

Agenda

Planning Commission - Regular Meeting City and Borough of Juneau

July 28, 2020
Virtual Meeting Only
7:00 PM

This virtual meeting will be by video and telephonic participation only. To join the webinar, paste this URL into your browser: <https://juneau.zoom.us/j/93574327888>. To participate telephonically, 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 Webinar ID: 935 7432 7888.

I. ROLL CALL

II. REQUEST FOR AGENDA CHANGES AND APPROVAL OF AGENDA

III. APPROVAL OF MINUTES

A. June 23, 2020 Draft Minutes, Regular Planning Commission - APPROVED

IV. BRIEF REVIEW OF THE RULES FOR PUBLIC PARTICIPATION

V. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

VI. ITEMS FOR RECONSIDERATION

VII. CONSENT AGENDA

A. CSP2020 0005: Asphalt rehabilitation and reconstruction of the Juneau Douglas Bridge, roundabout, and a portion of the South Douglas Highway - APPROVED AS RECOMMENDED

B. CSP2020 0006: Land disposal and sale of land to Taku Terrace Condos - APPROVED AS AMENDED

C. SMF2020 0001: Final Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels) - APPROVED AS RECOMMENDED

VIII. UNFINISHED BUSINESS

IX. REGULAR AGENDA

X. BOARD OF ADJUSTMENT

XI. OTHER BUSINESS

XII. STAFF REPORTS

XIII. COMMITTEE REPORTS

XIV. LIAISON REPORT

XV. CONTINUATION OF PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

XVI. PLANNING COMMISSION COMMENTS AND QUESTIONS

XVII. EXECUTIVE SESSION

XVIII. SUPPLEMENTAL MATERIALS

- A.** Additional Materials Packet - July 28, 2020 Planning Commission Meeting

XIX. ADJOURNMENT

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

June 23, 2020 Draft Minutes, Regular Planning Commission - APPROVED

ATTACHMENTS:

	Description	Upload Date	Type
▣	June 23, 2020 Draft Minutes, Regular Planning Commission	7/8/2020	Minutes

Agenda
Planning Commission
Regular Meeting
CITY AND BOROUGH OF JUNEAU
Michael LeVine, Chairman
June 23, 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 7:02 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 Pederson

Commissioners absent: None

Staff present: Jill Maclean, CDD Director; Irene Gallion, CDD; Emily Wright, Law; Alix Pierce, CDD; Teri Camery, CDD

Assembly members: Greg Smith

II. REQUEST FOR AGENDA CHANGES AND APPROVAL OF AGENDA - None

III. APPROVAL OF MINUTES

A. May 12, 2020 Draft Minutes – Regular Planning Commission Meeting

MOTION: *by Mr. Voelckers to approve the Planning Commission May 12, 2020, Regular Planning Commission Meeting minutes.*

The motion passed with no objection.

IV. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS - None

V. ITEMS FOR RECONSIDERATION- None

VI. CONSENT AGENDA - None

VII. UNFINISHED BUSINESS- None

VIII. REGULAR AGENDA

CSP2020 0004: Disposal of 848 Basin Road by land sale to the neighboring property owner
Applicant: City & Borough of Juneau
Location: 848 Basin Road

Staff Recommendation

Staff recommends the Planning Commission adopt the Director's analysis and findings and forward a recommendation of **DENIAL** to the CBJ Assembly for the land disposal.

Alternately, if the Planning Commission would like to consider approval of the disposal of the land, staff recommends that sale be contingent on a boundary and mitigation study drafted in accordance with 49.70.300(a)(4) & (5). That study should either establish that the property is not in a moderate hazard zone, or propose effective mitigating measures for development in the moderate hazard zone.

Staff Presentation:

Ms. Gallion presented **CSP2020 0004** and recommended **DENIAL** based on the Comprehensive plan in Title 49 as the property in question is in a moderate slide area. Ms. Gallion explained that it may be allowed, however, under Title 53. It is allowable under Code but not under the Comprehensive Plan.

Commission Discussion:

Commissioners questions focused on the parking requirements, the retaining wall and how far it is set back from the property line, the possible necessity of a CBJ easement, stability of the slope around Cope Park, and the trailhead nearby.

Mr. Winchell asked whether the land was purchased by CBJ due to the landslide risk. Staff confirmed it was acquired due to the risk.

Mr. Voelckers asked about the dimensions of the lot and the parking spaces, the retaining wall, and access to the lot and whether there would be an easement required for the lot to be developed. Staff explained that there is currently no easement as it is CBJ land and we do not need an easement from ourselves. If the lot is sold, there would need to be an easement for the retaining wall but she was unsure about the parking area.

Mr. Dye inquired whether this property would be eligible for fee-in-lieu of parking. Ms. Maclean explained that it is outside the fee-in-lieu boundary but the owner could apply for a parking waiver.

My Arndt asked about the possibility of redrawing the lot line rather than pursuing an easement. Ms. Maclean explained redrawing the lot would result in the lot having no frontage.

Mr. Hickok asked the CBJ intent for the area. Is it CBJ intent to purchase all of the lots in the area as they become available? Staff was not sure and explained to her knowledge there is not a fund set aside to purchase lands as they become available and this particular acquisition may have been an act of opportunity.

Mr. Eiler asked if this CSP is before the commission because it is a sale of CBJ land to a private party. Staff explained that according to Title 53 requires and Title 49 recognizes that all land disposals to come before the Commission. Staff further explained this lot was identified for disposal in the land management plan. However, in the Comprehensive and All Hazards Mitigation plans it is mentioned that they are to purchase these lands to discourage development.

Applicant Comment and Discussion:

Dan Bleidorn, CBJ Lands, was available for questions. Mr. Eiler asked how many similar parcels does CBJ own in hazard zones. Mr. Bleidorn was not sure of the exact number but explained that most parcels in hazard or extreme wasting zones are owned by Parks & Rec and are considered park lands. These are not subject to sale or disposal.

Public Comment:

Ke Mell: Explained she sent an email to the CDD department which should have been included in the Commissioner packets. It was determined these had not been included and were to be sent out via email. The Chairman called a short recess for members to familiarize themselves with the new information.

At Ease from 7:55pm until 8:04 pm

Ke Mell: Ms. Mell testified the retaining wall is 32 feet and is not supporting Basin Road and spoke to the conditions which she believes supports her purchasing the parcel.

Mr. LeVine asked Ms. Mell to explain about the trail on the property. Ms. Mell explained as long as she has lived there, the trail has existed. It is steep and she is not aware of anybody else in the area who uses it regularly. Only a couple of time each year does she see that it has been traveled.

Mr. Voelckers asked about her perceptions of the parking in the area. Mr. Mell answered the parking, as shown, is part of the parcel.

Kimberly Metcalfe: Ms. Metcalfe spoke in opposition to the land sale stating concerns with the stability and erosion along the road in that area.

Continued Applicant Discussion:

Mr. Bleidorn addressed the question of what happens if the land sale is allowed and then deemed undevelopable stating that the purchaser could decide not to purchase it or the Lands department could discontinue the sale. He added that the parking is contained on the property and would not be subject to an easement. Only the retaining wall would be in the easement.

Mr. Arndt asked about the possibility of redrawing the property line rather than obtaining an easement in order to keep the retaining wall and parking under CBJ control. Mr. Bleidorn did not think it would be easier nor necessary to redraw the lines and explained that CBJ has several easements and this is not an

unusual thing for them.

Mr. Voelckers asked how Lands will value the land for sale. Mr. Bleidorn explained in order to transact a sale, they will first have to have the property appraised and will have to ask fair value for the parcel.

Mr. Arndt asked why this lot was not included with other parcels under Parks & Rec ownership. Mr. Bleidorn was not sure why this was the case but he thought it was purchased to protect the road and to build the retaining wall.

Mr. Hickok asked what does the CBJ gain by this sale? Mr. Bleidorn explained CBJ would get fair market value for the property and one more housing unit downtown.

Commissioner Discussion:

Mr. Winchell asked to Law or CDD, Policy 7.17 says to retain ownership of CBJ Lands with moderate to high potential for avalanche or mass wasting. Is there any regulatory guidance that allows CBJ to dispose of rather than retain properties in the Hazard zones? Ms. MacLean said currently, the Comprehensive Plan is clear the we should retain these properties. There is a landslide and avalanche underway currently but it has not finalized, reviewed or adopted.

Commissioners discussed with Staff the options that CBJ or the purchaser would have regarding development if the sale were to be allowed.

Mr. Dye asked how does Title 49.70.300 (a)(5) apply to a CSP land disposal or where would it apply in the process. Ms. Wright explained the Commission is tasked with reviewing this as it pertains to Title 53 and making a recommendation to the assembly. They have broad latitude in this case. Ms. Maclean agreed the Commission focus at this time is to make a recommendation to the assembly. If they do not go with the Staff recommendation then they will need to determine their own conditions and findings to support their recommendation. Their role at this meeting is ONLY to recommend to the assembly to retain or dispose of the land.

Mr. Voelckers and Staff discussed the steep slope ordinance and how it would apply in this case. A hillside endorsement would be required at the permitting stage.

MOTION: *by Mr. Dye to **APPROVE** CSP2020 0004 to make recommendation to the Assembly to pursue disposal of this lot.*

Mr. Winchell objected based on Comprehensive Plan Policy 7.17.

Mr. Voelckers spoke in support of the motion stating the steep slopes ordinance and the fact that there has been a home on the property in the past as mitigating factors.

Mr. Pederson spoke in opposition based on the condition of the road and the fact that the lot was acquired to facilitate construction to support Basin Rd.

Mr. Arndt spoke to oppose based on the land being a moderate hazard and in the mass wasting zone.

Mr. Voelckers spoke against the motion based on the rules but would like to see a modification to the rules in the future.

Mr. Eiler spoke in support of the motion stating that while he is sensitive to the objections of other members, this is at a very preliminary stage.

Roll Call Vote:

Yes: Dye, Voelckers, Alper, Eiler,

No: Winchell, Hickok, Pederson, Arndt, LeVine

The motion failed on Roll Call vote.

MOTION: *by Mr. Hickok to accept staff's findings, analysis and recommendations and **DENY** CSP2020 0004.*

Mr. Dye objected on the same grounds stated earlier.

Roll Call Vote:

Yes: Hickok, Pederson, Arndt, Winchell, LeVine

No: Eiler, Alper, Voelckers, Dye

The motion passed on Roll Call vote.

Recess 9:22 to 9:31 pm

AME2020 0003: Text amendment to revise and update Title 49 to **ADOPT** flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements

Applicant: City & Borough of Juneau

Location: Boroughwide

Staff Recommendation

Staff recommends the Planning Commission adopt the Director's analysis and findings and make a recommendation to the Assembly to **APPROVE** the proposed text amendment to revise and update Title 49 to adopt flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements.

Prior to Staff presentation, Ms. Maclean explained that FEMA has a September 18, 2020 deadline we must meet in order meet FEMA requirements to adopt a new ordinance, flood study and map. Due to the impact of COVID, the workload of the Department and time limitations, there is no draft copy for the Commissioners to review but she hopes they can pass approval based on Ms. Camery's presentation and discussion. Ms. Maclean suggested a change to the staff recommendation to read "ADOPT an ordinance updating and adopting the flood management regulations" in place of "APPROVE the proposed text amendment to revise and update Title 49 to adopt flood management regulations."

Mr. LeVine suggested making a similar change to the staff findings in order to make it consistent with the

change in the recommendation.

Mr. Voelckers asked if Tee Harbor would be included in this. Staff explained the ordinance includes Tee Harbor. The ordinance is borough wide but the Tee Harbor area has undertaken a separate map process and there are other areas that have done similarly. Tee Harbor is included in the proposed ordinance but Tee Harbor has its own maps, already adopted outside of this ordinance.

MOTION: *by Mr. Winchell to **ACCEPT** staff's findings on AME2020 0003 and to recommend to the Assembly that they adopt an ordinance to adopt the Flood Plans as amended.*

The motion passed with no objection.

IX. BOARD OF ADJUSTMENT - None

- X. OTHER BUSINESS** - Ms. Maclean asked the Commission to request from the Assembly to grant an extension of the ADODs currently due to expire on August 1, 2020 to December 31, 2020 for the Downtown Juneau ADOD and December 31, 2021 for the Douglas ADOD.

MOTION: *by Mr. Dye to forward a draft ordinance to the assembly for **APPROVAL** to extend ADOD to December 31, 2020 for Downtown Juneau and December 31, 2021 for Douglas.*

The motion passed with no objection.

XI. STAFF REPORTS –

- Ms. Maclean reported two appeals have gone to the Assembly APPEAL 2020-0001 will be heard in September. The parties to APPEAL 2020-0002 have filed a stay until September while they work to reach a solution. Mr. LeVine reminded members not to discuss the appeals.
- Title 49 meeting to address parking will be scheduled soon.
- Joint Commission/Assembly meeting is still in the works but no date has been set.
- Currently the Department has received about twenty nonconforming permit applications with about half of those have been issued. The process is working quite smoothly so far.
- Any comments on the new staff report templates should be forwarded to staff this coming week.

XII. COMMITTEE REPORTS

Mr. Voelckers reported he attended the Public Works and Facilities Committee meeting recently and CBJ is proceeding with grant funds for a fully electric bus. Additionally,

Engineering has obtained a grant to do public/private partnering to move on a composting project.

XIII. LIAISON REPORTS – Greg Smith, Assembly Liaison, reported the Assembly has been:

- addressing COVID issues,
- has passed the Budget and the 5-year CIP plan
- in passing the budget, the Mill Rate was left unchanged which led to some cuts in the CIP plan to include postponing maintenance to the Augustus Brown Pool
- the big project now is spending the CARES ACT funding
- 2020 CBJ municipal election will be voting by mail
- July 4th fireworks will go on with conditions for Social Distancing
- Confirmed joint Commission/Assembly meeting is in the works but no date has been set

XIV. CONTINUATION OF PUBLIC PARTICIPATION ON NON-AGENDA ITEMS - None

XV. PLANNING COMMISSION COMMENTS AND QUESTIONS

- Mr. LeVine reminded members to contact Ms. Wright at Law if they are ever concerned that they may have a conflict on an issue.
- Mr. LeVine also reminded members to get their staff report template comments in this week.

XVI. EXECUTIVE SESSION - none

XVII. ADJOURNMENT - 10:10 p.m.

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

CSP2020 0005: Asphalt rehabilitation and reconstruction of the Juneau Douglas Bridge, roundabout, and a portion of the South Douglas Highway - APPROVED AS RECOMMENDED

AGENDA ITEM:

Case No.: CSP2020 0005

Applicant: State of Alaska Department of Transportation & Public Facilities

Location: Juneau Douglas Bridge, Douglas Roundabout, a little ways south on Douglas Highway

Proposal: Asphalt rehabilitation and reconstruction of the Juneau Douglas Bridge, roundabout, and a portion of the South Douglas Highway

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.

ATTACHMENTS:

Description	Upload Date	Type
☐ Staff Report for CSP2020 0005	7/17/2020	Staff Report
☐ Notice of Decision for CSP2020 0005	8/7/2020	Notice of Decision



PLANNING COMMISSION STAFF REPORT
STATE PROJECT REVIEW CSP2020-0005
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:
APPROVE

ALTERNATIVE ACTIONS:

1. **Amend:** amend the recommendation to include conditions and forward a Notice of Decision to the Assembly.
2. **Deny:** recommend denial of the proposed project. Planning Commission must make its own findings, and forward a Notice of Recommendation to the Assembly.
3. **Continue:** continue the hearing to a later date if determined that additional information or analysis is needed to make a decision, or if additional testimony is warranted.

ASSEMBLY ACTION REQUIRED:

The Notice of Decision (if approved) or Notice of Recommendation (if denied) will be forwarded to the Assembly.

STANDARD OF REVIEW:

This is a legislative decision and requires five (5) affirmative votes for approval.

DATE: July 17, 2020

TO: Planning Commission

FROM: CBJ Community Development Department

BY: Irene Gallion, Senior Planner

PROPOSAL SYNOPSIS: Applicant requests a State Project Review for asphalt rehabilitation and reconstruction of the Juneau Douglas Bridge, roundabout, and a portion of South Douglas Highway.

SUMMARY OF KEY CONSIDERATIONS, in addition to paving:

- Reconstruction of bridge joints
- Reconstruction of sidewalks
- Replacement of guard rail
- Improved drainage

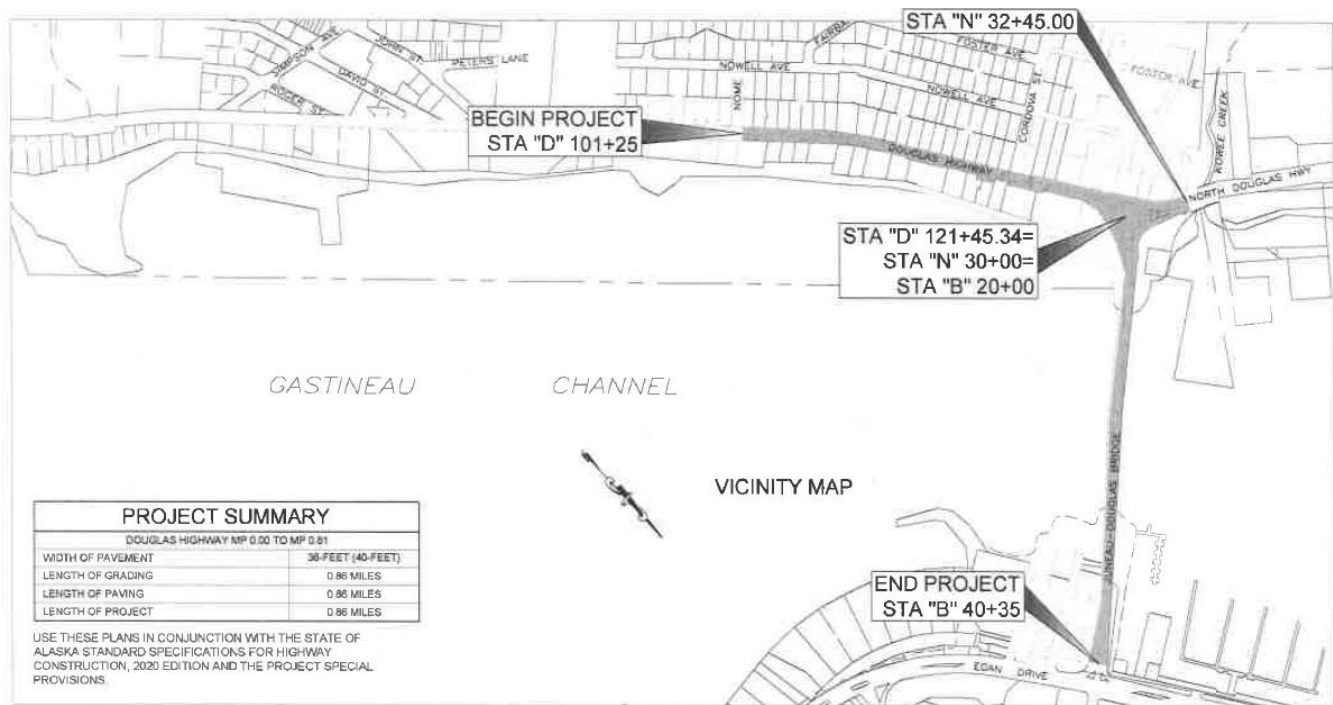
GENERAL INFORMATION

Property Owner	State of Alaska, Department of Transportation and Public Facilities (ADOT&PF)
Applicant	ADOT&PF
Property Address	N/A
Legal Description	N/A
Parcel Number	0
Zoning	Abuts D5, D18, Waterfront Industrial, and Waterfront Commercial
Land Use Designation	Waterfront Commercial Industrial, Urban Low Density Residential, Marine Commercial, Traditional Town Center, CBJ Recreational Service Park,
Lot Size	N/A
Water/Sewer	City
Access	Douglas Highway and Egan Drive
Existing Land Use	Bridge and roadway
Associated Applications	None

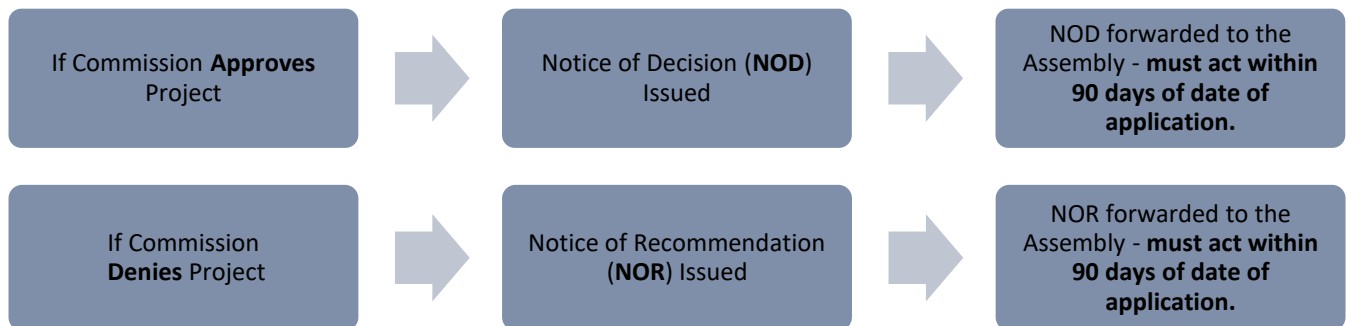
SITE FEATURES

Anadromous	No
Flood Zone	No
Hazard	No
Hillside	No
Wetlands	No

VICINITY MAP



49.15.580(a) - State Project Review: The commission shall review proposed Alaska State capital improvement projects for consistency with this title pursuant to AS 35.30.010 and may impose conditions on and modifications to such projects. If the commission approves or approves with conditions or modifications, a notice of decision shall be issued. **A notice of decision becomes final 90 days from the date the project was submitted unless modified or disapproved by the assembly.** If the commission disapproves, a notice of recommendation and draft resolution shall be forwarded to the assembly for further action.



ATTACHMENTS

Item	Description
Attachment A	Application Packet
Attachment B	Abutters Notice – NOT APPLICABLE
Attachment C	Agency Comments – NONE
Attachment D	Public Comments – NOT APPLICABLE

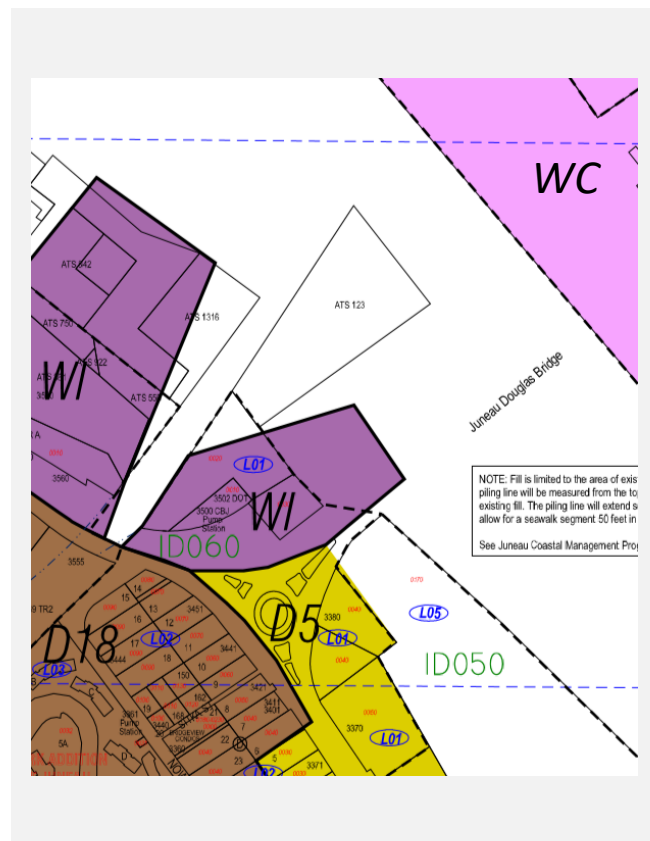
AGENCY REVIEW

CDD conducted an agency review comment period between June 4 and June 19, 2020.	
Agency	Summary
General Engineering	No comments.
CCFR, Lands and Resources, Transit, JPD	No response.

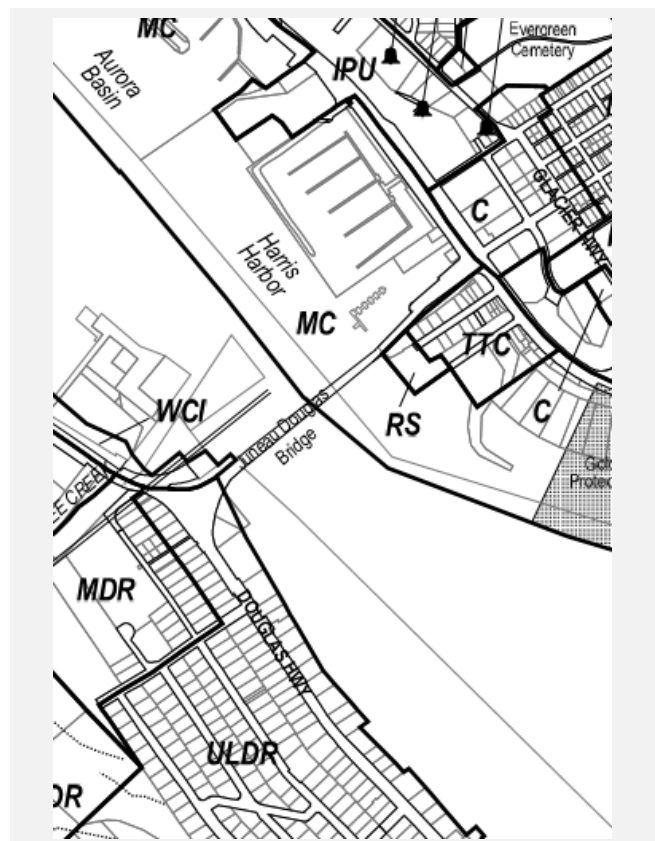
PUBLIC COMMENTS

Public notice is not required for ADOT&PF projects since they have their own public notice protocols and standards.

CURRENT ZONING MAP



LAND USE DESIGNATION MAP



SURROUNDING LAND USES AND ZONING

Direction	Zoning District	Land Use
North	Waterfront Industrial and Waterfront Commercial	Fuel storage, harbor
South	D5, D18	Residential
East	Waterfront Commercial	Park, office, and hotel
West	D18	Residential

BACKGROUND INFORMATION

Proposal –

- Reconstruct expansion joints in the Juneau Douglas Bridge
- Reconstruct existing sidewalks
- Reconstruct and improve drainage
- Repave impacted area
- Replace guardrail

Permit and Parcel History –

ADOT&PF projects:

- 1979 – Gastineau Channel Crossing Phase I: Piers, Pier Islands, Stone Columns, Partial Approach Embankment, and Navigational Channel Excavation
- 1981 – Juneau: Cordova Street to Douglas, Grading, Drainage, & Paving
- 1982 – Gastineau Channel Crossing Phase II: Bridge Superstructure and Approach Construction & Kowee Creek Bridge and Approach Construction
- 1995 – Douglas Highway: Gastineau Channel Bridge to St Ann's Avenue Pavement Rehabilitation
- 2006 – Juneau-Egan Drive/10th Street Intersection Capacity Improvements – Phase I
- 2014 – North Douglas Roundabout to Fish Creek Road and Lawson Creek Bridge Resurfacing (the proposed project abuts this project)

Current Conditions –

This project is being driven by:

- Repairs to expansion joints in the bridge
- ADA sidewalk compliance
- Roadway preventative maintenance

The existing pavement will be rehabilitated. Sidewalks will be reconstructed, and drainage improved.

This project is a replacement-in-kind, and does not include any improvements to Level of Service (LOS) at the Cordova intersection with Douglas Highway.

EXISTING OPERATIONAL CONDITION

Segment	CDS	AADT	Functional Classification
Juneau Douglas Bridge	296110	14,016	Minor Arterial
Douglas Roundabout	296158	3,659	Minor Arterial
North Douglas Highway	296150	4,222	Major Collector*
South Douglas Highway	296110	10,987	Major Collector

AADT and Functional Class information from ADOT&PF Transportation Information Group:
<http://www.dot.alaska.gov/stwdplng/transdata/index.shtml>

CDS: Coordinated Data system Number, delineating a section of road.

AADT: Average Annual Daily Traffic, measured 2018

*Differs from CBJ classifications, see "Roadway Classification Maps," below.

ZONING ANALYSIS

49.05.100 - Purpose and intent. The purpose and Intent of Title 49 Land Use Code is:

- (1) To achieve the goals and objectives, and implement the policies, of the Juneau comprehensive plan, and coastal management program;*
- (2) To ensure that future growth and development in the City and Borough is in accord with the values of its residents;*
- (3) To identify and secure, for present and future residents, the beneficial impacts of growth while minimizing the negative impacts;*
- (4) To ensure that future growth is of the appropriate type, design and location, and is served by a proper range of public services and facilities such as water, sewage, and electrical distribution systems, transportation, schools, parks and other public requirements, and in general to promote public health, safety and general welfare;*
- (5) To provide adequate open space for light and air; and*
- (6) To recognize the economic value of land and encourage its proper and beneficial use.*

Table of Permissible Uses – Not applicable.

Table of Dimensional Standards – Not applicable.

Other Permit Required – Not applicable.

Roadway Construction Standard Waivers – Not applicable.

Roadway Classification Maps –

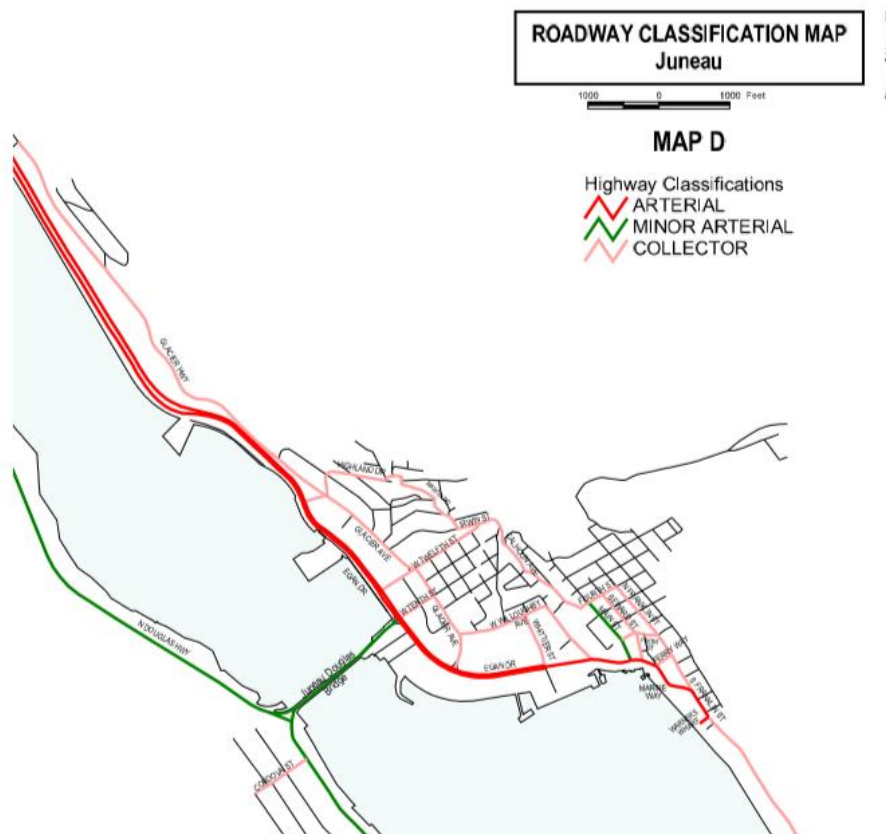
CBJ road classification maps differ from ADOT&PF road classification maps. Differences do not impact this project.

ADOT&PF and CBJ road classifications are not required to match. Parallel classification systems have developed to meet the needs of each agency. The same terms for classification are used by both agencies, which can cause confusion for our clients or when working on projects with ADOT&PF.

For future maps, CBJ may consider changing the classification names on CBJ maps to something different than ADOT&PF uses. ADOT&PF use of the classifications is federally mandated and the names cannot be changed.

By CBJ classifications, the entire section slated for repavement is a Minor Arterial.

CBJ ADOPTED FUNCTIONAL CLASSIFICATIONS (Ordinance 2013-9)



Hazard – Not applicable.

COMMUNITY SERVICES

Service	Summary
Urban Service Boundary	Yes
Water/Sewer	CBJ
Fire Service	Yes
Recreation	Proximate to Bill Overstreet (Whale) Park

ENVIRONMENTAL, CONSERVATION, HISTORIC, AND ARCHEOLOGICAL RESOURCES

The below table summarizes Conservation, Historic, and Archeological Resources which may be affected by the project.

Resource	Summary
Conservation Areas	No
Wetlands	No
Anadromous	No
Impaired Waterbodies	No
Historic	Unknown
Archeological	Unknown
Comprehensive Plan View sheds	No

CONFORMITY WITH ADOPTED PLANS

2013 COMPREHENSIVE PLAN VISION: *The City and Borough of Juneau is a vibrant State Capital that values the diversity and quality of its natural and built environments, creates a safe and satisfying quality of life for its diverse population, provides quality education and employment for its workers, encourages resident participation in community decisions and provides an environment to foster state-wide leadership.*

2013 COMPREHENSIVE PLAN – The Comprehensive Plan recognizes some of the systemic and contextual transportation challenges in the area. These do not negate the need for repairs and rehabilitation of this section of road. The Comprehensive Plan transportation project heavily emphasizes Transit.

Chapter	Page No.	Item	Summary
8	108	Local Transportation System	Key roadway intersections and bridge capacities are overburdened and inadequate to support increased development in the Mendenhall Valley and on Douglas Island. ... Traffic congestion at 10 th Street and Egan Drive is at a LOS E and F during the peak morning commute period and Cordova Street and Douglas Highway is at LOS F in the peak morning period. Motorists in areas with LOS D, E, or F experience significant delays in their commute times; those neighborhoods cannot accommodate additional peak hour single-occupancy vehicle traffic related to increased development without noticeable decreased livability and quality of life...

2013 COMPREHENSIVE PLAN – The Comprehensive Plan recognizes some of the systemic and contextual transportation challenges in the area. These do not negate the need for repairs and rehabilitation of this section of road. The Comprehensive Plan transportation project heavily emphasizes Transit.			
	114	8.6-DG1	Require sidewalks and bicycle paths or lanes along newly constructed arterial and collector streets where appropriate, and provide or work with ADOT&PF to provide such amenities along existing roads to provide safe and efficient access and recreation and to reduce pedestrian/automobile conflicts.
	115	Non-Motorized means of Transportation	To accommodate new development, particularly that of affordable housing, the CBJ government and community should encourage and support the provision of alternative transportation opportunities. ... Bicycling and walking are both essentially free transportation modes, and as active transportation modes, they improve public health. Additionally, non-motorized transportation infrastructure construction projects create more jobs than road-only projects do, so their benefit accrues to both the community's transportation network and public health and economic well-being.
	117	8.8-IA3	In order to accommodate safe transit, private vehicle, bicycle, and pedestrian traffic traveling to and from Douglas Island, urge ADOT&PF to immediately improve the traffic capacity and efficiency at the intersection of 10 th Street and Egan Drive. Any improvements to this intersection or the Juneau Douglas Bridge should provide adequate safe space for motor vehicles (including industrial trucks and buses), pedestrians, and bicyclists.

2001 Transportation Plan – This plan was written before the roundabout was built. The plan encourages the construction of the roundabout. It is relatively silent on maintenance applicable to this project.			
Chapter	Page No.	Item	Summary
None.			

2009 Non-Motorized Transportation Plan - Complies			
Chapter	Page No.	Item	Summary
6	41	6.2	Sidewalks should be a minimum of 5 feet wide and meet the requirements of the American Disabilities Association (<i>sic?</i>) for providing barrier free access. Curb cuts or ramps should be installed at all intersections and at mid-block locations where there are crosswalks. Ramps should have a slope of no more than 1:12 and tactile warning should be used to mark transitions for pedestrians with visual impairment. Sidewalks should be continuous, not end abruptly, and extend to the main entrances of public buildings.
	42	6.3	Paved shoulder lanes are found to the right of the main driving lane and are delineated by a white line at least 6 inches wide. Paved shoulder lanes differ from bike lanes in that they are not designed for exclusive use by bicycles. They are often used in rural areas to accommodate both pedestrian and bicycle traffic. They have no pavement markings other than the roadway striping. They may have a Share the Road sign

2009 Non-Motorized Transportation Plan - Complies			
			("sharrow") or, where they are part of the community bike route system, they should have appropriate bike route signage.
	42	6.4	Bike lanes are located to the right of the main traffic lane and are designed to carry bike traffic in the same direction as adjacent motor traffic. A bike lane should be 6 feet wide and be delineated using a 6 inch solid white line and painted with the standard bicycle paving symbols and directional arrows. In areas where the bike lane is adjacent to a curb face or guardrail, where there is a steep grade or lots of traffic, bike lanes may need to be wider than 6 feet. If there are physical width limitations, or if there is no curb, a minimum of 4 feet may be acceptable.
	46	6.7	Safe road crossings for bicyclists and pedestrians are very important for non-motorized transportation. Twelve types of alterations or crossing treatments that increase safety at intersections are described... ■ Crosswalks that are easy to see and last a long time. Continental or ladder style crosswalks are marked with thick white lines perpendicular to the direction of travel, are easy to see and long lasting. ■ Roundabouts where a large circular, raised island located at an intersection takes the place of a traffic signal and traffic entering the circle yields to traffic already in the roundabout.
7	51	17	Intersections on Douglas Highway - Improve intersections on Douglas Highway at Cordova Street (#88), Crow Hill Drive (#86), Savikko Road (#89) and Douglas Library (#87). This is the main route through the area and several accidents involving pedestrians and bicycles have taken place at each intersection

FINDINGS

In accordance with CBJ 49.15.580, staff finds the proposed asphalt rehabilitation and reconstruction of the Juneau Douglas Bridge, roundabout, and a portion of South Douglas Highway complies with Title 49 Land Use Code and is in general conformity with adopted plans, specifically the 2013 Comprehensive Plan, the 2001 Transportation Plan, and the 2009 Non-motorized Transportation Plan.

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.

PROJECT / APPLICANT INFORMATION

Project Description The proposed project would construct do asphalt rehabilitation and reconstruction for the the JD Bridge, the roundabout and a short ways south as shown o the plans.		
PROPERTY LOCATION		
Street Address JD Bridge, Douglas Roundabout and a little ways South on Douglas Hw.		City/Zip Juneau 99801
Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot) 58.2990° N, 134.4294° W		
Assessor's Parcel Number(s)		
LANDOWNER/ LESSEE		
Property Owner's Name State of Alaska	Contact Person: David Pyeatt, PE	Work Phone: 465-4490
Mailing Address PO Box 112506 Juneau, AK 99811-2506	Home Phone:	Fax Number:
E-mail Address david.pyeatt@alaska.gov	Other Contact Phone Number(s):	
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	
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" and sign and date at X below		
Applicant's Name same	Contact Person:	Work Phone:
Mailing Address	Home Phone:	Fax Number:
E-mail Address	Other Contact Phone Number(s):	
X _____ Applicant's Signature	_____ Date of Application	

OFFICE USE ONLY BELOW THIS LINE.

Permit Type	***SIGN	Date Received	Application Number(s)
Building/Grading Permit			
City/State Project Review and City Land Action		6/1/2020	CSP2020-005
Inquiry Case (Fee In Lieu, Letter of ZC, Use Not Listed)			
Mining Case (Small, Large, Rural, Extraction, Exploration)			
Sign Approval (If more than one, fill in all applicable permit #'s)			
Subdivision (Minor, Major, PUD, St. Vacation, St. Name Change)			
Use Approval (Allowable, Conditional, Cottage Housing, Mobile Home Parks, Accessory Apartment)			
Variance Case (De Minimis and all other Variance case types)			
Wetlands Permits			
Zone Change Application			
Other (Describe)			

***Public Notice Sign Form filled out and in the file.

Comments:

Permit Intake Initials
BCH

Revised November 2009

City/State Project and Land Action Review Information

City and State project review is outlined in CBJ 49.15.580

Each application for a City/State Project is reviewed by the Planning Commission at a public hearing. The permit procedure is intended to provide the Commission the flexibility necessary to make recommendations tailored to individual applications.

Application: An application for a City/State Project Review will not be accepted by the Community Development Department until it is determined to be complete. The items needed for a complete application are:

1. **Forms:** Completed City/State Project Review Application and Development Permit Application forms.
2. **Fees:** No fee required for projects that cost less than \$2.5 million. For projects costing more than this amount, the fee is \$1,600.00. All fees are subject to change.
3. **Project Narrative:** A detailed narrative describing the project.
4. **Plans:** All plans are to be drawn to scale and clearly show the items listed below:
 - a. Plat, site plan, floor plan and elevation views of existing and proposed structures and land;
 - b. Existing and proposed parking areas, including dimensions of the spaces, aisle width and driveway entrances;
 - c. Proposed traffic circulation within the site including access/egress points and traffic control devices;
 - d. Existing and proposed lighting (including cut sheets for each type of lighting);
 - e. Existing and proposed vegetation with location, area, height and type of plantings; and,
 - f. Existing physical features of the site (i.e. drainage, eagle trees, hazard areas, salmon streams, wetlands, etc.)

Document Format: All materials submitted as part of an application shall be submitted in either of the following formats:

1. Electronic copies in the following formats: .doc, .txt, .xls, .bmp, .pdf, .jpg, .gif, .xlm, .rtf (other formats may be preapproved by the Community Development Department).
2. Paper copies 11" X 17" or smaller (larger paper size may be preapproved by the Community Development Department).

Application Review & Hearing Procedure: Once the application is determined to be complete, the Community Development Department will initiate the review and scheduling of the application. This process includes:

Review: As part of the review process the Community Development Department will evaluate the application for consistency with all applicable City & Borough of Juneau codes and adopted plans. Depending on unique characteristics of the permit request the application may be required to be reviewed by other municipal boards and committees. Review comments may require the applicant to provide additional information, clarification, or submit modifications/alterations for the proposed project.

Hearing: All City/State Project Review Permit Applications must be reviewed by the Planning Commission. Once an application has been deemed complete and has been reviewed by all applicable parties the Community Development Department will schedule the requested permit for the next appropriate meeting. The Planning Commission will make a recommendation based on staff's analysis and forward it to the Assembly for final approval/denial.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED



CITY/STATE PROJECT AND LAND ACTION REVIEW APPLICATION

See reverse side 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.

PROJECT SUMMARY

The proposed project would construct do asphalt rehabilitation and reconstruction for the the JD Bridge, the roundabout and a short ways south as shown o the plans.

TYPE OF PROJECT REVIEW:

☐

City Project Review

☐

City Land Acquisition /Disposal

☒

State Project Review

PROJECT NUMBERS ASSOCIATED WITH PROPOSAL:

Is this project associated with any other Land Use Permits?

☐

YES Case No.: _____

☒

NO

Capital Improvement Program # (CIP) _____

Local Improvement District # (LID) _____

State Project # SFHWHY00058

ESTIMATED PROJECT COST: \$ 6,000,000

ALL REQUIRED MATERIALS ATTACHED

☒

Complete application

☐

Pre-Application notes (if applicable)

☒

Narrative including:

☒

Current use of land or building(s)

☒

Proposed use of land or building(s)

☒

How the proposed project complies with the Comprehensive Plan

☒

How the proposed project complies with the Land Use Code (Title 49)

☒

Site Plan (details on page 2)

NOTE: This application is required even if the proposed project is associated with other Land Use permits.

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

CITY/STATE PROJECT FEES	Fees	Check No.	Receipt	Date
Application Fees	\$ 146.00			

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.

Case Number <u>642020-005</u>	Date Received <u>6/11/2020</u>
----------------------------------	-----------------------------------

Attachment A - Application Packet



THE STATE
of **ALASKA**

GOVERNOR MIKE DUNLEAVY

Department of Transportation and Public Facilities

DOT&PF Engineering Manager
David Pyeatt, PE

6860 Glacier Highway
P.O. Box 112506
Juneau, AK 99811-2506
Phone: 907-465-4490

April 28th, 2020

Re: *Douglas Highway Stage I, SFHWY00058, Juneau, AK*

Certified Mail #: _____
Return Receipt Requested

*City of Juneau Planning Commission
155 S. Seward Street
Juneau, Alaska 99801*

Dear *Planning Commission*,

The enclosed plans are submitted for your review and comment, and for determination of compliance with local planning and zoning ordinances. Under AS 35.30.020, the Department must comply with local planning and zoning ordinances and other regulations in the same manner and to the same extent as other landowners. If you believe the Department's construction of this project would result in a violation of planning, zoning, or other regulations generally applicable to landowners, please identify the portions of the project that would be in violation, and the specific planning, zoning, or other regulations that you believe would be violated.

Pursuant to AS 35.30.010, you have 90 days from delivery of the plans to provide comments on the project and to notify the Department whether the project violates any planning, zoning, or other regulations. If comments are not received within this time frame, the Department is authorized to proceed with the project.

Thank you for consideration of this matter.

Sincerely,

04/28/2020

DOT&PF Engineering Manager

Enclosure: Project Plans

907 538 2290

RECEIVED

JUN 01 2020

Permit Center/CDD

Attachment A - Application Packet

PROPOSED HIGHWAY PROJECT
JUNEAU - DOUGLAS
HIGHWAY RESURFACE & SIDEWALK REPAIRS - STAGE 1
PROJECT NO. SFHWY00058/958032

PROJECT SUMMARY

DOUGLAS HIGHWAY MP 0.00 TO MP 0.81	
WIDTH OF PAVEMENT	36-FEET (40-FEET)
LENGTH OF GRADING	0.86 MILES
LENGTH OF PAVING	0.86 MILES
LENGTH OF PROJECT	0.86 MILES

USE THESE PLANS IN CONJUNCTION WITH THE STATE OF ALASKA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2020 EDITION AND THE PROJECT SPECIAL PROVISIONS.



DESIGN DESIGNATIONS	
CORDOVA STREET TO I STREET MP 0.55 TO 2.12	
FUNCTIONAL CLASS	MINOR ARTERIAL
ADT (2017)	8440
ADT (2021)	8520
ADT (2027)	8690
ADT (2035)	8830
DHV LAST YEAR W/ TRAFFIC DATA (2017)	930
DHV DESIGN YEAR (2021)	940
DHV MID-LIFE YEAR (2027)	950
DHV DESIGN YEAR (2035)	970
PERCENT TRUCKS (T)	2.8%
DIRECTIONAL SPLIT (D)	80/40
DESIGN SPEED (V)	40
DESIGN ESALS (15 YEARS)	550,000

DESIGN DESIGNATIONS	
EGAN DRIVE TO CORDOVA STREET	
MP 0.00 TO 0.55	
FUNCTIONAL CLASS	URBAN ARTERIAL
ADT (2012)	9510
ADT (2021)	9720
ADT (2027)	9870
ADT (2035)	10070
DHV LAST YEAR W/ TRAFFIC DATA (2012)	1050
DHV DESIGN YEAR (2021)	1070
DHV MID-LIFE YEAR (2027)	1090
PERCENT TRUCKS (T)	2.8%
DIRECTIONAL SPLIT (D)	80/40
DESIGN SPEED (V)	30
DESIGN ESALS (15 YEARS)	650,000
DHV FUTURE YEAR (2035)	1110

PLANS DEVELOPED BY: DOWL
9085 GLACIER HWY - JUNEAU, AK 99801
907-780-3533 - #AECLB48

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

APPROVED:

KIRK MILLER, P.E.
REGIONAL RECONSTRUCTION ENGINEER
CONCURRED

D LANCE MEARIG, P.E.
DIRECTOR, SOUTHCOAST REGION

ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
JUNEAU - DOUGLAS HIGHWAY
RESURFACE & SIDEWALK - STAGE 1
INDEX, SHEET LAYOUT, AND ABBREVIATIONS
DATE: 4/10/20
DRAWN BY: J. L. LARSEN
CHECKED BY: J. L. LARSEN
APPROVED BY: J. L. LARSEN
PROJECT NO.: SFHWY00058/958032
SHEET NO.: A2
TOTAL SHEETS: 16

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2	INDEX, SHEET LAYOUT, AND ABBREVIATIONS
A3	LEGEND AND SYMBOLS
A4-A7	SURVEY CONTROL
B1-B2	TYPICAL SECTIONS
C1	ESTIMATE OF QUANTITIES
D1-D4	SUMMARY TABLES
E1-E2	MISCELLANEOUS DETAILS
F1-F9	PLAN AND PROFILE
G1-G3	APPROACH PLAN AND PROFILES
H1-H10	SIGNING AND STRIPING
M1-M12	BRIDGE DRAWINGS
P1-P5	EROSION SEDIMENT AND CONTROL PLAN
Q1	DRAINAGE PLAN AND PROFILE
T1-T6	TRAFFIC CONTROL PLAN

ABBREVIATIONS

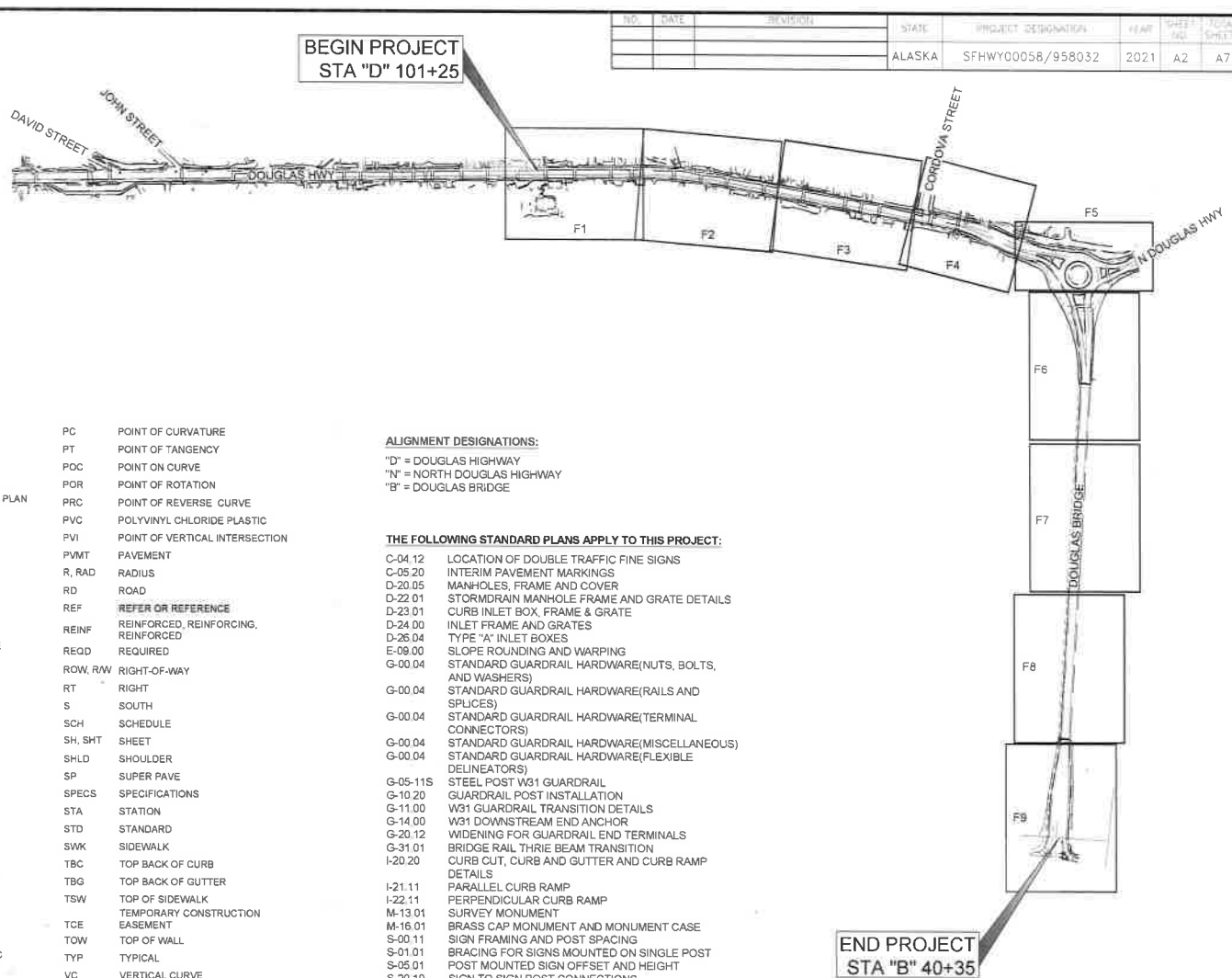
AT	AND	ENGR	ENGINEER
&	AND	E.O.P.	END OF PROJECT
ACI	AMERICAN CONCRETE INSTITUTE	EP	EDGE OF PAVEMENT
ADT	AVERAGE DAILY TRAFFIC	ESCP	EROSION SEDIMENT CONTROL PLAN
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	EXST, EX	EXISTING
APPROX	APPROXIMATE	FDN	FOUNDATION
ATB	ASPHALT TREATED BASE	FG	FINISH GRADE
BB	BEGIN BASELINE	FL	FLOW LINE (ELEV)
BCP	BLUE CURB PAINT	FT	FOOT OR FEET
BFE	BOTTOM FOOTING ELEVATION	FTG	FOOTING
BM	BENCH MARK	GAL	GALLONS
B.O.P.	BEGINNING OF PROJECT	GB	GRADE BREAK
BOT	BOTTOM	HDPE	HIGH DENSITY POLYETHYLENE
BRG	BEARING	HMA	HOT MIX ASPHALT
BVCE	BEGIN VERTICAL CURVE ELEVATION	HORIZ	HORIZONTAL
BVCS	BEGIN VERTICAL CURVE STATION	IN	INCH
CC	CENTER TO CENTER	INVT, INV	INVERT
C&G	CURB AND GUTTER	J, JB	JUNCTION BOX
CJ	CONSTRUCTION JOINT	JT	JOINT
CL	CENTER LINE	KIP	1000 POUNDS-FORCE
CLR	CLEAR	L	LEFT, LENGTH
CMP	CORRUGATED METAL PIPE	LAT	LATITUDE
CONC	CONCRETE	LB	POUNDS
CONN	CONNECTION	LF	LINEAR FOOT
CONT	CONTINUOUS, CONTINUATION	LONG	LONGITUDE
CORRUGATED POLYETHYLENE PIPE, TYPE S		LT	LEFT
CPP	CONNECT TO EXISTING	LVC	LENGTH OF VERTICAL CURVE
CTE	CONNECT TO EXISTING	MAX	MAXIMUM
CTR	CENTER	MIN	MINIMUM
CY	CUBIC YARD	MISC	MISCELLANEOUS
DET	DETAIL	MTE	MATCH TO EXISTING
DIA OR Ø	DIAMETER	MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
DI	DUCTILE IRON	N	NORTH
DOT&PF	ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	NO, #	NUMBER, NUMBERING
DWG	DRAWING	NTS	NOT TO SCALE
E	EAST	O.C / OC	ON CENTER
EA	EACH	OD	OUTSIDE DIAMETER
EB	END BASELINE	PED	PEDESTRIAN
EG	EXISTING GRADE	PGP	PROFILE GRADE POINT
		PI	POINT OF INTERSECTION
		PL	PLACE, PLATE, PROPERTY LINE

ALIGNMENT DESIGNATIONS:

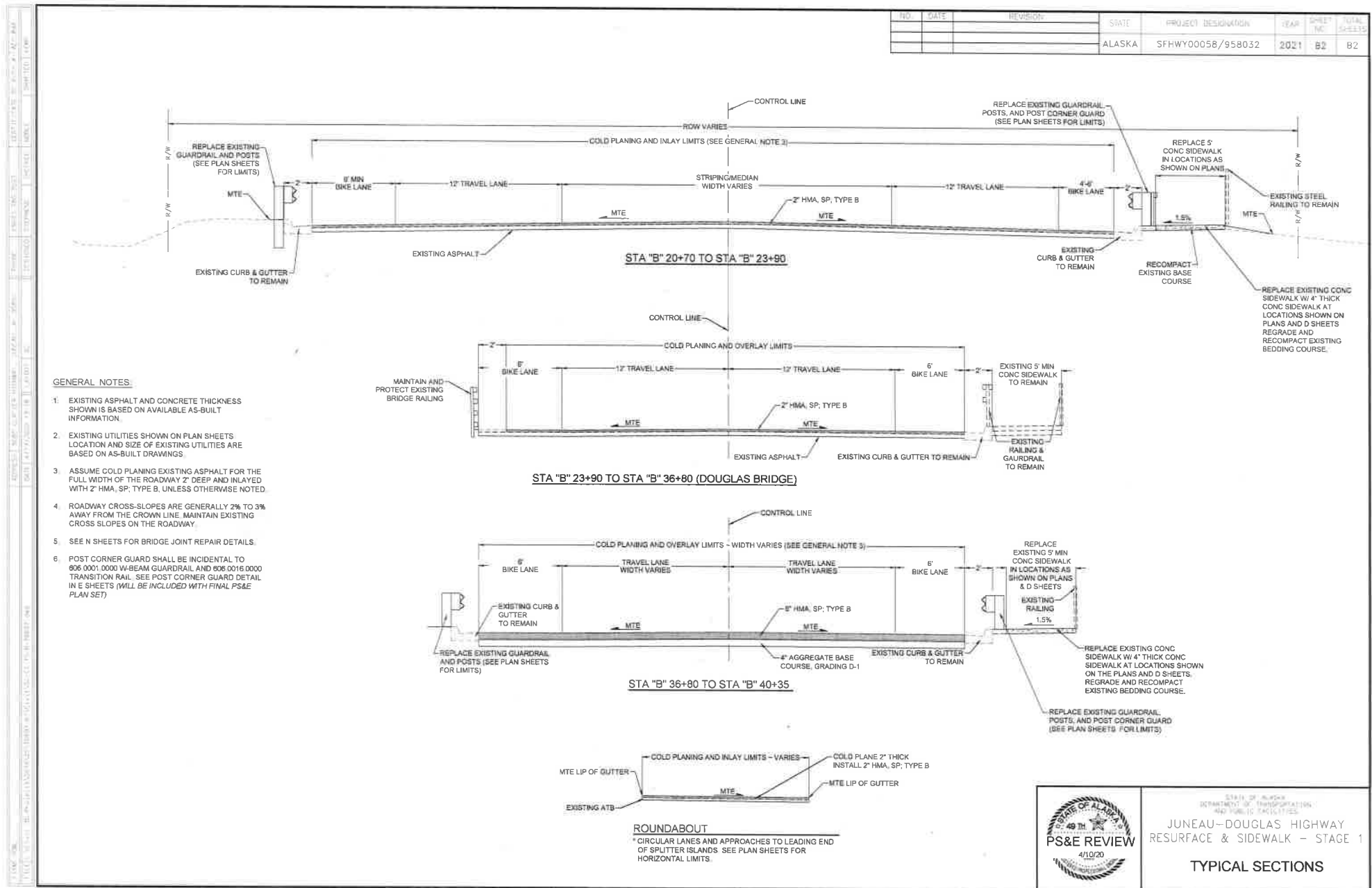
"D" = DOUGLAS HIGHWAY
"N" = NORTH DOUGLAS HIGHWAY
"B" = DOUGLAS BRIDGE

THE FOLLOWING STANDARD PLANS APPLY TO THIS PROJECT:

C-04.12	LOCATION OF DOUBLE TRAFFIC FINE SIGNS
C-05.20	INTERIM PAVEMENT MARKINGS
D-20.05	MANHOLES, FRAME AND COVER
D-22.01	STORMDRAIN MANHOLE FRAME AND GRATE DETAILS
D-23.01	CURB INLET BOX, FRAME & GRATE
D-24.00	INLET FRAME AND GRATES
D-26.04	TYPE "A" INLET BOXES
E-09.00	SLOPE ROUNDING AND WARPING
G-00.04	STANDARD GUARDRAIL HARDWARE(NUTS, BOLTS, AND WASHERS)
G-00.04	STANDARD GUARDRAIL HARDWARE(RAILS AND SPLICES)
G-00.04	STANDARD GUARDRAIL HARDWARE(TERMINAL CONNECTORS)
G-00.04	STANDARD GUARDRAIL HARDWARE(MISCELLANEOUS)
G-00.04	STANDARD GUARDRAIL HARDWARE(FLEXIBLE DELINEATORS)
G-05.11S	STEEL POST W31 GUARDRAIL
G-10.20	GUARDRAIL POST INSTALLATION
G-11.00	W31 GUARDRAIL TRANSITION DETAILS
G-14.00	W31 DOWNSTREAM END ANCHOR
G-20.12	WIDENING FOR GUARDRAIL END TERMINALS
G-31.01	BRIDGE RAIL THRIE BEAM TRANSITION
I-20.20	CURB CUT, CURB AND GUTTER AND CURB RAMP DETAILS
I-21.11	PARALLEL CURB RAMP
I-22.11	PERPENDICULAR CURB RAMP
M-13.01	SURVEY MONUMENT
M-16.01	BRASS CAP MONUMENT AND MONUMENT CASE
S-00.11	SIGN FRAMING AND POST SPACING
S-01.01	BRACING FOR SIGNS MOUNTED ON SINGLE POST
S-05.01	POST MOUNTED SIGN OFFSET AND HEIGHT
S-20.10	SIGN TO SIGN POST CONNECTIONS
S-31.01	SIGN POST BASE AND FOUNDATION
S-32.00	SIGN POST BASE AND FOUNDATION BEHIND BARRIER
T-06.00	RECESSED PAVEMENT MARKERS
T-20.04	PAVEMENT MARKING APPLICATIONS
T-21.03	PAVEMENT MARKING APPLICATIONS
T-22.04	PAVEMENT MARKING APPLICATIONS
T-23.00	CROSSWALK LOCATION AT INTERSECTIONS
T-32.10	LOOP DETECTOR INSTALLATION



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
JUNEAU-DOUGLAS HIGHWAY
RESURFACE & SIDEWALK - STAGE 1
INDEX, SHEET LAYOUT, AND ABBREVIATIONS



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFWY00058/958032	2021	C1	C1

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
201.0009.0000	CLEARING AND GRUBBING	LS	ALL REQ'D
201.2001.0000	INVASIVE PLANT SPECIES CONTROL, REMOVAL, AND DISPOSAL	SY	1,135
202.0002.0000	REMOVAL OF PAVEMENT	SY	7,314
202.0003.0000	REMOVAL OF SIDEWALK	SY	1,219
202.0004.0000	REMOVAL OF CULVERT PIPE	LF	249
202.0006.0000	REMOVAL OF MANHOLE	EA	7
202.0008.0000	REMOVAL OF INLET	EA	1
202.0009.0000	REMOVAL OF CURB AND GUTTER	LF	1,904
203.0003.0000	UNCLASSIFIED EXCAVATION	CY	717
203.0006.0000	BORROW, TYPE B	TON	80
301.0003.0001	AGGREGATE SURFACE COURSE, GRADING D-1	TON	1,434
306.0001.0000	ATB	TON	1,269
306.0002.6428	ASPHALT BINDER, GRADE PG 64-28	TON	63
308.2001.0029	ATB, PRICE ADJUSTMENT, TYPE II: CLASS B	CS	ALL REQ'D
402.0001.STE1	STE-1 ASPHALT FOR TACK COAT	TON	8
408.2001.0008	HMA, SP, TYPE B	TON	2,400
408.2004.6428	ASPHALT BINDER, GRADE PG 64-28	TON	144
408.2008.0008	HMA PRICE ADJUSTMENT, SP, TYPE B	CS	ALL REQ'D
408.2009.0000	LONGITUDINAL JOINT DENSITY PRICE ADJUSTMENT	CS	ALL REQ'D
408.2010.0001	PAVEMENT SMOOTHNESS PRICE ADJUSTMENT, METHOD 1	CS	ALL REQ'D
410.2001.0000	PAVEMENT COLD PLANING	SY	10,436
516.0001.0000	EXPANSION JOINT, SILICONE	LF	37
516.0001.0001	EXPANSION JOINT, STRIP SEAL	LF	110
603.0021.0012	CORRUGATED POLYETHYLENE PIPE 12 INCH	LF	74
603.0021.0018	CORRUGATED POLYETHYLENE PIPE 18 INCH	LF	64
603.0021.0024	CORRUGATED POLYETHYLENE PIPE 24 INCH	LF	78
603.0021.0036	CORRUGATED POLYETHYLENE PIPE 36 INCH	LF	45
603.2017.0000	CULVERT CLEANING	LF	479
603.2019.0012	LINER FOR STORM DRAIN 12 INCH, CIPP	LF	49
603.2019.0018	LINER FOR STORM DRAIN 18 INCH, HDPE	LF	50
603.2019.0024	LINER FOR STORM DRAIN 24 INCH, CIPP	LF	396
603.2019.0024	LINER FOR STORM DRAIN 24 INCH, HDPE	LF	77
603.2019.0036	LINER FOR STORM DRAIN 36 INCH, CIPP	LF	286
603.2019.0036	LINER FOR STORM DRAIN 36 INCH, HDPE	LF	17
603.2019.0048	LINER FOR STORM DRAIN 48 INCH, CIPP	LF	163

BASIS OF ESTIMATE

ITEM NO.	ITEM DESCRIPTION	ESTIMATING FACTOR
203.0006.0008	BORROW, TYPE B	1.85 TON/CY
301.0003.0001	AGGREGATE SURFACE COURSE, GRADING D-1	2.00 TON/CY
306.0002.6428	ASPHALT BINDER, GRADE PG 64-28	5.3% OF TOTAL WEIGHT OF 306.0001.0000
402.0001.STE1	STE-1 ASPHALT FOR TACK COAT	0.10 GAL/SY, 240 GAL/TON
408.2001.0008	HMA, SP, TYPE B	119 LB/SY-4N
408.2004.6428	ASPHALT BINDER, GRADE PG 64-28	6.0% OF TOTAL WEIGHT OF 408.2001.0008
670.2001.0000	MMA PAVEMENT MARKINGS, SURFACE APPLIED	SEE SHEET H1
670.2002.0000	MMA PAVEMENT MARKINGS, INLAID	SEE SHEET H1

