

Office of the City Manager

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Memorandum

TO: Mayor Lord and Homer City Council

FROM: Melissa Jacobsen, City Manager

DATE: February 21, 2025

SUBJECT: City Manager's Report for February 24, 2025 Council Meeting

Statewide Transportation Improvement Program (STIP) Amendment #2

The Alaska Department of Transportation & Public Facilities (DOT&PF) has released Amendment #2 to the 2024-2027 Statewide Transportation Improvement Program (STIP) for public review and they are welcoming public comment through Thursday, March 20, 2025. The STIP is a four-year state blueprint for federal surface transportation investments in key infrastructure projects that enhance safety, mobility, and economic growth.

Project # 34708, Sterling Highway Erosion Mitigation Study is a new project in the amended STIP. This planning study will evaluate needed improvements to protect the Sterling Highway from erosion along the Homer Spit. Improvements may include excavation, coastal erosion protection, paving, signing and striping, and utility relocation. The State has programmed \$800,000 for the study. The City has been in discussion with AK DOT about cooperating with them on this erosion mitigation effort on the Homer Spit. We are excited to see this project funding come forward and encourage the public to support this important project.

The STIP Amendment #2 is available at <a href="https://doi.org

Planning for the Future of the Alaska Marine Highway: Public Comment Invited

The Alaska Department of Transportation & Public Facilities also recently released a draft of the AMHS 2045 Long-Range Plan for public review. The plan outlines a 20-year vision for the future of Alaska's marine transportation network to meet the evolving needs of Alaska's coastal communities and covers the following key focus areas:

- Safe, reliable service to connect Alaska's communities
- Updating the Marine Highway fleet and terminal assets for resiliency and standardization
- Build and support a skilled, reliable workforce
- Promote financial efficiency and sustainability.

The Department invites the public to a Zoom webinar on Wednesday, March 19, at 12 p.m. to hear an overview of the plan. Information on how to join the webinar is available at https://publicinput.com/i56446.

The Department invites residents, business owners, public officials, and stakeholders to review <u>the plan</u> and submit comments at https://publicinput.com/i56446 through Sunday, March 30, 2025.

Staff Submits FY26 Congressionally Designated Spending Requests

Congressionally designated funding, also known as appropriations, allows individual members of Congress to request specific spending allocations for local projects in their states from a handful of appropriation committees' bills. The City's requests were based on (1) guidance from Senator Lisa Murkowski's office to resubmit any committee-approved requests from FY25 that are not yet funded and any additional projects for FY26 for a total of up to five requests; (2) meeting eligibility requirements of the various appropriation committees; and (3) priority projects in the City's Capital Improvement Plan with a developed budget. They include:

- 1. A-Frame Water Transmission Line Replacement (a project approved in FY25, but not yet funded through the Federal FY25 budget process).
- 2. Design and Permitting funds for the Homer Harbor Critical Float Systems 4 & 1 Replacement Project (a project approved in FY25, but not yet funded through the Federal FY25 budget process).
- 3. Homer Spit Erosion Mitigation to fund the first fiscal year of US Army Corps of Engineers' work on a reauthorized 1987 US Army Corps of Engineers Homer Spit Road Revetment General Investigation which has been listed for several years, but unfunded, in the Alaska District work plan.
- 4. Homer Spit Erosion Mitigation for funds to undertake a Homer Spit Storm Damage Reduction Feasibility Study under WRDA Section 203, which allows local entities to advance studies without waiting for federal funding or prioritization to expedite project timelines.
- 5. Homer Fire Department Fleet Management for funds to procure Wildland Urban Interface Fire Response Vehicles: A Type-3 Wildland-Urban Interface Pumper truck and a Type-6 Brush / Attack Unit. These complementary apparatuses enable a tiered response system where the Type-6 serves as a rapid scout and initial attack vehicle, while the Type-3 follows with additional water, equipment and personnel when/for escalating incidents or direct structure protection.

The Senator will review submissions and advance a selection to Appropriations Committees for thorough review, project scoring and prioritization based on merit and community impact. Successful projects will be included in the overall appropriations bill and will require approval by both House and Senate Appropriations Committees. Final funding is dependent on the overall federal budget process.

City of Homer Hosting Public Meeting on Homer Harbor Expansion Study

Join us and the U.S. Army Corps of Engineers to learn more about the work accomplished to date on the Homer Harbor Expansion Study and how that work is informing refined alternative designs. There will be a Study update, Study team members will be there to take questions and share feedback. The public meeting will be held Saturday, March 15th from 10:00 am to noon at the Kachemak Bay Campus, Room 201, 533 Pioneer Avenue, Homer, AK. Visit www.homerharborexpansion.com for more information.

Diamond Creek Recreation Area Trails Study

In January 2024 Council authorized \$25,000 of HART Trails funds to contract engineering services for preliminary design of non-motorized trails and trail head connecting City property to the AKDOT proposed highway underpass and later that year, a contract was awarded to Kinney Engineering to complete the work. Attached to this report you'll find a memo from City Engineer Galbraith updating Council on the work and anticipated next steps. Attached to his memo are the completed, with preliminary design, studies for the Diamond Creek Recreation Area (DCRA) Trails and a Sterling Highway Pedestrian Underpass.

High Speed Alerts on West Fairview Radar Shield speed sign

In response to public complaints about speeding on West Fairview the City purchased and installed a traffic monitoring device on the road to help remind drivers to slow down and to capture speed data for daily traffic

on the road. There have been reports of folks flying RC planes and/or drones at the sign which create high speed alerts. The Radar Shield recently snapped the following image. It's possible that a number of the 40 mph and above "high speed alerts" are these RC devices being flown at the speed sign. It's disappointing that all this effort on one road for the benefit of Public Safety is getting skewed data used for traffic control.



City Manager Meetings and Events:

- February 26 KPB Tourism Working Group meeting
- Ongoing weekly meetings with Departments, Mayor and Councilmembers, and City Attorney

Attachments:

- Homer Harbor Expansion Study Monthly Written Update
- Homer Harbor Expansion Study Charter Document
- Homer Harbor Expansion Study Public Meeting Flyer
- Memorandum from City Engineer Re: DCRA Trails Study
- DCRA Trail Design Final Study Consultant Memo
- DCRA Trails Study
- Employee Anniversaries for March
- Homer Spit Erosion Update



Homer Harbor Expansion Study Monthly Written Update

Item Type: Informational Memorandum

Prepared For: Mayor and City Council

Date: March 5, 2025

From: Jenny Carroll, Special Projects and Communications Coordinator

Through: Melissa Jacobsen, City Manager and Bryan Hawkins, Port Director

Purpose: This memorandum provides the Homer Harbor Expansion Study monthly written update to Homer City Council per Resolution 23-037.

The General Investigation is in full swing and gearing up for a busy spring and early summer in preparation for the USACE Tentatively Selected Plan (TSP) Milestone Meeting planned for 6/24/2025. A potential government shutdown is not expected to impact the study being able to reach the TSP Milestone.

The study's third Public Meeting, hosted by the City, will be held Saturday, March 15, in Homer at the Kachemak Bay Campus from 10:00 am to noon; a presentation will start at 10:30 a.m. We invite the public to join City Staff, HDR and members of the US Army Corps of Engineers Project Development Team to learn more about the work accomplished to date, how the study's findings are shaping design alternatives and share your comments. A flier for the meeting and the Homer Harbor Expansion Charter Document is attached.

For those unable to make the meeting, presentation materials will be posted on March 15th and a report on the public meeting will be available in late March to early April on the Study website https://homerharborexpansion.com/get-involved-replace/.

Below is a summary of the study's recent activities – be sure to attend the public meeting for full details and to provide your input.

The U.S. Army Corps of Engineers (USACE) Project Development Team (PDT)

Continuing study activities:

- The USACE Environmental Resources team:
 - Visited Homer in February to continue their environmental fieldwork series of beach seining and bottom trawls. They will conclude their fieldwork in mid-March 2025.
 - o Continued consultation with other agencies
 - Plans to re-engage the Environmental Stakeholders Working Group after the March 15th public meeting and the Environmental Resources team has completed their fieldwork for the study.
- The USACE Economics and Hydrology/Hydraulics teams:
 - Are developing a features/measures list for each alternative, for both federal General Navigation Features and Local Services Facilities features included in the alternatives.

City Managers Report City Council March 10, 2025

- Cost Engineering team:
 - o Is working with USACE project Planning team to consider probable dredge materials plans in consultation with the USACE Homer Spit Dredge Materials Management Plan.
 - o Collecting recent bid data from area quarries with acceptable source rock.
- Geotechnical team reviewed geophysical fieldwork results (sub-bottom profiling, hydrographic and topographic survey data) and are recommending collection of eight core samples immediately after selection of the tentatively selected plan.
- Economic Analysis team:
 - Analyzed moorage demand data and compiled information gathered from user groups to refine and develop four alternative harbor designs for comparison to determine the TSP.
 - o Is developing the USACE economic analysis model for USACE approval

HDR - Owner Representative:

- Responding to USACE comments and questions on the modelling report.
- Worked on harbor design memo and recommendations for USACE Hydrology/Hydraulics team.
- Refined basin alternatives to incorporate float systems and travel/turning lanes and delivered to the USACE for further refinement.
- Helped develop General Investigation informational materials for Juneau visit.
- Helped develop outreach plan and advertisements as well as presentation plan and materials for the March 15, 2025 Public Meeting
- Attended twice-monthly USACE Project Development Team meetings and twice-monthly meetings with City.
- Provides communications support as-needed; keeps Homer Harbor Expansion website updated.

