

AGENDA

WETLANDS REVIEW BOARD REGULAR MEETING

April 19, 2018

**CITY HALL CONFERENCE ROOM 224
5:15 P.M.**

- I. ROLL CALL AND WELCOME NEW MEMBERS**
- II. ELECTION OF CHAIR/VICE CHAIR (or wait until we have full attendance?)**
- III. APPROVAL OF MINUTES**

August 17, 2017 Regular Meeting

- III. APPROVAL OF AGENDA**
- IV. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS**
- V. BOARD COMMENTS**
- VI. AGENDA ITEMS**

1) MIP2017 0015: Minor Subdivision of one lot into nine lots

- A. Staff Presentation
- B. Applicant Presentation
- C. Public Testimony
- D. Board/Staff Discussion
- E. Motion

- VII. PENDING PERMITS & UPDATES**

- 1) AME2017 0001: Anadromous Waterbody Ordinance Revision
- 2) Board vacancy
- 3) Meeting location

- VIII. PLANNING COMMISSION LIAISON UPDATE**

- IX. SCHEDULE FOR NEXT BOARD MEETING**

May 17, 2018 Thursday October 19, 5:15 p.m., City Hall Conference Room 224

- X. ADJOURNMENT**

DRAFT MINUTES
WETLANDS REVIEW BOARD

August 17, 2017, 5:15 p.m. Valley Library Large Conference Room

Meeting Summary

I. Roll Call

Board Members Present: Irene Gallion, Amy Sumner, Lisa Hoferkamp, Hal Geiger, Nina Horne

Board Members Absent: Andrew Campbell, Percy Frisby, Dan Miller, Brenda Wright,

A quorum was present.

Staff Members Present: Tim Felstead, Planner; Alan Steffert, Engineer

Public Present: Scott Rinkenberger, Airport Maintenance Supervisor; John Mikesell, Airport Wildlife Specialist; Gretchen Pikul, Division of Water, State DEC.

Meeting called to order at 5:20 p.m.

II. Approval of Minutes

Minutes approved for the June 26, 2017 Regular Meeting subject to amendment

III. Agenda approved

IV. Public Participation on Non-Agenda Items

Mr. Rinkenberger passed around some photographs showing trash in Duck Creek adjacent to McGivney's Bar in Mendenhall Mall. He had been asked to assist a business with a bear nuisance issue. The photographs show a refuse receptacle and what presumably were its contents strewn across the stream. Mr. Rinkenberger stated that this is a situation repeated in many creeks in Juneau and restrictions of the thinning of vegetation around stream corridors is a contributing factor to this issue since these areas become 'out of sight'.

Ms. Sumner mentioned clean-up activities undertaken by volunteers and if such locations were reported then they could be tackled by volunteers. Mr. Rinkenberger cautioned against going into the undergrowth without a JPD presence since some areas were homeless campsites.

Mr. Mikesell suggested that vegetation could be thinned effectively to open up some undergrowth areas while protecting stream habitat. ADFG had visited some sites with Mr.

Mikesell and identified where some vegetation in the buffer could be removed without harming the habitat.

Dr. Geiger stated that this seemed to be an enforcement issue. Dr. Hoferkamp wondered if non camping signs might help. Mr. Rinkenberger said that non-life safety issues such as this were not a priority for JPD to enforce. Ms. Gallion stated that JPD has cut a Community Service Officer position in the recent CBJ budget and there was less resource to deal with bear and trash issues. Ms. Gallion suggested that reintroduction of this position could be an action they should consider at the next meeting.

Dr. Geiger said that he was not sure that the trash necessarily affected fish productivity and that removing vegetation could have a great negative impact; there needed to be a consideration of the balance of impacts.

VI. AGENDA ITEMS.

1) CSP2017 0013 City Project Review of an extension of the West Douglas Pioneer Road through CBJ lands on west side of Douglas Island.

A. Staff Presentation

Dr. Felstead outlined the proposal and requested that the Wetlands Review Board review not consider if the access road should be constructed but comment on the alignment and whether impacts were being effectively mitigated for. Dr. Felstead noted that there were additional materials in response to questions posed by Ms. Gallion.

B. Board/Staff Discussion

Ms. Gallion had three questions she presented to staff prior to the meeting:

- On the second page of the Mitigation Statement – Phase II staff references the “Existing Wetlands and Proposed Preservation Area Map.” What page of the pdf is that on? I was looking for the blue color referenced as a clue, but can’t find it.
- The delineation does not mention Kina soils. The Concept Plan (1997) does in the 1A development area. I didn’t see any mapping of where the Kina soils were? Just wanted to double check given the downhill migration of the originally proposed route. (Granted, soils change over, oh, 20 years)
- Has CBJ considered ending road development at about Sta 177+00? It seems. that would provide access to Development Areas 1-A and 1-B, without taking us to a dead end next to a creek. It looks like the lowest 1,300 or so has been mapped anadromous, is it worth protecting the upstream a bit? Also, might reduce project development costs while still giving the city what they need to get the first stages of development going.

Ms. Gallion asked why this extension was being built. Mr. Steffert responded that budget was available now, it was a priority of the Assembly and will help with access for future surveys related to planning the development of the West Douglas area.

Ms. Gallion noted that Kina soils were mentioned in the West Douglas Concept Plan. Mr. Steffert said he could only speculate that it may have poor mapping but the revised route that they had followed to date and were proposing for the extension had not identified Kina soils. Dr. Felstead distributed maps that showed the revised route.

Ms. Gallion also asked about the termination of the road and if there had been consideration to end further from Middle Creek. Mr. Steffert referred back to the earlier answer. ADFG had reviewed the stream crossings. The funding for the extension was State funding that was required to be spent within a certain time period. This deadline was approaching. This extension is just another phase in the final objective of accessing to Point Hilda. Dr. Felstead repeated that the extension is an Assembly priority and the purpose of construction is not the question.

Ms. Gallion commented that the fish passages on Phase 1 had been designed by DOWL. Mr. Steffert said the fish passages had been inspected by ADFG and the next Phase would be subject to the same scrutiny.

Dr. Geiger proposed that the previous motion for Phase I, which did not pass during the WRB review of that project, be proposed again for the purpose of discussion.

The Wetlands Review Board recommends that if the project is pursued that Best Management Practices be strongly adhered to with the goal of maintaining water quality and fish passage.

Ms. Gallion amended the motion to reflect that the access road should be terminated a further distance from Middle Creek.

Further discussion followed regarding the fish passage design. Ms. Sumner asked if there were bridges considered for the next phase. Mr. Steffert said there would be no bridge crossings, only culverts since the streams were so small in size. Ms. Sumner asked about the areas of alluvial fan and that culverts and alluvial fans do not work well together. Mr. Steffert said a Forest Service soils scientist has examined the site and the alluvial fans were stable and appeared to have not moved for some time. Mr. Steffert also noted that the streams being crossed in Phase II were very different from Phase I.

Ms. Horne said the decision to build the extension had already been made and at some point Middle Creek will also be crossed. Mr. Steffert said that crossing Middle Creek will be relatively expensive. Mr. Steffert also said that the required 50ft buffers are being observed during Phase II. Ms. Horne suggested the board consider how to get most benefit from the project and that this may include an education opportunity along the route with interpretative signs. Mr. Steffert said that suggestions from the WRB on how to minimize the impact of future development on the surrounding drainages and wetlands be a more productive issue for the WRB to consider. Ms. Pikul suggested that mitigation areas could be considered as part of the ACOE wetlands permit. Mr. Steffert had suggested a mitigation area in the application to the

Army Corp.