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
804.0001.0000	STORM SEWER MANHOLE	EA	7
804.0003.0000	RECONSTRUCT EXISTING MANHOLE	EA	1
804.0004.0000	ADJUST EXISTING MANHOLE	EA	4
804.0005.000A	INLET, TYPE A	EA	1
805.0006.0012	PERFORATED CORRUGATED POLYETHYLENE PIPE FOR UNDERDRAIN 12 INCH	LF	42
806.0001.0000	W-BEAM GUARDRAIL	LF	1,200
808.0008.0000	REMOVING AND DISPOSING OF GUARDRAIL	LF	813
806.0013.0000	PARALLEL GUARDRAIL TERMINAL	EA	3
806.0016.0000	TRANSITION RAIL MODIFICATION	EA	4
808.0001.0004	CONCRETE SIDEWALK, 4 INCHES THICK	SY	1,116
808.0001.0006	CONCRETE SIDEWALK, 6 INCHES THICK	SY	212
808.0003.0000	ASPHALT SIDEWALK	SY	750
808.0006.0000	CURB RAMP	EA	14
809.0002.0001	CURB AND GUTTER, TYPE I	LF	1,904
611.0001.0002	RIPRAP, CLASS II	CY	182
615.0001.0000	STANDARD SIGN	SF	302
615.0005.0000	DELINEATOR, FLEXIBLE	EA	13
615.0006.0000	SALVAGE SIGN	EA	52
827.0010.0000	ADJUSTMENT OF VALVE BOX	EA	8
631.0002.0001	GEOTEXTILE, EROSION CONTROL, CLASS 1	SY	179
635.0001.0000	INSULATION BOARD	MBM	1
638.0001.0000	DRIVEWAY	EA	17
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	LS	ALL REQ'D
641.0003.0000	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LS	ALL REQ'D
641.0005.0000	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE	CS	ALL REQ'D
641.0007.0000	SWPPP MANAGER	LS	ALL REQ'D
642.0001.0000	CONSTRUCTION SURVEYING	LS	ALL REQ'D
642.0003.0000	THREE PERSON SURVEY PARTY	HR	75
642.0008.0000	ADJUST EXISTING MONUMENT	EA	2
643.0002.0000	TRAFFIC MAINTENANCE	LS	ALL REQ'D
643.0003.0000	PERMANENT CONSTRUCTION SIGNS	LS	ALL REQ'D
643.0025.0000	TRAFFIC CONTROL	CS	ALL REQ'D
643.0032.0000	FLAGGING	CS	ALL REQ'D
643.0005.0000	PUBLIC INFORMATION PROGRAM	LS	ALL REQ'D
644.0001.0000	FIELD OFFICE	LS	ALL REQ'D
644.0002.0000	FIELD LABORATORY	LS	ALL REQ'D
644.0004.0000	ENGINEERING COMMUNICATIONS	CS	ALL REQ'D
644.0008.0000	WEB-BASED SUBMITTALS	LS	ALL REQ'D
645.0001.0000	TRAINING PROGRAM, 1 TRAINEE/APPRENTICE	LH	300
646.0001.0000	CPM SCHEDULING	LS	ALL REQ'D
660.2008.0000	TRAFFIC LOOP REPLACEMENT	CS	ALL REQ'D
670.0001.0000	PAINTED TRAFFIC MARKINGS	LS	ALL REQ'D
670.0008.0000	RECESSED PAVEMENT MARKER	EACH	53
670.2001.0000	MMA PAVEMENT MARKINGS, SURFACE APPLIED	LS	ALL REQ'D
670.2002.0000	MMA PAVEMENT MARKINGS, INLAID	LS	ALL REQ'D



STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 JUNEAU-DOUGLAS HIGHWAY
 RESURFACE & SIDEWALK - STAGE 1
 ESTIMATE OF QUANTITIES

201.0001.0000 INVASIVE PLANT SPECIES CONTROL, REMOVAL, AND DISPOSAL					
SHEET	START STATION	END STATION	OFFSET	AREA (SY)	REMARKS
P1	'D' 102+22	'D' 102+32	LT	5	REED CANARY GRASS
P1	'D' 102+47	'D' 102+53	LT	4	REED CANARY GRASS
P1	'D' 102+75	'D' 103+01	L7	12	REED CANARY GRASS
P1	'D' 101+82	'D' 101+96	LT	3	ORANGE HAWKWEED
P1	'D' 103+38	'D' 103+38	L7	1	ORANGE HAWKWEED
P1	'D' 103+74	'D' 103+89	LT	5	ORANGE HAWKWEED
P1	'D' 103+95	'D' 104+00	RT	1	ORANGE HAWKWEED
P2	'D' 113+73	'D' 113+80	LT	2	REED CANARY GRASS
P2	'D' 115+07	'D' 115+11	LT	4	REED CANARY GRASS
P2	'D' 117+05	'D' 117+46	LT	12	ORANGE HAWKWEED
P3	'D' 116+28	'D' 116+59	LT	40	REED CANARY GRASS
P3	'D' 119+53	'D' 120+00	LT	52	REED CANARY GRASS
P3	'D' 119+93	'D' 120+02	LT	9	REED CANARY GRASS
P3	'D' 118+45	'B' 23+98	RT	343	REED CANARY GRASS
P3	'B' 22+32	'B' 22+39	LT	3	REED CANARY GRASS
P3	'D' 120+13	'D' 120+18	LT	3	OXEYE DAISY
P3	'D' 120+34	'D' 120+40	LT	2	OXEYE DAISY
P3	'D' 120+06	'D' 120+30	LT	13	ORANGE HAWKWEED
P3/P4	'B' 22+48	'B' 22+58	LT	4	REED CANARY GRASS
P4	'B' 22+62	'B' 22+62	LT	1	REED CANARY GRASS
P4	'B' 22+68	'B' 22+78	LT	4	REED CANARY GRASS
P4	'B' 22+90	'B' 23+06	LT	7	REED CANARY GRASS
P4	'B' 23+28	'B' 23+36	LT	4	REED CANARY GRASS
P4	'B' 23+58	'B' 23+99	LT	28	REED CANARY GRASS
P4	'B' 23+72	'B' 23+89	RT	15	ORANGE HAWKWEED
P5	'B' 36+76	'B' 40+54	LT	207	REED CANARY GRASS
P5	'B' 40+67	'B' 40+80	LT	7	REED CANARY GRASS
P5	'B' 36+76	'B' 40+88	RT	312	REED CANARY GRASS
P5	'B' 39+92	'B' 40+02	LT	6	RAMPION BELL-FLOWER
P5	'B' 40+71	'B' 40+76	LT	2	OXEYE DAISY
P5	'B' 36+50	'B' 36+79	RT	22	ORNAMENTAL JEWELWEED
TOTAL:				1,135	SY

202.0002.0000 REMOVAL OF PAVEMENT					
SHEET	START STATION	END STATION	OFFSET	AREA (SY)	REMARKS
F2-F3	'D' 108+00	CL	'D' 110+00	CL	884 ROADWAY RECON
F2	'D' 108+00	RT	'D' 108+50	RT	7 DRIVEWAY
F2	'D' 108+50	LT	'D' 108+50	LT	17 DRIVEWAY
F2	'D' 109+25	RT	'D' 109+25	RT	3 DRIVEWAY
F3	'D' 110+10	LT	'D' 110+10	LT	14 DRIVEWAY
F3-F4	'D' 110+00	RT	'D' 115+00	RT	278 PATHWAY
F3-F4	'D' 110+00	RT	'D' 117+25	RT	161 2' C/G STRIP
F3-F4	'D' 110+00	CL	'D' 115+65	CL	2544 ROADWAY RECON
F3	'D' 111+00	RT	'D' 111+00	RT	14 DRIVEWAY
F3	'D' 111+75	LT	'D' 112+00	LT	35 DRIVEWAY
F3	'D' 112+25	LT	'D' 112+25	LT	28 DRIVEWAY
F3	'D' 113+05	LT	'D' 113+50	LT	24 DRIVEWAY
F3	'D' 113+60	RT	'D' 113+75	RT	4 DRIVEWAY
F3	'D' 114+00	RT	'D' 114+25	RT	23 DRIVEWAY
F3-F4	'D' 114+75	RT	'D' 115+00	RT	12 DRIVEWAY
F4	'D' 115+65	CL	'D' 117+25	CL	718 ROADWAY RECON
F4	'D' 115+65	LT	'D' 117+25	LT	36 2' C/G STRIP
F4	'D' 116+50	RT	'D' 116+50	RT	11 DRIVEWAY
F4	'D' 116+90	LT	'D' 116+90	LT	13 DRIVEWAY
F4	'D' 117+50	LT	'D' 117+50	LT	6 PARTIAL DRIVEWAY
F4	'D' 118+00	RT	'D' 118+00	RT	36 DRIVEWAY

202.0002.0000 REMOVAL OF PAVEMENT					
SHEET	START STATION	END STATION	OFFSET	AREA (SY)	REMARKS
F5	'D' 119+80	RT	'D' 119+80	RT	2 MEDIAN ISLAND
F5	'D' 120+25	RT	'D' 120+25	RT	16 MEDIAN ISLAND
F5	'D' 120+30	RT	'D' 120+30	RT	2 MEDIAN ISLAND
F5	'D' 120+45	LT	'D' 120+45	LT	2 MEDIAN ISLAND
F6	'B' 20+75	RT	'B' 20+75	RT	1 MEDIAN ISLAND
F6	'B' 20+90	CL	'B' 21+00	CL	36 MEDIAN ISLAND
F6	'B' 21+10	CL	'B' 21+10	CL	26 CROSSWALK
F6	'B' 21+20	CL	'B' 21+20	CL	4 MEDIAN ISLAND
F6	'B' 21+20	RT	'B' 21+20	RT	1 MEDIAN ISLAND
F6	'B' 22+15	RT	'B' 22+15	RT	3 MEDIAN ISLAND
F9	'B' 40+30	CL	'B' 37+25	CL	2308 FULL WIDTH ROAD
F5	'N' 30+77	RT	'N' 30+80	RT	2 MEDIAN ISLAND
F5	'N' 31+00	CL	'N' 31+00	CL	21 CROSSWALK
F5	'N' 31+10	CL	'N' 31+15	CL	19 MEDIAN ISLAND
F5	'N' 31+45	CL	'N' 31+40	CL	3 MEDIAN ISLAND
TOTAL:				7,314	SY

202.0003.0000 REMOVAL OF SIDEWALK					
SHEET	START STATION	END STATION	OFFSET	AREA (SY)	REMARKS
F4	'D' 115+05	RT	'D' 118+50	RT	191 DOUGLAS
F4	'D' 115+50	LT	'D' 117+60	LT	131 DOUGLAS
F4-F5	'D' 118+05	LT	'D' 119+00	LT	53 DOUGLAS
F5	'D' 119+45	RT	'D' 121+10	RT	158 DOUGLAS
F5	'D' 119+80	RT	'D' 119+80	RT	5 MEDIAN ISLAND
F5	'D' 120+20	LT	'D' 120+60	LT	44 DOUGLAS
F5	'N' 30+80	LT	'N' 31+70	LT	68 N.DOUGLAS
F5	'N' 30+80	RT	'N' 32+20	RT	117 N.DOUGLAS
F6	'B' 20+50	RT	'B' 21+30	RT	147 ROUNDABOUT
F6	'B' 20+50	LT	'B' 21+30	LT	108 DOUGLAS
F6	'B' 22+48	RT	'B' 23+90	RT	93 TO BRIDGE
F8	'B' 36+78	RT	'B' 36+88	RT	7 BRIDGE
F9	'B' 37+20	RT	'B' 38+59	RT	38 BRIDGE
F9	'B' 39+42	RT	'B' 40+32	RT	58 BRIDGE
TOTAL:				1,219	SY

202.0004.0000 REMOVAL OF CULVERT PIPE					
SHEET	INLET STATION	OUTLET STATION	SIZE (IN)	LENGTH (LF)	REMARKS
F1	'D' 101+25	27.3' LT	'D' 101+44	21.7' LT	12 20
F1	'D' 101+44	28.8' LT	'D' 101+46	23.0' LT	24 6
F2	'D' 106+60	25.5' RT	'D' 106+59	35.0' RT	18 10
F2	'D' 109+67	31.9' LT	'D' 109+79	17.3' LT	24 19
F2	'D' 109+81	17.5' LT	'D' 108+85	23.4' LT	12 20
F2	'D' 109+79	15.8' LT	'D' 109+96	25.2' RT	36 45
F3	'D' 111+53	17.8' LT	'D' 111+63	22.3' LT	12 20
F3	'D' 114+82	17.8' LT	'D' 115+55	24.9' LT	12 73
F9	'D' 118+70	50.5' LT	'D' 119+31	22.5' LT	18 36
TOTAL:				249	LF

202.006.0000 REMOVAL OF MANHOLE				
SHEET	STATION	OFFSET	QUANTITY (EA)	REMARKS
F1	'D' 101+46	18.6' LT	1	
F1	'D' 103+03	18.9' LT	1	
F1	'D' 104+94	24.3' LT	1	
F2	'D' 109+80	16.5' LT	1	
F9	'D' 115+55	24.9' LT	1	
F9	'D' 117+96	45' LT	1	
F9	'D' 119+37	77.3' LT	1	
TOTAL:			7	EA

NO.	DATE	REVISION	STATE	PROJECT DESCRIPTION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFH000058/958032	2021	D1	D4

202.0008.0000 REMOVAL OF INLET				
SHEET	STATION	OFFSET	QUANTITY (EA)	REMARKS
F3	'D' 114+80	17.4' LT	1	
TOTAL:			1	EA

202.0009.0000 REMOVAL OF CURB AND GUTTER						
SHEET	START STATION	END STATION	OFFSET	LENGTH (LF)	REMARKS	
F2-F4	'D' 108+00	LT	'D' 115+35	LT	724	
F2-F3	'D' 108+00	RT	'D' 110+00	RT	199	
F3	'D' 110+75	RT	'D' 111+25	RT	50	
F3-F4	'D' 112+50	RT	'D' 118+50	RT	594	
F5	'D' 115+50	LT	'D' 115+90	LT	58	
F5	'D' 119+70	RT	'D' 119+80	RT	27	
F5	'D' 120+30	RT	'D' 120+40	RT	10	
F5	'D' 120+65	LT	'D' 120+70	LT	10	
F5	'N' 31+40	CL	'N' 31+45	CL	14	NORTH DOUGLAS
F5	'N' 31+10	CL	'N' 31+20	CL	41	NORTH DOUGLAS
F5	'N' 30+76	RT	'N' 30+81	RT	10	NORTH DOUGLAS
F5	'N' 30+85	RT	'N' 31+15	RT	32	NORTH DOUGLAS
F5	'N' 30+85	LT	'N' 31+20	LT	30	NORTH DOUGLAS
F6	'B' 20+70	RT	'B' 20+75	RT	10	BRIDGE
F6	'B' 20+90	LT	'B' 21+10	LT	53	BRIDGE
F6	'B' 21+16	RT	'B' 21+21	RT	10	BRIDGE
F6	'B' 21+16	LT	'B' 21+21	LT	17	BRIDGE
F6	'B' 22+16	RT	'B' 22+20	RT	15	BRIDGE
TOTAL:				1,904	LF	

203.0003.0000 UNCLASSIFIED EXCAVATION				
SHEET	START STATION	END STATION	VOLUME (CY)	REMARKS
F2-F3	'D' 108+00	'D' 110+00	98	ROADWAY
F3-F4	'D' 110+00	'D' 115+65	283	ROADWAY
F4	'D' 115+65	'D' 117+25	80	ROADWAY
F8-F9	'B' 36+75	'B' 40+30	256	ROADWAY
TOTAL:			717	CY

301.0003.0001 AGGREGATE BASE COURSE, GRADING D-1				
SHEET	START STATION	END STATION	WEIGHT (TON)	REMARKS
F2-F3	'D' 108+00	'D' 110+00	196	ROADWAY
F3-F4	'D' 110+00	'D' 115+65	565	ROADWAY
F4	'D' 115+65	'D' 117+25	159	ROADWAY
F8-F9	'B' 36+75	'B' 40+30	513	ROADWAY
TOTAL:			1,433	TONS

306.0001.0000 ATB				
SHEET	START STATION	END STATION	WEIGHT (TON)	REMARKS
F2-F3	'D' 108+00	'D' 110+00	174	
F3-F4	'D' 110+00	'D' 115+65	500	
F4	'D' 115+65	'D' 117+25	141	
F4-F5	'B' 36+75	'B' 40+33	454	
TOTAL:			1,269	TONS



STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 JUNEAU-DOUGLAS HIGHWAY
 RESURFACE & SIDEWALK - STAGE 1

SUMMARY TABLES

306.0003.5838 ASPHALT BINDER, GRADE PG 64-25				
SHEET	START STATION	END STATION	WEIGHT (TON)	REMARKS
F1-F9	D' 108+00	B' 40+35	63	
TOTAL:			63	TONS

402.0001.0001 STE-1 ASPHALT FOR TACK COAT				
SHEET	START STATION	END STATION	WEIGHT (TON)	REMARKS
F1-F9	D' 108+00	B' 40+35	8	
TOTAL:			8	TONS

408.2001.000A HMA, SP, TYPE B				
SHEET	START STATION	END STATION	WEIGHT (TON)	REMARKS
F2-F3	D' 108+00	D' 110+00	116	
F3-F4	D' 110+00	D' 115+65	334	
F4	D' 115+65	D' 117+25	94	
F4-F5	D' 117+25	D' 119+00	144	
F5-F6	D' 119+00	B' 20+50	340	
F6-F7	B' 20+50	B' 26+00	334	
F6	B' 23+90	B' 23+95	6	BRIDGE JOINT
F7-F8	B' 26+00	B' 31+50	282	
F7	B' 29+80	B' 29+83	6	BRIDGE JOINT
F7	B' 30+85	B' 30+90	6	BRIDGE JOINT
F8	B' 31+50	B' 36+75	270	
F8	B' 36+75	B' 36+78	6	BRIDGE JOINT
F8-F9	B' 36+75	B' 40+35	454	
TOTAL:			2392	TONS
ROUNDED TOTAL:			2400	TONS

408.2002.5838 ASPHALT BINDER, GRADE PG 64-25				
SHEET	START STATION	END STATION	WEIGHT (TON)	REMARKS
F1-F9	D' 108+00	B' 40+33	144	
TOTAL:			144	TONS

410.2001.0000 PAVEMENT COLD PLANING					
SHEET	START STATION	END STATION	OFFSET	AREA (SY)	REMARKS
F4-F5	D' 117+25	D' 119+00	CL	1,091	
F5-F6	D' 119+00	B' 20+50	CL	2,595	
F6-F7	B' 20+50	B' 26+00	CL	2,544	
F7-F8	B' 26+00	B' 31+50	CL	2,149	
F8	B' 31+50	B' 36+75	CL	2,057	
TOTAL:				10,436	SY

516.0001.0000 EXPANSION JOINT			
SHEET	STATION	NOTES	
F6	B' 23+90	REFER TO N SHEETS	
F7	B' 29+83	REFER TO N SHEETS	
F7	B' 30+88	REFER TO N SHEETS	
F8	B' 36+77	REFER TO N SHEETS	

603.0021.0012 12-INCH CORRUGATED POLYETHYLENE PIPE									
SHEET	PIPE ID	INLET			OUTLET			LENGTH (LF)	REMARKS
		STATION	OFFSET	INVERT	STATION	OFFSET	INVERT		
F3-F4	P4-1	D' 114+82	17.8' LT	53.7	D' 115+55	24.9' LT	51.4	74	
TOTAL:								74	LF

603.0021.0024 18-INCH CORRUGATED POLYETHYLENE PIPE									
SHEET	PIPE ID	INLET			OUTLET			LENGTH (LF)	REMARKS
		STATION	OFFSET	INVERT	STATION	OFFSET	INVERT		
F4-F5	P5-1	D' 118+70	50.5' LT	47.8	D' 119+31	22.5' LT	40.0	64	
TOTAL:								64	LF

603.0021.0024 24-INCH CORRUGATED POLYETHYLENE PIPE									
SHEET	PIPE ID	INLET			OUTLET			LENGTH (LF)	REMARKS
		STATION	OFFSET	INVERT	STATION	OFFSET	INVERT		
F2	P2-5	D' 109+67	31.8' LT	45.3	D' 109+80	16.5' LT	44.8	20	
F3	P3-3	D' 111+53	16.8' LT	45.1	D' 111+45	38.1'	40.0	56	RECAMERA
TOTAL:								76	LF

603.0021.0036 36-INCH CORRUGATED POLYETHYLENE PIPE									
SHEET	PIPE ID	INLET			OUTLET			LENGTH (LF)	REMARKS
		STATION	OFFSET	INVERT	STATION	OFFSET	INVERT		
F2	P2-7	D' 109+79	16.5' LT	41.5	D' 109+96	25.2' RT	37.0	45	
TOTAL:								45	LF

603.2019.0018 18-INCH HDPE LINER FOR STORMDRAIN									
SHEET	PIPE ID	INLET			OUTLET			LENGTH (LF)	REMARKS
		STATION	OFFSET	INVERT	STATION	OFFSET	INVERT		
F2	P2-8	D' 106+41	21.5' LT	43.5	D' 106+60	24.7' RT	42.5	50	
TOTAL:								50	LF

603.2019.0024 24-INCH HDPE LINER FOR STORMDRAIN									
SHEET	PIPE ID	INLET			OUTLET			LENGTH (LF)	REMARKS
		STATION	OFFSET	INVERT	STATION	OFFSET	INVERT		
F1	P1-2	D' 103+01	29.8' LT	54.0	D' 103+17	36.8' RT	45.5	77	
TOTAL:								77	LF

603.2019.0036 36-INCH HDPE LINER FOR STORMDRAIN									
SHEET	PIPE ID	INLET			OUTLET			LENGTH (LF)	REMARKS
		STATION	OFFSET	INVERT	STATION	OFFSET	INVERT		
F2	P2-13	D' 109+96	25.4' RT	35.1	D' 109+97	41.9' RT	32.1	17	
TOTAL:								17	LF

603.2019.0012 12-INCH CIPP LINER FOR STORMDRAIN									
SHEET	PIPE ID	INLET			OUTLET			LENGTH (LF)	REMARKS
		STATION	OFFSET	INVERT	STATION	OFFSET	INVERT		
F2	P2-10	D' 108+24	22.8' LT	48.0	D' 108+72	24.7' LT	46.7	49	P165
TOTAL:								49	LF

603.2019.0024 24-INCH CIPP LINER FOR STORMDRAIN									
SHEET	PIPE ID	INLET			OUTLET			LENGTH (LF)	REMARKS
		STATION	OFFSET	INVERT	STATION	OFFSET	INVERT		
F1-F2	P2-1	D' 104+94	24.3' LT	48.5	D' 105+14	24.9' RT	48.5	60	
F2	P2-4	D' 109+09	24.9' RT	43.7	D' 109+96	25.4' RT	39.1	97	
F2	P2-11	D' 108+75	25.9' LT	46	D' 109+09	24.9' RT	43.9	69	
F3	P3-4	D' 112+06	27.9' LT	48.6	D' 112+03	40.7' RT	39.7	77	
F4	P4-3	D' 117+17	30.1' LT	48.9	D' 117+94	44.8' LT	47.1	93	
TOTAL:								396	LF

NO.	DATE	REVISION	STATE	FREQ. 1	REVISION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWY00058/958032		2021	D2	D4

603.2019.0036 36-INCH CIPP LINER FOR STORMDRAIN									
SHEET	PIPE ID	INLET			OUTLET			LENGTH (LF)	REMARKS
		STATION	OFFSET	INVERT	STATION	OFFSET	INVERT		
F2	P2-9	D' 106+93	19.1' LT	45.3	D' 109+16	16.0' LT	42.3	225	
F2	P2-12	D' 109+19	15.9' LT	42.2	D' 109+80	16.9' LT	41.8	61	
TOTAL:								286	LF

603.2019.0048 48-INCH CIPP LINER FOR STORMDRAIN									
SHEET	PIPE ID	INLET			OUTLET			LENGTH (LF)	REMARKS
		STATION	OFFSET	INVERT	STATION	OFFSET	INVERT		
F5	P5-3	D' 119+47	67.5' LT	35.6	D' 119+14	71.8' RT	23.2	163	
TOTAL:								163	LF

603.2017.0000 CULVERT CLEANING						
SHEET	PIPE ID	STATION	OFFSET	DIAMETER	LENGTH (LF)	REMARKS
F2		D' 106+74	21.8' RT	36	41	
F3		D' 111+44	37.6' RT	24	52	
F3		D' 111+44	20.1' RT	12	12	
F4		D' 116+24	Cross	12	39	
F4		D' 115+91	Cross	24	69	
F4		D' 116+26	Cross	12	39	
F4		D' 116+70	28.4' RT	24	91	
F4		D' 118+47	Cross	24	60	
F4		D' 118+49	30.2' RT	24	76	
TOTAL:					479	LF

604.0001.0000 STORM SEWER MANHOLE						
SHEET	STRUCTURE ID	STATION	OFFSET	QUANTITY (EA)	RIM EL.	TYPE OF CASTING
F1	S-96	D' 101+46	18.6' LT	1	59.76	GUTTER INLET FRAME AND GRATE
F1	S-98	D' 103+03	18.6' LT	1	58.20	GUTTER INLET FRAME AND GRATE
F1	S-99	D' 104+94	24.3' LT	1	56.46	MANHOLE LID FRAME AND GRATE
F2	S-105	D' 109+90	16.5' LT	1	48.59	GUTTER INLET FRAME AND GRATE
F4	S-109	D' 115+55	24.9' LT	1	55.05	CURB INLET FRAME AND GRATE
F4	S-113	D' 117+96	45.0' LT	1	52.26	MANHOLE LID FRAME AND GRATE
F5	S-118	D' 119+37	77.3' LT	1	44.28	MANHOLE LID FRAME AND GRATE
TOTAL:				7		

604.0003.0000 RECONSTRUCT MANHOLE						
SHEET	STRUCTURE ID	STATION	OFFSET	QUANTITY (EA)	RIM EL.	TYPE OF CASTING
F3	S-107	D' 111+53	16.8' LT	1	51.33	GUTTER INLET FRAME AND GRATE
TOTAL:				1		

604.0004.0000 ADJUSTING EXISTING MANHOLE						
SHEET	STRUCTURE ID	STATION	OFFSET	QUANTITY (EA)	RIM EL.	TYPE OF CASTING
F2	S-100	D' 105+14	24.9' RT	1	54.23	CURB INLET FRAME AND GRATE
F2	S-102	D' 106+60	24.7' RT	1	50.76	CURB INLET FRAME AND GRATE
F2	S-104	D' 109+09	24.9' RT	1	47.96	CURB INLET FRAME AND GRATE
F2	S-106	D' 109+96	25.4' RT	1	48.64	CURB INLET FRAME AND GRATE
TOTAL:				4	EA	

604.0005.0000A ADJUSTING INLET, TYPE A							
SHEET	STRUCTURE ID	STATION	OFFSET	QUANTITY (EA)	RIM EL.	TYPE OF CASTING	REMARKS
F3	S-108	D' 114+90	17.4' LT	1	55.54	GUTTER INLET FRAME AND GRA TE	SDMH
TOTAL:				1	EA		

605.0006.0012 12-INCH PERFORATED CORRUGATED POLYETHYLENE PIPE FOR UNDERDRAIN							
SHEET	PIPE ID	INLET		OUTLET		LENGTH (LF)	REMARKS
		STATION	OFFSET	STATION	OFFSET		
F1	P1-1	'D' 101+25	27.3' LT	53.8	'D' 101+44	21.7' LT	20
F2	P2-6	'D' 109+85	23.4' LT	42.8	'D' 109+80	16.5' LT	9
F3	P3-2	'D' 111+63	22.3' LT	-16.6	'D' 111+53	46.1' RT	13
TOTAL:						42	LF

606.0006.0000 W-BEAM GUARDRAIL					
SHEET	START		END		REMARKS
	STATION	OFFSET	STATION	OFFSET	
F4	'D' 118+51	36.7' RT	'D' 118+96	36.7' RT	50.0
F5	'N' 31+59	33.4' RT	'N' 32+09	36.5' RT	50.0
F6	'B' 21+44	52.4' RT	'B' 23+93	18.2' RT	262.5
F6	'B' 21+58	50.0' LT	'B' 23+90	17.9' LT	250.0
F8	'B' 36+80	18.5' RT	'B' 39+85	40.5' RT	312.5
F8	'B' 36+80	18.6' LT	'B' 40+51	36.2' LT	375.0
TOTAL:					1200.0 LF

606.0006.0000 REMOVING AND DISPOSING OF GUARDRAIL					
SHEET	START		END		REMARKS
	STATION	OFFSET	STATION	OFFSET	
F4	'D' 118+46	RT	'D' 118+96	RT	52
F5	'N' 31+59	RT	'N' 32+09	RT	50
F6	'B' 21+45	LT	'B' 23+90	LT	248
F6	'B' 21+44	RT	'B' 21+56	RT	12
F6	'B' 23+70	RT	'B' 23+93	RT	23
F8-F9	'B' 36+80	RT	'B' 37+00	RT	21
F8-F9	'B' 36+80	LT	'B' 40+75	LT	396
F9	'B' 39+72	RT	'B' 39+85	RT	13
TOTAL:					813 LF

606.0013.0000 PARALLEL GUARDRAIL TERMINAL					
SHEET	START		END		REMARKS
	STATION	OFFSET	STATION	OFFSET	
F4	'D' 118+51	36.80' RT	'D' 118+98	36.69' RT	1
F5	'N' 31+59	33.36' RT	'N' 32+09	36.52' RT	1
F9	'B' 40+01	33.05' LT	'B' 40+51	36.19' LT	1
TOTAL:					3 EA

606.0016.0000 TRANSITION RAIL MODIFICATION				
SHEET	STATION	OFFSET	QUANTITY (EA)	REMARKS
F6	'B' 23+90	17.8' LT	1	BRIDGE
F6	'B' 23+93	18.2' RT	1	BRIDGE
F8	'B' 36+80	18.6' LT	1	BRIDGE
F8	'B' 36+80	18.5' RT	1	BRIDGE
TOTAL:				4 EA

608.0001.0004 CONCRETE SIDEWALK, 4 INCHES THICK					
SHEET	START		END		REMARKS
	STATION	OFFSET	STATION	OFFSET	
F4	'D' 115+05	21.0' RT	'D' 118+50	31.0' RT	138
F4	'D' 115+50	40.0' LT	'D' 117+60	29.0' LT	61
F4-F5	'D' 118+05	32.0' LT	'D' 119+00	32.0' LT	53
F5	'D' 119+70	32.0' RT	'D' 121+20	101.8' RT	158
F5	'D' 119+75	4.0' RT	'D' 119+75	4.0' RT	7
F5	'D' 120+10	27.0' LT	'D' 120+55	40.0' LT	29
F5	'D' 120+30	13.4' RT	'D' 120+30	18.5' RT	2
F5	'D' 120+65	10.0' RT	'D' 120+70	5.0' RT	2
F5	'N' 30+77	11.6' RT	'N' 30+80	15.5' RT	2
F5	'N' 30+80	52.8' RT	'N' 32+15	29.3' RT	117
F5	'N' 30+90	37.0' RT	'N' 31+73	15.0' LT	49
F5	'N' 31+00	CL	'N' 31+00	CL	21
F5	'N' 31+40	CL	'N' 31+45	CL	3
F6	'B' 21+35	29.0' RT	'B' 20+50	95.5' RT	108
F6	'B' 21+20	CL	'B' 21+20	CL	4

608.0001.0004 CONCRETE SIDEWALK, 4 INCHES THICK					
SHEET	START		END		REMARKS
	STATION	OFFSET	STATION	OFFSET	
F6	'B' 21+20	17.7' RT	'B' 21+24	19.4' RT	1
F6	'B' 21+26	56.0' RT	'B' 20+50	93.0' RT	140
F6	'B' 20+75	28.0' RT	'B' 20+70	28.0' RT	1
F6	'B' 22+20	1.0' RT	'B' 22+20	1.0' RT	3
F6	'B' 22+40	33.0' RT	'B' 23+90	19.0' RT	93
F8	'B' 36+78	18.3' RT	'B' 36+89	18.0' RT	7
F9	'B' 37+20	20.3' RT	'B' 37+70	38.2' RT	38
F9	'B' 39+42	42.5' RT	'B' 40+33	47.3' RT	59
TOTAL:					1,118 SY

608.0001.0006 CONCRETE SIDEWALK, 6 INCHES THICK					
SHEET	START		END		REMARKS
	STATION	OFFSET	STATION	OFFSET	
F4	'D' 115+65	20.0' RT	'D' 115+65	20.0' RT	9 CURB RAMP
F4	'D' 115+55	25.0' LT	'D' 116+75	21.6' LT	13 CURB RAMP
F4	'D' 116+30	18.8' RT	'D' 116+63	19.4' RT	18 DRIVEWAY
F4	'D' 116+70	25.0' LT	'D' 117+00	26.0' LT	28 DRIVEWAY
F4	'D' 117+50	28.0' LT	'D' 117+55	28.6' LT	12 PARTIAL DRIVEWAY
F4	'D' 118+00	30.5' RT	'D' 118+47	30.5' RT	27 DRIVEWAY
F5	'D' 120+20	27.0' LT	'D' 120+30	40.0' LT	16 CURB RAMP
F5	'D' 120+25	CL	'D' 120+25	CL	16 ISLAND CROSSWALK
F5	'N' 30+80	38.0' LT	'N' 31+20	26.0' LT	19 CURB RAMP
F5	'N' 31+00	CL	'N' 31+00	CL	21 CURB RAMP
F6	'B' 21+15	RT	'B' 21+15	RT	7 CURB RAMP
F6	'B' 21+15	CL	'B' 21+15	CL	26 ISLAND CROSSWALK
TOTAL:					212 SY

608.003.0000 ASPHALT SIDEWALK					
SHEET	START		END		REMARKS
	STATION	OFFSET	STATION	OFFSET	
F2-F3	'D' 108+00	26.0' RT	'D' 110+00	26.5' RT	120 PATHWAY AND DRIVEWAYS
F2	'D' 108+25	20.0' LT	'D' 108+50	20.0' LT	17 DRIVEWAY
F2-F3	'D' 109+25	20.0' LT	'D' 111+03	20.0' LT	127 DRIVEWAY
F3-F4	'D' 110+00	26.5' RT	'D' 115+10	20.5' RT	333 PATHWAY AND DRIVEWAYS
F3	'D' 111+70	20.0' LT	'D' 112+00	20.0' LT	35 DRIVEWAY
F3	'D' 112+20	20.0' LT	'D' 112+47	20.0' LT	28 DRIVEWAY
F3	'D' 113+05	20.0' LT	'D' 113+40	20.0' LT	24 DRIVEWAY
F4	'D' 116+35	24.0' RT	'D' 116+80	24.0' RT	11 DRIVEWAY
F4	'D' 116+70	29.6' LT	'D' 116+90	31.2' LT	13 DRIVEWAY
F4	'D' 117+40	33.3' LT	'D' 117+52	34.0' LT	6 DRIVEWAY
F4	'D' 118+00	35.3' RT	'D' 118+50	35.7' RT	36 DRIVEWAY
TOTAL:					750 SY

608.006.0000 CURB RAMPS				
SHEET	STATION	OFFSET	QUANTITY (EA)	REMARKS
F4	'D' 115+62	20.1' RT	1	PARALLEL CURB RAMP
F4	'D' 115+65	21.6' LT	1	PARALLEL CURB RAMP
F5	'D' 120+20	29.0' LT	1	PARALLEL CURB RAMP
F5	'D' 120+25	15.7' RT	1	BLENDED TRANSITION
F5	'D' 120+28	1.6' LT	1	BLENDED TRANSITION
F5	'D' 120+30	37.8' RT	1	PERPENDICULAR CURB RAMP
F5	'N' 30+99	10.4' RT	1	BLENDED TRANSITION
F5	'N' 31+03	10.2' LT	1	BLENDED TRANSITION
F5	'N' 31+80	24.8' RT	1	PERPENDICULAR CURB RAMP
F5	'N' 31+88	16.8' LT	1	PARALLEL CURB RAMP
F6	'B' 21+12	4.4' LT	1	BLENDED TRANSITION
F6	'B' 21+12	22.1' RT	1	BLENDED TRANSITION
F6	'B' 21+29	38.3' RT	1	PERPENDICULAR CURB RAMP
F6	'B' 21+36	33.1' LT	1	PERPENDICULAR CURB RAMP
TOTAL:				14 EA

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET	TOTAL SHEETS
			ALASKA	SPHWY00058/958032	2021	D3	D4

609(2) CURB AND GUTTER, TYPE 1						
SHEET	START		END		LENGTH (LF)	REMARKS
	STATION	OFFSET	STATION	OFFSET		
F2-F4	'D' 108+00	19.0' LT	'D' 115+35	40.8' RT	724	
F2-F3	'D' 108+00	25.8' RT	'D' 110+00	25.5' RT	199	
F3	'D' 110+75	25.6' RT	'D' 111+25	25.5' RT	50	
F3-F4	'D' 112+50	25.6' RT	'D' 118+50	30.0' RT	594	
F4	'D' 115+50	39.4' RT	'D' 115+90	21.6' RT	58	BULL NOSE
F5	'D' 119+70	7.0' RT	'D' 119+80	3.0' RT	27	BULL NOSE
F5	'D' 120+30	13.0' RT	'D' 120+40	18.5' RT	10	BULL NOSE
F5	'D' 120+65	5.0' LT	'D' 120+70	11.0' LT	10	BULL NOSE
F5	'N' 31+40	CL	'N' 31+45	CL	14	BULL NOSE
F5	'N' 31+10	CL	'N' 31+20	CL	41	BULL NOSE
F5	'N' 30+76	10.0' RT	'N' 30+81	14.0' RT	10	BULL NOSE
F5	'N' 30+65	36.5' RT	'N' 31+15	29.0' RT	32	
F5	'N' 30+85	37.0' LT	'N' 31+20	25.5' RT	30	
F6	'B' 20+70	25.5' RT	'B' 20+75	29.0' RT	10	BULL NOSE
F6	'B' 20+90	CL	'B' 21+10	CL	53	BULL NOSE
F6	'B' 21+16	18.0' RT	'B' 21+21	20.0' RT	10	BULL NOSE
F6	'B' 21+16	5.0' RT	'B' 21+21	4.5' LT	17	BULL NOSE
F6	'B' 22+16	CL	'B' 22+20	CL	15	BULL NOSE
TOTAL:					1,904	LF

611.0001.0002 RIPRAP, CLASS II					
SHEET	PIPE ID	STATION	OFFSET	VOLUME (CY)	REMARKS
F1	P1-2	'D' 103+17	36.8' RT	38	
F2	P2-2	'D' 105+21	57.6' RT	38	
F2	P2-7	'D' 109+97	41.9' RT	68	
F3	P3-4	'D' 112+03	40.7' RT	38	
TOTAL:				182	ICY

627.0010.0000 ADJUSTMENT OF VALVE BOX				
SHEET	STATION	OFFSET	QUANTITY (EA)	REMARKS
F3	'D' 111+62	10.2' LT	1	
F3	'D' 111+69	10.3' LT	1	
F4	'D' 115+20	17.8' RT	1	
F4	'D' 115+22	13.8' RT	1	
F4	'D' 115+25	9.7' LT	1	
F4	'D' 115+24	17.8' RT	1	
F4	'D' 115+26	15.3' LT	1	
F4	'D' 116+23	17.5' RT	1	
TOTAL:				8 EA

631.002.0001 GEOTEXTILE, EROSION CONTROL, CLASS I					
SHEET	PIPE ID	STATION	OFFSET	AREA (SY)	REMARKS
F1	P1-2	'D' 103+17	58.6' RT	37	RIPRAP CLASS II
F2	P2-2	'D' 105+21	36.8' RT	37	RIPRAP CLASS II
F2	P2-7	'D' 109+97	57.8' RT	68	RIPRAP CLASS II
F3	P3-4	'D' 112+03	41.9' RT	37	RIPRAP CLASS II
TOTAL:				179	SY



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
JUNEAU-DOUGLAS HIGHWAY
RESURFACE & SIDEWALK - STAGE 1

SUMMARY TABLES

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
JUNEAU - DOUGLAS HIGHWAY
RESURFACE & SIDEWALK - STAGE 1
SUMMARY TABLES
DATE: 4/10/20
BY: [Signature]
CHECKED: [Signature]
APPROVED: [Signature]
PROJECT NO. 642.0008.0000
SHEET NO. 104
TOTAL SHEETS 104

639.0001.0000 DRIVEWAY						
SHEET	STATION	OFFSET	TYPE (EA)			REMARKS
			PUBLIC	RES.	COMM.	
F2	'D' 108+38	19.5' LT		1		20.1 DRIVEWAY CURB CUT MTE DRIVEWAY AT 8.0 FT BEHIND BACK OF GUTTER
F2	'D' 108+60	31.4' RT		1		36.1 DRIVEWAY CURB CUT MTE DRIVEWAY AT 2.4 FT BEHIND BACK OF SIDEWALK
F2	'D' 109+21	31.3' RT		1		38.9 DRIVEWAY CURB CUT MTE DRIVEWAY AT 1.3 FT BEHIND BACK OF SIDEWALK
F3	'D' 110+11	17.5' LT		1		22.6 DRIVEWAY CURB CUT MTE DRIVEWAY AT 5.4 FT BEHIND BACK OF GUTTER
F3	'D' 110+98	31.2' RT		1		20.9 DRIVEWAY CURB CUT MTE DRIVEWAY AT 10.6 FT BEHIND BACK OF SIDEWALK
F3	'D' 111+79	17.6' LT		1		20.2 DRIVEWAY CURB CUT MTE DRIVEWAY AT 10.6 FT BEHIND BACK OF GUTTER
F3	'D' 112+34	17.5' LT		1		24.0 DRIVEWAY CURB CUT MTE DRIVEWAY AT 10.7 FT BEHIND BACK OF GUTTER
F3	'D' 112+80	31.0' RT		1		22.3 DRIVEWAY CURB CUT MTE DRIVEWAY AT 0.7 FT BEHIND BACK OF SIDEWALK
F3	'D' 113+23	17.7' LT		1		36.5 DRIVEWAY CURB CUT MTE DRIVEWAY AT 5.8 FT BEHIND BACK OF GUTTER
F3	'D' 113+60	31.1' RT		1		18.9 DRIVEWAY CURB CUT MTE DRIVEWAY AT 2.1 FT BEHIND BACK OF SIDEWALK
F3	'D' 114+12	29.6' RT		1		31.7 DRIVEWAY CURB CUT MTE DRIVEWAY AT 8.4 FT BEHIND BACK OF SIDEWALK
F3	'D' 114+75	21.0' RT		1		DRIVEWAY CURB CUT MTE DRIVEWAY AT 2.7 FT BEHIND BACK OF SIDEWALK
F4	'D' 115+29	41.1' LT	1			75.7 CORDOVA STREET
F4	'D' 116+47	19.0' RT		1		33.4 DRIVEWAY CURB CUT MTE DRIVEWAY AT 4.9 FT BEHIND BACK OF SIDEWALK
F4	'D' 116+80	30.0' LT		1		DRIVEWAY CURB CUT MTE DRIVEWAY AT 3.8 FT BEHIND BACK OF SIDEWALK
F4	'D' 117+50	33.5' LT		1		DRIVEWAY CURB CUT MTE DRIVEWAY AT 3.4 FT BEHIND BACK OF SIDEWALK
F4	'D' 118+24	30.4' RT			1	46.4 DRIVEWAY CURB CUT MTE DRIVEWAY AT 7.2 FT BEHIND SIDEWALK. BREEZE-IN ACCESS
TOTAL:			1	15	1	EA
TOTAL:				17		EA

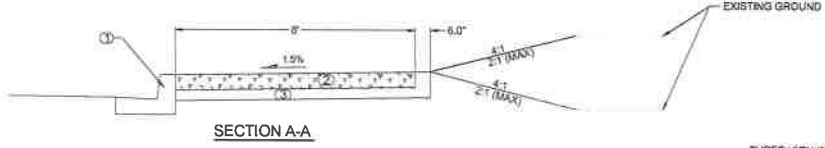
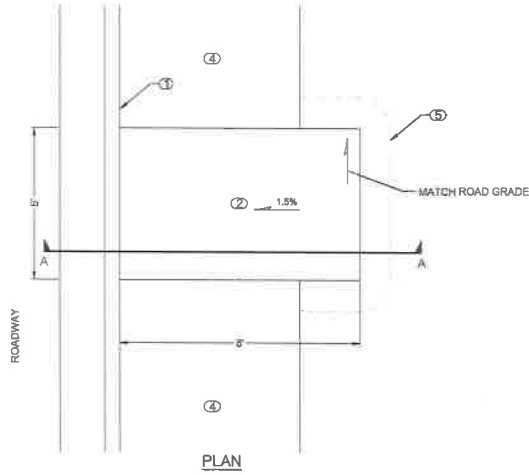
642.0008.0000 ADJUST EXISTING MONUMENT				
SHEET	STATION	OFFSET	QUANTITY (EA)	REMARKS
F4	'D' 115+32	0.0	1	
TOTAL:			1	EA

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFH00058/958032	2021	D4	D4



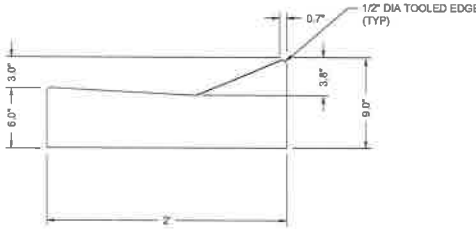
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
JUNEAU-DOUGLAS HIGHWAY
RESURFACE & SIDEWALK - STAGE 1
SUMMARY TABLES

REV.	DATE	DESCRIPTION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1			ALASKA	SFHWY00058/958032	2021	E2	E2

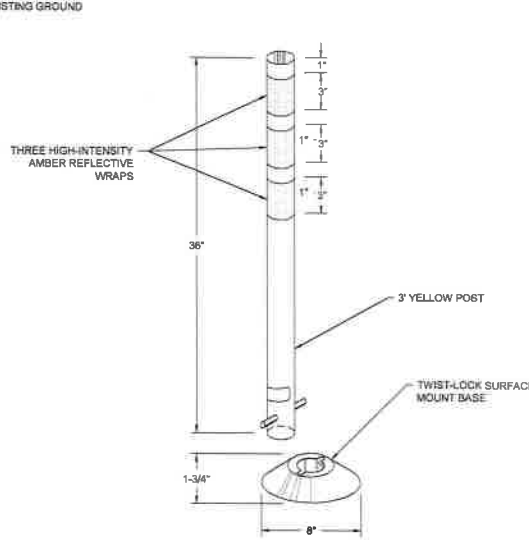


BUS STOP LANDING DETAIL
NTS

- NOTES (X):
1. STANDARD CURB & GUTTER PER STANDARD PLAN I-20.20.
 2. CONCRETE SIDEWALK, 6 INCHES THICK.
 3. AGGREGATE BASE COURSE, GRADING D-1, 4 INCHES THICK.
 4. ASPHALT OR CONCRETE SIDEWALK (SEE F SHEETS).
 5. APPROXIMATE SLOPE LIMITS.
 6. SEE F SHEETS FOR LOCATIONS OF NEW BUS STOP LANDINGS.

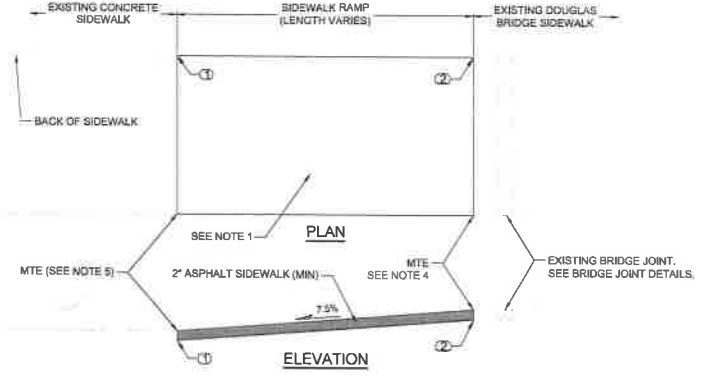


3-INCH CURB AND GUTTER
NTS



- NOTES (X):
1. DELINEATORS SHALL BE INSTALLED AT LOCATIONS SHOWN IN THE PLANS.
 2. DELINEATORS SHALL BE YELLOW IN COLOR. DELINEATORS INSTALLED ON MEDIAN SHOULDERS SHALL HAVE YELLOW REFLECTIVE SHEETING.

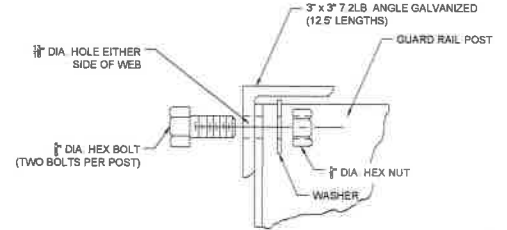
FLEXIBLE DELINEATOR DETAIL
NTS



SIDEWALK RAMP AT DOUGLAS BRIDGE

NTS
* TO BE MEASURED & PAID FOR UNDER ITEM
No. 806 0006 0000 - CURB RAMP

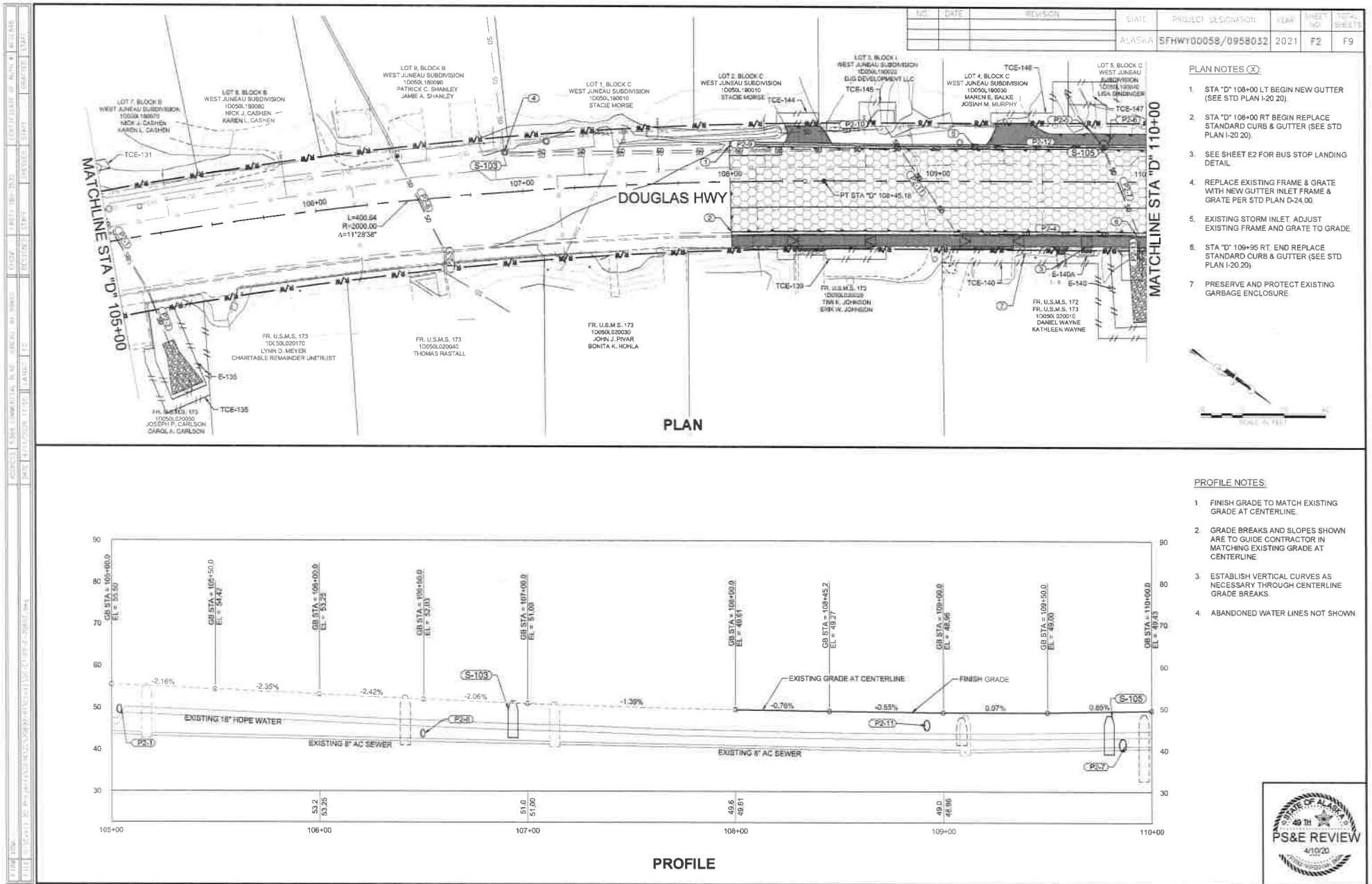
- NOTES (X):
1. REMOVE & DISPOSE OF EXISTING ASPHALT SIDEWALK RAMP.
 2. INSTALL 2" (MIN) ASPHALT SIDEWALK RAMP TO LIMITS SHOWN ON THE PLAN SHEETS. THE ENGINEER SHALL APPROVE LIMITS OF NEW SIDEWALK RAMP PRIOR TO INSTALLATION. GRADE OF RAMP TO BE APPROX. 7.5% OR OTHER APPROVED BY THE ENGINEER.
 3. REGRADE/RECOMPACT EXISTING BASE COURSE AS NEEDED PRIOR TO PAVING NEW RAMP.
 4. SAWCUT & REMOVE EXISTING CONCRETE SIDEWALK TO LIMITS AS APPROVED BY THE ENGINEER.

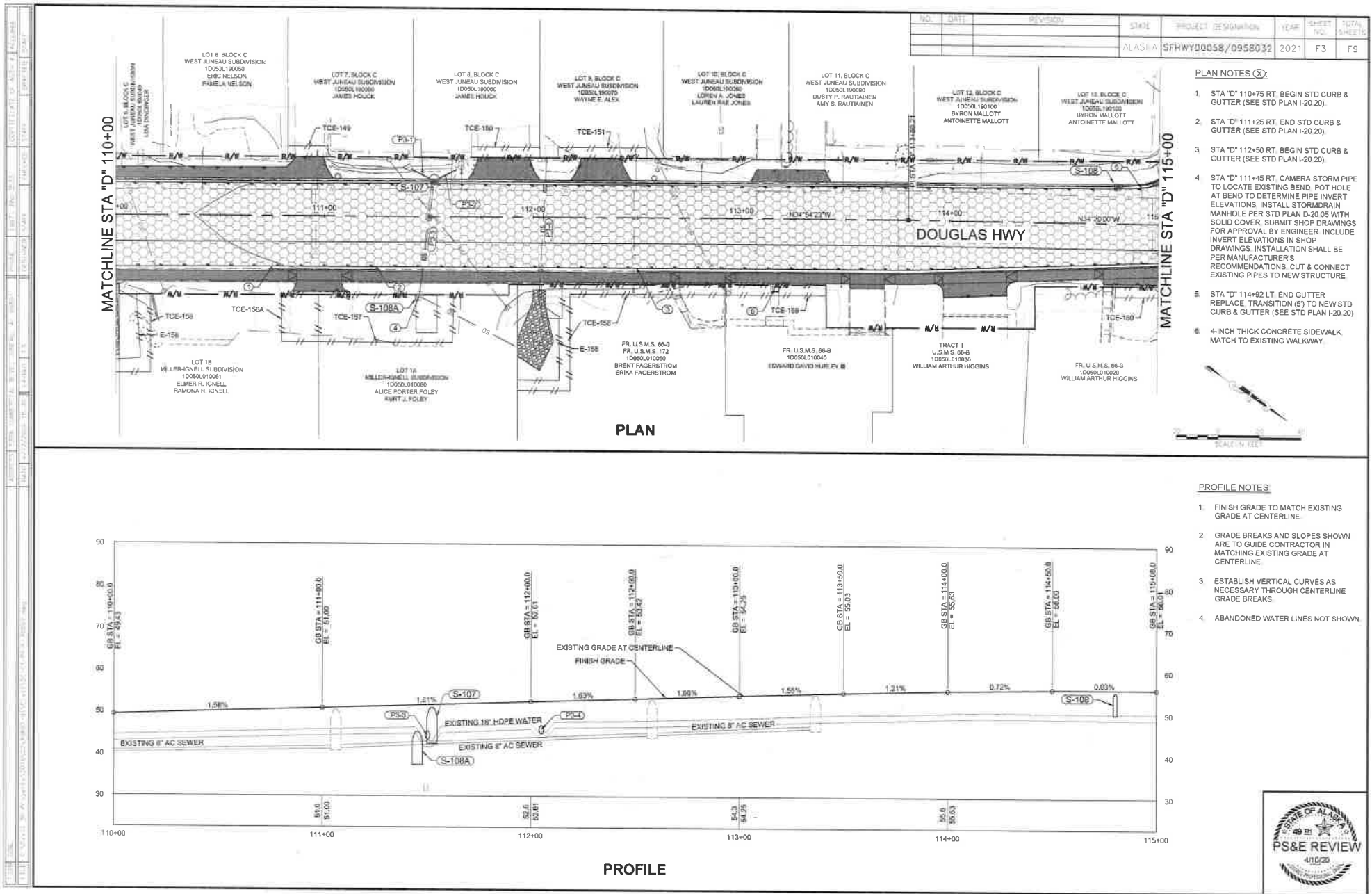


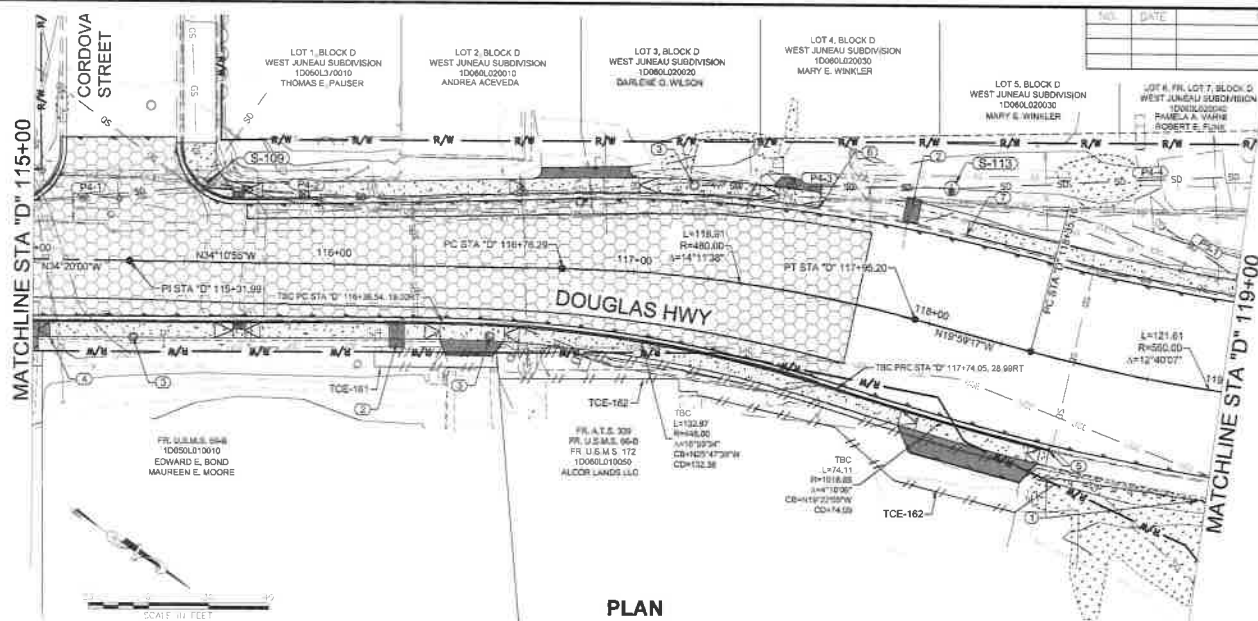
POST CORNER GUARD DETAIL
NTS



STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 JUNEAU-DOUGLAS HIGHWAY
 RESURFACE & SIDEWALK - STAGE 1
 DETAILS

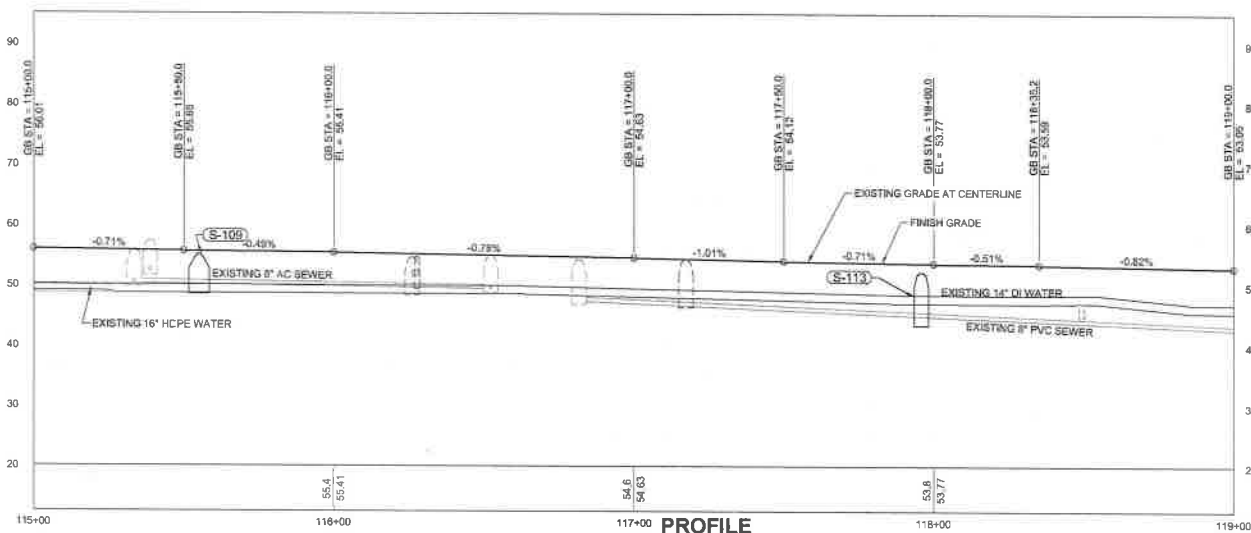






PLAN NOTES (XX)

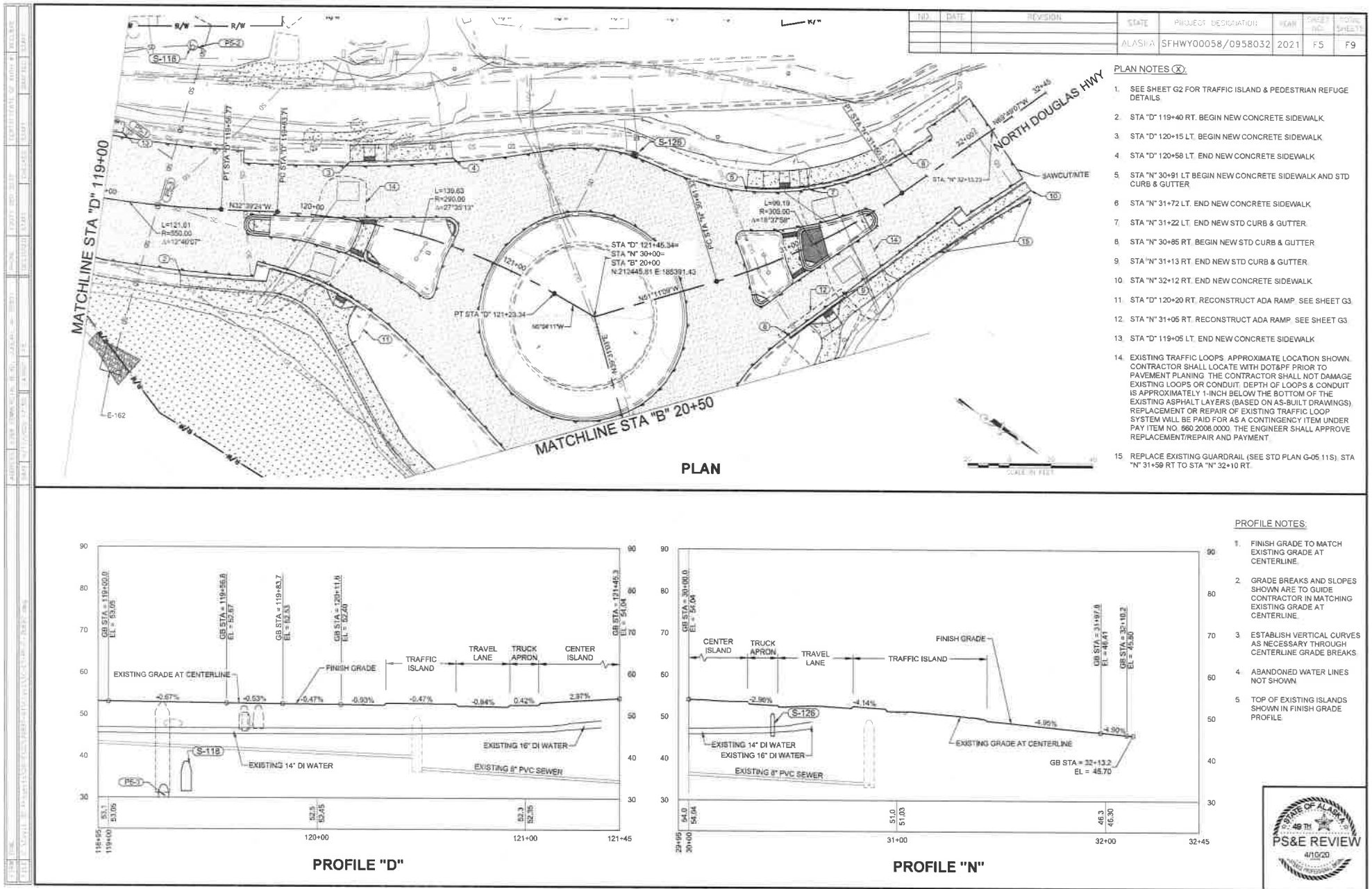
1. REPLACE EXISTING GUARDRAIL SECTION WITH NEW TO ACHIEVE 8 FOOT OFFSET AT END TERMINAL FROM BACK OF CURB. STA "D" 118+50, 38' RT TO STA "D" 118+98, 37' RT.
2. SEE SHEET E2 FOR BUS STOP LANDING DETAIL.
3. ADJUST FRAME & COVER TO GRADE.
4. STA "D" 115+06 RT. END ASPHALT SIDEWALK / BEGIN CONCRETE SIDEWALK.
5. STA "D" 118+49, 30' RT. END NEW STD CURB & GUTTER. END NEW CONCRETE SIDEWALK.
6. STA "D" 117+57 LT. END NEW CONCRETE SIDEWALK.
7. STA "D" 118+05 LT. BEGIN NEW CONCRETE SIDEWALK.