City of Homer staff:

- Attended twice-monthly USACE Project Development Team meeting and twice-monthly meetings with HDR.
- Met in person with USACE hydrology/hydraulics and economic team members to consult on development of alternatives.
- While in Juneau, gave Alaska legislators an update on the Homer Harbor Expansion General Investigation and thanked them for their support; met with the United States Coast Guard Admiral Dean and leasing staff to let them know design alternatives were nearing 35% for tentative plan selection.
- Helped disseminate information about the March 15, 2025 Public Meeting.
- Ongoing communications/outreach: Information and updates about the study are being disseminated through the <u>Homer Harbor Expansion website</u>, the City's quarterly newsletter, the <u>City of Homer Facebook</u> and <u>Instagram</u> pages and through HHE email subscriber list as needed.

Ship Simulation and geotechnical core sampling will happen in June and July, shortly after TSP and the rough basin size, configuration and location are determined but will continue to be refined. It is ideal to conduct these activities after the USACE has a TSP. Results from these activities could modify the TSP design (which will be to a 35% design level), but they would not change the selected alternative.

RECOMMENDATION:

Informational Only.

HOMER HARBOR EXPANSION CHARTER DOCUMENT



Vision

Recognizing Homer's unique environmental setting and our common desire to live, work, and play here, we will enhance Homer's maritime opportunities in a fiscally, environmentally, and socially responsible manner for the benefit of all.

Mission

Work collaboratively with all segments of the community to explore opportunities to expand necessary infrastructure while ensuring Homer's maritime future, navigational safety, environmental integrity, and regional connectivity. Align the development of any opportunities with the City of Homer Port and Harbor Department Mission Statement.

Goals and Objectives

- · Relieve transportation congestion
- Improve safety and efficiency within the harbor(s)
- Reduce potential for environmental impacts within the harbor(s)
- Foster a collaborative partnership with the U.S. Army Corps of Engineers
- Expand the community's economic base
- Foster the maritime trades industry and other yearround economic opportunities
- Enhance navigational safety and regional connectivity
- To the extent feasible, prioritize incorporation of:
 - » Green energy (e.g., solar, wind, tidal)
 - » Green infrastructure (e.g., adding vegetation, capturing runoff)
 - » Food security (e.g., support reliable delivery of food and supplies needed in regional communities)
 - » Polar security (e.g., provide support for federal security measures related to arctic navigation)
- Deliver a balanced harbor design that:
 - » Performs necessary port and harbor functions
 - » Has pleasing aesthetics
 - » Is within a sustainable construction, operations, and maintenance budget
 - » Maintains environmental integrity and quality of life
 - » Minimizes adverse impacts to the community
 - » Provides for flexibility that promotes smart growth and a blue economy
 - » Supports services for large vessels
 - » Supports the U.S. Coast Guard's mission at land and at sea

Success Factors

- Proactively collaborate with the community and port and harbor stakeholders to provide meaningful community and stakeholder engagement opportunities
- Provide transparency of the decision-making process and design development
- Align with national priorities for investing in future infrastructure
- Engage scientific agencies through study advancement
- Promote educational, research, and scientific opportunities
- Foster collaborative relationships with Department of Transportation and Public Facilities and other key stakeholder agencies
- Provide applicable utility providers (e.g., water, sewer, electric) with the necessary input to deliver required support infrastructure
- Promote strong, sustained support and leadership from the City Staff, City Council, and associated Commissions
- Identify risks early and manage them appropriately
- Consistently consider community-wide socioeconomic effects that may result from harbor expansion and align with the current communitywide planning policy
- Create and sustain a safe, respectful, collaborative, and enjoyable work environment for all City, consultant, and contractor staff
- Complete construction activities on time, to specification, and within target costs
- Encourage innovation with a focus on reducing costs, enhancing the environment, and fostering thoughtful community growth





Homer Harbor Expansion Study Update Public Meeting March 15, 2025

Join the City of Homer and US Army Corps of Engineers for a study update:



- Learn more about work accomplished to date
- See how Study findings are shaping design alternatives

Saturday, March 15, 2025

10:00 a.m. – 12:00 p.m. Presentation at 10:30 a.m.

Kachemak Bay Campus Room 201

533 E Pioneer Ave Homer, AK 99603



For more details, visit: www.homerharborexpansion.com





City Council update on preliminary design studies for the Diamond Creek Recreation Area (DCRA) Trails and a Sterling Highway Pedestrian Underpass

Item Type: Informational Memorandum

Prepared For: City Council

Date: February 28, 2025

From: Leon Galbraith, P.E., City Engineer

Through: Melissa Jacobsen, City Manager

The purpose of this Memorandum is to update the City Council and present the attached two documents recently completed with preliminary design studies for the Diamond Creek Recreation Area (DCRA) Trails and a Sterling Highway Pedestrian Underpass.

Through Ordinance 24-06(A), the FY24/25 Capital Budget included \$25,000 from the HART Trails Fund to complete these preliminary design studies.

Resolution 24-090(A) authorized issuance of a task order to Kinney Engineering, LLC to provide the professional services as the consultant tasked with completing these preliminary design studies.

The Kinney Engineering study has developed an option for a trail extension linking the city-owned DCRA property and the DCRA trail to the west side of the Sterling Highway leading to the Diamond Creek State Recreation Site (DCSRS). A pedestrian underpass used to cross the Sterling Highway would also be part of the trail extension. The study is intended to demonstrate the feasibility of the construction of a pedestrian trail, including right of way analysis. This is intended to be a preliminary study, not a final design. Assessing the feasibility of a proposed route is an important first step.

As a subcontractor to Kinney Engineering, Happy Trails also completed a preliminary design study of potential trail routes and costs for the area east of the Sterling Highway on the City owned parcel labeled as the DCRA. This includes a new parking lot at the area labeled as "Green Timbers TH".

Staff has reached out to Alaska DOT&PF (DOT) to discuss these final studies. Staff with the DOT appear to still be supportive of the trail project and Sterling Hwy underpass alternative locations that are proposed in the Kinney Engineering study. The proposed trail presented to the DOT shows the trail crossing three (and possibly four) privately owned properties as well as Kenai Peninsula Borough (KPB) Lands before reaching the State of Alaska DNR lands. A Homer Electric Association overhead power easement would also be crossed. The DOT expressed that they would like to see something definitive such as established trail easements between the City and the private land owners as well as with the KPB before the DOT commits to constructing a pedestrian tunnel.

Securing these proposed easements is estimated to take as long as one to two years, and the DOT's highway project construction is anticipated to occur in the summer of 2027. Therefore, we would need these easement agreements to be in place as soon as possible (less than one year) for the pedestrian tunnel to be included in the DOT's highway project design prior to their bidding and construction.

ANTICIPATED NEXT STEPS

If the Council wishes to pursue this project further, the following steps are anticipated:

- A Council sponsor would need to bring forward a resolution of support and future funding ordinance for easement acquisition.
- The City will need to reach out to all of the private property owners and KPB to see if they are willing to grant trail easements to support the proposed project.
- If any private property owner denies easement, the project is either dead, or the City would have to reach out to Kinney Engineering to investigate alternative routes to avoid the individual private property owner's lot, with the understanding that the DOT has expressed they are not willing to allow the trail to parallel the Sterling Highway within their right-ofway.
- If all property owners are interested in granting the trail easements, the City will need to fund further survey and design work as well as swiftly draft up the easement drawings and agreements for routing through the KPB's platting process as well as negotiate any potential payments associated with granting said easements.

When considering whether or not to pursue this trail further, the Council should also remember that the timeline is very short to get the DOT any easement agreements. There is the possibility that the DOT would accept something short of an established easement (if the process is underway), however that is risky. The City could invest substantial resources towards this effort and not make the deadline, or the partial process may not be sufficient to convince the DOT to construct the pedestrian tunnel. The DOT has expressed that they support the concept of the pedestrian tunnel, however they cannot construct the pedestrian tunnel on good intentions, only to have constructed a tunnel that doesn't get used because the City cannot secure the needed trail easements, or doesn't have the money to construct the trails themselves.

