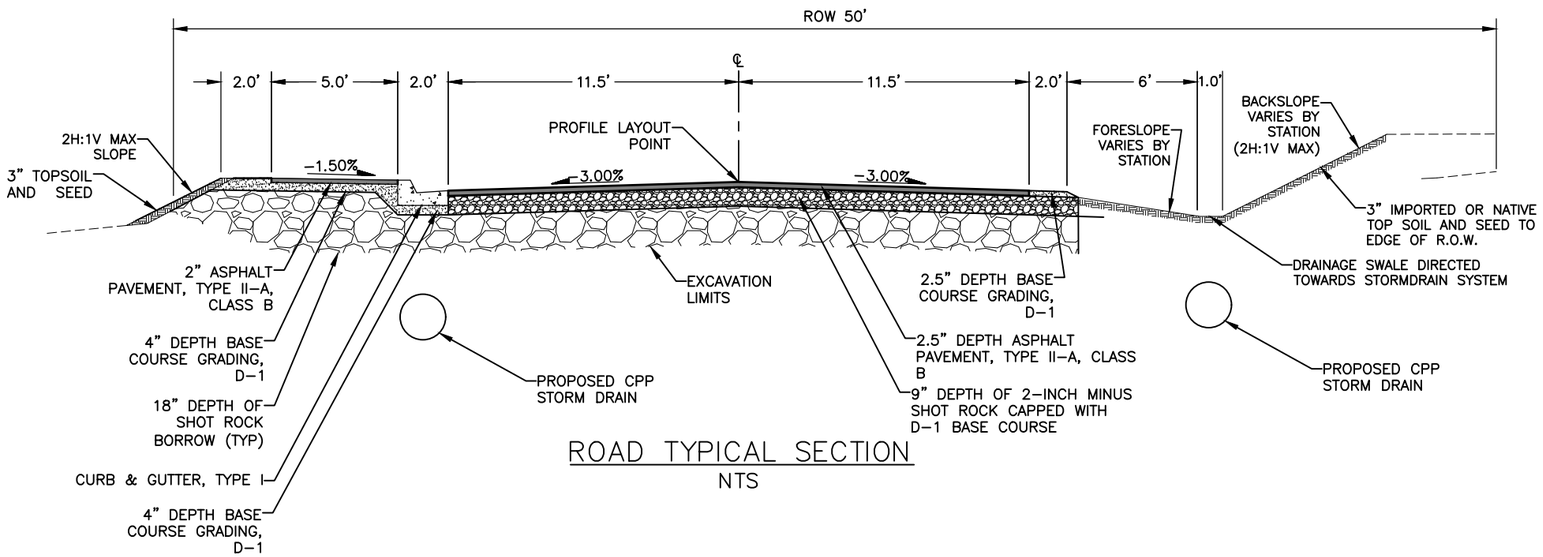
April 27, 2023

C:\Users\Chris\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Chilkat Vistas – Phase III – Mountainside Extension\Wetland Sheets\Conceptua

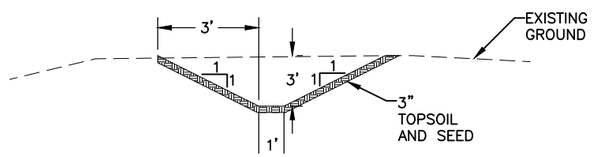


SECTION A–A





ROAD TYPICAL SECTION
NTS



REROUTED STREAM DITCH DETAIL
NTS

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS SECTIONS

SHEET NUMBER 6
OF 6

April 27, 2023

C:\Users\Chris\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Chilkat Vistas – Phase III – Mountainside Extension\Wetland Sheets\Conceptua

DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
P.O. BOX 22270
JUNEAU, AK 99802-2270

October 10, 2023

Regulatory Division
POA-2019-00066 M2

Chilkat Vistas LLC
Attention: Michael Heumann
1015 Otter Run
Juneau, AK 99801

Dear Mr. Heumann:

Enclosed is the signed Department of the Army (DA) permit, file number POA-2019-0066 M2, Gastineau Channel, which authorizes the discharge of 2,078 cubic yards of shot rock, 403 cubic yards of 2-inch rock, and 113 cubic yards of asphalt into 0.73 acres of wetlands to extend a road by 550-feet for additional residential housing. Several seasonal streams would also be rerouted into storm drains. The project site is located within Section 8 T. 41 S., R. 67 E., Copper River Meridian; USGS Quad Map Juneau B-2; Latitude 58.3453º N., Longitude 134.4904º W.; in Juneau, Alaska. Also enclosed is a Notice of Authorization which should be posted in a prominent location near the authorized work.

If changes to the plans or location of the work are necessary for any reason, plans must be submitted to us immediately. Federal law requires approval of any changes before construction begins.

Nothing in this letter excuses you from compliance with other Federal, State, or local statutes, ordinances, or regulations.

Please contact Ms. Delana Wilks via email at Delana.P.Wilks@usace.army.mil, by mail at the address above, or by phone at (907) 201-5021, if you have questions or to request a hard copy of this letter and enclosures. For more information about the Regulatory Program, please visit our website at www.poa.usace.army.mil/Missions/Regulatory.

Sincerely,

Randal P. Vigil
Chief, Southeast Section

Enclosures

DEPARTMENT OF THE ARMY PERMIT

Permittee: Chilkat Vistas LLC

Permit No.: POA-2019-00066 M2

Issuing Office: U.S. Army Engineer District, Alaska

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:

To discharge of 2,078 cubic yards of shot rock, 403 cubic yards of 2-inch rock, and 113 cubic yards of asphalt into 0.73 acres of wetlands to extend a road by 550-feet for additional residential housing. Several seasonal streams would also be rerouted into storm drains.

All work will be performed in accordance with the attached plan, sheets **[1-6]**, dated **April 27, 2023.**

Project Location:

The project site is located within Section 8 T. 41 S., R. 67 E., Copper River Meridian; USGS Quad Map Juneau B-2; Latitude 58.3453° N., Longitude 134.4904° W.; in Juneau, Alaska.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **September 30, 2028**.

If you find that you need more time to complete the authorized activity, submit your request for:

a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

4. **Self-Certification:** Within 60 days of completion of the work authorized by this permit, the Permittee shall complete the attached "Self-Certification Statement of Compliance" form (Attachment) and submit it to the Corps. In the event that the completed work deviates in any manner from the authorized work, the Permittee shall describe the deviations between the work authorized by this permit and the work as constructed on the "Self-Certification Statement of Compliance" form. The description of any deviations on the "Self-Certification Statement of Compliance" form does not constitute approval of any deviations by the Corps.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorization required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a revaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

[signature] - Owner
(PERMITTEE) AND TITLE

9-27-23
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

[signature]
FOR (DISTRICT COMMANDER)
Colonel Damon A. Delarosa
Randal P. Vigil
South Branch, Regulatory Division

October 10, 2023
(DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions have the transferee sign and date below.

(TRANSFEREE)

(DATE)

APPLICANT: chilkatvistas@gmail.com

MUNICIPAL OFFICIALS:
City Clerk city.clerk@juneau.gov
Planning and Zoning - Senior Planner Teri Camery
teri.camery@juneau.gov

CONGRESSIONAL OFFICES:
Bre Klayum - Director of Scheduling and Operations for Rep. Peltola (DC) bre.klayum@mail.house.gov
Simone Auger - Rep. Peltola's Office Simone.Auger@mail.house.gov
Logan Basner - Rep. Pelota's Office Logan.Basner@mail.house.gov
Josh Revak - Rep. Peltola's Office Josh.Revak@mail.house.gov
Chief of Staff Anton McParland - State Director for Rep. Peltola (AK) anton.mcparland@mail.house.gov
Senator Sullivan Office carrie_keil@sullivan.senate.gov
Senator Murkowski Office services@murkowski.senate.gov

FEDERALLY RECOGNIZED TRIBES:
Douglas Indian Association, 811 W 12th St, Juneau, AK 99801-1802

Central Council of the Tlingit & Haida Indian Tribes

emorrison-dia@gci.net

deptfob@ccthita-nsn.gov

corpsec@sealaska.com

Heritage@Sealaska.com

Goldbelt Inc., 3025 Clinton Drive, Juneau, AK 99801 (info@goldbelt.com)

MEDIA: editor@juneauempire.com

editor@capweek.com

apjuneau@ap.org

Other: juneauhistory@gmail.com

This notice of authorization must be conspicuously displayed at the site of work.

United States Army Corps of Engineers
Gastineau Channel

A permit to: discharge 2,078 cubic yards of shot rock, 403 cubic yards of 2-inch rock, and 113 cubic yards of asphalt into 0.73 acres of wetlands to extend a road by 550-feet for additional residential housing.

at: Section 8 T. 41 S., R. 67 E., Copper River Meridian; USGS Quad Map Juneau B-2; Latitude 58.3453º N., Longitude 134.4904º W.; in Juneau, Alaska

has been issued to: Chilkat Vistas LLC

on: October 10, 2023 and expires: October 31, 2028

Address of Permittee: 1015 Otter Run, Juneau, AK 99801

Permit Number:

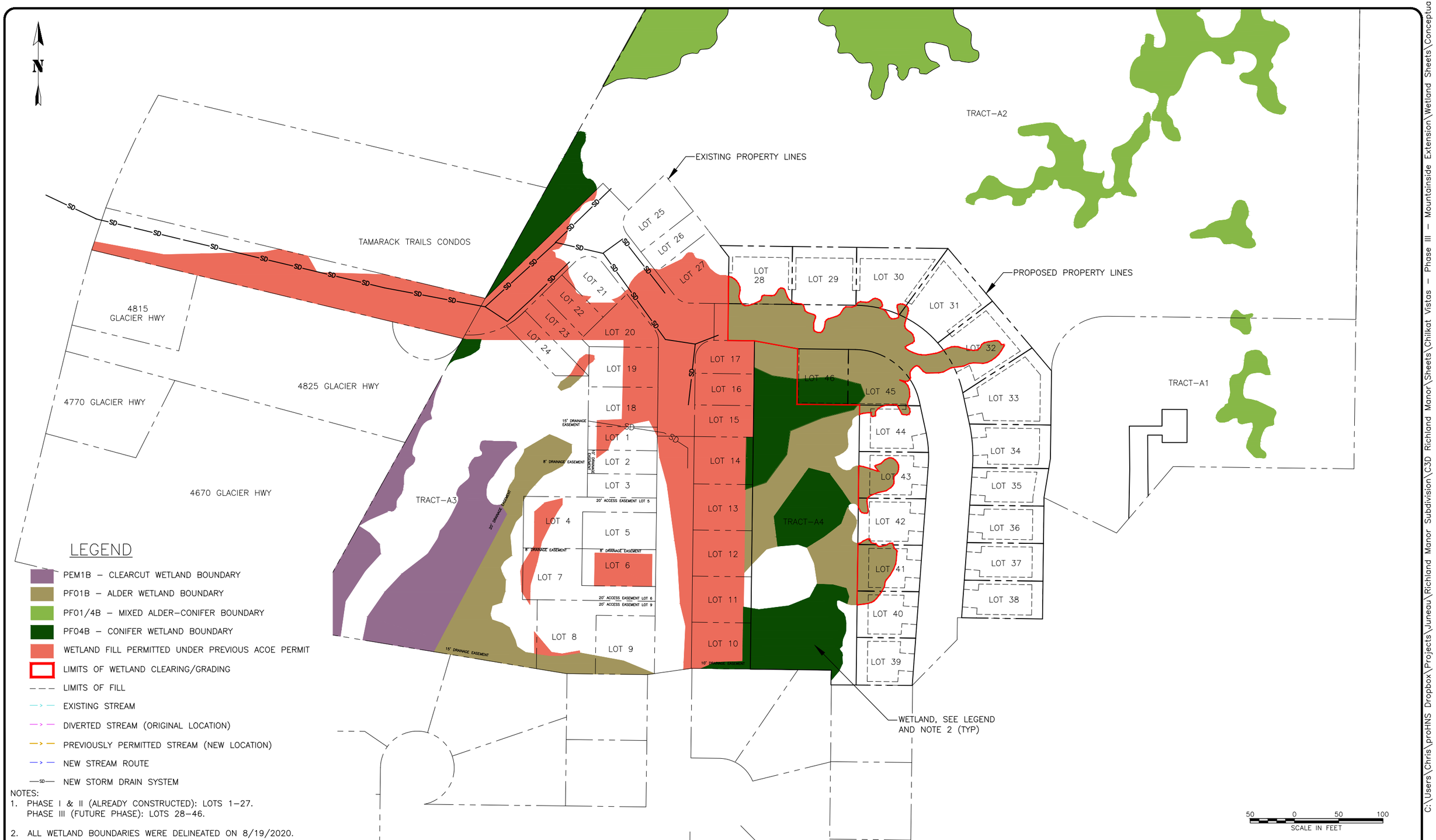
POA-2019-00066 M2

FOR: ***District Commander***
Randal P. Vigil
Acting Chief, Southeast Section
REGULATORY DIVISION

ENG FORM 4336, Jul 81 (33 CFR 320-330) EDITION OF JUL 70 MAY BE USED (Proponent: CECW-O)



Attachment M - Wetland Fill Permit



LEGEND

- PEM1B – CLEARCUT WETLAND BOUNDARY
- PF01B – ALDER WETLAND BOUNDARY
- PF01/4B – MIXED ALDER–CONIFER BOUNDARY
- PF04B – CONIFER WETLAND BOUNDARY
- WETLAND FILL PERMITTED UNDER PREVIOUS ACOE PERMIT
- LIMITS OF WETLAND CLEARING/GRADING
- LIMITS OF FILL
- EXISTING STREAM
- DIVERTED STREAM (ORIGINAL LOCATION)
- PREVIOUSLY PERMITTED STREAM (NEW LOCATION)
- NEW STREAM ROUTE
- —SD— NEW STORM DRAIN SYSTEM

NOTES:
1. PHASE I & II (ALREADY CONSTRUCTED): LOTS 1–27.
   PHASE III (FUTURE PHASE): LOTS 28–46.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

50 0 50 100
SCALE IN FEET

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS WETLAND IMPACTS

SHEET NUMBER 1 OF 6

April 27, 2023

C:\Users\Chris\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Chilkat Vistas – Phase III – Mountainside Extension\Wetland Sheets\Conceptua

Attachment M - Wetland Fill Permit



LEGEND

- PEM1B – CLEARCUT WETLAND BOUNDARY
- PF01B – ALDER WETLAND BOUNDARY
- PF01/4B – MIXED ALDER–CONIFER BOUNDARY
- PF04B – CONIFER WETLAND BOUNDARY
- WETLAND FILL PERMITTED UNDER PREVIOUS ACOE PERMIT
- LIMITS OF WETLAND CLEARING/GRADING
- LIMITS OF FILL
- EXISTING STREAM
- DIVERTED STREAM (ORIGINAL LOCATION)
- PREVIOUSLY PERMITTED STREAM (NEW LOCATION)
- NEW STREAM ROUTE
- SD NEW STORM DRAIN SYSTEM

NOTES:
1. PHASE I & II (ALREADY CONSTRUCTED): LOTS 1–27.
   PHASE III (FUTURE PHASE): LOTS 28–46.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

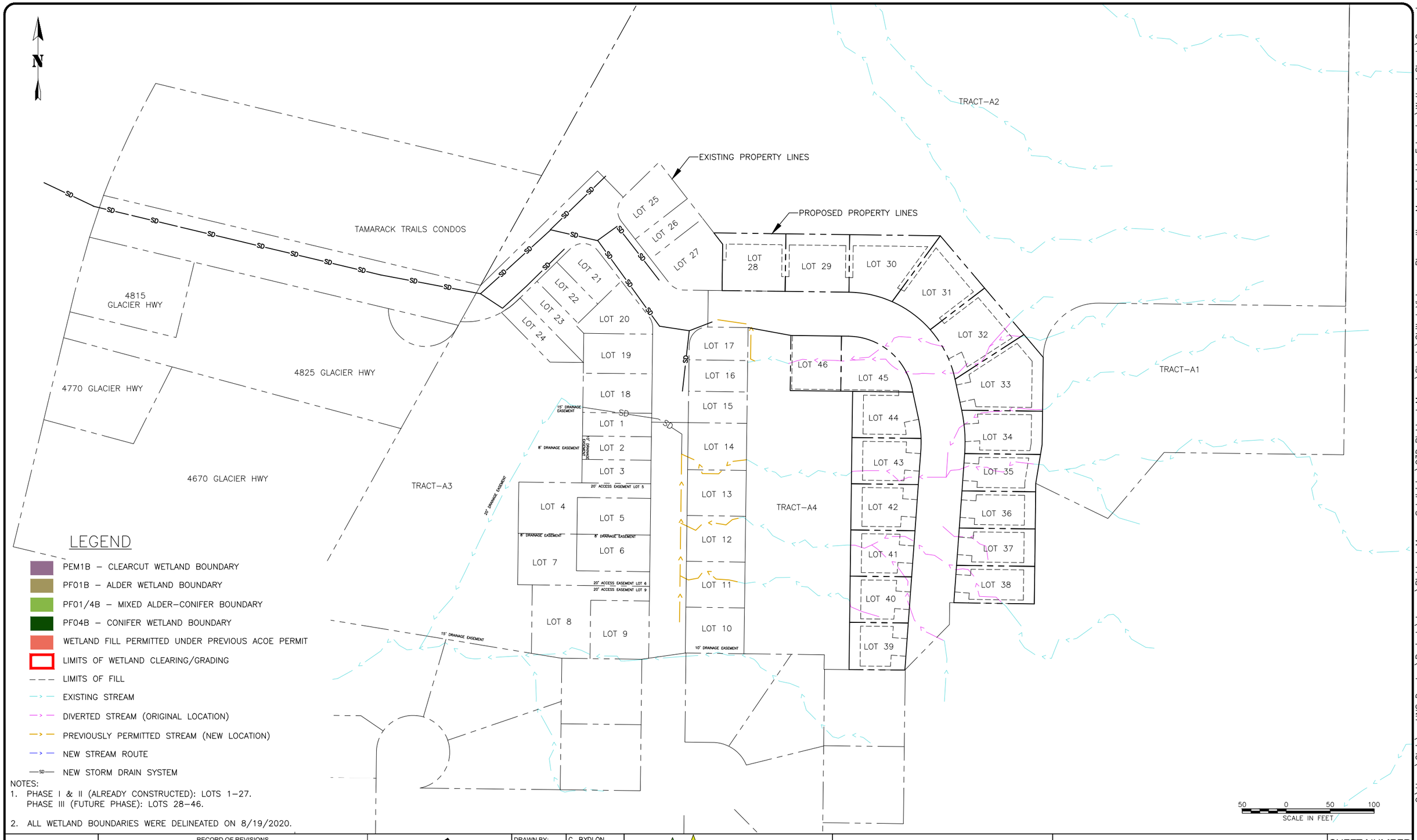
CHILKAT VISTAS EXISTING STREAMS

SHEET NUMBER 2 OF 6

April 27, 2023

C:\Users\Chris\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Chilkat Vistas – Phase III – Mountainside Extension\Wetland Sheets\Conceptua

Attachment M - Wetland Fill Permit



LEGEND

- PEM1B – CLEARCUT WETLAND BOUNDARY
- PF01B – ALDER WETLAND BOUNDARY
- PF01/4B – MIXED ALDER–CONIFER BOUNDARY
- PF04B – CONIFER WETLAND BOUNDARY
- WETLAND FILL PERMITTED UNDER PREVIOUS ACOE PERMIT
- LIMITS OF WETLAND CLEARING/GRADING
- LIMITS OF FILL
- EXISTING STREAM
- DIVERTED STREAM (ORIGINAL LOCATION)
- PREVIOUSLY PERMITTED STREAM (NEW LOCATION)
- NEW STREAM ROUTE
- SD NEW STORM DRAIN SYSTEM

NOTES:
1. PHASE I & II (ALREADY CONSTRUCTED): LOTS 1–27.
   PHASE III (FUTURE PHASE): LOTS 28–46.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