Considerable discussion amongst all board members followed on the exact wording of a revised motion. Eventually, the following motion was proposed:

The Wetlands Review Board recommends that when the project is pursued that Best Management Practices be strongly adhered to with the goal of maintaining water quality and fish passage.

The Wetlands Review Board requests that there be:

- *Mitigation areas identified and the Wetlands Review Board be consulted on their locations.*
- *Protection for sensitive areas by restricting motorized vehicles to the surfaced road area.*
- *A study to determine appropriately sized buffers to protect sensitive areas in the Peterson Creek and Middle Creek drainages.*

Ms. Gallion proposed the motion and asked for unanimous consent. Seeing no objections the motion was passed.

VII. PENDING PERMITS & UPDATES

- 1) AME2017 0001 Anadromous Waterbody Ordinance Revision

A number of the board members asked that they be notified regarding this proposed ordinance if there is no time to bring it back in front of them. They would like to be able to comment as members of the public.

VIII. PLANNING COMMISSION LIAISON UPDATE

No liaison from the Planning Commission was present.

IX. SCHEDULE FOR NEXT BOARD MEETING

- September 21 meeting has been cancelled; a special meeting is possible later in the month.
- Next Regular Meeting, Thursday October 19, 5:15 p.m., **CITY HALL CONFERENCE ROOM #224**. PLEASE NOTE LOCATION.

X. ADJOURNMENT

Meeting was adjourned at 6:50pm



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

MEMORANDUM

DATE: April 09, 2018

TO: Wetlands Review Board

FROM: Tim Felstead, Planner
Community Development Department

FILE NO.: MIP2017 0015

SUBJECT: Minor subdivision of one lot into nine lots

A handwritten signature in black ink, appearing to read 'Tim Felstead', is written over the 'FROM' line of the memorandum.

GENERAL INFORMATION

Applicant: Rand and Kathy Thatcher; DOWL

Property Owner: Rand and Kathy Thatcher

Property Address: Ocean View Drive

Legal Description: SOUTH LENA TR A1

Parcel Code No.: 8B3301070080

Attachments

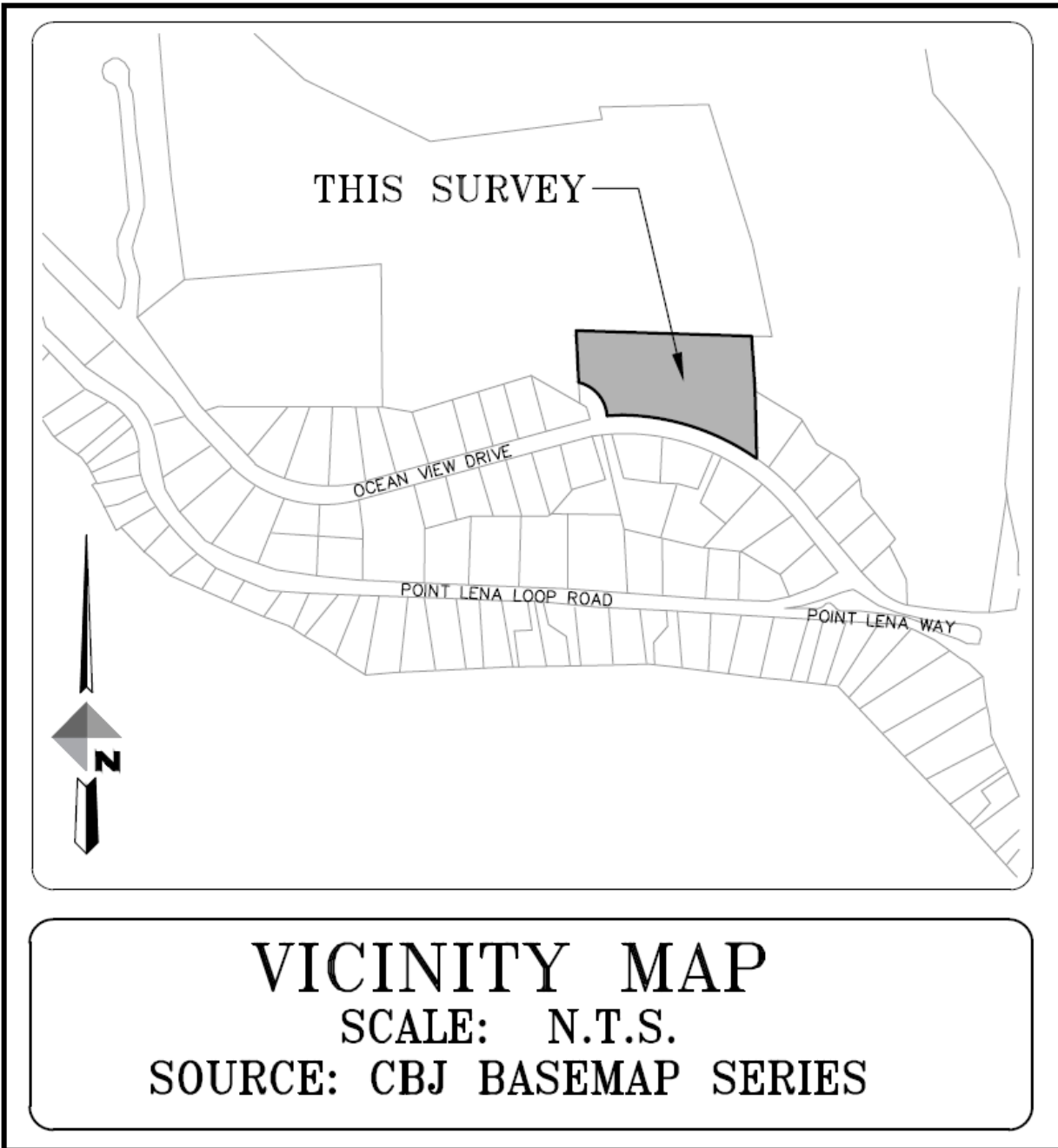
Attachment A Proposed subdivision design, applicant's proposed drainage plan, and alternative drainage plans discussed to date

Attachment B 2002 Wetlands analysis from South Lena Subdivision

Attachment C Wetlands Review Board recommendations for South Lena Subdivision (2003)

Attachment D Extracts from Draft Juneau Wetlands Management Plan regarding subject wetlands

VICINITY MAP



PROPOSAL

The applicant is proposing a nine lot subdivision of one existing lot (see **Attachment A**) located in the South Lena subdivision.

BACKGROUND

During the review process, when looking at drainage requirements for the subdivision, it became apparent that there may be wetlands on the subject lot and also on surrounding lots that would be used for future drainage paths.

Further research of the South Lena Subdivision files has discovered that wetlands have previously been identified on the subject lot through a wetlands functional analysis (see **Attachment B**). The analysis labels the subject wetlands as *Unit 1*. These wetlands were on the periphery of the South Lena subdivision. The South Lena subdivision has previously been reviewed by the Wetlands Review Board in 2002 and 2003, and the Board made a recommendation regarding the subdivision at that time (see **Attachment C**). Except for Recommendation 3, there were no recommendations directly related to Unit 1.