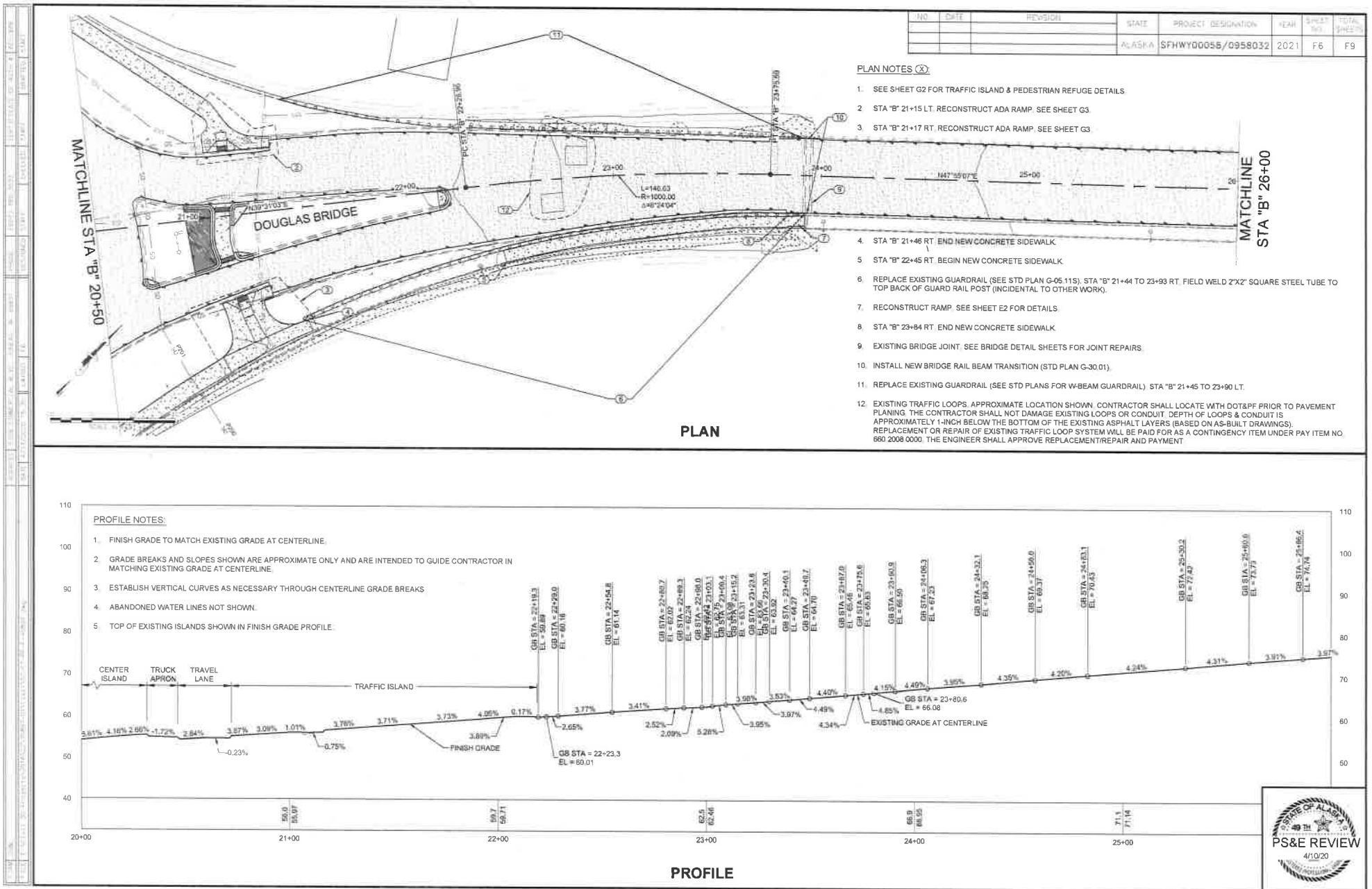


PROFILE NOTES:

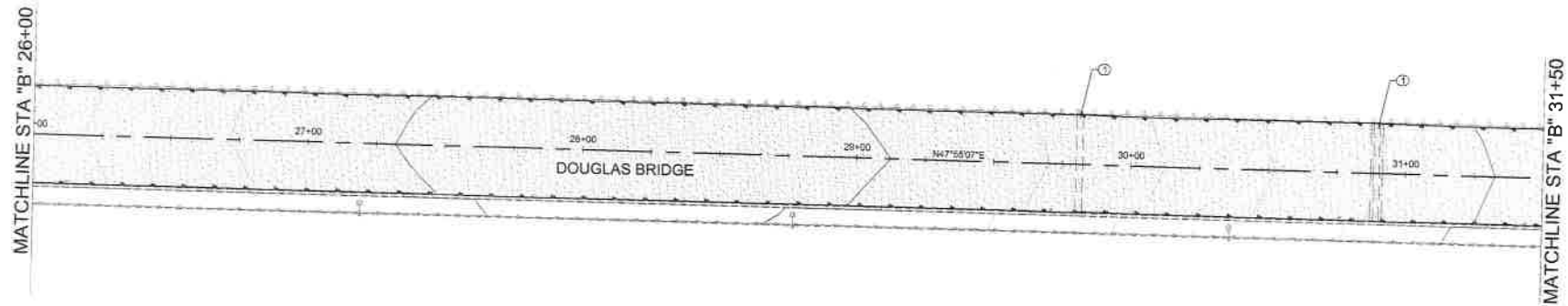
1. FINISH GRADE TO MATCH EXISTING GRADE AT CENTERLINE.
2. GRADE BREAKS AND SLOPES SHOWN ARE TO GUIDE CONTRACTOR IN MATCHING EXISTING GRADE AT CENTERLINE.
3. ESTABLISH VERTICAL CURVES AS NECESSARY THROUGH CENTERLINE GRADE BREAKS.
4. ABANDONED WATER LINES NOT SHOWN.



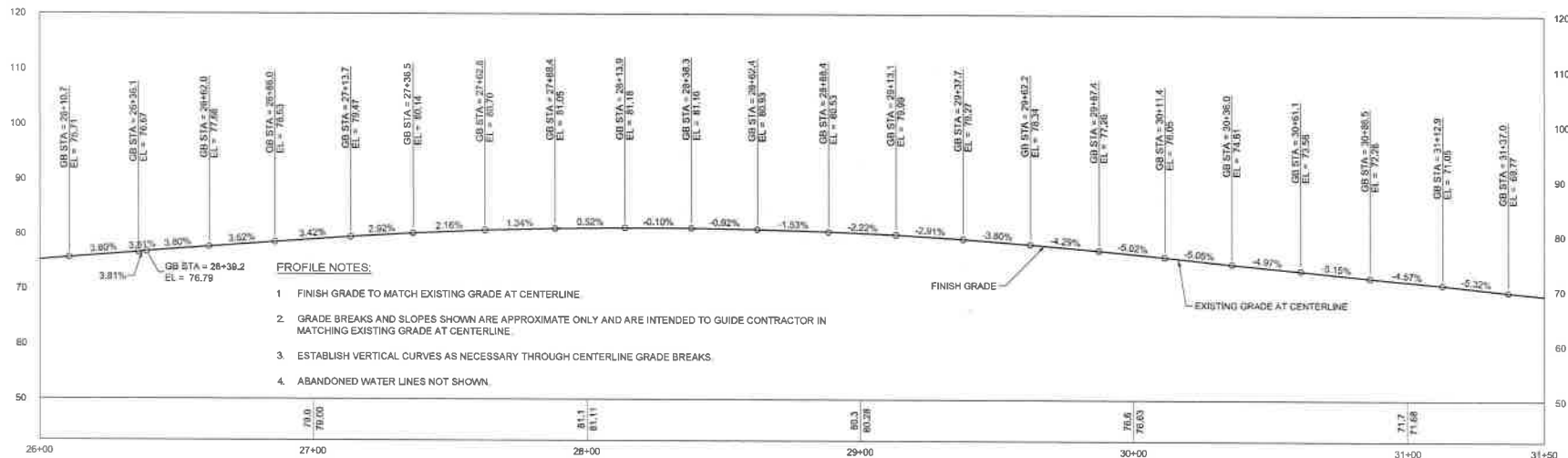




1. EXISTING BRIDGE JOINT. SEE BRIDGE DETAIL SHEETS FOR JOINT REPAIRS

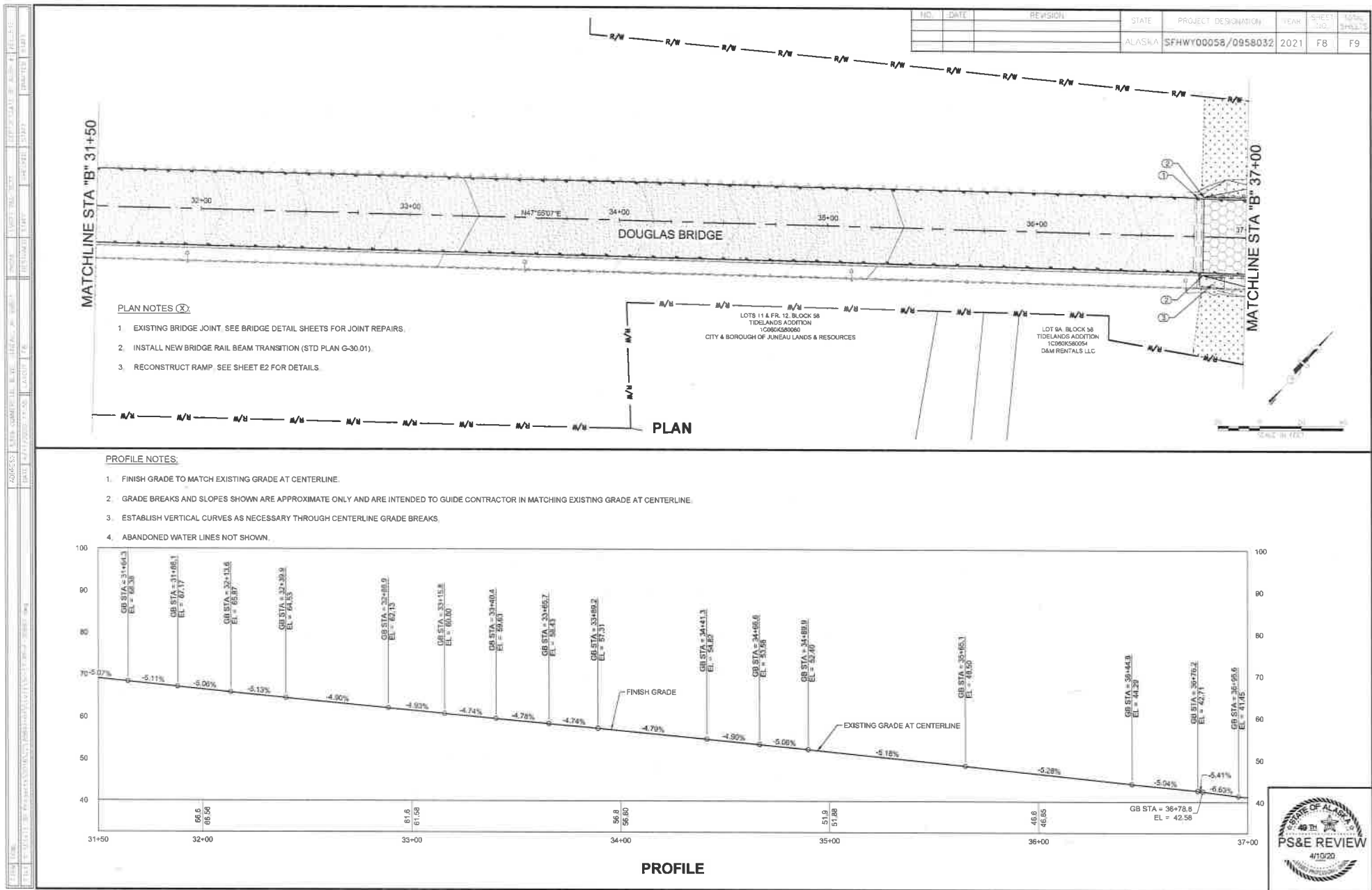


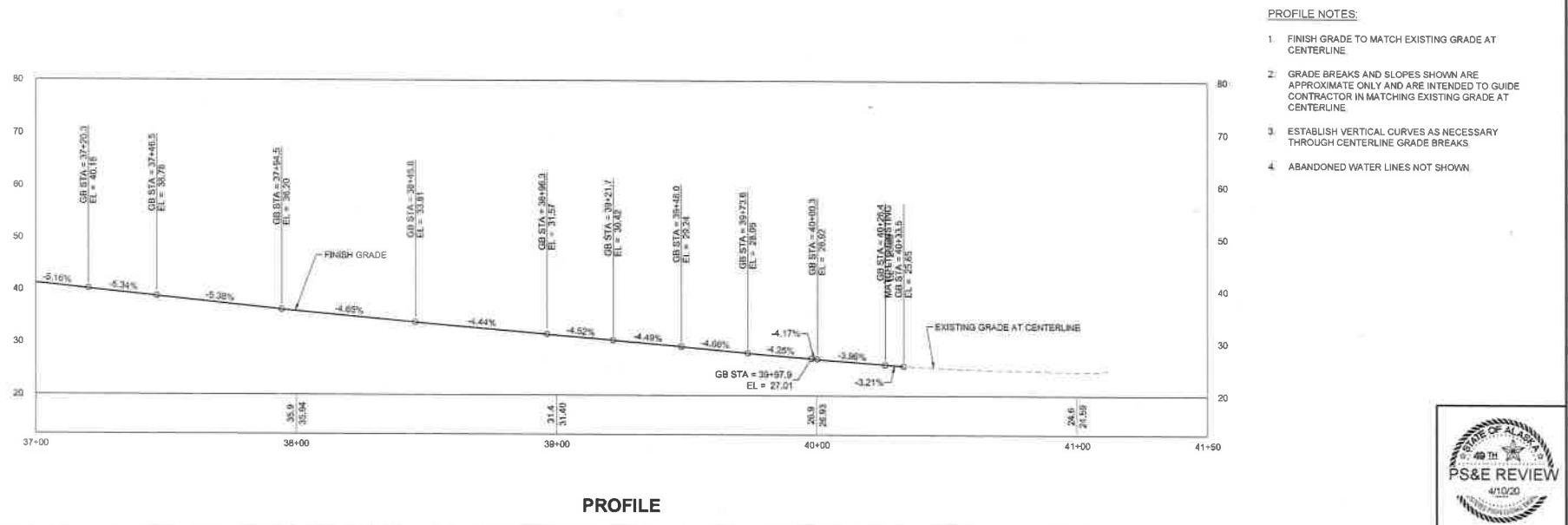
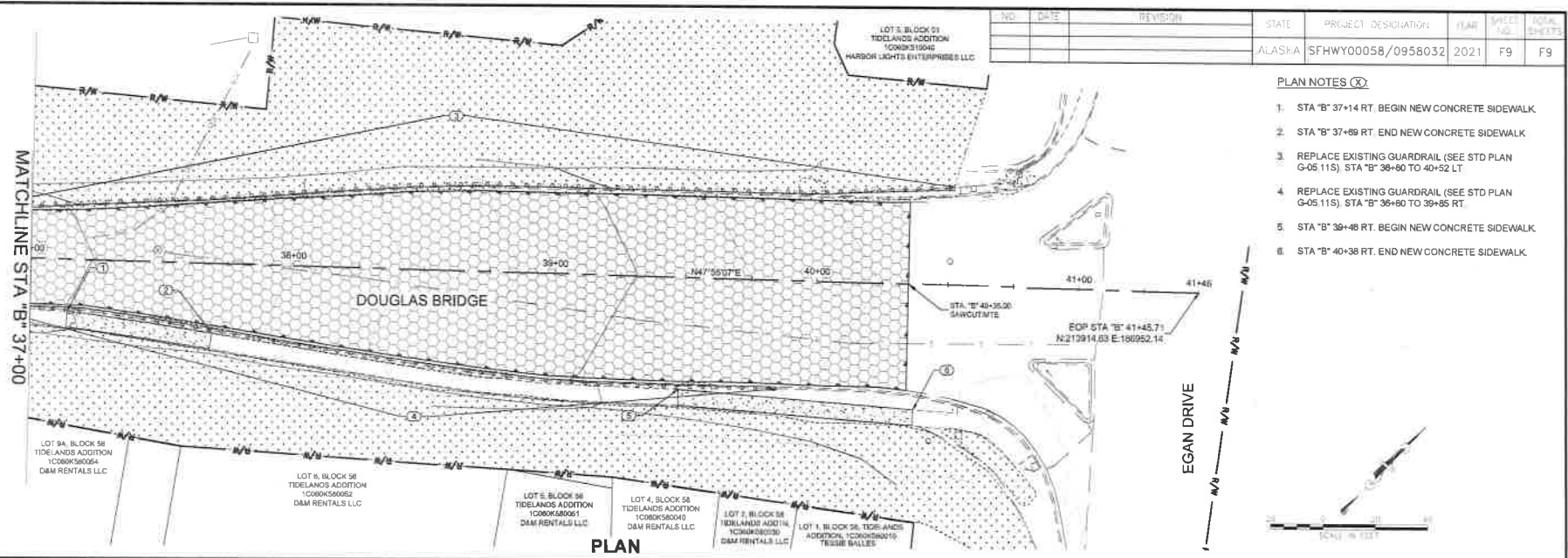
PLAN

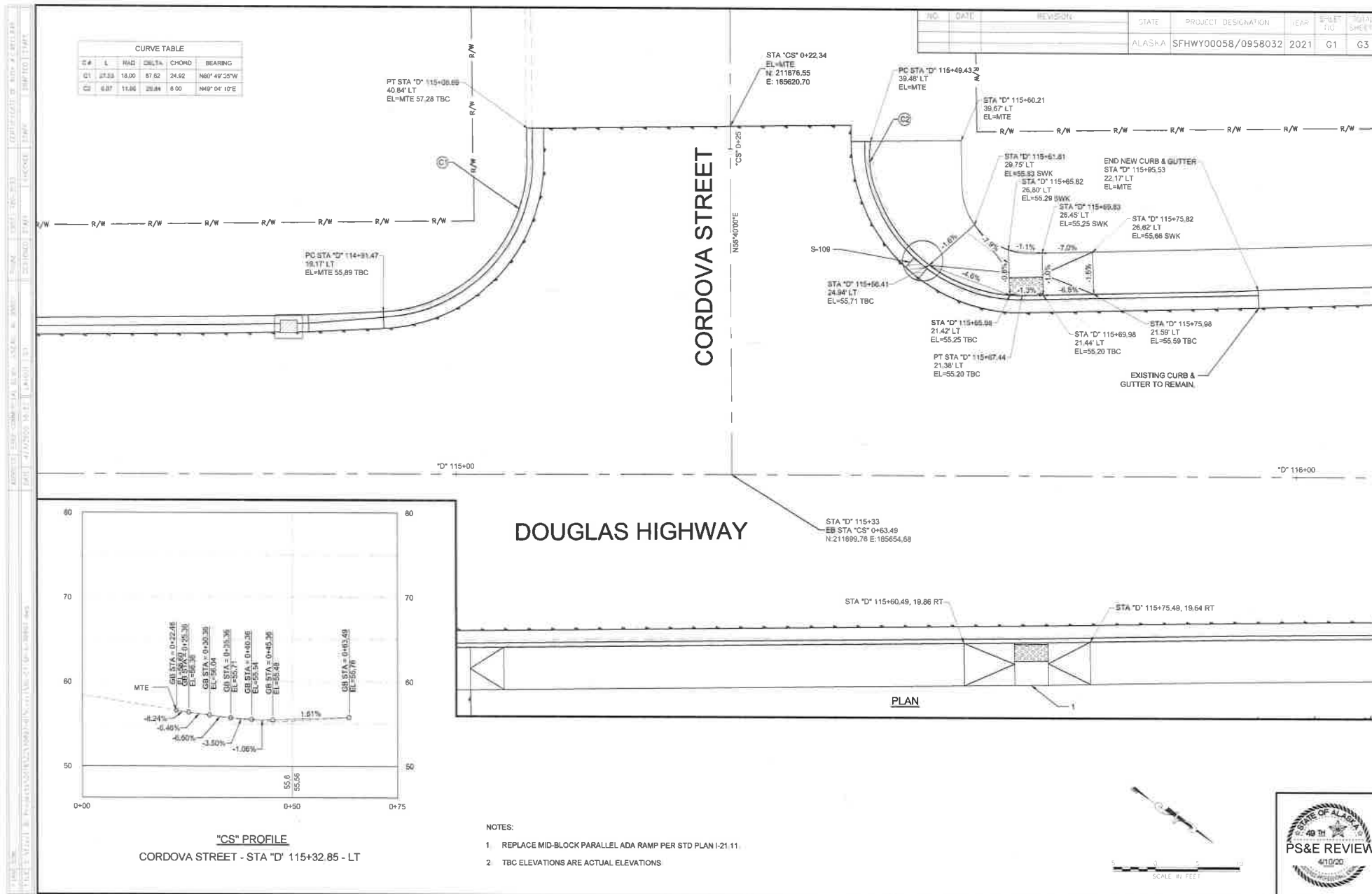


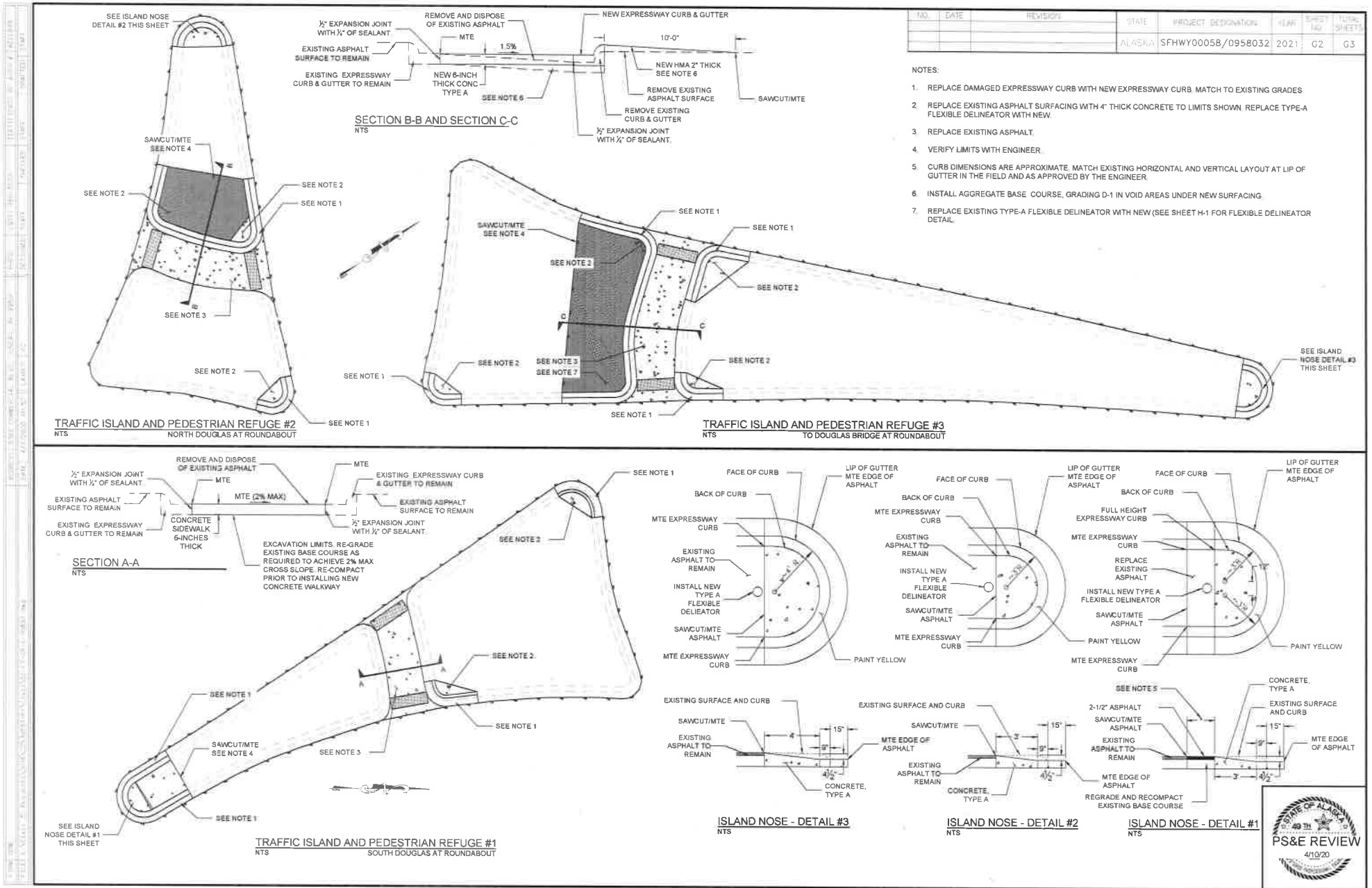
PROFILE

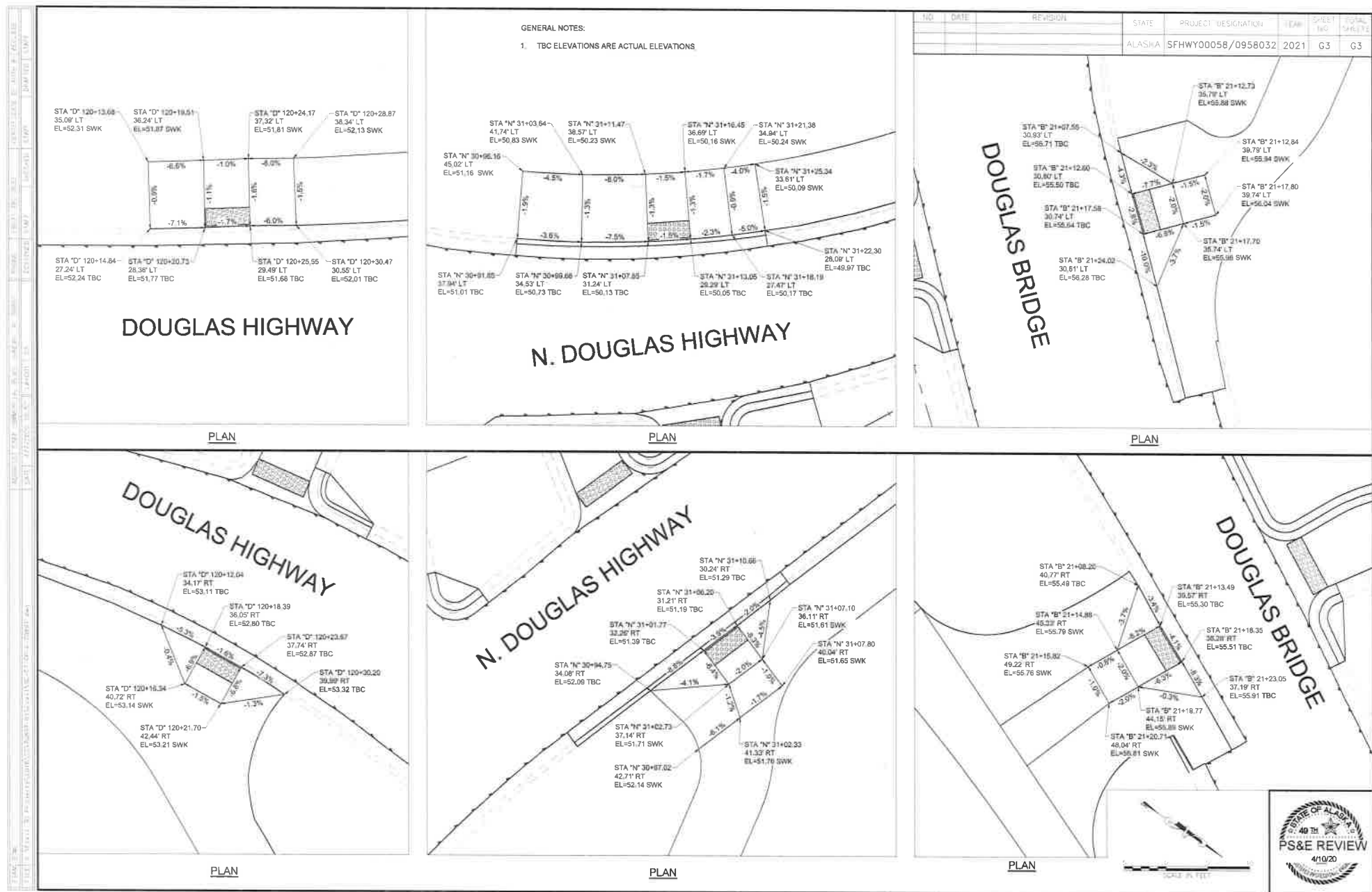












LEGEND

LEGEND APPLIES TO "H" SHEETS ONLY.

JUNCTION BOX, TYPE IA

JUNCTION BOX, TYPE II

JUNCTION BOX, TYPE III

SIGNAL POLE W/MAST ARM

LOAD CENTER

LUMINAIRE

RIGID METAL CONDUIT

SIGN

ROUNDABOUT PAVEMENT MARKING AREA

EXISTING

PROPOSED

ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC
AH	AHEAD
AVE	AVENUE
BPC	BLUE PAINTED CURB
C/A	CONTROL ACCESS
DOT&PF	DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DY	DOUBLE YELLOW
EB	EASTBOUND
EOP	EDGE OF PAVEMENT
IN. OR	INCH
LF	LINER FOOT
L.O.C.	LINE OF CURB
MLL	MILLILITERS
MTE	MATCH TO EXISTING
NB	NORTHBOUND
NE	NORTHEAST
NO.	NUMBER
NTS	NOT TO SCALE
NW	NORTHWEST
RP	REFERENCE POINT
SB	SOUTHBOUND
SE	SOUTHEAST
SW	SOUTHWEST
SF	SQUARE FOOT
SY	SQUARE YARD
STD	SEE STANDARD PLAN
TYP	TYPICAL
V	DESIGN SPEED
W	WHITE
WB	WESTBOUND
WD	WHITE DASHED
WRE	WHITE
Y	YELLOW
YPC	YELLOW PAINTED CURB

REV.	DATE	BY	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFWY00058/958032	2021	H1	H10

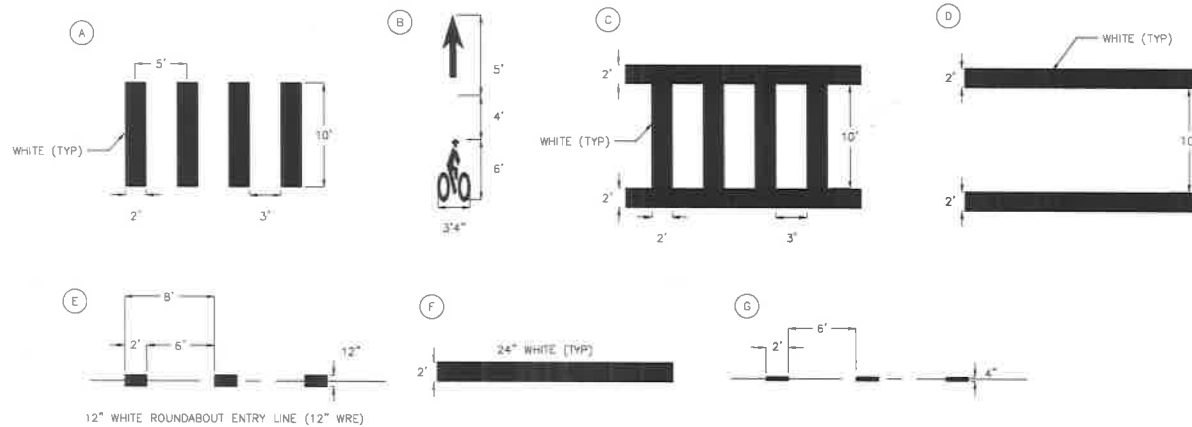
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
H-1	TRAFFIC LEGEND, DETAILS, AND SHEET INDEX
H-2 TO H-6	SIGNING AND STRIPING PLAN SHEETS
H-7 TO H-9	SIGN SUMMARY
H-10	SALVAGE SUMMARY

TRAFFIC MARKING SUMMARY

DESCRIPTION	UNIT	QUANTITY	STRIPING THICKNESS (MIL)	REMARKS
670.0010.0000 - METHYL METHACRYLATE PAVEMENT MARKINGS (INLAID)				
RIGHT TURN ARROWS	EACH	2	125	
"ONLY" LETTERING	EACH	1	125	
4" W	LF	6531	125	
4" Y	LF	1450	125	
4" DY	LF	6026	125	
8" W	LF	784	125	
18" Y (STD)	SF	154	125	
CROSSWALK BARS (ZEBRA)	SF	140	125	
LEFT TURN ARROWS	EACH	2	125	
COMBINATION ARROWS	EACH	1	125	
BIKE LANE SYMBOLS	EACH	5	125	
670.2001.0000 - MMA PAVEMENT MARKINGS (SURFACE APPLIED)				
STOP BARS	SF	56	60	
670.0010.0000 - METHYL METHACRYLATE PAVEMENT MARKINGS				
RIGHT TURN ARROWS	EACH	3	500	ROUNDABOUT
4" W	LF	805	500	ROUNDABOUT
4" Y	LF	1166	500	ROUNDABOUT
4" DY	LF	661	500	ROUNDABOUT
8" W	LF	772	500	ROUNDABOUT
8" WRE	LF	22	500	ROUNDABOUT
18" Y (STD)	SF	607	500	ROUNDABOUT
LEFT TURN ARROWS	EACH	3	500	ROUNDABOUT
CROSSWALK BARS (ZEBRA)	SF	500	500	ROUNDABOUT
BIKE LANE SYMBOLS	EACH	4	500	ROUNDABOUT
670.0013.0000 - PAINTED TRAFFIC MARKINGS				
YPC	LF	199	15-20	

PAVEMENT DETAILS



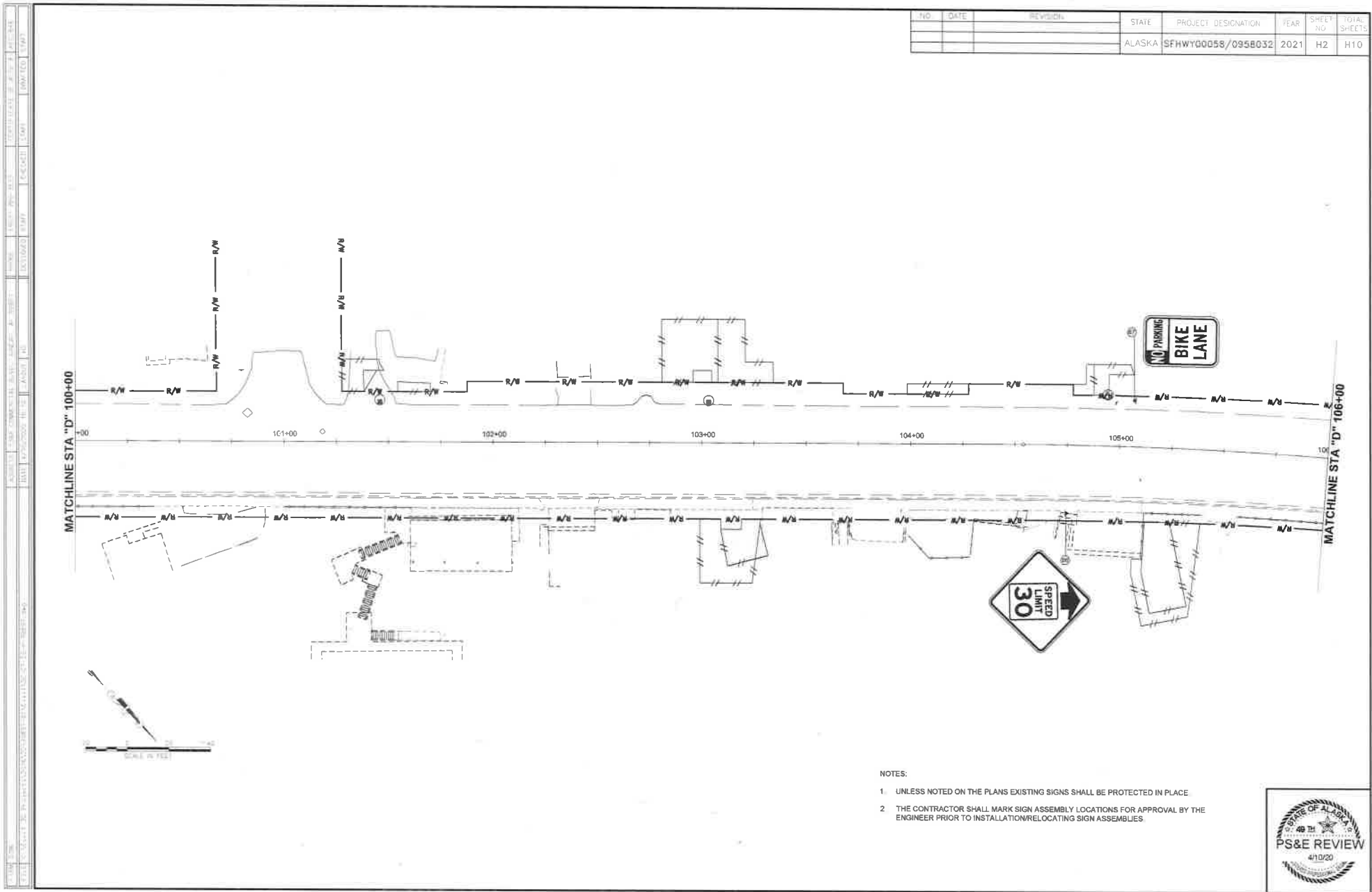
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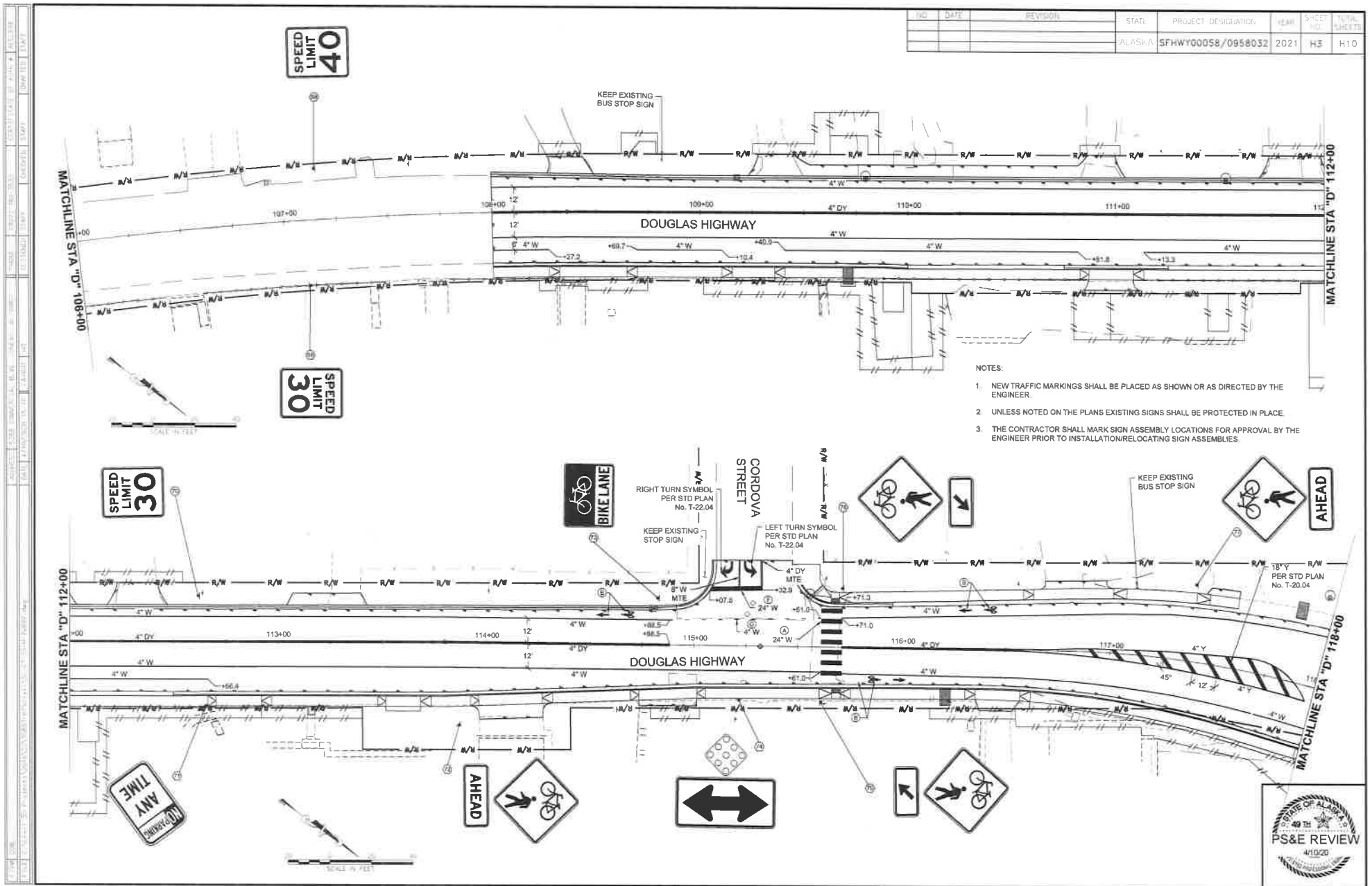


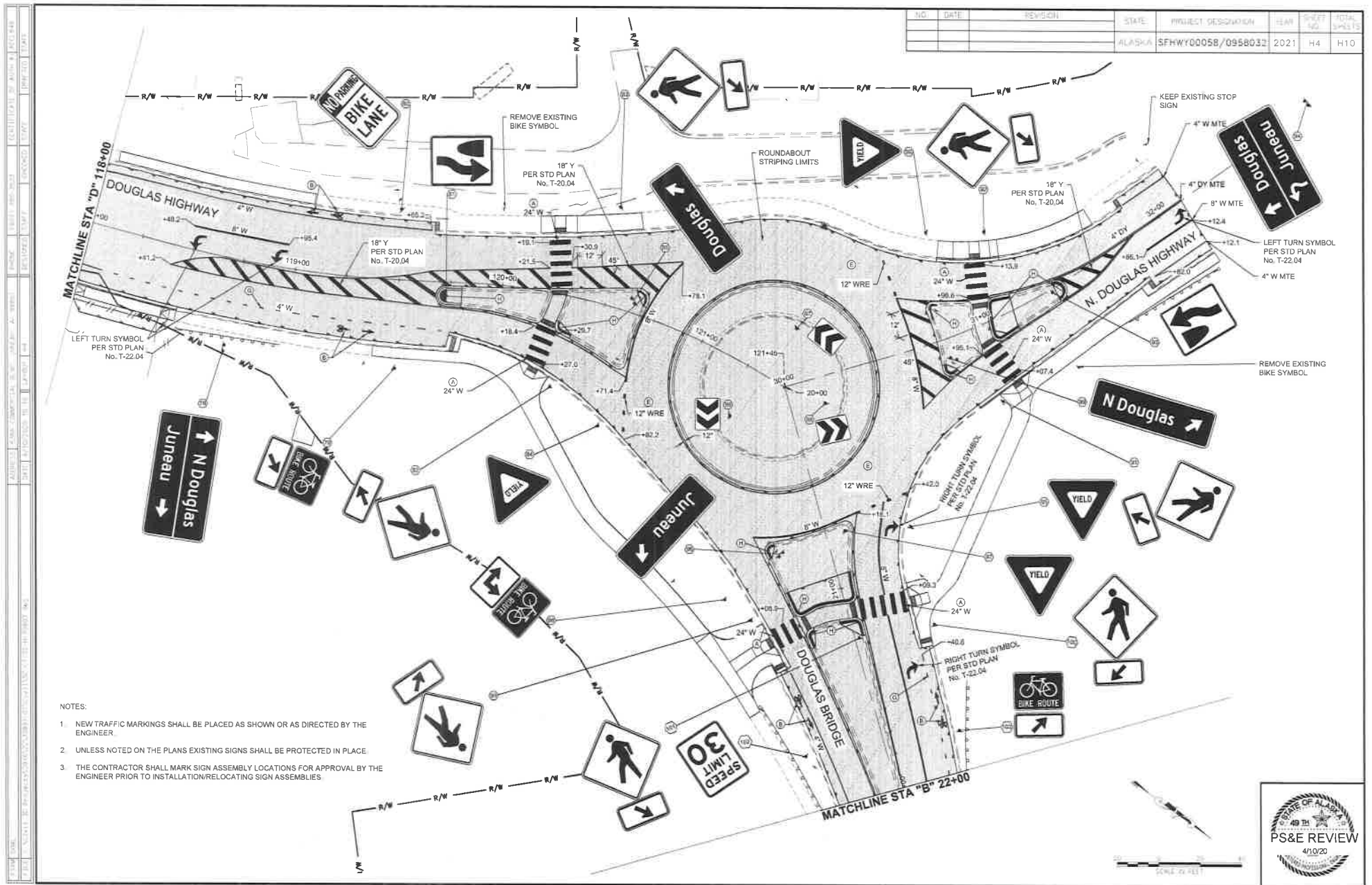
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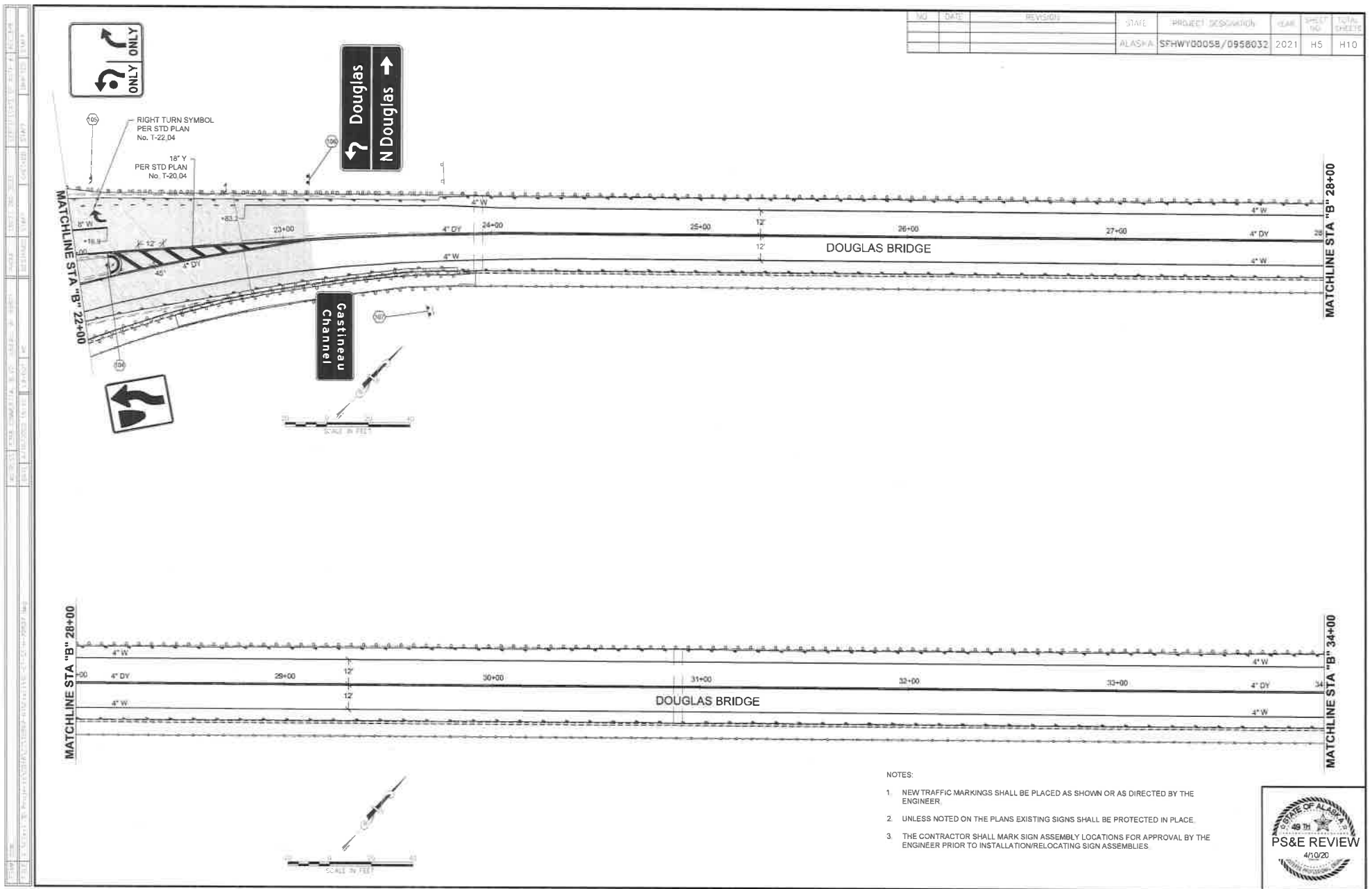


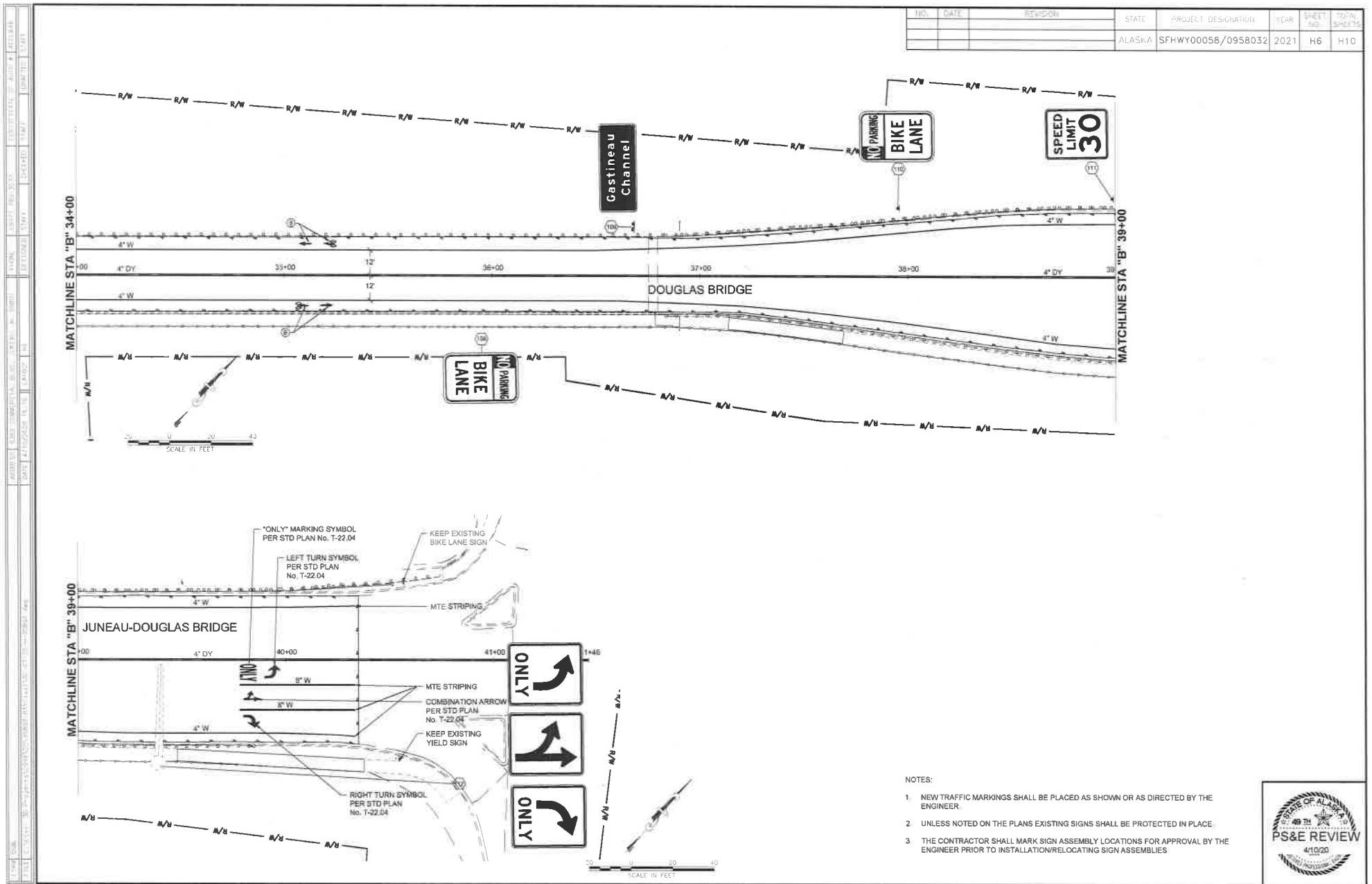
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
JUNEAU-DOUGLAS HIGHWAY
RESURFACE & SIDEWALK - STAGE 1
TRAFFIC LEGEND AND NOTES











NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFWY00058/958032	2021	H7	H10

SHEET	POST NO.	STATION ALIGNMENT	CL. REF.	TYPE	LEGEND/SIGN	SIZE (IN)		AREA (SQ.FT)	SIGN FACES	POSTS NO., SIZE, & TYPE	FRAMES		REMARKS
						WIDTH	HEIGHT				YES	NO	
H2	66	"D" 104+75	RT	W3-5	REDUCED SPEED LIMIT AHEAD	36	36	9	SE	1-2.5" PST		X	
	67	"D" 105+07	LT	R7-9	NO PARKING BIKE LANE	12	18	1.5	NW	1-2.5" PST		X	
H3	68	"D" 107+11	RT	R2-1	SPEED LIMIT 30	24	30	5	SE	1-2.5" PST		X	
	69	"D" 107+59	LT	R2-1	SPEED LIMIT 40	24	30	5	NW	1-2.5" PST		X	
	70	"D" 112+62	LT	R2-1	SPEED LIMIT 30	24	30	5	NW	1-2.5" PST		X	
	71	"D" 112+65	RT	R7P-101	NO PARKING ANYTIME	12	18	1.5	S	1-2.5" PST		X	
	72	"D" 113+88	RT	W11-15	COMBINATION BIKE AND PEDESTRIAN CROSSING	30	30	6.25	SE	1-2.5" PST		X	MOUNT W16-9P UNDER W11-15 ON SAME POST.
				W16-9P	AHEAD	24	12	2				X	
	73	"D" 114+83	LT	R3-17	BIKE LANE	30	24	5	NW	1-2.5" PST		X	
	74	"D" 115+33	RT	W1-7	LARGE ARROW (TWO DIRECTION)	48	24	8	W	1-3" ST	X	X	
				OM4-1	OBJECT MARKER (TYPE 4)	18	18	2.25				X	
	75	"D" 115+67	RT	W11-15	COMBINATION BIKE AND PEDESTRIAN CROSSING	30	30	6.25	SE	1-2.5" PST		X	MOUNT W16-7PL UNDER W11-15 ON SAME POST.
				W16-7PL	LEFT DIAGONAL DIRECTIONAL ARROW	24	12	2				X	
	76	115+67	LT	W11-15	COMBINATION BIKE AND PEDESTRIAN CROSSING	30	30	6.25	NW	1-2.5" PST		X	MOUNT W16-7PL UNDER W11-15 ON SAME POST.
				W16-7PL	LEFT DIAGONAL DIRECTIONAL ARROW	24	12	2				X	
	77	"D" 117+37	LT	W11-15	COMBINATION BIKE AND PEDESTRIAN CROSSING	30	30	6.25	NW	1-2.5" PST		X	MOUNT W16-9P UNDER W11-15 ON SAME POST.
				W16-9P	AHEAD	24	12	2				X	
H4	78	"D" 118+73	RT	D1-2D	N DOUGLAS/JUNEAU	60	30	12.5	SE	2-2.0" ST	X		BEHIND GUARDRAIL, REFER TO STD PLAN NO. S-05.01, AND S-32.00.
	79	"D" 119+47	RT	D11-1	BIKE ROUTE	24	18	3	S	1-2.5" PST		X	MOUNT M6-2 UNDER D11-1 ON SAME POST.
				M6-2	DIRECTIONAL ARROW AUXILIARY	12	9	0.75				X	
	80	"D" 119+50	LT	R7-9	NO PARKING BIKE LANE	12	18	1.5	N	1-2.5" PST		X	
	81	"D" 119+73	LT	R4-7C	KEEP RIGHT	24	30	5	SE	1-2.5" PST		X	INSTALL 5 FEET FROM CURB NOSE, REFER TO STD PLAN NO. S-05.01.



State of Alaska
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
JUNEAU-DOUGLAS HIGHWAY
RESURFACE & SIDEWALK - STAGE 1
SIGN SUMMARY

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFH000058/958032	2021	H8	H10

SHEET	POST NO.	STATION ALIGNMENT	CL. REF.	TYPE	LEGEND/SIGN	SIZE (IN)		AREA (SQ. FT.)	SIGN FACES	POSTS NO., SIZE, & TYPE	FRAMES		REMARKS
						WIDTH	HEIGHT				YES	NO	
H4	82	"D" 120+32	RT	W11-2	PEDESTRIAN TRAFFIC	30	30	6.25	S	1-2.5" PST		X	MOUNT W16-7 UNDER W11-2 ON SAME POST.
				W16-7PL	LEFT DIAGONAL DIRECTIONAL ARROW	24	12	2				X	
	83	"D" 120+46	LT	W11-2	PEDESTRIAN TRAFFIC	30	30	6.25	NW	1-2.5" PST		X	MOUNT W16-7 UNDER W11-2 ON SAME POST.
				W16-7PL	LEFT DIAGONAL DIRECTIONAL ARROW	24	12	2				X	
	84	"D" 120+65	RT	R1-2	YIELD	36	36	9	S	1-2.5" PST		X	
	85	"D" 120+63	LT	D1-1D	DOUGLAS	54	18	6.75	NW	2-2.0" ST	X		
	86	"D" 121+30	RT	R6-4	ROUNDABOUT DIRECTIONAL (2 CHEVRONS)	30	24	5	SE	1-2.5" PST		X	
	87	"D" 121+36	LT	R6-4	ROUNDABOUT DIRECTIONAL (2 CHEVRONS)	30	24	5	W	1-2.5" PST		X	
	88	"N" 30+17	RT	R4-7	ROUNDABOUT DIRECTIONAL (2 CHEVRONS)	30	24	5	NW	1-2.5" PST		X	
	89	"N" 30+81	RT	D1-1D	N DOUGLAS	60	18	7.5	E	2-2.0" ST	X		INSTALL 5 FEET FROM CURB NOSE, REFER TO STD PLAN NO. S-05.01.
	90	"N" 30+91	LT	R1-2	YIELD	36	36	9	NW	1-2.5" PST		X	
	91	"N" 30+95	RT	W11-2	PEDESTRIAN TRAFFIC	30	30	6.25	E	1-2.5" PST		X	MOUNT W16-7 UNDER W11-2 ON SAME POST.
				W16-7PL	LEFT DIAGONAL DIRECTIONAL ARROW	24	12	2				X	
	92	"N" 31+21	LT	W11-2	PEDESTRIAN TRAFFIC	30	30	6.25	NW	1-2.5" PST		X	MOUNT W16-7 UNDER W11-2 ON SAME POST.
				W16-7PL	LEFT DIAGONAL DIRECTIONAL ARROW	24	12	2				X	
	93	"N" 31+37	RT	R4-7C	KEEP RIGHT	24	30	5	W	1-2.5" PST		X	INSTALL 5 FEET FROM CURB NOSE, REFER TO STD PLAN NO. S-05.01.
	94	"N" 32+95	LT	D1-2D	DOUGLAS/JUNEAU	54	30	11.25	W	2-3.0" ST	X		PLACE APPROX. 175 FEET IN ADVANCE OF POST 92.
	95	"B" 20+74	LT	R1-2	YIELD	36	36	9	NE	1-2.5" PST		X	
	96	"B" 20+75	RT	D1-1D	JUNEAU	54	18	6.75	S	2-2.0" ST	X		INSTALL 5 FEET FROM CURB NOSE, REFER TO STD PLAN NO. S-05.01.
	97	"B" 20+80	LT	R1-2	YIELD	36	36	9	N	1-2.5" PST		X	
	98	"B" 20+90	RT	D11-1	BIKE ROUTE	24	18	3	S	1-2.5" PST		X	MOUNT M5-6 UNDER D11-1 ON SAME POST.
				M5-6	THROUGH AND LEFT DIRECTIONAL ARROW AUXILIARY	12	9	0.75				X	



STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
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 JUNEAU-DOUGLAS HIGHWAY
 RESURFACE & SIDEWALK - STAGE 1
 SIGN SUMMARY

NO.	DATE	REVISION	STATE	PROJECT / SIGNATURE	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFH000058/958032	2021	H9	H10

SHEET	POST NO.	STATION ALIGNMENT	CL REF	TYPE	LEGEND/SIGN	SIZE (IN)		AREA (SQ. FT)	SIGN FACES	POSTS NO., SIZE, & TYPE	FRAMES		REMARKS
						WIDTH	HEIGHT				YES	NO	
H4	99	"B" 21+03	RT	W11-2	PEDESTRIAN TRAFFIC	30	30	6.25	S	1-2.5" PST		X	MOUNT W16-7 UNDER W11-2 ON SAME POST.
				W16-7PL	LEFT DIAGONAL DIRECTIONAL ARROW	24	12	2				X	
	100	"B" 21+25	LT	W11-2	PEDESTRIAN TRAFFIC	30	30	6.25	NE	1-2.5" PST		X	MOUNT W16-7 UNDER W11-2 ON SAME POST.
				W16-7PR	RIGHT DIAGONAL DIRECTIONAL ARROW	24	12	2				X	
	101	"B" 21+29	LT	W11-2	PEDESTRIAN TRAFFIC	30	30	6.25	NE	1-2.5" PST		X	MOUNT W16-7 UNDER W11-2 ON SAME POST.
				W16-7PL	LEFT DIAGONAL DIRECTIONAL ARROW	24	12	2				X	
H5	102	"B" 21+73	RT	R2-1	"SPEED LIMIT 30"	24	30	5	S	1-2.5" PST		X	
	103	"B" 21+81	LT	D11-1	"BIKE ROUTE"	24	18	3	NE	1-2.5" PST		X	MOUNT M6-2 UNDER D11-1 ON SAME POST.
				M6-2	RIGHT DIRECTIONAL ARROW AUXILIARY	12	9	0.75				X	
	104	"B" 22+14	RT	R4-7C	KEEP RIGHT	24	30	5	NE	1-2.5" PST		X	
	105	"B" 22+12	LT	R3-B	ADVANCE CIRCULAR INTERSECTION LANE CONTROL- LEFT TURN ONLY	36	36	9	NE	1-2.5" PST		X	BEHIND GUARDRAIL, REFER TO STD PLAN NO. S-05.01, AND S-32.00.
	106	"B" 23+10	LT	D1-2D	DOUGLAS/ N-DOUGLAS	60	30	12.5	NE	2-3.0" ST	X		BEHIND GUARDRAIL, REFER TO STD PLAN NO. S-05.01, AND S-32.00.
H6	107	"B" 23+69	RT	I-3	GASTINEAU CHANNEL	42	18	5.25	SW	2-2.0" ST		X	BEHIND GUARDRAIL, REFER TO STD PLAN NO. S-05.01, AND S-32.00.
	108	"B" 35+95	RT	R7-9	NO PARKING BIKE LANE	12	18	1.5	W	N/A		X	MOUNT ON ELECTROLIER, LOCATED APPROX. 267 FEET IN ADVANCE OF THE MASTARM USED FOR POST 112 ON THE RIGHT SIDE.
	109	"B" 36+68	LT	I-3	GASTINEAU CHANNEL	42	18	5.25	E	2-2.0" ST		X	
	110	"B" 37+96	LT	R7-9	NO PARKING BIKE LANE	12	18	1.5	E	1-2.5" PST		X	BEHIND GUARDRAIL, REFER TO STD PLAN NO. S-05.01, AND S-32.00.
	111	"B" 38+99	LT	R2-1	SPEED LIMIT 30	24	30	5	E	1-2.5" PST		X	BEHIND GUARDRAIL, REFER TO STD PLAN NO. S-05.01, AND S-32.00.
	112	"B" 39+39	RT	R3-5L	LEFT MANDATORY MOVEMENT LANE CONTROL ONLY	30	36	7.5	SW	EXISTING		X	MOUNT SIGNS ON EXISTING MASTARM.
				R3-6TL	LEFT AND THROUGH OPTIONAL MOVEMENT LANE CONTROL	30	36	7.5				X	
				R3-5R	RIGHT MANDATORY MOVEMENT LANE CONTROL ONLY	30	36	7.5				X	



STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 JUNEAU-DOUGLAS HIGHWAY
 RESURFACE & SIDEWALK - STAGE 1
 SIGN SUMMARY

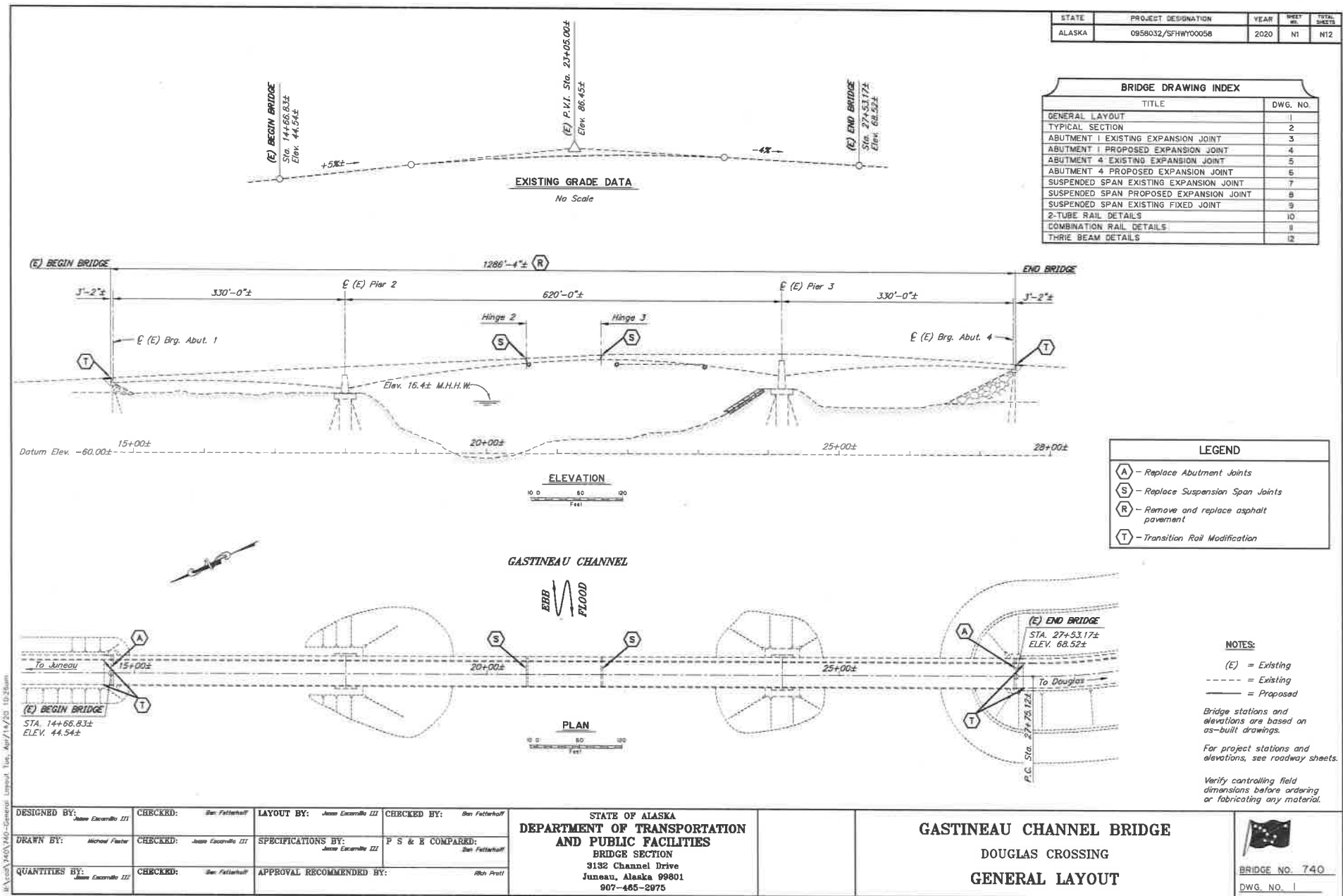
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFH000058/958032	2021	H10	H10

SALVAGE SIGN — 615.0006.0000			
STATION ALIGNMENT	CL. REF.	LEGEND	REMARKS
"D" 104+98	LT	NO PARKING BIKE LANE	
"D" 107+14	RT	SPEED LIMIT 30	
"D" 107+61	LT	SPEED LIMIT 40	
"D" 112+64	LT	SPEED LIMIT 30	
"D" 112+92	RT	BICYCLE SYMBOL	
"D" 114+01	LT	BIKE LANE	
"D" 114+63	RT	NO PARKING ANYTIME	
"D" 115+21	RT	RIGHT LEFT TURN ONLY	
"D" 115+63	LT	PEDESTRIAN SYMBOL	
"D" 115+63	RT	PEDESTRIAN SYMBOL	
"D" 116+56	LT	PEDESTRIAN SYMBOL	
"D" 118+59	RT	ROUNDABOUT CIRCULATION PLAQUE	
"D" 119+36	RT	YIELD	
"D" 119+49	LT	NO PARKING ANYTIME	
"D" 119+50	RT	BIKES OK	
"D" 119+73	RT	OBJECT MARKER	
"D" 119+73	RT	OBJECT MARKER	
"D" 119+98	LT	BICYCLE SYMBOL	
"D" 120+32	RT	PEDESTRIAN SYMBOL	
"D" 120+46	LT	PEDESTRIAN SYMBOL	
"D" 120+64	RT	YIELD	
"D" 120+64	RT	OBJECT MARKER	
"D" 120+65	LT	DOUGLAS	
"D" 121+38	LT	ONE WAY	
"N" 28+30	LT	ROUNDABOUT CIRCULATION PLAQUE	LOCATED APPROXIMATELY 242 FEET IN ADVANCE OF POST 92 IN THE SIGN SUMMARY TABLE.
		ADVISORY SPEED SIGN	
"N" 30+81	LT	YIELD	
"N" 31+21	LT	PEDESTRIAN SYMBOL	
"N" 30+81	RT	NORTH DOUGLAS	
"N" 30+95	RT	PEDESTRIAN SYMBOL	
"N" 31+37	RT	KEEP RIGHT	
"N" 31+37	RT	OBJECT MARKER	
"N" 31+31	RT	BICYCLE SYMBOL	
"N" 32+07	LT	YIELD	
"N" 32+07	LT	NO PARKING ANYTIME	
"B" 20+06	RT	ONE WAY	
"B" 20+13	LT	ONE WAY	
"B" 20+74	LT	YIELD	
"B" 20+75	RT	JUNEAU	
"B" 20+80	LT	YIELD	
"B" 20+90	RT	BIKES OK	
"B" 21+03	RT	PEDESTRIAN SYMBOL	
"B" 21+29	LT	PEDESTRIAN SYMBOL	
"B" 21+79	RT	SPEED LIMIT 30	
"B" 22+17	RT	KEEP RIGHT	
"B" 22+12	LT	RIGHT TURN MUST TURN RIGHT	
"B" 22+74	LT	LEFT LANE/ RIGHT LANE TURN	
"B" 23+68	RT	GASTINEAU CHANNEL	
"B" 23+77	LT	ROUNDABOUT DESTINATION SIGN	
"B" 36+90	RT	NO PARKING BIKE LANE	
"B" 36+90	LT	GASTINEAU CHANNEL	
"B" 37+56	LT	NO PARKING BIKE LANE	
"B" 39+39	RT	LEFT MANDATORY MOVEMENT LANE CONTROL ONLY	
"B" 39+39	RT	LEFT AND THROUGH OPTIONAL MOVEMENT LANE CONTROL	
"B" 39+39	RT	RIGHT MANDATORY MOVEMENT LANE CONTROL ONLY	
"B" 39+50	LT	SPEED LIMIT 30	

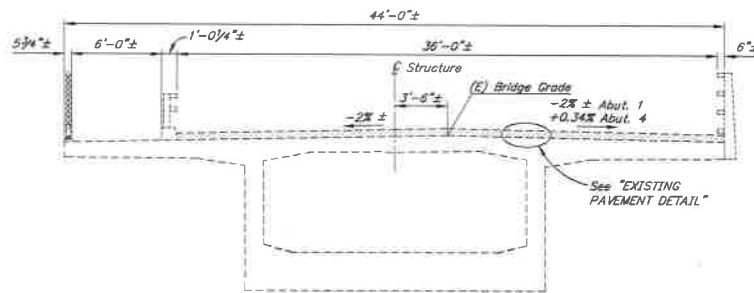
DELINEATOR, FLEXIBLE — 615.0005.0000		
STATION ALIGNMENT	OFFSET	REMARKS
"D" 119+76	RT	S. DOUGLAS ISLAND NOSE
"D" 120+30	RT	S. DOUGLAS ISLAND CORNER
"D" 120+70	LT	S. DOUGLAS ISLAND CORNER
"N" 30+70	RT	N. DOUGLAS ISLAND CORNER
"N" 31+05	RT	N. DOUGLAS ISLAND CORNER
"N" 31+10	LT	N. DOUGLAS ISLAND CORNER
"N" 31+40	RT	N. DOUGLAS ISLAND NOSE
"B" 20+75	RT	DOUGLAS BRIDGE ISLAND CORNER
"B" 21+05	RT	DOUGLAS BRIDGE ISLAND CORNER
"B" 21+10	LT	DOUGLAS BRIDGE ISLAND CORNER
"B" 21+15	RT	DOUGLAS BRIDGE ISLAND CORNER
"B" 21+17	LT	DOUGLAS BRIDGE ISLAND CORNER
"B" 22+15	RT	DOUGLAS BRIDGE ISLAND NOSE



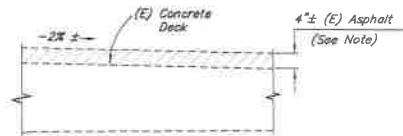
STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 JUNEAU-DOUGLAS HIGHWAY
 RESURFACE & SIDEWALK — STAGE 1
 SIGN SALVAGE



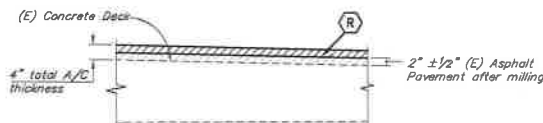
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0958032/SFHWD0058	2020	N2	N12



EXISTING TYPICAL SECTION



EXISTING PAVEMENT DETAIL



PAVEMENT DETAIL - THIS CONTRACT



NOTE:

Existing pavement is deeply rutted in some areas. Mill to leave a uniform thickness of 2" ± 1/2" of existing pavement.