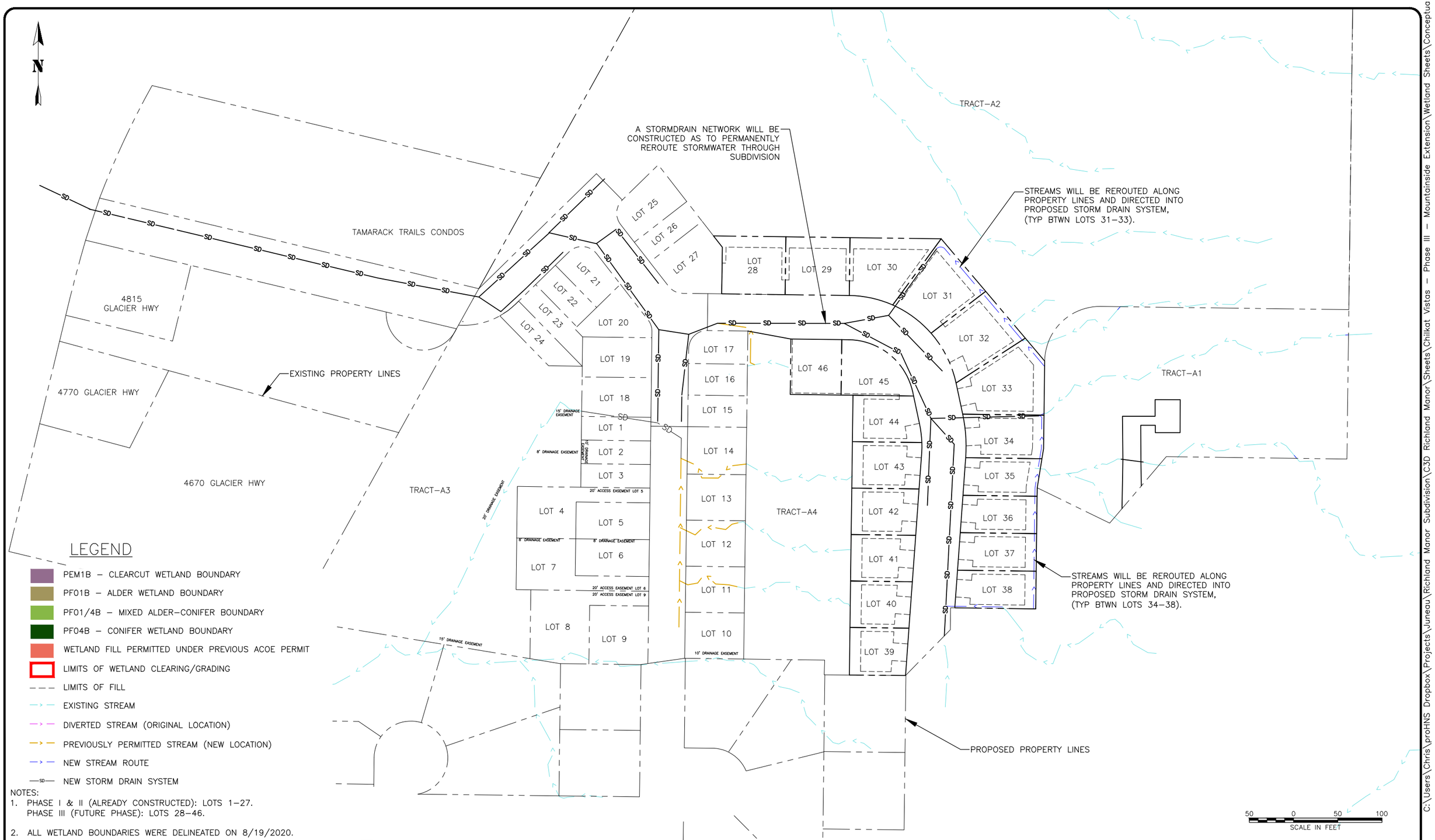
CHILKAT VISTAS EXISTING STREAMS TO BE DIVERTED

SHEET NUMBER 3 OF 6

April 27, 2023

C:\Users\Chris\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Chilkat Vistas – Phase III – Mountainside Extension\Wetland Sheets\Conceptua

Attachment M - Wetland Fill Permit



LEGEND

- PEM1B – CLEARCUT WETLAND BOUNDARY
- PF01B – ALDER WETLAND BOUNDARY
- PF01/4B – MIXED ALDER–CONIFER BOUNDARY
- PF04B – CONIFER WETLAND BOUNDARY
- WETLAND FILL PERMITTED UNDER PREVIOUS ACOE PERMIT
- LIMITS OF WETLAND CLEARING/GRADING
- LIMITS OF FILL
- EXISTING STREAM
- DIVERTED STREAM (ORIGINAL LOCATION)
- PREVIOUSLY PERMITTED STREAM (NEW LOCATION)
- NEW STREAM ROUTE
- —SD— NEW STORM DRAIN SYSTEM

NOTES:
1. PHASE I & II (ALREADY CONSTRUCTED): LOTS 1–27.
   PHASE III (FUTURE PHASE): LOTS 28–46.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS NEW STREAM ROUTES

SHEET NUMBER 4 OF 6

April 27, 2023

C:\Users\Chris\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Chilkat Vistas – Phase III – Mountainside Extension\Wetland Sheets\Conceptua

Attachment M - Wetland Fill Permit



LEGEND

- PEM1B – CLEARCUT WETLAND BOUNDARY
- PF01B – ALDER WETLAND BOUNDARY
- PF01/4B – MIXED ALDER–CONIFER BOUNDARY
- PF04B – CONIFER WETLAND BOUNDARY
- WETLAND FILL PERMITTED UNDER PREVIOUS ACOE PERMIT
- LIMITS OF WETLAND CLEARING/GRADING
- LIMITS OF FILL
- EXISTING STREAM
- DIVERTED STREAM (ORIGINAL LOCATION)
- PREVIOUSLY PERMITTED STREAM (NEW LOCATION)
- NEW STREAM ROUTE
- NEW STORM DRAIN SYSTEM

NOTES:
1. PHASE I & II (ALREADY CONSTRUCTED): LOTS 1–27.
   PHASE III (FUTURE PHASE): LOTS 28–46.
2. ALL WETLAND BOUNDARIES WERE DELINEATED ON 8/19/2020.

RECORD OF REVISIONS

No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

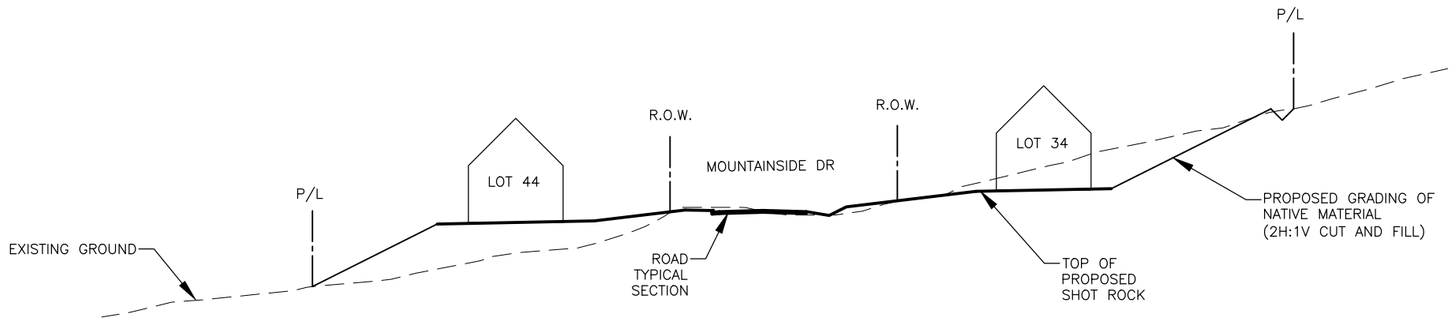
CHILKAT VISTAS CONCEPTUAL LOT LAYOUT

SHEET NUMBER 5 OF 6

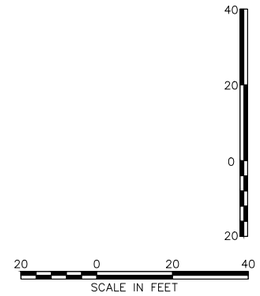
April 27, 2023

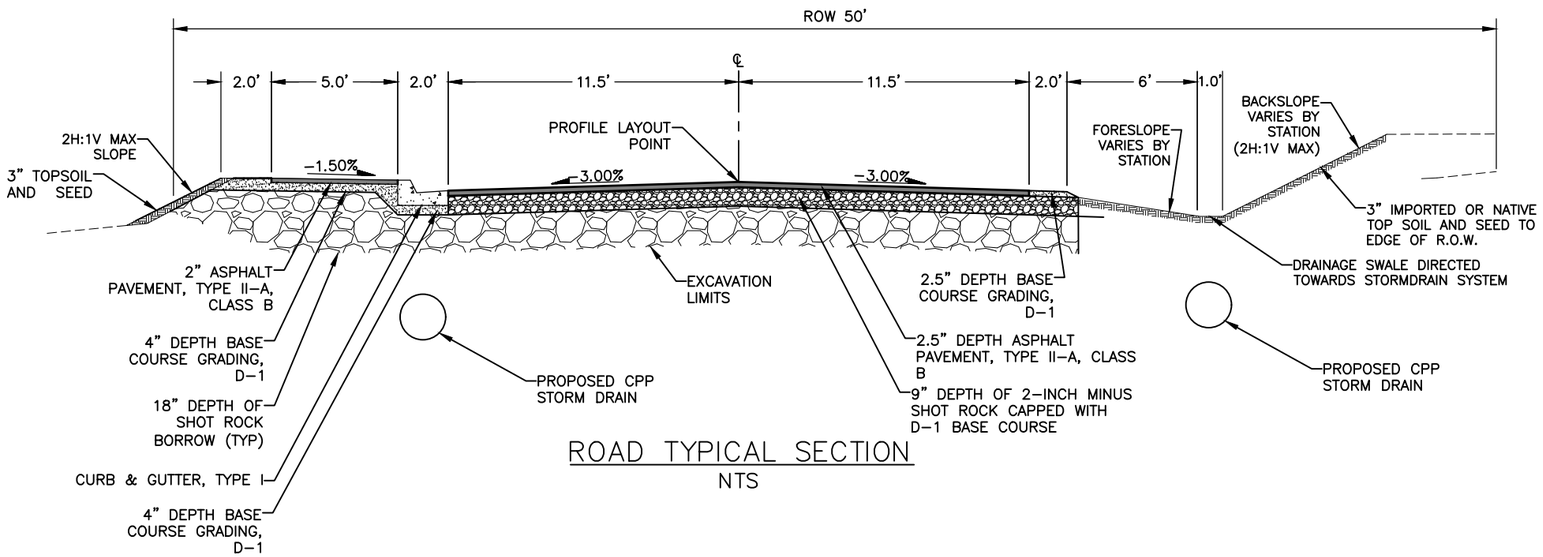
C:\Users\Chris\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Chilkat Vistas – Phase III – Mountainside Extension\Wetland Sheets\Conceptua

Attachment M - Wetland Fill Permit

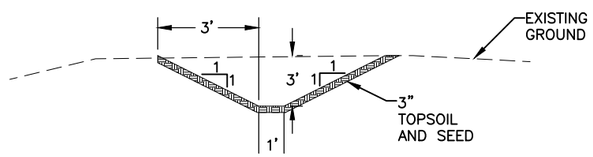


SECTION A–A





ROAD TYPICAL SECTION
NTS



REROUTED STREAM DITCH DETAIL
NTS

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	C. BYDLON
DESIGNED BY:	C. BYDLON
CHECKED BY:	L. CHMABERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
(907) 780-4004
solutions@proHNS.com
www.proHNS.com

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

JUNEAU, AK

CHILKAT VISTAS SECTIONS

SHEET NUMBER 6
OF 6

April 27, 2023

C:\Users\Chris\proHNS Dropbox\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Chilkat Vistas – Phase III – Mountainside Extension\Wetland Sheets\Conceptua

Attachment M - Wetland Fill Permit

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation
DIVISION OF WATER
Wastewater Discharge Authorization Program

555 Cordova Street
Anchorage, Alaska 99501-2617
Main: 907.269.6285
Fax: 907.334.2415
www.dec.alaska.gov/wastewater

September 19, 2023

Chilkat Vistas LLC
Attn: Michael Heumann, Owner
PO Box 34024
Juneau, AK 99803

Re: Chilkat Vistas LLC, Gastineau Channel Heumann Chilkat Vistas Residential Subdivision
POA-2019-00066-M2 v2.0, Mendenhall Wetlands

Dear Mr. Heumann,

In accordance with Section 401 of the Federal Clean Water Act of 1977 and provisions of the Alaska Water Quality Standards, the Department of Environmental Conservation (DEC) is issuing the enclosed water quality certification that the discharge from the proposed project will comply with water quality requirements for the placement of dredged and/or fill material in waters of the U.S., including wetlands and streams, associated with the proposed project: *Gastineau Channel Heumann Chilkat Vistas Residential Subdivision*.

