

## Agenda **Planning Commission Regular Meeting**

Thursday, January 02, 2025 at 6:30 PM City Hall Cowles Council Chambers In-Person & Via Zoom Webinar

**Homer City Hall** 491 E. Pioneer Avenue Homer, Alaska 99603 www.cityofhomer-ak.gov Zoom Webinar ID: 979 8816 0903 Password: 976062

https://cityofhomer.zoom.us Dial: 346-248-7799 or 669-900-6833; (Toll Free) 888-788-0099 or 877-853-5247

## CALL TO ORDER, 6:30 P.M.

## AGENDA APPROVAL

**PUBLIC COMMENTS** The public may speak to the Commission regarding matters on the agenda that are not scheduled for public hearing or plat consideration. (3 minute time limit).

## RECONSIDERATION

CONSENT AGENDA All items on the consent agenda are considered routine and non-controversial by the Planning Commission and are approved in one motion. There will be no separate discussion of these items unless requested by a Planning Commissioner in which case the item will be moved to the regular agenda.

- Unapproved Special Meeting Minutes for November 20, 2024 Α.
- Unapproved Regular Meeting Minutes of December 4, 2024 Β.

## **PRESENTATIONS / VISITORS**

## **REPORTS**

Staff Report 25-001, City Planner's Report Α.

## **PUBLIC HEARINGS**

A. Staff Report PL 25-002, Amending Homer City Code 21.16 Residential Office District; 21.24 General Commercial 1 District; and 21.26 General Commercial 2 District to Add Studios as a Permitted Use in Each District. Planning Commission.

## **PLAT CONSIDERATION**

Staff Report PL 25-003, Paradise South Subdivision Belieu Fabian 2025 Replat Preliminary Α. Plat

## PENDING BUSINESS

Staff Report PL 24-041 Review of Title 21 Zoning Code and Create a List of Issues/Comments Α.

## **NEW BUSINESS**

A. Staff Report PL 25-004, Request for Extension of Daybreeze Park 59 North Subdivision

## **INFORMATIONAL MATERIALS**

- A. Landslide Hazard Susceptibility Mapping
- B. Planning Commission Annual Calendar 2025
- <u>C.</u> 2025 Commission Meeting Dates and Submittal Deadlines

**COMMENTS OF THE AUDIENCE** Members of the audience may address the Commission on any subject. (3 min limit)

## COMMENTS OF THE STAFF

## COMMENTS OF THE MAYOR/COUNCIL MEMBER (if present)

## **COMMENTS OF THE COMMISSION**

## ADJOURNMENT

Next Regular Meeting is **Wednesday, January 15, 2025 at 6:30 p.m.** A Worksession is scheduled for 5:30 p.m. All meetings are scheduled to be held in the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska and via Zoom Webinar. Meetings will adjourn promptly at 9:30 p.m. An extension is allowed by a vote of the Commission

#### CALL TO ORDER

Session 24-19, a Special Meeting of the Planning Commission was called to order by Chair Scott Smith at 6:30 p.m. on November 20, 2024 at the Cowles Council Chambers in City Hall, located at 491 E. Pioneer Avenue, Homer, Alaska, and via Zoom Webinar.

PRESENT: COMMISSIONER BARNWELL, VENUTI, S. SMITH, SCHNEIDER, STARK & H. SMITH

**ABSENT:** COMMISSIONER CONLEY(EXCUSED)

STAFF: CITY PLANNER FOSTER CITY CLERK KRAUSE

#### AGENDA APPROVAL

SCHNEIDER/BARNWELL MOVED TO ADOPT THE AGENDA AS PRESENTED.

There was no discussion.

VOTE: NON-OBJECTION: UNANIMOUS CONSENT.

Motion carried.

#### PUBLIC COMMENT ON MATTERS ALREADY ON THE AGENDA

RECONSIDERATION

**CONSENT AGENDA** 

**PRESENTATIONS / VISITORS** 

REPORTS

PUBLIC HEARINGS

PLAT CONSIDERATION

#### **PENDING BUSINESS**

#### **NEW BUSINESS**

A. Memorandum PL 24-041, Compile Title 21 Zoning Code Issues and Areas for Improvement

Chair S. Smith introduced the item by reading of the title and deferred to City Planner Foster.

City Planner Foster stated for the record the purpose for the meeting, process and procedures to review Title 21 and the re-write that will be conducted by Stantec partnered with Agnew::Beck. He reported that they were looking to provide a list of issues that have been noticed within the code to present to the consultant by the end of December, first of January. He reminded the Commission on the purpose of the Comprehensive Plan and the relationship with Title 21 Planning and Zoning Code which addresses land use and development

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requirements. Mr. Foster reported that Title 21 is used to implement the visions in the Comprehensive Plan. He requested the Commission to review and provide additional issues besides the list he has provided and they can discuss it or postpone until the December 4, 2024 meeting or even until the January 2, 2025 meeting to provide ample time for the Commission to review the code. Mr. Foster noted that Agnew::Beck planned on attending this meeting but has been delayed so will join us at a later time period during the meeting.

Chair S. Smith requested clarification on the January meeting date.

City Planner Foster noted that the 2025 meeting schedule was approved with the Commission meeting on a day after the holiday since the regular meeting fell on New Year's Day. By adopting the meeting schedule Council acknowledged that the regular meeting would be held on the Thursday.

City Planner Foster facilitated discussion on the items he found within Title 21 that presented errors or discrepancies and recommended changes. The commission worked through the listing, section by section and made the following additional recommendations:

General

- Homer is ready for a building department and having one would address multiple issues.
  - Noted under the section addressing 21.70 that Zoning Code should be considerate of possible Building Code implementation in the near future.
- Timeframe for technical review was approximately 2-3 months

#### **Encroachment Issues**

- There are no provisions in code to address minor/major encroachment issues except for a variance application (which has a high bar for review criteria/consideration).
- Consideration for establishing an administrative encroachment with 1-2 feet limit and encroachment permit for other encroachment issues.
  - Allowing administrative encroachment permits did not allow for public comment and commission oversight.
  - There would be the limit of 1-2 feet anything larger would be presented to the Commission for review and recommendation through Public Hearing.
  - Dealing with a legacy encroachment would be dependent on the circumstances and require on a case by case determination and in accordance with city code treated as a nonconforming structure.
    - If it's in the right of way that would be a bigger problem but there are tools such as variance
    - Encroachments the city does not have any tools and these are unknown until a call is received from a property owner trying to sell their home.

Modern and User Friendly Zoning Code

- The current code is difficult to navigate, with a format consisting of a zoning map and zoning text.
- Consider illustrative format code to make it user friendly.
  - Having it available online in conjunction with the application process
  - Focus the applicable code to the zoning district

• Most applications received in the Planning Department on through the online portal

Commissioner Venuti lost connection at 5:55 p.m. He rejoined the meeting at 6:04 p.m.

#### Dimensional Requirements

- Dimensional requirements often have little to no flexibility, at times making a reasonable project unviable or difficult to build.
  - Providing room to work within using Planned Unit Development as an example.
  - Zoning Districts state setbacks at 20 feet and there is no flexibility for less, more is allowed.
  - $\circ$  ~ Some districts could allow zero lot lines such as town center.
    - Does not apply to all districts.
  - Fire Code would be triggered if structures are closer
    - Plan review is already required for commercial structures, multi-family
    - Permit must be in hand.

#### Split Lot Zoning

- Consider zoning map changes to address split lot zoning
  - There are multiple examples throughout the city with properties with split zoning
  - Can create issues for the property owners project
  - Require a Zoning change extending the time for the project to be started
    - Would require a public hearing and adoption by Council
  - Subdividing a lot would be subject to the districts it is split by and how the subdivision was being done.
    - Legally allowed and recommended selecting one district or the other for the property effected
  - Structures would be non-conforming, can impact property values and or not be able to sell the property.
- How did these properties come into development? Was it City of Borough responsible?
  - Should be addressed by the Commission and property owners not held accountable
  - Issue should be addressed by code.

Cross Referencing and Flow of the Code

- Improve the flow of the code. It is currently somewhat disjointed.
- Reduce cross reference, if possible to reduce confusion and jumping through sections of code unnecessarily
  - Just insert the code language in the section you are searching or district you are working within.

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#### Temporary Structures

- Current code does not consider temporary structures.
  - $\circ~$  A Yurt is a temporary structure that can be relocated at any given time.
  - Definition needed Permanent and Temporary

#### 21.03 Definitions and Rules of Construction

- Noted there were technical terms and language that did not have a definition in the current code

#### 21.44 Steep Slopes and Coastal Development

- This should be reviewed and consider improvements to applicability, requirements.
- Property that is under water, sold and then being considered when building
- Mitigation or exclusion of slopes over 20 degree
  - Limitation on the number of structures allowed
- There are thresholds, average slope and code which directs what is required
  - Professional expertise
- City has a responsibility due to recent past events that property owners are facing
  - Exclusion puts the city in another position

#### 21.55 Off Street Parking

- Required Number of Spaces 21.55.090
  - Review the number of required spaces and consider more opportunities for a reduction of parking requirements (such as the mixed use provision for shared parking).
  - Reduce the parking requirements Homer is not short of parking availability.
    - There is some flex CBD mixed use can reduce parking 25%
      - dwelling units for 1 BDRM or studio creatively offer alternative options such as bike or shared parking
      - parking garages usually costs \$\$\$\$ to \$\$,\$\$\$\$
      - Dependent on Zoning District, visitor parking
      - Interest in Comp Plan for CBD and setbacks/parking
        - Duplex, 4 structures, dead end, only one space per unit and there is no visitor parking so must park on the street

City Clerk Krause confirmed that Commissioner Venuti was shown on Zoom as in attendance but his video was turn off, at the request of the Chair, Commissioner Venuti turned his video back on at 6:59 p.m.

#### 21.59 Off Site Impacts

- Nuisances: There are nuisances listed in Title 21 and Title 5 of HCC.
  - Should these nuisances be consolidated to improve functionality of HCC and code enforcement?
    - Nuisances and properly addressed by the City, timely and immediate action to enforce compliance

#### 21.60 Sign Code

- General sign code
  - Ensure the sign code is compliant with content neutral requirements.
  - o 21.60.040 Definitions
    - Update definitions of signs, such as banner/blade signs.

- Make the sign code more user friendly and easier to enforce.
  - Compliant with supreme court decisions and content neutral requirement city can address size, location, update definition of signs such as banners, blades, etc. User friendly and easier to enforce. Calculations are required in order to determine what actually can be permitted.
  - Code enforcement is complaint driven but it is enforced, former personnel was the enforcement person and worked in a 4 person office and while Planning department currently has three people. Proper code enforcement is done consistently and regularly.
- Budget Requests for the Planning Department in FY2026/2027 education of the public how they will plan for the education around enforcement.
- interim code regarding signage height, flashing signs, lighting, other communities actions and competition between businesses.
  - Forward the frame work from the Supreme Court to the commission
- Review Political Signage code

#### 21.70 Zoning Permit

- General zoning permit
  - Consider reorganizing the code to have zoning permits and development regulations colocated for ease of use/reference.
  - Consider how zoning permits/the format of the code could be impacted if Homer adopts building codes in the future.
    - Apprehension and would like to know how many communities the size of Homer has building code and what would be gained by that endeavor, cost benefit ratio, not many people building out of pocket and many are building to the international building code in order to get financing
    - Application for developing building code, FEMA, discussion and laying groundwork, funding is not obtained yet.
    - information on building code would be required by the Commission
    - Building inspector will be needed if building code is employed

#### 21.71 Conditional Use Permit

- General CUP code
  - Analyze the number of conditional use permits triggered by the current code (there are likely many dozens of uses and circumstances that require a conditional use permit)
    - consider whether certain conditional uses should become permitted, not permitted, or remain as conditional uses.
  - Try to consolidate the circumstances that require a conditional use permit in the code to ensure a requirement for a permit is not missed/overlooked.
    - Perhaps create a "crosswalk" for permitted, conditional, and not permitted conditional use permits.

- Special Use Permits/Conditional Use Permits (SUP/CUP) apply to density and land uses, are dependent on the district, many of those processed in recent times puts the neighbor and property owner through turmoil
  - The City can improve the process and provide valid reason for requiring a CUP/SUP
  - Specificity set the expectations for all parties involved, doing this may bring forward less appeals and lower legal fees.
- Consider requiring the applicant attend and present at the public hearing for a CUP.
- Review of the code will present buried triggers within the code
- Address Tsunami Issues
  - This is addressed in the Hazard Mitigation Plan
  - Argued city responsibility to property owners when purchasing/building in tsunami inundation areas.
    - Educational opportunities offered by the city periodically disclaimer is interesting concept but property owners or developers develop the property at their own risk
    - Provide information and consultant can research what actions other communities have implemented.
- Building Code
  - o Information would be required for the Commission to participate in developing this
  - City is seeking funding to have building code developed by professionals, public comment will be obtained on the development of such code
    - If this code is adopted the city would not be able to amend it
- Higher quality drawings
  - Education and time to roll out the requirement

City Planner Foster facilitated general comments on the following:

- Understanding the code related to Planned Unit Developments
- Comprehensive Plan Review
- Company hired to conduct the re-write and experience level
- Language will be graphically depicted and drafts will present redlined versions to allow the public to fully understand what is being amended
- Involvement and input from the Commission

# STARK/SCHNEIDER MOVED TO SUSPEND THE RULES TO ALLOW COUNCILMEMBER ERICKSON TO PARTICIPATE IN THE DISCUSSION.

There was no discussion.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

Councilmember Erickson provided comments on the following:

- consideration of signage and looking to the future
- requirements of green space, art, parking and flexibility of the percentages.
- Growth outside the city limits, future expansion of city limits.
- Plats should consider non-motorized transportation and safety for such things as snow and ice.\
- Temporary Check with the KPB on taxation issue between temporary and permanent.
- Steep slope disclaimer was a good idea. Determination of worthless property, potential hazard to those property owners that are below.
- City of Homer owns property above Kachemak City and consideration on ramifications of the slides that have happened.

Further comments ensued from the Commission regarding:

- It was not the Planning Departments responsibility to tell the developer how to construct their project;
- Information on the Lidar report and provide an explanation on the issues during the first quarter worksession;
- Review the box store and small retail square footage, sidewalks on Pioneer were advocated for and then more equipment to maintain was needed;
- Invite Brad Salisbury with DGGS to come and speak to the Commission in reference to issues brought forward in the recent appeal filed by former Commissioner Highland and former Public Works Director Keiser.

#### INFORMATIONAL MATERIALS

- A. PC Annual Calendar 2024
- B. 2024 Meeting Dates & Submittal Deadlines

City Planner Foster noted the meetings for 2025 requesting a volunteer for the Council meeting.

#### **COMMENTS OF THE AUDIENCE**

Laura Karstens, city resident, commented on public notice processes for the city on replatting issues, recommended matching KPB

#### **COMMENTS OF THE STAFF**

City Planner Foster had no further comments.

City Clerk Krause commented it was nice to see everyone again and a great meeting.

#### COMMENTS OF THE MAYOR/COUNCILMEMBER (If Present)

Mayor Lord commented that this Commission conducts a meeting as it is almost 9:00 p.m. She will not be attending the Commission meetings on a regular basis. She then noted that comments on sidewalks are addressed in other titles within city code. She noted her personal experience in updating city code. Ms. Lord

requested the City Planner to provide a form similar to what is in the packet so that they can provide recommendations. She stated that they are working on facilitating legal assistance and training.

#### COMMENTS OF THE COMMISSION

Commissioner Venuti wished everyone a Happy Thanksgiving and commented it was an interesting meeting and how much he had to be grateful for when reviewing the world and wished everyone a good night.

Commissioner H. Smith commented that this was going to be interesting, referring to the Title 21 re-write but is why he signed up to serve on the Commission, expressed appreciation for the Mayor being in attendance and grateful to be living in one of the greatest corners of the earth.

Commissioner Barnwell commented on being back from Thailand and appreciated the cold weather and very thankful for what he has here in beautiful Homer. He thought the meeting was very productive and echoed the sentiment of putting on a good meeting.

Commissioner Stark expressed his appreciation for the Mayor attending and participating in the meeting and for City Clerk Krause being at the meeting, it was nice to have her back. He thanked the City Planner for his work in presenting the information on Title 21 with the analysis and summary.

Commissioner Schneider echoed Commissioner Stark's comments and understood why the Mayor would not be in attendance at every meeting but welcomed her to attend any meeting that is scheduled as the Commission would look forward to her input.

Chair S. Smith commented on the interesting meeting and getting their minds wrapped around the code rewrite and City Planner Foster did a phenomenal job with his initial analysis. He noted there was a portion of Homer residents that wanted to keep Homer as it was 30-50 years ago but the Commission needed to understand there is a new generation that requires and wants different things and it must have allowances for those changes. He then expressed his appreciation for everyone's hard work and efforts, volunteerism and serving the community.

#### ADJOURN

There being no further business to come before the Commission, Chair S. Smith adjourned the meeting at 8:53 p.m. The next Regular Meeting in scheduled for **Wednesday, December 4, 2024 at 6:30 p.m.** A Worksession is scheduled for 5:30 p.m. All meetings are scheduled to be held in the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska and via Zoom Webinar. Meetings will adjourn promptly at 9:30 p.m. An extension is allowed by a vote of the Commission.

Renee Krause, MMC, City Clerk

Approved:\_\_\_\_\_

#### CALL TO ORDER

Session 24-20, a Regular Meeting of the Planning Commission was called to order by Chair Scott Smith at 6:30 p.m. on December 4<sup>th</sup>, 2024 at the Cowles Council Chambers in City Hall, located at 491 E. Pioneer Avenue, Homer, Alaska, and via Zoom Webinar.