ATTACHMENTS

- 1. Homer Diamond Creek Trail Design Study-Final
- 2. DCRA Trails Study



TO: City of Homer Public Works Department

FROM: Brian Lamson, PE

Jan Keiser, PE

Margaret Devlin, Engineering Technician

Randy Kinney, PE, PTOE

DATE: 2/14/2025

SUBJECT: Task Order #24-01 – Proposed Diamond Creek Trail Route Memorandum

1. Purpose

The purpose of this Memorandum is to identify the design criteria and proposed trail route connecting the Diamond Creek Recreational Area ("DCRA") to the Diamond Creek State Recreation Site, including a crossing under the Sterling Highway.

2. Background

The Alaska Department of Transportation and Public Facilities ("DOT&PF") is planning to improve the Sterling Highway from MP 157-169, which includes a new fish passage culvert under the Sterling Highway for Diamond Creek flowing from the north side of the highway to the south. The Sterling Highway project lies within the vicinity of the DCRA on the northern side of the highway to and the Diamond Creek State Recreation Site ("DCSRC"), on the southern side of the highway. These areas are regularly, and frequently, used by local residents and visitors for hiking, mountain biking and skiing. Local residents have long desired an undercrossing that would allow these non-motorized users to safely cross under the highway. DOT&PF expressed concern that they are reluctant to develop an undercrossing in a location where there are no trails directly connecting to it.

City of Homer ("COH"), Kinney Engineering LLC ("Kinney"), DOT&PF, and Kenai Peninsula Bureau staff held a kick-off/scoping meeting on September 18, 2024 followed by a field review of the trail corridor, including the existing Diamond Creek crossing of Sterling Highway.

The COH City Council adopted Ordinance 24-06(A) supporting the undercrossing project and appropriating funds to conduct a design study that would investigate the feasibility of "the construction of a pedestrian trail in the DCRA and connecting the new trail to the DCRS, including right of way analysis." The City Council also adopted Resolution 24-090 authorizing staff to issue Task Order 24-01 to Kinney to conduct this study. Kinney will focus on the areas in the immediate vicinity of the Sterling Highway.

The City also issued Task Order 24-02 to Kinney, which authorizes Kinney to commission Happy Trails, Inc., ("Happy Trails"), as a subcontractor, to identify a trail route in the "backcountry"; that is, areas away from the Sterling Highway. Kinney will focus its efforts on trails from the proposed Green Timbers Trailhead south to the DCSRC. Happy Trails will focus its efforts on trails from the proposed Green Timbers Trailhead north to the existing trail system in the northeast portion of the DCRA.

3. Design Criteria

3.1. Design Standards and Guidelines

These design standards and guidelines apply to the DCRA trails and connections, including:

- Alaska Highway Preconstruction Manual, DOT&PF, 2025
- Alaska State Parks Trail Management Handbook, Section 3: Trail Design Parameters, Alaska Division of Natural Resources, 2015.
- Americans with Disabilities Act Standards for Accessible Design, Department of Justice, 2010
- <u>City of Homer Trail Manual Design Criteria</u>, COH, 2009
- <u>Guide for the Development of Bicycle Facilities</u>, 4th Edition, American Association of State Highway Transportation Officials, 2012
- <u>Guide for the Planning, Design, and Operation of Pedestrian Facilities</u>, 2nd Edition, American Association of State Highway Transportation Officials, 2021.

3.2. Selected Design Criteria

Design Criteria was chosen by location and ownership of the property surrounding the proposed trail as well as surrounding slope conditions. Table 1 (next page) shows the three trail classes and their chosen design criteria.

3.2.1. Portions in the DOT&PF ROW

Sections of the trail within the DOT&PF right-of-way (ROW) would need to meet the requirements of a Low ADT Shared Use Path as outlined in the Alaska Highway Preconstruction Manual. These sections would follow the DOT&PF Standard Trail seen in Attachment A.

3.2.2. Portions outside of DOT&PF ROW

Happy Trails elected to use the Alaska State Park Standards for a Bicycle Terra Trail Class 5 for the portion of the trail system from the proposed Green Timbers Trailhead to an existing trail in the DCRA. The goal was to create a trail that was as accessible for all ages and all abilities as possible. We will apply the same standards to the portions of the trail located outside of DOT&PF ROW where possible. Due to the steep slopes located on the bluffs, a Class 5 trail will not be suitable everywhere. Geotechnical investigations would be required to confirm the suitability of the soils to support at Class 5 standard trail on the bluffs. The existing ground cross slopes were analyzed to evaluate which class trail would be suitable for construction in the bluff sections of the trail.

The portions of the trail that cannot support the Class 5 Alaska Trail Standards will follow the Alaska State Parks Standards for a Class 1 Single Lane Trail. This is due to the steep bluffs and cross sections of the switchbacks. Alaska Trails Standard Class 1 and Alaska Trails Standard Class 5 typical sections can be seen in Attachment A. A profile of both bluff sections can be seen in Attachment B.

Table 1: Trail Standards

Design Criteria		Alaska Trails Standard: Bicycle Terra Trail Class 1	Alaska Trails Standard: Bicycle Terra Trail Class 5	Alaska Preconstruction Manual	
Tread \	Width	6"-12" single lane 36"-60" single lane 72"-120" double lane		8 feet	
Separation Road		N/A	N/A	Min 5', 10' for year- round	
Surface Material Obstacles		native, ungraded. May be continuously rough Sections of soft or unstable tread on grades <5% may be common	Imported Material, routine grading Uniform, firm, stable None	2 inches of asphalt overlying 4 in crushed aggregate base on top of 2 ft selected material	
Struct	ures	18" minimum width	60" min width	varies	
	Vertical	6'	8' - 9'	8 feet (undercrossings)	
Clearance	Horizontal	24"-36"	72" - 96"	8 feet (undercrossings)	
	Shoulders	0'-12'	8'-12'		
Grade Target Maximum		5%-20% 30% short pitch max 50% on downhill segments only	2% - 5% 8% short pitch max for 0-5% of trail	N/A 5% or adjacent road grade *	
Cross	Target	5%-10%	2% - 3%	1% *	
Slope	Maximum	10%	5%	2% *	
Design Tu	n Radius	2'-3'	8'-12'	Based on Design Speed *	

^{*}from AASHTO Guide for the Development of Bicycle Facilities

4. Route Alternatives

4.1.Process

The geospatial data used for this analysis were collected from the Kenai Peninsula Borough's GIS online data portal, including contour lines, parcel boundaries, and basemap information. These datasets were integrated with the design criteria, which considered factors such as terrain grade, right-of-way constraints, public land availability, proximity to Diamond Creek, and connectivity to the existing Diamond Creek Recreation Site Trailhead. The proposed path was then generated using ArcGIS, evaluated with the design criteria, and adjusted accordingly where necessary. DOT&PF provided Civil 3D files from the Sterling Highway MP 157-169 Rehabilitation project with survey and the proposed highway design that was used to take a closer look at things within the DOT&PF ROW.

4.2.Trail in DOT&PF ROW

At the September 18, 2024 meeting, DOT&PF stated that they prefer the trail be outside of their ROW except for trail crossings under the highway which should be more or less perpendicular to the roadway and ROW.

In addition to their stated preferences, as a practical matter, the ROW on Sterling Highway on both sides near the proposed trail underpass is constrained, making it difficult to construct a trail that would be within the DOT&PF ROW as well as meeting DOT&PF design standards. Keeping the trail within the ROW involves more than just being able to fit a trail and the proposed highway embankment within the ROW. Diamond Creek is at a low point in the highway with the proposed highway profile going down at a 6% grade on both sides of the creek and existing bluffs outside of the highway embankment. Portions of the trail within the DOT&PF ROW would be subject to ADA guidelines, these allow the trail profile to match but not exceed the 6% highway grade. The trail needs to be lowered in comparison to the highway to go under the highway. Since the trail cannot be steeper than the highway, this requires the proposed trail be longer than the adjacent highway. This length would typically be added with a loop in the trail alignment going down to the undercrossing, but there is not room for one within the ROW.

In addition to direct ROW constraints, the trail alignment will need to cross Diamond Creek at least once. Having this crossing within DOT&PF ROW would involve either a fish passage culvert or a bridge that meets DOT&PF standards, which would not work with the projects schedule or budget. However, the connecting trail has simple structures for stream crossings outside of DOT&PF ROW property and similar crossings could be used if creek crossings are outside of DOT&PF ROW.

In addition to ROW constraints, snow maintenance operations on the highway may render a trail within the ROW unusable at times when plows cast snow off the roadway. These factors have guided the corridor development which, except for the immediate undercrossing of Sterling Highway, has the trail traversing private and public lands. As such, the corridor allows other design criteria to be used instead of the more restrictive criteria required within DOT&PF ROW.

4.3. Proposed Diamond Creek Trail Alignment

This route was developed using a comprehensive spatial analysis performed by assessing existing geographic information layers and incorporating design criteria as key parameters to shape the proposed path. This corridor and general alignment are depicted in Figure 1 on page 5. Figure 2 on page 5 shows the trail profile and grades. Additionally, the conceptual path was designed to limit disturbances to private properties wherever possible.