The subject wetlands are also identified in the more recent Draft Juneau Wetlands Management Plan. The subject area is part of wetland unit *LP 02*. This is catalogued as ‘forested peatlands’ – relevant extracts regarding the subject wetlands unit, including location maps and WESPAK descriptions, are provided in **Attachment D**. It should be noted that some extracts for the wetland unit refer to it as ‘forested wetland’; it should be correctly described as ‘forested peatland’.

The subject lot was formerly owned by the Alaska Mental Health Trust and was left as one large tract during the South Lena Subdivision. It is now owned privately, and the applicant wishes to subdivide. Given the existence of wetlands on the subject lot, an Army Corp of Engineers (ACOE) fill permit will be required.

The subject lot is bounded by Ocean View Drive to the south, Merganser Road (an unbuilt right of way), a CBJ lot to the north that is identified for future subdivision by CBJ, and to the east a lot that is a CBJ greenbelt that was set aside as part of the South Lena Subdivision.

All lots are at least double the minimum lot size for the D3 zoning district (minimum lot size is 12,000 square feet). The Land Use Code requires the lots to provide 20% of lot area to be live vegetation and limits the maximum building coverage of the lot to 35%. Driveways and structures that are not buildings do not count towards lot coverage.

HABITAT

Anadromous Streams – There are no anadromous streams within the subject lot. Picnic Creek (aka Campground Creek) is located in a CBJ greenbelt on the adjacent lot to the east. The creek is ~650ft away from the subject lot’s eastern lot line. One of the drainage plan suggestions would see stormwater being directed toward the greenbelt lot although much of the water would have already infiltrated through the drainage channels by the time it reached the greenbelt lot.

Wetlands – The applicant intends to add fill for driveways, building pads, and it is likely that additional fill will also be required for on-site wastewater drain fields.

The subject area is part of wetlands unit LP 02 Draft Wetlands Management Plan. This is catalogued as ‘forested wetlands’ (see **Attachment D**).

Development within wetlands shall be managed to protect habitats per Title 49.70.950(c)(3).

49.70.950 Habitat.

(c) In addition to the standard contained in subsection (b) of this section, the following standards shall apply to the management of the following habitats:

(3) Wetlands and tidelands shall be managed so as to ensure adequate waterflow, nutrients, and oxygen levels, to avoid the adverse effects on natural drainage patterns, the destruction of important habitat, and the discharge of toxic substances;

A number of drainage plans have been suggested to date, and these will have implications for wetlands on CBJ lots. The applicants have proposed sheet flow drainage across the subdivision toward the neighboring CBJ lot. However, CBJ Lands Division has concerns that should they develop their adjacent parcel, the additional surface runoff from the subject subdivision would add additional cost to the CBJ drainage plan.

CBJ Lands Division would prefer that surface water drainage be diverted away from its current natural drainage path either toward the CBJ greenbelt or to Ocean View Drive using a series of ditches and culverts. The latter suggestion would require a new culvert to be added under Ocean View Drive.

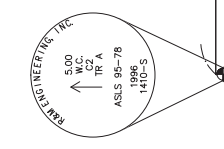
It is unclear to what extent the applicants intend or will be permitted to clear new lots.

ACTION REQUESTED

It is requested that the Wetlands Review Board review the subject application and proposed project in their scientific advisory role and make comments and a motion that can be provided to the Army Corp of Engineers when they request CBJ comments on the fill permit.

In particular, the board may wish to consider:

- Suggested drainage proposals and their impact on wetlands on CBJ property - this may be considered by CBJ when drainage acceptance is addressed.
- Subdivision configurations and ways to mitigate wetland loss – this may be considered by ACOE when they review the fill permit/s.



80' ROW

LOT 11
BLOCK C

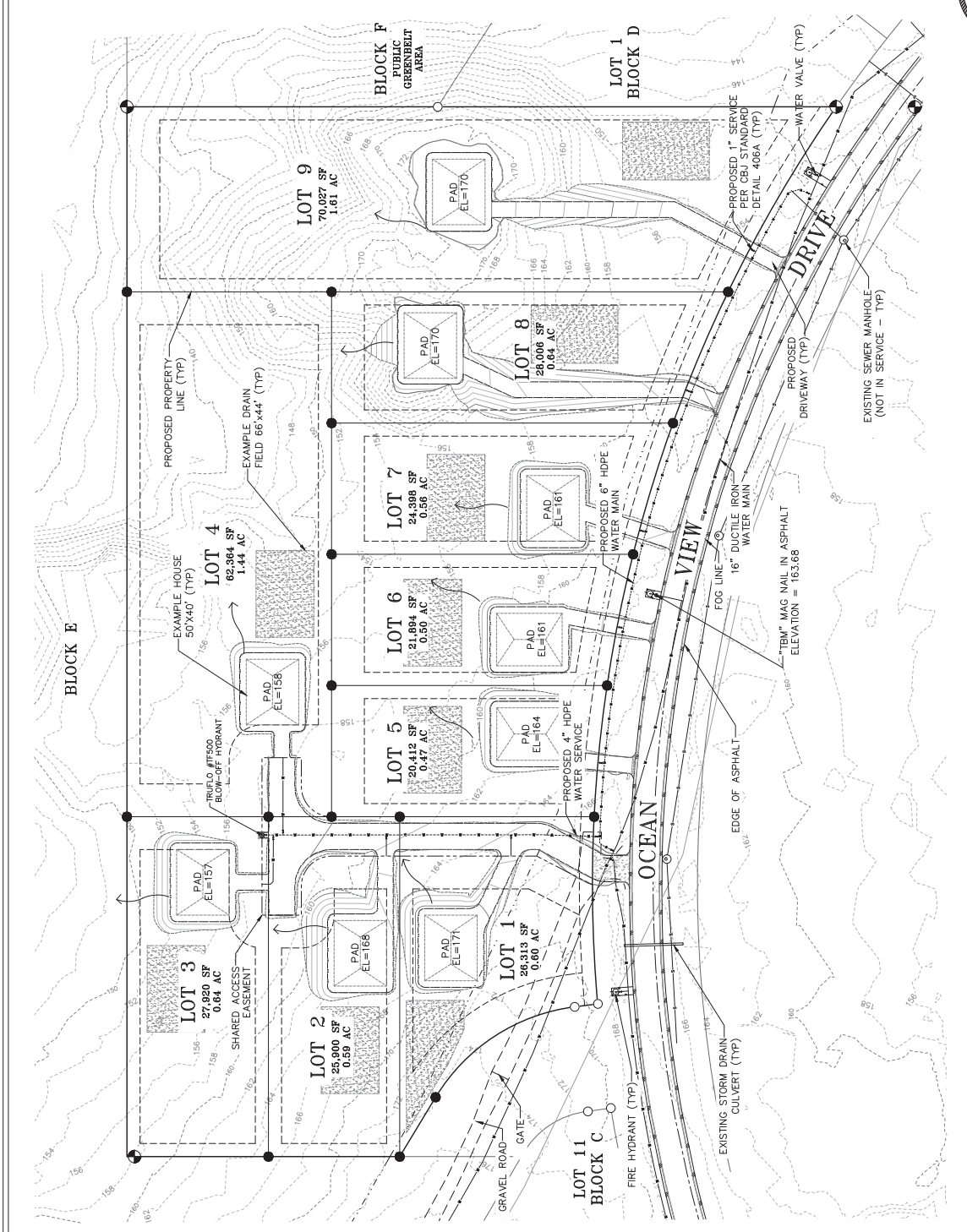
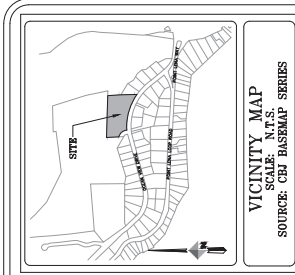
S71°10'49"E 17.5'
S71°2'10"E 17.6'