**PRESENT:** COMMISSIONER VENUTI, S. SMITH, SCHNEIDER, STARK & H. SMITH

**ABSENT:** COMMISSIONER BARNWELL (EXCUSED) & CONLEY

**STAFF:** CITY PLANNER FOSTER, PUBLIC WORKS DIRECTOR KORT & DEPUTY CITY CLERK PETTIT

#### AGENDA APPROVAL

Chair S. Smith read the supplemental items into the record and requested a motion and second to adopt the agenda as amended.

SCHNEIDER/H. SMITH MOVED TO ADOPT THE AGENDA AS AMENDED.

There was no discussion.

VOTE: NON-OBJECTION: UNANIMOUS CONSENT.

Motion carried.

#### PUBLIC COMMENTS UPON MATTERAS AREADY ON THE AGENDA

#### RECONSIDERATION

#### **CONSENT AGENDA**

- A. Unapproved Regular Meeting Minutes of November 6, 2024
- B. Decisions and Findings CUP 23-08, 1563 Homer Spit Road and 1491 Bay Avenue

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C. Decisions and Findings Cup 24-12, 688 Waddell Road

Chair S. Smith requested a motion and second to adopt the consent agenda.

SCHNEIDER/H. SMITH MOVED TO ADOPT THE CONSENT AGENDA AS PRESENTED.

There was no discussion.

VOTE: NON-OBJECTION: UNANIMOUS CONSENT.

Motion carried.

#### **PRESENTATIONS / VISITORS**

#### REPORTS

A. City Planner's Report, Staff Report 24-057

City Planner Foster reviewed his staff report included in the packet, covering the following:

- Comprehensive Plan Update
- Planning Commissioner Training postponement
- Next Regular Meeting on Thursday, January 2, 2025
- Next Commissioner report to Council on January 13, 2025
- B. Comprehensive Plan Steering Committee Report

City Planner Foster noted that the draft plan is being prepared for a tentative spring release.

#### **PUBLIC HEARINGS**

#### **PLAT CONSIDERATION**

A. Glacier View Subdivision No. 1 Muhs 2025 Replat Preliminary Plat, Staff Report 24-058

Chair S. Smith introduced the item by reading of the title.

Commissioner Venuti stated that he needed to declare a potential conflict of interest. He added that he owns a property adjacent to the subdivision, and that he has no problem with the subdivision moving forward.

SCHNEIDER/H. SMITH MOVED THAT COMMISSIONER VENUTI HAS A CONFLICT OF INTEREST.

Commissioner H. Smith questioned if Commissioner Venuti felt that he would be able to objectively decide on this matter, and whether or not he had anything to gain financially from this project. Mr. Venuti insisted that he could remain objective, and that he had nothing to gain regardless of the outcome.

Chair S. Smith requested the Clerk to perform a roll-call vote.

VOTE: NO: S. SMITH, SCHNEIDER, H. SMITH, STARK.

Motion failed.

Chair S. Smith then deferred to City Planner Foster, who provided a summary review of his report included in the packet.

Chair S. Smith opened the floor for the Applicant, who declined to comment, but made themselves available for questions. He then opened the public comment period.

Dave Collett-Paulie, city resident, noted that he lives on the block to the east of the proposed replat. He questioned the motive behind constructing Fairview Avenue, stating that while he isn't against splitting the lots on the plat, the construction of the road would create a dangerous intersection.



Caroline Venuti, city resident, shared that she owns the lot directly to the east of the proposed plat, but that she has no objections to the plat. She shared concerns she had about the traffic hazard that would be created if Fairview Avenue were to be connected, citing various accounts of accidents in that area from her personal experience. She suggested using Morowitz Alley as an access for the proposed subdivision.

Millie Morowitz-Lewis, city resident, noted that her property abuts to the East Fairview bike path. She shared concerns she had about the traffic in the area if Fairview Avenue were to be constructed all the way through. She reiterated Mrs. Venuti's comments about using the alley as a way of access for the subdivision. She stated that she has no objection to the subdivision, but that she is strongly against turning the bike path into a public road.

Scott Adams, city resident, shared his confusion as to why Fairview Avenue has always been undeveloped, yet platted as a road. He suggested the road come to a cul-de-sac instead of tying into Kachemak Way, so that traffic would only travel to the dead end instead of creating congestion when joining with Kachemak Way.

Anna Hatch, city resident, stated that she has no problems with the subdivision, but that she didn't want East Fairview Avenue to become a road. She added that she's hopeful the City can come up with a different solution.

Bradley Parsons, city resident, echoed the traffic concerns that had been brought forth by other members of the public during the public comment period. He claimed that the Kachemak Way and Fairview trail crossing is the most dangerous stretch of roadway in Homer. He proposed that the road connect to Fairview to the west instead of Kachemak. Mr. Parsons encouraged the Commission to find an alternative to the intersection, and added that he supports the division of these plats.

Chair S. Smith closed the public comment period, and opened the floor for comments and questions from the Commission. City Planner Foster and Public Works Director Kort also responded to various questions and concerns that arose during the public comment period.

With no other comments or questions from the Commission, Chair S. Smith requested a motion and second.

SCHNEIDER/H. SMITH MOVED TO ADOPT STAFF REPORT 24-058 AND RECOMMEND APPROVAL OF THE PRELIMINARY PLAT WITH THE FOLLOWING COMMENTS:

- 1. A CONSTRUCTION AGREEMENT WILL BE REQUIRED TO IMPROVE THE RIGHT-OF-WAY FOR THE SECTION OF FAIRVIEW AVENUE FRONTING THE FOUR LOTS AND CONNECTING TO KACHEMAK WAY TO THE EAST. THE NEW ROAD WILL BE BUILT TO CITY OF HOMER 2011 STANDARD AT SPECIFICATION.
- 2. THE DEVELOPER SHALL DEDICATE A 25' RADIUS FOR THE NORTHEAST CORNER OF LOT 1B.

There was a discussion among the Commission regarding the purpose of the 25' radius at the corner of the lot.

VOTE: NON-OBJECTION: UNANIMOUS CONSENT.

Motion carried.

#### PENDING BUSINESS

A. Memorandum PL 24-041, Compile Title 21 Zoning Code Issues and Areas for Improvement

Chair S. Smith introduced the item by reading of the title and deferred to City Planner Foster, who provided an explanation for this business item. Discussion topics included:

- Sub-development issues with proposed number of units on a lot
- Steep slope development
- Areas that have sloughed/will slough
- Code language

#### **NEW BUSINESS**

A. Memorandum PL 24-042, Planning Commission Request to Discuss a Moratorium on Conditional Use Permits

Chair S. Smith introduced the item by reading of the title and deferred to City Planner Foster, who provided an explanation for this business item. The Commission discussed the legitimacy of instating a moratorium on all CUPs, ultimately deciding that more research was needed before bringing the idea before Council.

B. Memorandum PL 24-043, Planning Commission Budget Request

Chair S. Smith introduced the item by reading of the title and deferred to City Planner Foster, who provided an explanation of his memorandum.

H. SMITH/VENUTI MOVED TO ADOPT A BUDGET REQUEST FOR FY26 AND FY27 FOR PLANNING COMMISSIONER TRAINING IN THE AMOUNT OF \$4,500 PER YEAR, AND AMEND THE LANGUAGE WITHIN THE DESCRIPTION TO ALLOW THREE PLANNING COMMISSIONERS TO ATTEND THE ALASKA CHAPTER AMERICAN PLANNING ASSOCIATION CONFERENCE.

There was a brief discussion regarding how the \$4,500 would be broken down in the budget.

VOTE: NON-OBJECTION: UNANIMOUS CONSENT.

Motion carried.

#### **INFORMATIONAL MATERIALS**

- A. PC Annual Calendar 2024
- B. 2024 Meeting Dates & Submittal Deadlines

Chair S. Smith noted the informational materials included in the packet.

#### **COMMENTS OF THE AUDIENCE**

Scott Adams, city resident, recalled the Foothills Sunset Subdivision that was required to put a sidewalk in around 2007-2008. He questioned if the Commission was planning to allow East Fairview to extend all the way



to the High School. Switching his focus to CUPs, Mr. Adams stated that he was amenable to a moratorium for CUPs in coastal areas.

#### **COMMENTS OF THE STAFF**

Public Works Director Kort shared that he appreciates the opportunity to attend the meetings and help out where he can.

City Planner Foster wished everyone a happy holiday season.

Deputy City Clerk Pettit wished everyone a happy holiday season.

## COMMENTS OF THE MAYOR/COUNCILMEMBER (If Present)

## COMMENTS OF THE COMMISSION

Commissioner Venuti noted that next Saturday is Chair S. Smith's birthday.

Commissioner H. Smith thanked Mr. Adams for always providing great public comment. He added that the responsibility for extending services to a certain area relies on the shoulders of both property owners and the City. He briefly spoke to special assessment districts, the Homer Accelerated Water and Sewer Program (HAWSP), and the Homer Accelerated Roads and Trails (HART) funds.

Commissioner Stark stated that all meetings are publicly noticed, and that it's incumbent upon the public to stay tuned in. He thanked Mrs. Venuti for attending the meeting, in addition to thanking City Staff and the rest of the Commission.

Commissioner Schneider thanked everyone for a good meeting, and thanked the City Staff for their work. He wished everyone a happy holiday season.

Commissioner S. Smith shared his appreciation for everyone, and wished everyone a happy holiday season.

#### ADJOURN

There being no further business to come before the Commission, Chair S. Smith adjourned the meeting at 8:45 p.m. The next Regular Meeting in scheduled for **Thursday, January 2<sup>nd</sup>, 2024 at 6:30 p.m.** A Worksession is scheduled for 5:30 p.m. All meetings are scheduled to be held in the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska and via Zoom Webinar. Meetings will adjourn promptly at 9:30 p.m. An extension is allowed by a vote of the Commission.

Zach Pettit, Deputy City Clerk I

Approved:\_\_\_\_\_



# **City of Homer**

Planning 491 East Pioneer Avenue Homer, Alaska 99603

www.cityofhomer-ak.gov

Planning@ci.homer.ak.us (p) 907-235-3106 (f) 907-235-3118

## Staff Report Pl 25-001

| TO:      | Homer Planning Commission |
|----------|---------------------------|
| FROM:    | Ryan Foster, City Planner |
| DATE:    | January 2, 2025           |
| SUBJECT: | City Planner's Report     |

## **Comprehensive Plan Update**

The Draft Comprehensive Plan will be available for public review in late January 2025 and an open house for the Draft Comprehensive Plan is scheduled for Tuesday, February 4, 2025 at the Islands & Ocean Visitor Center.

## 2024 Zoning Permits Issued

As requested at the last meeting on December 4, 2024, the Planning Division has issued 72 zoning permits in 2024 as of December 17, 2024.

## **Meeting Schedule**

The next regular meeting date is Wednesday, January 15, 2025.

## **Commissioner Report to Council**

1/13/25 \_\_\_\_\_





Planning 491 East Pioneer Avenue Homer, Alaska 99603

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## Staff Report PL 25-02

| TO:      | Homer Planning Commission  |
|----------|--|
| FROM:    | Ryan Foster, City Planner  |
| DATE:    | January 2, 2025  |
| SUBJECT: | Ordinance 25-XX Amending City Code to add Studio to RO, GC1, and GC2<br>Zoning Districts |

## Introduction

Attached is an email from Breezy Berryman requesting the Planning Commission to initiate a zoning code amendment to reconsider the zones allowed for a dance studio to districts such as Residential Office, General Commercial 1 and 2 and possibly even Urban Residential, citing the difficulty in finding properties in the zoning districts that currently allow dance studios (Town Center, Central Business District, Gateway Business District, East End Mixed Use), noting there is no opportunity to even put in for conditional use permit in other districts.

Per HCC 21.95.010 Initiating code amendment

An amendment to this title may be initiated by any of the following:

- a. A member of the City Council;
- b. A member of the Planning Commission;
- c. The City Manager;
- d. The City Planner; or

e. A petition bearing the signatures, and the printed names and addresses, of not less than 50 qualified City voters. [Ord. <u>10-58</u>, 2011].

At the November 6, 2024 Planning Commission meeting, in response to Breezy Berryman's request, Planning Commissioner Heath Smith stated he supports the initiation of the code amendment process to consider additional zoning districts that would allow for a Dance Studio.

## **Studio Definition**

"Studio" means a room, rooms or building where an artist or photographer does work, a place where dancing lessons, music lessons, or similar artistic lessons are given, or where radio or television programs are produced or where recordings are made.

## **General Commercial 1**

The General Commercial 1 (GC1) District is primarily intended to provide sites for businesses that require direct motor vehicle access and may require larger land area, and to provide business locations in proximity to arterials and transportation centers. It is also intended to minimize congestion and adverse effects on adjacent residential districts and on the appearance of the community.

## **Proposed Text:**

<u>Section 1.</u> Homer City Code Chapter 21.24, General Commercial1 District is amended as follows:

## 21.24.020 Permitted Uses and Structures.

The following uses are permitted outright in the General Commercial 1 District, except when such use requires a conditional use permit by reason of size, traffic volumes, or other reason set forth in this chapter:

#### <u>oo. Studio.</u>

**Analysis:** Studio is a good land use fit for a commercial zoning district and should not have a negative impact, especially as compared to other use permitted in the district such as lumberyards, manufacturing, fabrication, and assembly, retail businesses, hotels, banks, or warehouses and storage. A studio is a reasonable type of business to be expected in a commercial zoned district. Zoning districts should include permitted uses that fit well with the purpose and character of the district, this will provide an opportunity for businesses to be located in the proper district in Homer.

## **General Commercial 2**

The purpose of the General Commercial 2 District is primarily to provide a sound area for heavy commercial and industrial uses within the community designed to permit manufacturing, processing, assembly, packaging, or treatment of products and other uses described in this chapter. Residential uses and certain retail enterprises are purposely limited.

## **Proposed Text:**

<u>Section 2.</u> Homer City Code Chapter 21.26, General Commercial 2 District is amended as follows:

## 21.24.020 Permitted Uses and Structures.

The following uses are permitted outright in the General Commercial 2 District, except when such use requires a conditional use permit by reason of size, traffic volumes, or other reason set forth in this chapter:

## <u>aa. Studio.</u>

**Analysis:** Studio is a good land use fit for a commercial zoning district and should not have a negative impact, especially as compared to other use permitted in the district such as, manufacturing, fabrication, hotels and motels, open air businesses, or cold storage facilities. A studio is a reasonable type of business to be expected in a commercial zoned district. Zoning districts should include permitted uses that fit well with the purpose and character of the district, this will provide an opportunity for businesses to be located in the proper district in Homer.

## **Residential Office**

The Residential Office District is primarily intended for a mixture of low-density to mediumdensity residential uses and certain specified businesses and offices, which may include professional services, administrative services and personal services, but generally not including direct retail or wholesale transactions except for sales that are incidental to the provision of authorized services. A primary purpose of the district is to preserve and enhance the residential quality of the area while allowing certain services that typically have low traffic generation, similar scale and similar density. The district provides a transition zone between commercial and residential neighborhoods.

## **Proposed Text:**

Section 3. Homer City Code Chapter 21.16, Residential Office District is amended as follows:

## 21.16.020 Permitted Uses and Structures.

The following uses are permitted outright in the Residential Office District:

## <u>x. Studio.</u>

**Analysis:** Studio is a good land use fit for a mixed use district and should not have a negative impact, especially as compared to other use permitted in the district such as, professional offices and general business offices, personal services, mortuaries, or museums, libraries and similar institutions. A studio is not a direct retail activity and would have low traffic generation, and would fit in with a similar size and density as other RO uses. A studio is a reasonable type of business to be expected in a mixed use district. Zoning districts should include permitted

uses that fit well with the purpose and character of the district, this will provide an opportunity for businesses to be located in the proper district in Homer.

**Recommendation:** Staff recommends the Planning Commission recommend approval of the new text to the Homer City Council allowing Studio as a permitted use in the GC1, GC2, and RO districts.

## **Attachments:**

Email from Breezy Berryman date October 14, 2024

| From:    | Breezy Berryman                     |
|----------|-------------------------------------|
| То:      | <u>Ryan Foster</u>                  |
| Subject: | Fwd: letter to city planner         |
| Date:    | Monday, October 14, 2024 2:30:52 PM |

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

To the City of Homer Planning Commision,

My name is Breezy Berryman and I grew up dancing in Homer with my mom Jill Berryman who started the Homer Nutcracker Ballet in 1989. I then pursued dance in college and graduated from Tisch School of the Arts-New York University with my BFA in Dance. I danced choreographed and dance professionally in the city for 10 years and then pursued my MFA in dance at the University of Utah and joined a modern dance co. Ririe-Woodbury. I decided to move back home and share my knowledge and expertise in dance with our community. Since moving back i have co directed the Homer Nutcracker for 12 years as well as the Swan Lake Ballet and Alice and Wonderland. I have also been the recipient of two Rasmuson Foundation grants.

My dream and goal is to collaborate with trained dancer Alison Arima and start a rigorous dance training program, The Motivity Dance School and Company. We hope to build or purchase a home base so the school can grow. It would also be nice to have more than one choice to choose for dance instruction.

I have come up against some challenges when searching for properties to purchase or build a studio on. The main being that there are limited zoning districts that are allowed to have a dance studio on them. Those locations are limited to town center (hardly anything for sale), east end mixed use (pretty far out for parents to drop their kids after school), the gateway district (which is very small and there is hardly anything for sale or it is very expensive) and central business district.

I am requesting the planning commission to initiate a zoning code amendment ro reconsider the zones allowed for a dance studio to districts such as Residential Office, General Commercial 1 and 2 and possibly even Urban Residential as there is one or two potential properties that are right near town that I am interested in near Paul Banks Elementary. I really hope that this is a consideration, since there is no opportunity to even put in for conditional use permit, and I have found very few properties that would are zoned for a dance studio.