A primary objective of the design was to minimize areas with grades exceeding 5% to enhance accessibility and safety. There are two bluffs where this will not be practical. For Bluff 1 (north of Diamond Creek) we recommend constructing this segment of trail as a single lane Class 1 trail. For Bluff 2 a series of switchbacks on a Class 5 trail with a 5% profile grade is feasible without adding significant earthwork to the project, alternatively this section could be constructed as a Class 1 trail with less switch backs to reduce project cost. Bluff profiles are included in attachment B.

The trail undercrossing of Sterling Highway can be on the north or south side of the proposed Diamond Creek culvert. Crossing north of the culvert would require an easement from a private property with multiple owners. Crossing south of the creek can eliminate this property impact but requires a short section of trail parallel to the highway to avoid impacting this property. The following figures and discussion are based the trail crossing south of the proposed creek culvert. Attachment C shows both crossings overlaid on the highway design plans.

The proposed alignment for a trail connection located outside of DOT&PF ROW would connect the Green Timbers Trailhead with the Diamond Creek State Recreation Site via City of Homer, Borough, Department of Natural Resources, and private properties as seen in Figure 1 below. The trail would meet DOT ROW near the proposed fish passage and connect to the west side of Sterling Highway via a pedestrian underpass. This assumes trail easements in private property can be achieved

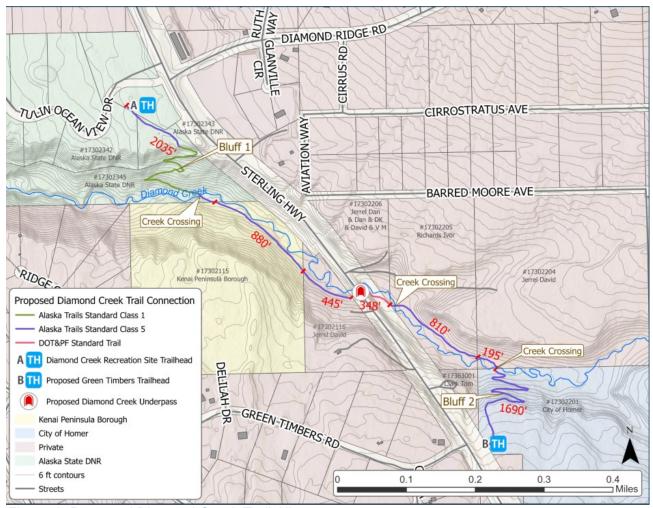


Figure 1: Proposed Diamond Creek Trail Alignment

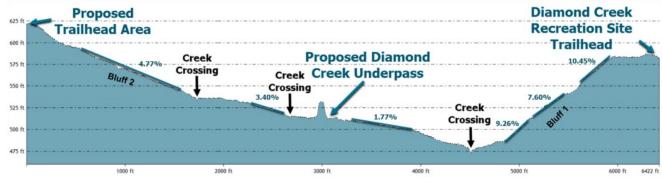


Figure 2: Proposed Diamond Creek Profile

Properties Impacted

The proposed conceptual trail impacts several properties. Each property ownership type, trail length, and design criteria used can be seen in Table 2 below.

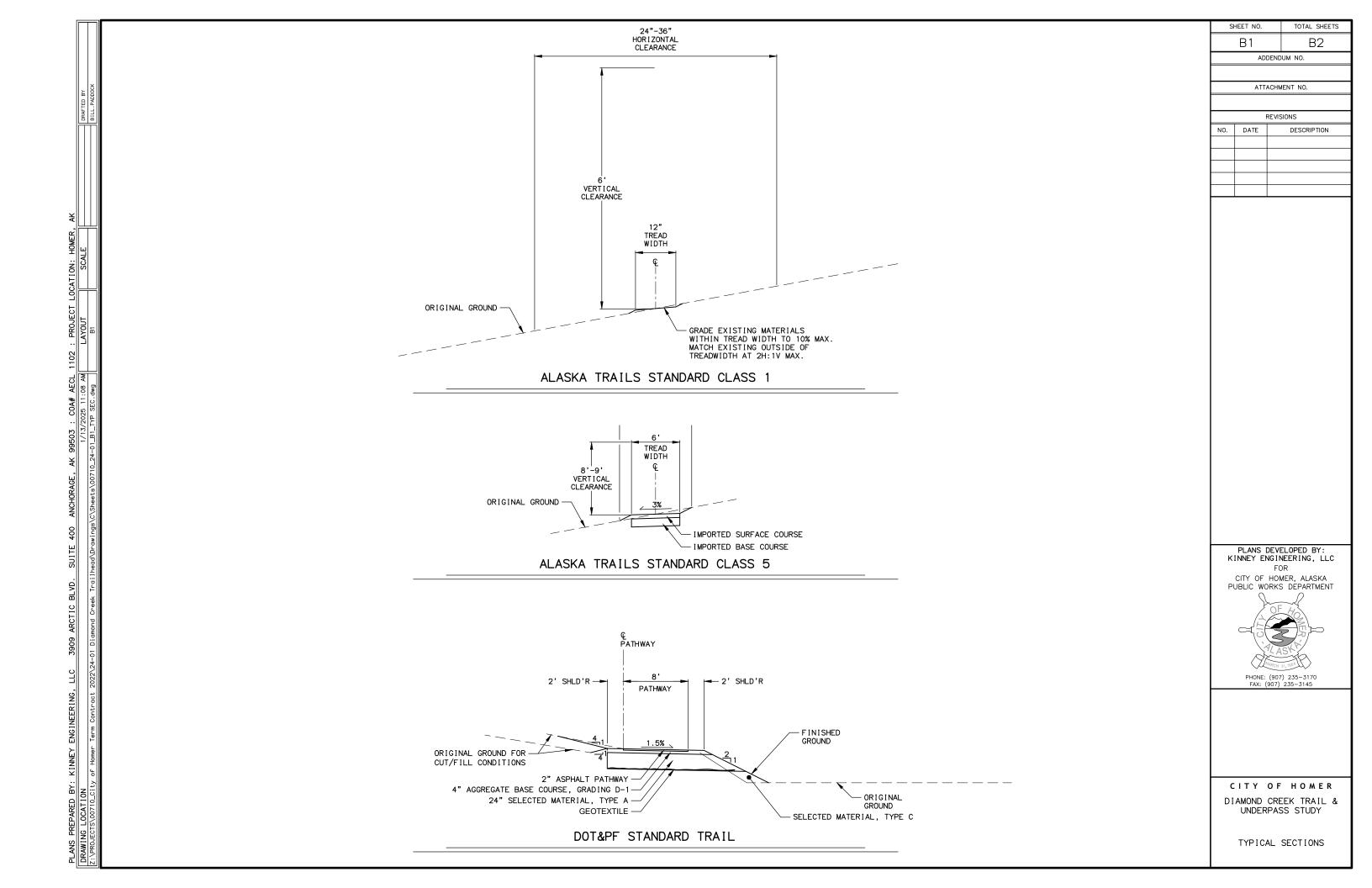
Table 2: Property Ownership and Trail Type