... SHARED ACCO
... THIS PLAT A
... CROSS LOTS 1,2,
... THE PRIVATE E
... THE CITY AND
... OR SNOW REMO

2. THE OWNER(S) SHALL BE RESPONSIBLE FOR ACCESS FROM
3. EXCEPT A SUBMITTAL SERVED BY THE CITY. THE ACCESS IS TO THE CITY AND BORO
4. OWNER OF A LOT SHALL ABANDON ALL UTILITIES, IF A LOT WITH FFRS IS PROHIBITED FROM THE SHARED

NOTARY ACKNOWLEDGMENT
STATE OF ALASKA
FIRST JUDICIAL DISTRICT

NOTARY
MY COMM. # _____



LEGEND

- PRIMARY MONUMENT RECOVERED THIS SURVEY
- SECONDARY MONUMENT TO BE SET THIS SURVEY
- SECONDARY MONUMENT RECOVERED THIS SURVEY
- PROPERTY LINE (ESTABLISHED THIS SURVEY)
- EXISTING PROPERTY LINE (NOT EFFECTED THIS SURVEY)
- BUILDING SETBACKS
- TOP OF CUT SLOPE
- EXISTING EDGE OF GRAVEL
- TOP OF FILL SLOPE
- PROPOSED PAD
- SHEET FLOW DRAINAGE DIRECTION
- EXISTING WATER LINE
- PROPOSED WATER SERVICE
- EXISTING SEWER LINE (NOT IN OPERATION)
- EXISTING EASEMENT PER ASLS 95-78 (JUNEAU PLAT 2003-12)
- PROPOSED PAVEMENT

NOTES

1. THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10000.
2. ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.
3. EXISTING WATER AND SEWER AS SHOWN DERIVED FROM CITY & BOROUGH OF JUNEAU WATER DEPARTMENT AS-BUILTS AND CITY & BOROUGH OF JUNEAU SEWER DEPARTMENT AS-BUILTS. RECOVERED UTILITY LOCATE PRIOR TO ANY CONSTRUCTION TO VERIFY LOCATIONS.
4. EXISTING SEWER SYSTEM ALONG OCEAN VIEW DRIVE IS NOT CURRENTLY IN OPERATION.
5. VERTICAL DATUM IS MEAN LOWER LOW WATER (MLLW) BASED ON NGS "JULY 0" (NGS PD 44407) LOCATED ON THE SOUTH SIDE OF THE WEST END OF THE MAIN RUNWAY AT THE JUNEAU INTERNATIONAL AIRPORT) HAVING AN ELEVATION OF 25.09 U.S. FEET.
6. TOPOGRAPHIC MAPPING SHOWN IS BASED ON LIDAR DATA COLLECTED IN 2013 BY THE CITY OF JUNEAU. THE DATA IS PROVIDED FOR REFERENCE ONLY AND WILL NOT BE CONSTRUCTED AS PART OF THIS LAND USE ACTION.
7. EXAMPLE HOUSE AND DRAINAGE SHOWN ARE SITED PER SOUTH LENA SUBDIVISION DATA PROVIDED BY CBU. THEY ARE SHOWN FOR REFERENCE ONLY AND WILL NOT BE CONSTRUCTED AS PART OF THIS LAND USE ACTION.

UTILITY & DRAINAGE PLAN

THATCHER SUBDIVISION

TRACT A1

SOUTH LENA SUBDIVISION

CITY OF JUNEAU RECORDING DISTRICT

STATE RECORDER'S OFFICE AT JUNEAU

ABCL246

DOWL

CIVIL ENGINEERING-LAND SURVEYING-CONSTRUCTION MANAGEMENT

6888 COMMERCIAL BOULEVARD

JUNEAU ALASKA 99801 907-760-9533

OWNERS

RAND E. & KATHY L. THATCHER

P.O. BOX 210146

JUNEAU, ALASKA 99821

SCALE: 1"= 50'