A person authorized under a provision of 18 AAC 15 may request an informal review of a contested decision by the Division Director in accordance with 18 AAC 15.185 and/or an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. See DEC's "Appeal a DEC Decision" web page https://dec.alaska.gov/commish/review-guidance/ for access to the required forms and guidance on the appeal process. Please provide a courtesy copy of the adjudicatory hearing request in an electronic format to the parties required to be served under 18 AAC 15.200.

By copy of this letter we are advising the U.S. Army Corps of Engineers of our actions and enclosing a copy of the certification for their use.

Sincerely,

James Rypkema
Program Manager, Storm Water and Wetlands

Enclosure: 401 Water Quality Certificate

cc: (with encl.)

Delana Wilks, USACE

Kate Kanouse, ADF&G
USFWS Field Office Juneau
Matthew LaCroix, EPA AK Operations
Kelly McDonald, EPA AK Operations

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Water Quality Certification

In accordance with Section 401 of the Federal Clean Water Act (CWA) and the Alaska Water Quality Standards (18 AAC 70), a water quality certification is issued to the Chilkat Vistas LLC, Attn: michael heumann, po box 34024, juneau AK 99803 that the discharge from the proposed project *Gastineau Channel Heumann Chilkat Vistas Residential Subdivision* will comply with water quality requirements for the placement of dredged and/or fill material in waters of the U.S. including wetlands and streams.

A state issued water quality certification is required under Section 401 because the proposed activity will be authorized by a U.S. Army Corps of Engineers permit POA-2019-00066-M2 and a discharge of pollutants to waters of the U.S. located in the State of Alaska may result from the proposed activity. Public notice of the application for this certification was given as required by 18 AAC 15.180 in the DEC Public Notice POA-2019-00066-M2 posted from August 02, 2023 to September 01, 2023.

Project Purpose, Description, and Location

Project Location: The proposed activity is located within Section S5, T41S, R67E; Copper River Meridian in Juneau, Alaska. Project Site (Latitude, Longitude): 58.3454, -134.4900. With potential discharge location into forested wetlands at -134.489499, 58.345860.

Project Purpose: The applicant's stated purpose is to extend an existing subdivision to allow for nineteen additional single-family residences. Juneau suffers from a severe housing shortage and recent housing needs studies performed by the city have identified need for 100's of new housing units to create a healthy housing market. Ultimately, this project will be used by the citizens of Juneau to shelter themselves in modern, energy efficient housing. Construction of roadways and utilities are planned to commence during early 2024, with construction of housing to follow later in 2024 through 2027.

Aside from the general need for housing in Juneau, the specific layout of this phase of the project is designed to satisfy requirements of the city to provide for a secondary access to the Mountainside Estates Neighborhood. This layout was set out in the settlement agreement attached with this application. The specific need for a secondary access comes from the International Fire Code Appendix D, D106.2, which states that residential projects with more than 200 units require two fire access roads. Mountainside Estates already has over 160 units on a single access and after this phase it would be possible for the unit count to exceed 200. By completing the loop of Mountainside Drive will also loop the local water system. The current municipal water system that serves the upper reaches of the neighborhood does not meet current fire code requirements for hydrant flow rates. By adding this loop, additional flows will be possible that will greatly increase available hydrant flow rates in the event of a fire.

Project Description: The Project proposes to discharge 2,078 cubic yards of shot rock, 403 cubic yards of 2-inch rock, and 113 cubic yards of asphalt into 0.73 acres of wetlands to extend a road by 550 feet for additional residential housing. Several seasonal streams would also be rerouted into storm drains.

Phase 3 of the project will extend Mountainside Drive roughly 550' in length from the intersection at Hillcrest Avenue to where it currently dead ends just past its' intersection with Robbie Road. Decades ago, a gravel road was roughed in past the current dead-end of Mountainside Drive and drainage was routed either around or under that roadway with culverts. This project would take that drainage and route it into the storm drain system constructed during Phase 2. The purpose of extending Mountainside Drive is to provide frontage to 19 single-family lots. There will also be frontage created for Tract A4. The single family lots will be graded and then building pads and driveways will be created. The exact sizes of the building pads will vary depending on the lot size, topography, and market conditions at time of construction. In general, there are little wetlands found on lots, other than lots 45 and 46. For lots 45 and

46 the applicant proposes to clear the entire site to reinforce any potential sources of erosion with rock during site prep. These lots have been laid out at near the minimum lot size for this zoning district (5200 and 5700 ft^2 vs 5000 minimum) to maximize the amount of housing created relative to wetlands fill. The layout is designed to maximize the use of existing infrastructure in the area as well as comply with the existing sketch plat and subdivision related settlement with the Juneau Planning Commission and Mountainside Estates Neighborhood Association. Wetlands fill associated with the roadway cover 1/3 of an acre. The incremental wetlands fill associated with road building cover roughly 9450 sq ft.

Construction of the roadways and housing units will require placement of imported fill. The roads are required to use rock as a base. The roadways will be constructed a 60' ROW and will include a paved roadway surface, sidewalk on one side, storm drain system and ditching where necessary. The housing units will generally require a combination of rock and gravel fill depending on the soil conditions and topography of the lots. Additionally, buried utilities such as water, sewer, electrical and storm drain systems will all be bedded in sandy material. Materials will be excavated and placed with heavy equipment and outside materials will be hauled in by truck. The rock used for roadways will be sourced from Stabler Point Quarry or Hidden Valley. The gravel material used in the right of way will come from the city pit located near Lemon Creek, other sandy material used on private lots will be hauled in from local gravel pits or be used from gravel found on site as available.

The area to be developed is drained by a series of seasonal streams which are intersected by a system of man-made ditches that originally date from several decades ago. Drawings attached in this application show the current stream configurations and their planned future status. Generally, the streams will be rerouted into storm drains or ditches when they intersect a roadway. Streams found on building lots will be rerouted and left in open ditches routed between or uphill of houses to ensure that erosion doesn't damage newly placed materials. In addition to this drainage configuration work, there will also be care taken to manage storm water during construction. A Storm Water Pollution Prevention Plan (SWPPP) will be created/updated by the applicant's civil engineers prior to beginning construction activities. That plan will detail the range of potential methods the applicant will use to manage construction activities to prevent discharges of pollutants into wetlands and other waters of the U.S.

Applicant Proposed Mitigation: The applicant proposes the following mitigation measures to avoid, minimize, and compensate for impacts to waters of the United States from activities involving discharges of dredged or fill material.

a. Avoidance: Given the nature of Southeast Alaska and the temperate rainforest of Juneau, Alaska, it would be difficult to altogether avoid new construction in wetlands. In 2020, the applicant had a wetland delineation conducted for the entire property and discovered significant areas of uplands. The current application for Phase 3 of the property is laid out in a way that places many housing lots entirely on those uplands. As this is an infill, hillside development, many elements of the project design are dictated by topography and existing infrastructure, but where possible the applicant seeks to fully utilize uplands while also making full use of land fronting the roadway that must be constructed to develop any units at all. The primary method of avoidance took place during selection of this phase's concept and location. After permitting Phase 2, the applicant looked over the property and determined that if they constructed the Mountainside Drive loop, they could create nineteen lots and disturb less than an acre of forested wetlands.

b. Minimization: The applicant has minimized impacts through several methods. The first is through site selection of lands that have been previously disturbed and/or have been previously partially developed. Chilkat Vistas Subdivision is located within the Vanderbilt Watershed, but it does not drain into Vanderbilt Creek. The natural drainage of the site is through several culverts under Glacier Highway to the north-east portion of Twin Lakes. The streams that exist on the property are not anadromous (verified by Alaska Department of Fish and Game in 2018) and are largely comprised as a series of man-made ditches as the result of clear cutting and fill placement operations. The primary type of wetlands found on the tract are previously disturbed second-growth palustrine forested wetlands. When viewed from the highway or by aerial photography, the entire tract was clear cut by previous landowners much more recently than the surrounding areas. During this process, large amounts of the ground were disturbed as evident by the topography and vegetation found in the area. While there are other developable wetlands in this watershed, Richland Manor is highly desirable for development due to its gentle topography and generally lower value wetlands than the surrounding more pristine forest, low-lying estuaries, and meadows. Further, this tract already has road access to the site, reducing the impact from construction of new roads and utilities that other areas in the watershed would need. When accounting for these factors, as well as the high-density zoning (15 units/acre) found on the tract, Richland Manor represented the best opportunity to deliver a substantial amount of housing for the southern Juneau market while limiting the amount of high value wetlands disturbed.

The applicant has also minimized impacts through their development design. The D-15 zoning of the tract allows for smaller lots than those typically developed in recent Juneau subdivisions. These smaller lots inevitably have shorter driveways, and smaller building pads than what is commonly developed. The single-family building pad and driveway fill areas average just under 2,700 square feet. This is far less than what is typical. Other recent permits in Juneau have included house and driveway related fills that are substantially larger, sometimes over 10,000 square feet for a single home. In addition to the smaller than average footprints for the houses, the small lots also allow for housing to be spaced closer together which results in a greater number of housing units to be constructed per area of roadway constructed.

Impacts to waters of the United States will also be minimized through usage of a Storm Water Pollution Prevention Plan (SWPPP). The use of a SWPPP means that off-site impacts to wetlands will be minimized through a variety of best management practices that minimize sediment and other pollutants leaving the site. The SWPPP will be prepared by the engineering firm who designs the rest of the civil construction work, and they will consult with engineers during the project regarding storm water issues throughout the project when necessary.

c. Compensatory Mitigation: The applicant does not propose compensation for unavoidable impacts to the waters of the United States. Through both the site selection and project design process, the applicant states they have made great effort to create the maximum amount of benefit for the minimum amount of loss in wetland functionality. Juneau has a known shortage of buildable land and several studies have concluded that without substantially more housing being created, Juneau residents will continue to suffer from an unhealthy housing market. The applicant intends to partially solve that problem through the subdivision of Chilkat Vistas. This permit would allow for development of 19 single family units. Generally, they note that it's difficult to create more housing in Juneau without impacting wetlands. The wetlands found on the site are of a lower quality than many other wetlands found in the Vanderbuilt Creek Watershed area due to more recent disturbance. The applicant will provide a variety of housing options to address a broad swath of housing needs and do so in a space-efficient manner.