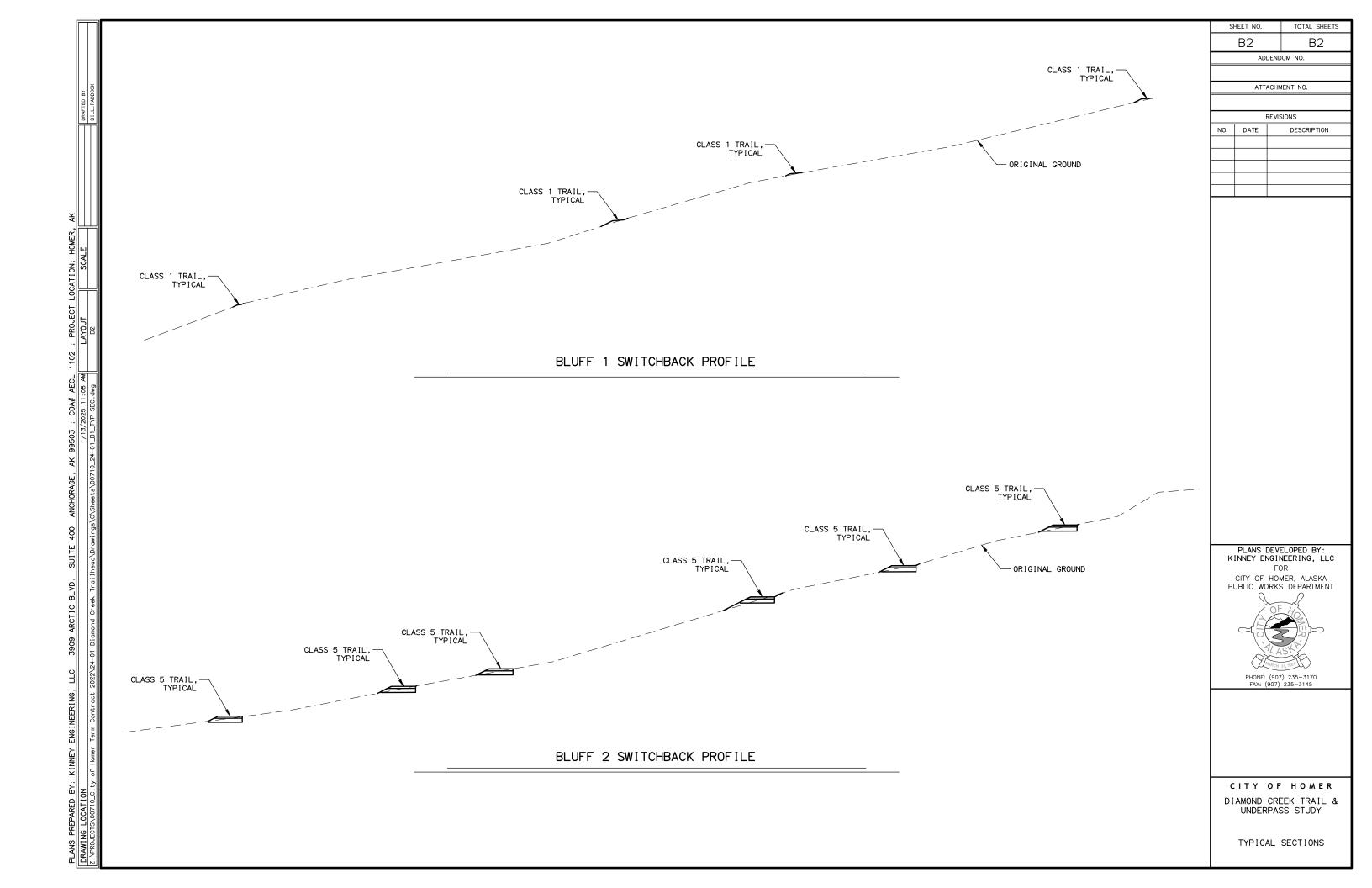
Ownership	Length of Class 1 Trail (feet)	Length of Class 5 Trail (feet)	Length of DOT&PF Standard Trail (feet)	Total Length of Trail in Property (feet
Alaska State DNR	1,370	665		2,035
Kenai Peninsula Borough		880		880
Private		445		445
AK DOT&PF			348	348
Private		810		810
Private		195		195
City of Homer		1690		1,690
Total Lengths	1,370	2,695	348	6,403

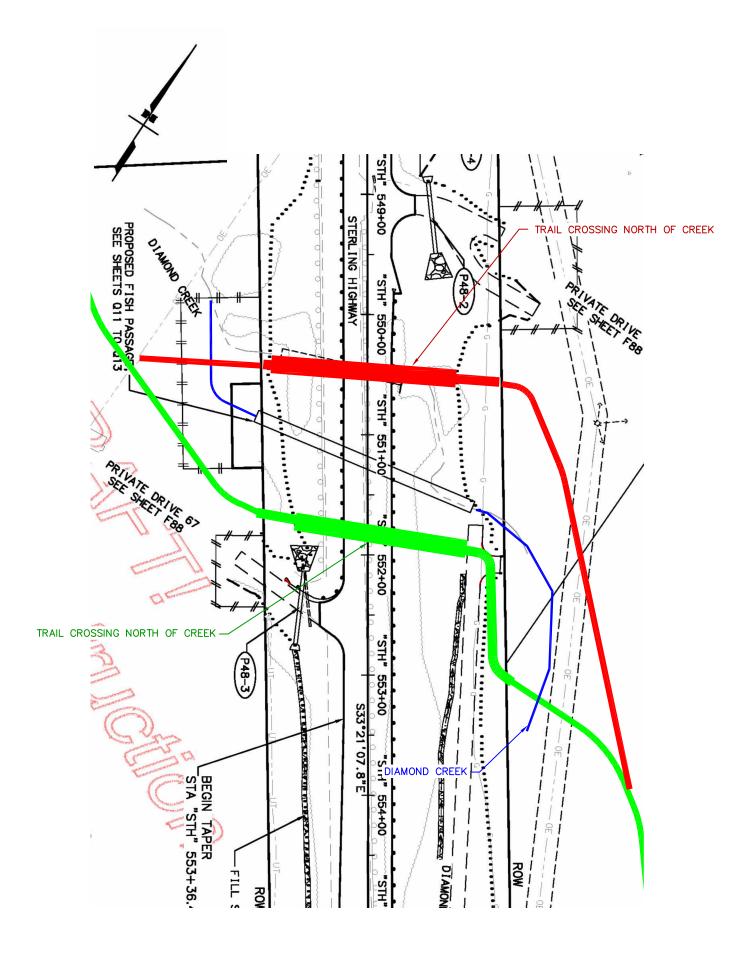
Private property owners will need to be contacted to acquire trail easements through their properties. In addition to the properties listed above, the trail will cross a 20-foot Homer Electric Association for their overhead lines.

5. Attachments:

Attachment A Typical Sections Attachment B Bluff Profiles Attachment C Crossing Overlay







ATTACHMENT C: CROSSING OVERLAY



Diamond Creek Recreation Area

Concept Trail Plan

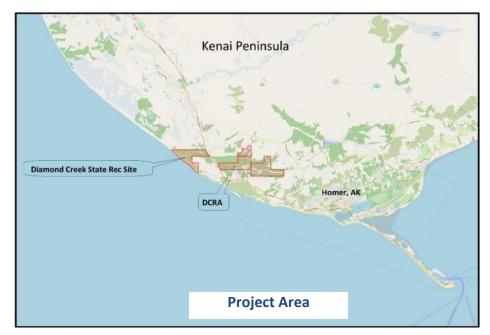




DCRA Concept Trail Plan February 2025

Purpose

The Diamond Creek Recreation Area (DCRA), located on land managed by the City of Homer, Alaska, is a popular and well-used trail recreation area in winter. The low-lying, treeless bogs provide an easy path for groomers and skiers alike to traverse the Baycrest Ski Trails without damage to the vegetation or wildlife. In summer, however, these trails cannot support any kind of recreation.



The Diamond Creek Recreation Area Multi-Resource Management Plan, adopted by the City of Homer in 2013, outlines two Recreational Objectives.

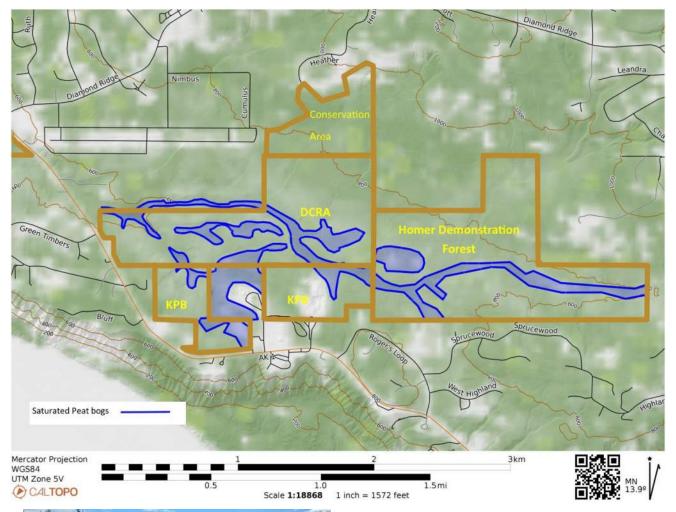
Recreational Objective 1:
Improve controlled, nonmotorized recreational access
to the DCRA. The Plan outlines
specific ideas for parking lots
and a pedestrian underpass
across the Sterling Highway to
connect the DCRA to the
Diamond Creek State
Recreation Site.

Recreational Objective 2: Construct summer-use trails within the DCRA. Specifically, trail loops and connectors in the upland "forest islands" and across the Sterling Highway via an underpass, hardened to create sustainable use by non-motorized recreationists.

This Concept Trail Plan provides a preliminary plan to achieve these objectives. Field work was conducted in October 2024 by Jon Underwood of Happy Trails, Inc. and Billy Day and Sandra Cronland of the Homer Trails Alliance. The concept routes were explored, collecting GPS information and making notes of soil conditions and water and wetland crossings. Work was limited to route-finding, with limited amounts of measurement. No trail lines were flagged or specified. The technical work of engineering, layout and flagging for construction remains to be done. *This preliminary plan represents a 15% design and should not be used for planning construction or soliciting bids*.

Soils

To understand what soil quality means for trails, we can divide trails into two categories: natural surface or hardened trails. Natural surface trails are composed of the dirt, gravel or rock found on the trail, which is the preferred surface for most trails. Some soils cannot withstand the wear and tear of any kind of sustained traffic, so they must be fortified by gravel, geofabric, grid, or boardwalk.





According to the National Resources Conservation Service, the dominant soil types in the DCRA are Spenard peat and Starichkoff peat. Any kind of peat retains water and drains poorly- utterly insufficient for a trail tread surface. The map above delineates areas of saturated peat soil in DCRA and surrounding public areas. This soil is so unstable, only moss and grass can grow there. (See photo example on left). Simply walking across it causes noticeable surface movement.