Thank you for your consideration as we are really hoping to create a wonderful and solid foundation in dance for our community.

Breezy Berryman and Alison Arima





Planning 491 East Pioneer Avenue Homer, Alaska 99603

www.cityofhomer-ak.gov

Planning@ci.homer.ak.us (p) 907-235-3106 (f) 907-235-3118

## Staff Report 25-003

| TO:               | Homer Planning Commission <b>25-003</b>  |
|-------------------|--|
| FROM:             | Ryan Foster, City Planner  |
| DATE:             | January 2, 2025  |
| SUBJECT:          | Paradise South Subdivision Belieu Fabian 2025 Replat   |
| Requested Action: | Approval of a preliminary plat to vacate the lot lines between Paradise South<br>Subdivision Lot 4 and Paradise South Subdivision Addition 1 Lot 04. This<br>preliminary plat also vacates the lot line between Paradise South Subdivision<br>Lot 4 and Scenic View Subdivision Number 2 Lot A-1A. |

## **General Information:**

| Applicante            | Carla Lee Fabian Trus  | too  | Tracy Allan Policy                       | Saabright Survey & Design        |  |  |
|-----------------------|------------------------|--|--|----------------------------------|--|--|
| Applicants.           |                        |  | Tracy Allan Belieu                       | Seabright Survey & Design        |  |  |
|                       | Carla Lee Fabian Livir | ig Trust   | P.O. Box 314                             | 1044 East End Rd, Suite A        |  |  |
|                       | P.O. Box 2380          |  | Homer, AK 99603                          | Homer, AK 99603                  |  |  |
|                       | Homer, AK 99603        |  |  |                                  |  |  |
| Location:             |                        | South o  | South of Paradise Place and Orion Circle |                                  |  |  |
| Parcel ID:            |                        | 1741001  | 17410013, 17410014 and 1741118           |                                  |  |  |
| Size of Existi        | ng Lot(s):             | 1.14 acr   | es, 4.25 acres and 13.83                 | acres                            |  |  |
| Size of Prop          | osed Lots(s):          | 19.22 ac   | cres                                     |                                  |  |  |
| Zoning Desig          | gnation:               | Rural Re   | Rural Residential District               |                                  |  |  |
| Existing Lan          | d Use:                 | Vacant and Residential   |  |                                  |  |  |
| Surrounding Land Use: |                        | North: Residential   |  |                                  |  |  |
|                       |                        | South: F   | Residential                              |                                  |  |  |
|                       |                        | East: \  | /acant and Residential                   |                                  |  |  |
|                       |                        | West: Vacant and Residential                                     |  |                                  |  |  |
| Comprehensive Plan:   |                        | Chapter 4 Goal 2 Objective C: Provide extra protection for areas |  |                                  |  |  |
|                       |                        | with highest environmental value or development constraints.     |  |                                  |  |  |
| Wetland Status:       |                        | Riverine and Wetland/ Upland Complex.                            |  |                                  |  |  |
| Flood Plain Status:   |                        | Not in a floodplain.   |  |                                  |  |  |
| BCWPD:                |                        | Not within the Bridge Creek Watershed Protection District.       |  |                                  |  |  |
| Utilities:            |                        | City water and sewer are not available at this time.             |  |                                  |  |  |
| Public Notic          | e:                     | Notice v   | vas sent to 61 property                  | owners of 55 parcels as shown on |  |  |
|                       |                        | the KPB  | tax assessor rolls.                      |                                  |  |  |

Staff Report 25-003 Homer Planning Commission Meeting of January 2, 2025 Page 2 of 4

**Analysis:** This subdivision is within the Rural Residential District. This plat vacates the lot line between Paradise South Subdivision Lot 4 and Paradise South Subdivision Addition 1 Lot 04. Vacates the lot line between Paradise South Subdivision Lot 4 and Scenic View Subdivision Number 2 Lot A-1A resulting in Lot A-1A-1 of 19.22 acres.

## Homer City Code 22.10.051 Easements and rights-of-way

A. The subdivider shall dedicate in each lot of a new subdivision a 15-foot-wide utility easement immediately adjacent to the entire length of the boundary between the lot and each existing or proposed street right-of-way.

**Staff Response:** The plat meets this requirement. The plat notes a 15-utility easement.

B. The subdivider shall dedicate in each lot of a new subdivision any water and/or sewer easements that are needed for future water and sewer mains shown on the official Water/Sewer Master Plan approved by the Council.

Staff Response: The plat meets this requirement.

C. The subdivider shall dedicate easements or rights-of-way for sidewalks, bicycle paths or other non-motorized transportation facilities required by HCC 11.04.120. **Staff Response:** The plat meets these requirements.

**Preliminary Approval, per KPB code 20.25.070 Form and contents required**. The commission will consider a plat for preliminary approval if it contains the following information at the time it is presented and is drawn to a scale of sufficient size to be clearly legible.

- A. Within the Title Block:
- 1. Names of the subdivision which shall not be the same as an existing city, town, tract or subdivision of land in the borough, of which a plat has been previously recorded, or so nearly the same as to mislead the public or cause confusion;
- 2. Legal description, location, date, and total area in acres of the proposed subdivision; and
- 3. Name and address of owner(s), as shown on the KPB records and the certificate to plat, and registered land surveyor;

**Staff Response:** The plat meets these requirements.

B. North point;

**Staff Response:** The plat meets these requirements.

C. The location, width and name of existing or platted streets and public ways, railroad rights-of-way and other important features such as section lines or political subdivisions or municipal corporation boundaries abutting the subdivision;

**Staff Response:** The plat meets these requirements.

D. A vicinity map, drawn to scale showing location of proposed subdivision, north arrow if different from plat orientation, township and range, section lines, roads, political

Staff Report 25-003 Homer Planning Commission Meeting of January 2, 2025 Page 3 of 4

boundaries and prominent natural and manmade features, such as shorelines or streams;

**Staff Response:** The plat meets these requirements.

E. All parcels of land including those intended for private ownership and those to be dedicated for public use or reserved in the deeds for the use of all property owners in the proposed subdivision, together with the purposes, conditions or limitation of reservations that could affect the subdivision;

**Staff Response:** The plat meets these requirements. *No such areas are proposed.* 

F. The names and widths of public streets and alleys and easements, existing and proposed, within the subdivision; [Additional City of Homer HAPC policy: Drainage easements are normally thirty feet in width centered on the drainage. Final width of the easement will depend on the ability to access the drainage with heavy equipment. An alphabetical list of street names is available from City Hall.]

Staff Response: The plat meets these requirements.

G. Status of adjacent lands, including names of subdivisions, lot lines, lock numbers, lot numbers, rights-of-way; or an indication that the adjacent land is not subdivided;

**Staff Response:** The plat meets these requirements.

H. Approximate location of areas subject to inundation, flooding or storm water overflow, the line of ordinary high water, wetlands when adjacent to lakes or non-tidal streams, and the appropriate study which identifies a floodplain, if applicable;

**Staff Response:** The plat meets these requirements.

I. Approximate locations of areas subject to tidal inundation and the mean high water line;

**Staff Response:** The plat meets these requirements.

J. Block and lot numbering per KPB 20.60.140, approximate dimensions and total numbers of proposed lots;

**Staff Response:** The plat meets these requirements.

K. Within the limits of incorporated cities, the approximate location of known existing municipal wastewater and water mains, and other utilities within the subdivision and immediately abutting thereto or a statement from the city indicating which services are currently in place and available to each lot in the subdivision;

**Staff Response:** City water main follows Slavin Drive up from the south and terminates at the South West corner of Lot A-2A HM 86-06. City sewer follows Paradise Place from the east and terminates at the North West corner of Lot 3 Blk 2 HM 74-175.

L. Contours at suitable intervals when any roads are to be dedicated unless the planning director or commission finds evidence that road grades will not exceed 6 percent on arterial streets, and 10 percent on other streets;

**Staff Response:** The plat meets these requirements. No new roads are dedicated.

M. Approximate locations of slopes over 20 percent in grade and if contours are shown, the areas of the contours that exceed 20 percent grade shall be clearly labeled as such;

**Staff Response:** The plat meets this requirement. Areas over 20 percent grade are indicated on the plat.

N. Apparent encroachments, with statement indicating how the encroachments will be resolved prior to final plat approval; and

**Staff Response:** The plat meets these requirements.

O. If the subdivision will be finalized in phases, all dedications for through streets as required by KPB 20.30.030 must be included in the first phase.

Staff Response: The plat meets these requirements.

Public Works Comments: Note 3 is not correct: the lot is not served by City Water and Sewer.

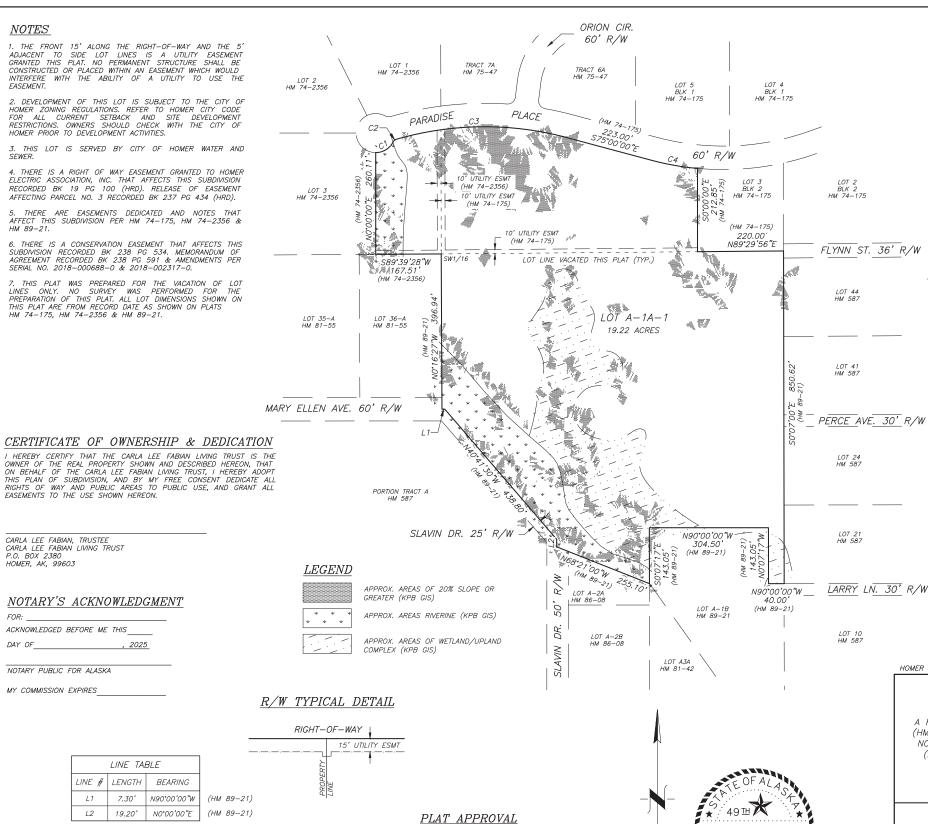
## **Staff Recommendation:**

Planning Commission recommends approval of the preliminary plat with the following additional comments.

- 1. Correct or remove Note 3: the lot is not served by City Water and Sewer.
- 2. The location of the existing utilities need to be indicated: City water main follows Slavin Drive up from the south and terminates at the South West corner of Lot A-2A HM 86-06. City sewer follows Paradise Place from the east and terminates at the North West corner of Lot 3 Blk 2 HM 74-175.

## Attachments:

- 1. Preliminary Plat
- 2. Surveyor's Letter
- 3. Public Notice
- 4. Aerial Map

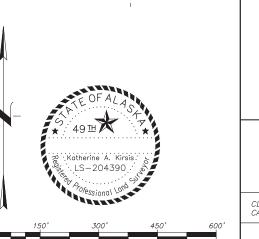


|         |         | CL      | IRVE TABL          | E           |            |             |
|---------|---------|---------|--------------------|-------------|------------|-------------|
| CURVE # | LENGTH  | RADIUS  | DELTA              | CH. BEARING | CH. LENGTH |             |
| C1      | 52.72'  | 50.00'  | 60°24'46"          | N59*47'37"E | 50.31'     | (HM 74-2356 |
| C2      | 15.80'  | 15.50'  | 58 <b>*</b> 23'18" | S51*47'22"W | 15.12'     | (HM 74-2356 |
| С3      | 438.25' | 810.00' | 31*00'00"          | 589*30'00"W | 432.93'    | (HM 74-2356 |
| C4      | 120.60' | 715.00' | 9*39'49"           | S79`49'55"E | 120.45'    | (HM 74–175) |

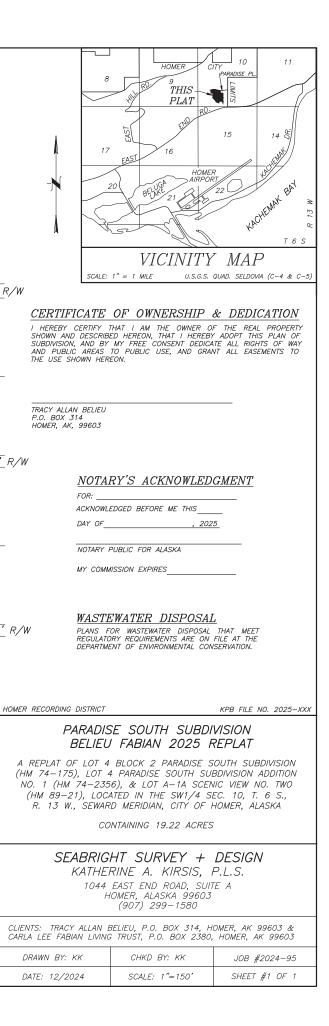




HM 74-175)



GRAPHIC SCALE



SEABRIGHT SURVEY + DESIGN Katherine A. Kirsis, P.L.S. 1044 East End Road Suite A Homer, Alaska 99603 (907) 299-1580

seabrightz@yahoo.com

December 12, 2024

City of Homer 491 East Pioneer Ave Homer, AK 99603

RE: Preliminary Submittal for "Paradise South Subdivision Belieu Fabian 2025 Replat"

Dear Planning Department,

We are pleased to submit the above referenced preliminary plat for your review. Included in this submittal packet you will find:

- 1 full size plat copy
- 111x17 plat copy
- Signed KPB plat submittal form
- Check for \$300 plat review fee

In addition, we have emailed you a digital copy of the 11x17 plat.

Please let us know if there are any concerns or clarifications we can address.

Cordially,

Katherine A. Kirsis

Katherine A. Kirsis, PLS Seabright Survey + Design

## **NOTICE OF SUBDIVISION**

Public notice is hereby given that a preliminary plat has been received proposing to subdivide or replat property. You are being sent this notice because you are an affected property owner within 500 feet of a proposed subdivision and are invited to comment.

Proposed subdivision under consideration is described as follows:

## Paradise South Subdivision Belieu Fabian 2025 Replat Preliminary Plat

The location of the proposed subdivision affecting you is provided on the attached map. A preliminary plat showing the proposed subdivision may be viewed at the City of Homer Planning and Zoning Office. Subdivision reviews are conducted in accordance with the City of Homer Subdivision Ordinance and the Kenai Peninsula Borough Subdivision Ordinance. A copy of the Ordinance is available from the Planning and Zoning Office. **Comments should be guided by the requirements of those Ordinances.** 

A public meeting will be held by the Homer Planning Commission on Thursday, January 2, 2025 at 6:30 p.m. In-person meeting participation is available in Cowles Council Chambers located downstairs at Homer City Hall, 491 E. Pioneer Ave., Homer, AK 99603. To attend the meeting virtually, visit zoom.us and enter the Meeting ID & Passcode listed below. To attend the meeting by phone, dial any one of the following phone numbers and enter the Webinar ID & Passcode below, when prompted: 1-253-215-8782, 1-669-900-6833, (toll free) 888-788-0099 or 877-853-5247.

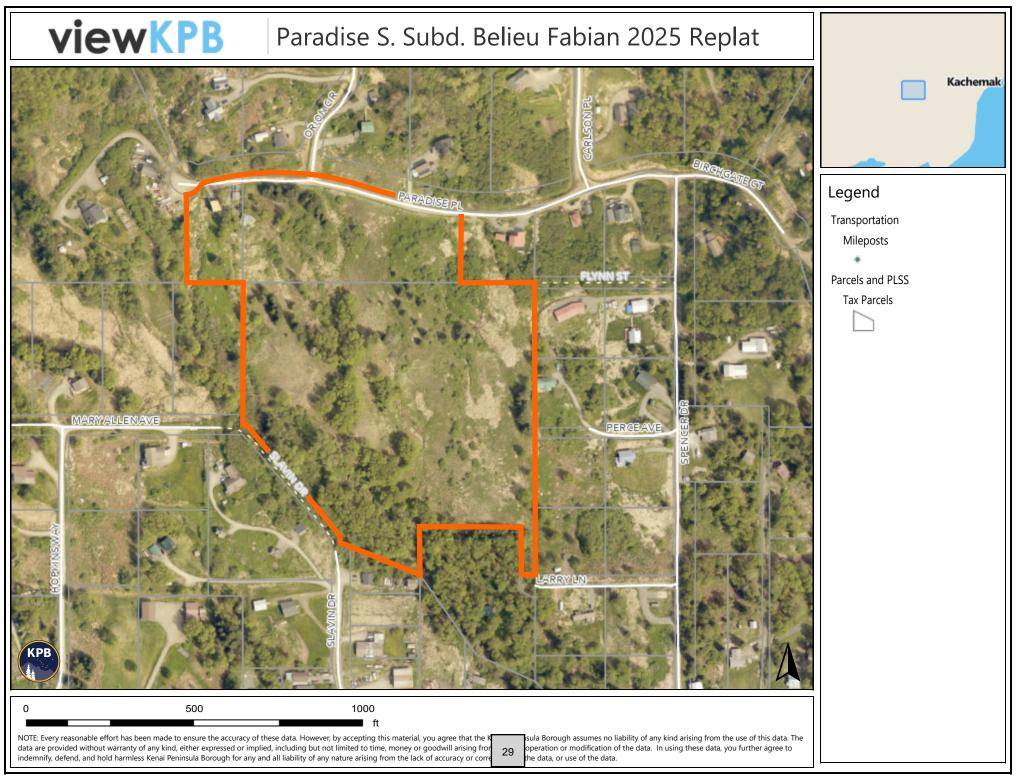
Meeting ID: 979 8816 0903 Passcode: 976062

Additional information regarding this matter will be available by 5 p.m. on the Friday before the meeting. This information will be posted to the City of Homer online calendar page for December 27, 2025 at <u>https://www.cityofhomer-ak.gov/calendar</u>. It will also be available at the Planning and Zoning Office at Homer City Hall and at the Homer Public Library.