Antidegradation Analysis Finding

Pursuant to the Department's Antidegradation Policy and Implementation Methods at 18 AAC 70.015 and 18 AAC 70.016, DEC finds that the project would comply with the requirements for Tiers 1 and 2 regarding water quality impacts to receiving water immediately surrounding the dredge or fill material pursuant to the Corps evaluation and findings of no significant degradation under 33 U.S.C. 1344 and under 40 CFR 230. The use of appropriate best management practices and erosion and sediment control measures would adequately protect the existing water uses and the level of water quality necessary to protect existing uses. Any potential water quality degradation is expected to be temporary and limited and necessary to accommodate important social and/or economic development in the area.

Conditions Necessary to Ensure Compliance with Water Quality Standards or Other Appropriate Water Quality Requirements of State Law

The Department of Environmental Conservation (DEC) reviewed the application and certifies that there is reasonable assurance that the proposed activity, as well as any discharge which may result, will comply with applicable provisions of Section 401 of the CWA and the Alaska Water Quality Standards, 18 AAC 70, provided that the following additional measures are adhered to.

Pursuant to 18 AAC 70.020(a) and the Toxics and Other Deleterious Organic and Inorganic Substances in 18 AAC 70.020(b), the following conditions are designed to reduce pollutants from construction activity to ensure compliance with the applicable water quality standards.

Pollutants/Toxics

1. Fuel storage and handling activities for equipment must be sited and conducted so there is no petroleum contamination of the ground, subsurface, or surface waterbodies.
2. During construction, spill response equipment and supplies such as sorbent pads shall be available and used immediately to contain and cleanup oil, fuel, hydraulic fluid, antifreeze, or other pollutant spills. Any spill amount must be reported in accordance with Discharge Notification and Reporting Requirements (AS 46.03.755 and 18 AAC 75 Article 3). The applicant must contact by telephone the DEC Area Response Team for Southeast Alaska 907-465-5340 during work hours or 1-800-478-9300 after hours. Also, the applicant must contact by telephone the National Response Center at 1-800-424-8802.
3. Construction equipment shall not be operated below the ordinary high-water mark if equipment is leaking fuel, oil, hydraulic fluid, or any other hazardous material. Equipment shall be inspected daily for leaks. If leaks are found, the equipment shall not be used and pulled from service until the leak is repaired.
4. Fill material (including dredge material) must be clean soil, sand, gravel or rock, free from petroleum products and toxic contaminants in toxic amounts.

Turbidity, Erosion and Sediment Control

5. Runoff discharged to surface water (including wetlands) from a construction site disturbing one or more acres must be covered under Alaska's General Permit for Storm Water Discharges from Large and Small Construction Activities in Alaska (CGP, AKR100000, 18 AAC 83). The CGP requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For projects that disturb more than five acres, this SWPPP must also be submitted to DEC prior to construction along with the Notice of Intent (NOI). For more information see DEC's website for the CGP at https://dec.alaska.gov/water/wastewater/stormwater/construction, or call 907-269-6285.

6. Excavated or fill material, including overburden, shall be placed so that it is stable, meaning after placement the material does not show signs of excessive erosion. Indicators of excess erosion include gullying, head cutting, caving, block slippage, material sloughing, etc. The material must be contained with siltation best management practices (BMPs) to preclude reentry into any waters of the U.S., which includes wetlands.
7. Include the following BMPs to handle storm water and total storm water volume discharges as they apply to the site:
    a. Divert storm water from off-site around the site so that it does not flow onto the project site and cause erosion of exposed soils;
    b. Slow down or contain storm water that may collect and concentrate within a site and cause erosion of exposed soils;
    c. Place velocity dissipation devices (e.g., check dams, sediment traps, or riprap) along the length of any conveyance channel to provide a non-erosive flow velocity. Also place velocity dissipation devices where discharges from the conveyance channel or structure join a water course to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank slopes, and downstream waters.
8. The permittee must stabilize any dredged material (temporarily or permanently) stored on upland property to prevent erosion and subsequent sedimentation into jurisdictional waters of the United States. The material must be contained with siltation control measures to preclude reentry into any waters of the U.S., including wetlands.

Vegetation Protection and Restoration

9. Any disturbed ground and exposed soil not covered with fill must be stabilized and re-vegetated with endemic species, grasses, or other suitable vegetation in an appropriate manner to minimize erosion and sedimentation, so that a durable vegetative cover is established in a timely manner.
10. All work areas, material access routes, and surrounding wetlands involved in the construction project shall be clearly delineated and marked in such a way that equipment operators do not operate outside of the marked areas.
11. Natural drainage patterns shall be maintained, to the extent practicable, without introducing ponding or drying.

General

12. DEC coordinates with several regulatory programs to review the impacts of proposed projects. A Section 401 Certification does not release the applicant from obtaining all necessary federal, state, and local permits, nor does it limit more restrictive requirements set through any such program. It does not eliminate, waive, or vary the applicant's obligation to comply with all state water statutes and rules through construction, installation, and operation of the project or mitigation, including, but not limited to the APDES permitting program 18 AAC 83 and 18 AAC 72.

13. USACE has stated that projects shall be reviewed under the federal rules in place at the time the application is received. This project and its mitigation were reviewed under the federal and state statutes and laws in place at the time the application was received. If the USACE determines any part or condition of this Certification is not lawful or is waived and unenforceable, the determination shall apply only to the part or condition so determined. The determination shall not apply to nor invalidate any remaining parts or conditions of this Certification. If the USACE makes such a determination, the applicant remains responsible for meeting state water quality statutes and rules, and if a violation occurs, may be subject to state enforcement (18 AAC 70.010).
14. This Certification does not release the applicant from any liability, penalty, or duty imposed by Alaska or federal statutes, regulations, rules or local ordinances, and it does not convey a property right or an exclusive privilege.
15. If your project is not completed by the time limit specified under USACE Permit and will continue, or for a modification of the USACE permit, you must submit an application for renewal of this certification at least 60 days before the expiration date or any deadline established by USACE for certification action on the modification, or 60 days before the proposed effective date of the modification, whichever is sooner. (18 AAC 15.120(b), 18 AAC 15.130, 18 AAC 15.180)..

Date: September 19, 2023

James Rypkema, Program Manager
Storm Water and Wetlands

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant:	File Number:	Date:

Attached is:		See Section Below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
X	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Delana Wilks
Alaska District Corps of Engineers
Juneau Regulatory Field Office (CEPOA-RD-SE)
P.O. Box 22270
Juneau, AK 99802-9998
delana.p.wilks@usace.army.mil
907-201-5021

If you only have questions regarding the appeal process you may also contact:

Ms. Kate Bliss
Regulatory Program Manager
U.S. Army Corps of Engineers, Pacific Ocean Division
CEPOD-PDC, Bldg. 525
Fort Shafter, HI 96858-5440
(808) 835-4626
Kate.M.Bliss@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:	Telephone number:

From: Teresa Bruce
To: PC_Comments; David Peterson
Subject: Case No.: SMP2023 0001 Chilkat Vistas Phase 3
Date: Monday, March 4, 2024 10:33:04 AM

My name is Teresa Kriletich Bruce and I've lived at 4505 Robbie Rd at the corner of Mountainside Dr for 38 years. I ask that Mr. Heumann give consideration to the roof orientation and pitch of the new home to be built in front of me in an effort to preserve as much of my view as possible. Although the Mountainside subdivision covenant had height restrictions as regards to the view, this may not be in effect for the new neighboring subdivision.
Also, I would request that, as agreed upon for the previous phases of Chilkat Vistas, that a greenbelt space is included between my lot and the neighboring phase 3 lot.
Thank you,

Plats 88-39 and 99-146 showing existing pedestrian access.

From: Sarah Holzman
To: David Peterson
Subject: Chilkat Vistas Subdivision
Date: Saturday, March 2, 2024 11:16:05 AM

David,

My most pressing concern regarding the continued development of Chilkat Vistas is regarding Hooter Lane.
It is my understanding that it is the responsibility of the developer to plow and maintain Hooter Lane.

Why is this not being done?
How does the city plan to follow up with this concern?

As an owner/resident of a Tamarack Trails unit, I must drive/walk/navigate Hooter Lane from Glacier Highway to reach the entry driveway to the condominiums. There is no other way through.

My frustration is that there has been absolutely no communication or action from the city or the contractor regarding this potentially hazardous road. It appears that the contractor is allowed to do whatever he wants, however he wants and with no oversight or consequence.

Thank you for the opportunity to comment.

Sarah E. Holzman

Plats 88-39 and 99-146 showing existing pedestrian access.

From:	Michele Elfers
To:	David Peterson; PC_Comments
Subject:	Comment on Chilkat Vistas Subdivision Phase 3
Date:	Friday, March 1, 2024 10:12:13 AM
Attachments:	SMP23-01 - Att. C - Prelim Draft Plat for Phase 3-1 comments MEE.jpg

Dear Mr. Peterson and Planning Commissioners,
Thank you for allowing the community to comment on this subdivision. I recognize the need for more housing in our community and see that this development will help us to better reach our housing goals. A development of this size, scale and density adjacent to and attached to an existing neighborhood with lower density development will impact the existing homeowners. I am hoping that the Commission will consider this request as a way to mitigate some of the impacts related to congestion, traffic, noise, lights and construction that we will experience.

Above the neighborhood, on state land, is a lovely social trail that connects to Blackerby Neighborhood, Twin Lakes Park and Salmon Creek. We, as neighbors, all pitch in to maintain this trail, cutting out trees when they fall, placing rocks over wet spots, and clearing brush as needed. Many people walk this trail and for a time it was even used as the exploration area of an outdoor daycare run by a person in the neighborhood. I walked this trail to Twin Lakes playground when my kids were younger and would take it to a friend's house for easter dinner. It is a shorter route than walking down the hill and along Glacier Highway.

There is only one city owned, public connection to the public state land behind our neighborhood, it is wet and virtually impassable, I have always thought that the original developer likely designated this access because it was difficult and costly to develop for housing. We see this often around Juneau, the required green spaces in subdivisions are the undevelopable lands and are frequently unusable for recreation. The neighborhood relies on the goodwill of neighbors to let us cross through their property for access to this trail. A couple of years ago, one neighbor moved and the new owner doesn't let people cross through their property. I now know of one homeowner that still lets us use their property to access this trail.