Saturated peat cannot support a heavy gravel structure without collapsing or being displaced. So much gravel is required to create a durable tread surface that the trail disrupts water flow and alters natural vegetation. We recommend boardwalk in these areas to preserve the natural soil and ecosystem.



The other type of soil found in DCRA is wet silt (see photo on left). This soil must be hardened with gravel, or a combination of gravel, geofabric, or grid to withstand non-motorized trail traffic.

Gravel construction on trails entails difficult logistics. It must be hauled from the pit and then hauled out on the trail. If hauled by a machine, the trail must be constructed at every point to withstand the ground pressure of the loaded machine. This typically increases the amount of gravel that must be hauled. To haul more in a load, a stronger, wider trail bed must be built. So the amount that can be hauled in one trip is limited by the fact that you want a small, narrow trail in most cases. At some point it can become economically more feasible to haul gravel in super-sacks with a helicopter.

Both gravel and boardwalk construction methods are

costly, but boardwalk is much more costly. For this reason, the trails should remain in the "tree island" areas and only cross the peat soils when necessary and in the shortest possible distance. Please note that the map only depicts the most obvious areas based on aerial photographs. Our recon team observed several areas within the "tree islands" that featured standing water and may not be suitable for gravel construction. Better routes may be discovered in later design iterations.

Proposed All-Season Trails

There are some clear routes to connect existing trails and trailheads to the proposed underpass crossing the Sterling Highway. Adding a few connectors between these trails will create loops, which are always

preferred by trail users. These trails are conceived and specified to conform to Alaska State Parks Pedestrian Trail Class 5. *See Appendix II*.

Construction Phases

Phase I: Connect Baycrest ski trails to proposed Green Timbers trailhead. Construct GT Trailhead. A trail similar in concept to the one proposed in the Kinney Engineering memorandum would connect to the underpass and Diamond Creek State Recreation Site.

Phase II: Construct trail to connect Green Timbers trail and Baycrest Ski Trails to KPB trailhead; construct KPB trailhead.

Phase III: Construct trail to complete Loop A and connect to Rogers trailhead.

Phase IV: Construct trail to complete Loop B and Homestead Connector.

Trail Inventory (Concept Trails Only)

Boardwalk and bridges are treated as the same for this level of planning, since they are proposed to have almost identical construction and load capacity.

Name	Length.	Gravel, ft	Boardwalk,	Width,	Clearing
	ft		ft	in.	ft
Phase I, Green Timbers to Viewpoint, GT	4470	4470	0	72	10
TH					
Phase II, KPB connector, KPB TH	709	709	0	72	10
Phase III, GT/KPB to Rogers	8504	7489	1015	72	10
Phase IV, Homestead Connector	8999	8849	150	72	10
Underpass Trail	6392				



Trailheads and Parking

Rogers Trailhead is one of the most heavily used trailheads for the winter trail system, and also provides access to recently upgraded boardwalk trails in the HDF. An area was cleared in 2024 for parking.

KPB and Green Timbers Trailheads are proposed and conceptual only. See Construction and Costs-Phase I below for more information.

AK DOT/PF parking area. The AK DOT/PF owns property that provides access to a portion of the trail system and has been used for parking in the past. However, this area is currently occupied by an asphalt plant and associated piles of gravel to support Homer's Airport Project and has not been available for parking. The AK DOT/PF will likely used this area for construction support of the Sterling Highway projects that are planned in the near future. Thus, this area is not reliably available for parking.

DOT vs KPB parking

In the past the DOT parking lot has provided convenient, free parking for winter trail users of the Baycrest Ski Trails. However, if a boardwalk is constructed across the saturated peat soils directly west of the DOT lot (see map below), it will cost \$8-900,000, much more than simply constructing a parking lot on KPB land. Moreover, the trail system will gain a convenient year-round parking area not shared with DOT. Negotiation with KPB will be required to obtain permission.

Phase I: Green Timbers to Baycrest Ski Trails

Phase I: Connect Baycrest ski trails to proposed Green Timbers trailhead. Construct GT Trailhead. A trail similar in concept to the one proposed in the Kinney Engineering memorandum would connect to the underpass and Diamond Creek State Recreation Site.

Winter construction

Money, time and the natural environment may be saved by hauling materials and completing construction of these trails in winter. The open bog areas that are a barrier in summer become clear, smooth access paths when frozen and covered with snow.

Estimated Costs Phase I

Trails Clearing and stumping, 4470 ft @\$6 per foot Layout, measurement, specs, permitting		\$26820 \$25000
Gravel, 12" pit run 8' wide, 2:1 fill slopes, 4470 ft @ Gravel, 6" type II, 6' wide, 4470 ft @ \$7.13 per foot	\$13 per foot	\$58110 \$31871
Green Timbers Parking lot	TOTAL Trail	\$141801
Clearing & Grubbing 2400 cu. yds. Classified Fill X \$35 / yd. 660 cu. yds. Type IIA X \$55 / yd 1350 sq. yds. geotextile fabric X \$1.00 / sq. yd		\$5000 \$84000 \$36000 \$1350
	TOTAL parking lot	\$126350
	TOTAL Phase I	\$268151

Costs based on estimates from local contractors and proposals from boardwalk component suppliers supplied by Homer Trails Alliance, and calculations by Happy Trails Inc. Calculations include October 2024 prevailing wage rates as published by the State of Alaska.

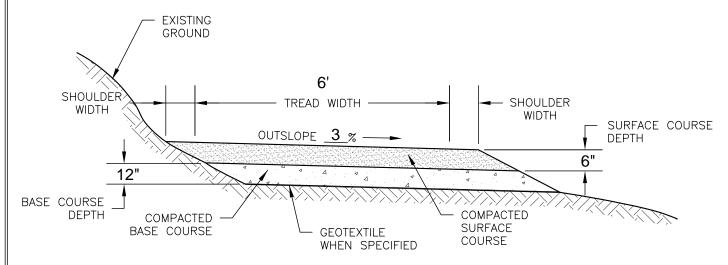
Gravel Hardening

12" of pit run gravel or 3" or higher graded cobble as a base, topped by 6" of D-1 or E-1 for a smooth top surface. See diagram.

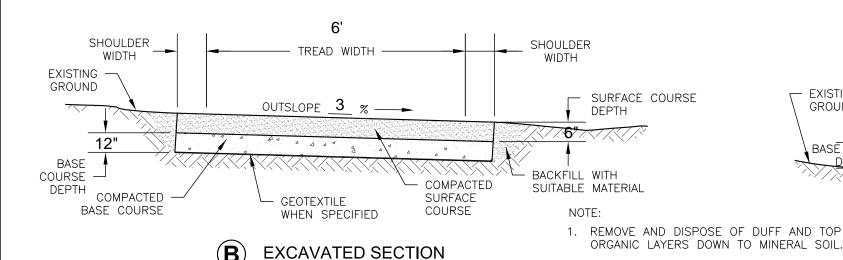
SURFACING SECTIONS

			BASE C	OURSE	SURFACE	COURSE				
TYPICAL	SECTION	TREAD	SHOULDE	ER WIDTH	GEOTEXTILE	TYPE	DEPTH	TYPE	DEPTH	COMMENTS
ID	TYPE	WIDTH	UPHILL	DOWNHILL	TYPE	111 L		111 -		COMMENTS
		6'				Pit Run	12"	D-1	6"	Compacted, 2:1 fill slopes

N/A WHEN NOT APPLICABLE



OUTSLOPED SECTION



DCRA Trails, Homer, Alaska

Page 8 of 17

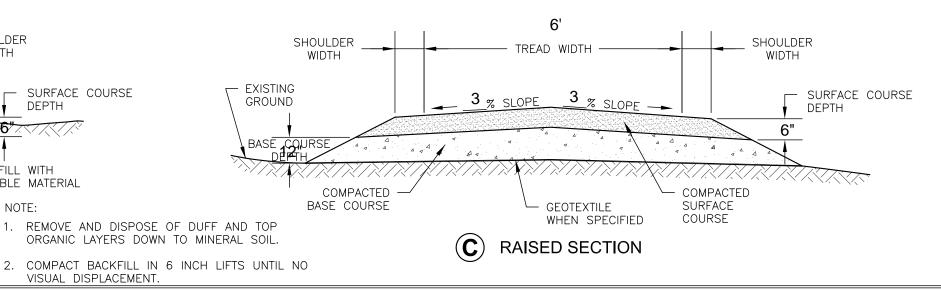
VISUAL DISPLACEMENT.