GENERAL NOTES

DESIGN: AASHTO LRFD Bridge Design Specifications, 2017 Edition, with latest interim specifications.

LIVE LOAD: HL-93

REINFORCEMENT: ASTM A706, Grade 60, Fy = 60,000 psi

CONCRETE: Class A Concrete unless otherwise noted, f'c = 4000 psi

STRUCTURAL STEEL: ASTM A709, Grade 50, Fy = 50,000 psi

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	PAY UNIT	ESTIMATING UNIT	SUBST.	SUPERST.	TOTAL QUANTITY
202.0002.0014	Removal of Pavement	LS	SY		5.282	5.282
516.0001.0000	Expansion Joint, Silicone	LS	LF		37	37
516.0001.0001	Expansion Joint, Strip Seal	LS	LF		110	110
806.0016.0001	Transition Rail, Modification	EA	EA		4	4

Item numbers are for reference only. Quantities shown are not necessarily the pay quantities nor the total quantity of the particular item.

NOTES:

(E) = Existing

--- = Existing

— = Proposed

Bridge stations and elevations are based on as-built drawings.

For project stations and elevations, see roadway sheets.

Verify controlling field dimensions before ordering or fabricating any material.

Existing stations, elevations and dimensions are based on as-built plans, and those plans may not show existing dimensions and conditions. Where dimensions of the proposed work depend on the existing bridge dimensions, field-verify the controlling dimensions and adjust proposed dimensions of the work to fit existing conditions.

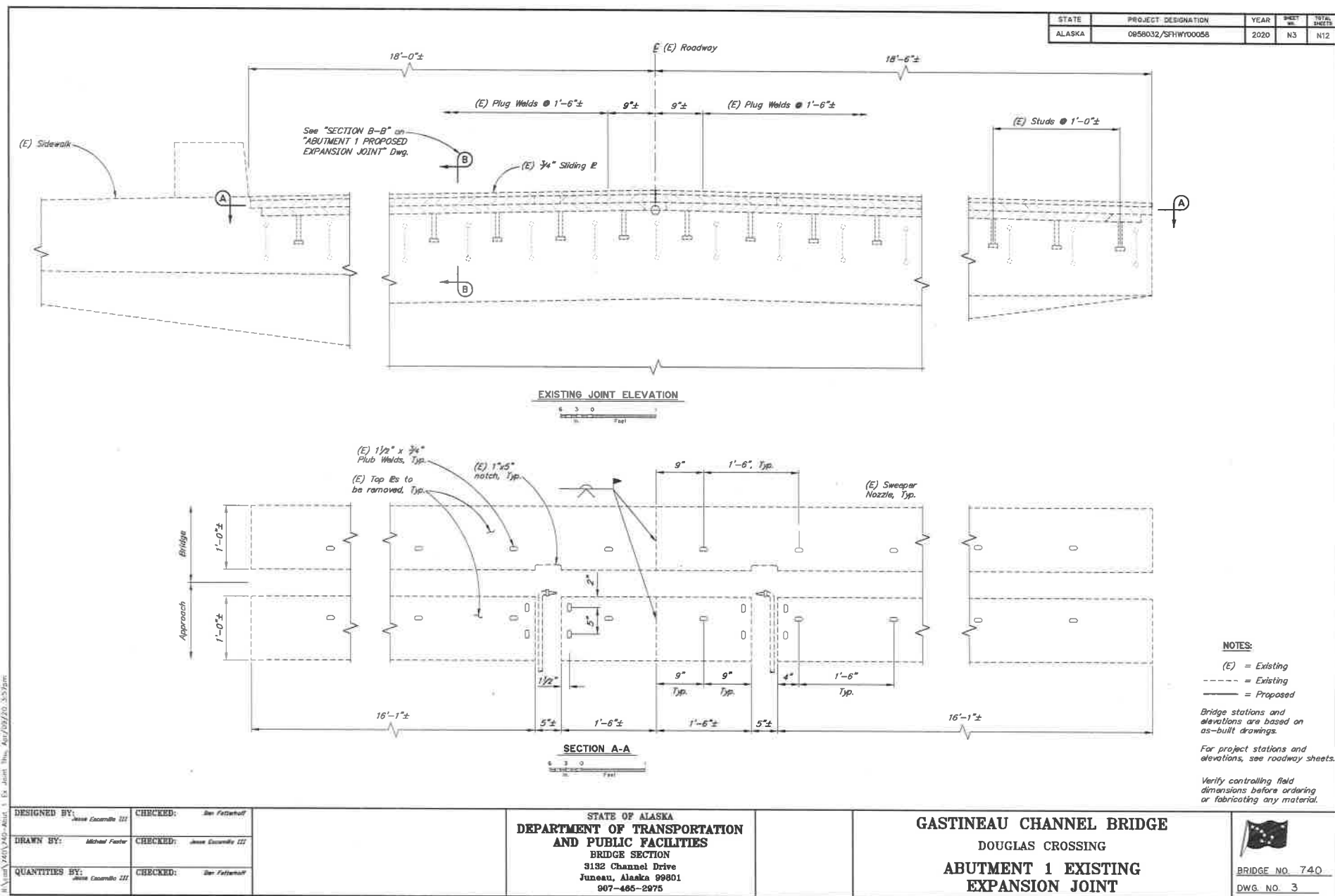
DESIGNED BY: Jesse Escarillo III	CHECKED BY: Ben Fetterhoff
DRAWN BY: Michael Foster	CHECKED BY: Jesse Escarillo III
QUANTITIES BY: Jesse Escarillo III	CHECKED BY: Ben Fetterhoff

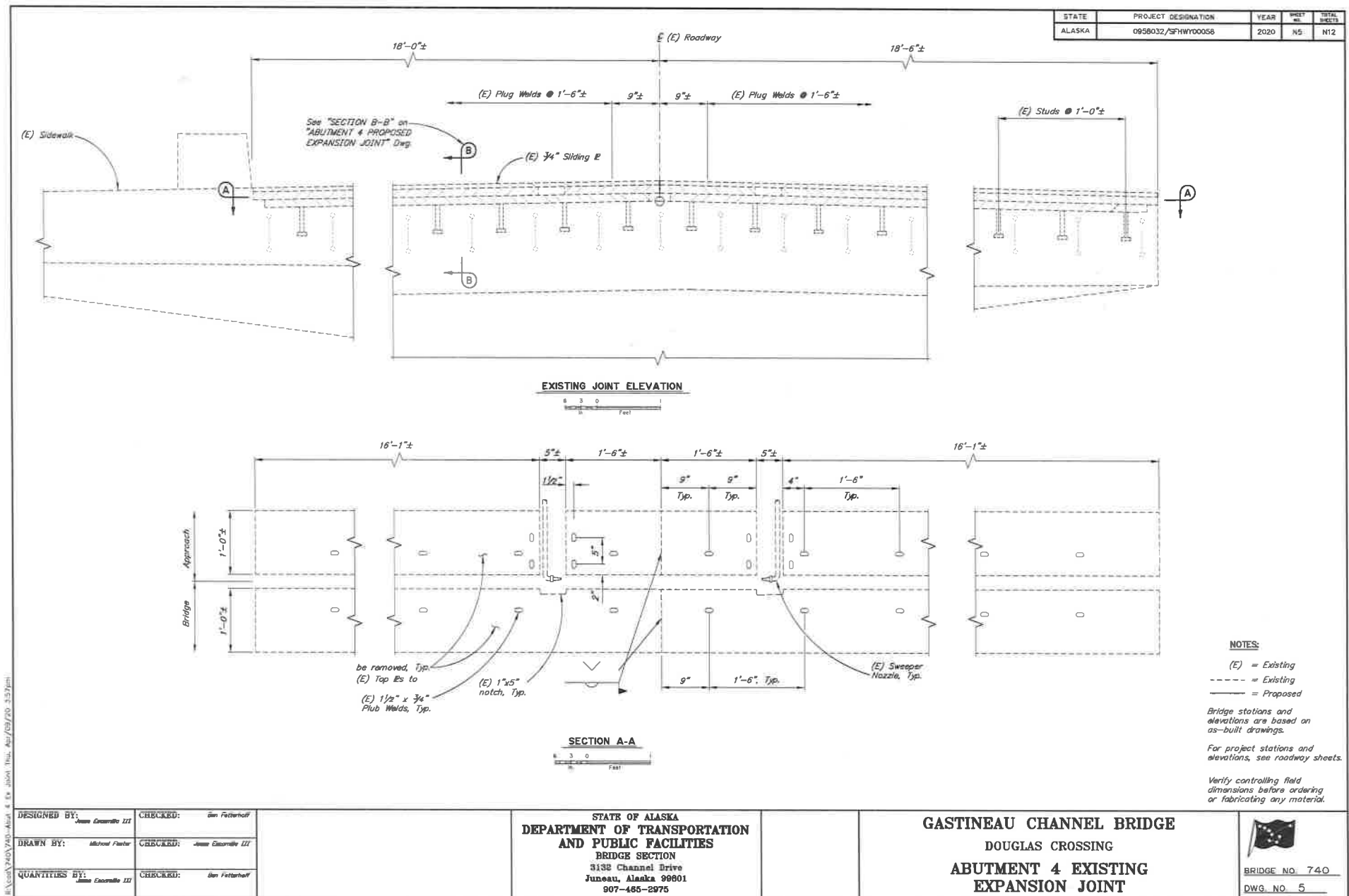
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-485-2975

GASTINEAU CHANNEL BRIDGE
DOUGLAS CROSSING
TYPICAL SECTION

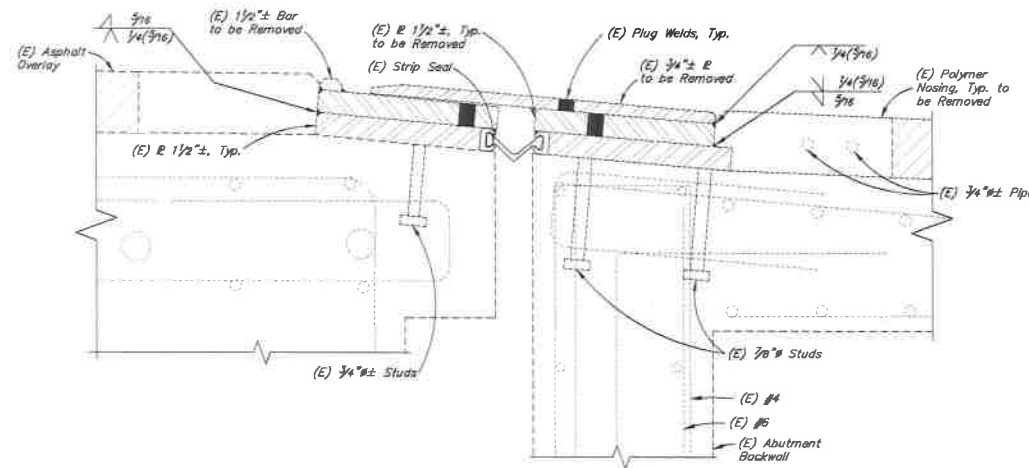
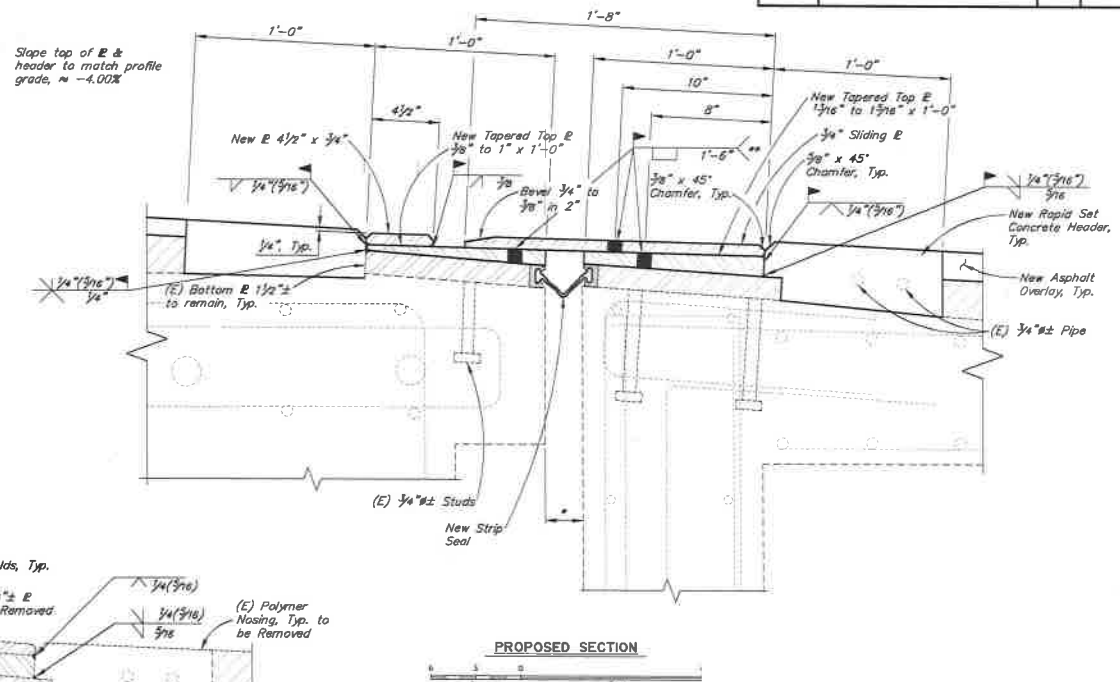
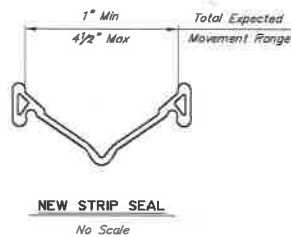


BRIDGE NO. 740
DWG. NO. 2





STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	D658032/SFHYY00058	2020	N6	N12



PROPOSED SECTION

NOTES:

(E) = Existing
 - - - - - = Existing
 ——— = Proposed

Bridge stations and elevations are based on as-built drawings.

For project stations and elevations, see roadway sheets.

Verify controlling field dimensions before ordering or fabricating any material.

+ 25# @ 40F. ± 1/4" for every 10F
 ** Plug spacing to match (E) E

DESIGNED BY: Jesse Escamille III	CHECKED BY: Dan Fetterhoff
DRAWN BY: Michael Foster	CHECKED BY: Jesse Escamille III
QUANTITIES BY: Jesse Escamille III	CHECKED BY: Dan Fetterhoff

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 BRIDGE SECTION
 3132 Channel Drive
 Juneau, Alaska 99801
 907-465-2975

GASTINEAU CHANNEL BRIDGE
 DOUGLAS CROSSING
 ABUTMENT 4 PROPOSED
 EXPANSION JOINT

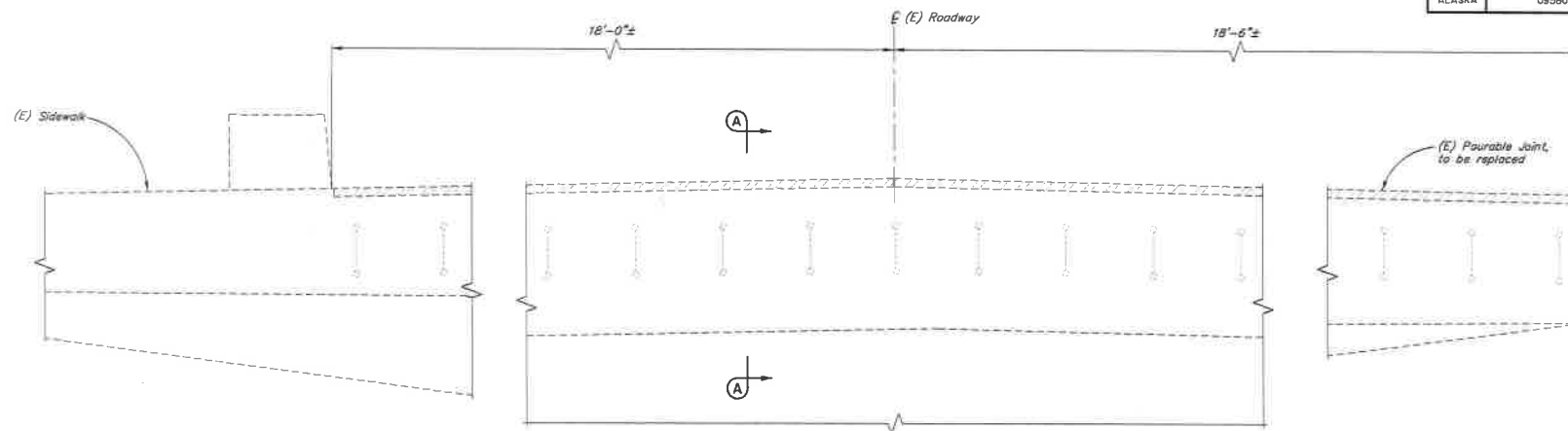


BRIDGE NO. 740
 DWG. NO. 6

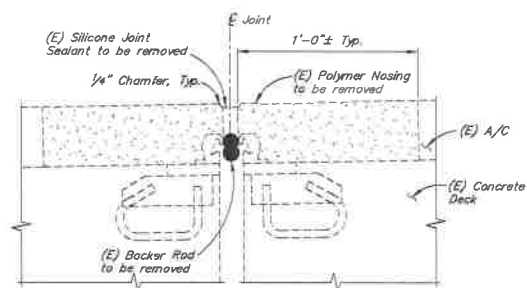
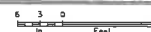
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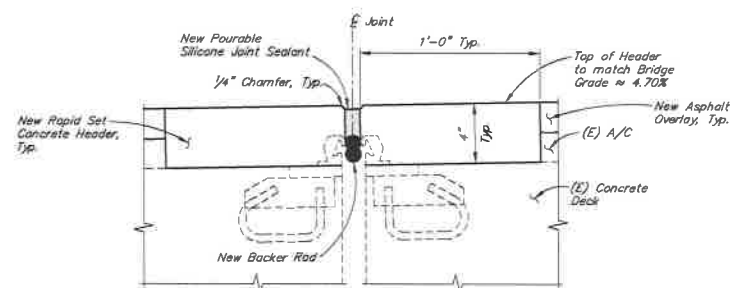
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0958032/SFHWO0058	2020	N9	N12



PARTIAL JOINT ELEVATION



SECTION A-A



PROPOSED FIXED JOINT



NOTES:

- (E) = Existing
- = Existing
- = Proposed

Bridge stations and elevations are based on as-built drawings.

For project stations and elevations, see roadway sheets.

Verify controlling field dimensions before ordering or fabricating any material.

DESIGNED BY: Jesse Escamilla III	CHECKED: Ben Fetherhall
DRAWN BY: Michael Foster	CHECKED: Jesse Escamilla III
QUANTITIES BY: Jesse Escamilla III	CHECKED: Ben Fetherhall

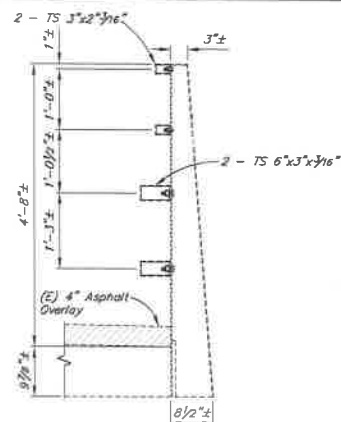
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

GASTINEAU CHANNEL BRIDGE
DOUGLAS CROSSING
SUSPENDED SPAN EXISTING
FIXED JOINT

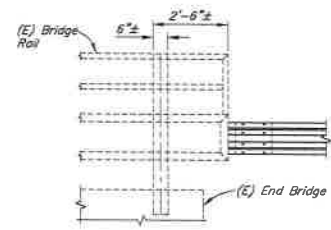


BRIDGE NO. 740
DWG. NO. 9

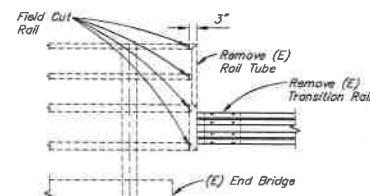
\\saw\240\40-11 Rail Details [2] "du, Dec/09/20 3:53pm



EXISTING TYPICAL SECTION



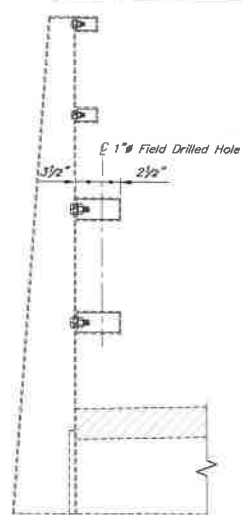
EXISTING RAIL END TERMINUS



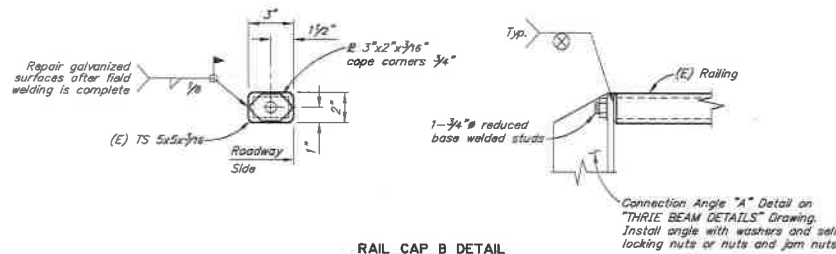
MODIFICATIONS TO RAIL END TERMINUS



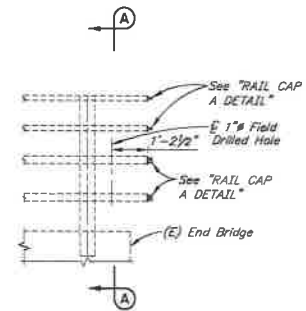
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0958032/SFHWO0058	2020	N11	N12



SECTION A-A



RAIL CAP B DETAIL



PROPOSED RAIL END TERMINUS



DESIGNED BY: Jesse Escamilla III	CHECKED BY: Ben Fetterhoff
DRAWN BY: Michael Foster	CHECKED BY: Jesse Escamilla III
QUANTITIES BY: Jesse Escamilla III	CHECKED BY: Ben Fetterhoff

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

GASTINEAU CHANNEL BRIDGE
DOUGLAS CROSSING
COMBINATION RAIL DETAILS


BRIDGE NO. 740
DWG. NO. II



TID	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SEHWY00058/0958032	2021	P1	P5

NOTES:

1. REFER TO ESCP IN APPENDIX C OF THE SPECIAL PROVISIONS
2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO EARTH DISTURBING ACTIVITIES.
3. THE LOCATION OF TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE RECOMMENDATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE AND IMPLEMENT A SWPPP ACCORDING TO CONTRACT SPECIFICATION SECTION 641 AND THE ESCP.

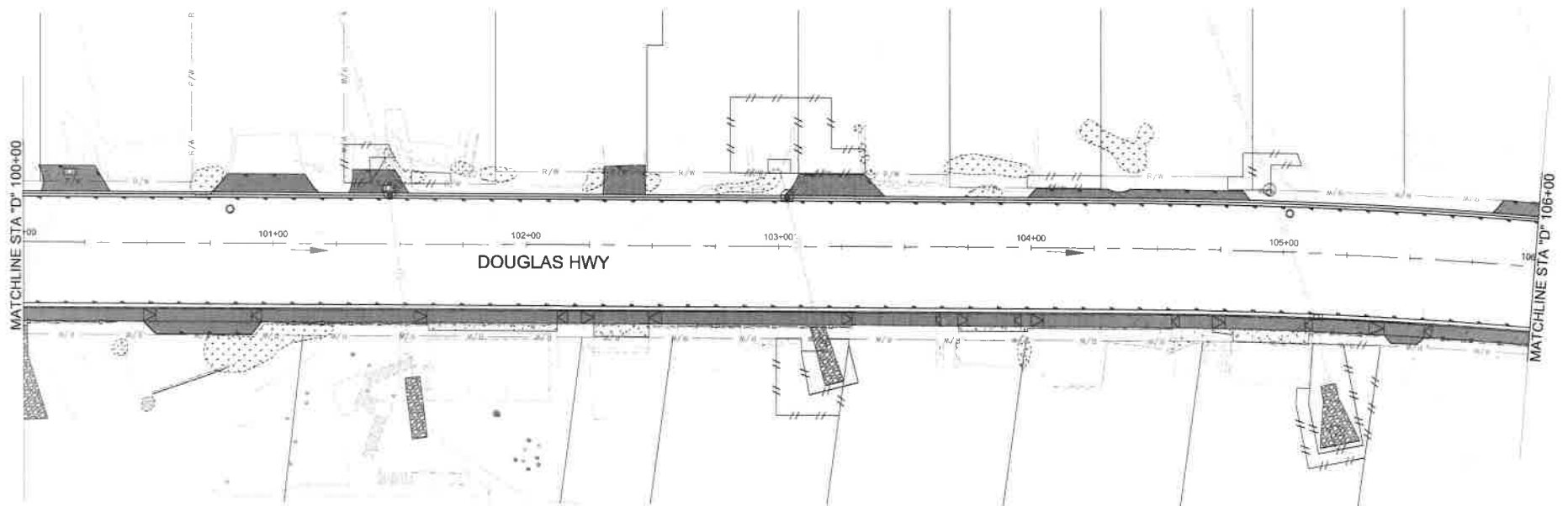
ESCP LEGEND

SEDIMENT BARRIER

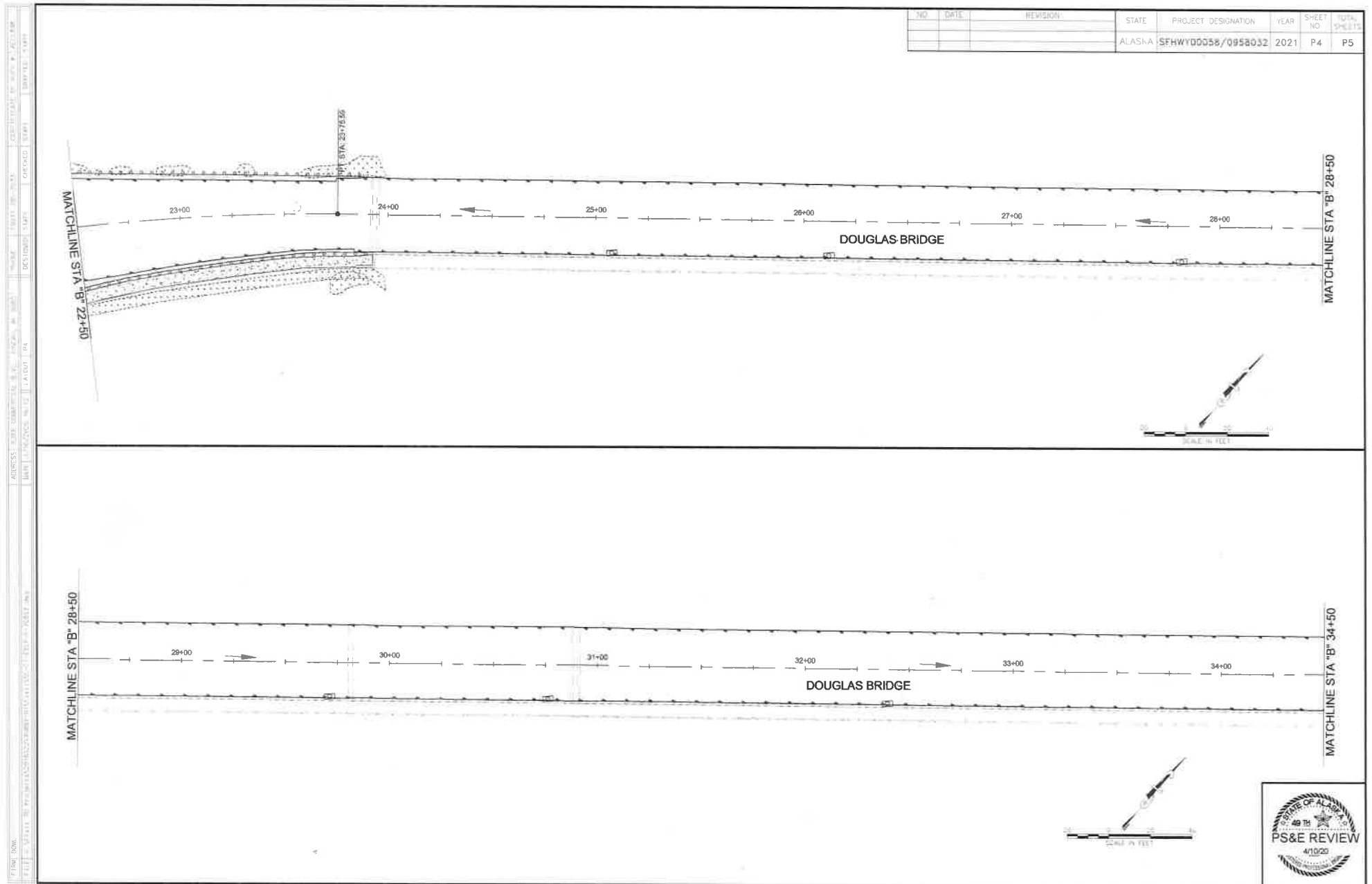
INLET PROTECTION

SURFACE STORMWATER FLOW

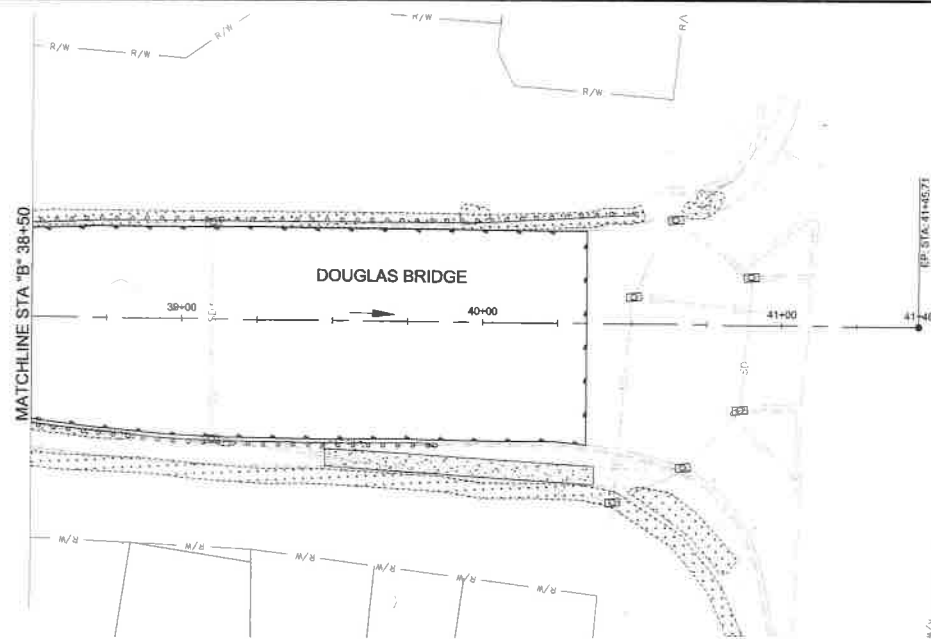
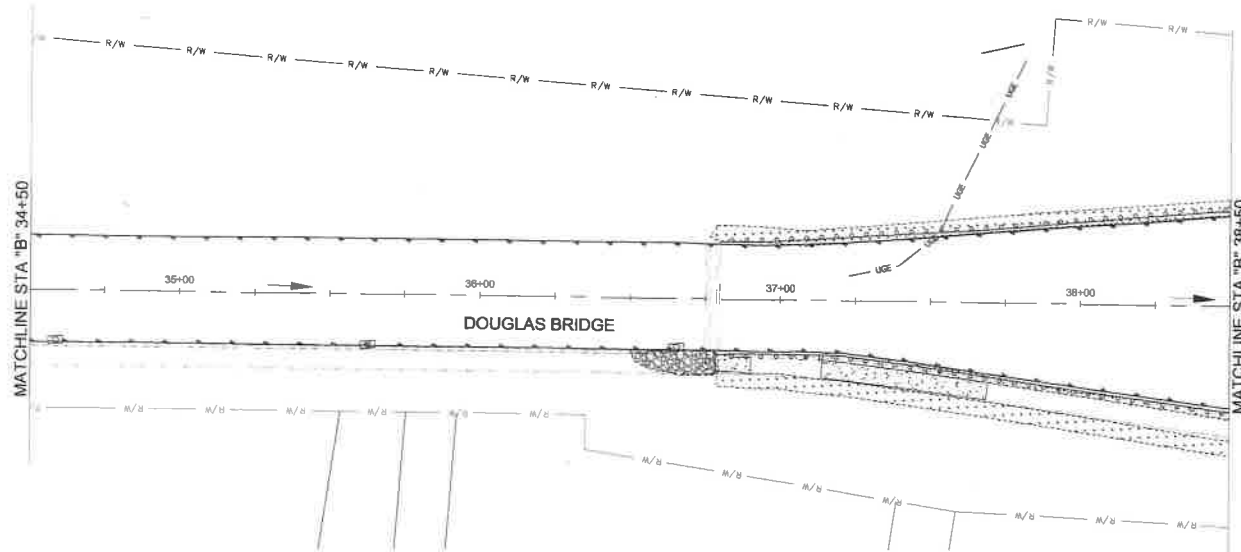
INVASIVE SPECIES

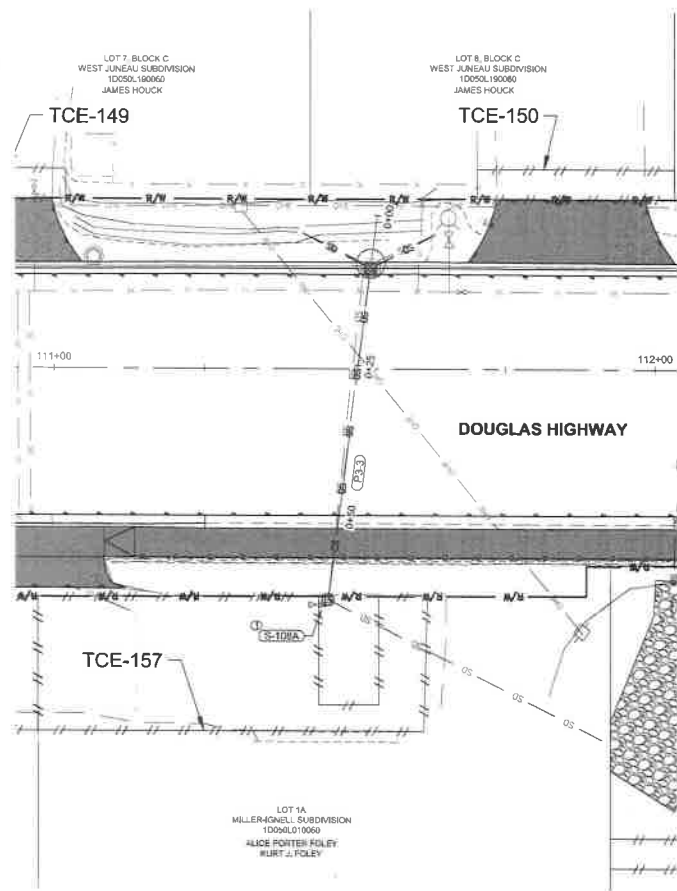






NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	5FHWWY00058/D958032	2021	P5	P5





P3-3 PLAN

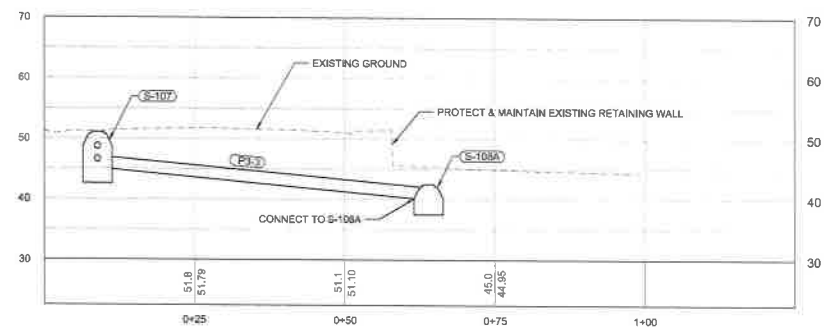
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWHY00058/0958032	2021	01	01

EXISTING P3-3:

D = 24" CMP
 L = UNKNOWN
 S = UNKNOWN
 IN IE = 45.09'
 STA "D" 111+53, 16.6' LT
 38.74'
 OUT IE = STA "D" 111+91, 61.2' RT

NOTES (X)

1. INSTALL STORM DRAIN MANHOLE WITH SOLID COVER. VIDEO INSPECT EXISTING STORMPIPE TO VERIFY LOCATION OF ASSUMED BEND. POT HOLE ON VERIFIED BEND LOCATION & RECORD PIPE ELEVATIONS. SUBMIT INFORMATION TO ENGINEER. SUBMIT SHOW DRAWING FOR NEW STRUCTURE TO ENGINEER FOR APPROVAL OF CULVERT REHABILITATION
2. FINAL DESIGN OF CULVERT REHABILITATION IS PENDING ADDITIONAL ASSESSMENT BY DOT&PF



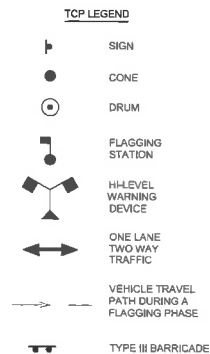
P3-3 PROFILE



PROJECT: 2020-2021 STATEWIDE HIGHWAY IMPROVEMENT PROJECT
SHEET NO.: 101
DATE: 10/1/2020
DRAWN BY: J. J. JENSEN
CHECKED BY: J. J. JENSEN
APPROVED BY: J. J. JENSEN

TRAFFIC CONTROL NOTES

- IT IS THE INTENT OF THIS TRAFFIC CONTROL PLAN (TCP) TO ILLUSTRATE SOME, BUT NOT ALL OF THE TRAFFIC CONTROL CONFIGURATIONS THAT WILL BE REQUIRED BY THIS PROJECT. THE FINAL TCP ADDRESSING IN DEPTH THE VARIETY OF SITUATIONS THAT MAY OCCUR ONCE CONSTRUCTION HAS STARTED SHALL BE COMPLETED BY THE CONTRACTOR AND SUBMITTED FOR REVIEW BY THE ENGINEER.
- ALL TRAFFIC CONTROL PLANS SUBMITTED BY THE CONTRACTOR SHALL BE NUMBERED. ALL TRAFFIC CONTROL PLANS THAT USE A TYPICAL APPLICATION AS DESCRIBED IN THE LATEST EDITION OF THE ALASKA TRAFFIC MANUAL (ATM) SHALL REFERENCE THE TYPICAL APPLICATION.
- TWO LANES SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE APPROVED BY THE ENGINEER. FLAGGERS MUST BE PRESENT FOR ANY LANE CLOSURES. IF LANE CLOSURES MUST OCCUR AND ARE APPROVED BY THE ENGINEER, THE CONTRACTOR SHALL STRICTLY ADHERE TO THE REQUIREMENTS OF THE LANE CLOSURE INCLUDING, BUT NOT LIMITED TO BEGINNING AND END TIMES, AND DURATION, AT NO TIME SHALL ALL LANES OF TRAFFIC BE CLOSED.
- THE LENGTH OF WORK AREA SHALL BE MINIMIZED TO AVOID EXCESSIVE TRAFFIC DELAYS AS DIRECTED BY THE ENGINEER. IN NO CASE WILL THE ENGINEER ALLOW A WORK AREA GREATER THAN 2000 FEET.
- KEEP THE PUBLIC INFORMED OF CONSTRUCTION ACTIVITIES THROUGH A PUBLIC INFORMATION PLAN (PIP). SEE SECTION 643-3.03 OF THE SPECIAL PROVISIONS FOR PIP REQUIREMENTS.
- SEE SECTION 202-3.05 OF THE SPECIAL PROVISIONS FOR LIMITATIONS ON PAVEMENT REMOVAL AND REPAVING. REPAVED SECTIONS REQUIRE INTERIM PAVEMENT MARKINGS PER SECTION 643-2.01 OF THE SPECIFICATIONS.
- A WORK ZONE SPEED LIMIT OF 10 MPH LESS THAN THE POSTED SPEED IS RECOMMENDED DURING CONSTRUCTION. HOWEVER, IN SOME SITUATIONS, A LOWER WORK ZONE SPEED LIMIT MAY BE NECESSARY. IN THESE SITUATIONS, THE CONTRACTOR SHALL DETERMINE THE NEED FOR A LOWER WORK ZONE SPEED LIMIT IN ACCORDANCE WITH THE AK DOT&PF POLICY AND PROCEDURE 05.05.020 AND SUBMIT FOR APPROVAL BY THE ENGINEER.
- LOCATION OF DOUBLE TRAFFIC SIGNS SHALL BE ESTABLISHED IN ACCORDANCE WITH THE AK DOT&PF STANDARD PLAN C-04.12.
- CHANGEABLE MESSAGE SIGNS SHALL BE USED FOR ADVANCED NOTIFICATION. LOCATION OF CHANGEABLE MESSAGE SIGNS SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER.
- NIGHT WORK MAY BE REQUIRED BY THE ENGINEER. IF WORK REQUIRES ONE LANE OF TRAFFIC, THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS FOR NIGHT WORK. THE CONTRACTOR SHALL PERFORM NIGHT WORK WITHIN THE TIMES IDENTIFIED IN THE SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY EACH RESIDENT OR PROPERTY OWNER OF EACH DRIVEWAY CLOSURE 3 DAYS BEFORE CLOSING THE DRIVEWAY TO VEHICULAR ACCESS AND AGAIN 24 HOURS BEFORE CLOSURE. THE RESIDENT OR PROPERTY OWNER SHALL BE INFORMED OF THE PERIOD OF TIME THE CLOSURE WILL BE IN EFFECT. NO DRIVEWAY CLOSURES WILL BE PERMITTED UNTIL THIS REQUIREMENT HAS BEEN MET TO THE SATISFACTION OF THE ENGINEER.
- THE CONTRACTOR SHALL NOTIFY EACH RESIDENT OR PROPERTY OWNER OF ON-STREET PARKING CLOSURES 3 DAYS BEFORE CLOSING THE DRIVEWAY TO VEHICULAR ACCESS AND AGAIN 24 HOURS BEFORE CLOSURE. THE RESIDENTS OR PROPERTY OWNERS SHALL BE INFORMED OF THE PERIOD OF TIME THE CLOSURE WILL BE IN EFFECT AND WHERE TEMPORARY ON-STREET PARKING IS AVAILABLE DURING THE CLOSURE. NO ON-STREET PARKING CLOSURES WILL BE PERMITTED UNTIL THIS REQUIREMENT HAS BEEN MET TO THE SATISFACTION OF THE ENGINEER.



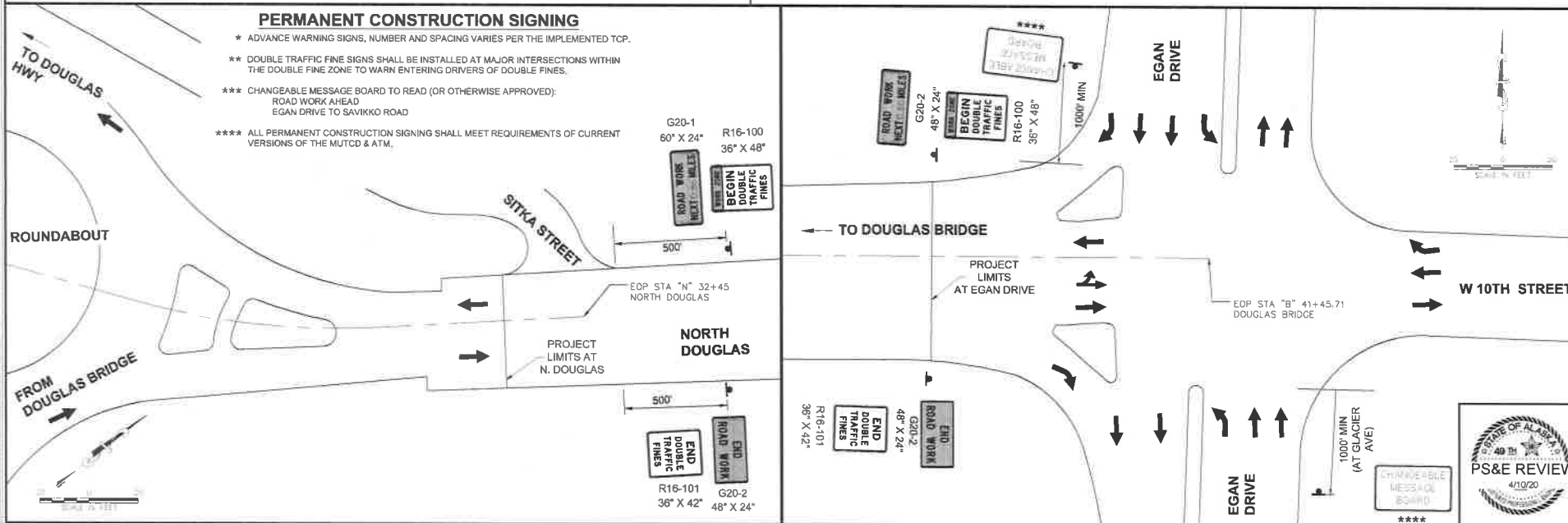
NO.	DATE	REVISION	STATE	PROJECT DESCRIPTION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFH000058/0958032	2021	T1	T8

TCP SETUP TABLE

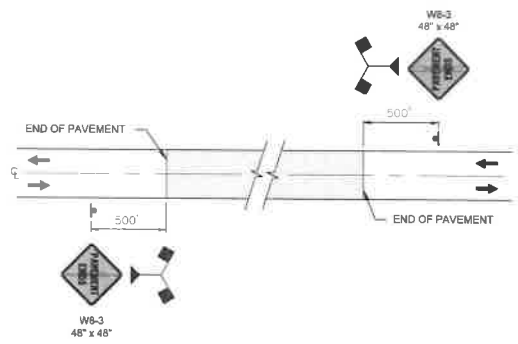
SPEED (MPH)	MIN MERGING TAPER LENGTH (L) IN FEET			MIN NUMBER OF DEVICES WIDTH OF OFFSET (W) IN FEET			MAX DEVICE SPACING IN FEET		BUFFER SPACE IN FEET
	10'	11'	12'	10'	11'	12'	ALONG TAPER	ALONG TANGENT	
25 OR BELOW	105	115	125	6	6	6	25	50	155
30	150	165	180	6	7	7	30	60	200
35	205	225	245	7	8	8	35	70	250
40	270	295	320	8	9	9	40	80	305
45	450	495	540	11	12	13	45	90	360
50	500	550	600	11	12	13	50	100	425
55	550	605	660	11	12	13	55	110	495
60	600	660	720	11	12	13	60	120	570

PERMANENT CONSTRUCTION SIGNING

- * ADVANCE WARNING SIGNS, NUMBER AND SPACING VARIES PER THE IMPLEMENTED TCP.
- ** DOUBLE TRAFFIC FINE SIGNS SHALL BE INSTALLED AT MAJOR INTERSECTIONS WITHIN THE DOUBLE FINE ZONE TO WARN ENTERING DRIVERS OF DOUBLE FINES.
- *** CHANGEABLE MESSAGE BOARD TO READ (OR OTHERWISE APPROVED):
ROAD WORK AHEAD
EGAN DRIVE TO SAVIKKO ROAD
- **** ALL PERMANENT CONSTRUCTION SIGNING SHALL MEET REQUIREMENTS OF CURRENT VERSIONS OF THE MUTCD & ATM.

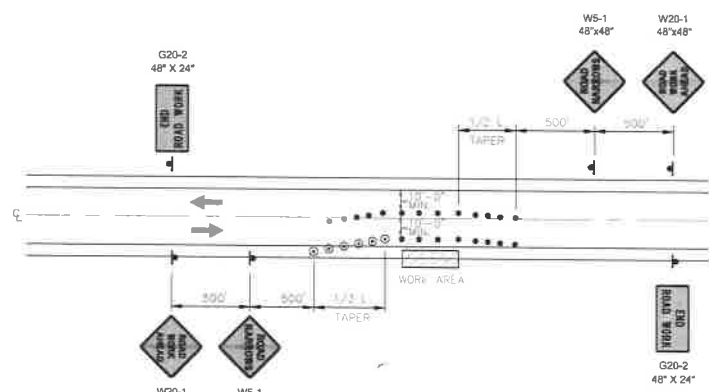


PROJECT: STATE OF ALASKA, ROAD AND BRIDGE DIVISION
 ADDRESS: 1000 COMMERCIAL BLVD, ANCHORAGE, AK 99501
 DATE: 11/15/2020 BY: J. L. JENSEN
 DRAWING NO.: 0958032
 SHEET NO.: T6
 TOTAL SHEETS: T6



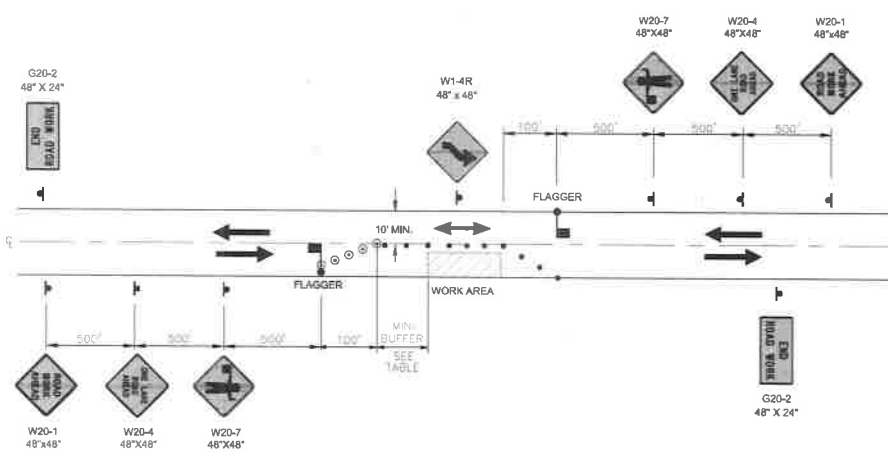
SIGNING FOR UNPAVED AREA

NO.	DATE	REVISION	STATE	PROJECT DESCRIPTION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWD00058/0958032	2021	T3	T6

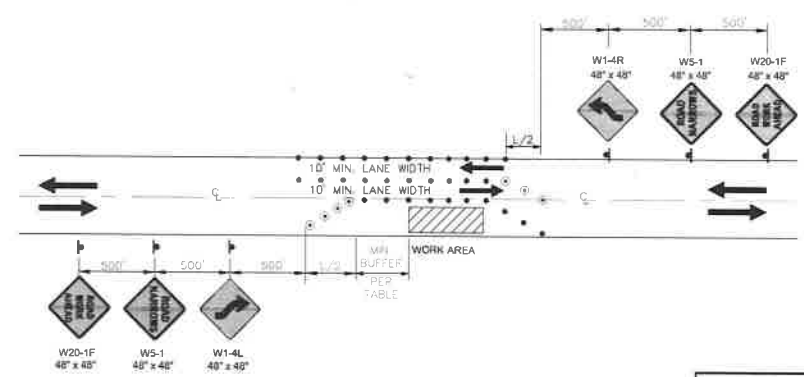


ROADWAY ENCROACHMENT

NOTE:
 IF ONLY ONE LANE IS AFFECTED BY ROAD WORK (THAT IS, THE CONES
 ALONG THE WORK AREA ARE NO CLOSER THAN 10' TO CENTERLINE) THE
 CENTERLINE CONES FOR THE OPPOSING LANE WILL NOT BE NEEDED.



**TWO LANE ROAD - SINGLE LANE CLOSURE
DOUBLE FLAGGER**



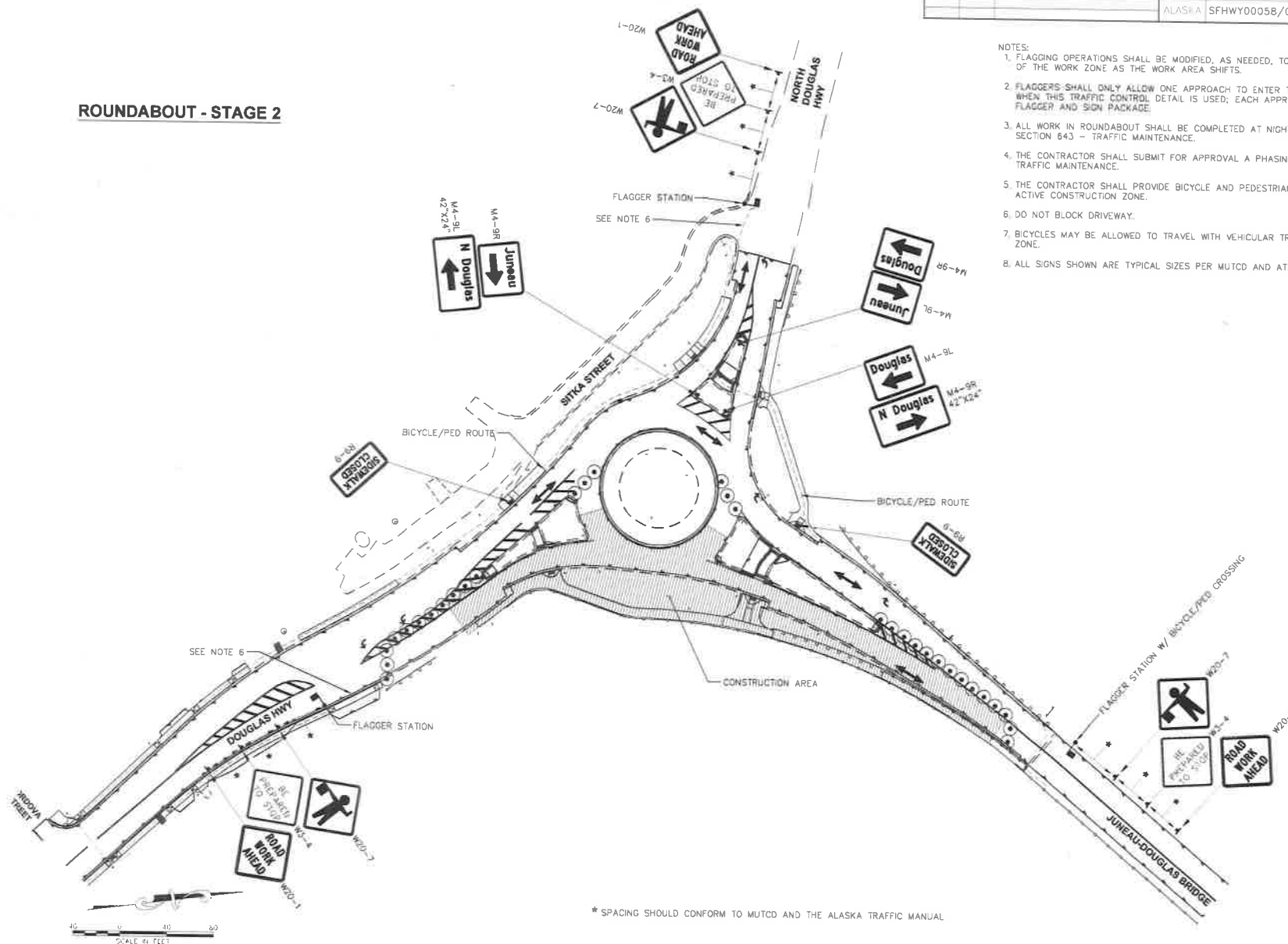
TWO-WAY TRAFFIC



ROUNDBABOUT - STAGE 2

REV.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFWHY00058/0958032	2021	T5	T6

- NOTES:
1. FLAGGING OPERATIONS SHALL BE MODIFIED, AS NEEDED, TO MEET THE CHANGING NEEDS OF THE WORK ZONE AS THE WORK AREA SHIFTS.
 2. FLAGGERS SHALL ONLY ALLOW ONE APPROACH TO ENTER THE ROUNDBABOUT AT A TIME WHEN THIS TRAFFIC CONTROL DETAIL IS USED; EACH APPROACH SHALL HAVE ITS OWN FLAGGER AND SIGN PACKAGE.
 3. ALL WORK IN ROUNDBABOUT SHALL BE COMPLETED AT NIGHT IN ACCORDANCE WITH SECTION 643 - TRAFFIC MAINTENANCE.
 4. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL A PHASING PLAN PER SECTION 643 - TRAFFIC MAINTENANCE.
 5. THE CONTRACTOR SHALL PROVIDE BICYCLE AND PEDESTRIAN ROUTES AROUND THE ACTIVE CONSTRUCTION ZONE.
 6. DO NOT BLOCK DRIVEWAY.
 7. BICYCLES MAY BE ALLOWED TO TRAVEL WITH VEHICULAR TRAFFIC THROUGH THE WORK ZONE.
 8. ALL SIGNS SHOWN ARE TYPICAL SIZES PER MUTCD AND ATM, UNLESS OTHERWISE NOTED.



* SPACING SHOULD CONFORM TO MUTCD AND THE ALASKA TRAFFIC MANUAL



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWW00058/0958032	2021	T6	T6

-
- ROUNDABOUT - STAGE 3**
- NOTES:
1. FLAGGING OPERATIONS SHALL BE MODIFIED, AS NEEDED, TO THE WORK AREA AS THE WORK AREA SHIFTS.
 2. FLAGGERS SHALL ONLY ALLOW ONE APPROACH TO ENTER THE WORK AREA WHEN THIS TRAFFIC CONTROL DETAIL IS USED, EACH APPROACH SHALL BE FLAGGED BY A FLAGGER AND SIGN PACKAGE.
 3. ALL WORK IN ROUNDABOUT SHALL BE COMPLETED AT NIGHT - SECTION 643 - TRAFFIC MAINTENANCE.
 4. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL A PHASING PLAN FOR TRAFFIC MAINTENANCE.
 5. THE CONTRACTOR SHALL PROVIDE BICYCLE AND PEDESTRIAN ACCESS TO THE ACTIVE CONSTRUCTION ZONE.
 6. DO NOT BLOCK DRIVEWAY.
 7. BICYCLES MAY BE ALLOWED TO TRAVEL WITH VEHICULAR TRAFFIC IN THE CONSTRUCTION ZONE.
 8. ALL SIGNS SHOWN ARE TYPICAL SIZES PER MUTCD AND ATMS.
- *SPACING SHOULD CONFORM TO MUTCD AND THE ALASKA TRAFFIC MANUAL





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 30, 2020

File No.: CSP2020 0005

State of Alaska

ATTN: David Pyeatt, PE

P.O. Box 112506

Juneau, AK 99811-2506

Proposal: State Project Review for asphalt rehabilitation and reconstruction of the Juneau Douglas Bridge, roundabout, and a portion of North and South Douglas Highway

Property Address: N/A

ROW name: Juneau Douglas Bridge and roundabout; portions of North and South Douglas Highway

Parcel Code No.: N/A

Hearing Date: July 28, 2020

The Planning Commission, at a regular public meeting, adopted the analysis and findings listed in the attached memorandum dated July 17, 2020, and approved asphalt rehabilitation and reconstruction of the Juneau Douglas Bridge and a portion of South Douglas Highway. The work will be conducted as described in the project description and drawings submitted with the application, and include reconstruction of bridge joints, reconstruction of sidewalks, replacement of guard rail, and improved drainage.

Attachments: July 17, 2020 memorandum from Irene Gallion, Community Development, to the CBJ Planning Commission regarding CSP2020 0005.

Additional Materials: Comment from Aaron Brakel, received July 28, 2020

Effective Date: The permit is effective upon approval by the Commission, July 28, 2020. This decision is final 90 days from the date the application was received, or August 30, 2020, unless modified or disapproved by the Assembly.

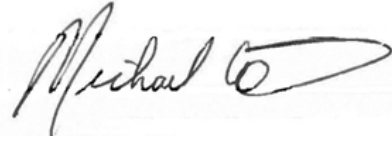
This Notice of Decision does not authorize construction. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

State of Alaska
File No.: CSP2020 0005
July 30, 2020
Page 2 of 2

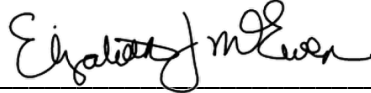
Project Planner:



Irene Gallion, Planner
Community Development Department



Michael LeVine, Chair
Planning Commission



Filed With City 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 development project. ADA regulations have access requirements above and beyond CBJ - adopted regulations. The State Government and project 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.

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

CSP2020 0006: Land disposal and sale of land to Taku Terrace Condos - APPROVED AS AMENDED

AGENDA ITEM:

Case No.: CSP2020 0006

Applicant: City and Borough of Juneau

Location: 1220 Glacier Avenue

Proposal: Land disposal and sale of land to Taku Terrace Condos

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.

ATTACHMENTS:

Description	Upload Date	Type
☐ Staff Report for CSP2020 0006	7/16/2020	Staff Report
☐ Presentation for CSP2020 0006	7/28/2020	Presentation
☐ Notice of Recommendation for CSP2020 0006	8/7/2020	Notice of Recommendation



PLANNING COMMISSION STAFF REPORT
CITY PROJECT REVIEW CSP2020-0006
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 the Planning Commission recommend

APPROVAL with an advisory condition of the project to the Assembly.

ALTERNATIVE ACTIONS:

1. **Amend:** amend the recommendation to include conditions and recommend approval to the Assembly.
2. **Deny:** recommend denial of the proposed project. Planning Commission must make its own findings.
3. **Continue:** continue the hearing to a later date if determined that additional information or analysis is needed to make a decision, or if additional testimony is warranted.

ASSEMBLY ACTION REQUIRED:

A Notice of Recommendation will be forwarded to the Assembly for further action.

STANDARD OF REVIEW:

This is a legislative decision and

DATE: July 16, 2020

TO: Planning Commission

THROUGH: Jill Maclean, Director, AICP

BY: Allison Eddins, Planner II

PROPOSAL SYNOPSIS: Applicant requests a City Project Review for a land disposal and sale of land to Taku Terrace Condos.

SUMMARY OF KEY CONSIDERATIONS:

- CBJ has been leasing the lot to Taku Terrace Condos since 1970.
- Under the lease agreement the lease price is well under fair market value.
- A land sale will be at fair market value.