Please create a permanent easement for pedestrian access from the new ROW to the public land. The plat in the application shows a vegetative buffer designated in this area. A 20' easement could be added from the ROW, to and through this buffer to the state land. This provides alternative transportation means in and out of the neighborhood, connectivity to an existing trail and recreation to support a healthy community. The new homeowners will benefit from this also. I know this trail could be extended to Lemon Creek one day, and it is more likely that this will happen with this new easement. Please see the attached markup showing the proposed permanent pedestrian easement.

Thank you for your consideration and all your forward thinking work to create and sustain a community that is healthy, connected and flourishing now and in 50 years.

Sincerely,
Michele Elfers and Brad Elfers
4493 Mountainside Drive

Plats 88-39 and 99-146 showing existing pedestrian access.

From:	Sheila Box
To:	David Peterson; PC_Comments
Subject:	Comments on Chilkat Subdivision phase 3
Date:	Monday, March 4, 2024 1:45:16 PM
Attachments:	SMP23-01 - Att. C - Prelim Draft Plat for Phase 3.pdf

Dear Mr. Peterson and Planning Commissioners,
Thank you for allowing the community to comment on this subdivision. I recognize the need for more housing in our community. A development of this size, scale and density adjacent to and attached to an existing neighborhood with lower density development will impact the existing homeowners. I am hoping that the Commission will consider this request as a way to mitigate some of the impacts related to congestion, traffic, noise, lights and construction that we will experience.

Above the neighborhood on state land is a lovely social trail that connects to Blackerby Neighborhood, Twin Lakes Park and Salmon Creek. We, as neighbors, all pitch in to maintain this trail, cutting out trees when they fall, placing rocks over wet spots, and clearing brush as needed. Many people walk this trail and for a time it was even used as the exploration area of an outdoor daycare run by a person in the neighborhood. I walked this trail to Twin Lakes playground when my kids were younger and would take it to a friend's house for easter dinner. It is a shorter route (and safer for dogs and children) than walking down the hill and along Glacier Highway.

There is only one city owned, public connection to the public state land behind our neighborhood, it is wet and virtually impassable, I have always thought that the original developer likely designated this access because it was difficult and costly to develop for housing. We see this often around Juneau, the required green spaces in subdivisions are the undevelopable lands and are frequently unusable for recreation. The neighborhood relies on the goodwill of neighbors to let us cross through their property for access to this trail. A couple of years ago, one neighbor moved and the new owner doesn't let people cross through their property. I now know of only one homeowner that still lets us use their property to access this trail.

Please create a permanent easement for pedestrian access from the new ROW to the public land. The plat in the application shows a vegetative buffer designated in this area. A 20' easement could be added from the ROW, to and through this buffer to the state land. This provides alternative transportation means in and out of the neighborhood, connectivity to an existing trail and recreation to support a healthy community. The new homeowners will benefit from this also. I know this trail could be extended to Lemon Creek one day, and it is more likely that this will happen with this new easement. Please see the attached markup showing the proposed permanent pedestrian easement.

Thank you for your consideration and all your forward thinking work to create and sustain a community that is healthy, connected and flourishing now and in 50 years.
Sheila Box
4467 Mountainside Drive
Juneau, AK 99801

Plats 88-39 and 99-146 showing existing pedestrian access.

From: Nickie Linder
To: David Peterson
Subject: Plat Review Chilkat Vistas
Date: Sunday, August 27, 2023 11:35:28 AM

Hello, Mr. Peterson,

My name is Nickie Romine, and I'm the Administrator/Teacher for Juneau Adventist Christian School, which sits between Tamarack Trails and Coogan Drive.

In reviewing the upcoming work, there are a few concerns for our property. One is the water coming down from the planned work area, as well as for the sewers, sumps and drainage from above us. Also considering these factors, is the increased risk of land/mudslide onto the school property.

Thank you for your time and consideration of these concerns.

Sincerely,

Nickie Romine
Administrator/Teacher
Juneau Adventist Christian School

Plats 88-39 and 99-146 showing existing pedestrian access.

From: Robert Trousil
To: David Peterson
Subject: Re: SMP2023 0001
Date: Tuesday, February 20, 2024 9:27:12 PM

Hi David,

Ok, let's try this again!

One item I would like to understand is the drainage management plan, particularly stormwater flows, proposed by the developer. In my informal discussions with Bill Huemann a year or so ago, he mentioned the possibility of a drainage easement being placed along the north edge of our property (Lot 18). I see one along Lots 19 and 20 that appears to accommodate an existing perennial drainage that enters and skirts along the southern boundary of Chilkat Vista subdivision. Although the normal flow in this stream is small, it serves as the main stormwater discharge for a significant catchment area within a portion of the Mountainside Estates Subdivision. In my conversation with Bill, it would have made sense to extend that easement eastward to catch other flows that enter the Chilkat Vistas subdivision. This made sense at the time and we were amenable to that possibility.

How the developer manages drainage within the development may not impact me, however, there is one drainage management issue that does not appear to be addressed as indicated by the lack of a drainage easement in one area. Apart from stormwater discharges mentioned above, there are significant stormwater flows that originate with the Mountainside Estates Subdivision that are routed by ditching, catch basins, and culverts into the Chilkat Vistas Phase 3 subdivision between Lot 18 and Lot 1A. Perhaps this has been addressed in CBJs engineering review of the drainage management plan for Chilkat Vistas? If so, I would like to obtain a copy of their evaluation and analysis of the drainage management plan. If not, or if such a plan has not been required of the developer, the preliminary plat needs to extend the lone aforementioned drainage easement 100.32-ft eastward to accommodate the potential for such a drainage feature.

Finally, would it be possible to send a copy of the document "*Unique characteristics of the land or structure(s*)" required when submitting the Subdivision and Development Plan Application?

Thanks for your help, David. Any questions, let me know.

Robert Trousil

Plats 88-39 and 99-146 showing existing pedestrian access.

On Feb 20, 2024, at 3:55 PM, David Peterson <David.Peterson@juneau.gov> wrote:

Copy that.

Will be on the lookout.

DP

From: Trousil <trousil@bigsky.net>
Sent: Tuesday, February 20, 2024 3:42 PM
To: David Peterson <David.Peterson@juneau.gov>
Subject: Re: SMP2023 0001

Sorry David! Tried to compose the previous message using my phone. I'll try again on my home computer, so you can disregard the previous email. I'll send another later. Thanks!

Robert
Sent from my iPhone

> On Feb 20, 2024, at 3:36 PM, Trousil <trousil@bigsky.net> wrote:
>
> Hi David. Thanks for the plat.
>
> One item I would need to know more about is drainage. I see a sliver of a drainage easement that does not extend up gradient but appears to accomodate an existing drainage that enters from the south. There is no such accommodation for an engineered drainage (Plat 97-47) or for existing drainages drainage that enters from the south along Mountainside adjacent to Lot1A at the southwest corner of the play but that's it. Maybe your engineering staff has an understanding of how drainage will be managed. There appears to be no regard for this.
>
> Sent from my iPhone
>
> > On Feb 20, 2024, at 3:12 PM, Trousil <trousil@bigsky.net> wrote:

Plats 88-39 and 99-146 showing existing pedestrian access.

Sent from my iPhone

Begin forwarded message:

> **From:** David Peterson <David.Peterson@juneau.gov>
> **Date:** February 20, 2024 at 10:05:37 AM AKST
> **To:** Robert Trousil <trousil@bigsky.net>
> **Subject: RE: SMP2023 0001**
>
> Hello Robert,
>
> Please see attached preliminary plat for Chilkat Vistas Phase 3. As it is shown this plan does meet our zoning code for a D15 zoned area. Any comments you have will be submitted to the Planning Commission for consideration.
>
> I do know our Admin team has been short staffed and may not have updated the website yet. I will nudge them regarding the website.
>
> Let me know if you have any questions or concerns regarding this.
>
> Best Regards,
>
> David Matthew Peterson | Planner II - Plat Reviewer
> Community Development Department | City & Borough of Juneau, AK
> Location: 230 S. Franklin Street, 4th Floor Marine View Building
> Office: 907.586.0753 ext. 4132
>
> Fostering excellence in development for this generation and the next.
>
> -----Original Message-----
> From: Robert Trousil <trousil@bigsky.net>

Plats 88-39 and 99-146 showing existing pedestrian access.

Sent: Monday, February 19, 2024 8:15 AM
To: David Peterson
<David.Peterson@juneau.gov>
Subject: SMP2023 0001

David,

I received an invitation to comment on the above referenced preliminary plat. Was able to view the application, but was not able to find a link to any plans. I click on the image but get sent back to the main listing of projects. Not much to review and comment on without the plat. How does one get a copy? Thanks!

Robert Trousil

<SMP23-01 - Att. C - Prelim Draft Plat for Phase 3.pdf>

Plats 88-39 and 99-146 showing existing pedestrian access.

GENERAL NOTES

1. THE BASIS-OF-BEARING UTILIZED FOR THIS SURVEY WAS THE COMMON NORTH BOUNDARY OF U.S. SURVEY NO. 4807 AND THE SOUTH BOUNDARY OF U.S. SURVEY NO. 668 AS ESTABLISHED BY RECOVERED GLO/BLM BRASS CAP MONUMENTS AT CORNER 1, U.S. SURVEY NO. 4807, AND CORNER 2, U.S. SURVEY NO. 4807, HAVING AN ACCEPTED TRUE BEARING OF S 89°52' E.
2. ALL DISTANCES SHOWN ON THIS PLAT ARE TRUE AS MEASURED IN U.S. FEET.
3. ALL BEARINGS ARE TRUE AND HAVE BEEN ROUNDED TO THE NEAREST 0°00'15" OF ARC.
4. WHERE RECORD BEARINGS AND/OR DISTANCES DIFFER FROM MEASURED AND/OR COMPUTED DISTANCES, RECORD BEARINGS AND/OR DISTANCES APPEAR IN PARENTHESES, THUSLY; S 89°52' E. - 726.81' (726.0').

CERTIFICATE OF OWNERSHIP TEMPORARY EASEMENTS WITHIN REMAINDER OF U.S. SURVEY NO. 4807

I (WE) HEREBY CERTIFY THAT I AM (WE ARE) THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT I (WE) HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH MY (OUR) FREE CONSENT AND DEDICATE ALL TEMPORARY EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED.

DATED 12/6 19 88

Mark E. Deen — Donna M. Holdick Trustee Don Abel Employee Profit Sharing Trust

WITNESS — OWNER

NOTARY'S ACKNOWLEDGEMENT

UNITED STATES OF AMERICA } ss.
STATE OF ALASKA }

THIS IS TO CERTIFY THAT ON THIS 6th DAY OF December 19 88 BEFORE THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN APPEARED Donald M. Kay TO ME KNOWN AND KNOWN TO BE TO BE THE PERSON DESCRIBED IN AND WHO EXECUTED THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE SIGNED AND SEALED THE SAME FREELY AND VOLUNTARILY FOR THE USES AND PURPOSES THEREIN MENTIONED.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

James E. Johnson
NOTARY PUBLIC FOR ALASKA
MY COMMISSION EXPIRES: 8/30/90

STATE OF ALASKA — OFFICIAL SEAL — Florence E. Johnson — NOTARY PUBLIC — My Commission Expires August 30, 1990

TYPICAL MONUMENTS SET THIS SURVEY

MT. SIDE ESTATES SUB. LOT-9 BLK-E 1410-S 1988

PRIMARY 3" Ø ALUM. MONUMENT ON 3/4" x 2-1/2" Ø ALUM. SHANK.