BASE COURSE MATERIAL TYPE

TYPE	MATERIAL	GRADATION	COMMENTS
B1	PITRUN		
B2	D-1		
В3			

SURFACE COURSE MATERIAL TYPE

TYPE	MATERIAL	GRADATION	COMMENTS
S1	PITRUN		
S2	D-1		
S3			
S4			
S5			



REVISION DATE 11/20/2024

DRAWING NO. SHEET NO SCALE bruary 2025**0F**

Typical Gravel Surfacing

SECTION

TYPICAL ID

DCRA Concept Trail Plan

NOT TO SCALE



Mirror Lake Trails, Chugiak



Shoup Bay Trail, Valdez



Mirror Lake Trails, Chugiak



Riverwalk Park, Delta Jct.

Typical gravel surfacing projects in Alaska

Boardwalk

Trail sections across saturated peat soils should be constructed as boardwalks. These boardwalks would be constructed by drilling helical piles into the soil to a sufficient depth that they encounter firm soil. The piles are cross-braced and a frame attached to support Fiber Reinforced Polymer (FRP) decking. This boardwalk construction technique provides a long-lasting structure with minimal disturbance of fragile soils and vegetation.

Foundation: 3" diameter helical piles, cross-braced. Helical piles can be driven in winter.

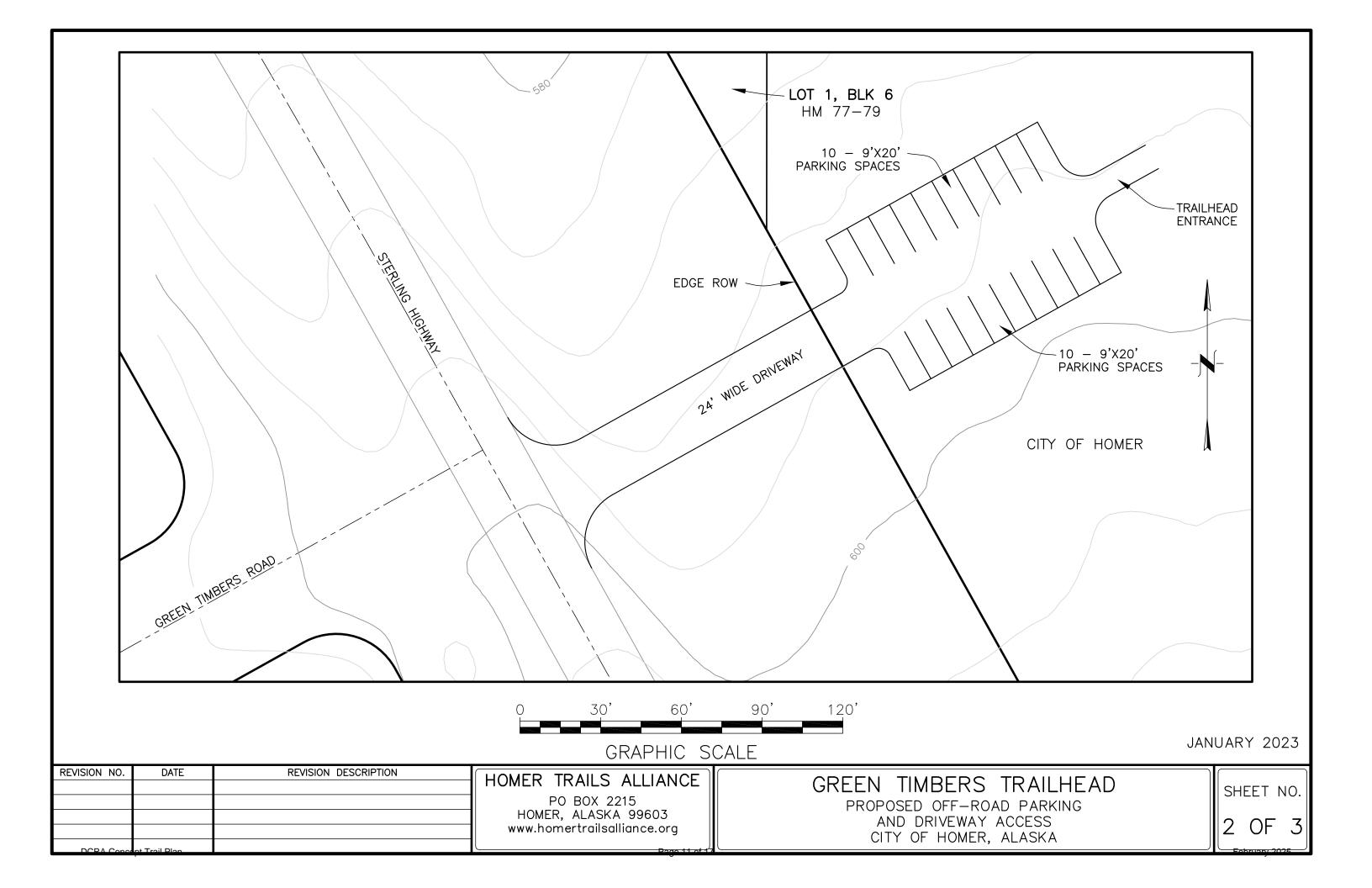
Structure: FRP (Fiber Reinforced Polymer) girders and decking. See photo below.

This method of construction yields a structure that is very long-lasting- up to 100 years as opposed to typical wood-decked trail boardwalk built on wooden sills laid into swampy ground, which last 10-20 years.

Boardwalk built with FRP structure and deck

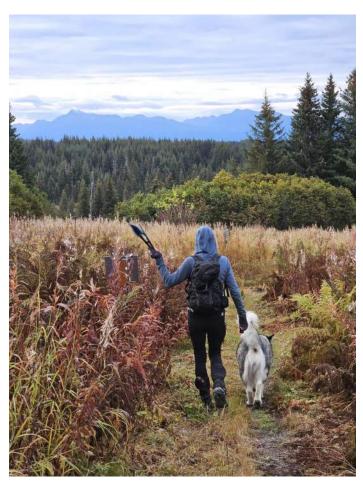


Union Valley Reservoir Boardwalk, El Dorado National Forest, California





Boardwalk near Rogers Trailhead



Homestead Trail NE of DCRA



Muktuk Marston Trail, Chugach State Park

Acknowledgements and Thanks

Diamond Creek Recreation Area Multi-Resource Management Plan, May 2013, Homer Soil & Water Conservation District. Officially adopted by the City of Homer in May 2013.

Billy Day and Sandra Cronland, Homer Trails Alliance for their warm hospitality and passion for trails. Billy supplied most of the construction cost estimates based on quotes from local contractors. **Jan Keiser, Kinney Engineering**, for her skill at bringing ideas and people together.

Appendix I Nine Elements of a Sustainable trail

A **Sustainable Trail** is a trail that conforms to its terrain and environment, is capable of handling its intended use without serious resource degradation, requires minimal maintenance, and focuses on maximizing the user's experience.

New trail construction projects should strive to meet all nine elements. For existing/social trails, these elements can be used as a template for identifying problems, and prescribing or implementing improvements.

- **1. Planned & Designed:** Guided by design documents & specifications; public comment; EA/EIS and other permitting; field recon; and professional design & layout.
- 2. Contour Curvilinear Alignment: Layout for sidehill construction following topography. Avoids straight lines, matches the curves of existing topography. Enables full bench construction, which promotes sheet flow drainage. Avoids the fall line. Conforms to, not imposed on, terrain.
- **3. Controlled Grade:** Grade choices designed and deliberate, not just responding to terrain as encountered. Follows "half-rule" regarding side-slope: trail grade generally not more than half the steepness of side-slope it crosses (Eg: on a measured slope of 20%, a traversing trail should not be steeper than 10%). In Alaska, because of poor soils and often unpredictable hydrology, we have found a "one-third rule" to be a more reliable predictor of sustainability.
- **4. Integrated Water Control:** Drainage designed and constructed into initial alignment (via grade reversals). Reduces dependence on drainage structures, which can fail. Post-construction drainage incorporates rolling grade dips, topo-mods, etc. All tread is either out-sloped (toward drainage point) or crowned (on flat ground). Avoids reliance on culverts and "waterbar" style drains.
- **5. Full Bench Construction:** 100% of tread surface excavated from sloping terrain to native undisturbed ground. Avoids $\frac{3}{4}$ to $\frac{1}{2}$ bench, with trail tread on cut & fill sections.
- **6. Durable Tread Surface:** When bench cut isn't possible because of low side-slopes, or soils are fragile, use other trail hardening methods. On-site material, imported material, structures, geo-textiles, etc. Implement the simplest solution first. Always begin with drainage structures before tread structures.
- **7. Regular Maintenance:** Even the most sustainable trail needs maintenance. This should be accounted for in trail planning and funding.

- **8. Integrates Well into the Environment:** Trail does not destroy the feel, aesthetics or ecological integrity of the surrounding environment. Rather, the trail enhances natural features & draws users into surroundings. Trail is an interpreter of landscape.
- **9.** Satisfies the Intended User: If a user's needs are not met, they won't use the trail or they'll use it in a way that degrades it. A good trail makes a user happy!