GENERAL INFORMATION

Property Owner	CBJ Lands & Resources
Applicant	Dan Bleidorn
Property Address	1220 Glacier Avenue
Legal Description	USS 655 FR
Parcel Number	1C030J010001
Zoning	D18
Land Use Designation	Commercial (C)
Lot Size	27,443 square feet
Water/Sewer	Public
Access	Private easement
Existing Land Use	Multi-family residential
Associated Applications	NCC2020-0014

SITE FEATURES

Anadromous	None
Flood Zone	Area of minimal flood hazard
Hazard	None
Hillside	None
Wetlands	None



CBJ 49.10.170(c) Planning Commission Duties: *The commission shall review and make recommendations to the assembly on land acquisitions and disposals as prescribed by Title 53, or capital improvement project by any City and Borough agency. The report and recommendation of the commission shall be based upon the provisions of this title, the comprehensive plan, and the capital improvements program.*

CBJ 49.15.580(a) - CBJ Project Review: *The commission shall review all proposed City and Borough capital improvement projects estimated to cost \$500,000 or more for consistency with this title. The commission may review, at the director's discretion, all proposed City and Borough capital projects estimated to cost more than \$250,000 but less than \$500,000. The commission may recommend conditions on and modifications to any project reviewed by the commission through a notice of recommendation. The notice of recommendation shall be forwarded to the assembly for further action.*

ATTACHMENTS

Item	Description
Attachment A	Application Packet
Attachment B	Abutters Notice

Item	Description
Attachment C	Public Comments
Attachment D	Lands Committee June 22, 2020 minutes
Attachment E	Human Remains Discovery Guide

AGENCY REVIEW

CDD conducted an agency review comment period between June 24, 2020 and July 7, 2020. Agency review comments can be found in Attachment C.	
Agency	Summary
CBJ Parks and Recreation	There is the possibility of unknown graves along the common property line.
CBJ Risk Management	CBJ would not be liable if graves were found on the lot after the sale.

CBJ finished the Evergreen Cemetery Mapping Project in 2015. The project confirmed gravesite locations and consolidated existing burial records into a digital database. No records indicated that gravesites were located on the Taku Terrace lot. If the lot is sold to the Taku Terrace Condo Association, and if any human remains are discovered during development activity, the individual responsible for the management of 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 (See Attachment E – Human Remains Discovery Guide).

PUBLIC COMMENTS

Public notice postcards were mailed to property owners within 500 feet of the property on June 30, 2020. Additionally, a notice appeared in the Juneau Empire on July 17, 2020 and July 27, 2020. Public comments submitted at time of writing this staff report can be found in Attachment D.	
Name	Summary
Tom Wagner	In favor of the land sale.
Susi Fowler	In favor of the land sale.

SURROUNDING LAND USES AND ZONING

Direction	Zoning District	Land Use
North	D5	Evergreen Cemetery
South	Light Commercial (LC)	Commercial / Residential
East	D5	Evergreen Cemetery / Residential
West	Light Commercial (LC)	Commercial

BACKGROUND INFORMATION

Proposal – John L. Rader, who constructed and owned the Taku Terrace condos, entered into a 90-year land lease agreement with the City of Juneau on June 26, 1970 through approval of Resolution No. 404. The Resolution allowed the construction of the Taku Terrace Condos on the 0.6 acre city-owned lot. The condo association seeks to purchase the lot at fair market value. Based on the terms of the lease agreement, the lease rate is currently

\$296.38 per month. The last assessment of this lot in 2000 determined the fair market value for the lease at \$1,852 per month.

At their June 22, 2020 meeting the CBJ Lands Committee reviewed the proposed sale and made a motion to support the sale negotiations pending Planning Commission review. (See Attachment E for meeting minutes)

Title 53 ANALYSIS

The Planning Commission is required to review the disposal of CBJ Property per CBJ 49.10.170(c):

City and borough land acquisitions, disposals and projects. The commission shall review and make recommendations to the assembly on land acquisitions and disposals as prescribed by title 53, or capital improvement project by any City and Borough agency. The report and recommendation of the commission shall be based upon the provisions of this title, the comprehensive plan, and the capital improvements program.

Additionally, CBJ 53.09.260(b) requires Planning Commission review of negotiated sales, leases, and exchanges of CBJ property:

Planning commission review, final assembly approval. Upon satisfactory progress in the negotiation or competition undertaken pursuant to subsection (a) of this section, and after review by the planning commission and authorization by the assembly by ordinance, the manager may conclude arrangements for the lease, sale, or exchange or other disposal of City and Borough land. The final terms of a disposal pursuant to this section are subject to approval by the assembly unless the minimum essential terms and the authority of the manager to execute the disposal are set forth in the ordinance enacted pursuant to this subsection. The disposal may not be executed until the effective date of the ordinance.

In conjunction with the CSP application, CBJ Lands Division applied for Nonconforming Certification (NCC2020-0014), which is currently being reviewed by staff.

CONFORMITY WITH ADOPTED PLANS

2013 COMPREHENSIVE PLAN VISION: *The City and Borough of Juneau is a vibrant State Capital that values the diversity and quality of its natural and built environments, creates a safe and satisfying quality of life for its diverse population, provides quality education and employment for its workers, encourages resident participation in community decisions and provides an environment to foster state-wide leadership.*

2013 COMPREHENSIVE PLAN - The proposed land sale is in compliance with the 2013 Comprehensive Plan.			
Chapter	Page No.	Item	Summary
17	226	Policy 17.2	To hold certain lands in the public trust, and to dispose of certain lands for private use when disposal serves the public interest.

2016 Lands Management Plan - The proposed land sale generally complies with the 2016 Housing Action Plan			
Chapter	Page No.	Item	Summary
4	7	Goal 1	Continue the land disposal program which systematically places CBJ land into private ownership. Objective 2: Expand the property tax base. Objective 5: Maximize the CBJ's return of its property. Objective 6: Provide opportunities for as many people as possible to acquire CBJ land.
7	58	CBJ Land Holdings	"Retain"

The 2016 Lands Management Plan lists the Taku Terrace lot as "Retain." There was no offer to purchase at the time the plan was adopted and a long term lease agreement was in place. The Lands Committee at the June 22, 2020 meeting recognized that this lot may have been overlooked in the 2016 Lands Management Plan and supported changing the retention status to "Dispose." The Lands Committee supports the sale to Taku Terrace Condo Association (See Attachment E for minutes).

FINDINGS

In accordance with CBJ 49.15.580, staff finds the proposed land sale to the Taku Terrace Condo Association complies with Title 49 Land Use Code and is in general conformity with adopted plans, specifically the 2013 Comprehensive Plan and the goals and objectives in the 2016 Lands Management Plan.

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.



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 1220 Glacier Highway		
	Legal Description(s) (Subdivision, Survey, Block, Tract, Lot) Fraction of U.S Survey 655		
	Parcel Number(s) 1C030J010001		
	☐ This property located in the downtown historic district ☐ This property located in a mapped hazard area, if so, which _____		
	LANDOWNER/ LESSEE		
	Property Owner Taku Terrace Condo/CBJ	Contact Person Dan Bleidorn	Phone Number(s) 586-0224
	Mailing Address 155 S. Seward St.		
	E-mail Address dan.bleidorn@juneau.org		
	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 <u>Daniel Bleidorn</u> 06/11/2020 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 same	Contact Person		
Mailing Address	Phone Number(s)		
E-mail Address			
X _____ Applicant's Signature Date of Application			

-----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 ANE
Case Number CSP20200006 Date Received 6/23/20



CITY/STATE PROJECT AND LAND ACTION REVIEW APPLICATION

See reverse side 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	
	Taku Terrace has requested to buy the land that their condos are on from the City. This is a land disposal request	
	TYPE OF PROJECT REVIEW:	
	☐ City Project Review ☒ City Land Acquisition / Disposal ☐ State Project Review	
	PROJECT NUMBERS ASSOCIATED WITH PROPOSAL:	
	Is this project associated with any other Land Use Permits? ☒ YES Case No.: <u>NCC2020 - 0014</u> ☐ NO	
	Capital Improvement Program # (CIP) _____	
	Local Improvement District # (LID) _____	
	State Project # _____	
	ESTIMATED PROJECT COST: \$ _____	
	ALL REQUIRED MATERIALS ATTACHED	
	☒ Complete application ☐ Pre-Application notes (if applicable) ☐ Narrative including: ☐ Current use of land or building(s) ☐ Proposed use of land or building(s) ☐ How the proposed project complies with the Comprehensive Plan ☐ How the proposed project complies with the Land Use Code (Title 49) ☐ Site Plan (details on page 2)	

NOTE: This application is required even if the proposed project is associated with other Land Use permits.

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

CITY/STATE PROJECT FEES	Fees	Check No.	Receipt	Date
Application Fees	\$ _____			

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.

Case Number	Date Received
CSP20200006	4/23/20

City/State Project and Land Action Review Information

City and State project review is outlined in CBJ 49.15.580

Each application for a City/State Project is reviewed by the Planning Commission at a public hearing. The permit procedure is intended to provide the Commission the flexibility necessary to make recommendations tailored to individual applications.

Application: An application for a City/State Project Review will not be accepted by the Community Development Department until it is determined to be complete. The items needed for a complete application are:

1. **Forms:** Completed City/State Project Review Application and Development Permit Application forms.
2. **Fees:** No fee required for projects that cost less than \$2.5 million. For projects costing more than this amount, the fee is \$1,600.00. All fees are subject to change.
3. **Project Narrative:** A detailed narrative describing the project.
4. **Plans:** All plans are to be drawn to scale and clearly show the items listed below:
 - a. Plat, site plan, floor plan and elevation views of existing and proposed structures and land;
 - b. Existing and proposed parking areas, including dimensions of the spaces, aisle width and driveway entrances;
 - c. Proposed traffic circulation within the site including access/egress points and traffic control devices;
 - d. Existing and proposed lighting (including cut sheets for each type of lighting);
 - e. Existing and proposed vegetation with location, area, height and type of plantings; and,
 - f. Existing physical features of the site (i.e. drainage, eagle trees, hazard areas, salmon streams, wetlands, etc.)

Document Format: All materials submitted as part of an application shall be submitted in either of the following formats:

1. Electronic copies in the following formats: .doc, .txt, .xls, .bmp, .pdf, .jpg, .gif, .xlm, .rtf (other formats may be preapproved by the Community Development Department).
2. Paper copies 11" X 17" or smaller (larger paper size may be preapproved by the Community Development Department).

Application Review & Hearing Procedure: Once the application is determined to be complete, the Community Development Department will initiate the review and scheduling of the application. This process includes:

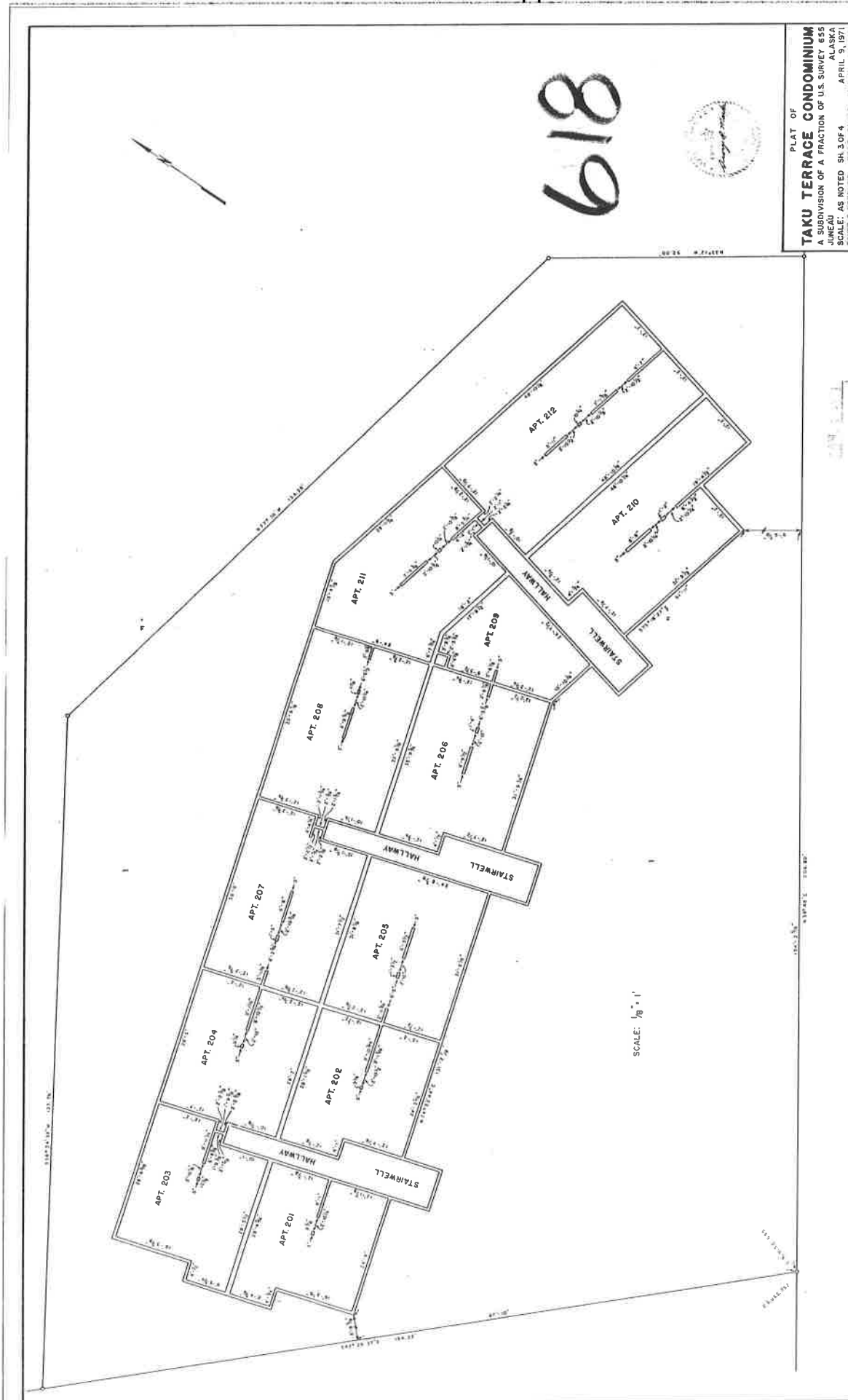
Review: As part of the review process the Community Development Department will evaluate the application for consistency with all applicable City & Borough of Juneau codes and adopted plans. Depending on unique characteristics of the permit request the application may be required to be reviewed by other municipal boards and committees. Review comments may require the applicant to provide additional information, clarification, or submit modifications/alterations for the proposed project.

Hearing: All City/State Project Review Permit Applications must be reviewed by the Planning Commission. Once an application has been deemed complete and has been reviewed by all applicable parties the Community Development Department will schedule the requested permit for the next appropriate meeting. The Planning Commission will make a recommendation based on staff's analysis and forward it to the Assembly for final approval/denial.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

Narrative:

The City and Borough of Juneau owns the land under the Taku Terrace Condo building. The City has leased the land to the Condos since 1970. The Condos would like to purchase the land from the City as the lease makes financing of condos more complicated. This property does not have road frontage but there is an access easement recorded. This property might not be legally defined and in 1970 it was part of Evergreen Cemetery. The Condo Association and Lands and Resources Staff are interested in knowing what process will need to be completed in order for the City to dispose of this property to the Condo Association. Is this property legally defined and does it exist separate from the surrounding City property? Does anything need to happen to provide road frontage or does the existing easement cover the access needs? Are there any other concerns that will need to be addressed for this property to be sold to the Condo Association?



5/21/2020

CBJ Land Sale Application – City and Borough of Juneau



Application to Purchase City and Borough of Juneau Lands

The CBJ Lands and Resources Division has received your application. We will contact you shortly. Have questions? You can reach our mainline at (907) 586-5252 or email us at Lands_Office@juneau.org. Thank you.

Information you submitted (Print for your own records):

Business / Individual

Taku Terrace Association

Address

c/o JPR Management Services Inc, PO Box 211450
Auke Bay, AK 99821
Map It

Phone

(801) 791-5363

Email

c.christopher.burton@gmail.com

Site Address

1220 Glacier Ave

Legal Description

USS 655 FR [TAKU TERRACE CONDO LAND]

Provide Brief Description of Your Proposal

The HOA would like to discuss the possibility of purchasing the land currently leased from CBJ, negotiate a price and terms.

Provide a Map of CBJ Land you wish to Purchase

- Taku-Map-View.pdf

Have you mailed the \$500.00 filing fee?

Yes

Legal Representative of Business / Individual

LEASE

THIS LEASE, made this 26 day of June, 1970, by and between the CITY OF JUNEAU, Alaska, a municipal corporation, hereinafter called "Lessor," and JOHN L. RADER, hereinafter called "Lessee,"

WITNESSETH:

A.
Grant of Lease, Description of
Property, and Duration of Lease

1. Lessor, in consideration of the rents hereinafter reserved and of the agreements herein of the Lessee to be kept, performed and fulfilled, hereby leases the following described premises situated in the City of Juneau, First

Judicial District, State of Alaska, described as follows:

Commencing at Corner No. 3 of U.S.S. No. 752 and the true point of beginning; thence N 58°48' E a distance of 208.80 feet; thence N 33°11' W a distance of 52.00 feet; thence N 77°38' W a distance of 134.39 feet; thence S 58°54' W a distance of 132.80 feet; thence S 41°21' E a distance of 154.33 feet to the true point of beginning of this description, subject to easements of record, a parcel of land containing an area of 0.83 acre.

2. To have and to hold the above-described premises, with right, privileges, easements and appurtenances thereto attaching and belonging, to Lessee for the term of Ninety (90) years from June 26, 1970, paying rent therefor, and yielding possession thereof as hereinafter provided.

B.
Rent

1. For purposes of determining rents to be paid Lessor hereunder, the term of this lease is divided into ten (10) year periods.

2. For the first ten (10) year period hereof, from June 26, 1970, through June 26, 1980, Lessee agree to pay Lessor as rent for the said premises the

JUNEAU sum of \$20,714.40, payable in monthly installments of \$172.62 commencing
Serial No. 12-1153

rent for the said premises such sum as may be agreed to by the parties hereto. In the event the parties cannot agree as to the total amount of rent to be paid for each of said successive ten (10) periods, then the said rent shall be determined by a board of three members, one of whom shall be appointed by Lessee, one of whom shall be appointed by Lessor, and a third member, who shall be an officer of a local bank, to be chosen by the other two. The three members so selected shall determine the full and true value of the said premises, and which for the purposes of this section shall be equal to the value a willing buyer not under compulsion to buy would pay a willing seller not under compulsion to sell, and shall take into account the location of the premises and the use or uses to which it is put and suitable for, but not to include the value of the structure or structures erected thereon by Lessee. They may take into account the agreement of the parties that for the purpose of fixing rent under the 6% formula the premises are now valued at \$1.25 per square foot. The annual rent shall be 6% of the value of the premises as so determined. Provided, however, anything herein to the contrary notwithstanding the rental for any ten (10) year period shall not exceed by more than 20% of the amount paid during the immediately prior ten (10) year period. Increased rental, if any, shall be paid in monthly installments by Lessee to Lessor as aforesaid.

4. All of the rents herein reserved and to be paid Lessor by Lessee shall be paid to Lessor in the name of the City of Juneau, a municipal corporation, or its successor in interest.

1; The leased property shall be subject to application of the

codes,

D.
Taxes, Special Assessments,
Public Service Charges

1. Lessee agrees to pay all taxes and assessments, general and special, and all other dispositions, ordinary and extraordinary, of every kind or nature whatsoever, levied or assessed on the premises, or any part thereof, and on any buildings or improvements at any time situated thereon or levied or assessed, and on any interest of Lessor in or under this lease during the term thereof, at such time or times as the same or any of them become due and payable, and in any case within time to prevent any sale or forfeiture of the premises or any part thereof, and to pay any and all fines, penalties and interest arising out of any delinquent payment or payments thereof.

2. Lessee further agrees to pay to the State of Alaska and to any political subdivision or subdivisions thereof, for and on behalf of Lessor, and as its agent in that respect, any and all sales, use or other taxes on rents of these premises which may be due and payable, at such time or times as they become due and payable, and to pay any and all fines, penalties and interest arising out of any delinquent payment of such taxes.

E.
Mortgage by Lessee

1. Lessee may at any time mortgage or convey by deed of trust in the nature of a mortgage, its estate in the premises and any building or improvement thereon, provided it shall not be in default in any agreement herein contained to be kept, observed and performed by Lessee; and provided further no mortgagee or trustee or other person shall claim any greater rights in the premises and any building or improvement thereon than Lessee has under this lease, and further

of a properly recorded mortgage, conditional assignment, collateral assignment or other interest will have a sixty (60) day option from date of cancellation or forfeiture to cure the default and to acquire the lease for the unexpired term, subject to the same terms and conditions herein contained.

F.
Breach of Lease as Terminating Lease

1. In the event of default by Lessee in the payment of any rent herein provided, or other terms and conditions hereof to be kept, observed and performed by Lessee, and such default shall continue thirty (30) days after notice thereof in writing by Lessor, or its agents or attorneys, then it shall be lawful for Lessor to terminate this lease on thirty (30) days' notice in writing, and it shall thereupon cease and terminate thirty (30) days after such notice, whereupon it shall be lawful for Lessor, its agents and attorneys, to reenter said premises, and any building or improvements thereon. Lessee agrees to peaceably surrender and deliver possession to Lessor, its agents or attorneys immediately upon termination of this lease as aforesaid; and, should there be any holding over after termination of the lease as aforesaid, Lessee shall be deemed to be guilty of forcible detainer under the statute and subject to eviction and removal, forcibly or otherwise, with or without process of law.

G.
Costs and Attorney Fees

1. In case Lessor shall, without any fault on its part, be made a party to litigation commenced by or against Lessee, Lessee shall pay all costs and attorney's fees incurred by or against Lessor, by or in connection with such litigation, and Lessee shall and will also pay all costs and attorney's fees incurred by or against Lessor, in enforcing agreements and provisions of this lease; and all such costs and attorney's fees, if paid by Lessor, or either of them.

H.
Notices

1. Notices to the parties hereto under any provisions of this lease shall be

their address. Any notice given to Lessee shall also be given to any record holder of a mortgage, deed of trust or other interest in the property.

I.
Waivers

1. No waiver of a breach of any of the agreements or provisions contained in this lease shall be construed to be a waiver of any subsequent breach of the same or of any other provision in the lease.

J.
Scope of Words Used

1. All of the terms and conditions of this lease, and all of the words, terms, phrases and expressions contained herein, shall extend to and bind or inure to the benefit of not only the parties named herein, but each and every of the heirs, executors, administrators, successors and assigns of the parties hereto; and, wherever in this lease a reference to either or both of the parties is made, such reference shall include, where applicable, a reference to the heirs, executors, administrators, successors and assigns of such party or parties, and all conditions and agreements contained herein shall include, where applicable, a reference to the heirs, executors, administrators, successors and assigns of such party or parties, and all conditions and agreements contained herein shall be construed as running with the land.

K.
Hold Harmless

In consideration of said premises being leased to Lessee for the above rental, Lessee agrees that Lessee at all times will defend, indemnify and keep harmless Lessor from, and does hereby assume and agree to pay, all losses, damage, liabilities and expenses which may arise or be claimed against Lessor and be in favor of any party or person for any injuries or damages to the person or

neglect or fault of Lessee (its agents, servants, contractors, subcontractors, customers or invitees), or consequent upon or arising from Lessee's failure to comply with any pertinent law, statute, ordinance or regulation; that Lessor shall not be liable to Lessee for any damages, losses or injuries to the person or property of Lessee which may be caused by the acts, neglect, omissions or faults of any party or person, and that Lessee will defend, indemnify and keep harmless Lessor from all damages, liabilities, losses, injuries or expenses which may arise or be claimed against Lessor and be in favor of any party or person for any injuries or damages to the person or property of any party or person, where said injuries or damages arose about or upon said premises.

IN WITNESS WHEREOF, the parties hereto have subscribed their names the day and year hereinabove first written,

CITY OF JUNEAU, ALASKA, Lessor

By

Byron

By

City Manager



W. Stone

Deputy City Clerk

John L. Rader, Lessee

This contract approved as to form
this 26 day of June, 1970.

Joseph H. Hume
City Attorney

This is to certify that on the 26 day of June, 1970, before me, the undersigned, a Notary Public in and for the State of Alaska, duly commissioned and sworn, appeared JOSEPH A. MC LEAN, M. B. WINEGAR, and IONA N. STONE, to me known and known to me to be the persons they represent themselves to be and the Mayor, City Manager, and City Clerk respectively of the City of Juneau, who acknowledged to me that they executed the foregoing instrument as the free act and deed of the City of Juneau for the purposes therein mentioned, being fully authorized to do so.

WITNESS my hand and official seal the day and year in this certificate first above written.

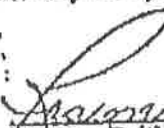

Notary Public for Alaska
My commission expires 1971

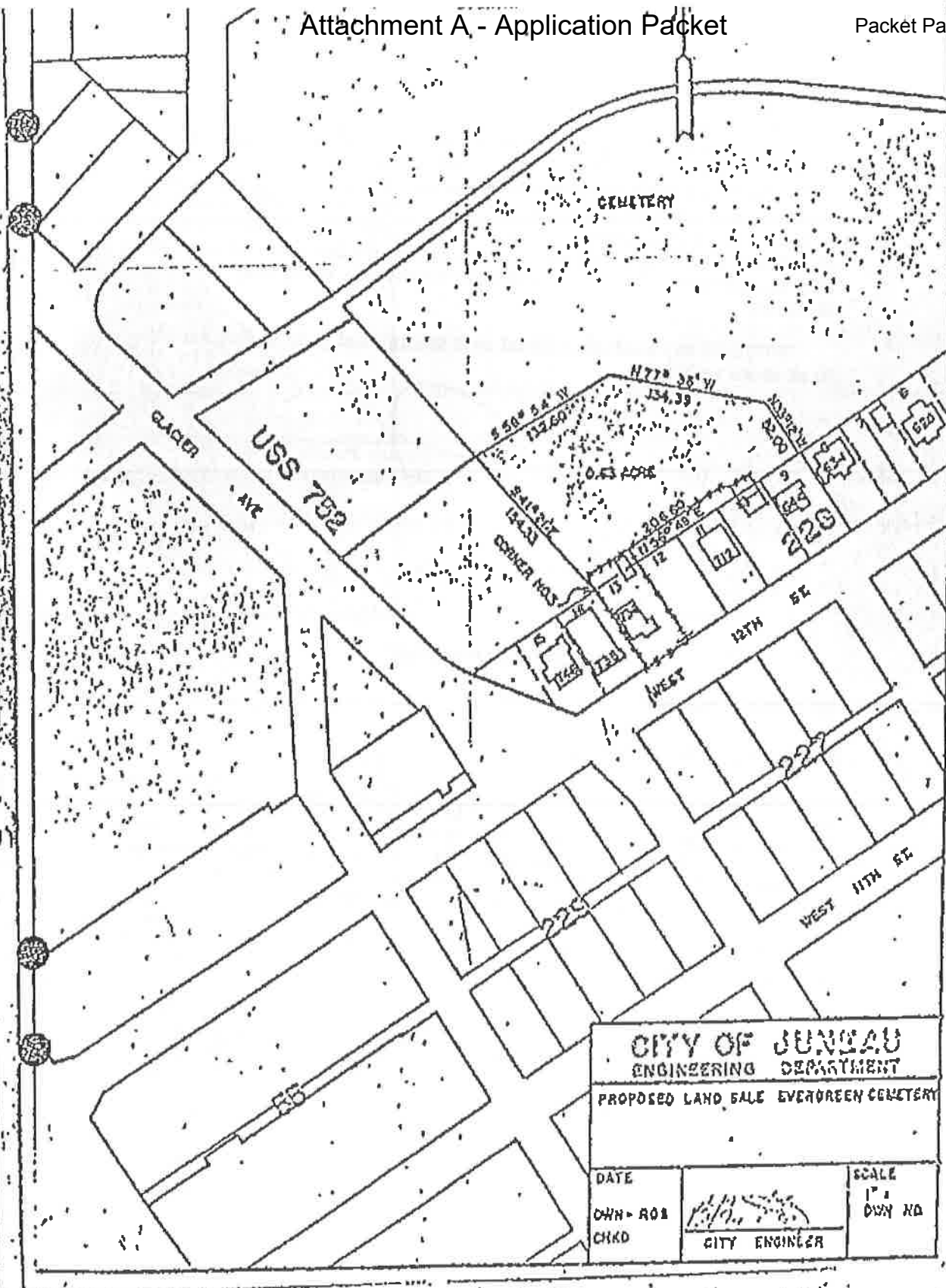
ACKNOWLEDGEMENT

STATE OF ALASKA)
FIRST JUDICIAL DISTRICT) ss.

This is to certify that on the 27 day of June, 1970, before me, the undersigned, a Notary Public in and for the State of Alaska, duly commissioned and sworn, appeared JOHN L. RADER, known to me and to me known to be the individual named in and who executed the foregoing instrument and acknowledged to me that he signed and sealed the same as his voluntary act and deed for the uses and purposes therein mentioned.

WITNESS my hand and official seal the day and year in this certificate first above written.


Notary Public for Alaska
My commission expires 1971



RESOLUTION NO. 704

A RESOLUTION PERTAINING TO THE LEASE OF CERTAIN
PROPERTY IN THE EVERGREEN CEMETERY, JUNEAU,
ALASKA,

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF JUNEAU, ALASKA:

The execution of that certain lease by the Mayor, City Manager and City Clerk, between the City and John L. Rador, attached hereto and made a part hereof, as Exhibit "A", dated the 26th day of June 1970, is hereby ratified and confirmed.

The Council finds that the portion of Evergreen Cemetery described in said Exhibit "A" is not suitable for cemetery purposes, was never used for such purposes, and will not be so used because it is low swampy land, separated from the main part of the Cemetery by a high bank. The City has no use or need for the parcel, and it should be leased as set forth in Exhibit "A" so that some useful purpose can be made of the property.

PASSED AND APPROVED this 26 day of June, 1970,

CITY OF JUNEAU, ALASKA

By Joseph A. Martin
Mayor



By John L. Rador
Deputy City Clerk

RECORDED - FILED	
JUNEAU, ALASKA, DIST.	
DATE <u>7-2</u>	1970
TIME <u>2:04</u>	PM
Transmitted by <u>Phone</u>	
Address <u>Phone</u>	

LEASE

THIS LEASE, made this 26 day of June, 1970, by and between the CITY OF JUNEAU, Alaska, a municipal corporation, hereinafter called "Lessor," and JOHN L. RADER, hereinafter called "Lessee,"

WITNESSETH:

A,
Grant of Lease, Description of
Property, and Duration of Lease.

1. Lessor, in consideration of the rents hereinafter reserved and of the agreements herein of the Lessee to be kept, performed and fulfilled, hereby leases the following described premises situated in the City of Juneau, First

Judicial District, State of Alaska, described as follows:

Commencing at Corner No. 3 of U.S.S. No. 763 and the true point of beginning; thence N 58°48' E a distance of 208.80 feet; thence N 33°11' W a distance of 52.00 feet; thence N 77°38' W a distance of 134.39 feet; thence S 58°54' W a distance of 132.00 feet; thence S 41°21' E a distance of 154.33 feet to the true point of beginning of this description, subject to easements of record, a parcel of land containing an area of 0.83 acre,

2. To have and to hold the above-described premises, with right, privileges, easements and appurtenances therunto attaching and belonging, to Lessee for the term of Ninety (90) years from June 26, 1970, paying rent therefor, and yielding possession thereof as hereinafter provided.

B,
Rent

1. For purposes of determining rents to be paid Lessor hereunder, the term of this lease is divided into ten (10) year periods,

2. For the first ten (10) year period hereof, from June 26, 1970, through June 26, 1980, Lessee agrees to pay Lessor as rent for the said premises the

JUNEAU sum of \$20,714.40, payable in monthly installments of \$172.62 commencing
Serial No. 72-4153

in said ten (10) year period,

3. For the second ten (10) year period, and for each successive ten (10) year period thereafter during the term of this lease, Lessee agrees to pay Lessor as rent for the said premises such sum as may be agreed to by the parties hereto. In the event the parties cannot agree as to the total amount of rent to be paid for each of said successive ten (10) periods, then the said rent shall be determined by a board of three members, one of whom shall be appointed by Lessee, one of whom shall be appointed by Lessor, and a third member, who shall be an officer of a local bank, to be chosen by the other two. The three members so selected shall determine the full and true value of the said premises, and which for the purposes of this section shall be equal to the value a willing buyer not under compulsion to buy would pay a willing seller not under compulsion to sell, and shall take into account the location of the premises and the use or uses to which it is put and suitable for, but not to include the value of the structure or structures erected thereon by Lessee. They may take into account the agreement of the parties that for the purpose of fixing rent under the 8% formula the premises are now valued at \$1.25 per square foot. The annual rent shall be 8% of the value of the premises as so determined. Provided, however, anything herein to the contrary notwithstanding the rental for any ten (10) year period shall not exceed by more than 20% of the amount paid during the immediately prior ten (10) year period. Increased rental, if any, shall be paid in monthly installments by Lessee to Lessor as aforesaid.

4. All of the rents herein reserved and to be paid Lessor by Lessee shall be paid to Lessor in the name of the City of Juneau, a municipal corporation, or its successor in interest.

1; The leased property shall be subject to applicable zoning and building

codes.

D,
Taxes, Special Assessments,
Public Service Charges

1. Lessee agrees to pay all taxes and assessments, general and special, and all other dispositions, ordinary and extraordinary, of every kind or nature whatsoever, levied or assessed on the premises, or any part thereof, and on any buildings or improvements at any time situated thereon or levied or assessed, and on any interest of Lessor in or under this lease during the term thereof, at such time or times as the same or any of them become due and payable, and in any case within time to prevent any sale or forfeiture of the premises or any part thereof, and to pay any and all fines, penalties and interest arising out of any delinquent payment or payments thereof.

2. Lessee further agrees to pay to the State of Alaska and to any political subdivision or subdivisions thereof, for and on behalf of Lessor, and as its agent in that respect, any and all sales, use or other taxes on rents of these premises which may be due and payable, at such time or times as they become due and payable, and to pay any and all fines, penalties and interest arising out of any delinquent payment of such taxes.

E,
Mortgage by Lessee

1. Lessee may at any time mortgage or convey by deed of trust in the nature of a mortgage, its estate in the premises and any building or improvement thereon, provided it shall not be in default in any agreement herein contained to be kept, observed and performed by Lessee; and provided further no mortgagee or trustee or other person shall claim any greater rights in the premises and any building or improvement thereon than Lessee has under this lease, and further

2. Should this lease be canceled or forfeited for cause, the holder or owner of a properly recorded mortgage, conditional assignment, collateral assignment or other interest will have a sixty (60) day option from date of cancellation or forfeiture to cure the default and to acquire the lease for the unexpired term, subject to the same terms and conditions herein contained.

F.

Breach of Lease as Terminating Lease

1. In the event of default by Lessee in the payment of any rent herein provided, or other terms and conditions hereof to be kept, observed and performed by Lessee, and such default shall continue thirty (30) days after notice thereof in writing by Lessor, or its agents or attorneys, then it shall be lawful for Lessor to terminate this lease on thirty (30) days' notice in writing, and it shall thereupon cease and terminate thirty (30) days after such notice, whereupon it shall be lawful for Lessor, its agents and attorneys, to reenter said premises, and any building or improvements thereon. Lessee agrees to peaceably surrender and deliver possession to Lessor, its agents or attorneys immediately upon termination of this lease as aforesaid; and, should there be any holding over after termination of the lease as aforesaid, Lessee shall be deemed to be guilty of forcible detainer under the statute and subject to eviction and removal, forcibly or otherwise, with or without process of law.

G.

Costs and Attorney Fees

1. In case Lessor shall, without any fault on its part, be made a party to litigation commenced by or against Lessee, Lessee shall pay all costs and attorney's fees incurred by or against Lessor, by or in connection with such litigation, and Lessee shall and will also pay all costs and attorney's fees incurred by or against Lessor, in enforcing agreements and provisions of this lease; and all such costs and attorney's fees, if paid by Lessor, or either of them.

H.

Notices

1. Notices to the parties hereto under any provisions of this lease shall be

their address. Any notice given to Lessee shall also be given to any record holder of a mortgage, deed of trust or other interest in the property.

I.
Waivers

1. No waiver of a breach of any of the agreements or provisions contained in this lease shall be construed to be a waiver of any subsequent breach of the same or of any other provision in the lease.

J.
Scope of Words Used

1. All of the terms and conditions of this lease, and all of the words, terms, phrases and expressions contained herein, shall extend to and bind or insure to the benefit of not only the parties named herein, but each and every of the heirs, executors, administrators, successors and assigns of the parties hereto; and, wherever in this lease a reference to either or both of the parties is made, such reference shall include, where applicable, a reference to the heirs, executors, administrators, successors and assigns of such party or parties, and all conditions and agreements contained herein shall include, where applicable, a reference to the heirs, executors, administrators, successors and assigns of such party or parties, and all conditions and agreements contained herein shall be construed as running with the land.

K.
Hold Harmless

In consideration of said premises being leased to Lessee for the above rental, Lessee agrees that Lessee at all times will defend, indemnify and keep harmless Lessor from, and does hereby assume and agree to pay, all losses, damage, liabilities and expenses which may arise or be claimed against Lessor and be in favor of any party or person for any injuries or damages to the person or

neglect or fault of Lessee (his agents, servants, employees, licensees, customers or invitees), or consequent upon or arising from Lessee's failure to comply with any pertinent law, statute, ordinance or regulation; that Lessor shall not be liable to Lessee for any damages, losses or injuries to the person or property of Lessee which may be caused by the acts, neglect, omissions or faults of any party or person, and that Lessee will defend, indemnify and keep harmless Lessor from all damages, liabilities, losses, injuries or expenses which may arise or be claimed against Lessor and be in favor of any party or person for any injuries or damages to the person or property of any party or person, where said injuries or damages arose about or upon said premises.

IN WITNESS WHEREOF, the parties hereto have subscribed their names the day and year hereinabove first written,

CITY OF JUNEAU, ALASKA, Lessor

By Joseph A. Ben
Mayor

By McElrath
City Manager



W. Stone
Deputy City Clerk

John L. Rader
John L. Rader, Lessee

This contract approved as to form this 26 day of June, 1970.

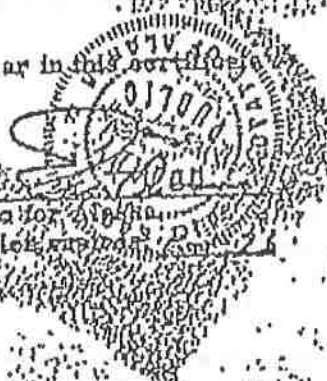
Joseph A. Ben
City Attorney

FIRST JUDICIAL DISTRICT)
ss.

This is to certify that on the 26 day of June, 1970, before me, the undersigned, a Notary Public in and for the State of Alaska, duly commissioned and sworn, appeared JOSEPH A. MCLEAN, M. B. WINEGAR, and IONA N. STONE, to me known and known to me to be the persons they represent themselves to be and the Mayor, City Manager, and City Clerk respectively of the City of Juneau, who acknowledged to me that they executed the foregoing instrument as the free act and deed of the City of Juneau for the purposes therein mentioned, being fully authorized to do so.

WITNESS my hand and official seal the day and year in this certificate first above written.

[Signature]
Notary Public for Alaska
My commission expires June 26, 1971



ACKNOWLEDGEMENT

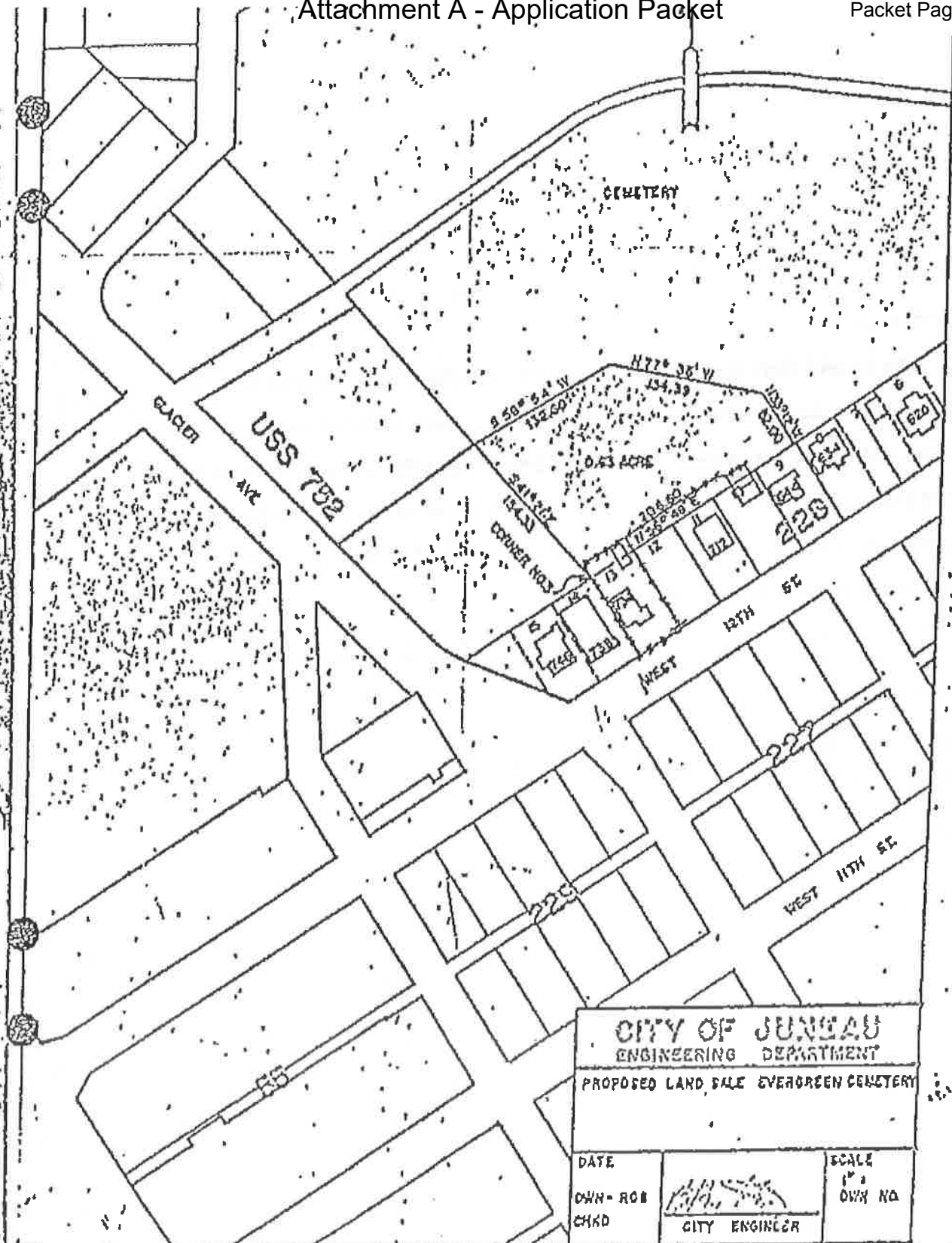
STATE OF ALASKA)
FIRST JUDICIAL DISTRICT) ss.

This is to certify that on the 27 day of June, 1970, before me, the undersigned, a Notary Public in and for the State of Alaska, duly commissioned and sworn, appeared JOHN L. RADER, known to me and to me known to be the individual named in and who executed the foregoing instrument and acknowledged to me that he signed and sealed the same as his voluntary act and deed for the uses and purposes therein mentioned.

WITNESS my hand and official seal the day and year in this certificate first above written.

[Signature]
Notary Public for Alaska
My commission expires June 26, 1971





RESOLUTION NO. 7046
A RESOLUTION PERTAINING TO THE LEASE OF CERTAIN
PROPERTY IN THE EVERGREEN CEMETERY, JUNEAU,
ALASKA,

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF JUNEAU, ALASKA:

The execution of that certain lease by the Mayor, City Manager and City Clerk, between the City and John L. Rador, attached hereto and made a part hereof, as Exhibit "A", dated the 26th day of June 1970, is hereby ratified and confirmed.

The Council finds that the portion of Evergreen Cemetery described in said Exhibit "A" is not suitable for cemetery purposes, was never used for such purposes, and will not be so used because it is low swampy land, separated from the main part of the Cemetery by a high bank. The City has no use or need for the parcel, and it should be leased as set forth in Exhibit "A" so that some useful purpose can be made of the property.

PASSED AND APPROVED this 26 day of June, 1970.

CITY OF JUNEAU, ALASKA

By James A. Sullivan
Mayor

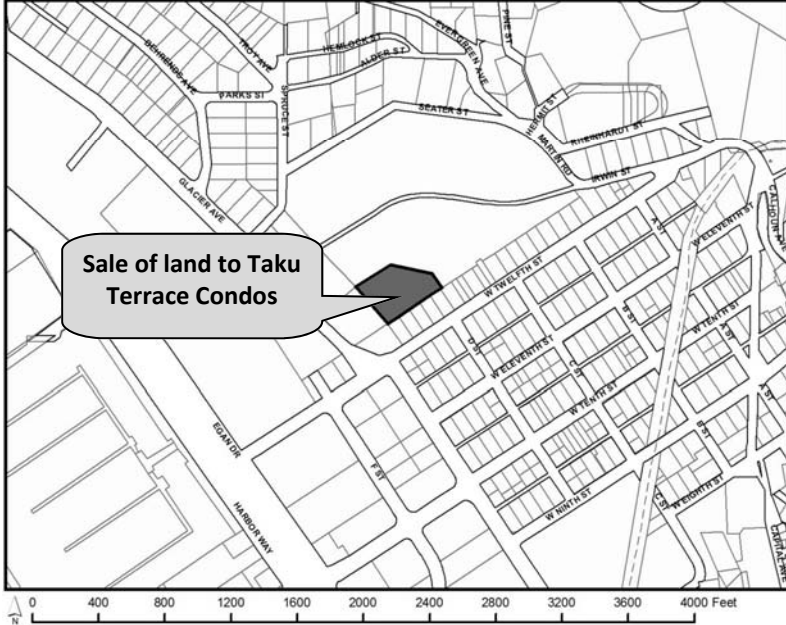


By W. S. True
Deputy City Clerk

RECORDED - FILED	
JUNEAU REC. DIST.	
DATE <u>7-2</u>	19 <u>70</u>
TIME <u>2:04</u>	<u>PM</u>
Transmitted by <u>Acorns</u>	

Invitation to Comment

On a proposal to be heard by the CBJ Planning Commission
Your Community, Your Voice



155 S. Seward Street Juneau, Alaska 99801

TO:

An application has been submitted for consideration and public hearing by the Planning Commission for a **land disposal request** located at **1220 Glacier Avenue** in a **D18 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, Allison Eddins , 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.: CSP2020 0006
Parcel No.: 1C030J010001
CBJ Parcel Viewer: <http://epv.juneau.org>

From: [Tom Wagner](#)
To: [PC_Comments](#)
Subject: Case No. CSP2020 0006
Date: Sunday, July 5, 2020 1:47:05 PM

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

I am in favor of the land disposal. I live at nearby Glacier Avenue Condos, which are on land leased from the Russian Orthodox Church. It is awkward for a condo owner to be in a building not owned by the condo association. It creates uncertainty and affects market value. CBJ should certainly seek fair market value for the property. Tom Wagner

From: Susi Gregg Fowler <Cowler.Susi@seagrant.mn.gov>
Sent: Monday, July 06, 2020 11:31 AM
To: PC_Comments
Subject: Case No.: CSP2020 0006

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EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

July 6, 2020

ATTN: Allison Eddins, Planner
Re: Case No.: CSP2020 0006

Dear Ms. Eddins:

I have lived in "the flats" for 40 years and have been a homeowner on 12th Street for 38 of those years. As a neighbor, I recently received notification of an application for a land disposal request located at 1220 Glacier Avenue.

I support this request. I think that full ownership adds to the security of the owners' investment and to the stability of the neighborhood. I've known many neighbors there at Taku Terrace, both owners and renters in various units. I think the enhanced ownership security for those who have bought units has value, hurts no one, and possibly helps the City as well.

Not owning the land on which the Taku Terrace condominium complex rests limits the loan opportunities for potential purchasers and so it seems to me limits the value to the owners. Years ago I knew buyers who were eligible for an unconventional loan but the land ownership issue meant they were unable to take advantage of that loan and so did not buy the unit--a lost opportunity for both owner and prospective buyers. It strikes me that enabling purchase through certain unconventional loan programs actually enhances the City's goal of affordable housing, opening opportunities to those who may not qualify for a traditional loan.

It seems likely that purchasing the land on which the complex rests could also benefit the city in this difficult financial environment--a cash infusion rather than spreading out small amounts over the balance of the current lease. Of course, CBJ would also need to be fair and reasonable in setting a price. I would also guess that once the property is sold outright the City would be released from whatever its existing liability may be.

I hope that you will recommend to the commission their support of this proposed sale. Thank you.

Susi Gregg Fowler
603 West 12th Street
Juneau, Alaska. 99801

--

**ASSEMBLY STANDING COMMITTEE MINUTES
LANDS AND RESOURCES COMMITTEE
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

June 22, 2020, 5:00 P.M.

City Hall, Assembly Chambers, Zoom Webinar Meeting

I. ROLL CALL

Chair Edwardson called the meeting to order at 5:00pm.

Members Present: Chair Rob Edwardson, Alicia Hughes-Skandijs, Greg Smith, Carole Triem

Members Absent: None

Liaisons Present: Chris Mertl, Parks and Recreation; Chris Dimond, Docks and Harbors

Liaisons Absent: Michael LeVine, Planning Commission

Other Assembly Members Present: Loren Jones

Some Members of the Public Present: Taku Terrace Homeowners Association members

Staff Present: Dan Bleidorn, Lands Manager; Roxie Duckworth, Lands & Resources Specialist; Teresa Bowen, Assistant Attorney

II. APPROVAL OF AGENDA

Mr. Bleidorn added a staff report item to the agenda. The agenda was approved.

III. APPROVAL OF MINUTES

The June 1, 2020 Draft Minutes were approved.

IV. PUBLIC PARTICIPATION

None

V. AGENDA TOPICS

A. Taku Terrace Association Request to Purchase City Property

Mr. Bleidorn discussed this item. Taku Terrace is located at 1220 Glacier Avenue and the total square footage for this property is .63 acres. The land below the condos is owned by the City and has been leased to the condo association since 1970. There is no road frontage to the condos on Glacier Avenue but there is a long existing easement agreement to allow for access. There are 35 condo units. The lease is for 90 years with forty years left. One of the clauses in the lease states that the rent is to be evaluated every ten years and "the rental for any ten (10) year period shall not exceed by more than 20% of the amount paid during the immediately prior ten (10) year period." Currently Taku Terrace's lease rate is \$296.38 per month. Because of the 20% cap on the lease rate, this lease is not currently at fair market value. The last

assessment of this property is from 2000 and determined that the fair market value for the lease would have been \$1,852.50 per month.

On May 21, 2020, the Lands Office received a request from Taku Terrace Association declaring that there is interested in acquiring the property from the City. Private financing on the condominiums has become problematic because Taku Terrace Association does not own the land that the condominiums are built on. This property was listed in the 2016 Land Management Plan as “retain” which will need to be updated prior to a disposal of this property. If the Lands Committee provides a positive motion to work with the original proposer, the next step in the process will be to have this request reviewed by the Planning Commission. The Planning Commission will evaluate for conformity with existing plans, including the Land Management Plan and provide a recommendation to the Assembly.

Bringing this to the Lands Committee for discussion is the first step in the process. The Assembly would decide to retain the property, work with the original proposer, or open it up for competition. Because Taku Terrace owns the building on top of the land, it makes sense to work with them on this proposal. The application has been reviewed by Lands staff and deemed complete and a Planning Commission review has been started due to the large file for this property and the uniqueness of this situation. After a Planning Commission, meeting it will go to the Assembly as new business and back to Lands prior to an ordinance drafted, if this proposal has been approved along the way.

Ms. Hughes-Skandijs asked what the status of this property was in the adopted Land Management plan. Mr. Bleidorn replied that there was an oversight in the 2016 plan with the thought that this property was to be retained due to the long-standing lease and there was no proposals to purchase the property at that time. Part of the Planning Commission and Staff review is to look at this detail to make sure it makes sense to make the change from retain to dispose.

Mr. Mertl asked if the property is the entire property that the condominiums are on, Mr. Bleidorn confirmed. Mr. Mertl asked if there are any legal complications with the easement going through the adjacent piece of property that may cause future issue. Mr. Bleidorn replied that he has not found any complications through his research and that this is one area that will be addressed through the Planning Commission to help set up this proposal in the future to avoid any legal complications.

Chair Edwardson asked Mr. Bleidorn to explain leases in regards to land rights. Mr. Bleidorn replied that this agreement is written as a lease with a 90-year lease with nine, ten-year terms, but when that lease expires, it could get complicated with the ownership of the building when the land reverts back to the City. Part of this request is to ensure the future of the condo association is secure. Chair Edwardson commented that he was referring to a land right, if you imagine all of the rights that

exists in land as a bundle of sticks. The City is not giving up just the right of occupancy with the lease, we are not just letting someone live there we are giving up legal rights they get a good portion, maybe half of that bundle of sticks is rights. If the City does not approve this then it will stay a lease for the next forty years. It is binding agreement that surrenders certain rights to the lessee.

A motion of support to the Assembly to work with the original proposer (Taku Terrace Association) for the disposal of a fraction of U.S. Survey 655; passed.

VI. STAFF REPORTS

A. Juneau Home Building Program Update

Mr. Bleidorn highlighted the success that the Home Build Program has had in Juneau. Mr. Bleidorn had recently spoken with Tamara Rowcroft, the executive director at Alaska Housing Development Corporation, about the progress she has made with the Juneau Home Build program. She has been working with Juneau high schools on a property that was sold to her organization from the City. Ms. Rowcroft was pleased to announce that the first house through this project has been completed and she is working on closing on the house, as it has been sold. Mr. Bleidorn wanted to update the Lands Committee, as this committee has been an advocate for this project in getting this property to the housing trust. This is the first of seven houses they plan on building. She has had delays with the COVID pandemic and working with the school district, with a previous goal of building one house per school year and that has changed a little, with a second house that should be completed in the fall semester. The Jackie Street lot that was sold to the housing trust in 2017 was about fifty percent of fair market value with the requirement that they build the houses with the home build program. The housing trust puts these in a 99-year land lease, in which these houses are sold under. This is a great program that provides a lot of training to the students that participate.

VII. COMMITTEE MEMBER / LIAISON COMMENTS AND QUESTIONS

No Liaison reports provided.

VIII. ADJOURNMENT

Chair Edwardson adjourned the meeting at 5:18PM.

GUIDELINES**Laws and Protocols Pertaining to the
Discovery of Human Remains in Alaska**

The treatment of human remains following inadvertent discovery is governed by state and federal laws, land status, postmortem interval (time since death), and biological/cultural affiliation. First and foremost, the site of discovered remains should be regarded a potential “crime scene” until a person with appropriate expertise and authority determines otherwise.

State Laws:

Several State laws are applicable to the discovery of human remains in Alaska. The State Medical Examiner (SME) has jurisdiction over all human remains in the state (with rare exceptions, such as military aircraft deaths), regardless of age.

AS 12.65.5 requires immediate notification of a peace officer of the state (police, Village Public Safety Officer, or Alaska State Trooper [AST]) and the State Medical Examiner when death has “been caused by unknown or criminal means, during the commission of a crime, or by suicide, accident, or poisoning.”

In this regard, contact the Alaska State Trooper/Missing Persons Bureau first. (See list of contacts on following page.) The AST has interpreted notification procedures as applicable to all remains, including ancient remains.

AS 11.46.482(a)(3), which applies to all lands in Alaska, makes the “intentional and unauthorized destruction or removal of any human remains or the intentional disturbance of a grave” a class C felony.

AS 41.35.200, which applies only to State lands, makes the disturbance of "historic, prehistoric and archeological resources" (including graves, per definition) a class A misdemeanor.

AS 18.50.250, which applies to all lands in Alaska, requires permits for the disinterment, transport, and reinterment of human remains. Guidance and permits are available from the Bureau of Vital Statistics (see attached list of contacts).

Federal Laws:

On Federal lands and Federal trust lands, the unauthorized destruction or removal of archaeological human remains (i.e., more than 100 years old) is a violation of **16 USC 470ee** (Archeological Resources Protection Act). If human remains on federal or federal trust lands are determined to be Native American, their treatment and disposition are also governed by the Native American Graves and Repatriation Act (NAGPRA) of 1990 (**PL 101-601; 25 USC 3001-30013**; 104 Stat. 3048-3058; 43 CFR 10). NAGPRA also applies to Native American human remains from any lands if the remains are curated in any institution that receives federal funds.

General Guidance:

Your first contacts should be the AST/Missing Persons Bureau, the Alaska State Medical Examiner’s Office, local law enforcement, the Alaska Office of History and Archaeology, and the landowner.

In many instances, the field archaeologist must make a judgement call regarding the age of the remains, his/her level of confidence in the evaluation, and whether further investigation by a specialist is warranted. While notification under State Law is required, peace officers and the SME generally regard archaeologists competent to make these type determinations and welcome input that may assist with the investigation. With regard to ancient remains (> 100 years old), the SME and AST will generally defer to the opinion of the field archaeologist and require no further criminal investigation. However, the remains and a surrounding buffer area should not be disturbed until appropriate reporting and consultation have occurred.

Dr. Richard VanderHoek, State Archaeologist
Alaska Office of History and Archaeology
550 W. 7th Avenue, Suite 1310
Anchorage, AK 99501
(907) 269-8728 or richard.vanderhoek@alaska.gov

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Attachment E - Human Remains Discovery Guide
CONTACT INFORMATION FOR STATE OFFICIALS INVOLVED WITH HUMAN
REMAINS ISSUES IN ALASKA

****Denotes suggested contact person in list below.***

1.) Alaska State Troopers, Missing Persons Bureau:

Phone: (907) 269-5477

Fax: (907) 338-7243

Sgt. Kid Chan

Phone: (907) 269-5058

e-mail: choong.chan@alaska.gov

*Stephanie Johnson

Phone: (907) 269-5497

e-mail: steph.johnson@alaska.gov

*After contact by phone, send e-mail with relevant information and photos to Sgt. Chan and Stephanie Johnson.

2.) Alaska State Medical Examiner's Office:

* Reporting Hotline (Death Hotline) to speak with on-duty investigator.

Phone: (907) 334-2356

1-888-332-3273 (Outside Anchorage)

Stephen Hoage, Operations Administrator

Phone: (907) 334-2202

Fax: (907) 334-2216

e-mail: stephen.hoage@alaska.gov

Dr. Gary Zientek, Chief Medical Examiner

Phone: (907) 334-2200

Fax: (907) 334-2216

e-mail: gary.zientek@alaska.gov

3.) Alaska Office of History and Archaeology (State Historic Preservation Office):

Judith E. Bittner, Chief / State Historic Preservation Officer (SHPO)

Phone: (907) 269-8721

Fax: (907) 269-8908

E-mail: judy.bittner@alaska.gov

*Dr. Richard VanderHoek, State Archaeologist / Deputy SHPO

Phone: (907) 269-8728

Fax: (907) 269-8908

E-mail: richard.vanderhoek@alaska.gov

Alaska Bureau of Vital Statistics

Heidi Lengdorfer, Chief

Phone: (907) 465-8643

e-mail: heidi.lengdorfer@alaska.gov

For questions regarding burial transit permits:

Margo Meyer

Phone: (907) 465-8610

e-mail: margo.meyer@alaska.gov

CSP2020 0006

Staff recommends **APPROVAL** of disposal of 1220 Glacier Avenue to Taku Terrace Condo Association with one advisory condition.

July 28, 2020 Planning Commission

Vicinity

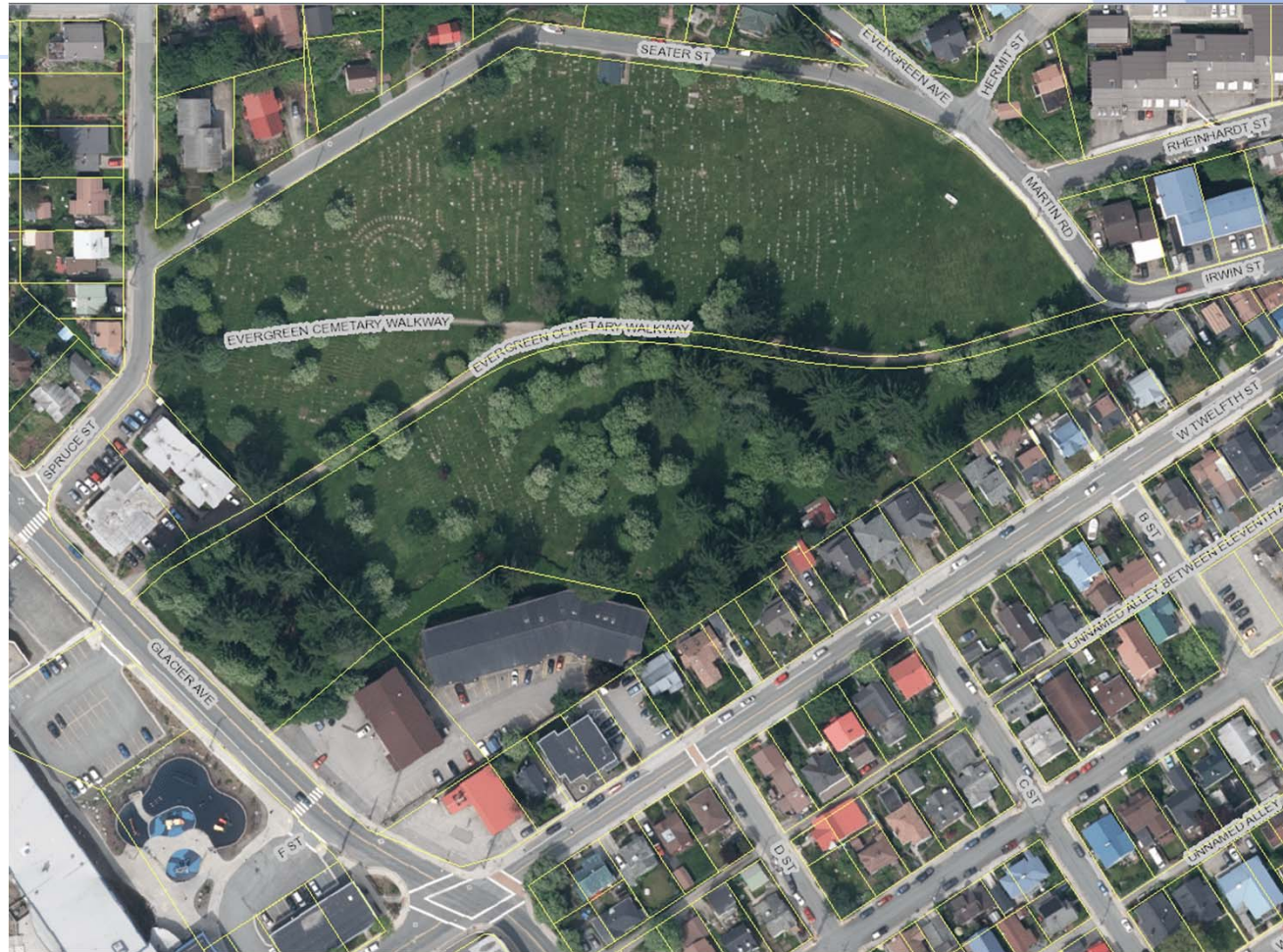


Project Overview:

- Taku Terrace Condo Association has been leasing the lot from CBJ since 1970 through approval of Resolution No. 404.
- Having the condos and the land under common ownership will make financing easier.

Background

- The subject lot was originally part of the Evergreen Cemetery lot.
- The condos were constructed between 1970 and 1972.
- The Evergreen Cemetery was re-subdivided in 1972 creating the condominium lot.
- CBJ Parks and Recreation Department manages and maintains the cemetery.
- On June 22, 2020 CBJ Lands Committee passed a motion to support the land sale.



Agency Review

CBJ Parks & Rec. – There is the possibility of unknown graves along the common property line.

CBJ Risk Mgmt. – No liability if graves are found.

In 2015, CBJ digitized burial records and mapped the locations of known graves.

No records indicate that gravesites are located on the Taku Terrace lot.



Agency Review cont.

ADVISORY CONDITION:

If the lot is sold to the Taku Terrace Condo Association, and if any human remains are discovered during development activity, the individual responsible for the management of 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.



Public comments

- Public notice postcards were mailed to property owners within 500 feet of the property on June 3, 2020.
- A notice appeared in the Juneau Empire on July 17th and July 27th.

Conformity with adopted plans



2013 Comprehensive Plan

Chapter 17 – Community Development

Policy 17.2. To hold certain lands in the public trust, and to dispose of certain lands for private use when disposal serve the public interest.

Conformity with adopted plans cont.



2016 Lands Management Plan

Goal 1 – Continue the land disposal program which systematically places CBJ land into private ownership

Objective 2: Expand the property tax base.

Objective 5: Maximize the CBJ's return of its property.

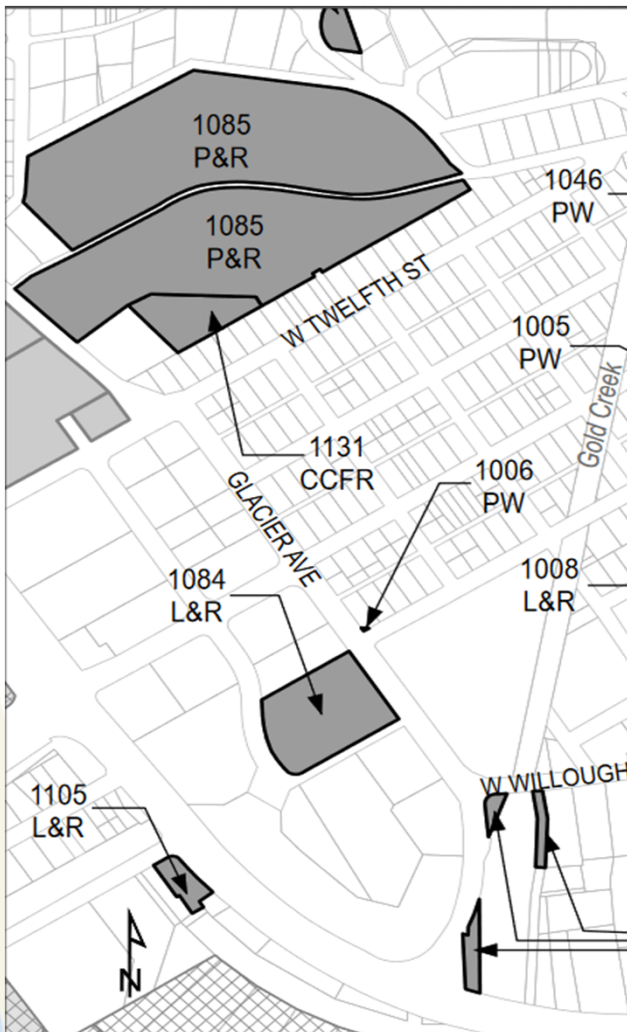
Objective 6: Provide opportunities for as many people as possible to acquire CBJ land.

Conformity with adopted plans cont.

2016 Lands Management Plan

CBJ Land Holdings – “Retain”

- The Lands Committee at the June 22, 2020 meeting recognized that this lot may have been overlooked in the 2016 Lands Management Plan and supported changing the retention status to “Dispose.”
- The Lands Committee supports the sale to Taku Terrace Condo Association.



Map No. 19: Cope Park

Recommend APPROVAL with

Advisory Condition:

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.



Planning Commission

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

PLANNING COMMISSION

NOTICE OF RECOMMENDATION

Date: August 5, 2020

File No.: CSP2020 0006

City and Borough of Juneau
CBJ Assembly Members
155 S Seward Street
Juneau, AK 99801

Proposal: Planning Commission Recommendation to the City and Borough Assembly regarding a land disposal request and sale of land to Taku Terrace Condos.

Property Address: 1220 Glacier Avenue

Legal Description
or ROW name: USS 655 FR

Parcel Code No.: 1C030J010001

Hearing Date: July 28, 2020

The Planning Commission, at a regular public meeting, adopted the analysis listed in the attached staff report dated July 16, 2020, and recommended approval for the land disposal and sale of land to Taku Terrace Condo Association, with the following amendments to staff's Finding and Recommendation.