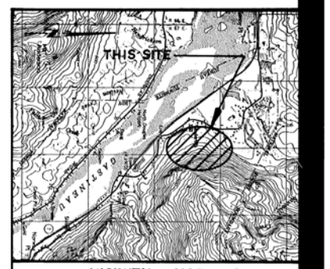
MENZIES 1410-S

SECONDARY 1" Ø PLASTIC SURV. CAP ON 5/8" Ø REBAR 24" LONG

SYMBOLS

- PRIMARY MONUMENT ESTABLISHED THIS SURVEY
- R & M PRIMARY MONUMENT RECOVERED THIS SURVEY
- B.L.M. / G.L.O. BRASS CAP MONUMENT RECOVERED THIS SURVEY
- E.M.P.S. SECONDARY MONUMENT RECOVERED THIS SURVEY
- STONE / "X" RECOVERED THIS SURVEY
- SECONDARY MONUMENT SET THIS SURVEY
- WATER SERVICE CURB STOP (SEE SPECIAL SERVICE ACCESS & MAINTENANCE EASEMENT NOTE)

R&M ENGINEERING INC.



VICINITY MAP
SOURCE: U.S.G.S. QUADRANGLE JUNEAU (B-2), ALASKA
SCALE: 1" = 1 MILE
DATE: 1962 REV.: 1966

U.S.S. 3246

N0°01'00"E - 470.00'

BLOCK "E" — lots 2 (13,104 S.F.), 3 (10,224 S.F.), 4 (11,006 S.F.), 5 (11,000 S.F.), 6 (11,000 S.F.), 11 (11,190 S.F.), 12 (12,615 S.F.), 15 (12,104 S.F.), 10 (13,995 S.F.), 13 (15,507 S.F.), 14 (15,301 S.F.)

BLOCK "F" — lots 3 (10,573 S.F.), 4 (9,829 S.F.), 5 (9,829 S.F.), 6 (9,829 S.F.), 8 (9,829 S.F.), 9 (9,829 S.F.), 7 (11,195 S.F.)

BLOCK "D" — lots 26 (15,897 S.F.), 25 (16,441 S.F.), 24 (17,044 S.F.), 23 (17,044 S.F.), 22 (14,819 S.F.), 21 (12,828 S.F.), 20 (9,311 S.F.), 19 (12,729 S.F.)

ABBY WAY — HILLCREST AVENUE — CRAIG STREET — MOUNTAINSIDE DRIVE — SIDE COURT — CREST COURT

N42°55'00"E 88.15 — TEMPORARY CUL-DE-SAC EASEMENT

N81°10'15"E-60.71' — TEMPORARY CUL-DE-SAC EASEMENT

SECONDARY MONU. 1/4" BELOW PVMT.

15' UTILITY EASEMENT FOR SEWER SERVICE TO LOT 9, BLOCK "E"

20' UTILITY & ACCESS EASEMENT

DEDICATED TO C.B.J. FOR PUBLIC PARK

15' DRAINAGE & ACCESS EASEMENT

DENOTES A FRACTION OF THE R/W DEDICATED BY MOUNTAINSIDE ESTATES SUBD. I

CURVE DATA
Δ = 36°17'30"
R = 170.00'
L = 107.68
T = 55.72'
CH = N 18°08'45" W
105.88'

DEDICATED 10' UTILITY, DRAINAGE & PEDESTRIAN ACCESS WAY WITH 5' UTILITY & DRAINAGE EASEMENT.

SOUTH - 644.81'

S32°31'00"W 107.84'

NORTH 60.45'

NORTH - 602.81'

NORTH - 180.00'

SOUTH 20.00'

SOUTH 194.27'

S0°02'30"E - 794.00'
(SOUTH - 3360.06')

S0°02'30"E - 1054.15'

SOUTH - 1510.34'

N0°06'30"W - 230.06'

N0°06'00"W - 419.14'

(NORTH - 419.10')

(WEST - 289.08')
S89°52'30"W - 289.81'

(WEST - 520.08')
S89°59'45"W - 518.88'

(WEST - 138.68')
N89°46'30"W - 138.89'

N89°58'15"W - 178.20'

N89°58'15"W - 147.65'

N89°58'15"E 25.42'

N11°39'45"W - 198.73'

N17°24'30"W 398.48'

N39°09'00"E - 513.74'

N28°18'00"E - 170.95'

N28°30'45"E - 784.08'

S89°52'00"E - 726.81' (726.00')
BASIS - OF - BEARING

S89°59'00"W 110.00'

N89°59'00"E 110.00'

N0°00'01"E - 304.71'

172.00'

S89°59'30"E - 14.09'

S47°07'45"W 32.75'

S72°35'45"W 90.00'

N13°00'00"E

S45°52'00"E

EAST - 89.32'

WEST 245.12'

S89°58'15"W 115.31'

S33°39'30"W 118.40'

N39°58'15"E 109.34'

S89°58'15"W 115.31'

N0°01'00"E 107.34'

S89°58'15"W 107.34'

S89°58'15"W 107.34'

S89°58'15"W

R&M 83-146

R&M CONSULTANTS, INC.

1983 — 146 — 00387

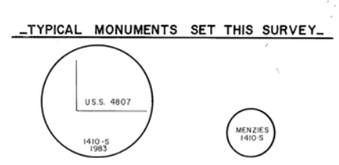
GENERAL NOTES

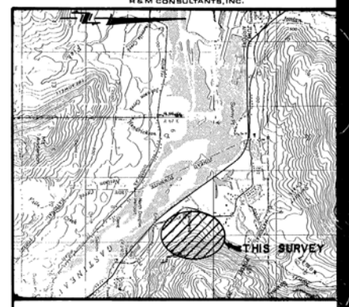
1. THE BASIS-OF-BEARING UTILIZED FOR THIS SURVEY WAS THE COMMON NORTH BOUNDARY OF U.S. SURVEY NO. 4807 AND THE SOUTH BOUNDARY OF U.S. SURVEY NO. 668 AS ESTABLISHED BY RECOVERED GLO/BLM BRASS CAP MONUMENTS AT CORNER 1, U.S. SURVEY NO. 4807, AND CORNER 2, U.S. SURVEY NO. 4807, HAVING AN ACCEPTED TRUE BEARING OF S 89°52' E.
2. ALL DISTANCES SHOWN ON THIS PLAT ARE TRUE AS MEASURED IN U.S. FEET.
3. ALL BEARINGS ARE TRUE AND HAVE BEEN ROUNDED TO THE NEAREST 0°00'15" OF ARC.
4. WHERE RECORD BEARINGS AND/OR DISTANCES DIFFER FROM MEASURED AND/OR COMPUTED DISTANCES, RECORD BEARINGS AND/OR DISTANCES APPEAR IN PARENTHESES, THUSLY; S 89°52' E - 726.81' (726.0').

SYMBOLS

- BLM/GLO BRASS CAP MONUMENT RECOVERED THIS SURVEY
- STONE /"X" RECOVERED THIS SURVEY
- PRIMARY MONUMENT ESTABLISHED THIS SURVEY
- EMPS SECONDARY MONUMENT RECOVERED THIS SURVEY
- SECONDARY MONUMENT ESTABLISHED THIS SURVEY
- PRIMARY MONUMENT W.K.V.H. RECOVERED THIS SURVEY
- PROPERTY BOUNDARY LINE

TYPICAL MONUMENTS SET THIS SURVEY





VICINITY MAP

SOURCE: U.S.G.S. QUADRANGLE JUNEAU (B-2), AK.
SCALE: 1" = 1 MILE
DATE: 1962 REV: 1974

LEGAL DESCRIPTION

MOUNTAINSIDE ESTATES, PHASE 1

A CERTAIN TRACT OR PARCEL OF LAND LYING AND BEING SITUATE WITHIN A FRACTION OF U.S. SURVEY NOS. 2502 AND 4807 (PROTRACTED SECTION 5, T.41S., R.66E., C.R.M.), FIRST JUDICIAL DISTRICT, STATE OF ALASKA, BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS;

BEGINNING AT CORNER 1, U.S. SURVEY NO. 3246, A RECOVERED GLO/BLM BRASS CAP MONUMENT, AND BEING A POINT ON THE COMMON BOUNDARY LINE OF U.S. SURVEY NO. 2502; THENCE ALONG THE COMMON BOUNDARY BETWEEN U.S. SURVEY NOS. 2502 AND 3246, S 89°58'15" E - 150.97' TO CORNER 9, U.S. SURVEY NO. 4807, THENCE ALONG THE COMMON BOUNDARY BETWEEN U.S. SURVEY NOS. 2502 AND 4807, S 36°17'30" W - 805.79' (N 36°15'15" W - 806.52') TO CORNER 1, U.S. SURVEY NO. 4807, THENCE ALONG THE COMMON BOUNDARY BETWEEN U.S. SURVEY NOS. 4807 AND 2502, S 89°52'30" W - 289.81' (WEST - 289.08'); THENCE LEAVING SAID COMMON BOUNDARY, N 00°06'30" W - 230.06'; THENCE N 89°53'30" E - 80.00'; THENCE N 00°06'30" W - 180.00'; THENCE S 89°53'30" W - 80.00'; THENCE N 00°06'30" W - 168.08'; THENCE N 89°53'30" E - 94.00'; THENCE N 00°06'30" W - 168.06'; THENCE S 89°53'30" W - 94.00'; THENCE N 00°06'30" W - 230.06' TO THE NORTH BOUNDARY OF U.S. SURVEY NO. 4807; THENCE ALONG THE NORTH BOUNDARY OF U.S. SURVEY NO. 4807, S 89°53'30" W - 138.59' (WEST - 138.60') TO THE INTERSECTION OF ARCHEMINTED BOUNDARY AND THE EASTERLY BOUNDARY OF U.S. SURVEY NO. 1902, SAID POINT BEING CORNER 6, U.S. SURVEY NO. 4807, A RECOVERED GLO/BLM BRASS CAP MONUMENT; THENCE ALONG THE EASTERLY BOUNDARY OF U.S. SURVEY NO. 1902, S 00°06'00" W - 419.14' (NORTH - 419.10') TO THE NORTHEASTERLY RIGHT-OF-WAY LIMITS OF OLD GLACIER HIGHWAY; THENCE ALONG ARCHEMINTED RIGHT-OF-WAY LIMITS OF OLD GLACIER HIGHWAY, N 39°47'45" W - 196.73'; THENCE DEPARTING THE NORTHEASTERLY RIGHT-OF-WAY LIMITS OF OLD GLACIER HIGHWAY ALONG THE COMMON BOUNDARY BETWEEN U.S. SURVEY NO. 3246 AND U.S. SURVEY NO. 2502, S 89°58'15" E - 25.42' TO THE TRUE POINT AND PLACE OF BEGINNING.