Written comments can be emailed to the Planning and Zoning Office at the address below, mailed to Homer City Hall at the address above, or placed in the Homer City Hall drop box at any time. Written comments must be received by 4 p.m. on the day of the meeting.

If you have questions or would like additional information, contact Ryan Foster at the Planning and Zoning Office. Phone: (907) 235-3106, email: <u>clerk@cityofhomer-ak.gov</u>, or in-person at Homer City Hall.

## NOTICE TO BE SENT TO PROPERTY OWNERS WITHIN 500 FEET OF PROPERTY.







Planning 491 East Pioneer Avenue Homer, Alaska 99603

www.cityofhomer-ak.gov

Planning@ci.homer.ak.us (p) 907-235-3106 (f) 907-235-3118

## Staff Report PL 24-041

| TO:      | Homer Planning Commission   |
|----------|---|
| FROM:    | Ryan Foster, City Planner   |
| DATE:    | November 20, 2024   |
| SUBJECT: | Review of Title 21 Zoning Code and Create a List of Issues/Comments |

In anticipation of the re-write of the Title 21 Zoning Code in 2025, the Planning Commission has requested a special meeting to begin discussing Homer's Zoning Code. Among the first SOW tasks for re-writing the zoning code, is to conduct a technical review of the existing code. Attached to this memo is a draft of a list of current issues/comments on the existing zoning code from the perspective of Planning staff. Since the Planning Commission is a frequent user of the zoning code, it would be of great value to compile your issues/comments on the existing code and provide feedback to our consultant firm, Agnew Beck, by January 2025. The re-write of the Title 21 Zoning Code will take place from January 2025 to December 2025, and the Comprehensive Plan will also provide direct input into the zoning code re-write to ensure the code can implement the vision, goals, and objectives of the comprehensive plan.

## **Recommended Action:**

Staff recommends the Planning Commission include their issues/comments on the current Title 21 Zoning Code and send them to Agnew Beck for the Title 21 Code Update process.

## <u>Attachment</u>

Draft Title 21 Zoning Code Issues List

| Title 21 Zoning Code Section                | Issue/Comment  |
|---|--|
| General Issues                              |  |
|   | There are no provisions in code to address minor/major encroachment issues except for a variance application (which has a high bar for |
| Encroachment                                | encroachment of between 1'-2' and an encroachment permit for other encroachment issues.  |
|   | The current code is difficult to navigate, with a format consisting of a zoning map and zoning text. Consider an                       |
| Modern and user friendly zoning code        | illustrative format code to make it user friendly.   |
|   | Dimensional requirements often have little to no flexibility, at times making a reasonable project, unviable and or                    |
| Dimensional requirements                    | difficult to build/pencil out.   |
| Split lot zoning                            | Consider zoning map changes to address split lot zoning.   |
|   | Improve the flow of the code, it is currently somewhat disjointed. Reduce cross references, if possible, to reduce                     |
| Cross referencing an flow of the code       | confusion and jumping between sections of the code unnecessarily.  |
| Temporary structures                        | Current code does not consider temporary structures, this is this something to consider.   |
| General drawings/plans/illustrations        | Address the quality of site plans and drawings, what might the new standards be to ensure quality drawings?                            |
| Connectivity                                | Address connectivity in corridors for non-motorized transportation.  |
|   |  |
|   | Tsunamis are discussed in 2022 Local Hazard Mitigation Plan. Consider if zoning code should address this topic. Educational opportunit |
| Tsunami Codes                               | interesting concept but property owners or developers develop the property at their own risk. Research what actions other communit     |
| Public Notifications                        | Review requirements for public notifications for possible improvements.  |
| Development standards                       | Consider flexibility of what is required for development standards.  |
| Utility Connections                         | Consider future growth and connections to utilities.   |
| Outdoor storage                             | Review outdoor storage for businesses in commercial districts.   |
| Code Enforcement                            | Consideration for outreach on zoning code and enforcement in the community.  |
| Big box stores                              | Review big box store standards.  |
| Planned Unit Developments                   | Review planned unit developments and the role they play in zoning code.  |
| 21.03 Definitions and Rules of Construction |  |
|   | Update the definitions to ensure it is comprehensive. Many definitions are missing, thus requiring outside reference                   |
| 21.03.040 Definitions used in code          | to find a best definition that fits the Homer circumstances.   |
| 21.44 Steep Slopes and Coastal Development  |  |
| General steep slopes/coastal development    | Review this section and consider improvements to applicability and requirements.   |
| 21.55 Off-Street Parking                    |  |
|   | Review the number of required spaces and consider more opportunities for a reduction of parking requirements (such                     |
| 21.55.090 Required number of spaces         | as the mixed use provision for shared parking).  |
| 21.59 Off-Site Impacts                      |  |
|   | There are nuisances listed in Title 21 and Title 5 of HCC. Should these nuisances be consolidated to improve                           |
| 21.59.010 Nuisances                         | functionality of HCC and code enforcement? Ensure nuisances are enforceable.   |
| 21.60 Sign Code                             |  |
| General sign code                           | Ensure the sign code is compliant with content neutral requirements.   |
| 21.60.040 Definitions                       | Update definitions of signs, such as banner/blade signs.   |
| General sign code                           | Make the sign code more user friendly and easier to enforce.   |
| General sign code                           | Review sign height, flashing signs, lighting, other communities actions and competition between businesses.                            |
| General sign code                           | Review Sign types including standards for political signs.   |
| 21.70 Zoning Permit                         |  |
|   | Consider reorganizing the code to have zoning permits and development regulations co-located for ease of                               |
| General zoning permit                       | use/reference.   |
| General zoning permit                       | Consider how zoning permits/the format of the code could be impacted if Homer adopts building codes in the future.                     |

| for review criteria/consideration).Consider administrative                          |
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| nities offered by the city periodically with disclaimer is nities have implemented. |
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| Title 21 Zoning Code Section  | Issue/Comment   |  |  |
|-------------------------------|---|--|--|
| 21.71 Conditional use permits |   |  |  |
| General CUP code              | Analyze the number of conditional use permits triggered by the current code (there are likely many dozens of uses and circumstances t<br>whether certain conditional uses should<br>become permitted, not permitted, or remain as conditional uses. |  |  |
| General CUP code              | Try to consolidate the circumstances that require a conditional use permit in the code to ensure a requirement for a permit is not misse permitted, conditional, and not permitted conditional use permits.   |  |  |
| General CUP code              | Consider requiring the applicant attend and present at the public hearing for a CUP.  |  |  |

es that require a conditional use permit) and consider

issed/overlooked. Perhaps create a "crosswalk" for



Planning 491 East Pioneer Avenue Homer, Alaska 99603

arch 31, 19

www.cityofhomer-ak.gov

Planning@ci.homer.ak.us (p) 907-235-3106 (f) 907-235-3118

## Memorandum 2025 – 004

| TO:      | Homer Advisory Planning Commission                                    |
|----------|---|
| THROUGH: | Ryan Foster, City Planner   |
| FROM:    | Will Anderson, Associate City Planner                                 |
| DATE:    | December 11, 2024   |
| SUBJECT: | Final Time Extension Request for Daybreeze Park 59 North KPB#2019-067 |

Property owner Bob Shavelson has requested a final two-year time extension for this plat to continue his consideration of financing options. This plat creates nine residential lots along Fairview Ave, and one lot on Alpine Way (Tract A). The preliminary plat received approval from the Kenai Peninsula Borough in June of 2019, and a two-year time extension until December 17, 2024, was granted in December of 2022. Staff has no objection to the extension for an additional two-years, through December 2026. After the Homer Advisory Planning Commission makes a recommendation, Mr. Shavelson will submit the request for extension to the Kenai Peninsula Borough for their action.

Requested action: Recommend approval of a final two-year time extension request for Daybreeze Park 59 North KPB#2019-067.

## **Attachments:**

Subdivision time extension request

Kenai Peninsula Borough Planning Department 144 North Binkley Street Soldotna, Alaska 99669 Phone: (907) 714-2200 Fax: (907) 714-2378

## TIME EXTENSION REQUEST FORM

|       | Name of Subdivision: Day breeze Vark 59 North     |
|-------|---|
|       | Location of Subdivision: Homer                    |
|       | KPB Number:                                       |
|       | Date of Planning Commission Approval(s)           |
|       | 6/24/19 final plat                                |
|       |   |
|       |   |
|       | Reason for time extension request.                |
|       | still considering financing options               |
|       |   |
|       |   |
|       |   |
|       |   |
|       |   |
| Date  | : 12/3/24   |
| Sian  | ature of Surveyor/Property Owner: Company Journer |
| e.gri |   |
|       |   |

## Landslide Hazards Susceptibility Mapping in Homer, Alaska—Executive Summary

- In the 2017 Risk Report for the Kenai Peninsula Borough, the City of Homer identified slope failures as a concern with a Recommended Resilience Strategy of completing a comprehensive slope failure hazard assessment for the city.
- To support the City of Homer's resilience to potential hazards, the Alaska Division of Geological & Geophysical Surveys (DGGS) received funding from the Federal Emergency Management Agency (FEMA) Cooperating Technical Partners (CTP) program to create a map and database of existing slope failures, maps of shallow and deep-seated landslide susceptibility, and a map of simulated debris flow runouts for the City of Homer and neighboring Kachemak City. (https://doi.org/10.14509/31155)
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- DGGS created shallow and deep landslide susceptibility maps following protocols like those developed by the Oregon Department of Geology and Mineral Industries, which includes incorporating landslide inventory data, basic geotechnical soil properties, and lidar-derived slope steepness.
- Debris flow runout extents were generated using the model Laharz, which simulates runouts based on catchment-specific physical parameters (for example, hypothetical sediment volumes).
- Data from these analyses are collectively intended to depict locations where landslides are relatively more likely to occur and to model the extent of their potential impacts. The maps are not intended to predict slope failures, and site-specific, detailed geotechnical investigations should be conducted prior to development in vulnerable areas.
- The intended use of these overview maps is to help identify slopes with a relatively high slope failure hazard in and around Homer, to provide a basis for regional, long-term planning and increased resilience, and to help identify localities where more detailed mapping is warranted if areas are to be developed or improved. Maps are not intended to be used for legal, engineering, or surveying purposes.
- DGGS developed the landslide inventory, shallow landslide susceptibility, deep landslide susceptibility, and debris flow runout maps using the best available data at the time of the project; however, there are many inherent limitations. Conditions that lead to a landslide are complex. Some influencing factors like geologic and hydrologic conditions, vegetation, seasonal weather, and long-term climate all change at different rates while other landslide triggers, like earthquakes, are unpredictable. As such, there is potential for areas not depicted on these maps to be affected by future landslides.
- This report complements a 2022 Coastal Bluff Stability Assessment for Homer, also published at DGGS (<u>https://doi.org/10.14509/30908</u>).

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# LANDSLIDE HAZARD SUSCEPTIBILITY MAPPING IN HOMER, ALASKA

J. Barrett Salisbury



Aerial photograph looking south towards the Homer Spit.



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# LANDSLIDE HAZARD SUSCEPTIBILITY MAPPING IN HOMER, ALASKA

J. Barrett Salisbury

Report of Investigation 2024-3

State of Alaska Department of Natural Resources Division of Geological & Geophysical Surveys

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## LANDSLIDE HAZARD SUSCEPTIBILITY MAPPING IN HOMER, ALASKA

J. Barrett Salisbury

#### Abstract

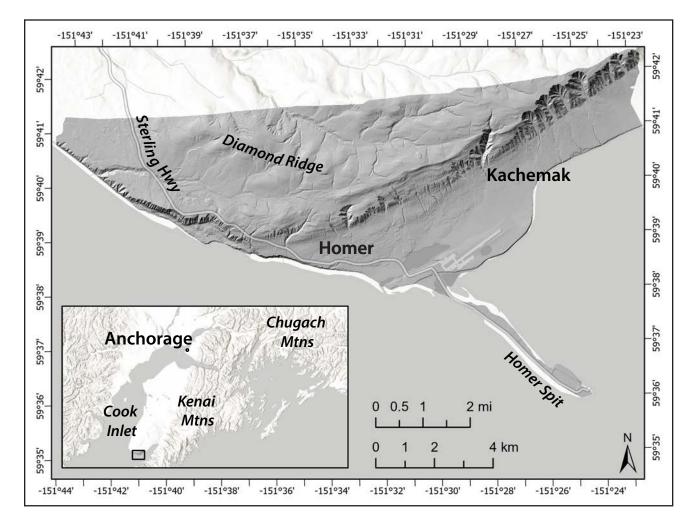
The potential for slope failures poses a great safety and financial risk to people and infrastructure in many communities throughout Alaska, including the City of Homer. The Alaska Division of Geological & Geophysical Surveys (DGGS) completed a comprehensive landslide hazard assessment for the city by creating a map and database of historical and prehistoric slope failures, maps of shallow and deep-seated landslide susceptibility, and a map of simulated debris flow runouts for the City of Homer and neighboring Kachemak. The landslide inventory map integrates existing maps of landslides caused by the 1964 Great Alaska Earthquake and newly mapped slope failures identified in sequences of aerial photos since 1950 and high-resolution light detection and ranging (lidar) data collected for this project. DGGS created a shallow landslide susceptibility map following protocols like those developed by the Oregon Department of Geology and Mineral Industries, which includes incorporating landslide inventory data, geotechnical soil properties, and lidarderived topographic slope to calculate the Factor of Safety (FOS)—a proxy for landslide susceptibility. Debris flow runout extents were generated using the model Laharz, which simulates runout extents based on catchment-specific physical parameters (e.g., hypothetical sediment volumes). Data from these analyses are collectively intended to depict locations where landslides are relatively more likely to occur or are relatively more likely to travel. The results provide important hazard information that can help guide planning and future risk investigations. The maps are not intended to predict slope failures, and site-specific, detailed investigations should be conducted prior to development in vulnerable areas. Results are for informational purposes and are not intended for legal, engineering, or surveying uses.

#### INTRODUCTION

In the 2017 Risk Report for the Kenai Peninsula Borough, the City of Homer identified slope failures as a concern with a Recommended Resilience Strategy of completing a comprehensive slope failure hazard assessment for the city (Alaska Department of Commerce, Community, and Economic Development, 2017). To support the City of Homer's resilience to potential hazards, the Alaska Division of Geological & Geophysical Surveys (DGGS) received funding in 2018 from the Federal Emergency Management Agency (FEMA) Cooperating Technical Partners (CTP) Program to create a map and database of existing slope failures, maps of shallow and deep-seated landslide susceptibility, and a map of simulated debris flow runouts for the City of Homer and neighboring Kachemak City (fig. 1). The results of this study are intended to: 1) educate officials regarding locations of potential slope failure hazards; 2) provide information to inform future zoning and planning decisions; and 3) to inform the city's update of their Comprehensive Plan. For the area of interest (AOI) that includes the City of Homer, Kachemak City, and parts of Diamond Ridge, DGGS produced new, high-resolution (0.5 m per pixel) light detection and ranging (lidar)

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**Figure 1.** 2019 lidar extent (visible as a gray hillshade) and area of interest for Homer slope failure susceptibility assessment. Inset map shows study location on the western Kenai Peninsula.

elevation data and data layers specific to the AOI's slope failure hazards (Salisbury and others, 2021). This report describes the datasets and methods used for the resilience study and discusses mapping and modeling results that will be used to increase Homer's resilience to future slope failures.

### BACKGROUND Geologic Setting

Regionally, the Homer area falls within an accretionary wedge of sediments and sedimentary rocks lying above the Alaska-Aleutian subduction zone, where the Pacific plate is being subducted beneath the North American plate. The bedrock at the southern end of the Kenai Peninsula consists of moderately indurated, freshwater Eocene sands, silts, clays, and minor amounts of conglomerate in generally thin and intergraded beds and lenses (Barnes and Cobb, 1959). Known collectively as the Kenai Group, these beds contain many subbituminous coal and lignite deposits from a few inches to 7 ft (2.1 m) thick that decrease in abundance and thickness to the north. Strata are generally flat or gently dipping northward less than about 10 degrees, and the coal and lignite beds act as aquitards, impeding the vertical movement of groundwater. The total thickness of the Kenai Group likely exceeds 4,700 ft (1,430 m) (Barnes and Cobb, 1959; Wilson and Hults, 2012). In general, the soils of Homer are mapped as silt loam with slight compositional variations owing to the nearly ubiquitous parent material. Exceptions include organic-rich wetland soils, beach deposits, or steep cliffs where erosion prevents soil formation (United

States Department of Agriculture [USDA] Natural Resources Conservation Service [NRCS], 2005).