Finding as Amended:

In accordance with CBJ 49.15.580, staff finds the proposed land sale to the Taku Terrace Condo Association complies with Title 49 Land Use Code and is in general conformity with adopted plans, *specifically the 2013 Comprehensive Plan and the intent of the 2016 Lands Management Plan.* (Emphasis added)

City and Borough of Juneau
 CBJ Assembly
 File No.: CSP2020 0006
 August 5, 2020
 Page 2 of 3

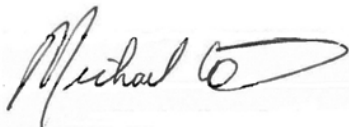
Recommendation as Amended:

1. The 2016 Lands Management Plan designation for the subject lot should be changed from "Retain" to "Dispose".
2. The CBJ Assembly should approve the land disposal request for USS 655 FR and sale the land to the Taku Terrace Condo Association.
3. The Taku Terrace Condo Association should be notified 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.

Attachments: July 16, 2020 staff report from Allison Eddins, Community Development, to the CBJ Planning Commission regarding CSP2020 0006.

This Notice of Recommendation constitutes a recommendation of the CBJ Planning Commission to the City and Borough Assembly. Decisions to recommend an action are not appealable, even if the recommendation is procedurally required as a prerequisite to some other decision, according to the provisions of CBJ 01.50.020(b).

Project Planner: 
 Allison Eddins, Planner
 Community Development Department


 Michael LeVine, Chair
 Planning Commission


 Filed With Municipal Clerk

8/7/2020
 Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this development project. ADA regulations have access requirements above and beyond CBJ - adopted regulations. The CBJ and project designers are

City and Borough of Juneau

CBJ Assembly

File No.: CSP2020 0006

August 5, 2020

Page 3 of 3

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.

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

SMF2020 0001: Final Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels) - APPROVED AS RECOMMENDED

AGENDA ITEM:

Case No.: SMF2020 0001

Applicant: William & Michael Heumann

Location: 4506 Hillcrest Avenue

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

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.

ATTACHMENTS:

Description	Upload Date	Type
☐ Staff Report for SMF2020 0001 - Part 1	7/21/2020	Staff Report
☐ Staff Report for SMF2020 0001 - Part 2	7/21/2020	Staff Report
☐ Presentation for SMF2020 0001	7/27/2020	Presentation
☐ Notice of Decision for SMF2020 0001	8/7/2020	Notice of Decision



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

Laurel Christian

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 and 3) 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:
 - o Minimum lot width is 25 feet
 - o 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.



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) 781001160010		
	☐ 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 mphekmann@hotmail.com		
	<th>LANDOWNER/ LESSEE CONSENT</th> 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 <u>[Signature]</u> <u>5/12/20</u> Landowner/Lessee Signature Date X <u>[Signature]</u> <u>5/12/20</u> 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 Same	Contact Person		
Mailing Address	Phone Number(s)		
E-mail Address			
X <u>[Signature]</u> Applicant's Signature		<u> </u> Date of Application	

-----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	LEC
Case Number	SMF20-001
Date Received	5/12/20



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.

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

☒ 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.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

Case Number	Date Received
SMF20-001	5/12/20 LEC

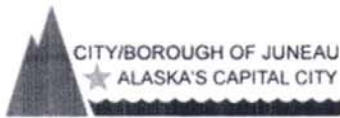
Chilkat Vistas Project Narrative



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

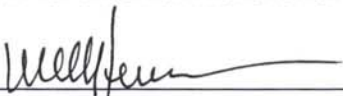
11. Residential sprinkler systems will be permitted and installed

**FINAL PLAT CHECK LIST**

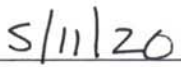
Name of Proposed Subdivision: _____

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

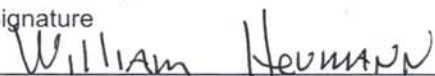
- ☒ Application, filled out completely
- ☒ Application fee (see fee schedule)
- ☒ Preliminary Plat Notice of Decision
- ☐ Three (3) – 24" by 36" Copies
- ☒ Project Narrative explaining compliance with Notice of Decision preliminary plat conditions
- ☐ Draft improvement guarantee, if applicable
- ☐ Not Closure Report if any change to lots
- ☐ Certificates of approval for water and sanitary systems
- ☐ Proof of construction plan approval
- ☒ Final Plat Checklist: I have reviewed the checklist and all submittals for completeness and accuracy.



Signature



Date



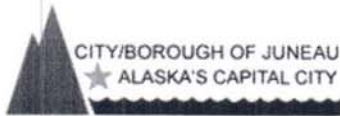
Print Name

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



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

Attachment A - Application Packet

- ☒ 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

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- If required, the following additional mapping or reports shall be submitted:

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.



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
- ▨ DRAINAGE EASEMENT ESTABLISHED THIS SURVEY
- ▩ ACCESS EASEMENT ESTABLISHED THIS SURVEY
- ▧ DRAINAGE & SEWER EASEMENT ESTABLISHED THIS SURVEY
- ▦ ELECTRICAL EASEMENT ESTABLISHED THIS SURVEY

LOT 1
PLAT 2019-3

LOT 1B
PLAT 2003-23

LOT 3
PLAT 99-52

LOT 4
PLAT 99-52

LOT 9
PLAT 88-39

LOT 19
PLAT 88-39

HOOTER LANE
60.0 ROW

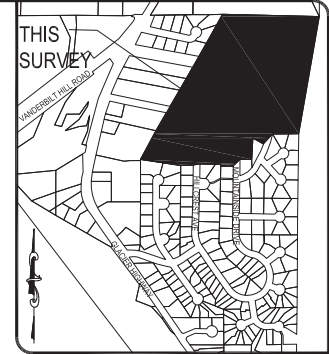
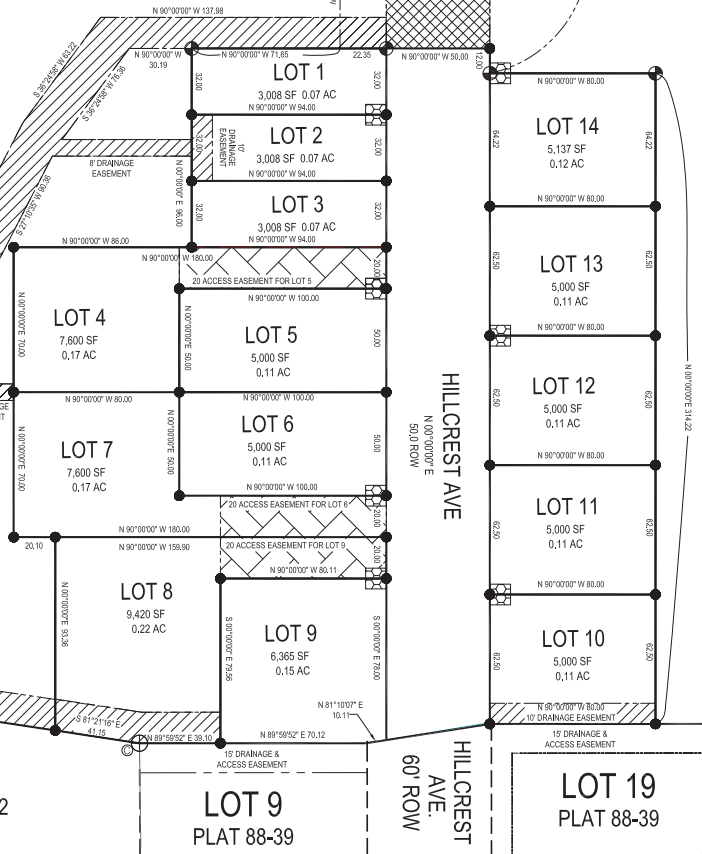
HILCREST AVE
N 07°00'00" E
50.0 ROW

HILCREST AVE
60 ROW

PUBLIC DRAINAGE & SEWER
EASEMENT

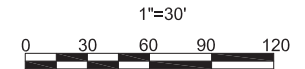
TEMPORARY
CUL-DE-SAC
EASEMENT
PLAT 89-89

TEMPORARY
CUL-DE-SAC
EASEMENT
PLAT 89-89

**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



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
907-857-1908

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

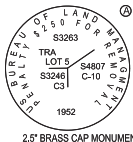
SMF:
20200001

SCALE:
1" = 30'

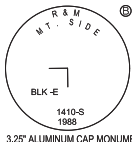
DATE:
1 JUNE 2020

SHEET NO.
2 OF 3

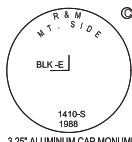
FOUND MONUMENT DESCRIPTIONS:



2.5" BRASS CAP MONUMENT



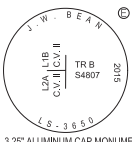
3.25" ALUMINUM CAP MONUMENT



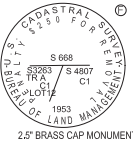
3.25" ALUMINUM CAP MONUMENT



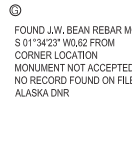
2.5" BRASS CAP MONUMENT



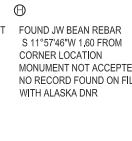
3.25" ALUMINUM CAP MONUMENT
FOUND J.W. BEAN MONUMENT
S 61°38'46" E 0.37' FROM
US SURVEY 4807 BOUNDARY
MONUMENT NOT ACCEPTED



2.5" BRASS CAP MONUMENT



FOUND J.W. BEAN REBAR MONUMENT
S 01°34'23" W 0.82' FROM
CORNER LOCATION
MONUMENT NOT ACCEPTED
NO RECORD FOUND ON FILE WITH
ALASKA DNR



FOUND J.W. BEAN REBAR
S 11°57'40" W 1.00' 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



58" x 38" 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)
)
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 VOLUNTARILY 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.

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. 296 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 85-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 85-147 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. 89-52 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 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 EASTWEST 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' GREENBELT 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



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:
20200001

SCALE:
1" = 30'

DATE:
1 JUNE 2020

SHEET NO.
3 OF 3

Attachment B - Final Plat and Closure Report

Packet Page 156 of 372

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

Date: 1 June 2020

To: CBJ COMMUNITY DEVELOPMENT 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

Norththing	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

Norththing	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

Norththing	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

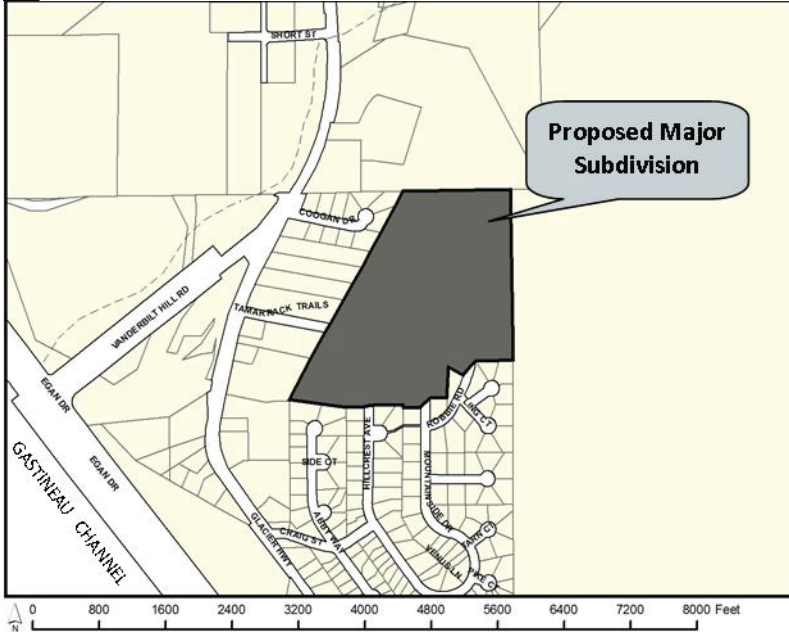
Lot 14

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



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

Printed June 25, 2020

Case No.: SMP2019 0004; SMF2020 0001
Parcel No.: 7B1001160010
CBJ Parcel Viewer: <http://epv.juneau.org>

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.

William & Michael Heumann

File No.: SMP2019 0004

November 13, 2019

Page 2 of 3

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

William & Michael Heumann

File No.: SMP2019 0004

November 13, 2019

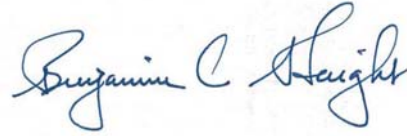
Page 3 of 3

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, Planner
Community Development Department



Benjamin Haight, Chair
Planning Commission



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.



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

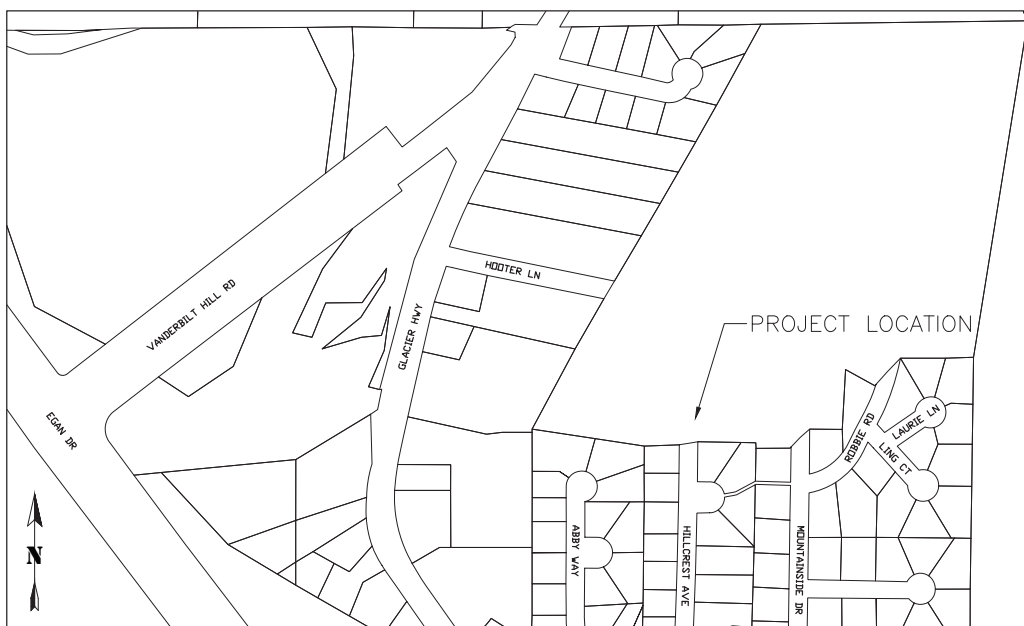
June 23, 2020

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



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



DRAWN BY: C. BYDLON
DESIGNED BY: L. CHAMBERS
CHECKED BY: G. GLADSIJO
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

CBJ REVIEW

APPROVED: *[Signature]*
DATE: 06/01/2020

CHILKAT VISTAS
SUBDIVISION, PHASE I -
HILLCREST AVE EXTENSION
MICHAEL & WILLIAM HEUMANN

COVER

SHEET NUMBER	
1	OF
9	

Attachment F - Approved Construction Drawings

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 (P-1) 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 POLYETHYLENE PIPE
CONC	CONCRETE
CIE	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
TP	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.



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



DRAWN BY:	C. BYDLON
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADSO

CBJ REVIEW

APPROVED: 
DATE: 06/01/2020

CHILKAT VISTAS
SUBDIVISION, PHASE I -
HILLCREST AVE EXTENSION
MICHAEL & WILLIAM HEUMANN

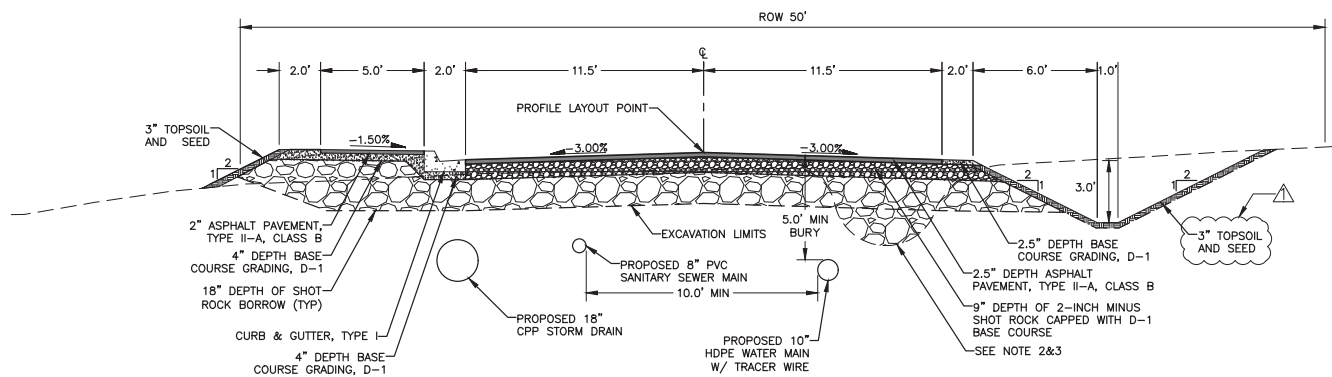
LEGEND ABBREVIATIONS
& GENERAL NOTES

SHEET NUMBER	
2	OF
9	

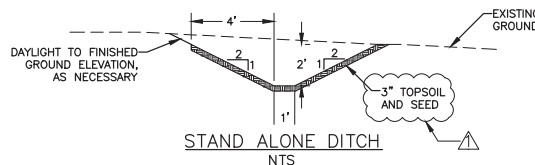
Attachment F - Approved Construction Drawings

TYPICAL SECTION NOTES

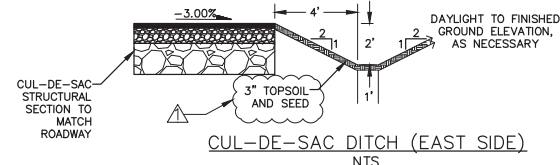
- RIGHT-OF-WAY AND ROAD PRISM SHALL BE CLEARED AND GRUBBED.
- CLEAR, GRUB AND INSTALL SHOT ROCK BORROW OR USABLE EXCAVATION, AS NECESSARY, WHERE EXISTING GROUND IS BELOW EXCAVATION LIMITS.
- ADDITIONAL EXCAVATION BELOW THE NEATLINE SUBCUT LEVEL MAY BE REQUIRED IF ORGANIC OR OTHER UNSUITABLE MATERIALS ARE ENCOUNTERED, EXCAVATION AND REPLACEMENT OF UNSUITABLE MATERIALS SHALL BE APPROVED BY THE ENGINEER.
- 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.
- ALL CUT AND FILL SLOPES NOT STABILIZED WITH SHOT ROCK SHALL BE TOP SOILED AND SEEDED.
- THE CONTRACTOR/ OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSTALLING/ MAINTAINING EROSION AND SEDIMENT CONTROL PER LOCAL, STATE AND FEDERAL REQUIREMENTS



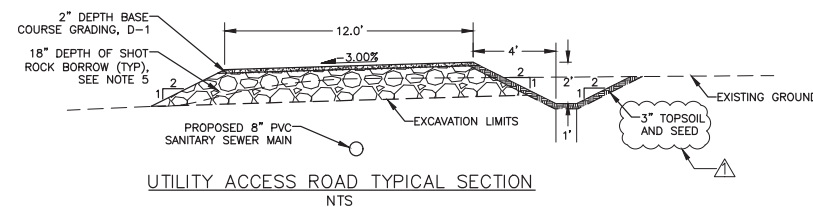
HILLCREST AVE EXTENSION TYPICAL SECTION
NTS



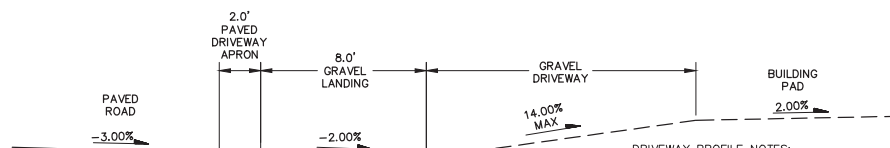
STAND ALONE DITCH
NTS



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:
- SEE STD 103A FOR ADDITIONAL DETAILS.
 - PROVIDE A SMOOTH TRANSITION BETWEEN GRADE BREAKS.
 - 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 VALVE BOX.



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/13/2020	CHANGED SHOT ROCK DITCH LINING TO TOPSOIL & SEED	LC



DRAWN BY: C. BYDLON
DESIGNED BY: L. CHAMBERS
CHECKED BY: G. GLADSO
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

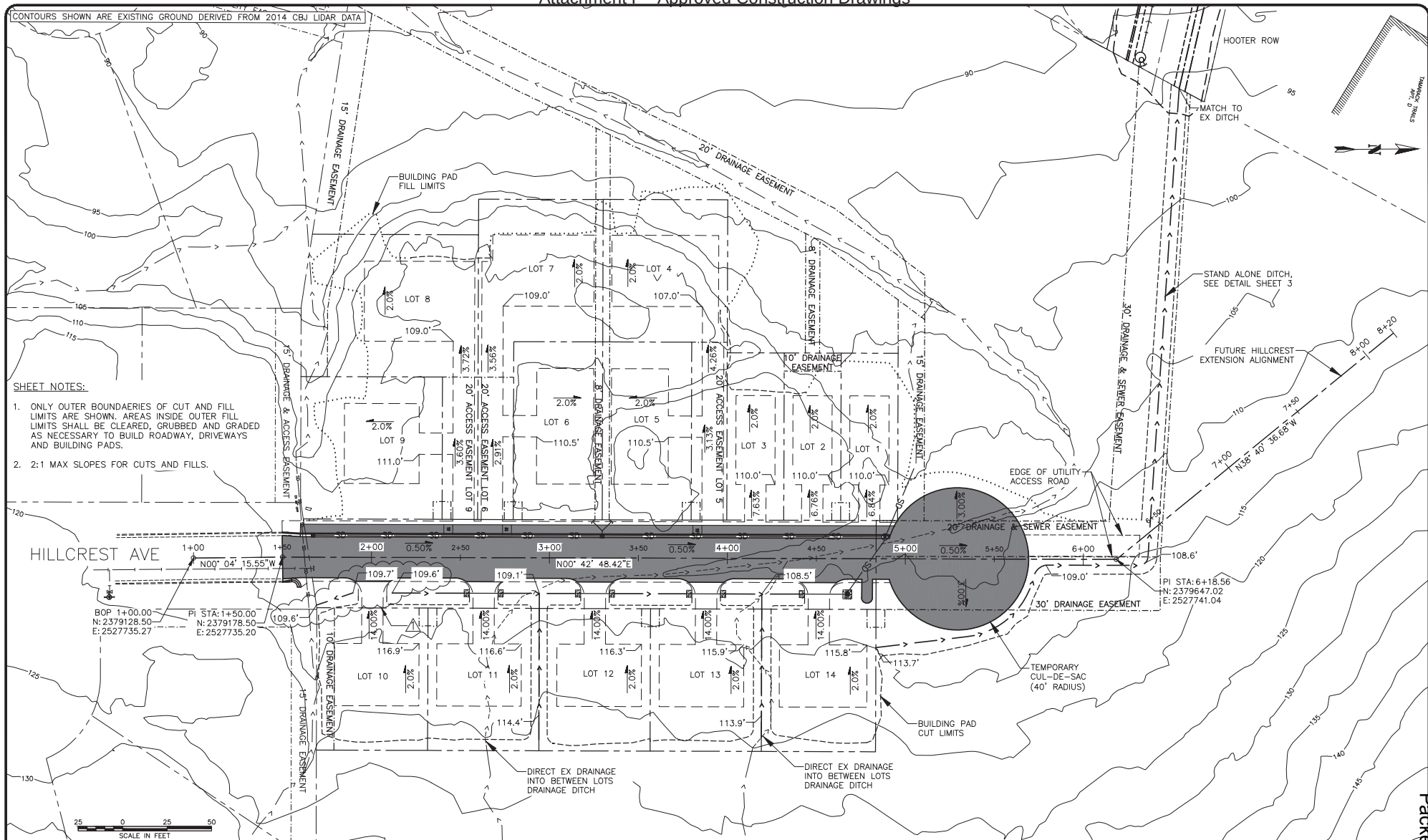
CBJ REVIEW
APPROVED: *[Signature]*
DATE: 07/14/2020

CHILKAT VISTAS
SUBDIVISION, PHASE I -
HILLCREST AVE EXTENSION
MICHAEL & WILLIAM HEUMANN

TYPICAL SECTION

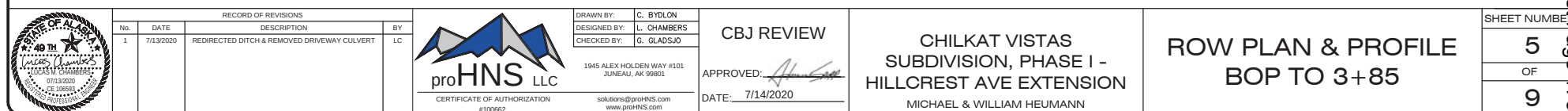
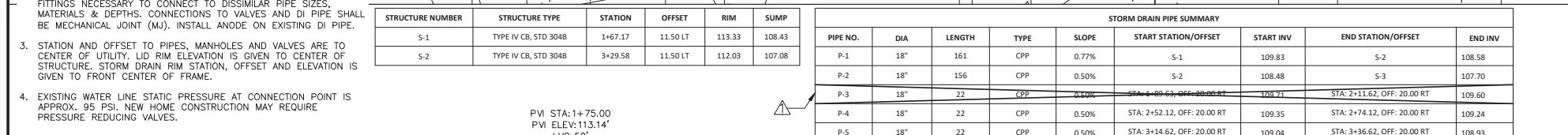
SHEET NUMBER
3
OF
9

Attachment F - Approved Construction Drawings

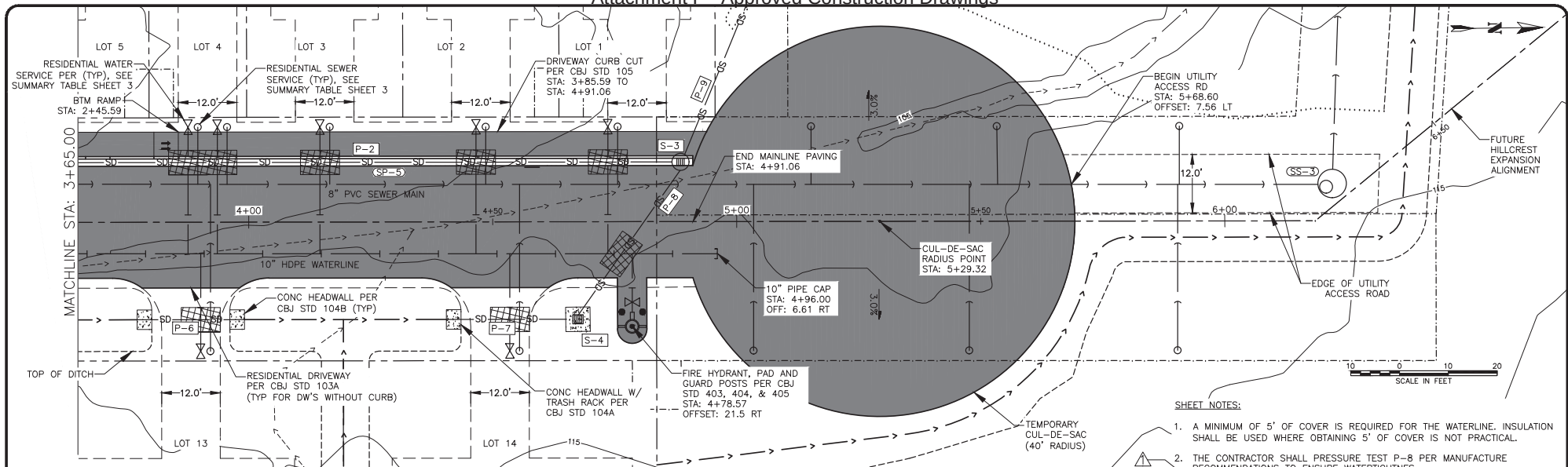


		RECORD OF REVISIONS <table border="1"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7/13/2020</td> <td>REDIRECTED DITCH & REMOVED DRIVEWAY CULVERT</td> <td>LC</td> </tr> </tbody> </table>		No.	DATE	DESCRIPTION	BY	1	7/13/2020	REDIRECTED DITCH & REMOVED DRIVEWAY CULVERT	LC	 proHNS LLC CERTIFICATE OF AUTHORIZATION #100662		DRAWN BY: C. BYDLON DESIGNED BY: L. CHAMBERS CHECKED BY: G. GLADISO 1945 ALEX HOLDEN WAY #101 JUNEAU, AK 99801 solutions@proHNS.com www.proHNS.com		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	
No.	DATE	DESCRIPTION	BY																				
1	7/13/2020	REDIRECTED DITCH & REMOVED DRIVEWAY CULVERT	LC																				

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 July 13, 2020
 Page 79 of 372

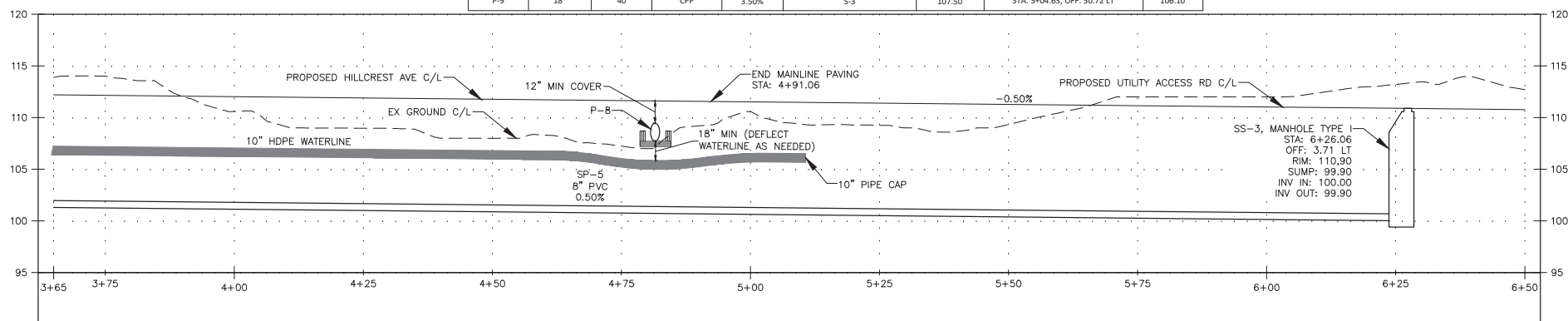


Attachment F - Approved Construction Drawings



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	END INV
P-2	18"	156	CPP	0.50%	S-2	108.48
P-6	18"	22	CPP	0.50%	STA: 3+77.12, OFF: 20.00 RT	108.72
P-7	18"	25	CPP	2.12%	STA: 4+40.48, OFF: 20.00 RT	108.43
P-8	18"	32	CPP	0.63%	S-4	107.80
P-9	18"	40	CPP	3.50%	S-3	107.50



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY
1	6/19/2020	ADDED JOINT SEPARATION NOTE	LC



DRAWN BY: C. BYDLON
 DESIGNED BY: L. CHAMBERS
 CHECKED BY: G. GLADISO
 1945 ALEX HOLDEN WAY #101
 JUNEAU, AK 99801
 solutions@proHNS.com
 www.proHNS.com

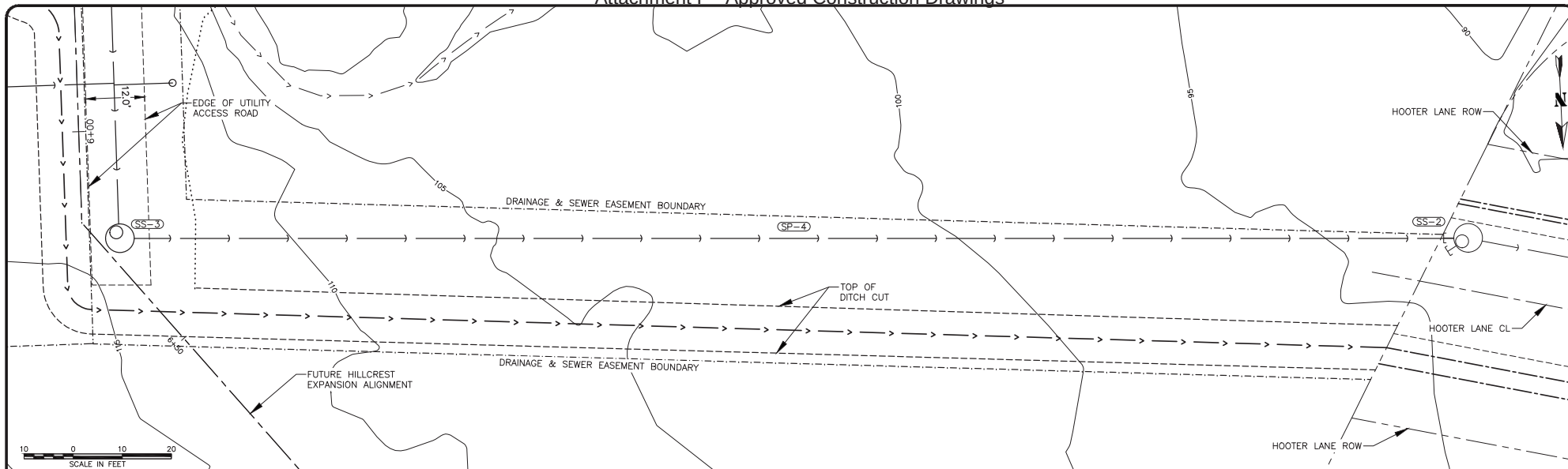
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 DATE: 7/14/2020

**CHILKAT VISTAS
 SUBDIVISION, PHASE I -
 HILLCREST AVE EXTENSION**
 MICHAEL & WILLIAM HEUMANN

**ROW PLAN & PROFILE
 3+85 TO EOP**

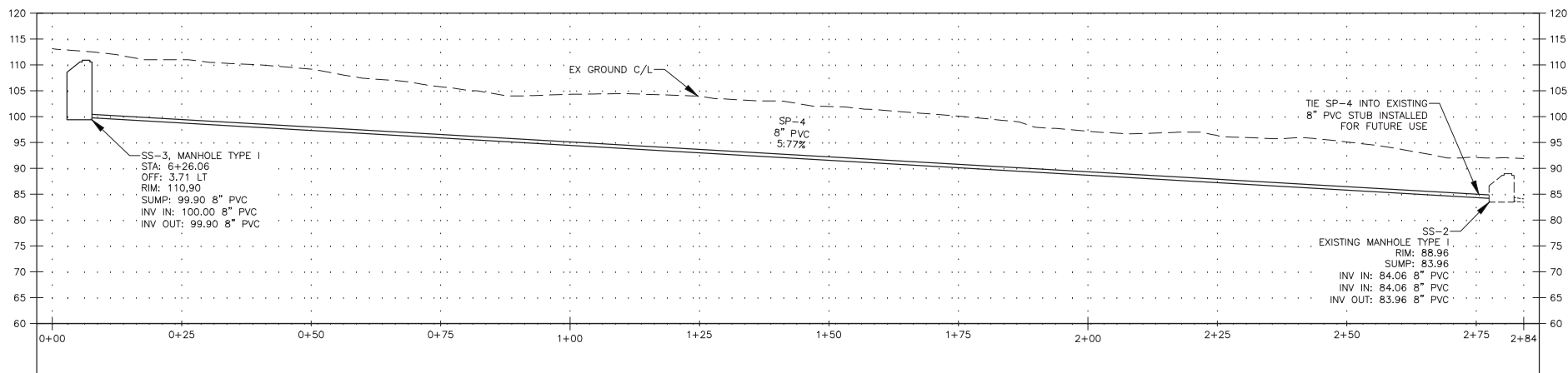
SHEET NUMBER
6
OF
9

Attachment F - Approved Construction Drawings



SHEET NOTES:

1. STATION AND OFFSET TO PIPES, MANHOLES AND VALVES ARE TO CENTER OF UTILITY.



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY
1	5/18/2020	ADDED EASEMENT & TOP OF DITCH CALLOUT	LC



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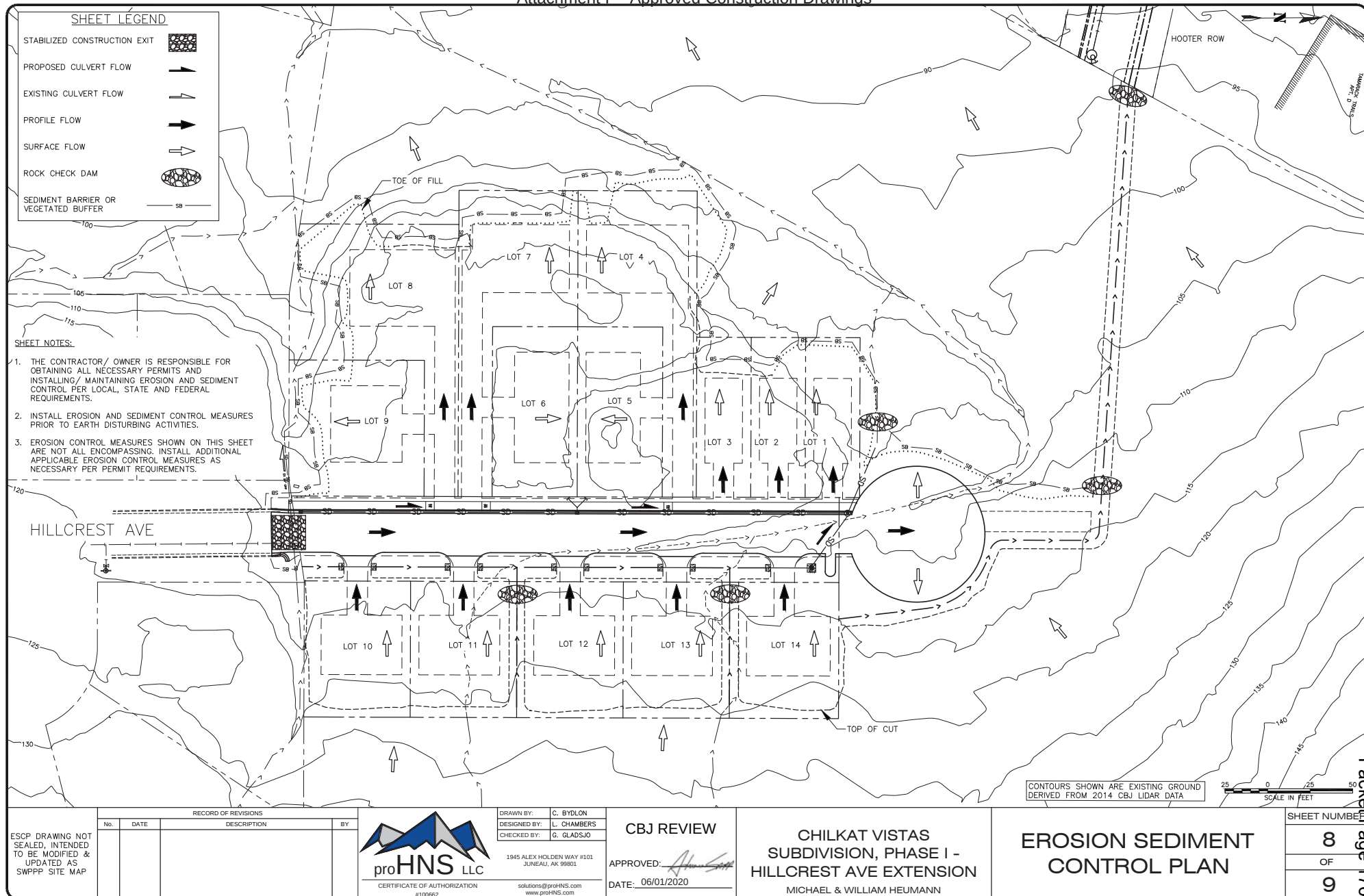
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 DATE: 06/01/2020

CHILKAT VISTAS
 SUBDIVISION, PHASE I -
 HILLCREST AVE EXTENSION
 MICHAEL & WILLIAM HEUMANN

SP-4 PLAN & PROFILE

SHEET NUMBER	
7	OF
9	

Attachment F - Approved Construction Drawings



ESCP DRAWING NOT SEALED, INTENDED TO BE MODIFIED & UPDATED AS SWPPP SITE MAP

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



CERTIFICATE OF AUTHORIZATION
#100662

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DATE: 06/01/2020

CHILKAT VISTAS
SUBDIVISION, PHASE I -
HILLCREST AVE EXTENSION
MICHAEL & WILLIAM HEUMANN

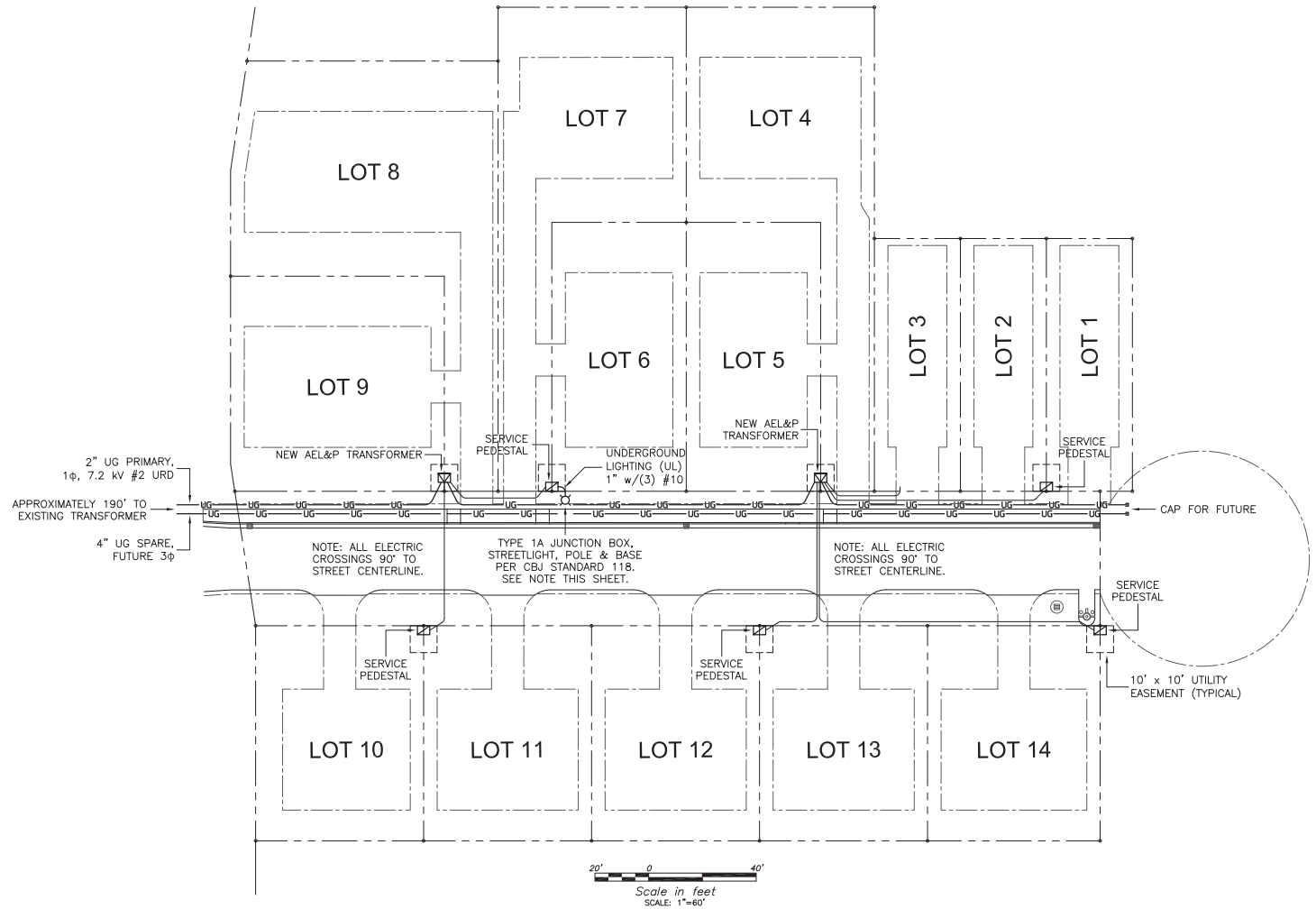
EROSION SEDIMENT
CONTROL PLAN

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: *[Signature]*
 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



**GORMAN
ENGINEERS**
 10761 HORIZON DRIVE
 JUNEAU, ALASKA 99801-1626
 PHONE: 463-6701 CELL: 733-9884
 e-mail: pgorman@gcnet.net

**STREET LIGHTING &
ELECTRICAL PLAN**
HILLCREST AVENUE EXTENSION

HOOTER LANE PHASE I ROW IMPROVEMENTS JUNEAU, AK

PREPARED FOR:
MICHAEL & WILLIAM HEUMANN



PROJECT LOCATION MAP
SCALE 1" = 400'

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



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



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DESIGNED BY:	L. CHAMBERS
CHECKED BY:	G. GLADISO

CBJ REVIEW
APPROVED: <i>[Signature]</i>
DATE: 01/24/2020

HOOTER LANE PHASE I ROW IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

TITLE SHEET

SHEET NUMBER
1
OF
5

Attachment F - Approved Construction Drawings

LEGEND

ABBREVIATIONS

GENERAL NOTES

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
STORM DRAIN UNDERDRAIN	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		

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 POLYETHYLENE 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
TP	TYPICAL

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-BUILT 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.



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



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CBJ REVIEW
APPROVED: *Michael Heumann*
DATE: 01/24/2020

HOOTER LANE PHASE I ROW
IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

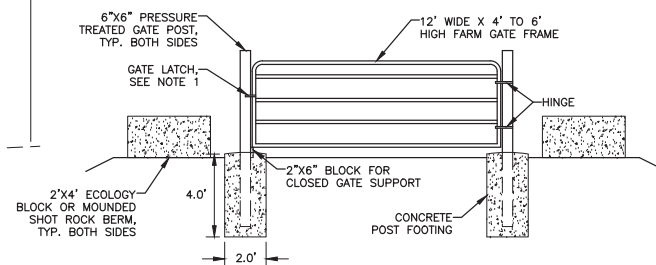
LEGEND ABBREVIATIONS
& GENERAL NOTES

SHEET NUMBER	2
OF	5

January 21, 2020
c:\Users\lucas\drobox\Projects\Juneau\richland manor subdivision\c3d richland manor\Sheets\hooter\one phase\TYPICAL SECTIONS\dwg
Packet Page 186 of 372



1. CBJ ENGINEERING STANDARD DETAILS BOOK FOR CIVIL ENGINEERING PROJECTS AND SUBVISION 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 OCEANIC 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.



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.



CBJ REVIEW

APPROVED: [Signature]
DATE: 01/24/2020

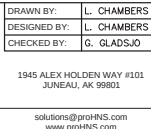
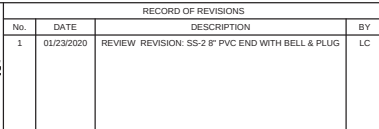
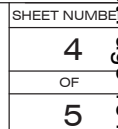
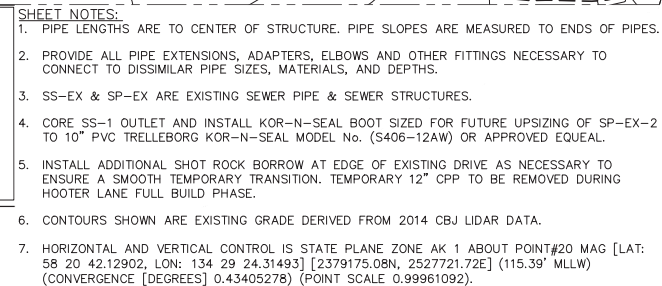
HOOTER LANE PHASE I ROW IMPROVEMENTS

MICHAEL & WILLIAM HEUMANN

TYPICAL SECTIONS

SHEET NUMBER	3
OF	5

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 January 23, 2020
 Packet Page 164 of 372



APPROVED: 
DATE: 01/24/2020

MICHAEL & WILLIAM HEUMANN

BOP TO EOP
PLAN & PROFILE

SHEET NOTES:

1. STABILIZED 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



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



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APPROVED: [Signature]
DATE: 01/24/2020

HOOTER LANE PHASE I ROW IMPROVEMENTS

MICHAEL & WILLIAM HEUMANN

EROSION SEDIMENT CONTROL PLAN

SHEET NUMBER	5
OF	5

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



RECORD OF REVISIONS			
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APPROVED: *[Signature]*
DATE: 01/24/2020

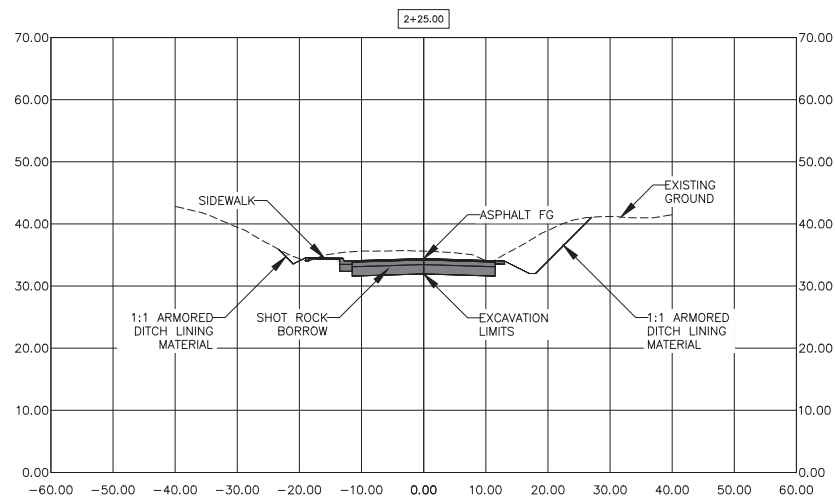
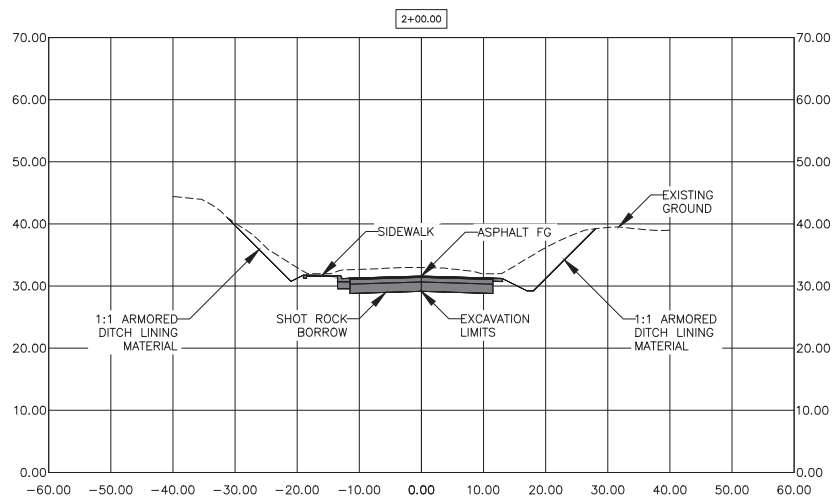
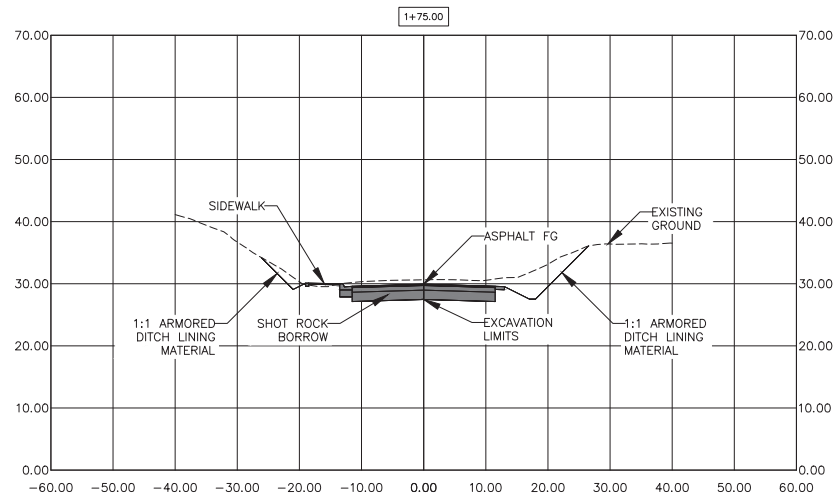
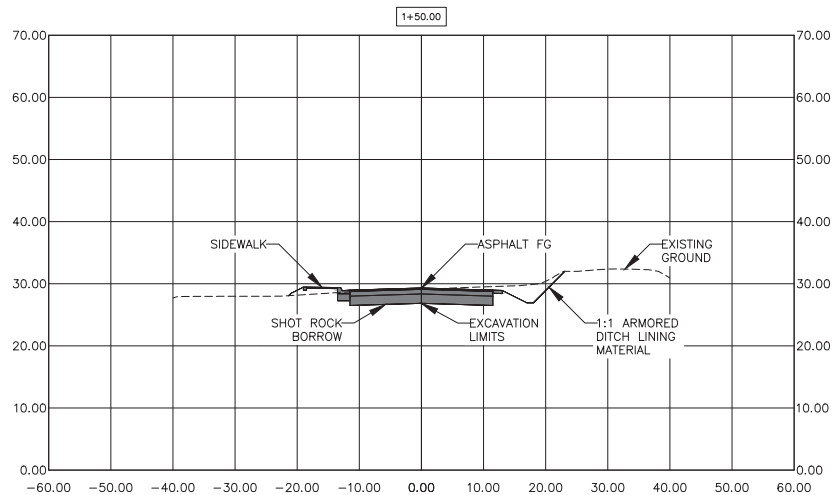
HOOTER LANE FULL BUILD
ROW IMPROVEMENTS

MICHAEL & WILLIAM HEUMANN

COVER SHEET

SHEET NUMBER
1
OF
8

Attachment F - Approved Construction Drawings



RECORD OF REVISIONS			
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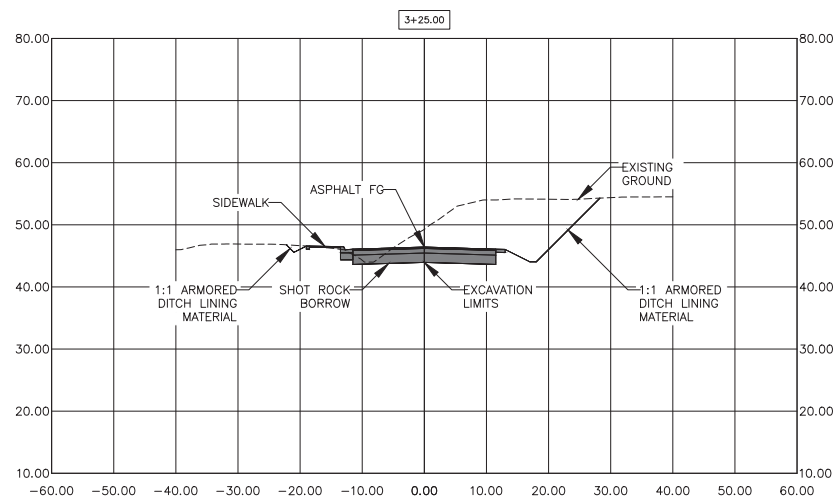
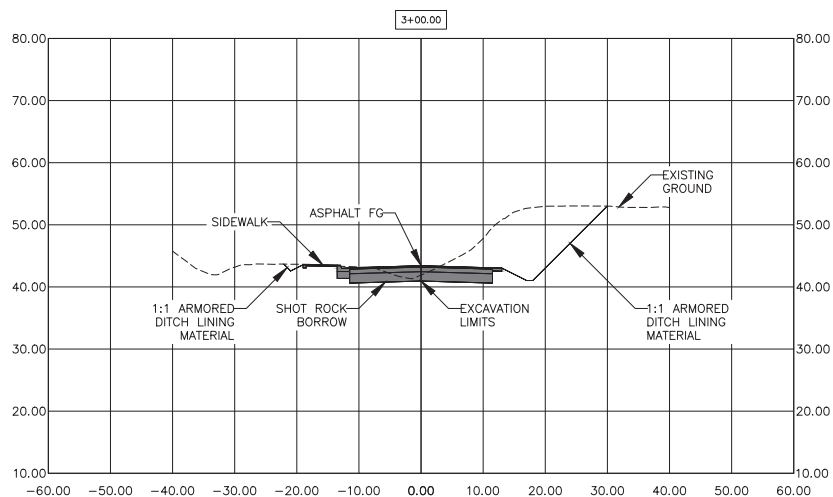
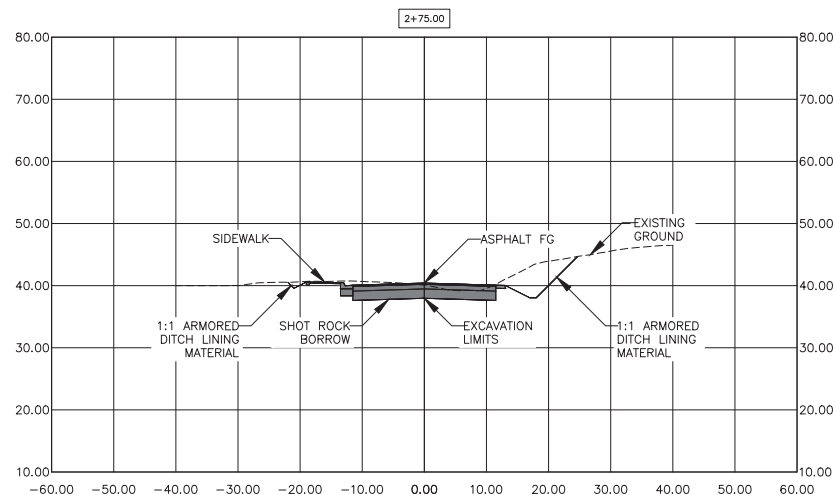
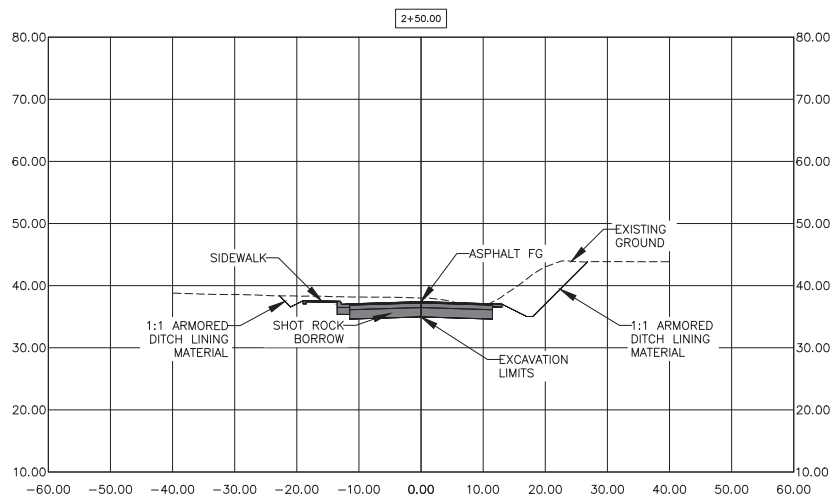
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 DATE: 01/24/2020

HOOTER LANE FULL BUILD
 ROW IMPROVEMENTS
 MICHAEL & WILLIAM HEUMANN

CROSS SECTIONS 1+50 -
 2+25

SHEET NUMBER	
2	OF
8	

Attachment F - Approved Construction Drawings



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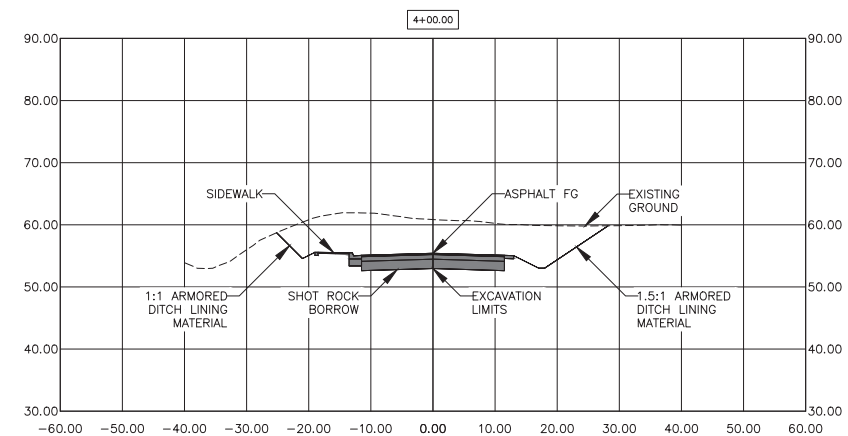
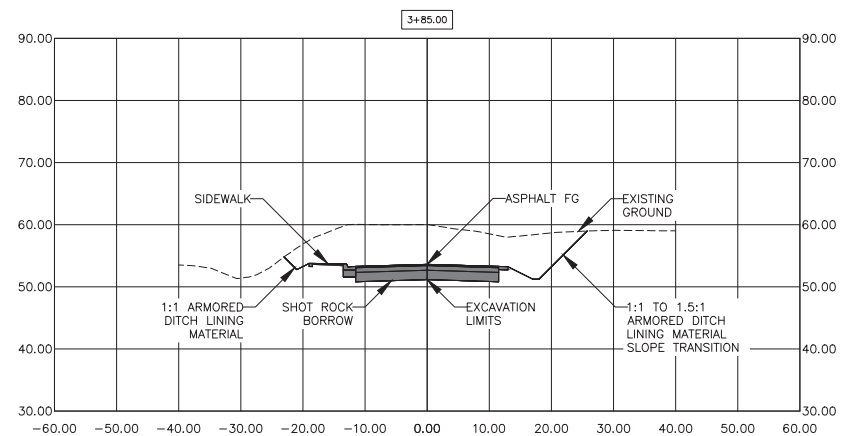
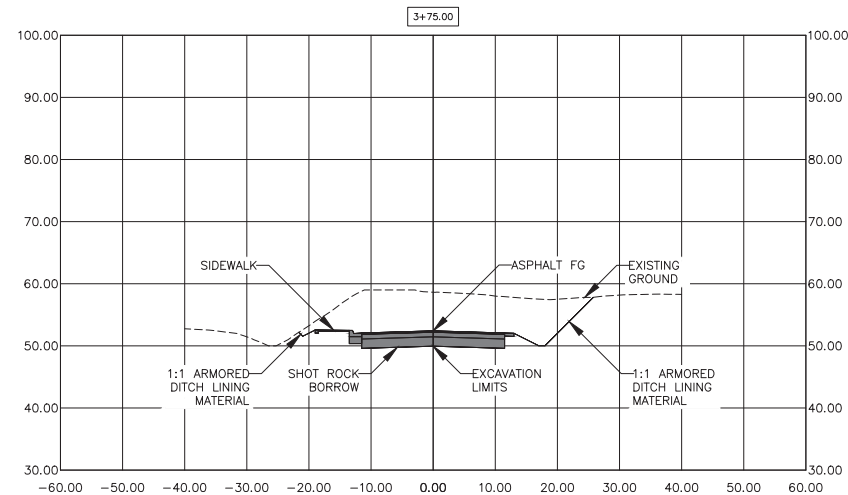
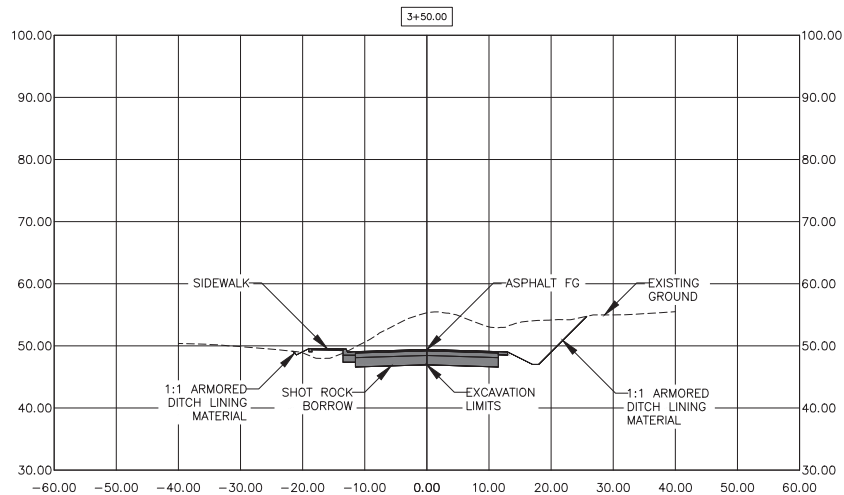
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 DATE: 01/24/2020

HOOTER LANE FULL BUILD
 ROW IMPROVEMENTS
 MICHAEL & WILLIAM HEUMANN

CROSS SECTIONS 2+50 -
 3+25

SHEET NUMBER	
3	OF
8	

Attachment F - Approved Construction Drawings



RIGHT SIDE ARMORED DITCH BACK SLOPE TRANSITIONS
FROM 1:1 TO 1.5:1 SLOPE AT STA: 3+85.