CONTAINING 39.41 ACRES, MORE OR LESS.

OWNERSHIP CERTIFICATE

I (WE) HEREBY CERTIFY THAT I (WE ARE) THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT I (WE) HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH MY (OUR) FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATED Aug 23, 1983

Madsen Development Corp
President

WITNESS

WITNESS

NOTARY'S ACKNOWLEDGEMENT

STATE OF ALASKA)
FIRST JUDICIAL DISTRICT) ss.

THIS IS TO CERTIFY THAT ON THIS 23 DAY OF Aug, 1983 BEFORE THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, APPEARED Donald C. Madsen KNOWN AND KNOWN TO ME TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE FOREGOING INSTRUMENT, AND THEY ACKNOWLEDGED TO ME THAT THEY SIGNED THE FOREGOING INSTRUMENT AS THE FREE ACT AND DEED OF THE SAID CORPORATION FOR THE PURPOSES THEREIN MENTIONED, BEING FULLY AUTHORIZED TO DO SO.

President AND THE N/A

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA
MY COMMISSION EXPIRES: 5/28/86

CERTIFICATE OF APPROVAL BY THE BOARD

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA, AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLATTING BOARD BY PLAT RESOLUTION NO. PP-15-D DATED July 12, 1983 AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, JUNEAU, ALASKA.

DATED Sept 21, 1983

CHAIRMAN
CITY AND BOROUGH OF JUNEAU
PLATTING BOARD

ATTEST:

CLERK
CITY AND BOROUGH OF JUNEAU
PLATTING BOARD

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND LICENSED TO PRACTICE LAND SURVEYING IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND THE MONUMENTS SHOWN THEREON ACTUALLY EXIST AS DESCRIBED, AND THAT ALL DIMENSIONS AND OTHER DETAILS ARE CORRECT.

Plat 83-146
RECORDED - FILED 10:40
JUNEAU REC. DIST.
DATE 9-23-83
TIME 1:54 P M
Requested Madsen Development Corporation
Address

NOTE:
TRACTS A, B, & C ARE TO BE DONATED TO THE CITY & BOROUGH OF JUNEAU.

CURVE DATA

C #	DELTA	RADIUS	LENGTH	TANGENT	CHORD BEARING	CHORD LENG.
1	15°21'41"	170.00'	182.93'	94.33'	S 85°19'00" W	180.75'
2	37°59'26"	50.00'	33.15'	17.19'	S 00°06'30" W	32.55'
3	47°48'10"	100.00'	83.45'	44.31'	S 00°06'30" E	81.06'
4	24°38'19"	200.00'	86.04'	43.63'	S 65°48'04" E	85.38'
5	24°38'19"	200.00'	86.04'	43.63'	S 41°09'45" E	85.38'
6	24°38'11"	200.00'	85.93'	43.56'	S 16°31'08" E	85.28'
7	25°00'30"	200.00'	87.28'	44.30'	S 08°23'30" W	86.60'
8	1°13'31"	200.00'	4.28'	2.14'	S 35°48'04" E	4.28'
9	63°50'00"	200.00'	222.80'	126.27'	S 68°58'15" E	211.50'
10	15°00'00"	200.00'	28.80'	14.48'	S 17°30'00" E	28.72'
11	50°00'00"	200.00'	260.46'	140.80'	S 50°00'00" E	252.32'
12	59°00'00"	200.00'	205.95'	113.15'	N 7°30'00" W	196.97'
13	41°01'53"	200.00'	143.23'	74.96'	N 51°31'00" W	140.19'
14	28°01'53"	200.00'	272.26'	162.05'	N 39°01'00" W	251.83'
15	64°59'00"	200.00'	226.69'	129.30'	N 83°00'30" W	214.33'
16	15°22'25"	230.00'	61.73'	31.05'	S 28°36'15" E	61.54'
17	4°30'59"	170.00'	28.33'	14.20'	N 76°58'00" W	28.30'
18	22°56'25"	230.00'	92.09'	46.67'	S 83°28'15" E	91.47'
19	38°13'43"	50.00'	76.99'	40.48'	S 27°06'30" E	75.58'
20	41°54'08"	50.00'	36.58'	19.12'	N 87°51'00" E	35.78'
21	47°59'23"	50.00'	41.88'	22.32'	N 43°10'45" E	40.66'
22	109°01'23"	50.00'	95.14'	70.13'	N 34°53'30" W	81.16'
23	15°00'00"	230.00'	60.21'	30.27'	S 07°36'30" E	60.04'
24	18°08'25"	230.00'	72.69'	36.65'	S 25°02'45" E	72.38'
25	15°00'00"	230.00'	60.21'	30.27'	S 40°06'30" E	60.04'
26	18°08'25"	230.00'	72.69'	36.65'	S 55°02'45" E	72.38'
27	15°00'00"	230.00'	60.21'	30.27'	S 70°06'30" E	60.04'
28	56°54'33"	50.00'	49.66'	27.04'	S 89°58'15" E	47.66'
29	90°00'00"	50.00'	78.54'	50.00'	S 44°53'45" E	70.71'
30	90°00'00"	50.00'	78.54'	50.00'	S 45°06'15" W	70.71'
31	90°00'00"	50.00'	78.54'	50.00'	S 44°53'45" E	70.71'
32	63°00'48"	50.00'	27.64'	15.76'	N 33°05'00" E	26.26'
33	27°00'00"	50.00'	23.56'	12.00'	N 76°23'30" E	23.34'
34	13°29'00"	140.00'	47.63'	24.05'	S 80°15'30" E	47.40'
35	63°05'53"	50.00'	55.05'	30.53'	S 69°25'45" E	52.30'
36	42°53'53"	50.00'	37.44'	19.64'	S 39°59'00" E	36.57'
37	44°06'16"	50.00'	38.49'	20.30'	S 03°02'45" E	37.53'
38	110°03'14"	50.00'	96.34'	71.74'	N 80°56'08" W	82.01'
39	90°00'00"	50.00'	78.54'	50.00'	S 44°53'45" E	70.71'
40	19°17'09"	230.00'	77.43'	39.07'	S 80°42'15" E	77.07'
41	45°56'42"	230.00'	184.42'	96.90'	S 54°53'45" E	179.54'
42	45°56'42"	230.00'	184.42'	96.90'	S 09°03'45" E	179.54'
43	56°13'02"	50.00'	49.05'	26.69'	N 78°13'00" E	47.09'
44	56°50'00"	50.00'	49.59'	27.01'	N 21°03'00" E	47.60'
45	54°00'25"	50.00'	47.13'	25.48'	N 35°00'45" W	45.41'
46	54°06'46"	50.00'	51.59'	28.35'	S 89°03'00" W	49.33'
47	20°36'31"	230.00'	82.73'	41.82'	N 4°12'00" E	82.28'
48	23°14'50"	230.00'	93.34'	47.43'	N 17°46'15" W	92.70'
49	23°06'24"	50.00'	20.17'	10.23'	S 89°45'30" E	20.03'
50	50°52'21"	50.00'	44.40'	23.69'	N 52°09'00" E	42.96'
51	51°21'32"	50.00'	50.20'	27.43'	N 6°27'00" W	48.12'
52	99°09'05"	50.00'	86.51'	58.01'	N 64°51'30" W	76.07'
53	54°51'58"	50.00'	47.86'	25.94'	S 59°46'00" W	46.05'
54	54°51'58"	50.00'	47.86'	25.94'	S 5°04'03" W	46.05'
55	76°58'11"	50.00'	67.17'	39.70'	S 54°25'30" W	62.24'
56	13°06'29"	230.00'	52.62'	26.46'	S 74°52'30" W	52.51'
57	25°00'30"	230.00'	100.39'	51.12'	S 87°42'30" W	99.57'
58	66°06'19"	170.00'	197.62'	111.71'	N 35°03'30" W	186.85'
59	4°54'21"	170.00'	14.00'	7.01'	N 0°39'45" E	14.00'
60	28°54'13"	50.00'	26.64'	12.53'	S 50°09'15" E	26.39'
61	50°00'00"	50.00'	43.63'	23.54'	N 88°06'30" E	42.26'
62	58°34'36"	50.00'	51.12'	28.05'	N 23°12'15" E	48.92'
63	51°05'53"	50.00'	44.59'	24.01'	N 32°58'45" W	43.13'
64	56°54'07"	50.00'	49.62'	27.00'	N 85°51'15" W	47.62'
65	28°01'53"	50.00'	24.46'	12.49'	N 51°31'15" W	24.22'
66	23°34'20"	230.00'	94.61'	47.93'	N 30°43'15" E	93.95'
67	4°30'59"	170.00'	28.33'	14.20'	N 76°58'00" W	28.30'
68	16°29'47"	230.00'	66.20'	33.26'	N 33°32'00" E	66.00'
69	38°13'43"	50.00'	33.35'	17.36'	N 30°38'30" W	32.73'
70	56°38'08"	50.00'	49.42'	26.94'	N 86°40'00" E	47.44'
71	51°21'32"	50.00'	44.82'	24.15'	S 50°52'00" E	43.33'
72	99°09'05"	50.00'	86.51'	58.01'	S 64°51'30" E	76.07'
73	69°55'07"	50.00'	60.64'	34.68'	N 34°44'30" W	56.99'
74	20°54'58"	50.00'	18.25'	9.23'	N 79°45'45" E	18.15'
75	65°00'15"	110.00'	124.82'	70.68'	S 57°30'00" E	118.21'

REMAINDER
U.S.S. 4807
41.86 Ac.

TONGASS NATIONAL FOREST

A SUBDIVISION PLAT OF
MOUNTAINSIDE ESTATES SUBDIVISION PHASE-I
WITHIN
A FR. OF U.S.S. 4807 & A FR. OF U.S.S. 2502
CITY & BOROUGH OF JUNEAU ____, ____ ALASKA

CLIENT:
MADSEN CONSTRUCTION
9340 GLACIER HWY. SUITE 42
JUNEAU, AK.
99801

SHEET I OF II

SURVEYOR:
R&M CONSULTANTS INC.
P.O. BOX 1786
JUNEAU, AK.
99801

SCALE: 1" = 100' (30.48 METERS)

DATED: 4/83

R&M PROJECT Nº 937154

Mountainside Estates Phase-1

Attachment O - Plats 88-39 and 99-146 showing existing pedestrian access.