A trail that incorporates the nine Sustainable Elements has a dramatic reduction in life-cycle maintenance costs when compared to an unplanned, undesigned trail, which more than compensates for a higher initial cost. Additionally, a sustainable trail offers significantly improved public safety and transportation alternatives, higher user-satisfaction, more stringent resource protection, better environmental aesthetics, and increased adjacent property values.

Adapted from IMBA guidleines by Interior Trails LLC and Happy Trails Inc.

Appendix II Trail Design Parameters

Table 3.1 - Hiker / Pedestrian Terra Trail Design Parameters

Trail Class 5 Recommended for DCRA

Designed Use Hiker/Pedestr	ian: Terra Trail	Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design	Single Lane	0"-12"	6" – 18"	18" – 36"	24" – 60"	36" – 72"
Tread Width	Double Lane	36"	36"	36" – 60"	48" – 72"	72" – 120"
	Structures (Minimum Width)	18"	18"	18"	36"	36"
Design Surface	Туре	Native, ungraded May be continuously rough	Native, limited grading May be continuously rough	Native, with some on-site borrow or imported material where needed for stabilization and occasional grading Intermittently rough	Native with improved sections of borrow or imported material, and routine grading Minor roughness	Likely imported material, and routine grading Uniform, firm, and stable
	Protrusions	≤ 24" Likely common and continuous	≤ 6" May be common and continuous	≤ 3" May be common, not continuous	≤3 " Uncommon, not continuous	No protrusions
	Obstacles (Maximum Height)	24"	14"	10"	8"	No obstacles
Design Grade	Target Grade	5% – 25%	5% – 18%	3% – 12%	2% – 10%	2% – 5%
	Short Pitch Maximum	40%	35%	25%	15%	5% – 12%
	Maximum Pitch Density	20% – 40% of trail	20% – 30% of trail	10% – 20% of trail	5% – 20% of trail	0% – 5% of trail
Design Cross Slope	Target Cross Slope	Natural side slope	5% – 20%	5% – 10%	3% – 7%	2% – 3% (or crowned)
	Maximum Cross Slope	Natural side slope	25%	15%	10%	3%
Design Clearing	Height	6'	6' – 7'	7' – 8'	8' – 10'	8' – 10'
	Width	≥ 24" Some vegetation may encroach into clearing area	24" – 48" Some light vegetation may encroach into clearing area	36" – 60"	48" – 72"	60" – 72"
	Shoulder Clearance	3" – 6"	6" – 12"	12" – 18"	12" – 18"	12" – 24"

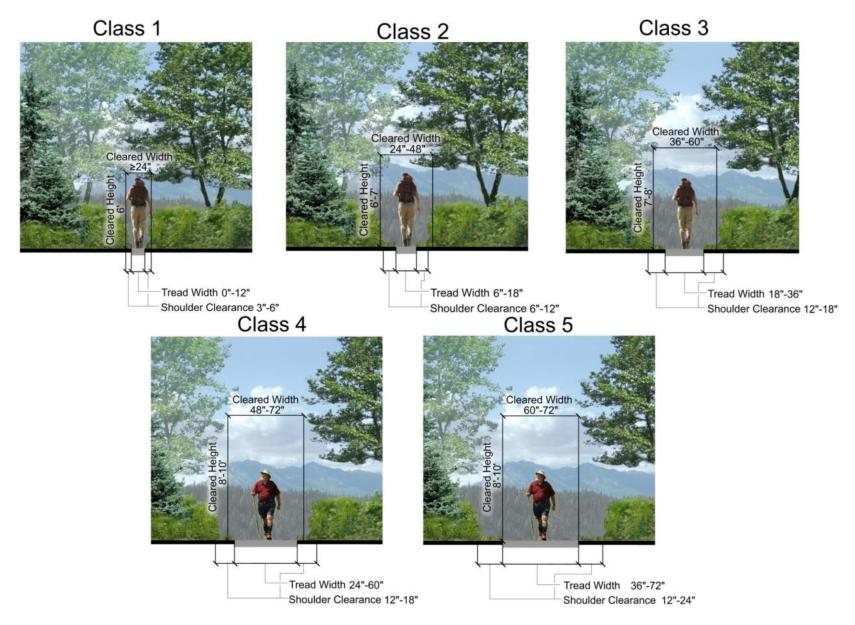


Figure 3.1 - Hiker / Pedestrian Terra Trail Design Parameters



March Employee Anniversaries

Item Type: Informational Memorandum

Prepared For: Mayor Lord and City Council

Date: March 10, 2025

From: Andrea Browning, HR Director

Through: Melissa Jacobsen, City Manager

I would like to take the time to thank the following employees for the dedication, commitment and service they have provided the City and taxpayers of Homer over the years.

Matt Clarke	Port	24	Years
Elton Anderson	Port	19	Years
Renee Krause	Clerks	18	Years
Mike Parish	Public Works	11	Years
Angie Kalugin	Finance	10	Years
Elizabeth Fischer	Finance	8	Years
Kurt Read	Port	8	Years
Matt Smith	Library	7	Years
Bill Jirsa	IT	2	Years
Michael de la Torre	Police	2	Years
Brad Gullikson	Police	1	Year



Homer Spit Erosion Update

Item Type: Informational Memorandum

Prepared For: Mayor and City Council

Date: March 5, 2025

From: Jenny Carroll, Special Projects and Communications Coordinator

Through: Melissa Jacobsen, City Manager and Bryan Hawkins, Port Director

Purpose: This memorandum provides an update on conversations with Alaska Department of Transportation & Public Facilities regarding advancing Homer Spit Erosion Mitigation measures.

While in Juneau, Homer representatives Mayor Rachel Lord, Councilmembers Storm Hansen and Donna Aderhold, City Manager Melissa Jacobsen and Port Direct Bryan Hawkins and I met with Alaska Department of Transportation & Public Facilities Commissioner Ryan Anderson and Deputy Director Katherine Keith. Our lobbyists from J&H Consulting, Christine Hess and Reggie Joule also attended.

The main purpose of the meeting was to discuss planning and implementation of Homer Spit Erosion Mitigation measures.

- Commissioner Anderson provided an update on temporary road protection measures as a result of the November 16, 2024 emergency event
 - The Alaska Department of Transportation received authorization to extend the emergency revetment wall to connect it to a shoreline hardening structure at the property of the Glacier D building. The State expects contractors to begin work on that new section in mid-March 2025.
- The City provided the Commissioners with City Resolutions urging immediate multi-agency planning to address erosion comprehensively, and explained the potential for long-term benefits of engaging the US Army Corps of Engineers in the process through reauthorization of the 1987 Homer Spit Revetment General Investigation.
- Deputy Commissioner Katherine Keith confirmed that the Department added the Sterling Highway Erosion Mitigation Study as a new project in the draft 2024-2027 Statewide Transportation Improvement Program (STIP) Amendment 2. The study, funded at \$800,000 (using FY25 Federal formula planning funds from the PROTECT program will evaluate needed improvements to protect the Sterling Highway from erosion along the Homer Spit. Improvements and "may include excavation, coastal erosion protection, paving, signing and striping, and utility relocation".
- A City Resolution to provide comment on the draft STIP amendment is on City Council's March 10, 2025 agenda for consideration and staff are conducting public outreach about the opportunity to comment.
- The Commissioners were receptive to the idea of scoping the planning study to meet the needs of the General Investigation; they agreed to meet with the US Army Corps of Engineers and Homer

representatives to discuss how best to utilize funding and divide the work. We are encouraged about the developing cooperative approach.

- A study will not commence until after the draft STIP goes through public comment, is amended by the State accordingly and is subsequently approved by the Federal Highway Administration, and possibly a review by the Federal Department of Government Efficiency.
- The Commissioners asked City if we would be willing to draft a scope of work so we would will be ready for RFP when funding is available, and floated the possibility of the City managing the study, through a sub-award agreement and in collaboration with ADOT and the US Army Corps of Engineers to meet both road surface preservation needs and more comprehensive measures for shoreline protection.
- No decisions were made, but we see there will likely be a need for a future City Council conversation about the City managing the project.
- The Commissioners reiterated their intent to apply for discretionary FY24-26 PROTECT grant funds in cooperation with the City to further the effort. Presently the FY24-26 PROTECT grant round is on hold while on review for compliance with new Presidential Executive Orders.
- The City shared that we have a State FY26 Capital request in for \$300,000 in shared local sponsor match funding for the Homer Spit Revetment General Investigation and asked for their support. We also told them the City was requesting Federal funds through the FY26 Congressionally Designated Spending process for the Federal share. These requests have been deemed important and reasonable by Legislators and their staff, however the funding environment is highly uncertain due to fiscal gaps constraining the State budget process, and, on the Federal level, a funding freeze and the possibility of the federal government shutting down or operating under a long-term continuing resolution and thus not resolving the Federal FY25 or FY26 budgets.
- City staff continue to advocate and hunt for funding mechanisms to support this important project.

Staff members engaged Central Region Planners in additional talks about Spit Erosion Mitigation on February 24-25, 2025 when they came to Homer for a site visit.

RECOMMENDATION:

Informational Only.