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



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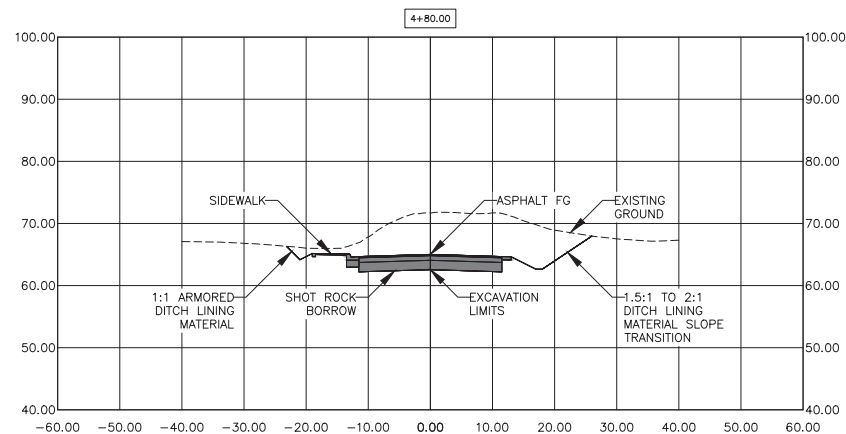
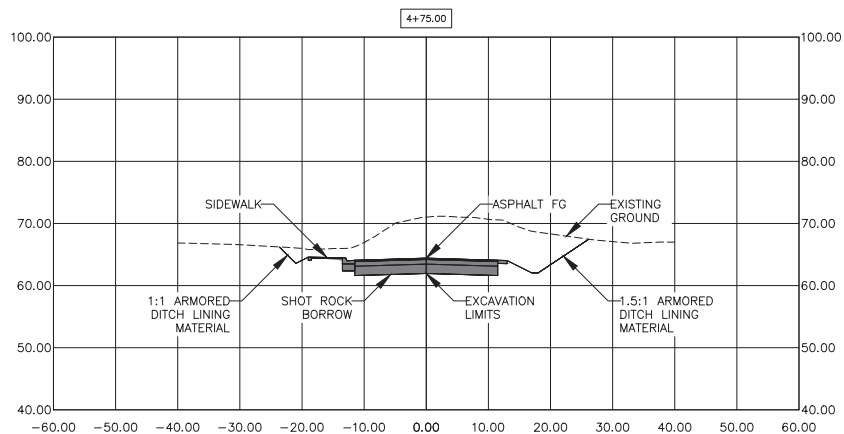
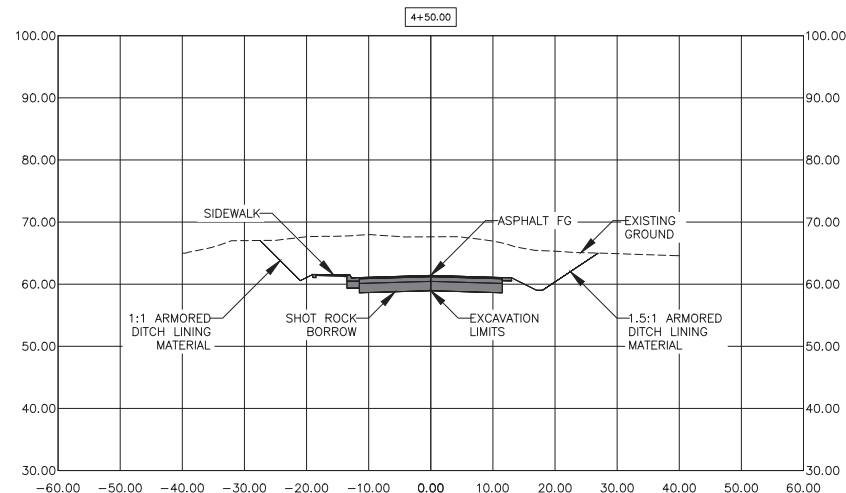
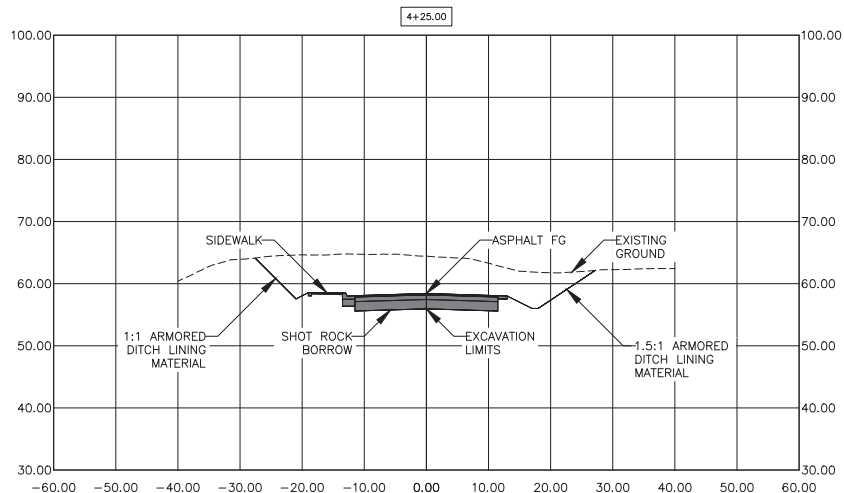
HOOTER LANE FULL BUILD
ROW IMPROVEMENTS

MICHAEL & WILLIAM HEUMANN

CROSS SECTIONS 3+50 -
4+00

SHEET NUMBER	
4	OF
8	

Attachment F - Approved Construction Drawings



RIGHT SIDE ARMORED DITCH BACK SLOPE TRANSITIONS FROM 1.5:1 TO 2:1 DITCH LINING BACK SLOPE AT STA: 4+80.



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



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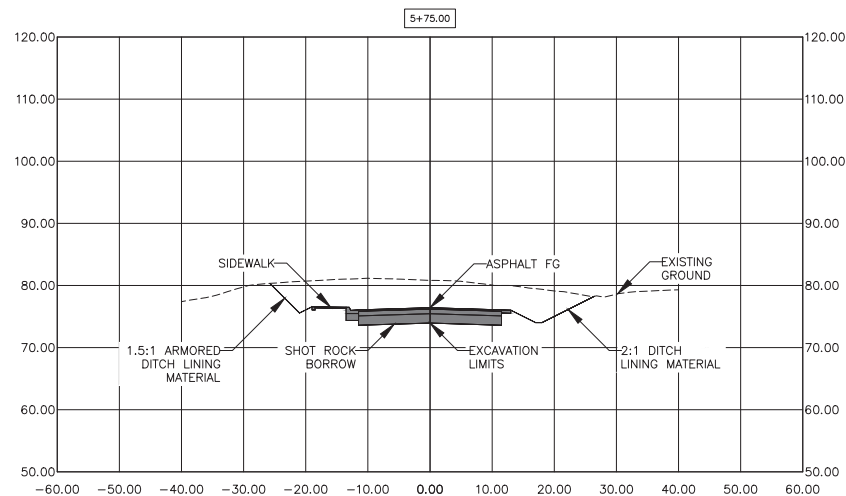
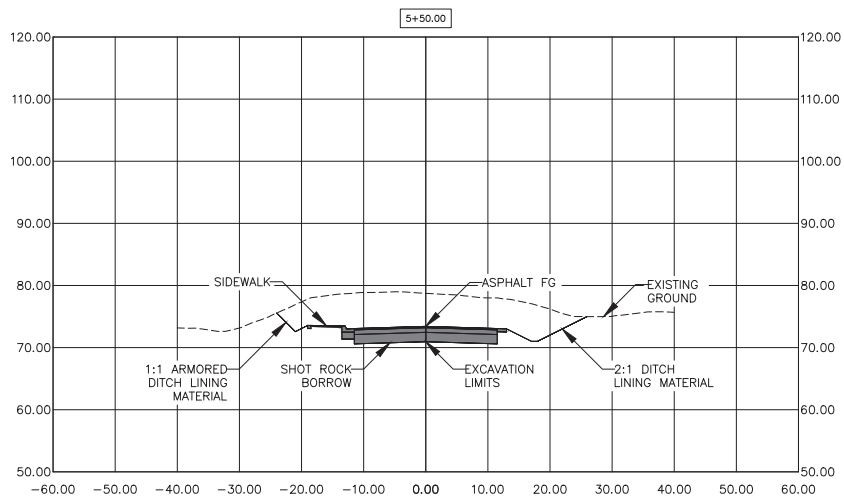
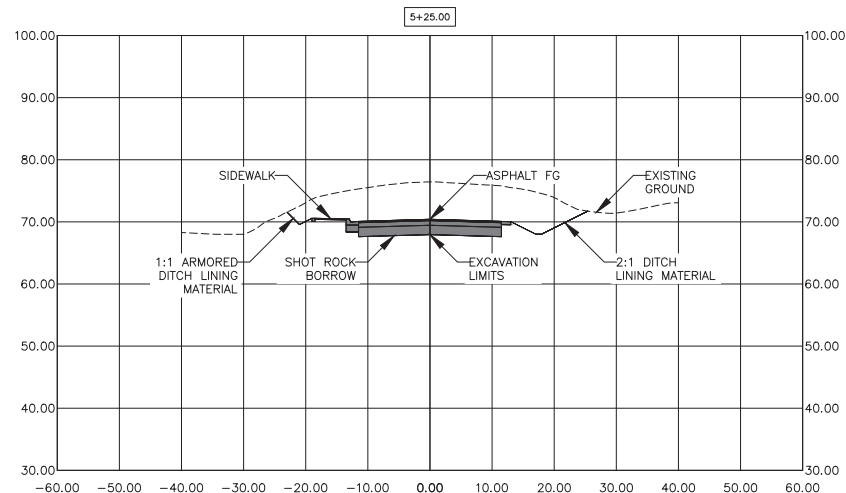
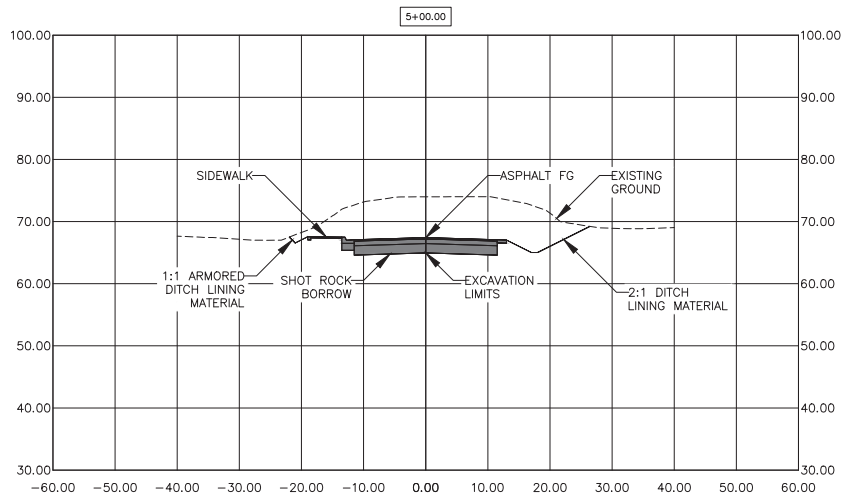
HOOTER LANE FULL BUILD ROW IMPROVEMENTS

MICHAEL & WILLIAM HEUMANN

CROSS SECTIONS 4+25 - 4+80

SHEET NUMBER	5
OF	8

Attachment F - Approved Construction Drawings



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 www.proHNS.com

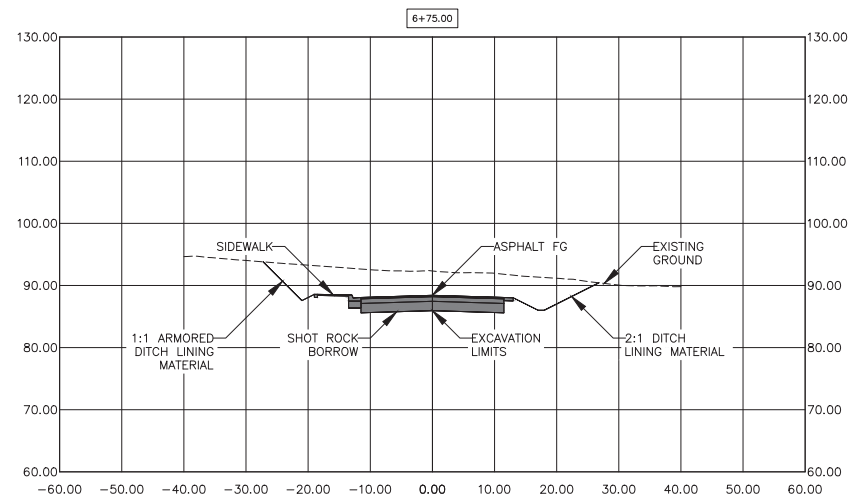
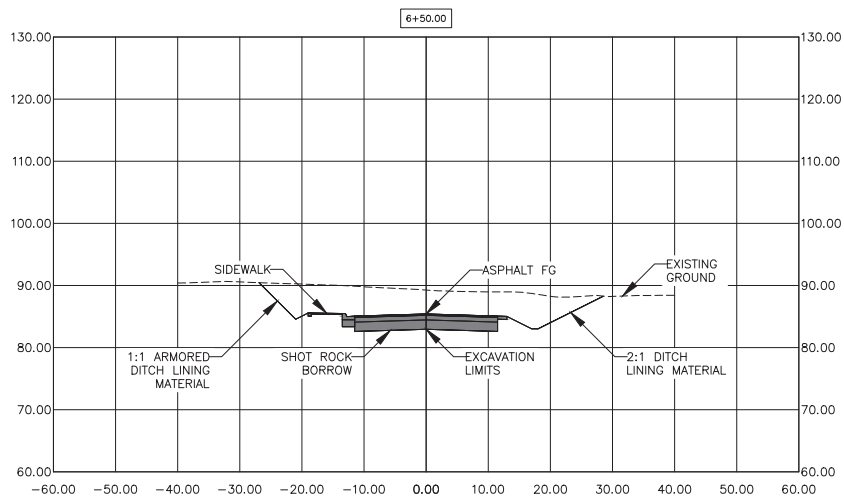
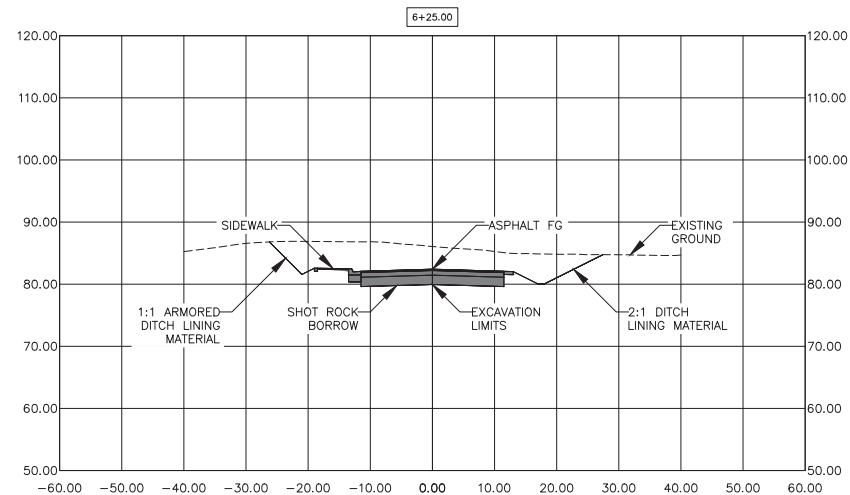
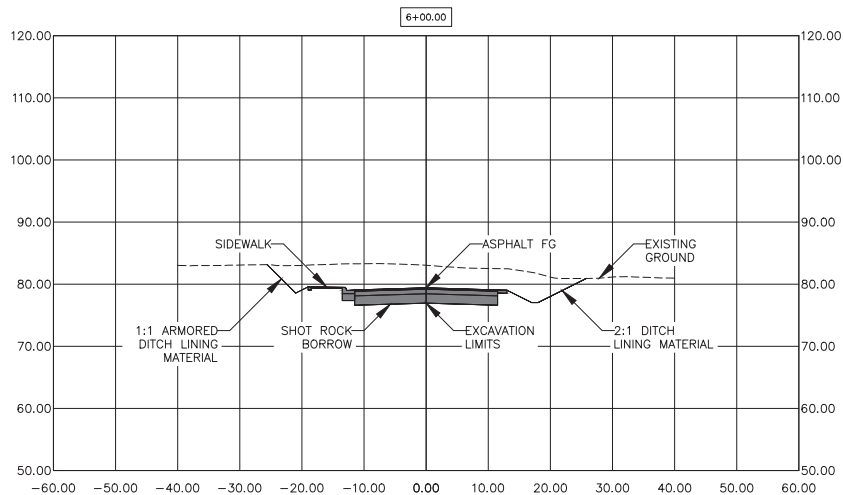
CBJ REVIEW
 APPROVED: *[Signature]*
 DATE: 01/24/2020

HOOTER LANE FULL BUILD
 ROW IMPROVEMENTS
 MICHAEL & WILLIAM HEUMANN

CROSS SECTIONS 5+00 -
 5+75

SHEET NUMBER	
6	OF
8	

Attachment F - Approved Construction Drawings



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



DRAWN BY: C. BYDLON
 DESIGNED BY: L. CHAMBERS
 CHECKED BY: L. CHAMBERS
 1945 ALEX HOLDEN WAY #101
 JUNEAU, AK 99801
 solutions@proHNS.com
 www.proHNS.com

CBJ REVIEW

APPROVED: *[Signature]*
 DATE: 01/24/2020

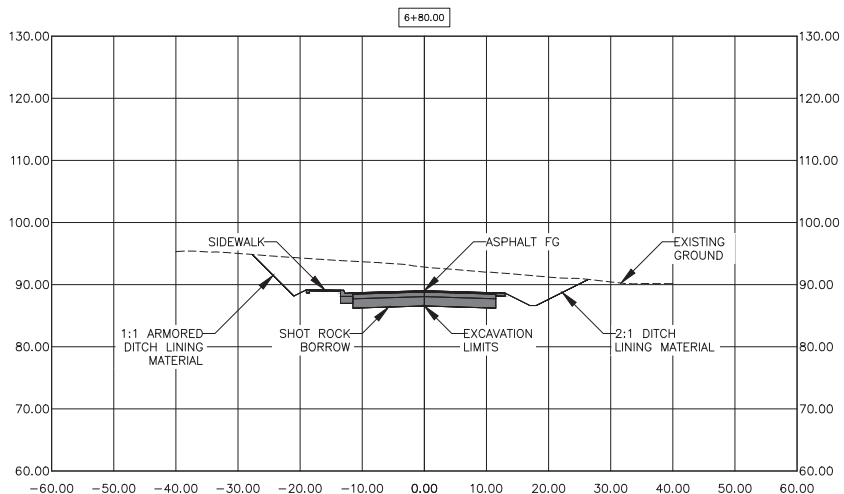
HOOTER LANE FULL BUILD
 ROW IMPROVEMENTS

MICHAEL & WILLIAM HEUMANN

CROSS SECTIONS 6+00 -
 6+75

SHEET NUMBER	
7	OF
8	

Attachment F - Approved Construction Drawings



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



DRAWN BY: C. BYDLON
DESIGNED BY: L. CHAMBERS
CHECKED BY: L. CHAMBERS
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

CBJ REVIEW
APPROVED: *Michael Heumann*
DATE: 01/24/2020

HOOTER LANE FULL BUILD
ROW IMPROVEMENTS
MICHAEL & WILLIAM HEUMANN

CROSS SECTION 6+80

SHEET NUMBER
8
OF
8


**CONTRACTOR'S REQUEST
FOR PAYMENT NO.**
1

CONTRACTOR: Coogan Construction
 PROJECT TITLE: Chillkat Vistas Subdivision, Phase I - Hillcrest Ave Extension
☒ Partial Pay Request for period: **6/4/2020** to **6/17/2020**
☐ Final Pay Request

Original Contract Amount	<u>\$436,266.30</u>
Amount Added/Deleted by Change Order	<u>\$0.00</u>
Adjusted Contract Price	<u>\$436,266.30</u>
 Total Work Completed to Date	 <u>\$78,855.00</u>
Materials on Hand	<u> </u>
NET EARNED ON CONTRACT TO DATE	<u>\$78,855.00</u>
REMAINING CONTRACT AMOUNT TO BE COMPLETED:	<u>\$357,411.30</u>

Previous Payments:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Total of Previous Payment	-	<u>\$0.00</u>	
AMOUNT OF THIS PAYMENT REQUEST		<u>\$78,855.00</u>	← 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)	



CONTRACTOR'S PAY ESTIMATE NO.: 1
(UNIT PRICE CONTRACT)

CONTRACT TITLE:
CONTRACTOR:

Chillkat Vistas Subdivision, Phase I - Hillcrest Ave Extension
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 Sanitary 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:
CONTRACTOR:

Chillkat Vistas Subdivision, Phase I - Hillcrest Ave Extension
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



PO Box 38327
Juneau, AK 99803
907-780-4004
solutions@proHNS.com

Attachment G - Engineer's Estimate
PO Box 104
Haines, AK 99827
907-419-6070
www.proHNS.com

Chillikot Vistas Pay
Request # 1
6/18/2020
B. Mitchell
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: 4/4/20 - 6/17/20



Attachment G - Engineers Estimate
PO Box 322
Juneau, AK 99803
907-780-4004
solutions@proHNS.com

Haines, AK 99827
907-419-6070
www.proHNS.com

Chillat Vistas Pay Packet Page 195 of 372

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/yd³

Volume Excavated = 714 yd³ (for Hillcrest Ave Extension, NOT Col-De-Sac)
(Value obtained from CAD volumes dashboard)

$$(714 \text{ yd}^3) \left(\frac{\$10.00}{1 \text{ yd}^3} \right) = \$7,140.00$$

Dates: 6/08/20 — 6/17/20



PO Box 3022 Attachment G - Engineers Estimate
Juneau, AK 99803 Haines, AK 99827
907-780-4004 907-419-6070
solutions@proHNS.com www.proHNS.com

Chilkat Vistas Pay Packet Page 196 of 372
Request # 1
6/18/2020
B. Mitchell
Page # 3

2204.3 (Shot Rock Borrow) $\frac{\$35.00}{1 \text{ yard}^3}$

~~2204.3~~ Hillcrest Ave Extension Roadway Area = 12,725 ft²
Access Road Area = 756 ft²

(Values from
AutoCAD,
NOT including
cul-de-sac)

Depth = 1.5 ft

Total Area = 13,481 ft²

$$\text{Volume of Rock} = (\text{Total Area})(\text{Depth}) = (13,481 \text{ ft}^2)(1.5 \text{ ft})\left(\frac{1 \text{ yard}^3}{27 \text{ ft}^3}\right) = 749 \text{ yards}^3$$

$$(749 \text{ yards}^3)\left(\frac{\$35.00}{1 \text{ yard}^3}\right) = \$26,215.00$$

Dates: 6/10/20 - 6/17/20

2401.1 (8-inch Sewer Pipe, PVC) $\$70.00/\text{ft}$

SP-4 Installation = 230 ft (Value from AutoCAD $\approx$ Onsite measurement)

$$(230 \text{ ft})\left(\frac{\$70.00}{1 \text{ ft}}\right) = \$16,100$$

Dates: 6/04/20 - 6/05/20



PO Box 3822 Attachment G - Engineers Estimate
Juneau, AK 99803 Haines, AK 99827
907-780-4004 907-419-6070
solutions@proHNS.com www.proHNS.com

Chillkat Village 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 Construction)					
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 Reconstructon 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 Reconstructon 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. Excavation 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 Distribution	\$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 Maintenance	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 Maintinace			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:					
Prepared By:					
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

Quantity 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 account 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:					
Date:					
Prepared By:					
Checked By:					
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

CITY AND BOROUGH OF JUNEAU

Duncan Rorie Watt, Manager
City and Borough of Juneau

By: _____

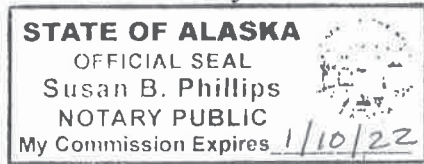
Witness my hand and official seal hereto affixed the day and year first above-written.

Chelsa Wallace
Notary Public for Alaska
My Commission Expires: July 30, 2023

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.



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



Attachment I - Drainage Report

1945 Alex Holden Way #101
219 Main Street #13

Juneau, AK 99801
Haines, AK 99827

907-780-4004
907-419-6070

Packet Page 253 of 372
solutions@proHNS.com
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 were determined using the proposed design model, Lidar data and aerial photos in AutoCAD C3D and were verified 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 guide¹. 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.

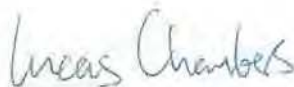
Summary:

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, 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



PROJECT LOCATION MAP
NTS

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



ALASKA

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



CERTIFICATE OF AUTHORIZATION
#100662

DRAWN BY: L. CHAMBERS
DESIGNED BY: L. CHAMBERS
CHECKED BY: G. GLADSDON

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801

solutions@proHNS.com
www.proHNS.com

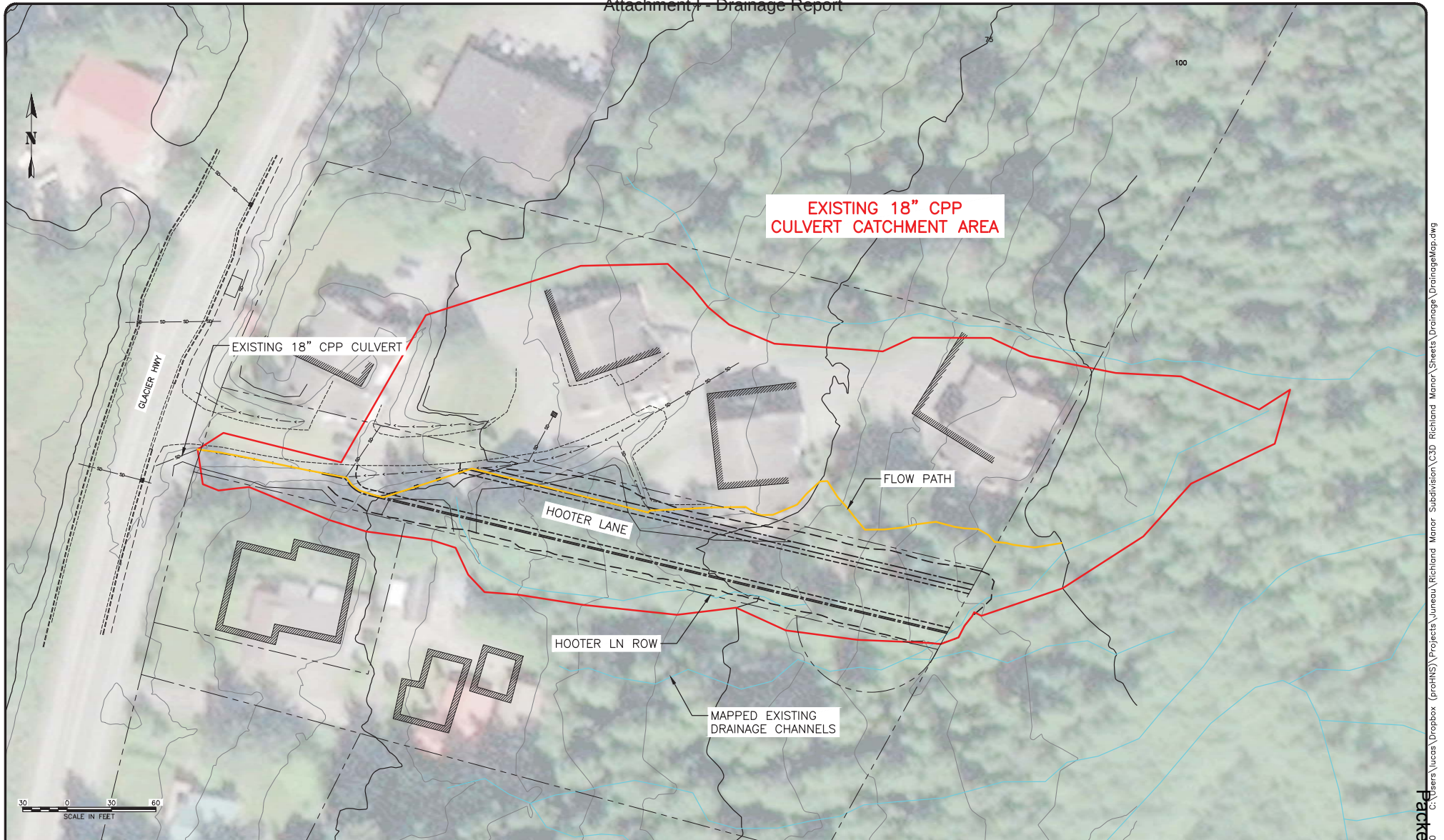
HOOTER LANE PHASE I
ROW IMPROVEMENTS

WILLIAM & MICHAEL HEUMANN

COVER SHEET

SHEET NUMBER	
1	OF
6	

Attachment I - Drainage Report



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

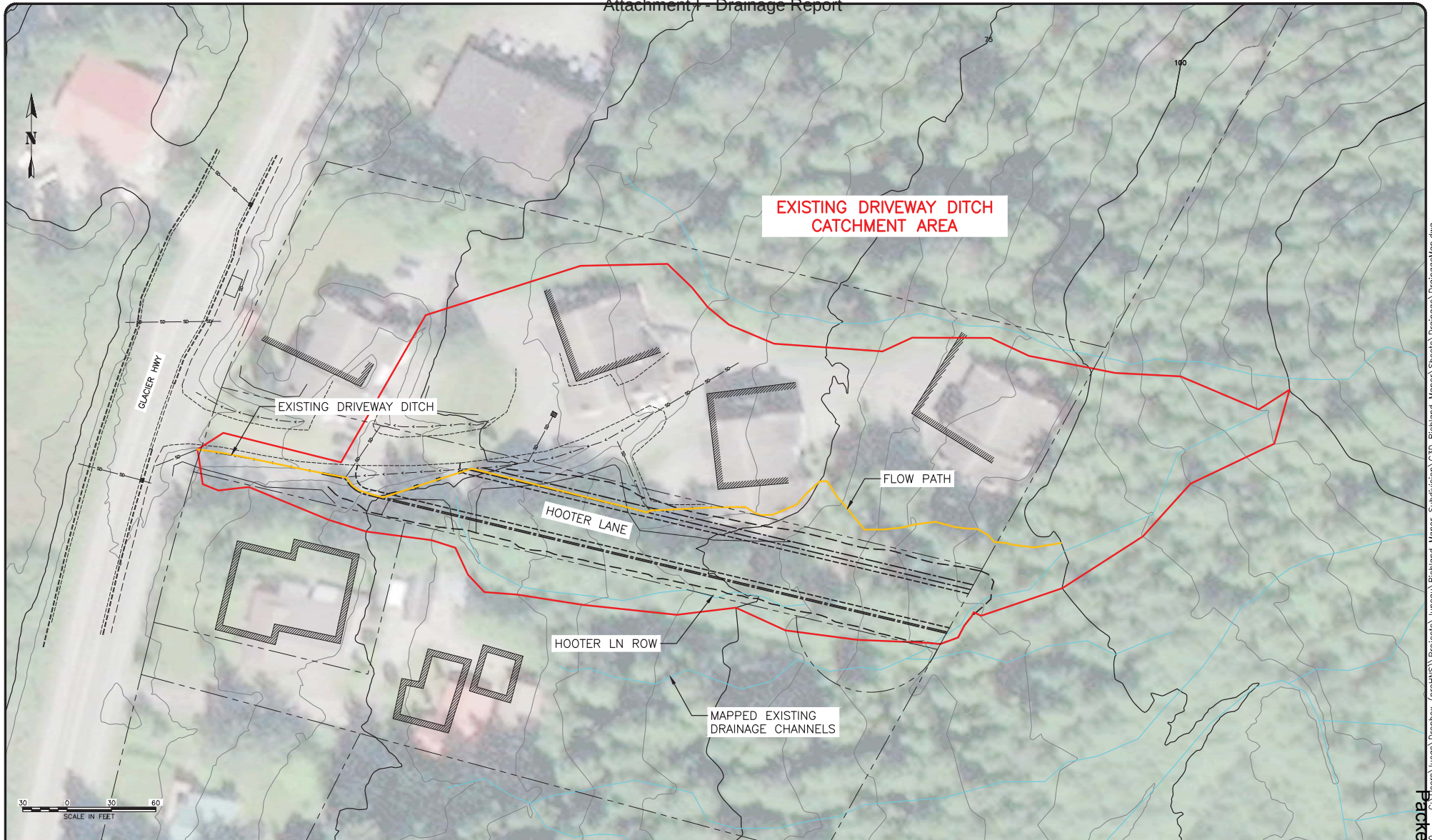


DRAWN BY: L. CHAMBERS
 DESIGNED BY: L. CHAMBERS
 CHECKED BY: G. GLADSDO
 1945 ALEX HOLDEN WAY #101
 JUNEAU, AK 99901
 solutions@proHNS.com
 www.proHNS.com

HOOTER LANE PHASE I
 ROW IMPROVEMENTS
 WILLIAM & MICHAEL HUMEANN

EXISTING 18" CPP
 CATCHMENT AREA

SHEET NUMBER	
2	OF
6	



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

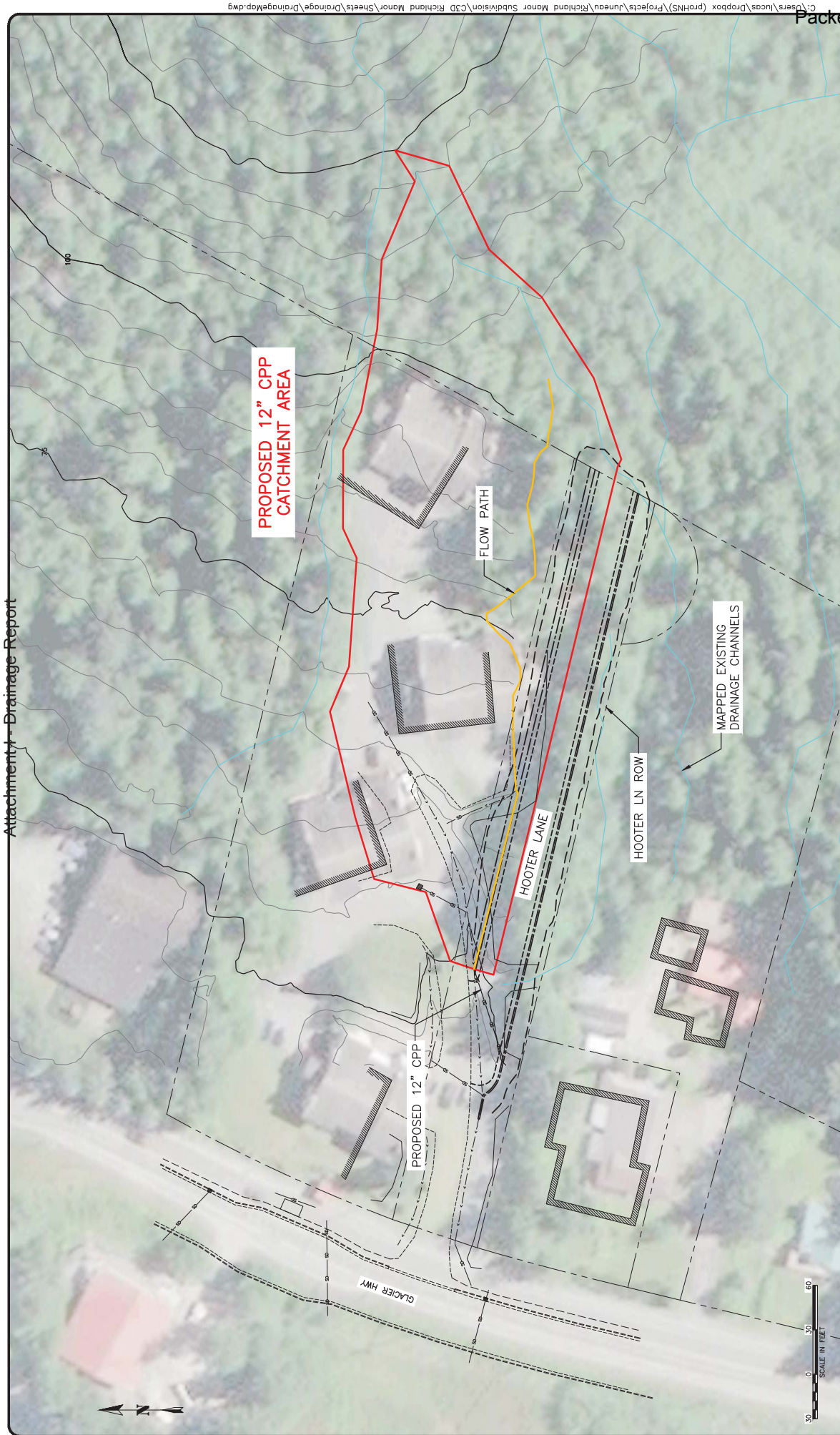


DRAWN BY: L. CHAMBERS
DESIGNED BY: L. CHAMBERS
CHECKED BY: G. GLADSDO
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99901
solutions@proHNS.com
www.proHNS.com

HOOTER LANE PHASE I
ROW IMPROVEMENTS
WILLIAM & MICHAEL HUMEANN

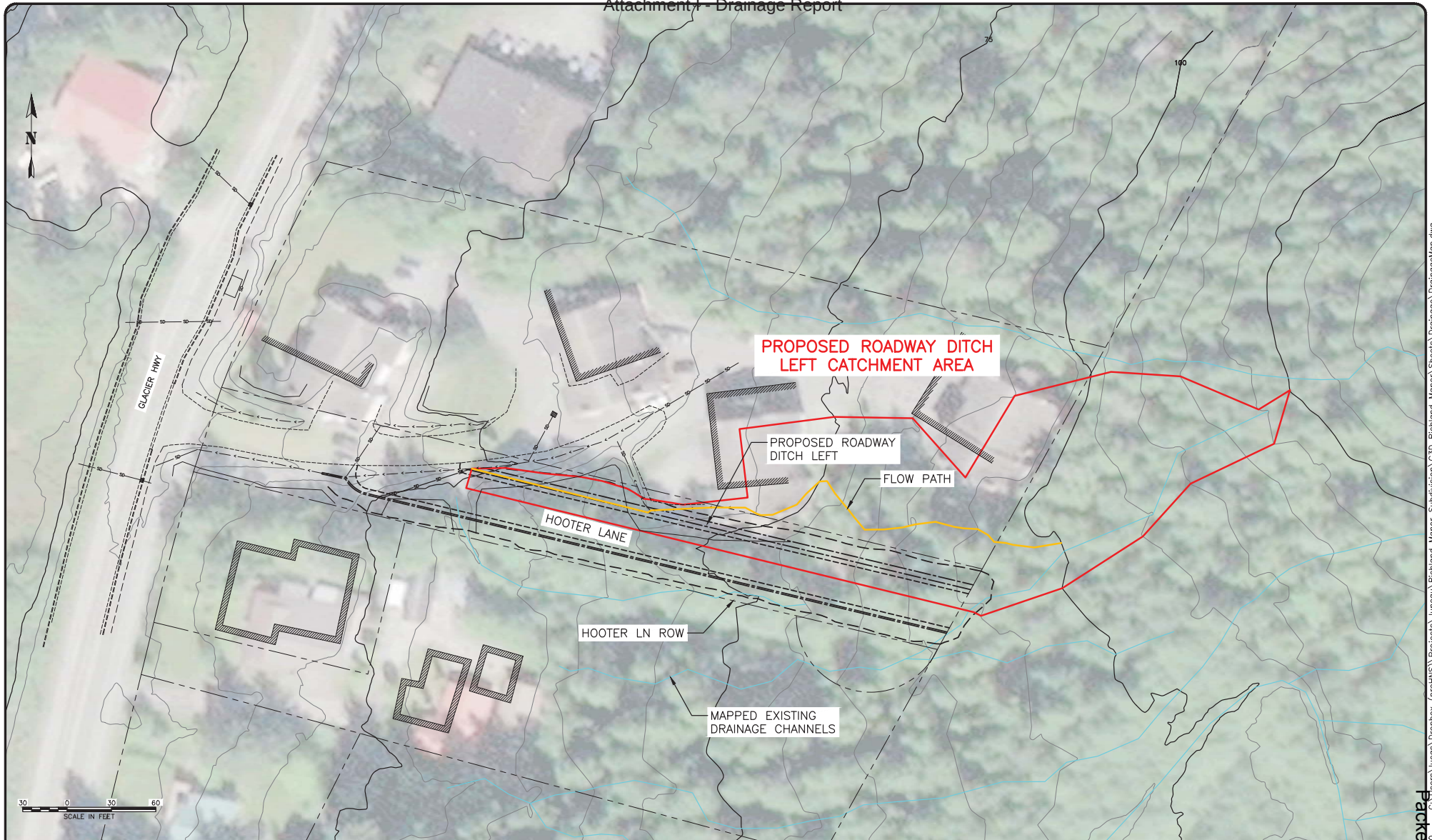
EXISTING DRIVEWAY
DITCH CATCHMENT
AREA

SHEET NUMBER	
3	OF
6	



 proHNS LLC CERTIFICATE OF AUTHORIZATION #00082 1945 ALEXANDER WAY #101 JANESVILLE, WI 53501 sales@prohns.com www.prohns.com		DRAWN BY: L. CHAMBERS		DESIGNED BY: G. GLADISO	
		CHECKED BY:			
RECORD OF REVISIONS		DATE	BY	DESCRIPTION	
No.					
HOOTER LANE PHASE I ROW IMPROVEMENTS				PROPOSED 12" CPP CATCHMENT AREA	
WILLIAM & MICHAEL HUMEANN				SHEET NUMBER 4 OF 6	

Attachment I - Drainage Report



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



DRAWN BY: L. CHAMBERS
 DESIGNED BY: L. CHAMBERS
 CHECKED BY: G. GLADSDO

1945 ALEX HOLDEN WAY #101
 JUNEAU, AK 99801

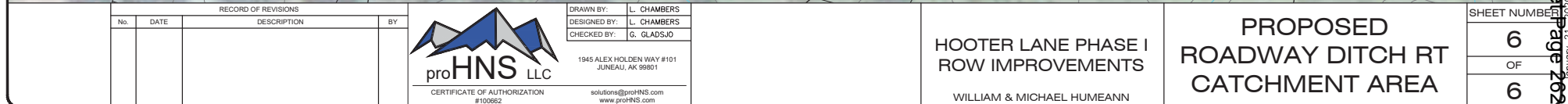
solutions@proHNS.com
 www.proHNS.com

**HOOTER LANE PHASE I
 ROW IMPROVEMENTS**

WILLIAM & MICHAEL HUMEANN

**PROPOSED
 ROADWAY DITCH LT
 CATCHMENT AREA**

SHEET NUMBER	
5	OF
6	



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)

$C_c = 0.55$, See Appendix C for calculation

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

T_c = time of concentration (min)

$T_{1,2}$ = travel time across separate flow path segments (min)

$T_c = 22.61$ 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)

$V = k_R \text{Sqrt}(S_0)$ = 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 delineated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ.

$$A = 107513 \text{ sqft} / 43,560 = \mathbf{2.47 \text{ acres}}$$

	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)

$C_c = 0.55$, See Appendix B for calculation

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

T_c = time of concentration (min)

$T_{1,2}$ = travel time across separate flow path segments (min)

$T_c = 22.61$ 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)

$V = k_R \text{Sqrt}(S_0)$ = 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 delineated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ.

$$A = 107513 \text{ sqft} / 43,560 = \mathbf{2.47 \text{ acres}}$$

	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)

$C_c = 0.51$, See Appendix C for calculation

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

T_c = time of concentration (min)

$T_{1,2}$ = travel time across separate flow path segments (min)

$T_c = 22.31$ 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)

$V = k_R \text{Sqrt}(S_0)$ = 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 beginning of the proposed Hooter Lane Phase I ROW improvements. The area currently contributing runoff to this culvert was delineated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ.

$$A = 67066 \text{ sqft} / 43,560 = 1.54 \text{ acres}$$

	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)

$C_c = 0.33$, See Appendix C for calculation

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

T_c = time of concentration (min)

$T_{1,2}$ = travel time across separate flow path segments (min)

$T_c = 22.31 \text{ min.}$, See Appendix D for calculation

$$T_t = L/60V$$

T_t = travel time (min)

L = the distance of flow across a given segment (feet)

$V = k_R \text{Sqrt}(S_0)$ = 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 delineated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ.

$$A = 41749 \text{ sqft} / 43,560 = 0.96 \text{ acres}$$

	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)

$C_c = 0.55$, See Appendix C for calculation

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

T_c = time of concentration (min)

$T_{1,2}$ = travel time across separate flow path segments (min)

$T_c = 5.22 \text{ min.}$, See Appendix D for calculation

$$T_t = L/60V$$

T_t = travel time (min)

L = the distance of flow across a given segment (feet)

$V = k_R \text{Sqrt}(S_0)$ = 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	
	T_c 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 delineated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ.

$$A = 18055 \text{ sqft} / 43,560 = 0.41 \text{ acres}$$

	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

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

Sheet Flow Equation

$T_c = (0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))$

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

$V = 16.1345 * (S_f^{0.5})$ (unpaved surface)
 $V = 20.3282 * (S_f^{0.5})$ (paved surface)
 $V = 15.0 * (S_f^{0.5})$ (grassed waterway surface)
 $V = 10.0 * (S_f^{0.5})$ (nearly bare & untilled surface)
 $V = 9.0 * (S_f^{0.5})$ (cultivated straight rows surface)
 $V = 7.0 * (S_f^{0.5})$ (short grass pasture surface)
 $V = 5.0 * (S_f^{0.5})$ (woodland surface)
 $V = 2.5 * (S_f^{0.5})$ (forest w/heavy litter surface)
 $T_c = (L_f / V) / (3600 \text{ sec/hr})$

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation

$V = (1.49 * (R^{(2/3)})) * (S_f^{0.5}) / n$
 $R = A_q / W_p$
 $T_c = (L_f / V) / (3600 \text{ sec/hr})$

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:			
Flow Length (ft):	.8	0.00	0.00
Slope (%):	87.3	0.00	0.00
2 yr, 24 hr Rainfall (in):	6.9	0.00	0.00
Velocity (ft/sec):	2.97	0.00	0.00
Computed Flow Time (minutes):	0.07	0.00	0.00
	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:			
Flow Length (ft):	.033	.01	.03
Channel Slope (%):	122	63	132
Cross Section Area (ft ²):	12	10.4	7.02
Wetted Perimeter (ft):	2	.63	3.42
Velocity (ft/sec):	5.6	2.1	6.12
Computed Flow Time (minutes):	7.87	21.53	8.93
	0.26	0.05	0.25

=====
Total TOC (minutes): 22.61
=====

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

Sheet Flow Equation

$$T_c = (0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))$$

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:			
Flow Length (ft):	.8	0.00	0.00
Slope (%):	87.3	0.00	0.00
2 yr, 24 hr Rainfall (in):	6.9	0.00	0.00
Velocity (ft/sec):	2.97	0.00	0.00
Computed Flow Time (minutes):	0.07	0.00	0.00
	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:			
Flow Length (ft):	.033	.01	.03
Channel Slope (%):	122	63	132
Cross Section Area (ft ²):	12	10.4	7.02
Wetted Perimeter (ft):	2	.63	3.42
Velocity (ft/sec):	5.6	2.1	6.12
Computed Flow Time (minutes):	7.87	21.53	8.93
	0.26	0.05	0.25

=====
Total TOC (minutes): 22.61
=====

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

Sheet Flow Equation

$$T_c = (0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))$$

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:			
Flow Length (ft):	.8	0.00	0.00
Slope (%):	87.3	0.00	0.00
2 yr, 24 hr Rainfall (in):	6.9	0.00	0.00
Velocity (ft/sec):	2.97	0.00	0.00
Computed Flow Time (minutes):	0.07	0.00	0.00
	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:			
Flow Length (ft):	.033	0.00	0.00
Channel Slope (%):	122	0.00	0.00
Cross Section Area (ft ²):	12	0.00	0.00
Wetted Perimeter (ft):	2	0.00	0.00
Velocity (ft/sec):	5.6	0.00	0.00
Computed Flow Time (minutes):	7.87	0.00	0.00
	0.26	0.00	0.00

=====
Total TOC (minutes): 22.31
=====

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

Sheet Flow Equation

$$T_c = (0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))$$

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:			
Flow Length (ft):	.8	0.00	0.00
Slope (%):	87.3	0.00	0.00
2 yr, 24 hr Rainfall (in):	6.9	0.00	0.00
Velocity (ft/sec):	2.97	0.00	0.00
Computed Flow Time (minutes):	0.07	0.00	0.00
	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:			
Flow Length (ft):	.033	0.00	0.00
Channel Slope (%):	122	0.00	0.00
Cross Section Area (ft ²):	12	0.00	0.00
Wetted Perimeter (ft):	2	0.00	0.00
Velocity (ft/sec):	5.6	0.00	0.00
Computed Flow Time (minutes):	7.87	0.00	0.00
	0.26	0.00	0.00

=====
Total TOC (minutes): 22.31
=====

SCS TR-55 Time of Concentration Computations Report =====	
Sheet Flow Equation -----	
$T_c = (0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))$	
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 -----	
$V = 16.1345 * (S_f^{0.5}) \text{ (unpaved surface)}$	
$V = 20.3282 * (S_f^{0.5}) \text{ (paved surface)}$	
$V = 15.0 * (S_f^{0.5}) \text{ (grassed waterway surface)}$	
$V = 10.0 * (S_f^{0.5}) \text{ (nearly bare & untilled surface)}$	
$V = 9.0 * (S_f^{0.5}) \text{ (cultivated straight rows surface)}$	
$V = 7.0 * (S_f^{0.5}) \text{ (short grass pasture surface)}$	
$V = 5.0 * (S_f^{0.5}) \text{ (woodland surface)}$	
$V = 2.5 * (S_f^{0.5}) \text{ (forest w/heavy litter surface)}$	
$T_c = (L_f / V) / (3600 \text{ sec/hr})$	
Where:	
Tc = Time of Concentration (hrs)	
Lf = Flow Length (ft)	
V = Velocity (ft/sec)	
Sf = Slope (ft/ft)	
Channel Flow Equation -----	
$V = (1.49 * (R^{(2/3)})) * (S_f^{0.5}) / n$	
$R = A_q / W_p$	
$T_c = (L_f / V) / (3600 \text{ sec/hr})$	
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 DitchRT
=====

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
-			
Manning's Roughness:			
Flow Length (ft):	.8	0.00	0.00
Slope (%):	16	0.00	0.00
2 yr, 24 hr Rainfall (in):	10	0.00	0.00
Velocity (ft/sec):	2.97	0.00	0.00
Computed Flow Time (minutes):	0.06	0.00	0.00
	4.71	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
-			
Manning's Roughness:			
Flow Length (ft):	.033	0.00	0.00
Channel Slope (%):	400	0.00	0.00
Cross Section Area (ft ²):	12	0.00	0.00
Wetted Perimeter (ft):	5.67	0.00	0.00
Velocity (ft/sec):	7.5	0.00	0.00
Computed Flow Time (minutes):	12.98	0.00	0.00
	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: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Site: Per... Douglas, K... Juneau, Alaska, USA
Roy, Svein... Juneau, Alaska, USA
Bonnin, S... Juneau, Alaska, USA

NOAA, N... Juneau, Alaska, USA

Univ. of Alaska, Fairbanks, Alaska, USA

PF bulr | PF gr_h | Ma s & er ls

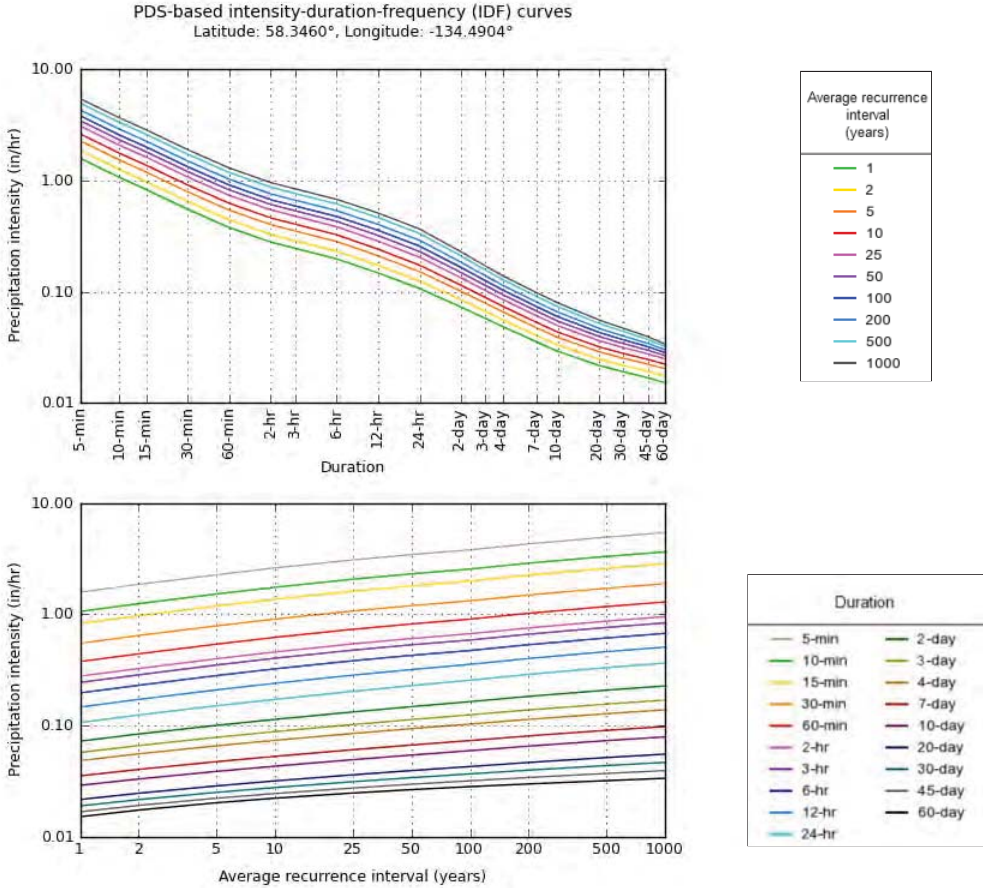
PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹											
Duration	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 (0.788-1.26)	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 (1.49-2.84)	2.25 (1.69-3.04)	2.59 (1.78-3.64)	2.84 (1.93-4.29)	
30-min	0.550 (0.440-0.702)	0.646 (0.510-0.835)	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 (0.350-0.619)	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 (0.646-1.44)	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 (0.488-0.962)	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 (0.216-0.372)	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 Please refer to NOAA Atlas 14 for more information.
Numbers in parentheses are 90% confidence intervals for the lower bound (or less than) and upper bound (or greater than) of the frequency estimates.
The bolded numbers are the frequency estimates for the 90% confidence interval.
The numbers in parentheses are the 90% confidence intervals for the lower bound (or less than) and upper bound (or greater than) of the frequency estimates.

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PF graphical



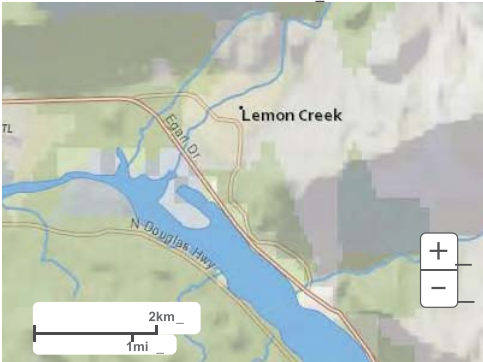
NOAA Atlas 14, Volume 7, Version 2

Created (GMT): Fri Nov 1 21:25:38 2019

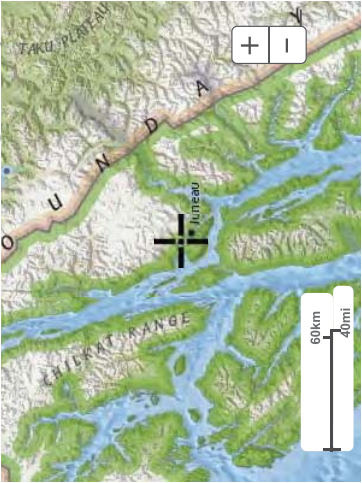
[Back To](#)

Maps & aerals _

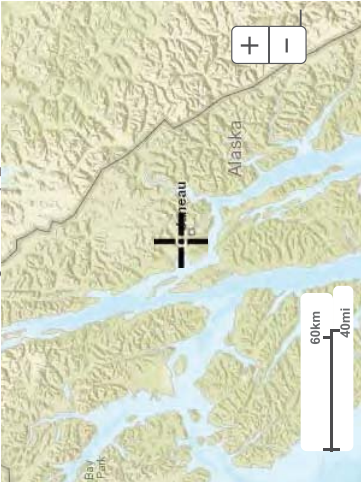
Small scale terrain



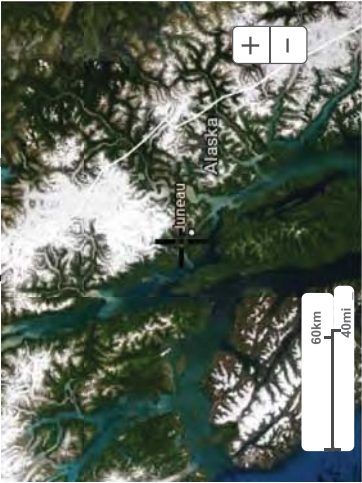
Large scale terrain _



Large scale map



Large scale aerial



Block 10

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.

Q (cfs)	K	n	A	R	S	=	
	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 beginning 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 construction 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 construction 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.

Q (cfs)	K	n	A	R	S	=	
	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 construction 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.

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

Appendix G

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



Attachment I - Drainage Report

1945 Alex Holden Way #101
219 Main Street #13

Juneau, AK 99801
Haines, AK 99827

907-780-4004
907-419-6070

Packet Page 297 of 372
solutions@proHNS.com
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 guide¹. 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,

A handwritten signature in blue ink that reads "Lucas Chambers".

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



PROJECT LOCATION MAP
NTS

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



ALASKA

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



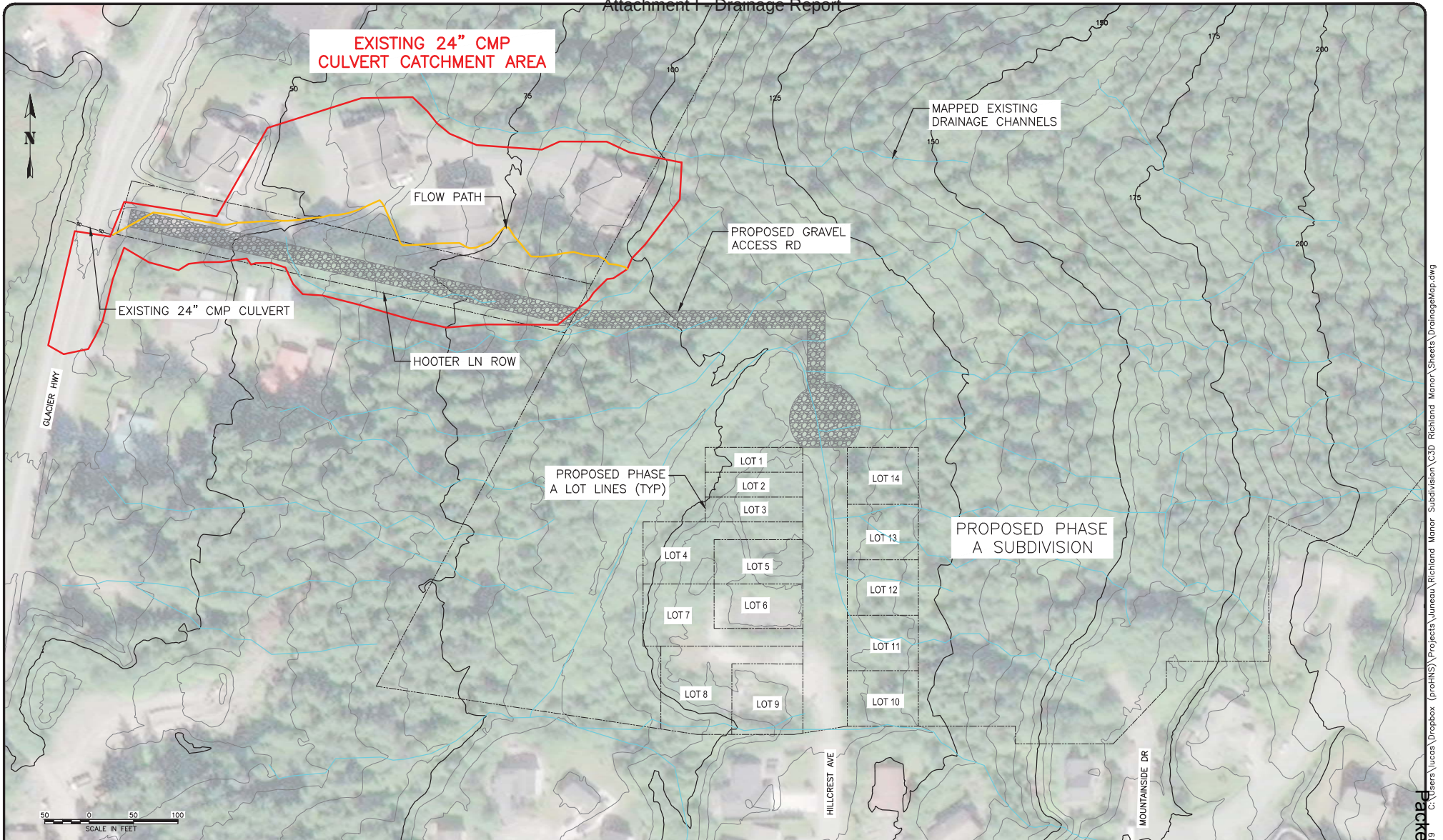
DRAWN BY: S. MÖLLER
DESIGNED BY: L. CHAMBERS
CHECKED BY: L. CHAMBERS
1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

RICHLAND MANOR
SUBDIVISION

WILLIAM & MICHAEL HUEMANN

COVER SHEET

SHEET NUMBER	
1	OF
4	



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



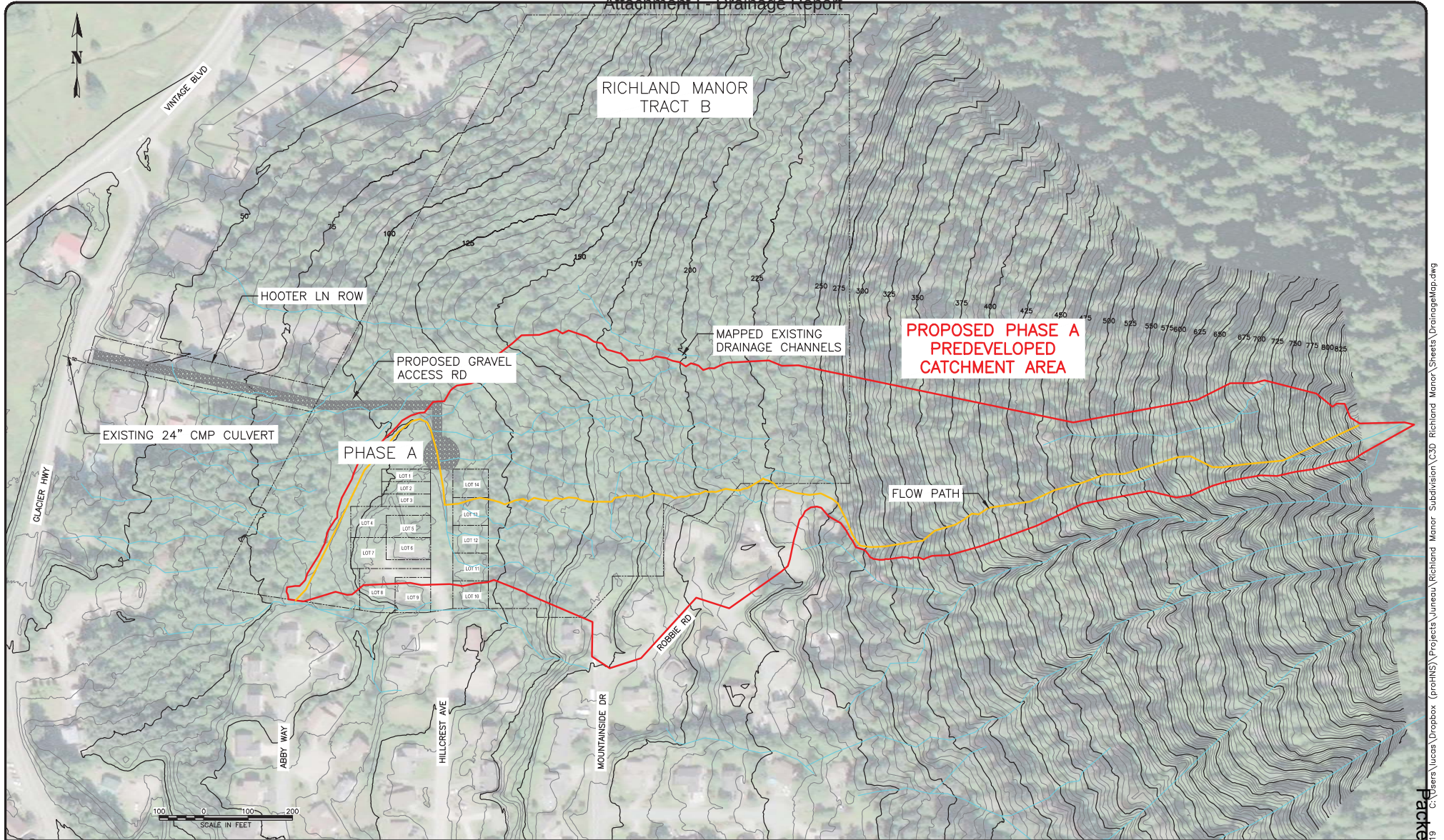
DRAWN BY: S. MOLLER
 DESIGNED BY: L. CHAMBERS
 CHECKED BY: L. CHAMBERS
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**RICHLAND MANOR
 SUBDIVISION**
 WILLIAM & MICHAEL HUMEAN

**EXISTING 24" CMP
 CATCHMENT AREA**

SHEET NUMBER	
2	OF
4	

Attachment I - Drainage Report



RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY



DRAWN BY: S. MOLLER
 DESIGNED BY: L. CHAMBERS
 CHECKED BY: L. CHAMBERS
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RICHLAND MANOR
 SUBDIVISION
 WILLIAM & MICHAEL HUMEAN

PHASE A
 PREDEVELOPED
 CATCHMENT AREA

SHEET NUMBER	
3	OF
4	



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

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801

CERTIFICATE OF AUTHORIZATION
#100662

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PROPOSED PHASE A
SUBDIVISION
CATCHMENT AREA

SHEET NUMBER
4
OF
4

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)

$C_c = 0.45$, See Appendix D for calculation

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

T_c = time of concentration (min)

$T_{1,2}$ = travel time across separate flow path segments (min)

$T_c = 8.71 \text{ min.}$, See Appendix E for calculation

$$T_t = L/60V$$

T_t = travel time (min)

L = the distance of flow across a given segment (feet)

$V = k_R \text{ Sqrt}(S_0)$ = 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 minute 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
T_c 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 delineated in AutoCAD from aerial photos and 2013 Lidar Data provided by CBJ, see Appendix A.

$$A = 107513 \text{ sqft} / 43,560 = \mathbf{2.47 \text{ acres}}$$

	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
Storm frequency = 25 yrs
Time interval = 10 min
Drainage area = 19.920 ac
Basin Slope = 0.0 %
Tc method = User
Total precip. = 4.82 in
Storm duration = 24 hrs

Peak discharge = 6.311 cfs
Time to peak = 8.33 hrs
Hyd. volume = 143,272 cuft
Curve number = 71*
Hydraulic length = 0 ft
Time of conc. (Tc) = 41.57 min
Distribution = Type IA
Shape factor = 484

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



Hydrograph Report

Attachment I - Drainage Report

Packet Page 309 of 372

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v12

Friday, 11 / 1 / 2019

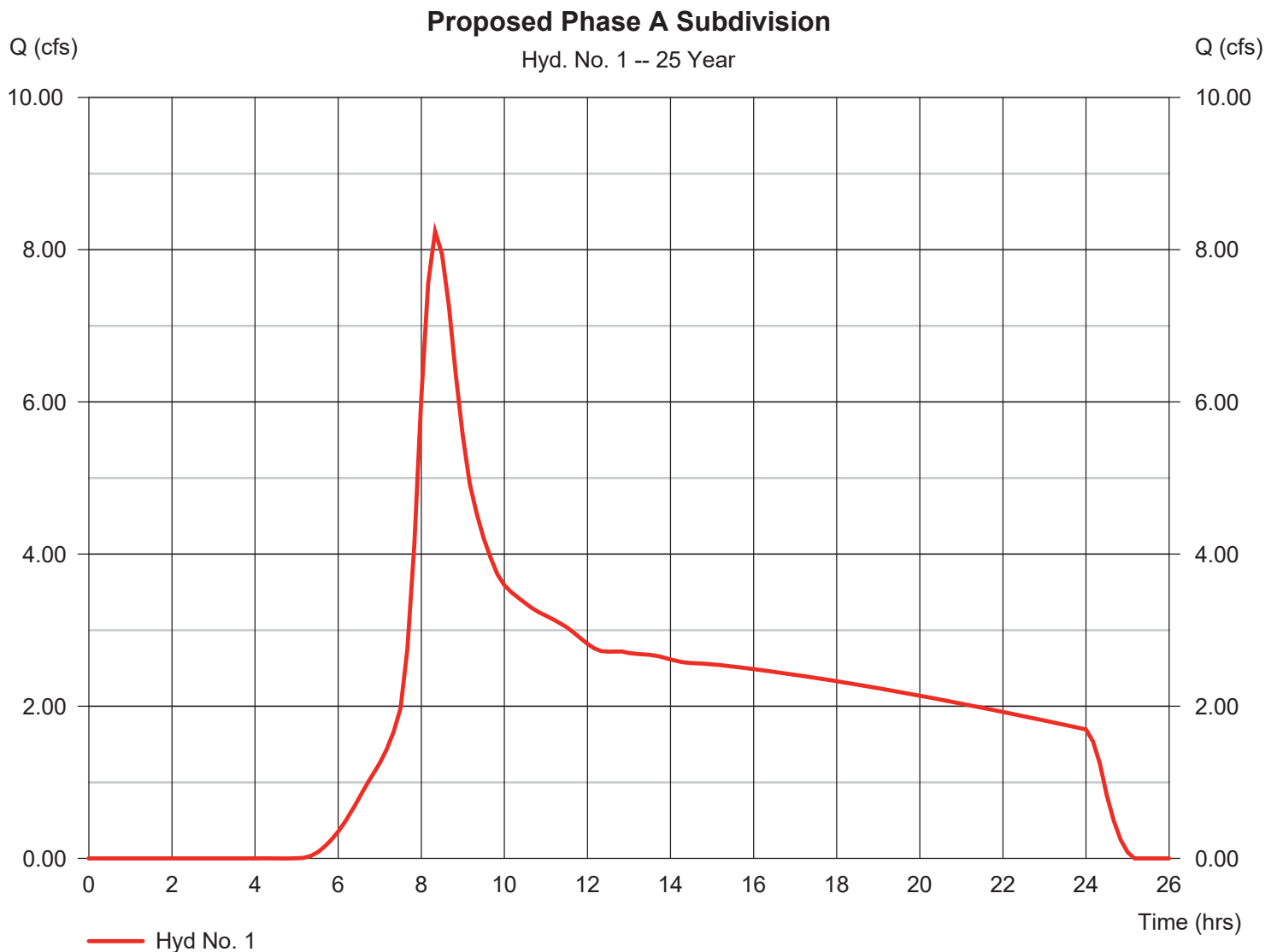
Hyd. No. 1

Proposed Phase A Subdivision

Hydrograph type = SCS Runoff
Storm frequency = 25 yrs
Time interval = 10 min
Drainage area = 23.060 ac
Basin Slope = 26.0 %
Tc method = User
Total precip. = 4.82 in
Storm duration = 24 hrs

Peak discharge = 8.239 cfs
Time to peak = 8.33 hrs
Hyd. volume = 179,151 cuft
Curve number = 73*
Hydraulic length = 3231 ft
Time of conc. (Tc) = 39.30 min
Distribution = Type IA
Shape factor = 484

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



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.