The structure of the Kenai Group in Homer consists of northeast-trending broad folds. These folds (with limb dips less than ~10 degrees) are superposed on the northeast-trending regional forearc basin that defines Cook Inlet. Many highangle faults have been mapped in wave-cut beach bluffs, but little is known about the extent of these northwest-striking features. In general, faults show a normal sense of displacement, are steep to sub-vertical, and have vertical displacements ranging from a few inches to nearly 80 ft (24.4 m) (Barnes and Cobb, 1959). While none of these fault offsets found in Tertiary rocks are the result of Holocene surface deformation, we cannot rule out the possibility that shallow, crustal faults exist in the active accretionary wedge at the modern plate boundary.

The physiography of Homer is characterized by a prominent, steep escarpment of moderately cemented Tertiary sedimentary bedrock. The escarpment is a result of glacial scour by the Kachemak Bay ice lobe during the recent Moosehorn and Killey stades of the Naptowne glaciation, approximately 23 and 18 thousand years before present, respectively. The escarpment is dissected by steep canyons, and the gently sloping lowlands below are underlain by a mix of canyon-fed debris flow deposits and drift (i.e., Pleistocene sediments transported/deposited by glacial ice or meltwater) from the last major glaciation (Reger and others, 2007).

#### Types of Slope Failures

The term "landslide" is a commonly used catch-all term for gravity-driven mass movements. However, "landslide" refers to a range of movements, including slides, flows, falls, topples, and spreads (Cruden and Varnes, 1996) (fig. 2). A "slide" typically moves downslope along one or more failure planes, sometimes without much internal deformation. "Flows" move rapidly downslope as a viscous

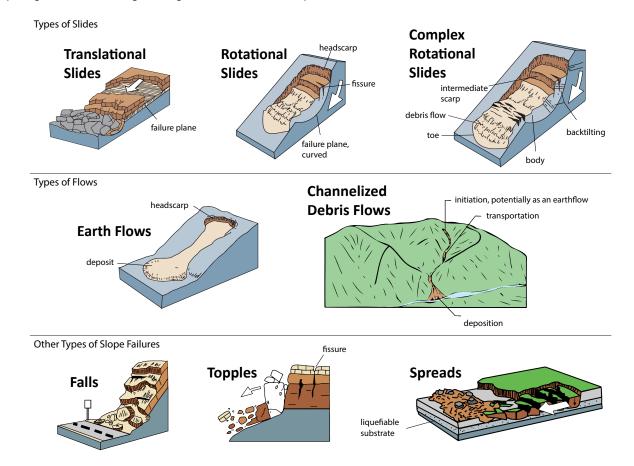


Figure 2. Types of slope failures as classified by Varnes (1978). Illustrations modified from Cruden and Varnes (1996) and Highland and Johnson (2004).

#### fluid because of water content and/or loss of cohesion within a moving mass. In and around Homer, there is evidence of several types of slides, flows, and complex mixes of the two.

#### Slides

Slides can occur in a wide range of geologic materials and typically occur on slopes of 20 to 40 degrees. Downslope movement occurs on one or more distinct failure planes, and a slide mass may travel with very little internal deformation. A translational landslide moves down (and potentially outward) along a planar failure surface without backwards tilting (fig. 2). Translational slides are typically shallower and move longer distances than rotational slides. A rotational slide moves along an upward-curved (i.e., spoon-shaped) failure plane such that the slide mass tilts backwards towards the headscarp (fig. 2). Both types of landslides, while initially sliding as a more-or-less coherent block, may disintegrate to rubble or transition to a flow, depending on local conditions. In either case, triggering mechanisms include saturation of slopes and increased water levels within the mass due to intense or prolonged rainfall or snowmelt, and human-induced or natural slope disturbances such as undercutting (e.g., removing the toe of an existing slope) or earthquake shaking (Cruden and Varnes, 1996; Highland and Bobrowsky, 2008).

#### Flows

Earthflows generally occur in fine-grained soils, including silts and clays, and exhibit a wide range of relative sizes, failure depths, and velocities. Earthflows typically have a characteristic hourglass shape, leaving behind a bowl or depression at the head of the slope failure, often with a headscarp (fig. 2). In Homer, flows typically occur on steep slopes within drainage catchments and range from hundreds to tens of thousands of square feet in area (tens to thousands of square meters). Ground observations and historical aerial photographs show that these earthflows likely initiate as small-scale slides that tend to be relatively shallow, mostly affecting the uppermost hydrologically active part of the soil column (approximately 5 ft [1.25 m]). Earthflows typically move as plastic or viscous masses with strong internal deformation, because they are commonly triggered by saturation of soil due to prolonged or intense rainfall or snowmelt, earthquakes, or human-induced vibration (Keefer and Johnson, 1983). In Homer, daylighting coal beds in coastal bluffs and steep catchments act as aquicludes, and natural springs from above them, which may locally contribute to earthflow initiation.

Channelized debris flows occur on steep, concave slopes and are initiated as earthflows (or other types of landslides) that run into a channel and gain momentum by picking up more debris, water, or speed (fig. 2). Channelized debris flows are prevalent in steep gullies, particularly in areas of weak soil. These types of movements are typically initiated by heavy surface-water flow or in areas where earthflow conditions are common; they can move downslope rapidly, approaching 35 miles per hour (56 km per hour) (Cruden and Varnes, 1996; Highland and Bobrowsky, 2008). Even though channelized debris flows may be thin and watery, they can incorporate large boulders, vegetation, and other objects. Coupled with their sudden onset, even small debris flows can be lethal.

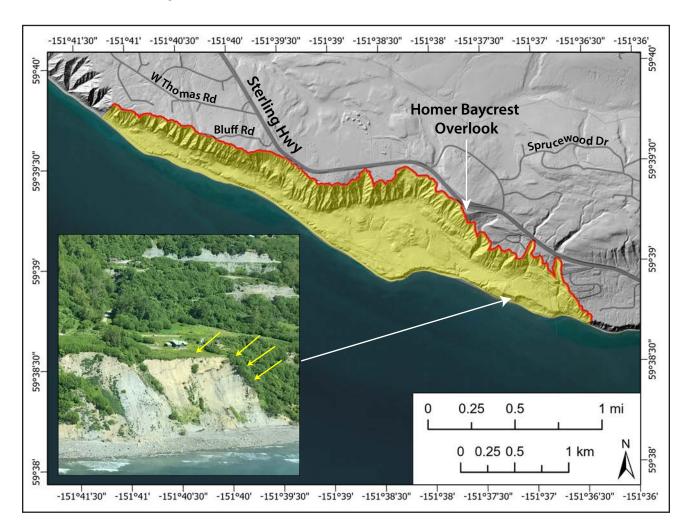
The debris flows that emanate from the bedrock-walled canyons and gullies deposit material on alluvial fans within and below the mouths of the canyons. The alluvial fan deposits have a finegrained, silt and sand matrix and contain blocks of coal, cobbles, and plant debris of all sizes (Reger and others, 2007). Each fan is composed of many individual debris flow deposits, and some flows deposit materials beyond the fan limits in existing ephemeral stream channels. The debris flows are supply-limited phenomena, meaning each event effectively empties the source area (or drainage gulley) of accumulated debris (Reger and others, 2007). The debris flow requires (1) sufficient time since the previous flow to accumulate sufficient debris in the source canyon and (2) a hydroclimatic event of sufficient duration or magnitude to saturate and mobilize the debris accumulated in the canyon (Jakob, 2005). Events are often initiated by a small earthflow from a steep

canyon wall, and this slide imparts an initiating pulse of material and energy to the existing unstable sediment in the canyon channels. Recurrence intervals are estimated to range from decades to centuries, with smaller events typically occurring more frequently than large events (Reger and others, 2007).

#### **Bluff Point Landslide**

The Sterling Highway at the western edge of Homer city limits closely follows the headscarp outline of the Bluff Point landslide (red line, fig. 3). The Bluff Point landslide is the largest landslide of the Kenai Peninsula lowland and is approximately 3.4 mi (5.4 km) long, up to 1.6 mi (2.6 km) wide, and has a scarp, or cliff relief, of 200 to 600 ft (60–215 m) (Reger and others, 2007). The Baycrest/Homer Overlook Point offers a view to the southwest, down across the ponded area of the back-tilted landslide block (fig. 3, yellow area) that formed as the mass slid along one or more spoonshaped failure planes at depth. Bathymetry of the seafloor in this area suggests that the main body of the landslide could have extended up to 1.2 mi (2 km) out from the modern shore (Reger, 1978), as also evidenced by exposures of basal shear surfaces in the beach far out from the modern bluff. Sediment layers at the modern shoreline are noticeably back-tilted, as opposed to the relatively flat-lying layers of the main bluff (figs. 2 and 3).

The landslide could have occurred any time since about 17,500 years before present (BP), when



**Figure 3.** Bluff Point landslide headscarp extent (red line) along the Sterling Highway in the 2019 lidar-derived hillshade (Salisbury and others, 2021). Note that the headscarp has undergone significant erosion since formation ~2,250 years ago. The yellow area represents the headscarp wall and back-tilted landslide block. Inset: oblique aerial photograph of back-tilted coal seams within the landslide mass.

the Killey-age glaciers retreated from the Bluff Point area back into Kachemak Bay, effectively debuttressing (i.e., destabilizing) the slope. Radiocarbon age estimates of vegetation from a soil layer overrun by the landslide suggest the slide occurred about 2,250 BP (Berg and others, 2014). Though there is no direct evidence linking the Bluff Point landslide to a causative subduction zone earthquake, it is plausible that this massive bluff failure was triggered by such an event. Shennan and Hamilton (2006) analyzed fossil diatoms within peat-mud couplets to reconstruct land/sea-level changes for the 1964 and five earlier great earthquakes during the past 3,300 years, two of which occurred about 2,100 BP and 2,500 BP. Given the uncertainties associated with radiocarbon dating, it is possible (though not proven) that either of these earthquakes triggered the bluff collapse.

The slide block has been extensively modified by coastal processes since deposition, and therefore, it is not clear whether the Bluff Point landslide occurred as a single, catastrophic failure or as a series of progressive, smaller failures. The remnants of the original landslide block are continuously eroding and collapsing, and there is evidence that reactivation of old slump blocks is possible, with at least one portion of the old slump block having been active as recently as 2009 (Berg, 2009). Deep-seated landslides fail progressively over time, and—coupled with the potential for strong shaking in 1964-type subduction zone earthquakes—future failures of the headwall are inevitable (Reger and others, 2007).

#### Effects of the Great Alaska Earthquake, 1964

The effects of the March 27, 1964, Great Alaska Earthquake in the Homer area were thoroughly documented after the event. Observations included general damage caused by tectonic subsidence and earthflows, landslides, fissures, seiches, submarine landslides, and beach changes caused by strong ground shaking during the M9.2 event (Waller, 1966). While the earthquake effects in Homer were minor compared to devastation in other parts of Alaska, most of the seismic damage to the community occurred on Homer Spit because of tectonic subsidence (2–3 ft [0.6–0.9 m]) and differential compaction and lateral spreading (an additional 1–4 ft [0.3–1.2 m]) (Plafker, 1969). Similarly, there were several areas of heightened coastal erosion in the months and years following the earthquake. This report focuses on the Bluff Point landslide headscarp and other inland areas where there were several instances of earthquake-induced geologic effects throughout the community.

Despite "the incompetent nature of the bedrock and of the thin layer of soil that overlies the rock," Waller (1966) notes that, surprisingly, only one landslide and one earthflow of significance occurred in Homer during the 1964 earthquake, both north of Kachemak City. The landslide occurred as the collapse of a precipice between two steep, neighboring catchments eroding into the Kenai Group (fig. 4C, labeled 1964 event on the right). The landslide block disintegrated and spread into a debris apron approximately 600 feet (183 m) long and 100 feet (30 m) wide below the existing precipice. Waller (1966) stresses that "landslide hazards exist in comparable situations near Homer-and indeed anywhere that promontories extend out from precipitous bluffs and cliffs."

The earthflow and channelized debris flow runout occurred in the neighboring drainage catchment southwest of the landslide (fig. 4C, labeled 1964 event on the left).

> It created a jumbled mass of uprooted trees, mudflows, rafts of soil and vegetation, and collapsed ground. The area of disturbed ground [was] about 1,000 feet [305 m] long and [had] a maximum width of about 400 feet [122 m]. Horizontal displacement of material within the flow, however, probably did not exceed 200 ft [61 m]. The material involved [consisted] mainly of silt, some fine sand, and occasional layers of flat pebbles. The head of the flow is near the apex of

an alluvial fan at the mouth of a small canyon occupied by an intermittent stream. Water was seeping from both disturbed and undisturbed material... and may have contributed to causing the flow. (Waller, 1966).

Lastly, the earthquake caused many fissures throughout Homer, the most notable of which occurred near the headscarp of the Bluff Point landslide at a U.S. Bureau of Land Management field station built 50 ft (15 m) from the edge of the 700 ft (213 m) bluff. In general, a fissure is an opening crack that forms at the ground surface. Regarding earthquakes, fissures may be caused by several different mechanisms, including primary on-fault deformation or secondary off-fault deformation. The fissures that formed in Homer in 1964 are secondary effects of the earthquake (i.e., caused by seismic shaking) and represent the geomorphic expression of lateral spreads (perhaps due to liquefaction), subsidence from sediment compaction, the initiation of new landslides, or triggered movements on existing, retrogressive landslides (e.g., fig. 2, rotational slides, topples).

> Numerous fissures developed during the earthquake on the surface above the bluff, some of them several inches wide. A few could be traced about 20 ft [6 m] down the bluff face. One earth fissure extended across the area of a field-station building and cracked the basement floor of the structure. Areas above and below promontories where earthslides might occur must remain suspect as sites for any building. (Waller, 1966).

Other anecdotal reports suggest that fissures at the mouth of Thurston Canyon were so large that "a Shetland pony fell into one several days after the earthquake and could not get out," but these observations were not checked in the field (Waller, 1966).

Homer is located above a boundary between segments of the earthquake-generating Alaska-Aleu-

tian subduction zone-the Kodiak Island (KI) segment to the southwest and the Prince William Sound (PWS) segment to the northeast. While the 1964 Great Alaska Earthquake ruptured both the KI and PWS segments, recent paleoseismological findings from around the region suggest that the two segments may rupture independently. Research by Shennan and others (2014) suggests that the average recurrence interval for great (M>8) megathrust earthquakes on the PWS segment is approximately 535 years, a slightly shorter recurrence interval than the 589 years estimated by Carver and Plafker (2008). Importantly, however, work in the KI segment revealed evidence for more frequent megathrust earthquakes than the PWS segment (Nishenko and Jacob, 1990), and recurrence intervals for M7.5-8.0 earthquakes may be as low as 60 years in this area (Nishenko, 1991). The fact that there has been a significant historical earthquake in the area does not reduce the likelihood that there may be another earthquake at any time.

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For context, peak ground accelerations (PGAs, the maximum ground shaking that occurs during an earthquake) in Homer during the M9.2 Great Alaska Earthquake reached about 0.35g, or 35 percent of the acceleration due to Earth's gravity (U.S. Geological Survey [USGS] ShakeMap). However, time-independent Probabilistic Seismic Hazard Models—models that quantify the rate at which ground-motion levels at a site are exceeded—show a 2 percent chance in 50 years (the rough equivalent of an earthquake with a ~2,500-year return period) for PGAs of approximately 0.6g in Homer (Wesson and others, 2007). The potential for future strong ground motion should not be underestimated.

#### METHODS

The Oregon Department of Geology and Mineral Industries published a series of special papers detailing protocols for inventory mapping of landslide deposits from lidar, shallow landslide susceptibility, and deep landslide susceptibility (Burns and Madin, 2009; Burns and others, 2012; Burns and Mickelson, 2016, respectively). Where existing geologic and geotechnical soils data allow, we closely follow these suggested methods and build on other similar landslide hazard studies conducted by DGGS (e.g., Hubbard and others, 2024).

#### Lidar Acquisition and Processing

DGGS used lidar point cloud data to produce a high-resolution (1.6 ft [0.5 m]) digital terrain model (DTM) and a digital surface model (DSM) for Homer (Salisbury and others, 2021). The DTM, also known as a bare-earth elevation model, was essential for identifying landslide geomorphology beneath dense vegetation, confirming evidence of landslide activity identified in aerial photograph sequences, making Factor of Safety (FOS) calculations, and modeling potential debris flow runouts. DGGS operates a RIEGL VUX1-LR scanner integrated with a Global Navigation Satellite System (GNSS) and Northrop Grumman Inertial Measurement Unit. The lidar and the GNSS data were collected on June 3, 2019, and processed using TerraSolid software. The Alaska Division of Mining, Land and Water's Survey Section conducted a targeted Ground Control Survey for this project June 19–20, 2019. The resulting modeled surfaces reveal the complex topography required for slope failure interpretation and modeling. These data are available as a Raw Data File with an open end-user license. All files are available via the DGGS elevation portal at elevation. alaska.gov. See Salisbury and others (2021; doi. org/10.14509/30591) for additional metadata.

#### Landslide Inventory

There are few publications with comprehensive landslide catalogs near Homer, despite numerous examples of historical debris flows emanating from the steep bluffs and blocking roads in Homer. These events, typically caused by heavy rains or rain-onsnow events, cause flooding, blockage, and damage to roads, and damage to culverts and other water diversion structures.