DATE: FEB 2018

PROJECT NO: J70941

FILE NO: 1 OF 1

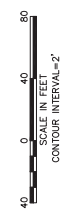
SHEET NO: 1 OF 1

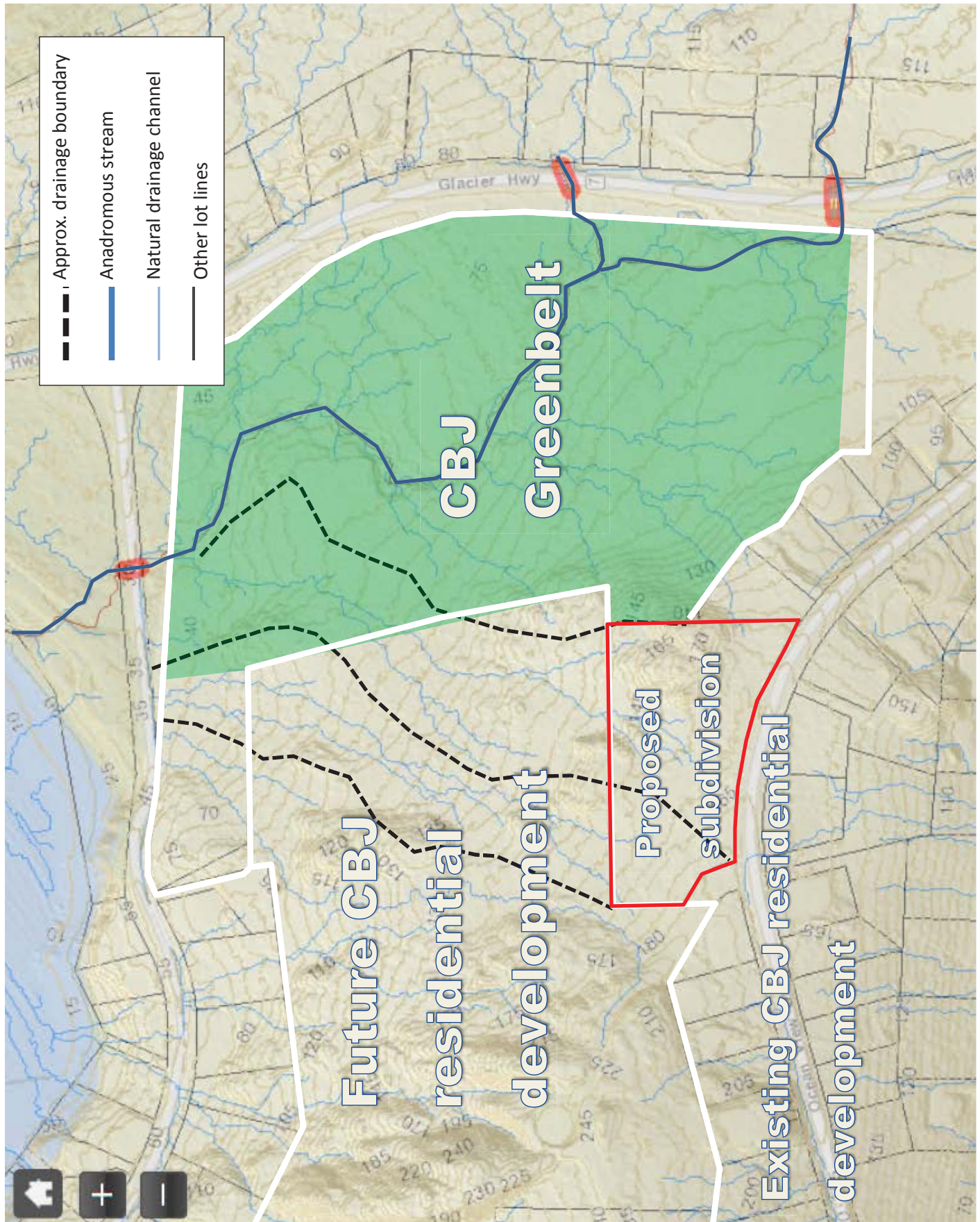


STORMWATER NOTE & EASEMENT

THE ON LOT STORM WATER RUNOFF DRAINAGE IS ACCEPTABLE AS EXISTS BETWEEN THE PLATTED LOTS OF THIS SUBDIVISION AND MAY NOT BE MODIFIED UNLESS PERMITTED BY THE CBU ENGINEERING PURSUANT TO CHAPTER 15.12.1201 BEST MANAGEMENT PRACTICES.

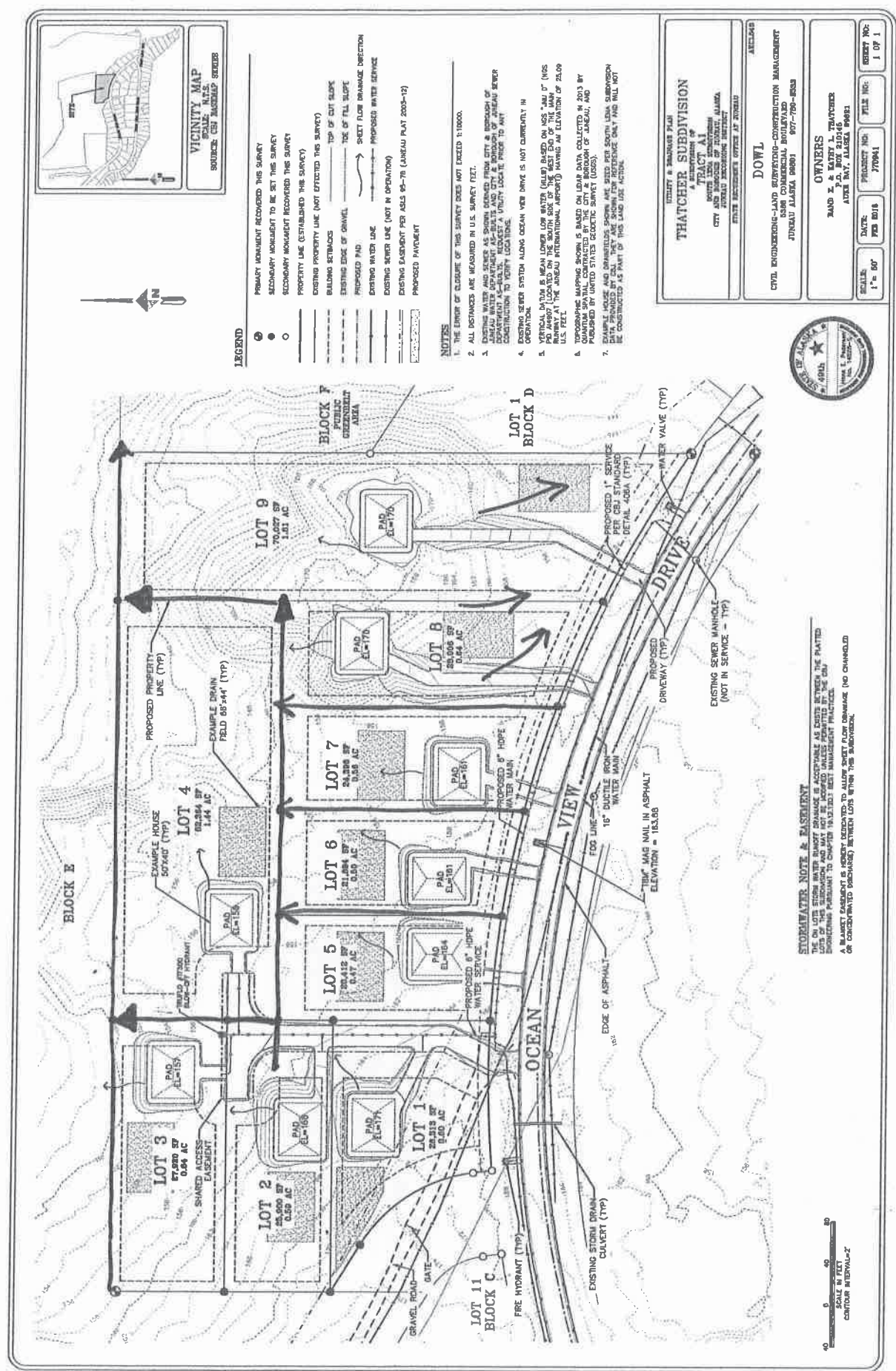
A BLANKET EASEMENT IS HEREBY DEDICATED TO ALLOW SHEET FLOW DRAINAGE (NO CHANNLED OR CONCENTRATED DISCHARGE) BETWEEN LOTS WITHIN THIS SUBDIVISION.







GENERAL Wetlands Note
 Demolish Easement on Back Lot



DUNN ENVIRONMENTAL SERVICES

WETLAND FUNCTIONAL ANALYSIS

SOUTH LENA SUBDIVISION

FOR

CITY AND BOROUGH OF JUNEAU

BY

DUNN ENVIRONMENTAL SERVICES

GRAPHICS ASSISTANCE

R&M ENGINEERING

JULY, 2002



19890 Cohen Drive
Juneau, Alaska 99801
907-463-3243

Fax 907-463-3272

Attachment B

WETLAND FUNCTIONAL ANALYSIS

**By
Dunn Environmental Services
for
CITY AND BOROUGH OF JUNEAU
SOUTH LENA SUBDIVISION**

Purpose:

The purpose of this functional analysis is to document the existence and functions of jurisdictional wetlands in the project area at the proposed South Lena Subdivision, Juneau, Alaska. This documentation is then to be used in evaluating the environmental impact of the proposed subdivision development.

Methods:

Wetlands in the vicinity of the airport were identified using several resources: The National Wetland Inventory (NWI) mapping, previous work in the area by the US Army, Corps of Engineers, and on-site investigations. The on-site investigations were used to verify the presence of jurisdictional wetlands as well as to make observations pertinent to functional analysis. The 1987 Corps of Engineers Wetlands Delineation Manual was used to verify presence or absence of jurisdictional wetlands. The Preliminary Wetland Jurisdictional Determination attached is the result of that study. The Wetlands Evaluation Technique (WET II), as modified by Paul Adamus for use in Southeast Alaska (Juneau Wetlands: Functions and Values, 1987) was used for functional analysis.

Findings:

Jurisdictional Wetlands

The attached Preliminary Wetland Jurisdictional Determination shows estimated locations of wetlands on the subdivision. As of this date, this preliminary work is subject to revision and approval by the US Army Corps of Engineers.