Packet Page 313 of 372

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

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

Sheet Flow Equation

$T_c = (0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))$

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

$V = 16.1345 * (S_f^{0.5})$ (unpaved surface)
 $V = 20.3282 * (S_f^{0.5})$ (paved surface)
 $V = 15.0 * (S_f^{0.5})$ (grassed waterway surface)
 $V = 10.0 * (S_f^{0.5})$ (nearly bare & untilled surface)
 $V = 9.0 * (S_f^{0.5})$ (cultivated straight rows surface)
 $V = 7.0 * (S_f^{0.5})$ (short grass pasture surface)
 $V = 5.0 * (S_f^{0.5})$ (woodland surface)
 $V = 2.5 * (S_f^{0.5})$ (forest w/heavy litter surface)
 $T_c = (L_f / V) / (3600 \text{ sec/hr})$

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation

$V = (1.49 * (R^{(2/3)})) * (S_f^{0.5}) / n$
 $R = A_q / W_p$
 $T_c = (L_f / V) / (3600 \text{ sec/hr})$

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 existing24cmp
=====

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
-	341.5	0.00	0.00
Flow Length (ft):	12.3	0.00	0.00
Slope (%):	Forest	Unpaved	Unpaved
Surface Type:	0.88	0.00	0.00
Velocity (ft/sec):	6.47	0.00	0.00
Computed Flow Time (minutes):			

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
-	.1	0.00	0.00
Manning's Roughness:	312	0.00	0.00
Flow Length (ft):	8.33	0.00	0.00
Channel Slope (%):	1.5	0.00	0.00
Cross Section Area (ft ²):	3.8	0.00	0.00
Wetted Perimeter (ft):	2.31	0.00	0.00
Velocity (ft/sec):	2.25	0.00	0.00
Computed Flow Time (minutes):			

=====
Total TOC (minutes): 8.71
=====

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

Sheet Flow Equation

$T_c = (0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))$

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

$V = 16.1345 * (S_f^{0.5})$ (unpaved surface)
 $V = 20.3282 * (S_f^{0.5})$ (paved surface)
 $V = 15.0 * (S_f^{0.5})$ (grassed waterway surface)
 $V = 10.0 * (S_f^{0.5})$ (nearly bare & untilled surface)
 $V = 9.0 * (S_f^{0.5})$ (cultivated straight rows surface)
 $V = 7.0 * (S_f^{0.5})$ (short grass pasture surface)
 $V = 5.0 * (S_f^{0.5})$ (woodland surface)
 $V = 2.5 * (S_f^{0.5})$ (forest w/heavy litter surface)
 $T_c = (L_f / V) / (3600 \text{ sec/hr})$

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation

$V = (1.49 * (R^{(2/3)})) * (S_f^{0.5}) / n$
 $R = A_q / W_p$
 $T_c = (L_f / V) / (3600 \text{ sec/hr})$

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 (ft ²):	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

$$T_c = (0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))$$

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

$$\begin{aligned} V &= 16.1345 * (S_f^{0.5}) \text{ (unpaved surface)} \\ V &= 20.3282 * (S_f^{0.5}) \text{ (paved surface)} \\ V &= 15.0 * (S_f^{0.5}) \text{ (grassed waterway surface)} \\ V &= 10.0 * (S_f^{0.5}) \text{ (nearly bare & untilled surface)} \\ V &= 9.0 * (S_f^{0.5}) \text{ (cultivated straight rows surface)} \\ V &= 7.0 * (S_f^{0.5}) \text{ (short grass pasture surface)} \\ V &= 5.0 * (S_f^{0.5}) \text{ (woodland surface)} \\ V &= 2.5 * (S_f^{0.5}) \text{ (forest w/heavy litter surface)} \\ T_c &= (L_f / V) / (3600 \text{ sec/hr}) \end{aligned}$$

Where:

- Tc = Time of Concentration (hrs)
- Lf = Flow Length (ft)
- V = Velocity (ft/sec)
- Sf = Slope (ft/ft)

Channel Flow Equation

$$\begin{aligned} V &= (1.49 * (R^{(2/3)})) * (S_f^{0.5}) / n \\ R &= A_q / W_p \\ T_c &= (L_f / V) / (3600 \text{ sec/hr}) \end{aligned}$$

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 (ft ²):	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

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Pelica, Douglas Kane, Sarah Dietz, Kazungu Malania, Deborah Martin, Sandra Pavlovic, Ishani Roy, Svetlana Stueler, Amy Tidwell, Carl Trypanuk, 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 & aeriels](#)

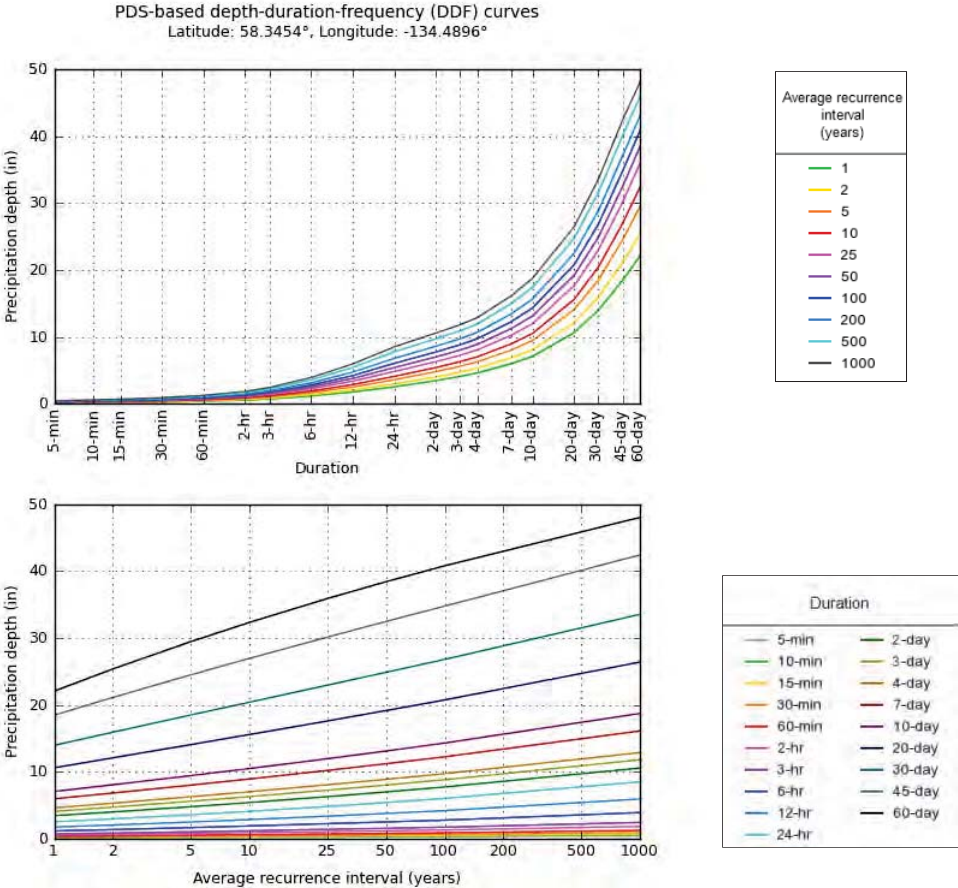
PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹											
Duration	Average recurrence interval (years)										
	1	2	5	10	50	100	200	500	1000		
5-min	0.131 (0.108-0.166)	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 (0.303-0.592)	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 (0.353-0.684)	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 (0.681-1.10)	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.

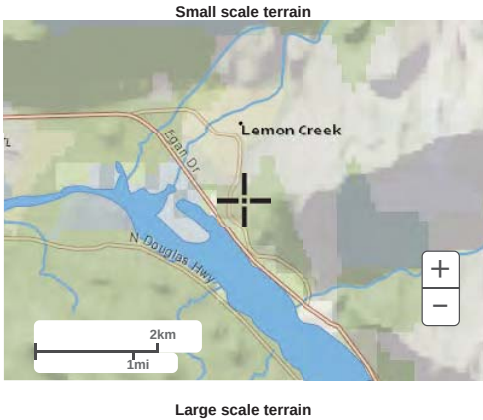
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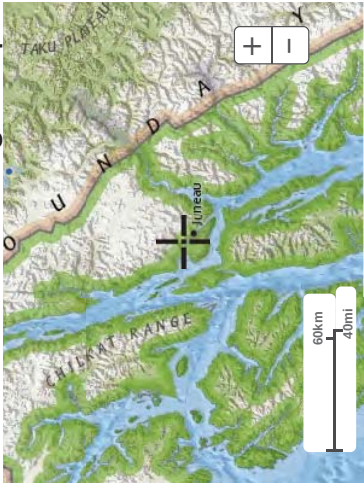
PF graphical



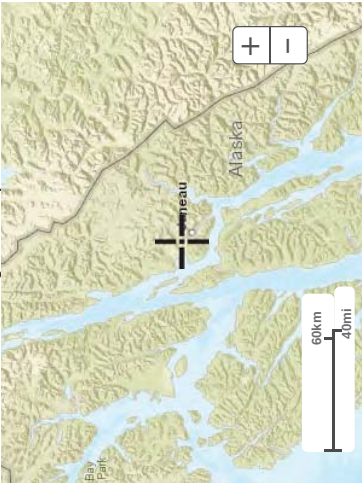
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Maps & aerals

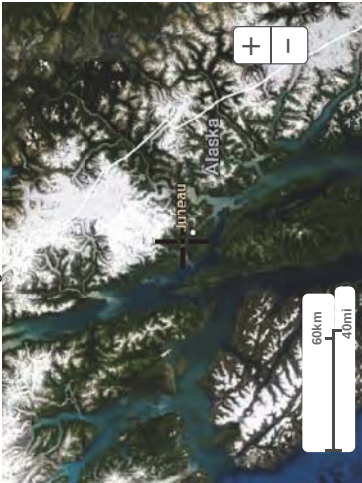




Large scale map



Large scale aerial



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[National Weather Service](#)
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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POINT PRECIPITATION FREQUENCY ESTIMATES

S nj Per _ , Dougl s K ne, S r h D e z, K zungu Ma _ r _ , Debor h M a _ n, S ndr P vlov _ lsh n _
R oy, Sve i _ S uefer, Amy T dweli, C r l Try _ luk, D le Unruh, Mi h el Yek _ Er _ Be s, Geoffrey _
Bonn n, S r h Hem, L il n H ner, Elz be h L lly, J y shree N r y n n, Fenglin Y n, T n Zh o _

NOAA, N_on I We _her Serv e, Silver S_r ng, Mayl nd

University of Alaska Fairbanks, Environmental Research Center

Philip R. Pfeiffer, PhD, is a professor of psychology at the University of North Carolina at Chapel Hill. He is also a senior research advisor at the Carolina Center for the Study of Mental Health. His research interests include the development of self-report measures of mental health and the use of these measures in the study of mental health in the community. He is the author of several books and numerous articles on these topics.

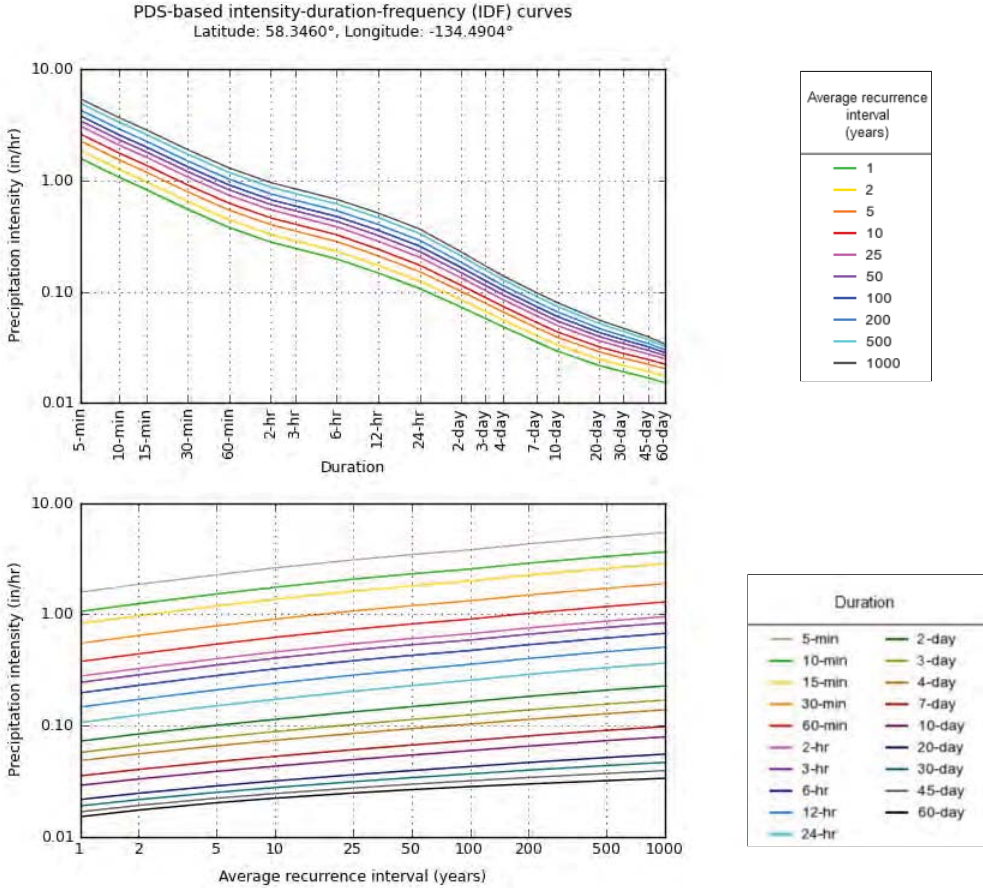
PF tabular

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 (1.75-3.03)	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	1.05 (0.86-1.36)	1.25 (0.984-1.61)	1.52 (1.18-2.02)	1.75 (1.32-2.35)	2.07 (1.54-2.95)	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 (2.47-5.45)		
15-min	0.828 (0.684-1.06)	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 (1.78-3.64)	2.84 (1.93-4.28)		
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 (0.950-1.98)	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)	0.403 (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 (0.528-1.13)	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)	0.475 (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 (0.285-0.582)	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 (0.230-0.361)	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)	0.077 (0.063-0.094)	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 (0.100-0.165)	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)	0.084 (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)	0.036 (0.030-0.044)	0.043 (0.030-0.044)	0.043 (0.033-0.048)	0.043 (0.035-0.054)	0.052 (0.037-0.059)	0.057 (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)		

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PF graphical



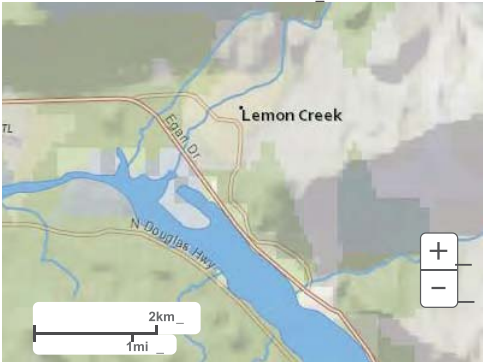
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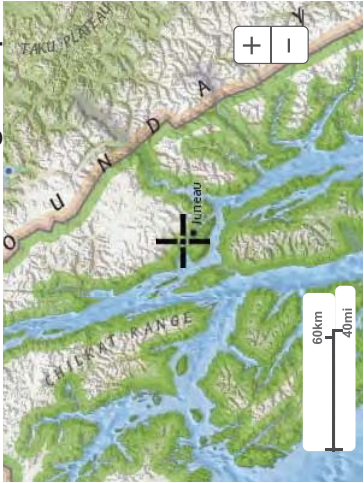
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Maps & aerals _

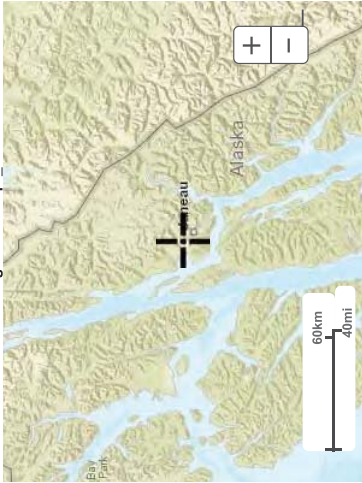
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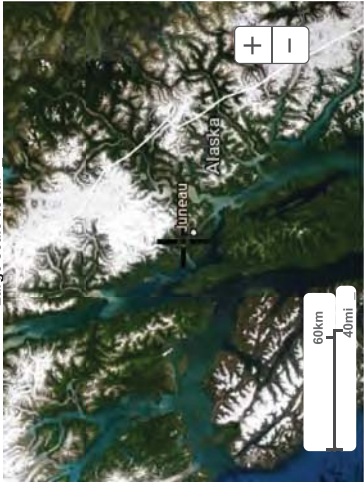
Large scale terrain _



Large scale map



Large scale aerial



Block 10

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National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
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Silver Spring, MD 20910
Questions? HDSC.Questions@noaa.gov
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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.

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

d = diameter in ft

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

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

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		TOP OF GRADE ELEVATION	INVERT ELEVATION	INVERT REMARKS	PIPE NO.	DESIGN LENGTH	PIPE SIZE	FROM		TO		REMARKS
		STATION	OFFSET							STRUCTURE NO.	INVERT ELEVATION	STRUCTURE NO.	INVERT ELEVATION	
S-1	A	140+37	RT	27.77	23.52	25.23	P-1	8'-11"	18"	S-1	23.52	OUTFALL		SPILLWAY
S-2	A	142+18	LT	26.11	21.36	19.22	P-2	6'-6"	24"	S-2	22.86	OUTFALL		SPILLWAY
S-3	A	144+35	LT	22.23	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	26.23	OUTFALL	25.9	
S-6	A	148+39	RT	30.67	25.92	25.97	P-6	3'-2"	24"	S-6	27.42	S-7	27.32	
S-7	A	148+72	RT	30.72	25.92		P-7	10'	24"	S-7	27.22	S-8	26.25	DELETED
S-8	FIELD	"W" 10+28	LT	29.00	25.60		P-8	6'-6"	24"	S-8	26.20	OUTFALL		
S-9	FIELD	"W" 11+65	LT	49.00	44.30		P-9	1'-6"	18"	S-9	45.80	S-7	27.42	
							P-10	24'-28"	24"			S-9	46.00	
S-10	A	152+00	LT	30.43	26.18	25.18	P-11	1'-6"	18"	S-10	26.27	OUTFALL		SPILLWAY
S-11	A	153+16	LT	29.96	25.71	21.71	P-12	1'-6"	18"	S-11	26.27	OUTFALL		SPILLWAY
S-12	A	154+93	RT	29.85	25.40		P-13	56'-35"	24"	S-12	26.68	S-13	26.49	
S-13	A	154+93	LT	29.85	24.70	24.66	P-14	12'-4"	24"	S-13	26.68	OUTFALL	26.30	SPILLWAY
S-14	A	156+42	RT	20.50	26.25	25.17	P-15	8'-11"	18"	S-14	27.75	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	10'-11"	18"	S-16	28.33	OUTFALL	26.00	
S-17	A	161+98	LT	30.46	26.21	25.21	P-18	1'-6"	18"	S-17	26.27	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	1'-6"	18"		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	25.26	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	OUTFALL	25.70	
S-21	A	169+48	LT	30.52	26.27	25.27	P-22	1'-6"	18"	S-21	26.27	OUTFALL	26.50	SPILLWAY
S-22	A	172+04	LT	29.70	25.45	24.47	P-23	14'-9"	18"	S-22	25.25	OUTFALL	25.70	
S-23	A	173+33	LT	29.70	24.60	23.60	P-24	1'-6"	18"	S-23	25.26	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	29.63	25.38	24.38	P-26	1'-6"	18"	S-25	26.28	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	1'-6"	18"	S-27	25.26	OUTFALL	25.30	SPILLWAY
							P-28A	10'	18"		25.26	S-26	27.50	
S-28	A	177+98	RT	30.07	25.32	25.04	P-29	1'-6"	24"	S-28	26.27	OUTFALL	26.50	SPILLWAY
S-28A	A	"B" 10+34	RT	28.66	23.70	24.70	P-29B	34'-36"	24"	S-28A	25.27	S-28B	25.46	
S-28B	A	"B" 10+34	LT	28.49	23.60	24.60	P-29C	5'-1"	24"	S-28B	25.46	DITCH	25.46	
							P-29A	10'	24"		25.30	S-28A	25.25	
S-29	A	180+85	RT	28.56	23.81	23.81	P-30	34'-58"	24"	S-29	25.31	OUTFALL		
S-30	B	182+56	RT	29.13	22.40		P-31	34'-71"	24"	S-30	23.90	OUTFALL	19.20	
							P-32	1'-6"	18"		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	14'-9"	18"	S-32	27.26	OUTFALL	27.30	SPILLWAY
S-33	A	187+22	LT	31.35	27.10	26.10	P-35	10'-8"	18"	S-33	27.26	OUTFALL	27.30	SPILLWAY
S-34	A	188+98	LT	31.54	27.29	26.29	P-36	12'-9"	18"	S-34	27.29	OUTFALL	27.60	SPILLWAY
S-35	A	191+00	LT	31.07	26.22	25.22	P-37	26'-6"	18"	S-35	26.27	OUTFALL	24.50	
							P-37A	45'-40"	24"		30.00	S-35	22.82	
S-36	A	192+72	LT	30.03	25.78	24.78	P-38	1'-6"	18"	S-36	26.27	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	26.26	OUTFALL	26.30	SPILLWAY
S-39	A	198+00	RT	30.86	26.11		P-41	36'	24"	S-39	26.26	S-40	27.43	
S-40	A	198+00	LT	30.86	25.81	24.81	P-42	14'-8"	18"	S-40	26.27	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'-6"	24"	S-42	25.26	OUTFALL	25.00	SPILLWAY
							P-45	10'-10"	18"		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	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	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'-32"	18"	S-46A	30.43	S-44A	30.00	
							P-47C	6'-10"	18"		30.70	S-46A	30.53	
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"		33.15	S-46	33.65	
S-47	A	206+50	RT	45.64	41.39		P-50	10'	18"	S-47	43.22	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'-11"	18"	S-50	25.26	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	10'-10"	24"	S-52	22.84	OUTFALL	18.00	
S-53	A	223+26	RT	25.33	21.00	20.22	P-56	14'	18"	S-53	22.58	OUTFALL	22.00	
S-54	A	223+26	LT	24.71	20.38	20.32	P-57	18'-10"	18"	S-54	21.88	OUTFALL	21.00	

TOTALS: 54- A 1- B 2- F

TOTALS: 18" - 57' 24" - 1,077'

BY:	DATE:	DESCRIPTION OF CHANGE:

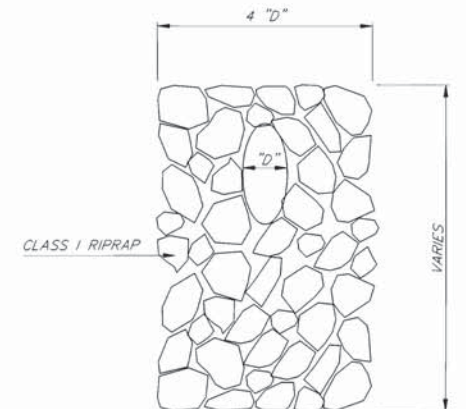
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

JUNEAU

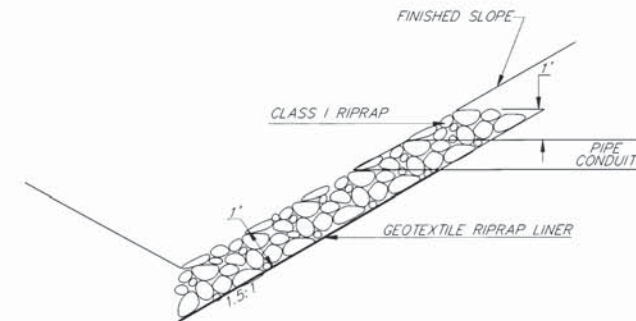
SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-6955(8) (70469)
STORM DRAIN SYSTEM SUMMARY

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	10 OF 85

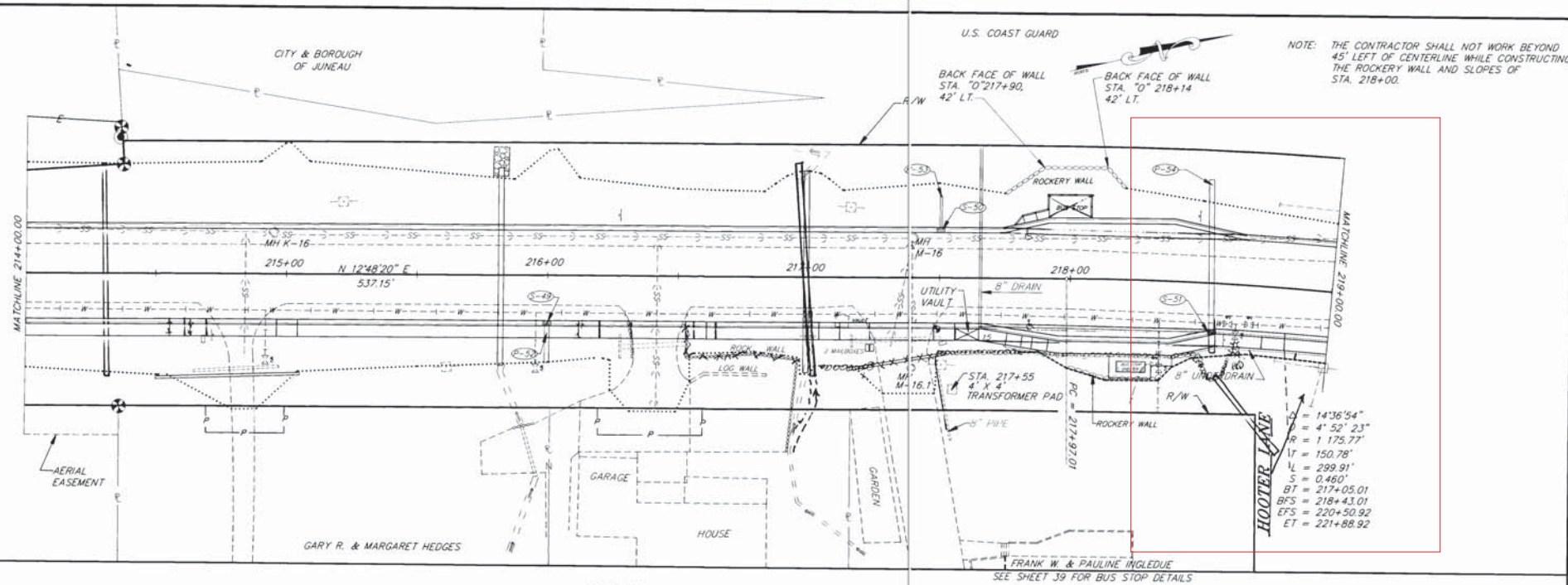


SPILLWAY PLAN



SPILLWAY SECTION





NO.	DATE	DESCRIPTION OF CHANGE

RECORD OF REVISIONS

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

JUNEAU

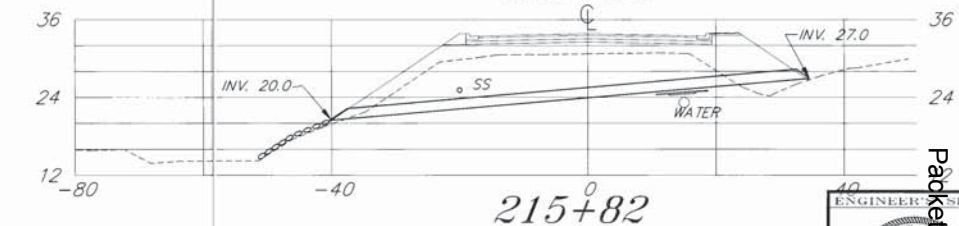
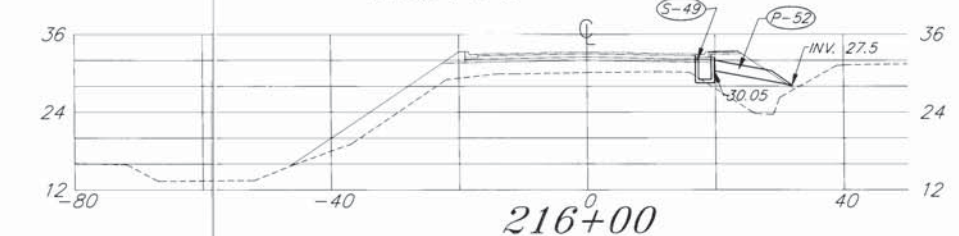
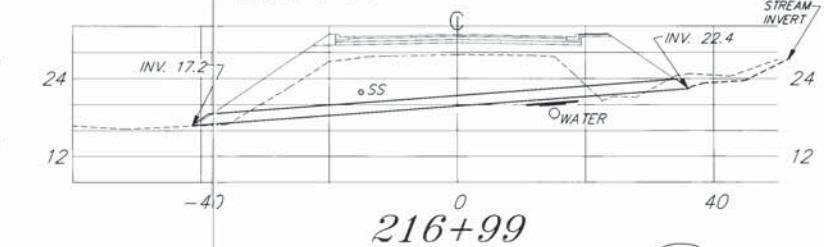
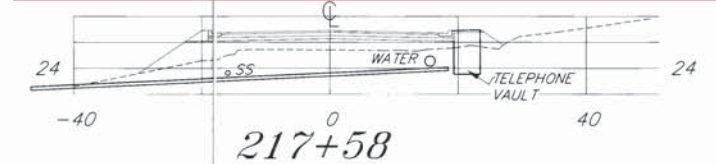
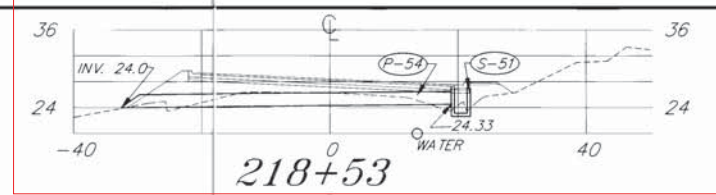
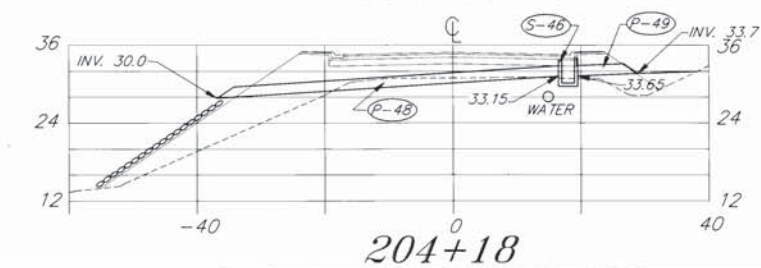
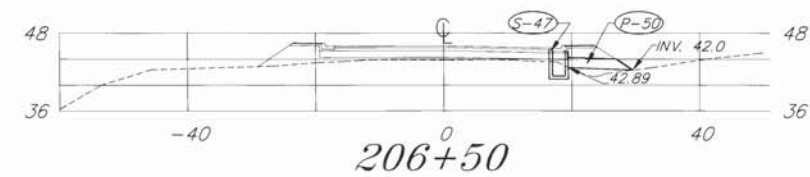
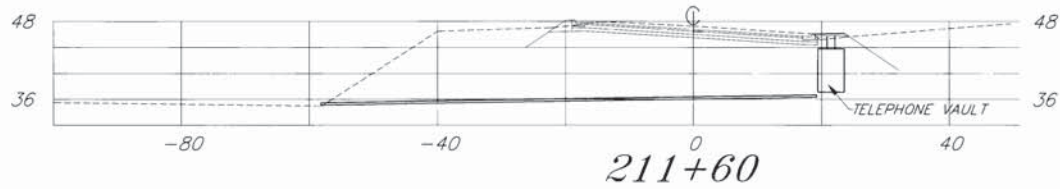
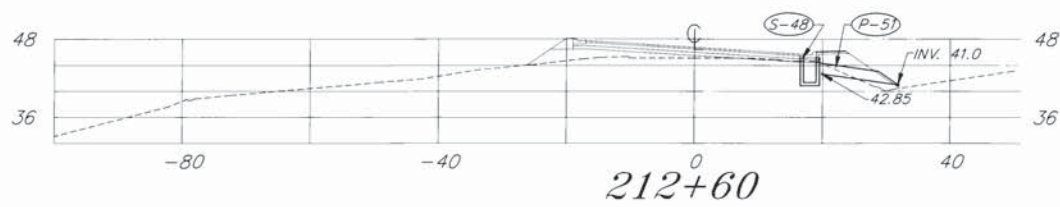
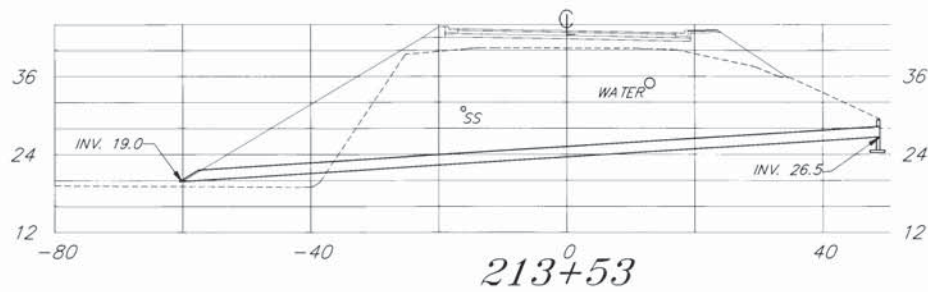
SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-0955(8) (70469)
STA. "O" 214+00.00 TO STA. "O" 219+00.00

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



P: JNU/SALMON/0955(8) 1=20



NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

PATH:			P: \JUNU\SALMON\DR\PIPE9 1=10		
BY:	DATE:	DESCRIPTION OF CHANGE:			
RECORD OF REVISION					

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

JUNEAU

SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-0955(8) 70/69

PIPE CROSS SECTIONS-204+18 TO 218+53

ALASKA

DESIGNED BY:

D. KROMAREK

DRAWN BY:

C. ANDERSON

CHECKED BY:

P. BEDNAROWICZ

PROJECT NO.

70462

DATE:

6/1993

SHEET 83 OF 85



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.

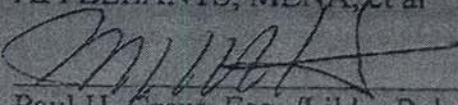
16. If a third party appeals a Notice Of Decision that approves the alternative plat,, the Heumanns and MENA shall immediately meet and confer (with or without the involvement of the third party appellants) to determine whether there is a solution that is consistent with this Agreement. If an agreement 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.

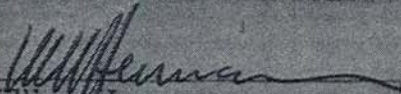
19. The parties agree to bear their own costs and attorney fees in this appeal.

Respectfully submitted this 23 ^{Sept} day of ~~August~~ 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

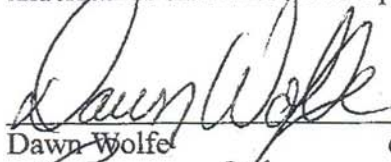
By: 
Michael Heumann

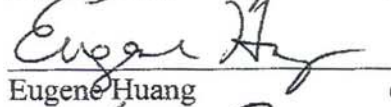
APPELLEE PC

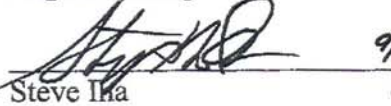
By: Jane S. Mores 9/30/19
Jane S. Mores, Esq.
Alaska Bar No. 9011115

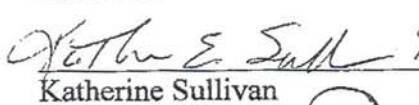
SIGNATURES OF INDIVIDUAL APPELLANTS

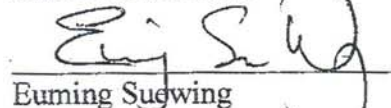
The following are the individual Appellants in the CBJ Planning Commission appeal designated as No. SMP2018-0002. By signing below each of them certifies that he or she has reviewed the Stipulated Settlement Agreement and the associated exhibits, and agrees that the appeal should be resolved as set out 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.

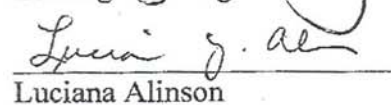
 9/5/19
Dawn Wolfe date

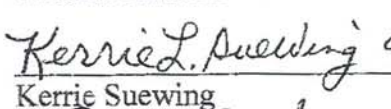
 9/11/19
Eugene Huang date

 9/5/2019
Steve Iha date

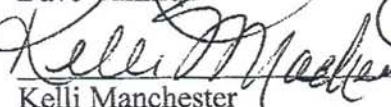
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Katherine Sullivan date

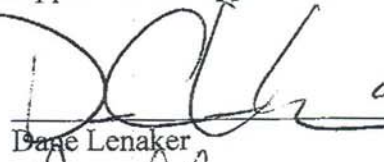
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Euming Suewing date

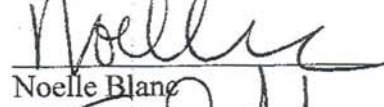
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Luciana Alinson date

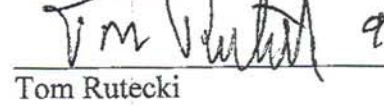
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Kerrie Suewing date

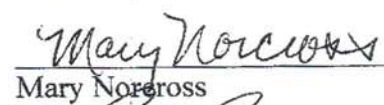
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Dave Tallmon date

 9/5/19
Kelli Manchester date

 9/9/19
Dane Lenaker date

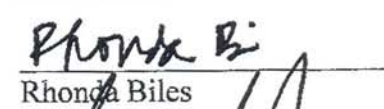
 9-12-19
Noelle Blanc date

 9-5-2019
Tom Rutecki date

 9/12/2019
Mary Norcross date

 9/6/2019
Bob Jones date

 9/5/19
Kris Coffee date

 9/5/19
Rhonda Biles date

 9/5/19
Mathew Pegues date



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.

Michael & William Heumann

File No.: SMP2018 0002

February 28, 2019

Page 2 of 4

- 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.

Michael & William Heumann
 File No.: SMP2018 0002
 February 28, 2019
 Page 3 of 4

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.

Michael & William Heumann

File No.: SMP2018 0002

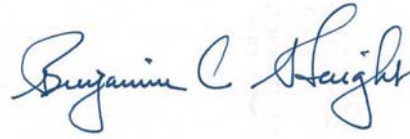
February 28, 2019

Page 4 of 4

Project Planner: _____



Laurel Bruggeman, Planner
Community Development Department



Benjamin Haight, Chair
Planning Commission



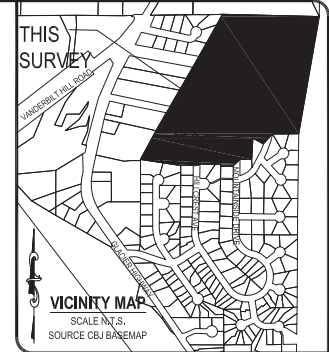
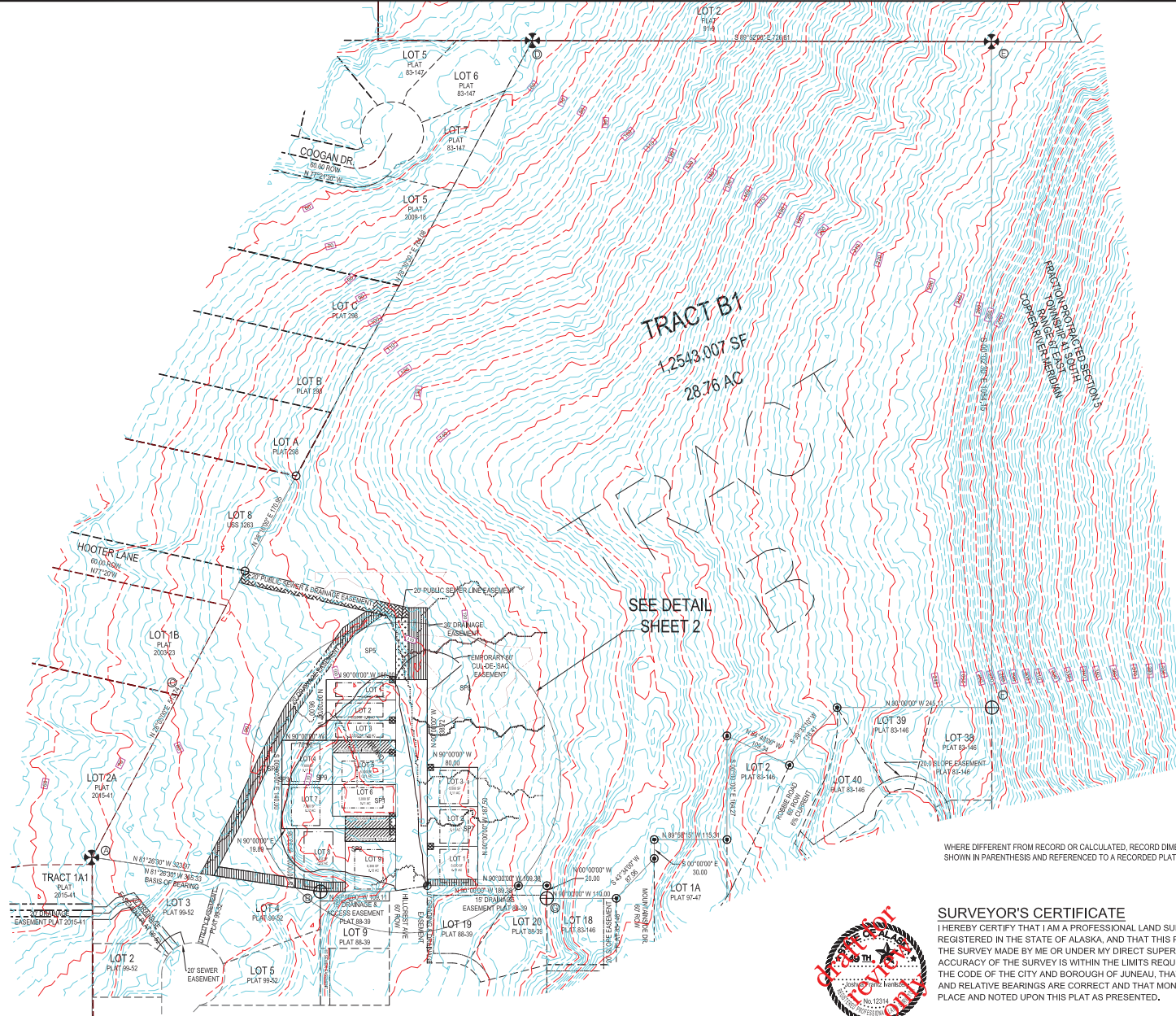
Filed With Municipal Clerk

3/5/2019

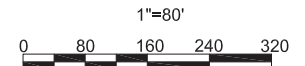
Date

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.

**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
- (N 45°04'15" W) R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S 00°06'33" W) R3 RECORD INFORMATION FROM PLAT No. 97-47



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

**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" = 80'

DATE:
26 DECEMBER 2018

SHEET NO.
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
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 - EASEMENT BOUNDARY CREATED THIS PLAT
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 - 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
 - (N 45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
 - (S 00°06'33" W)R3 RECORD INFORMATION FROM PLAT No. 97-47

HOOTER LANE
60.00 ROW
N 77°20' W

LOT 1B
PLAT
2003-23

LOT 2A
PLAT
2015-41

TRACT 1A1
PLAT
2015-41

LOT 3
PLAT 99-52

LOT 4
PLAT 99-52

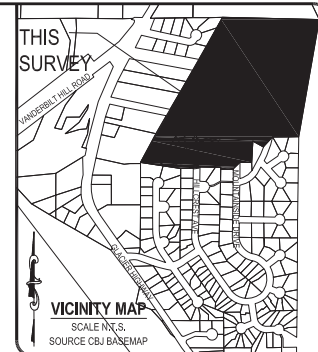
LOT 9
PLAT 88-39

LOT 19
PLAT 88-39

TRACT B1
1,253,007 SF
28.76 AC

HILLCREST AVE
N 00°00'00" E
50' ROW

LOT 19
PLAT 88-39



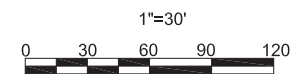
TYPICAL MONUMENT DETAIL
N.T.S.
5/8" x 3/8" REBAR WITH 2.5" ALUMINUM CAP



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.

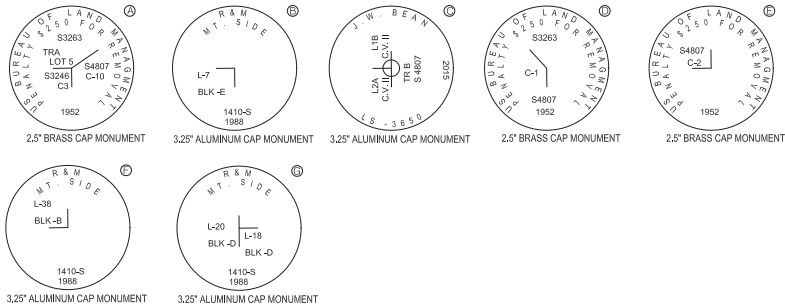
DATED: _____ 2019

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



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 907-257-1908			
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

FOUND MONUMENT DESCRIPTIONS:



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 VOLUNTARILY 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. 286 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 1987; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2005-23; 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 15.12 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.

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



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

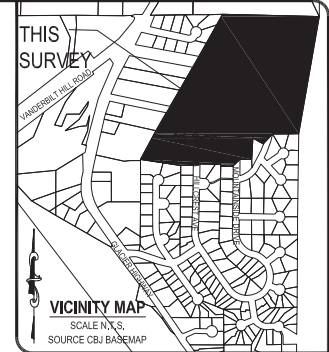
SETBACK LINE

TEMPORARY CUL-DE-SAC LIMITS

(N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807

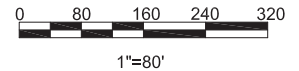
(N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146

(S00°06'33" W)R3 RECORD INFORMATION FROM PLAT No. 97-47



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 1989, 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.



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: 28 DECEMBER 2018	SHEET NO. 3 OF 3

EXHIBIT A

Date: 24 JANUARY 2019

To: CBJ COMMUNITY DEVELOPMENT 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

Norththing	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

Norththing	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

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
- (N 45°04'15" W) R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S 00°06'33" W) R3 RECORD INFORMATION FROM PLAT No. 97-47

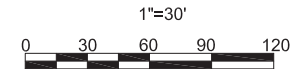
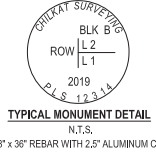
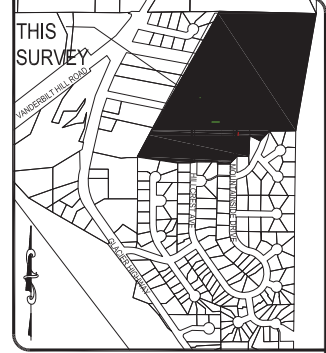
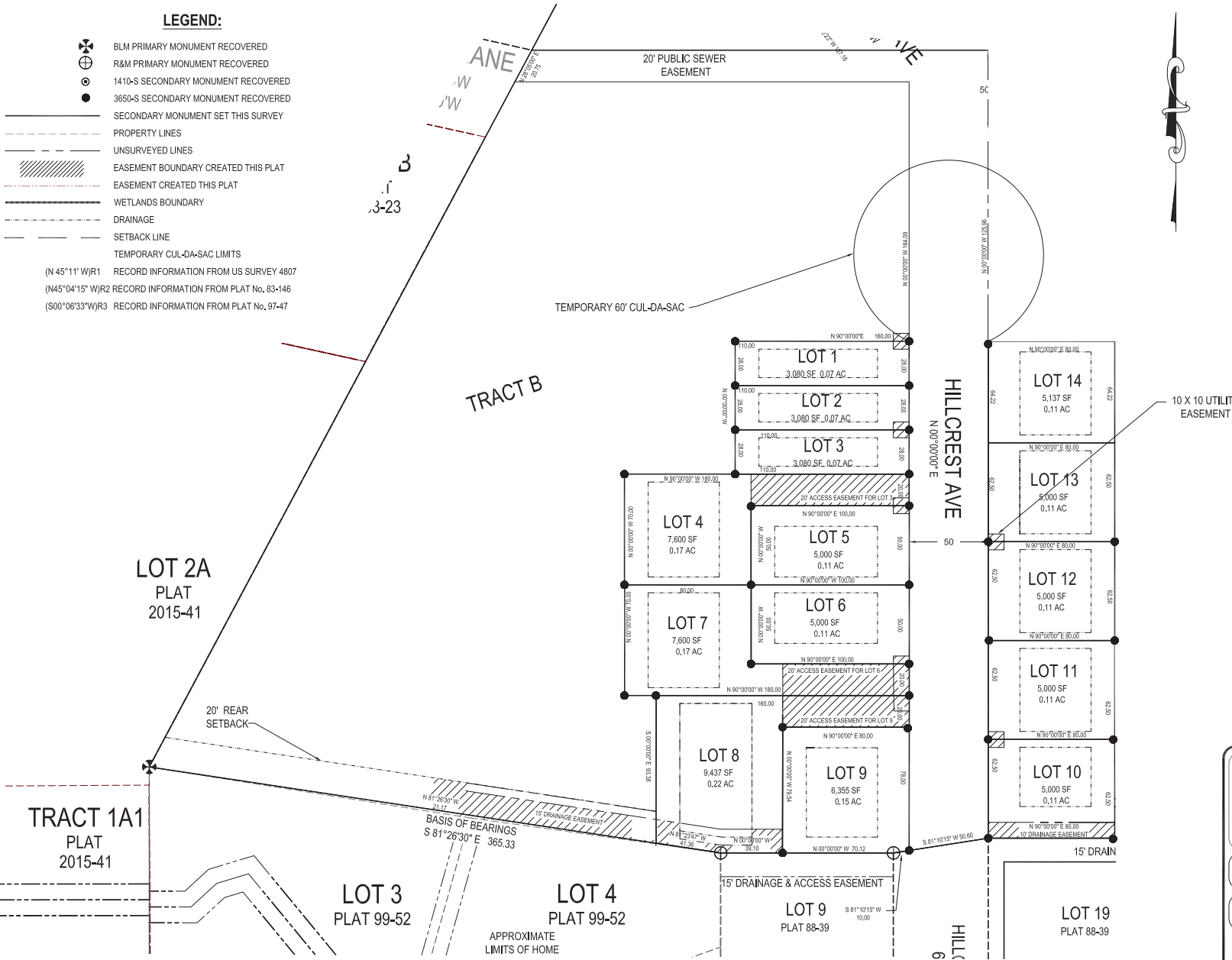


EXHIBIT B
PHASE A
RICHLAND MANOR 2
A FUTURE SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE, JUNEAU, ALASKA 99801
907-257-1908

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

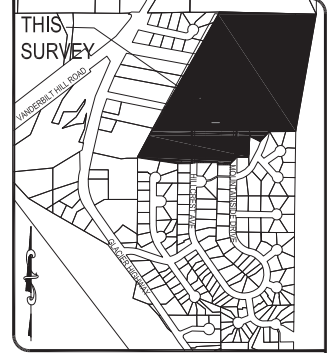
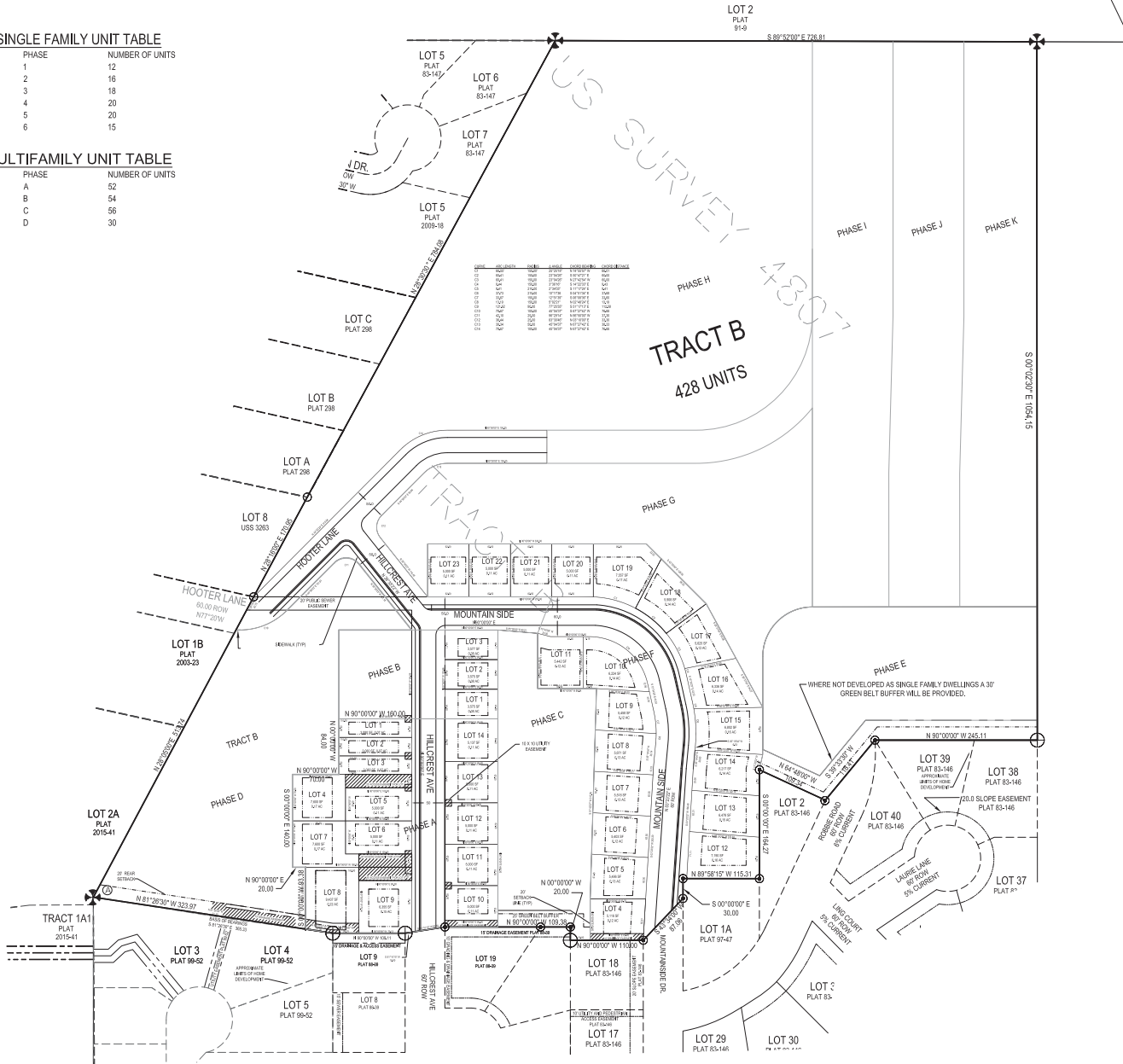


SINGLE FAMILY UNIT TABLE

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°10'6\" W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- (N45°11'W)R4 RECORD INFORMATION FROM PLAT No.99-52

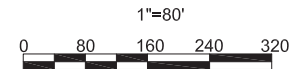


EXHIBIT D

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:
1\"=80'

DATE:
4 SEPTEMBER 2019

SHEET NO.
1 OF 1

SMF2020 0001

A final plat review for a phased major subdivision creating 14 lots
and 1 large tract for future development (15 lots total)

Planning Commission Hearing July 28, 2020

Staff Recommends Approval

Vicinity Map



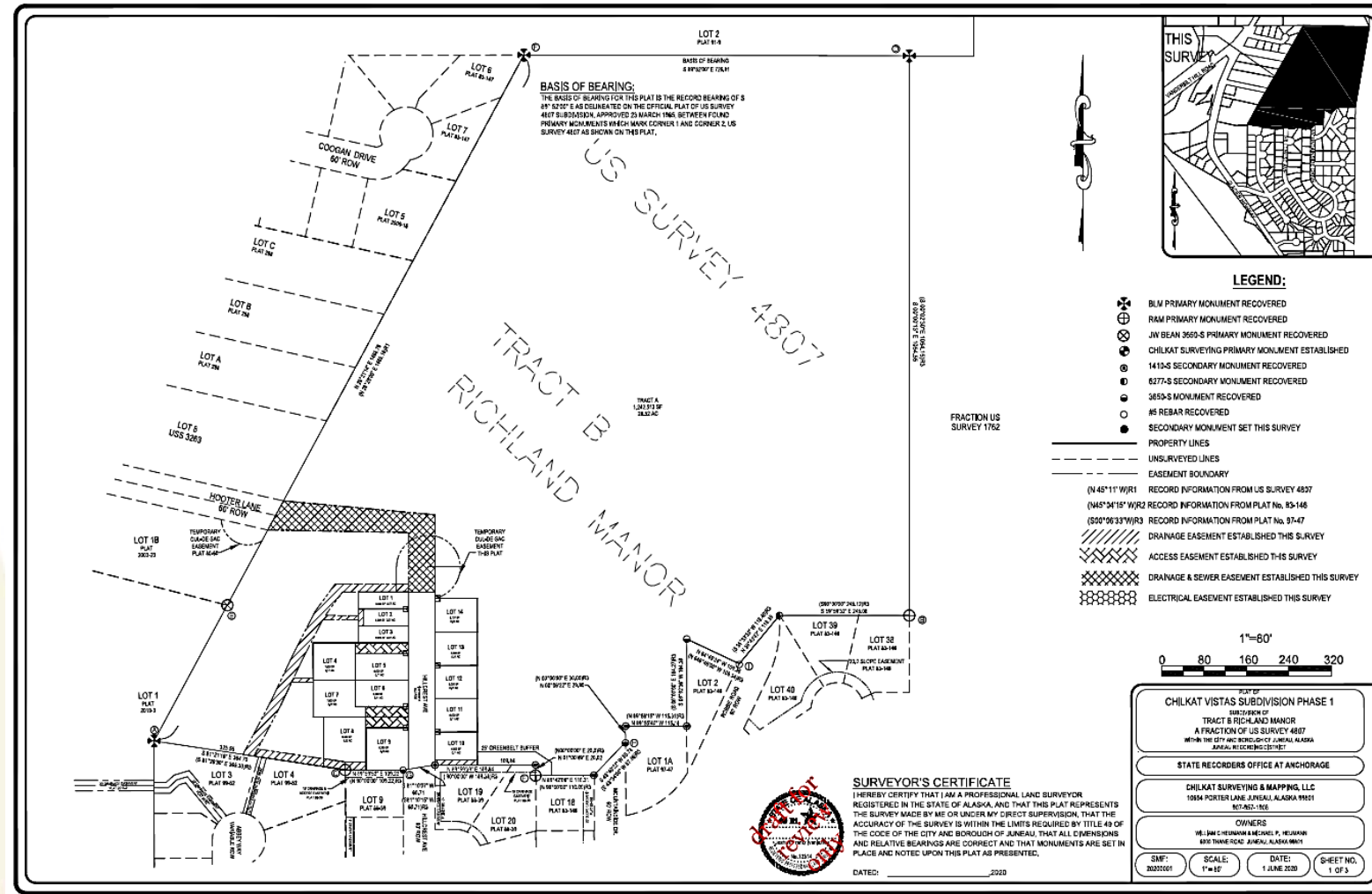
- 30.67 Acres
- Zoned D15
- Abuts D15, D5 and RR zoning

Background Information

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.
APL2019 0003 Settlement Agreement	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	The preliminary plat was approved in November of 2019 through SMP2019 0004. This is the current approval on which the applicants are acting.

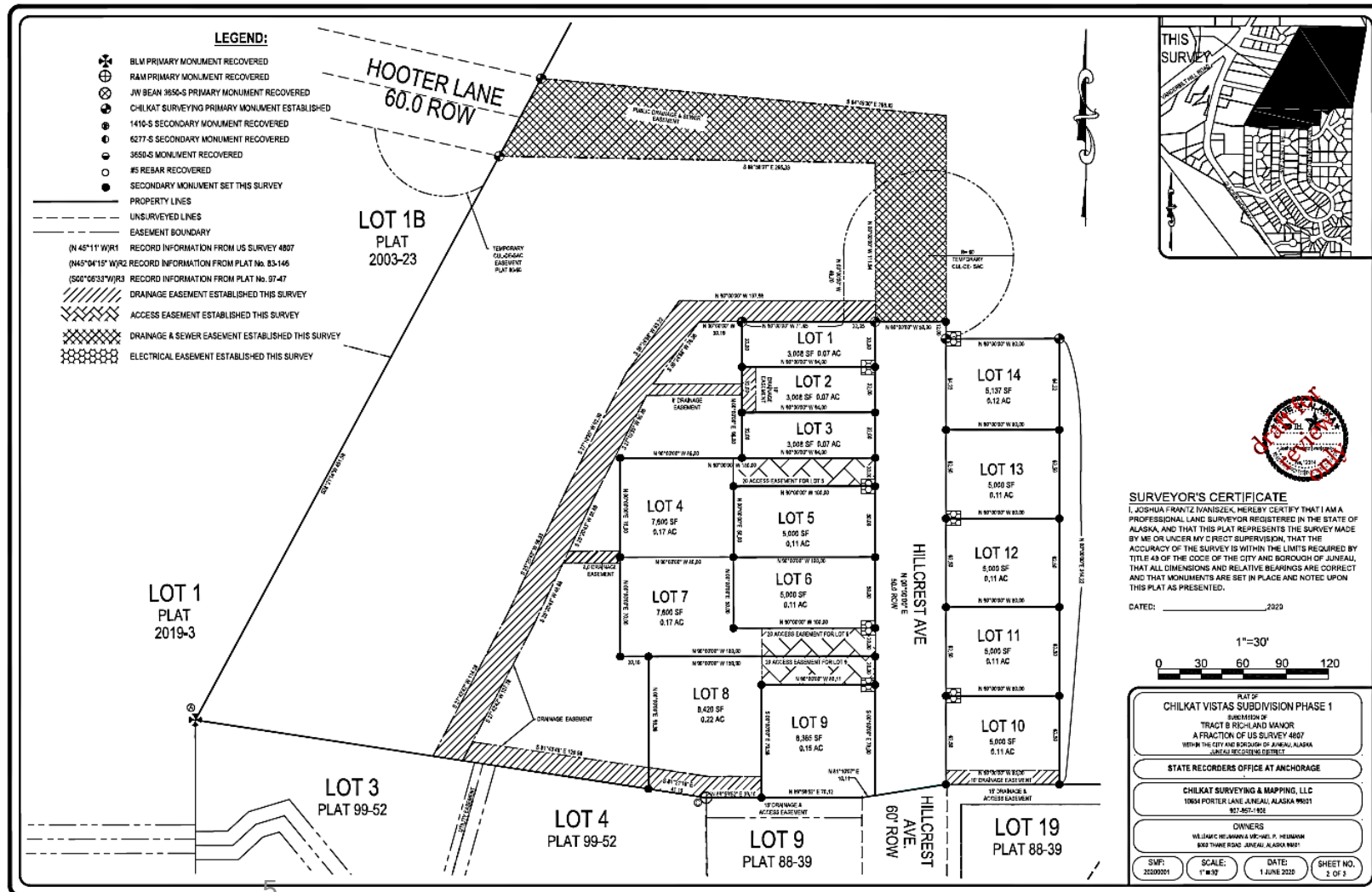
Packet page no. 126

Final Plat



- 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.
- Packet page no. 137-139

Final Plat



- The bungalow lots (Lots 1, 2 and 3) 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 width is 25 feet
 - Minimum lot depth is 80 feet
- Packet page no. 137-139

Preliminary Plat Approval Conditions

- Preliminary plat was approved in November, 2019
- All conditions of approval have been met or are on-going
- Conditions are listed on packet pages 127-128
- Preliminary Plat Notice of Decision – packet pages 149-151

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.



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.

William & Michael Heumann

File No.: SMF2020 0001

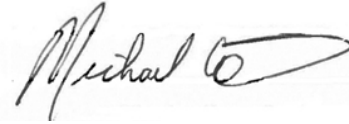
July 29, 2020

Page 2 of 2

Project Planner:



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.

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

Additional Materials Packet - July 28, 2020 Planning Commission Meeting

ATTACHMENTS:

Description	Upload Date	Type
Additional Materials Packet - July 28, 2020 Planning Commission Meeting	7/28/2020	Miscellaneous

Additional Materials

Regular Planning Commission Meeting

Assembly Chambers

7:00pm

Meeting Date: July 28, 2020

1. CSP2020 0005:

- a. Public Comment – Aaron Brakel, received 7.28.20

From: [Aaron Brakel](#)
To: [PC_Comments](#)
Subject: Douglas Bridge Bicycle lane
Date: Tuesday, July 28, 2020 2:27:47 PM
Attachments: [738FA0FA-9A37-4968-A59A-C17B46C7A8A3.png](#)

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Dear Commissioners,

I was taking a look at the packet for tonight's meeting and noticed that the Douglas Bridge was in the packet. I'd like to draw your attention to the bicycle lane as it enters on to the bridge from the South Douglas side. The turn on to the bike path is way too sharp currently and needs to be improved in this project. Bicyclists are seeking to keep momentum going up the bridge and enter this area at higher speeds. The current entry brings bicyclists momentum too much toward the road by the crosswalk especially as they are forced to turn late toward the crosswalk because of the existing design. Please see the black lines I've drawn in on the attached image for suggested locations for improvement so that bicycles can more safely merge back onto the road.

If you're not sure what I mean, try it on a bike!

Thank you for your consideration.

Aaron Brakel