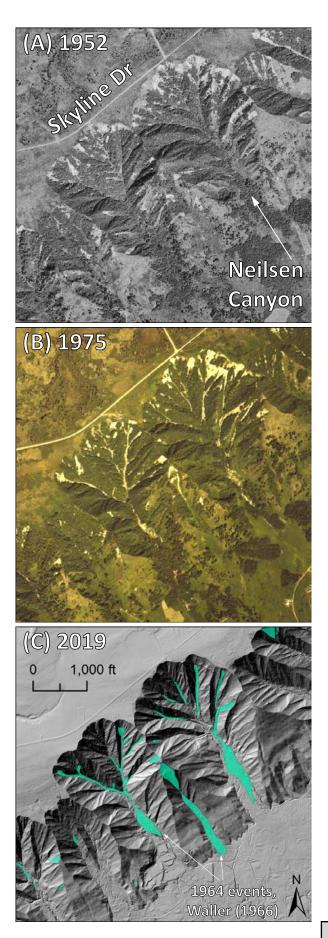
The comprehensive landslide inventory presented here (sheet 1) spans 1952–2019 and was generated by (1) collecting and organizing existing

information about previously identified landslides; (2) obtaining, georeferencing, and analyzing sets of aerial photographs since 1952; (3) acquiring, processing, and analyzing high-resolution lidar elevation data; (4) compiling all landslide information into a geodatabase; and (5) generating a landslide inventory map.

The most prominent landslide in the area, the Bluff Point landslide, has been well-known for some time. The Bluff Point headland was originally named by W.H. Dall of the U.S. Coast and Geodetic Survey in 1880. Early exploration in the southwestern Kenai Lowland was motivated by potential coal resources, and while the Bluff Point headland was mentioned in several reports in the following decades, the first instance of it being mapped as a paleo-landslide was in a USGS description of the Tertiary stratigraphy and associated coal resources in the area by Barnes and Cobb (1959). It has since been recognized in guidebooks and several news articles, and more recent work has helped refine the age estimate for the slide. The only other documentation of slope failures in the area followed the 1964 Great Alaska Earthquake (e.g., Waller, 1966), as mentioned above.

DGGS acquired multiple epochs of historical aerial photographs from the USGS Earth Explorer (earthexplorer.usgs.gov) and the Kenai Peninsula Borough Historical Imagery Viewer (gis.kpb. us/map/index.html?viewer=imagery). We chose years, or combinations of closely spaced years, with complete aerial coverage of upland Homer and Kachemak City while maximizing the number of distinct intervals since 1952. The photograph sets used are from 1952, 1975, 1984/1986, 2000, 2012–2013, and 2016 and were georeferenced in ArcGIS Pro.

For the Bluff Point landslide and all upland catchments, slope failure scars were delineated by comparing sets of aerial photographs. Interpreting slope failure scars from aerial photographs relied on the assumption that there is a one-to-one correlation between a newly identified scar and an earthflow



or debris flow event (fig. 4). We initially calibrated earthflow and debris flow identification using aerial photographs by analyzing the topographic expression of the slides that are known to have occurred during the 1964 Great Alaska Earthquake (fig. 4). This mapping strategy could underestimate the total number of individual slides, because the length of time required for vegetation to re-establish itself (a few years) is far exceeded by the average photo interval (~13 years). However, areas that remain unvegetated because they are oversteepened by failure or are channelized may have hosted several slides between one aerial photo epoch to the next.

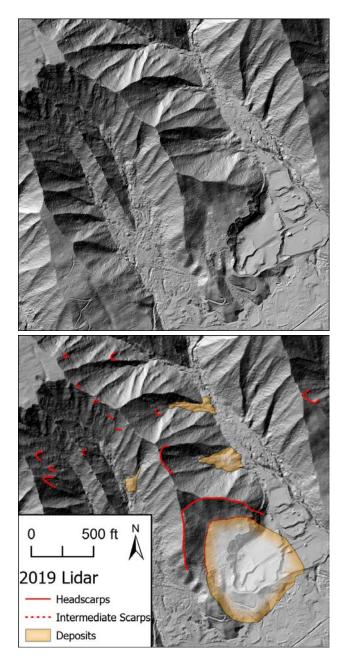
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Slope failure scars were delineated by digitizing the landslide footprints. To minimize positional error from distortion around the edges of the aerial photographs, landslide polygons were digitized directly on the 0.5 m, lidar-derived bare earth elevation models according to the geomorphic expression of the identified slope failures (e.g., fig. 4). At the same time, any landslide geomorphology indicative of recent instability but not visible in the air photographs was mapped as a landslide headscarp line only, as the full extent of the slide (i.e., deforestation) is difficult to determine from 2019 topography alone (fig. 5). We also mapped slope failures along the coastline, but in the 2019 lidar data only. Rarely, we also mapped debris flow deposits or runout zones with or without an immediate source area (fig. 5). These mapped features do not contain any additional date information. The slope geomorphology was mapped at about

**Figure 4. A, B.** Examples of georeferenced aerial photographs for two steep upland catchments where landslides were mapped by Waller (1966) after the 1964 Great Alaska Earthquake. We used changes in vegetation between air photo pairs to identify landslide, earthflow, and channelized debris flow scars. **C.** Slope failures that were identified between air photo sets were digitized in the 2019 lidar elevation data using geomorphic characteristics. Note: the channelized debris flow deposit polygons include both the source areas and runout zones (deposits). Though only two of the major events shown here are known to have occurred in the 1964 earthquake, it is likely that the channelized debris flow in Neilsen Canyon also occurred at the same time. 1:2,500, and the ArcGIS Pro feature class and associated geospatial information form the Landslide Inventory Database (fig. 6).

#### Shallow Landslide Susceptibility

The FOS (sheet 2) is a relationship between shear forces acting to move material downslope (e.g., gravity, unit weight) and forces acting to resist



**Figure 5.** Excerpt of 2019 lidar landslide mapping near the end of China Poot Street. Headscarps, intermediate scarps, and deposits are only identifiable using bare-earth lidar and are not visible in aerial photographs. Some headscarps have no accompanying deposits and vice versa.

downslope movement (e.g., soil cohesion) (Cornforth, 2005). In general, the greater the forces acting to move material downhill relative to forces resisting movement, the lower the FOS and the greater the likelihood a slope failure may occur.

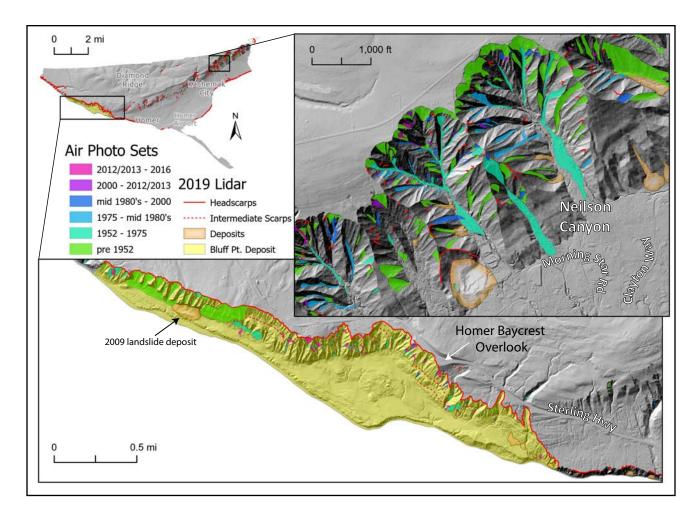
In Homer, we estimate the FOS for shallow landslides, or earthflows, that are approximately the thickness of the mapped soil column (~5 ft [1.25 m] or less, USDA NRCS, 2005). The following formula combines geotechnical information about the earth materials with the slope of the land surface from our high-resolution lidar data:

$$FOS = \frac{c'}{\gamma t \sin \alpha} + \frac{\tan \Phi'}{\tan \alpha} - \frac{m(\gamma_w) \tan \Phi'}{\gamma \tan \alpha}$$

where c' is effective soil cohesion,  $\Phi'$  is the effective angle of internal friction,  $\gamma$  is soil density (unit weight),  $\gamma_w$  is groundwater density (unit weight), t is depth to failure surface, m is the groundwater depth ratio, and  $\alpha$  is slope in degrees.

Areas with an FOS <1 are theoretically unstable because downslope stress is greater than the shear strength of the soil. FOS values equal to 1 are regarded as "critically stable"-meaning the driving and resisting forces are more-or-less balanced and the slope could fail at the slightest disturbance (e.g., a change in the water table position, vibration). Importantly, the FOS calculation involves several major assumptions regarding conditions present within a slope, so typically engineering geologists consider slopes with an FOS <1.5 to be potentially unstable. Therefore, we classify FOS values from 1.0 to <1.25 as highly susceptible to failure, values from 1.25 to 1.5 as moderately susceptible, and values >1.5 as having low susceptibility of failure (Burns and others, 2012) (fig. 7; red, orange, and no color areas, respectively).

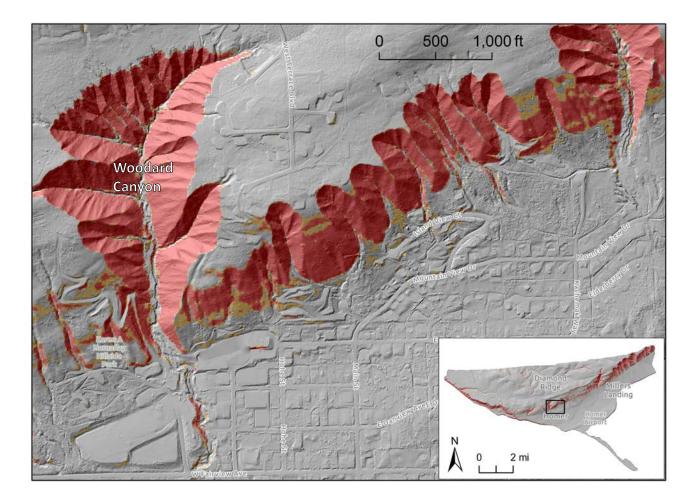
Nearly all the mapped soil types in Homer are from the same parent material (i.e., geologic unit) and therefore have similar material properties as silt loams. However, there are slight differences in grain size distributions that ultimately affect the saturated soil density, so we use respective values to



**Figure 6.** Excerpts from the complete landslide inventory database for the Bluff Point area (bottom) and Neilson Canyon area (top right). Earthflow and channelized debris flow scar polygons include both the source area and any associated deposit. The digital landslide inventory extends northeast of the 2019 lidar coverage into Thurston Canyon.

calculate the FOS for each group of mapped soils with the same dry unit weight (table 1). Representative angle of internal friction, cohesion, and groundwater density are assigned based on USDAdata for the western Kenai Peninsula (table 2; USDA NRCS, 2005). Geotechnical properties are assumed to be constant within individual soil units. For all calculations, we used the highest values of bulk dry density to calculate saturated bulk density, and we assumed the groundwater depth ratio to be one (implying fully saturated conditions with groundwater levels at the surface, as earthflow and debris flow events often occur following significant hydroclimatic events).

For each group of soil types (table 1), we used soil properties to calculate the FOS for a range of possible slopes (1–55 degrees), making note of slope angle thresholds corresponding to the FOS classification thresholds of 1.0, 1.25, and 1.5. We then used ArcGIS Pro Spatial Analyst toolbox to generate a slope map from the lidar-derived bare earth elevation model and extract the slope raster cells by soil type polygon. We display the data according to high (FOS 1-<1.25, red), moderate (FOS 1.25-1.5, orange), or low (FOS >1.5, no color) susceptibility to failure according to soil-specific FOS results (fig. 7). Slopes steeper than about 55 degrees are assumed to be highly unstable. We calculated the slope using a resampled, 5 m (16.4 ft) bare earth elevation model to avoid classifying small-scale, steep but low-relief features (e.g., ditches, driveway embankments) as having high susceptibility to failure.



**Figure 7.** Excerpt from the Factor of Safety map (map sheet 2) highlighting areas of moderate (FOS 1.25–1.5, orange) and high (FOS 1–1.25, red) shallow landslide susceptibility at saturated conditions for the area near Woodard Canyon.

#### Deep-Seated Landslide Susceptibility

Deep-seated landslides involve the failure of materials, as the name implies, several tens of feet below layers of active soil and the uppermost weathered bedrock in an area. While the distinction between shallow and deep landslides is somewhat arbitrary, for the purposes of this report, deep slope failures include underlying lightly weathered or unweathered bedrock. In Homer, we have designated deep landslides as those that include materials below the mapped, uppermost hydrologically active soil column: for the purposes of this report, a failure surface deeper than approximately 5 ft (~1.25 m) (USDA NRCS, 2005). In general, this is a relatively shallow delineation compared to other landslide studies (Burns and Madin, 2009).

Deep landslide susceptibility is difficult to assess, but in this study area, deep-seated landslides tend to fail repeatedly and progressively. An initial, deep-seated failure weakens the strength of the local geologic material, increases permeability (resulting in an increase of water infiltration), and alters the topography by steepening toe and headscarp slopes (Burns and Mickelson, 2016). It is common for deep-seated landslides to move through retrogressive failure (i.e., continued upslope failure); therefore, the most likely locations for future deep landslides are within existing deep landslides (reactivation) or adjacent to and above existing deep landslides. Susceptibility maps rely heavily on an existing inventory of deep landslides, and all mapped deep landslide polygons and headscarp-flank polygons are considered high susceptibility areas.

| Soil Series Name          | Soil Type                    | USDA Map Unit # in<br>study area          | Depth (in) | Dry Unit<br>Weight<br>(Ib/ft³) | Group |
|---------------------------|------------------------------|---|------------|--------------------------------|-------|
| Badland Sea Cliff         | silt loam                    | 503, 504                                  | 60         | 1                              | 1     |
| null                      | gravel pit                   | 563                                       | null       | 2                              | 2     |
| null                      | tidal flat                   | 688                                       | null       | 2                              | 2     |
| null                      | urban                        | 704                                       | null       | 2                              | 2     |
| Salamatof                 | peat                         | 651                                       | 60         | 6                              | 3     |
| Starichkof                | peat                         | 677, 678, 679                             | 60         | 11                             | 4     |
| Island                    | silt loam                    | 569, 570, 572                             | 60         | 75                             | 5     |
| Mutnala                   | silt loam                    | 618, 619, 620, 621, 622                   | 60         | 81                             | 6     |
| Mutnala-Starichkof-Slikok | silt loam                    | 623                                       | 60         | 81                             | 6     |
| Tuxedni                   | silt loam                    | 700                                       | 60         | 81                             | 6     |
| Doroshin                  | mucky peat over<br>silt loam | 558, 559                                  | 60         | 87                             | 7     |
| Salamatof & Doroshin      | peat over silt loam          | 650, 676                                  | 60         | 87                             | 7     |
| Truuli                    | muck                         | 695                                       | 60         | 87                             | 7     |
| Beluga-Mutnala            | silt loam                    | 509                                       | 60         | 91                             | 8     |
| Kachemak                  | silt loam                    | 573, 574, 575, 576, 577,<br>583, 584, 585 | 60         | 94                             | 9     |
| Smokey Bay                | silt loam                    | 657                                       | 60         | 94                             | 9     |
| Beluga-Smokey Bay         | silt loam                    | 510, 511                                  | 60         | 97                             | 10    |
| Beluga                    | silt loam                    | 506, 507, 508                             | 60         | 100                            | 11    |
| Coal Creek                | silt loam                    | 538                                       | 60         | 106                            | 12    |
| Spenard                   | peat over silt loam          | 673, 674, 675                             | 60         | 106                            | 12    |
| Cryaquents                | silt loam                    | 701                                       | 60         | 106                            | 12    |
| Chunila                   | mucky silt loam              | 530, 531                                  | 60         | 112                            | 13    |
| Clunie                    | peat over silt loam          | 535                                       | 60         | 112                            | 13    |
| Qatal                     | silt loam                    | 641                                       | 60         | 112                            | 13    |
| Slikok                    | peat over silt loam          | 653                                       | 60         | 112                            | 13    |
| Cryorthent                | silt loam                    | 703                                       | 60         | 112                            | 13    |
| Redoubt                   | silt loam                    | 24  | 60         | 116                            | 14    |
| Cohoe                     | silt loam                    | 541                                       | 60         | 119                            | 15    |

**Table 2.** Generic USDA soil properties for the Soil Series inthe western Kenai Peninsula (USDA, 2005).

| Soil Property                              | Variable | Value  | Unit               |
|--|----------|--------|--------------------|
| effective cohesion                         | C'       | 209    | lb/ft <sup>2</sup> |
| effective internal<br>friction angle       | $\Phi'$  | 25     | o                  |
| unit weight (soil)                         | γ        | varies | lb/ft <sup>3</sup> |
| unit weight (water)                        | Ŷw       | 64     | lb/ft <sup>3</sup> |
| depth to failure<br>surface                | t        | 5.0    | ft                 |
| proportion of slope<br>thickness saturated | m        | 1.0    |                    |

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In the Homer area, there are several mapped deep-seated landslides, the most prominent of which is the Bluff Point landslide. We use a headscarp buffer to highlight the area surrounding the Bluff Point landslide with high susceptibility to deep-seated landslide failure. Most poorly consolidated coarsegrained geologic materials have an angle of internal friction of at least 26 degrees. Because a slope ratio of 2 horizontal to 1 vertical (2H:1V) is equal to 26 degrees, geotechnical engineers commonly use that ratio as a proxy for slope stability (Burns and Mickelson, 2016). The maximum widespread vertical relief of the Bluff Point landslide headscarp is about 600 ft (215 m), so we add a horizontal buffer of 1,200 feet (430 m) to the scarp (fig. 8).

Procedures exist for defining areas that are moderately susceptible to deep-seated landslide failure, including identifying susceptible geologic units, geologic contacts, and engineering geologic units (Burns and Mickelson, 2016). However, given the paucity of high-resolution geologic and soils data for the area, additional analyses were beyond the scope of this study.