The US Army Corps of Engineers defines wetlands as : "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." Wetlands must possess the following the three attributes:

1. Prevalence of plant species typically adapted for life in saturated soils.
2. Water sufficient to flood or saturate most of the soil for at least part of the growing

season.

3. Soil conditions that indicate saturation.

Wetlands found in the subdivision boundary included five classifications (Cowardin classification system): Emergent, Scrub Shrub, Emergent/Scrub Shrub, Forested/Scrub Shrub, and Forested.

An emergent wetland was found around and in the old material site located just east of the existing gravel access road. This wetland has standing water and is dominated by sedges and several species of horsetail. Small areas of emergent wetlands were also found within the scrub shrub wetlands in the material site just west of the access road.

Scrub shrub wetlands were found around both old material sites. These wetlands were dominated by Sitka alder, sedges, mosses, skunk cabbage.

The muskeg on the east boundary of the property is classified as an emergent / scrub shrub wetland. This wetland is dominated by Sitka alder on the fringes, needle-leaf evergreens, shore pines, and mosses as well as grasses and sedges.

Forested and forested/scrub shrub wetlands were found over a majority of the forested portions of the proposed subdivision area. These wetlands were dominated by western hemlock trees and shrubs, several species of blueberry, rusty Menziesia, and skunk cabbage. The vegetation in some of the undisturbed portions of this wetland was extremely thick, while the portions that had been previously cleared had a closed canopy of hemlock and practically no understory except skunk cabbage.

Soils in the emergent and scrub shrub wetlands, found in the old material sites, consists of mostly mineral soil saturated to near surface or inundated. This soil has no development because of the previous material extraction. Soils in the emergent / scrub shrub (muskeg) wetland, was mostly histosols (peat), saturated to the surface. Soils in the forested and forested / scrub shrub wetlands were black organic mucks overlaying gleyed mineral soils, saturated to near the surface.

A number of small drainages flow south from the large portion of forested wetland toward South Lena Loop Road. One drainage was found that flowed northeast from Tract A toward Picnic Creek. This small drainage emanated from an old iron pipe, and it is supposed that this pipe was placed to drain old developments along the access road in Tract A.

Wetland Functions

Wetlands provide a number of beneficial functions to the natural and human environments including fish and wildlife habitat, flood water desynchronization, filtration of water pollutants,

and recreation. The WET II functional analysis method, as adapted by Adamus for Southeast Alaska, lists ten natural functions of wetlands as well as four human values of wetlands. This analysis will consider only the ten natural functions, leaving the human values to the local community to decide. The ten natural functions most common in Southeast Alaska are as follows:

- Groundwater Discharge
- Groundwater Recharge
- Surface Hydrologic Control
- Sediment/Toxicant Retention
- Nutrient Export
- Riparian Support
- Erosion Sensitivity
- Salmonid Habitat
- Disturbance to Sensitive Wildlife
- Regional Ecological Diversity

The WET II method of functional analysis lists criteria for each function, resulting in ranking of the function from non-existent to Very High. The criteria include such factors as the slope of the land, proximity to salmon streams, and type of vegetation.

The wetland areas on the subdivision land naturally fall into three units of similar wetland types, locations, and functions (Figure 1, Wetland Units):

- Unit 1 is composed of the eastern-most wetlands, including the muskeg wetland along the eastern boundary, and forested and forested scrub / shrub wetlands contiguous with the muskeg. These wetlands are on a crown of land, but the northern portion of the wetlands drain toward Picnic Creek, an anadromous stream flowing north into Lena Cove.
- Unit 2 consists of the two old material sites. These two wetlands are included together because of similar soils, locations, size, and function. These wetlands are isolated and do not have surface drainages.

- Unit 3 is by far the largest area, and consists of forested and forested / scrub shrub wetlands on the south slope with drainage to South Lena Loop Road. Some of the eastern portion of this wetland was cleared, but the unit has similar vegetation, soils, and hydrology.

The following table gives rankings for the various functions of these three wetland units on the proposed subdivision.

Functions of South Lena Subdivision Wetland Units

FUNCTIONS	UNITS		
	Unit 1	Unit 2	Unit 3
Groundwater discharge	L	M	M
Groundwater recharge	H	M	M
Surface Hydrologic Control	H	H	L
Sediment/ Toxicant Retention	ML	H	L
Nutrient export	M	L	M
Riparian Support	MH	L	L
Erosion Sensitivity	L	L	ML
Salmonid Habitat	L*	VL	VL
Disturbance of Sensitive Wildlife	MH	L	H**
Regional Ecological Diversity	L	L	L

Key to Table: L = low, ML = Moderately Low, M = moderate, MH = moderately high, H = high

* Observation of small drainage shows probably restricted access and meets definition of "poor" rearing habitat.

** Several Bald eagle nests within wetland unit.

Unit 1 Functions:

The muskeg wetland and adjacent scrub shrub / forested wetlands, rates high or moderately high for groundwater recharge, surface hydrologic control, riparian support, and disturbance sensitive wildlife. The ground water recharge and surface hydrologic control functions ratings are the result of the relatively flat organic (peat) soil at the crown of topography. Riparian support rating is a reflection of the stream leading to Picnic Creek, and the disturbance of sensitive wildlife rating is because of potential (actual) deer habitat.

Unit 2 Functions:

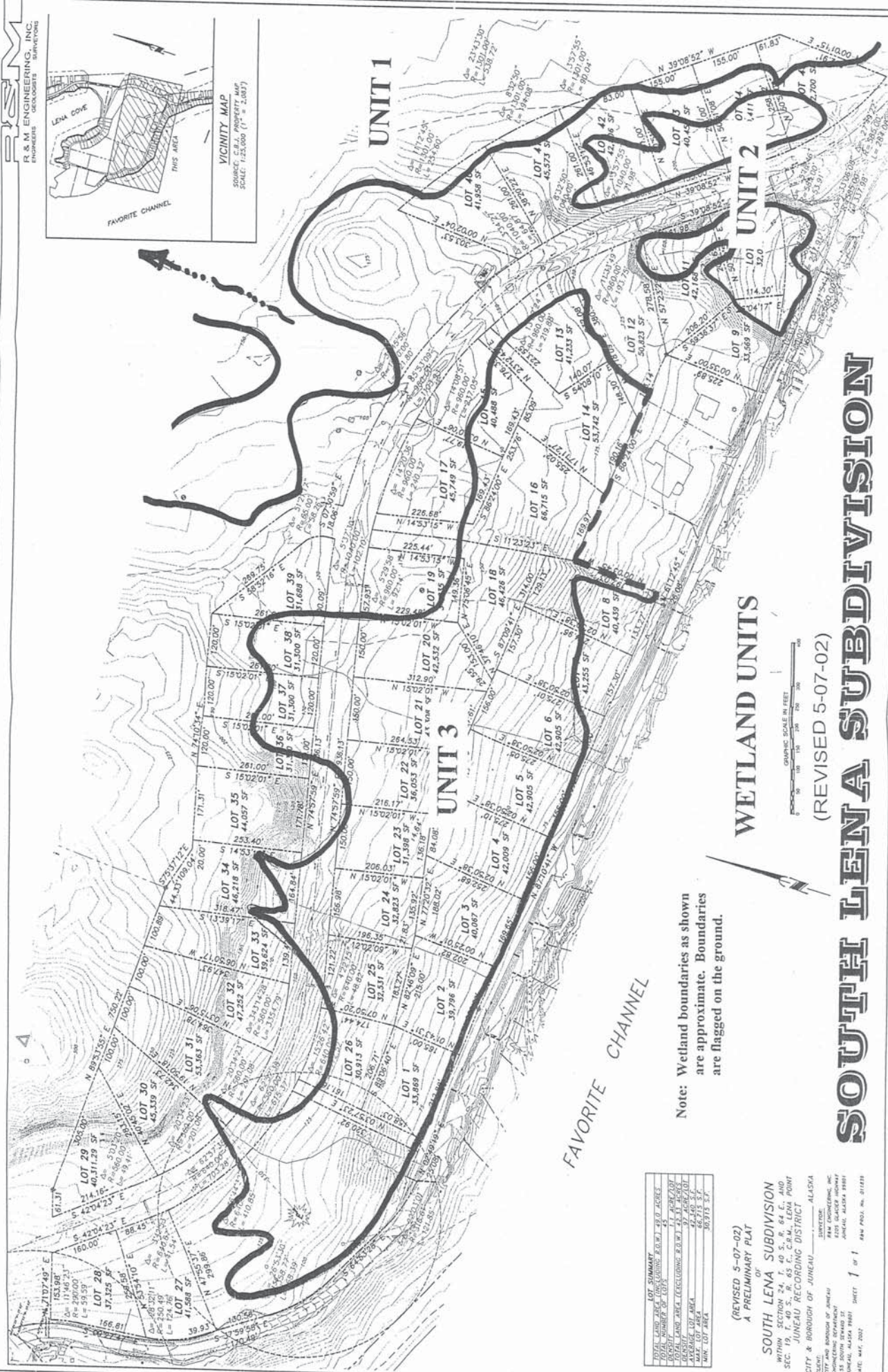
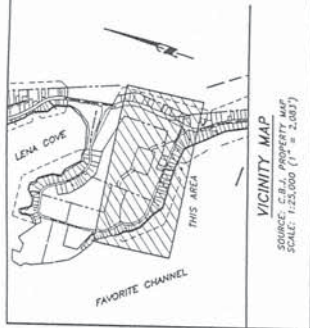
This unit, the old material sites, had high ratings for only surface hydrologic control and sediment / toxicant retention. Both of these high ratings were a result of the isolated, flat nature of these wetlands. This unit had no other ratings of high or moderately high.

Unit 3 Functions:

Unit 3 has a high rating only for disturbance of sensitive wildlife. This rating is because of the Bald eagle nest found within the wetland. This unit would have received a moderately high rating for potential deer habitat if no Bald eagle nest were present.

Summary:

Unit 1, composed of the edge of a muskeg wetland and adjacent contiguous forested wetlands, has the highest ratings of the three wetland units found on the proposed subdivision site. These ratings pertain to both the hydrologic functions of the wetland as well as the wildlife habitat functions. Assuming this functional analysis is to be used for permitting purposes, several additional factors should be taken into account, such as the area of impact as compared to the total area of the wetland (beyond the scope of this analysis), and the area of impact as compared to the total area of similar wildlife habitat in the watershed (wildlife habitat in these cases may extend beyond wetland boundaries).



Note: Wetland boundaries as shown are approximate. Boundaries are flagged on the ground.

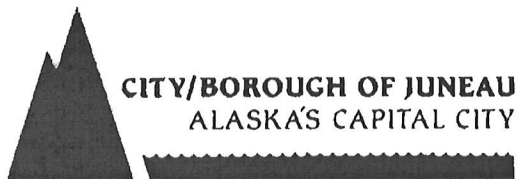
WETLAND UNITS
(REVISED 5-07-02)



SOUTH LENA SUBDIVISION

LOT SUMMARY	
TOTAL LAND AREA	18.0 ACRES
TOTAL NUMBER OF LOTS	39
TOTAL LAND AREA (EXCLUDING 8.3 ACRES)	9.7 ACRES
DENSITY	37 ACRES/LOT
MAX LOT AREA	66,715 S.F.
MIN LOT AREA	30,975 S.F.

(REVISED 5-07-02)
A PRELIMINARY PLAN
OF
SOUTH LENA SUBDIVISION
WITHIN SECTION 19, T. 40 S., R. 64 W., S. 64
JUNEAU RECORDING DISTRICT
CITY & BOROUGH OF JUNEAU
ALASKA
CLIENT: JUNEAU
SURVEYOR: R & M ENGINEERING, INC.
155 SOUTH STANLEY ST.
JUNEAU, ALASKA 99801
DATE: MAY 2002
SHEET 1 OF 1
PLAN NO. 01289



February 6, 2003

Mr. Dale Pernula, Director
Community Development Department
City and Borough of Juneau

Subject: South Lena Subdivision, SUB2002-00009

Dear Mr. Pernula,

The Wetland Review Board has completed its review of the South Lena Subdivision. Special meetings were held on September 26th, 2002, January 27th, 2003, and February 3rd, 2003. A quorum was present at each meeting. Board review encompassed the following topics:

- 1) Wetland values and functional analysis, to evaluate the impact on wetlands in different areas of the subdivision
- 2) The impact of the wetland footprint on each of the lots
- 3) The drainage plan information, to address concerns about water flow through wetlands and streams
- 4) The conservation designation of the Picnic Creek wetland area
- 5) Sewer information to address intertidal wetland impacts.

The Juneau Wetlands Management Plan defines the Wetland Review Board's advisory role as follows:

"....The Board also functions as an advisory body to the Planning Commission and the Director of the Community Development Department on other wetlands issues, such as CBJ comments on wetland permits being considered by the Corps for wetlands not covered by the General Permit; the protection of streamside riparian areas, and the conduct of CBJ, State, and Federal projects that affect wetlands and streams."

Because the Board is concerned about maintaining wetland functions, the integrity of stream drainages, and preventing flooding and erosion of downstream properties, we make the following recommendations concerning the South Lena Subdivision:

- 1) In cooperation with CDD and Engineering staff and the WRB, develop a set of guidelines and Best Management Practices (BMPs) that property owners must utilize

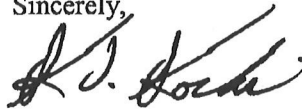
for maintaining the integrity, stability, and flow paths of the permanent and ephemeral streams draining their property. These BMPs will be implemented as a condition of issuing the building permit for each lot. The new road, driveways, buildings, and clearing of vegetation in the subdivision will increase stormwater runoff and cause increased erosion and sedimentation of new and downstream residential properties if adequate preventive measures are not taken and enforced.

- 2) Establish a 25 foot windfirm vegetative buffer between the existing Point Lena road and the lower lots of Unit Three (Blocks A and B) to filter runoff and potential pollutants from these lots, and to prevent erosion and sedimentation along the road drainage ditch. Removal of trees, or limbing and/or topping of trees in the buffer to enhance windfirmness may be allowed as long as the remaining vegetation is left relatively undisturbed. If tree stumps are removed, the remaining hole must be filled and planted with native vegetation. Development of basic services such as access and utilities are permitted within the buffer but must be approved by the CBJ Engineering Department. Since a buffer is not permissible within the DOT right-of-way, the buffer shall begin at the edge of the right-of-way.
- 3) Remove Lots 1-6 from Block D to maintain functions of the muskeg meadow wetland that borders these lots and supplies waterflow to Picnic Creek. Because this wetland is fragile and sensitive to impacts from public use, development of these lots would reduce its function in maintaining flow and water quality in Picnic Creek. If this recommendation cannot be implemented by CBJ, the Board recommends a compromise that reduces the size of lots 1-5, by moving the property lines out of the wetlands; and fully removes lot 6 from consideration, since this lot will be too small to adequately develop without wetland encroachment.
- 4) Establish a maximum building pad size for each lot in Unit Three (Blocks A, B, and C), and prohibit development within the 25 foot rear yard setback. The forested wetlands in Unit Three function to attenuate storm flow and erosion, and extensive clearing of these lots could exacerbate the potential for windthrow and runoff in this Unit. This recommendation will serve to limit the amount of land clearing that can take place within the Unit, which will preserve wetland functions and drainage patterns.
- 5) Support a CBJ maintained and monitored centralized treatment system that uses UV radiation and collects, treats, and disposes of sewage from individual home treatment systems. The Board has concerns that the proposed sewage treatment, including individual home treatment plants, and the outfall location may pollute the nearshore intertidal wetland if there is not continuous monitoring and maintenance. The Board also recommends that this proposed CBJ design be reviewed and approved by consulting engineers and that the system be certified for meeting all state and federal requirements prior to construction.

Lastly, we request that CBJ inform the Board early in the process of all development and land disposal projects, so wetland and habitat issues may be addressed before plans become too far advanced. In particular, we request timely information for the next phase of Lena Subdivision development.

Thank you for your thoughtful consideration of our comments. If you have additional questions, please contact Teri Camery, Wetland Review Board staff liaison, at 586-0755 or teri_camery@ci.juneau.ak.us.

Sincerely,

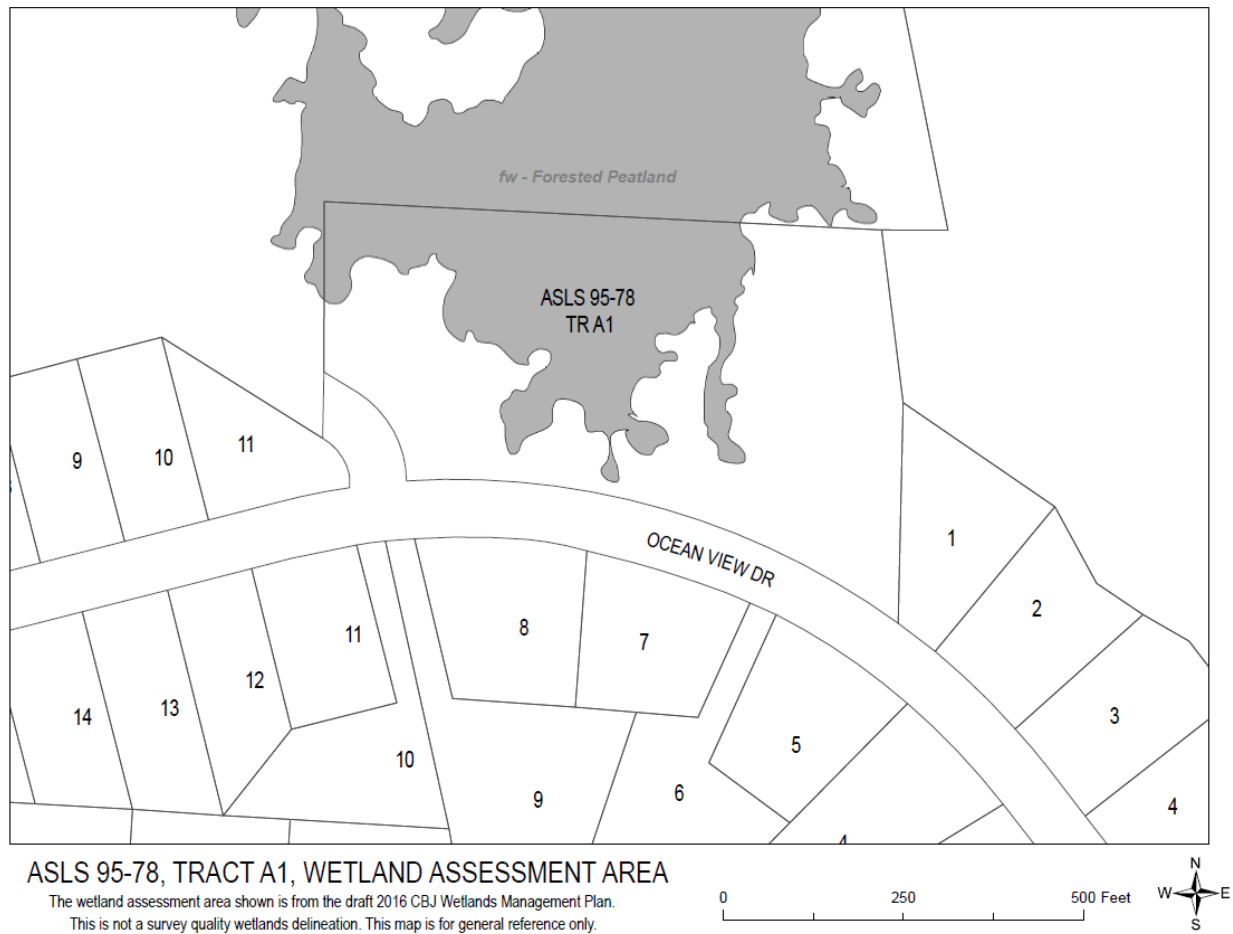
A handwritten signature in black ink, appearing to read "K.V. Koski", written over a horizontal line.

Dr. K.V. Koski
WRB Chairman

Attachment D – Location and description of wetlands from the 2016 Draft Juneau Wetlands Management Plan



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LP02 • type: forested peatland • acres: 13.4 • boundary criteria: w-u, pa • pcn: 8B3301070090 • no known or probable anadromous fish

Function or Other Attribute	Function Score	Function Rating	Value Score	Value Rating
Phosphorus Retention	4.46	Higher	4.46	Higher
Nitrate Removal	4.01	Higher	5.96	Higher
Pollinator Habitat	8.48	Higher	4.34	Moderate
Stream Flow Support	8.07	Higher	1.96	Moderate
Water Cooling	7.34	Higher	3.07	Moderate
Water Warming	5.97	Higher	3.72	Moderate
Songbird, Raptor, & Mammal Habitat	8.16	Higher	2.50	Lower
Organic Nutrient Export	8.67	Higher	N.A.	N.A.
Water Storage	4.16	Moderate	5.00	Moderate
Native Plant Habitat	3.31	Moderate	2.74	Moderate
Sediment Retention & Stabilization	2.96	Moderate	2.73	Moderate
Waterbird Nesting Habitat	3.81	Moderate	0.00	Lower
Invertebrate Habitat	3.66	Moderate	1.19	Lower
Amphibian Habitat	2.89	Moderate	3.47	Lower
Carbon Sequestration	4.99	Moderate	N.A.	N.A.
Anadromous Fish Habitat	0.00	Lower	0.00	Lower
Resident Fish Habitat	0.00	Lower	0.00	Lower
Waterbird Feeding Habitat	0.00	Lower	0.00	Lower
Wetland Stressors	N.A.	N.A.	7.78	Higher
Wetland Risk	N.A.	N.A.	7.33	Higher
Wetland Ecological Condition	N.A.	N.A.	4.20	Moderate
Wetland Sensitivity	N.A.	N.A.	3.23	Lower
Public Use & Recognition	N.A.	N.A.	1.79	Lower