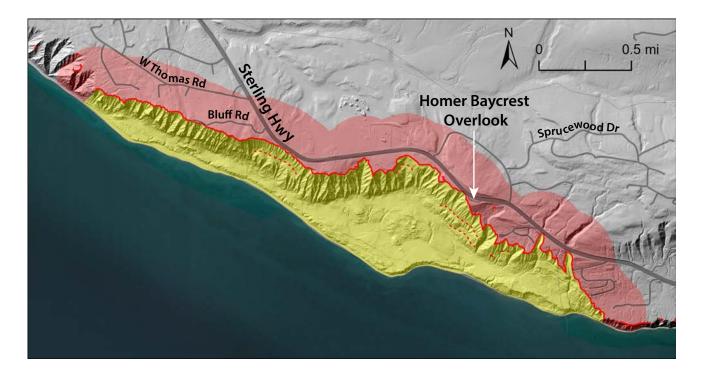
#### **Debris Flow Runout Modeling**

Laharz is a numerical model developed by Schilling (1998) for the USGS that simulates the behavior of volcanic debris flows known as lahars. This model uses empirically derived, statistical descriptions of areas inundated by past mass-flow events to forecast areas likely to be inundated by hypothetical future events (sheet 3). Model coefficients can be adjusted to work with lahars/debris flows, rock avalanches, or materials with intermediate viscosities. The forecasts use power-law equations to relate a debris flow volume (V) to a cross-sectional inundation area (A) and a planimetric inundation area (B) via two equations:

(1) A = 
$$cV^{2/3}$$
  
(2) B =  $cV^{2/3}$ 

The constant parameters (c) effectively define the viscosity of flowing material and dictate the resulting distribution of debris on the landscape. Materials can range from pure water to rock, with water being the least viscous and rock being the most viscous material. Water generates a narrow stream and travels a long distance, whereas rock debris forms a steep pile at the terminus of the debris flow. The behavior of a debris flow falls between the two extremes and depends on the material grain size, distribution of debris, and the roughness of the landscape. We use standard debris flow constants from Griswold and Iverson (2008) of 0.1 for cross-sectional area (in equation 1) and 20 for planimetric area (in equation 2).

The software is designed to automate equations (1) and (2) over a three-dimensional elevation model using (a) a starting point of debris accu-

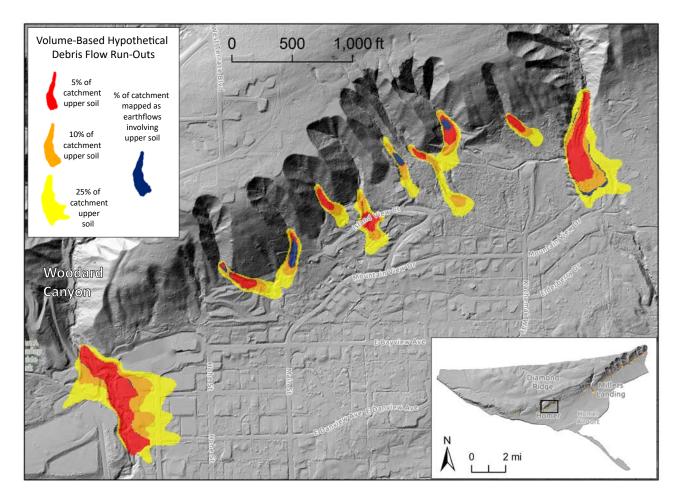


**Figure 8.** Deep-seated landslide susceptibility near the Bluff Point landslide (red polygon). The landslide body (yellow area, south of the red headscarp line) is the landslide deposit and is also susceptible to repeated failure.

mulation, (b) the total debris volume, and (c) the appropriate constant values described above. We chose the starting points of debris flows based on geomorphological evidence of debris accumulation within a catchment. This typically occurs at the transition from steep catchment slopes to flatter valley slopes, but it is dependent on the size, recent debris flow activity, and the degree of channelization within each catchment.

We simulate several debris volumes for each catchment. Assuming that earthflows mapped from aerial photographs and lidar data are shallow, or the approximate thickness of the mapped soil column (5 ft [1.42 m]), we calculate 5, 10, and 25 percent of the total volume of soil available in each catchment (fig. 9). For each catchment, we estimate the volume of landslides and earthflows identified in air

photos and lidar and use this as an additional debris flow volume input (fig. 9). The maximum amount of topsoil in a catchment identified as having moved since 1952 is about 25 percent of the total catchment area; thus, we assume 25 percent of the total volume is an appropriate upper limit to the amount of sediment that might be available for mobilization in a saturated debris flow. However, one major assumption regarding potential sediment volumes is that none of the available sediment (from mapped earthflows) has already left the catchment via fluvial transport or channelized debris flows. The volumes we use are rough estimates of the potential available material. Of course, it is possible that 100 percent of the total soil volume in a catchment fails in a debris flow, but historical aerial photographs do not indicate that this has happened recently.



**Figure 9.** Excerpt from the Channelized Debris Flow runout map (map sheet 3). The percent of the Woodard Canyon catchment mapped as earthflows involving the upper soil column is just over five percent, and therefore, it is only barely visible between the red and the orange polygons.

Incremental volumes are calculated by cross-sectional area (perpendicular to flow direction), proceeding down the steepest path from the user-defined starting point. The distribution of material in a model result is based on the beginning position in a landscape, defined flow characteristics (model coefficient "c"), and initial volume. The model fills the lowest-lying areas in a cross section first (i.e., the active stream channel), spilling out onto the surrounding area (i.e., the alluvial fan) as dictated by the initial flow volume and local slope steepness. The model continues until the initial input volume is depleted. In some areas, the model produces unrealistic, spiky deposits because of small variations in the high-resolution bare earth elevation model. For all hypothetical runouts, we use ArcGIS Pro focal statistics and conditional tools to smooth the results.

#### RESULTS

#### Landslide Inventory and Database

Within the upland steep drainage catchments, we identified 678 slope failure scars in aerial photographs, including those present in the 1952 images. Nearly all these slope failures could be tied to geomorphological evidence (e.g., headscarps, over-steepened areas, slope failure deposits) in the 2019 lidar-derived elevation models. Table 3 summarizes the number and size distribution of photo-identified slope failures.

We identified an additional 404 slope failure scars using only the 2019 lidar data, many of which were along the coastline. We also identified 69 landslide deposits of various sizes throughout the study area. There is no additional event age data for these features. Most of these slope failure scars represent relatively small and shallow earthflows within the steep drainage catchments. Some notable exceptions include the channelized debris flows attributed to the 1964 earthquake and large topples from the face of the Bluff Point landslide headscarp (fig. 6). North of Kachemak City, at the end of China Poot Street, there is a significant, deep-seated paleo-landslide, the deposit of which covers 484,000 square feet (45,000 square meters) (figs. 5 and 6). This landslide is notable not only because of its size but also because the toe of the landslide deposit has been extensively excavated.

It should be noted that, except for the Bluff Point landslide headscarp, the coastline was not investigated using aerial photo sets. Nearly all the Homer and Kachemak City coastlines are susceptible to, or are currently undergoing, some sort of slope failure processes. Detailed coastline analysis and assessment of past and future trends is beyond the scope of this study but has been assessed in a parallel coastal bluff stability analysis (Buzard and Overbeck, 2022).

#### Factor of Safety Map

We calculated the FOS for the entire study area on a 5 m resampled bare earth elevation model (fig. 7; map sheet 2). Areas mapped as having elevated shallow landslide susceptibility are primarily on steep slopes. Our conservative anal-

 Table 3. Summary of photo-identified slope failures.

| Date            | Number of slope<br>failures | Average individual failure area ft² (m²) | Max individual fail-<br>ure area ft² (m²) | Sum total failure<br>area ft² (m²) |
|-----------------|-----------------------------|--|---|------------------------------------|
| prior to 1952   | 273                         | 19,806 (1,840)                           | 654,975 (60,013)                          | 5,408,564 (502,472)                |
| 1952–1975       | 93                          | 21,560 (2,003)                           | 278,581 (25,881)                          | 2,005,241 (186,293)                |
| 1975–mid 1980's | 109                         | 8,773 (815)                              | 51,570 (4,791)                            | 956,481 (88,860)                   |
| mid 1980's-2000 | 64                          | 8,891 (826)                              | 40,763 (3,787)                            | 569,109 (52,872)                   |
| 2000–2012/2013  | 60                          | 3,832 (356)                              | 14,908 (1,385)                            | 230,380 (21,403)                   |
| 2012/2013-2016  | 79                          | 6,512 (605)                              | 39,095 (3,632)                            | 515,258 (47,869)                   |

ysis (performed for soils at saturated conditions) suggests that slopes steeper than about 20–25 degrees are considered moderately susceptible to failure, and those steeper than about 30 degrees are highly susceptible to failure. The actively eroding canyon walls above Homer typically have steepnesses well into the highly susceptible category.

#### Deep-Seated Landslide Hazards

The Bluff Point landslide deposit (fig. 8, yellow area below the headscarp line) and the area immediately adjacent to and within 1,200 ft (430 m) of the Bluff Point landslide headscarp (fig. 8, red area above the headscarp line) present significant landslide hazards. Slope instability in the Bluff Point area is manifest as several different types of mass movements, each with varying severity. The most common type of failure occurs along the oversteepened inland Bluff Point headscarp or coastal bluffs as a mix of earthflows, rock falls, and cliff topples (fig 2). Natural or earthquake-induced fissures, as noted by Waller (1966) following the 1964 earthquake, make the cliffs more prone to toppling.

A more concerning type of instability involves deformation on new or reactivation of existing curved failure planes within the complex rotational landslide (fig. 2). In the case of Bluff Point, the toe of the original slide mass(es) extended into the ocean and was removed by coastal processes. Coupled with headscarp collapse onto the slide body, removal of the slide toe facilitates continued rotation-either as steady creep or in punctuated movements, the latter of which occurred in 2009 (Berg, 2009). In addition to an 820-1,000-footwide (250-300-m-wide) bluff collapse (identifiable in 2019 lidar, fig. 6), a several hundred-meter-wide stretch of the intertidal zone uplifted as much as 15 ft (-4.5 m) approximately 50-100 yards out in front of the main inland bluff (Berg, 2009). Progressive backtilting of sedimentary layers in the young slide block confirms deformation along a curved failure plane at depth. Ongoing coastal erosion and continued degradation of the Bluff Point headscarp wall (particularly as exacerbated by 1964-type earthquakes, extreme rainfall events, or uncharacteristically wet seasons driven by climate change) will drive continued slip on old failure planes and could eventually lead to reactivation of greater portions of the extensive landslide. Figure 8 highlights the area north of the Bluff Point headscarp that is potentially susceptible to continued deep-seated landslide failure. Particular attention should be paid to the western end of the Bluff Point landslide, where slopes are taller, steeper, more active, and poorly buttressed compared to the eastern half of the paleo-landslide.

The deep-seated paleo-landslide at the end of China Poot Street (figs. 5 and 6) also represents an area of elevated landslide hazard. The headscarp of the China Poot Street slide is approximately 130 ft (40 m) tall, so an appropriate horizontal buffer is about 260 ft (80 m) upslope of the primary headscarp. However, there is nothing developed immediately upslope of this landslide headscarp, so we do not explicitly draw the buffer. Development within and on the landslide deposit, and development in the mouths of catchments on either side of the China Poot Street landslide, should be considered to be at higher risk.

Additionally, in Thurston Canyon, just east of the 2019 lidar coverage, there is evidence of a deep-seated paleo-landslide on the northeast wall of the catchment (fig. 10). The established drainage in the main axis of the catchment and the incision of the landslide deposit itself suggest that it is relatively stable, but the original, oversteepened headwall has hosted small-scale earthflows as seen in neighboring catchments. This Thurston Canyon landslide is a good example of how a major, deepseated failure within an upland catchment could either: 1) temporarily block exit flow from the catchment, eventually contributing to alluvial fan growth downstream in the form of repeat channelized debris flows; or 2) send deep-seated landslide debris directly out of the catchment as the landslide block disintegrates and flows downhill.

#### **Debris Flow Runout Map**

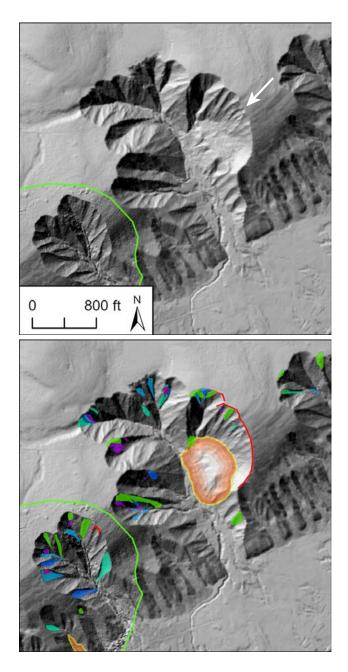
We simulated debris flow runouts for 47 individual catchments in Homer and Kachemak City (map sheet 3). For each catchment, we calculate flow volumes of 5, 10, and 25 percent of the estimated total soil volume, and where earthflows were identified in aerial photographs, the total volume of the identified earthflows in each catchment assumes a 5 ft (1.5 m) failure depth (fig. 9).

#### DISCUSSION AND LIMITATIONS

We developed the landslide inventory, shallow landslide susceptibility, deep landslide susceptibility, and debris flow runout maps using the best available data; however, there are many inherent limitations. The intended use of these overview maps is to help identify slopes with a relatively high slope failure hazard in and around Homer, to provide a basis for regional planning and increased resiliency, and to help identify localities where more detailed landslide mapping is warranted if areas are to be developed or improved. Limitations of the input data and modeling methods are such that the maps are not suitable to answer site-specific or legal questions. The maps should be used only for regional- or community-scale purposes.

The lidar-based mapping is a "snapshot" view of the current landscape based on available data and may change as new information regarding landslides becomes available and new landslides occur. Because we lack detailed site-specific information on every landslide, any existing engineered mitigative steps have not been accounted for. Local conditions may vary substantially from the parameters used to make these maps. It is likely that some slope failures were missed or misinterpreted by the map author, even using high-quality lidar-derived topographic data. We targeted our lidar survey point density to account for high vegetation density and known problem (i.e., unstable) areas, but we were only able to spot-check a few locations on the road system as part of this project.

The FOS calculations are sensitive to variability in the input parameters, and the map results are influenced by the accuracy and resolution of the input data for material properties, depth to failure, depth to groundwater, and slope angle. We estimated material properties based on available soils data, a limited amount of published field data, and



**Figure 10.** Deep-seated paleo-landslide on the east flank of Thurston Canyon, immediately east of the 2019 lidar coverage (2019 lidar extent delineated by green line). See figure 6 for symbol explanation.

assumed worst-case conditions. While it is possible for earthquakes to trigger slope failures, in a practical sense, the worst-case conditions mentioned here (i.e., saturated soils) will most likely be achieved through heavy seasonal precipitation or rain-onsnow events. Climate change is contributing to more variable weather patterns, from a changing snowpack to increased instances of extreme precipitation, and monitoring soil moisture conditions may be an important tool for monitoring evolving hazards.

Site-specific studies should be undertaken before development on existing landslide and debris flow deposits. Many of the drainages in Homer's steep catchments are conduits for debris, and many catchments have debris flow fans at their bases, indicating that several debris flows have occurred there in the past. At some sites, excavated debris flows are more than 40 ft (~12 m) thick and are comprised of many individual debris flows. We recommend site-specific investigations by qualified geotechnical engineers to evaluate recent activity of debris flow fans and to test subsurface soil conditions for suitability in construction projects.

Debris flow runout modeling is primarily based on estimates of the sediment volume for each catchment and the point at which slope failures will begin deposition of materials. Although these estimates are based on our best assessment of the data, many factors can lead to large differences in the estimates and actual landslide runouts. For example, interaction of a debris flow with buildings or engineered earth materials can change the direction of flow. Large trees or other objects in a debris flow can change the final runout length and width. Lastly, the lidar-based digital elevation model contains artifacts from the removal of man-made structures (e.g., homes, porches). It would require extensive GIS and field work to locate and remove all structures completely.

Although several landslides were mapped by Waller (1966) after the 1964 Great Alaska Earthquake, anecdotal evidence and air photo analyses indicate that there were potentially many more landslides in Homer. Several additional photo-identified channelized debris flows occurred between 1952 and 1975 that were not mapped by Waller (1966) but exhibit similar characteristics to those that occurred during the 1964 event (e.g., fig. 4C, channelized debris flow in Neilsen Canyon). We did not identify other channelized debris flows in aerial photographs taken since 1952, and those that occurred in 1964 cover significantly more area (at ~23,000 square meters and ~25,000 square meters each) than most other slope failures since 1952. Furthermore, it is likely that there was significantly more fissuring at the tops of bluffs and along the deepseated paleo-landslide scarps than was observed by Waller (1966). This is reasonable, given that at that time, far less of Homer was developed and access was significantly limited compared to today. With respect to potential earthquake-induced ground failures, Waller (1966) notes that "landslide hazards exist...anywhere that promontories extend out from precipitous bluffs and cliffs." Analysis of potential compound hazards-such as soil liquefaction on slopes—is beyond the scope of this project.

Lastly, evidence from Thurston Canyon and elsewhere along the shores of Kachemak Bay suggests that there is potential for large volume, deep-seated landslides in the upland catchments to disintegrate and flow downhill into developed areas. Modeling these types of failures and runouts would be purely speculative, but we cannot rule out the possibility that such an event may occur.

#### CONCLUSION

DGGS completed a comprehensive landslide hazard assessment for the City of Homer by creating a map and database of historical and prehistoric slope failures, maps of shallow and deepseated landslide susceptibility, and a map of simulated debris flow runouts for the City of Homer and neighboring Kachemak City. Data from these analyses are collectively intended to depict overall landslide hazard, and the results provide important information that can help guide planning and future investigations. The maps are not intended to predict slope failures, and site-specific, detailed investigations should be conducted prior to development in vulnerable areas. Results are for informational purposes and may not be used for legal, engineering, or surveying uses.

#### ACKNOWLEDGMENTS

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#### REFERENCES

- Alaska Department of Commerce, Community, and Economic Development, 2017, Kenai Peninsula Risk Report: Federal Emergency Management Agency Risk Report, 89 p. https:// www.commerce.alaska.gov/web/Portals/4/pub/ risk\_report\_kenai\_final.pdf
- Barnes, F.F., and Cobb, E.H., 1959, Geology and coal resources of the Homer District, Kenai coal field, Alaska: U.S. Geological Survey Bulletin 1085-F, p. 203–208.
- Berg, Ed, 2009, Sudden uplift of the beach recalls ancient landslides, *in* Berg, Ed, ed., Refuge Notebook: U.S. Fish & Wildlife Service Kenai National Wildlife Refuge Notebook, v. 11, no. 27, p. 54–55. https://ecos.fws.gov/ServCat/ Reference/Profile/128174
- Berg, Ed, Reger, Dick, and Higman, Bretwood, 2014, Geologists determine age of Bluff Point Landslide, *in* Morton, J.M., ed., Refuge Notebook: U.S. Fish & Wildlife Service Kenai National Wildlife Refuge Notebook, v. 16, no. 32, p. 63–64. https://ecos.fws.gov/ServCat/ Reference/Profile/128179
- Burns W.J., and Madin I.P., 2009, Protocol for inventory mapping of landslide deposits from

light detection and ranging (lidar) imagery: Oregon Department of Geology and Mineral Industries Special Paper 42, 30 p. https://www. oregongeology.org/pubs/sp/p-SP-42.htm

- Burns W.J., Madin I.P., and Mickelson, K.A., 2012, Protocol for shallow landslide susceptibility mapping: Oregon Department of Geology and Mineral Industries Special Paper 45, 32 p. https:// www.oregongeology.org/pubs/sp/p-SP-45.htm
- Burns, W.J., and Mickelson, K.A., 2016, Protocol for deep landslide susceptibility mapping: Oregon Department of Geology and Mineral Industries Special Paper 48, 66 p. https://www. oregongeology.org/pubs/sp/p-SP-48.htm
- Buzard, R.M., and Overbeck, J.R., 2022, Coastal bluff stability assessment for Homer, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2022-5, 22 p., 2 sheets, scale 1:50,000. https://doi.org/10.14509/30908
- Carver, G.A., and Plafker, George, 2008, Paleoseismicity and neotectonics of the Aleutian subduction zone—An overview, *in* Freymueller, J.T., Haeussler, P.J., Wesson, R.L, and Ekström, G., eds., Active tectonics and seismic potential of Alaska: American Geophysical Union Monograph 179, p. 43–63.
- Cruden, D.M., and Varnes, D.J., 1996, Landslide types and processes, *in* Turner, A.K., and Schuster, R.L., eds., Landslides—Investigation and mitigation: Transportation Research Board, Special report no. 247, National Academy of Sciences, Washington, D.C., p. 36–75.
- Cornforth, D.H., 2005, Landslides in practice: Investigation, analysis, and remedial/preventative options in soils: Hoboken, N.J., John Wiley and Sons, 596 p.
- Griswold, J.P., and Iverson, R.M., 2008, Mobility statistics and automated hazard mapping for debris flows and rock avalanches: U.S. Geological Survey Scientific Investigations Report 2007-5276, 59 p.
- Highland, L.M., and Bobrowsky, Peter, 2008, The landslide handbook—A guide to understanding landslides: Reston, Virginia, U.S. Geological Survey Circular 1325, 129 p.
- Highland, L.M., and Johnson, Margo, 2004, Landslide types and processes: U.S. Geological

Survey Fact Sheet 2004-3072, 4 p. https://pubs. usgs.gov/fs/2004/3072/pdf/fs2004-3072.pdf

- Hubbard, T.D., Daanen, R.P., and Stevens, D.S.P., 2024, Debris flow hazard evaluations for multihazard risk mapping in Sitka, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2024-2, 13 p., 6 sheets. https://doi.org/10.14509/30187
- Jakob, Matthias, 2005, A size classification for debris flows: Engineering Geology, v. 79, p. 151–161.
- Keefer, D.K., and Johnson, A.M., 1983, Earth flows; morphology, mobilization, and movement: U.S. Geological Survey Professional Paper 1264, 53 p. https://doi.org/10.3133/pp1264
- Nishenko, S.P., 1991, Circum-Pacific seismic potential, 1989–1999: Pure and Applied Geophysics, v. 135, no. 2, p. 169–259. http://doi. org/10.1007/BF00880240
- Nishenko, S.P., and Jacob, K.H., 1990, Seismic potential of the Queen Charlotte–Alaska– Aleutian seismic zone: Journal of Geophysical Research, v. 95, no. B3, p. 2,511–2,532. http:// doi.org/10.1029/JB095iB03p02511
- Plafker, George, 1969, Tectonics of the March 27, 1964, Alaska earthquake: U.S. Geological Survey Professional Paper 543-I, p. I1–I74, 2 sheets.
- Reger, R.D., 1978, Bluff Point landslide, a massive ancient rock failure near Homer, Alaska: Alaska Division of Geological & Geophysical Surveys Short Notes on Alaskan Geology, Geologic Report 61 B, p. 5–9. https://doi.org/1014509/409
- Reger, R.D., Sturmann, A.G., Berg, E.E., and Burns, P.A.C., 2007, A guide to the late Quaternary history of northern and western Kenai Peninsula, Alaska: Alaska Division of Geological & Geophysical Surveys Guidebook 8, 112 p., 6 sheets, scale 1:63,360. http://doi. org/10.14509/15941
- Salisbury, J.B., Herbst, Andrew, and Daanen, R.P., 2021, High-resolution lidar data for Homer, Alaska: Division of Geological & Geophysical Surveys Raw Data File 2021-2, 6 p. https://doi. org/10.14509/30591
- Schilling, S.P., 1998, LAHARZ: GIS programs for automated mapping of lahar-inundation

hazard zones: U.S. Geological Survey Open-File Report 98-638, 80 p. https://pubs.usgs.gov/ of/1998/0638/report.pdf

- Shennan, Ian, and Hamilton, Sarah, 2006, Coseismic and pre-seismic subsidence associated with great earthquakes in Alaska: Quaternary Science Reviews, v. 25, 8 p. https://doi.org/10.1016/j. quascirev.2005.09.002
- Shennan, Ian, Barlow, Natasha, Carver, Gary, Davies, Frank, Garrett, Ed, and Hocking, Emma, 2014, Great tsunamigenic earthquakes during the past 1,000 yr on the Alaska megathrust: Geology, v. 42, no. 8, p. 687–690. http://doi.org/10.1130/ G35797.1
- United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS), 2005, Soil Survey of Western Kenai Peninsula Area, Alaska, 618 p. https://websoilsurvey.nrcs. usda.gov/app/WebSoilSurvey.aspx
- U.S. Geological Survey ShakeMap, M 9.2 1964 Prince William Sound Earthquake, Alaska, event ID 19640328033616\_30. https:// earthquake.usgs.gov/earthquakes/eventpage/ official19640328033616\_30/executive [accessed March, 2021]
- Varnes, D.J., 1978, Slope movement types and processes, *in* Schuster, R.L., and Krizek, R.J., eds., Landslides analysis and control: Transportation Research Board Special Report 176, National Academy of Sciences, Washington, D.C., p. 11–33. http://onlinepubs.trb.org/Onlinepubs/sr/ sr176/176.pdf
- Waller, R.M., 1966, Effects of the earthquake of March 27, 1964 in the Homer Area, Alaska: U.S. Geological Survey Professional Paper 542-D, 28 p.
- Wesson, R.L., Boyd, O.S., Mueller, C.S., Bufe, C.G., Frankel, A.D., and Petersen, M.D., 2007, Revision of time-Independent probabilistic seismic hazard maps for Alaska: U.S. Geological Survey Open-File Report 2007-1043, 33 p.
- Wilson, F.H., and Hults, C.P., 2012, Geology of the Prince William Sound and Kenai Peninsula region, Alaska: U.S. Geological Survey Scientific Investigations Map 3110, 38 p., 1 sheet.

#### PLANNING COMMISSION

2024 Calendar

|          | TYPE OF MEETINGS & TIME  | MEETING<br>DATE | COMMISSIONER<br>SCHEDULED TO<br>REPORT | CITY COUNCIL<br>MEETING FOR<br>REPORT* | TOPICS FOR AGENDA AND EVENTS PLANNED                                |
|----------|--|-----------------|--|--|---|
| JANUARY  | Worksession Canceled<br>Regular Meeting 6:30 p.m.  | 01/02/25        |  | Monday,<br>01/13/25<br>6:00 p.m.       | • Title 21 Review and comments from the Commission                  |
|          | Worksession @ 5:30 p.m.<br>Regular Meeting @ 6:30 p.m.   | 01/15/25        |  | Monday<br>01/27/25<br>6:00 p.m.        | •   |
| FEBRUARY | Joint Worksession with Council &<br>Comp Plan Steering Committee 5:00<br>p.m.<br>Regular Meeting @ 6:30 p.m. | 02/05/25        |  | Monday<br>02/10/25<br>6:00 p.m.        | •   |
|          | Worksession @ 5:30 p.m.<br>Regular Meeting @ 6:30 p.m.   | 02/19/25        |  | Monday<br>02/24/25<br>6:00 p.m.        | •   |
| MARCH    | Worksession @ 5:30 p.m.<br>Regular Meeting @ 6:30 p.m.   | 03/05/25        |  | Monday<br>03/10/25<br>6:00 p.m.        | • National Planning Conference March 29-April 1, 2025 Denver,<br>CO |
|          | Worksession @ 5:30 p.m.<br>Regular Meeting @ 6:30 p.m.   | 03/19/25        |  | Monday<br>03/24/25<br>6:00 p.m.        |   |
| APRIL    | Worksession @ 5:30 p.m.<br>Regular Meeting @ 6:30 p.m.   | 04/02/25        |  | Monday<br>04/14/25<br>6:00 p.m.        |   |
|          | Worksession @ 5:30 p.m.<br>Regular Meeting @ 6:30 p.m.   | 04/16/25        |  | Monday<br>04/28/25<br>6:00 p.m.        | •   |
| МАҮ      | Worksession @ 5:30 p.m.<br>Regular Meeting @ 6:30 p.m.   | 05/07/25        |  | Monday<br>05/12/25<br>6:00 p.m.        | •   |
|          | Worksession @ 5:30 p.m.<br>Regular Meeting @ 6:30 p.m.   | 05/21/25        |  | Tuesday<br>05/27/25<br>6:00 p.m.       | •   |
| JUNE     | Worksession @ 5:30 p.m.<br>Regular Meeting @ 6:30 p.m.   | 06/04/25        |  | Monday<br>06/09/25<br>6:00 p.m.        | • Reappointment Applications will be sent out by the Clerk's Office |

|           | Worksession @ 5:30 p.m.     | 06/18/25 | Monday             |  |
|-----------|-----------------------------|----------|--------------------|--|
|           | Regular Meeting @ 6:30 p.m. |          | 06/23/25           |  |
|           |                             |          | 6:00 p.m.          |  |
|           | Worksession @ 5:30 p.m.     | 07/16/25 | Monday             |  |
| JULY      | Regular Meeting @ 6:30 p.m. |          | 07/21/25           |  |
|           |                             |          | 6:00 p.m.          |  |
|           | Worksession @ 5:30 p.m.     | 08/06/25 | Monday             | Election of Officers   |
| AUGUST    | Regular Meeting @ 6:30 p.m. |          | 08/11/25           | Worksession: Training with City Clerk                        |
|           |                             |          | 6:00 p.m.          | Capital Improvement Plan Presentation by Jenny Carroll       |
|           |                             |          |                    |  |
|           | Worksession @ 5:30 p.m.     | 08/20/25 | Monday             |  |
|           | Regular Meeting @ 6:30 p.m. |          | 08/25/25           |  |
|           |                             | 00/00/05 | 6:00 p.m.          |  |
|           | Worksession @ 5:30 p.m.     | 09/03/25 | Monday             |  |
| SEPTEMBER | Regular Meeting @ 6:30 p.m. |          | 09/08/25           |  |
|           |                             | 00/17/05 | 6:00 p.m.          |  |
|           | Worksession @ 5:30 p.m.     | 09/17/25 | Monday             |  |
|           | Regular Meeting @ 6:30 p.m. |          | 09/22/25           |  |
|           |                             | 10/01/05 | 6:00 p.m.          |  |
|           | Worksession @ 5:30 p.m.     | 10/01/25 | Monday             |  |
| OCTOBER   | Regular Meeting @ 6:30 p.m. |          | 10/13/25           |  |
|           |                             | 10/15/05 | 6:00 p.m.          |  |
|           | Worksession @ 5:30 p.m.     | 10/15/25 | Monday             | <ul> <li>Approve Annual Meeting Schedule for 2026</li> </ul> |
|           | Regular Meeting @ 6:30 p.m. |          | 10/27/25           |  |
|           | Worksossion @ 5:20 n m      | 11/05/25 | 6:00 p.m.          |  |
| NOVEMBER  | Worksession @ 5:30 p.m.     | 11/05/25 | Monday             |  |
| NOVEMDEK  | Regular Meeting @ 6:30 p.m. |          | 11/10/25           |  |
|           | Worksession @ 5:30 p.m.     | 12/03/25 | 6:00 p.m.          |  |
| DECEMBER  |                             | 12/03/25 | Monday<br>11/25/24 |  |
| DECEMIDER | Regular Meeting @ 6:30 p.m. |          |                    |  |
|           |                             |          | 6:00 p.m.          | Council amended their meeting schedule to hold two meetings  |
|           |                             |          |                    | in November. There are no Council meetings in December.      |
|           |                             |          |                    | in November. There are no council meetings in December.      |

\*The Commission's opportunity to give their report to City Council is scheduled for the Council's regular meeting following the Commission's regular meeting, under Agenda Item 8 – Announcements/ Presentations/ Borough Report/Commission Reports. Reports are the Commission's opportunity to give Council a brief update on their work. Attend via Zoom or in Person. A written report can be submitted if no member is able to attend.

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## 2025 Meeting Dates & Submittal Deadlines

Homer Planning Commission

Meeting dates are bolded and submittal deadlines are underneath

#### January 2, 2025

| December 11 for Public Hearing Items       |
|--|
| December 13 for Preliminary Plat Submittal |
| December 17 for Regular Agenda Items       |
| January 15, 2025                           |
| December 24 for Public Hearing Items       |
| December 27 for Preliminary Plat Submittal |
| January 3 for Regular Agenda Items         |
| February 5, 2025                           |
| January 15 for Public Hearing Items        |
| January 17 for Preliminary Plat Submittal  |
| January 24 for Regular Agenda Items        |
| February 19, 2025                          |
| January 29 for Public Hearing Items        |
| January 31 for Preliminary Plat Submittal  |
| February 7 for Regular Agenda Items        |
| March 5, 2025                              |
| February 12 for Public Hearing Items       |
| February 14 for Preliminary Plat Submittal |
| February 21 for Regular Agenda Items       |
| March 19, 2025                             |
| February 26 for Public Hearing Items       |
| February 28 for Prelim. Plat Submittal     |

March 7 for Regular Agenda Items

#### April 2, 2025

March 12 for Public Hearing Items March 14 for Preliminary Plat Submittal March 21 for Regular Agenda Items April 16, 2025 March 26 for Public Hearing Items March 28 for Preliminary Plat Submittal April 4 for Regular Agenda Items May 7, 2025 April 16 for Public Hearing Items April 18 for Preliminary Plat Submittal April 25 for Regular Agenda Items May 21, 2025 April 30 for Public Hearing Items May 2 for Preliminary Plat Submittal May 9 for Regular Agenda Items June 4, 2025 May 14 for Public Hearing Items May 16 for Preliminary Plat Submittal May 23 for Regular Agenda Item June 18, 2025 May 28 for Public Hearing Items May 30 for Preliminary Plat Submittal

June 6 for Regular Agenda Items

## 2025 Meeting Dates & Submittal Deadlines

Homer Planning Commission

Meeting dates are bolded and submittal deadlines are underneath

| July 16, 2025                               | October 1, 2025                             |
|---|---|
| June 25 for Public Hearing Items            | September 10 for Public Hearing Items       |
| June 27 for Preliminary Plat Submittal      | September 12 for Preliminary Plat Submittal |
| July 3 for Regular Agenda Items             | September 19 for Regular Agenda Items       |
| August 6, 2025                              | October 15, 2025                            |
| July 16 for Public Hearing Items            | September 24 for Public Hearing Items       |
| ,<br>July 18 for Preliminary Plat Submittal | September 26 for Preliminary Plat Submittal |
| July 25 for Regular Agenda Items            | October 3 for Regular Agenda Items          |
| August 20, 2025                             | November 5, 2025                            |
| July 30 for Public Hearing Items            | October 15 for Public Hearing Items         |
| August 1 for Preliminary Plat Submittal     | October 16 for Preliminary Plat Submittal   |
| August 8 for Regular Agenda Items           | October 24 for Regular Agenda Item          |
| September 3, 2025                           | December 3, 2025                            |
| August 13 for Public Hearing Items          | November 12 for Public Hearing Items        |
| August 15 for Prelim. Plat Submittal        | November 14 for Preliminary Plat Submittal  |
| August 22 for Regular Agenda Items          | November 21 for Regular Agenda Item         |
| September 17, 2025                          |   |
| August 27 for Public Hearing Items          |   |

August 29 for Preliminary Plat Submittal September 5 for Regular Agenda Items