

CITY AND BOROUGH OF JUNEAU

PUBLIC WORKS AND FACILITIES COMMITTEE

Project Briefing

March 11, 2024

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated April 13, 2023, and executed by FHWA and DOT&PF.

AGENDA

- PEL Study Process and Schedule Update
- Fieldwork Update
- Level 2 Screening Process
- Level 2 Screening Preliminary Results
- Next Steps



SCHEDULE

SPRING 2022

SUMMER - FALL 2022

WINTER 2022 - SPRING 2023

SUMMER - WINTER 2024

SPRING - SUMMER 2024



Project Initiation,
Problems to be Solved,
Purpose & Need:
Emerging Themes



Evaluation Criteria,
Develop & Screen
Alternatives



Evaluate & Refine
Alternatives



Limited Environmental
Fieldwork & Additional
Analysis



Finalize
Documentation

Baseline Analysis, Data
Collection, Purpose & Need:
Emerging Themes

Identify Crossing Alternatives and
Develop Screening Criteria

Level 1 Screening

Level 2 Screening,
Recommended Alternatives,
Draft PEL Study

Public Comment Period (30 days)
and Finalize PEL Study



ADDITIONAL FIELD STUDIES

Agencies, organizations, and the public suggested Level 2 Screening would benefit from additional environmental analyses.

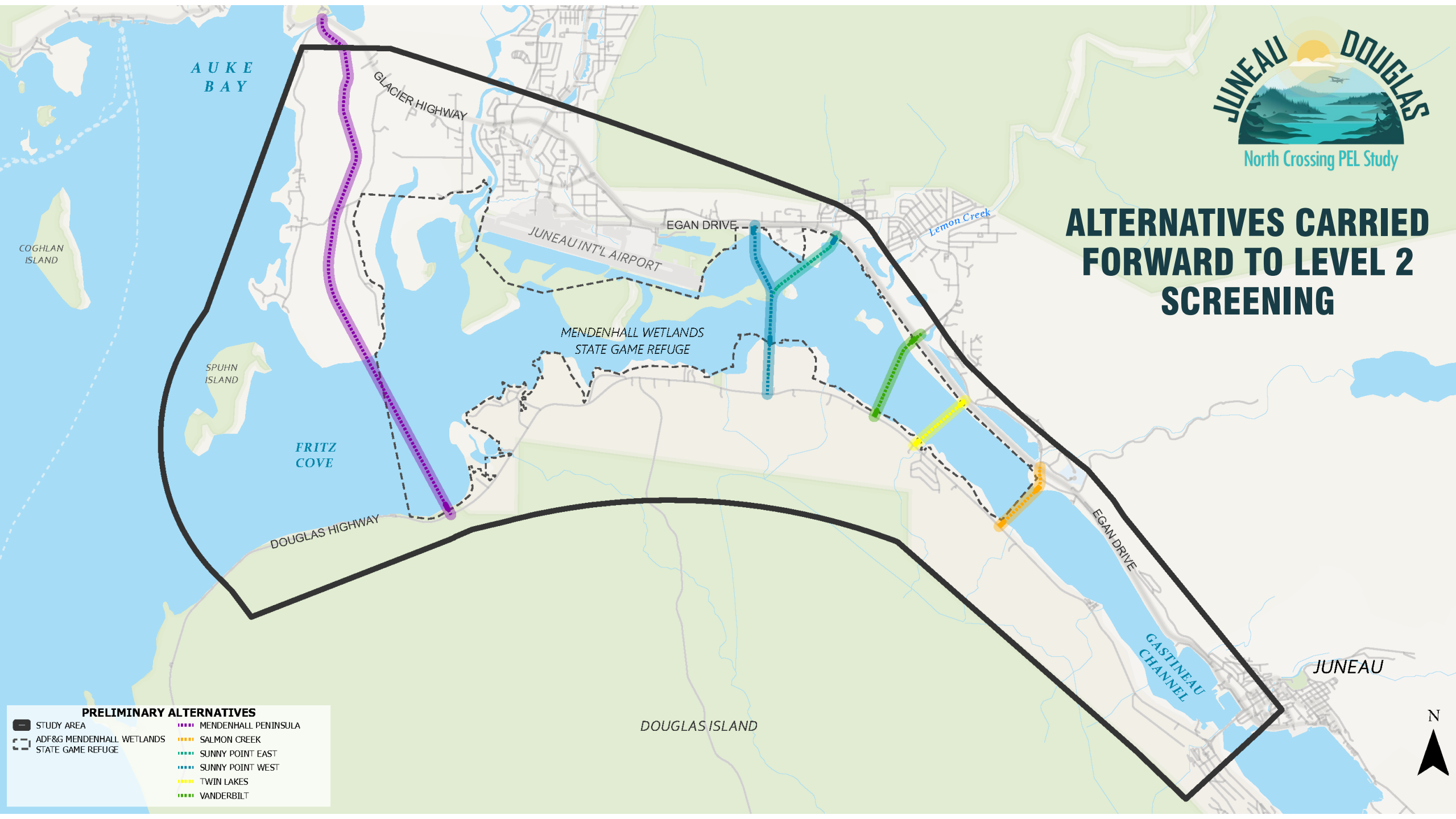
Additional Fieldwork Completed Included:

- Wetland delineation
- Eel grass survey
- Intertidal habitat mapping
- Migratory bird survey and upland bird habitat mapping
- Geophysical surveys
- Visual analysis



This Work Has Been Incorporated Into The Draft Level 2 Screening Results

ALTERNATIVES CARRIED FORWARD TO LEVEL 2 SCREENING



PRELIMINARY ALTERNATIVES

STUDY AREA	MENDENHALL PENINSULA
ADF&G MENDENHALL WETLANDS STATE GAME REFUGE	SALMON CREEK
	SUNNY POINT EAST
	SUNNY POINT WEST
	TWIN LAKES
	VANDERBILT



PURPOSE & NEED STATEMENT – LEVEL 2 SCREENING



PURPOSE

The ***purpose*** of the Juneau Douglas North Crossing PEL Study is to identify ways to improve the connection between Douglas Island and Juneau.

The secondary purposes are to identify ways to improve transportation for non-motorized users and reduce transportation related energy consumption.



NEED

*An improved connection to Douglas Island should address the following **needs**:*

- **Alternate access and transportation infrastructure resiliency**
- **Decrease traffic pressure on Douglas Island Bridge and its intersections**

*The identified alternative(s) should also strive to meet these **additional goals**:*

- Improve connection to North and West Douglas Island by creating additional traffic capacity to support the future development of affordable housing and economic development opportunities.
- Enhance and protect public health and safety and safety of travelers and the communities that transportation facilities traverse and serve.
- Transportation improvements should avoid, minimize, and mitigate impacts to the environment and to residential areas.
- Transportation improvements should maintain the visual, cultural, and scenic identity of Juneau and Douglas Island.

LEVEL 2 SCREENING - DETAILS

Level 2 Screening quantitatively evaluates how well each alternative:

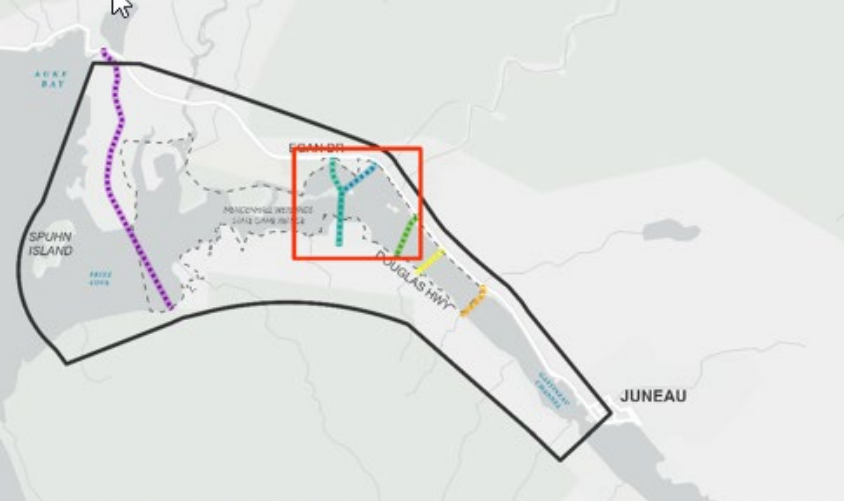
- Satisfies the proposed projects purpose and meets the transportation needs
- Satisfies adopted planning documents
- Is technically implementable and constructable from an engineering perspective
- Is financially feasible
- Is reasonable under the National Environmental Policy Act (NEPA)
- Is practicable under the Clean Water Act
- Is prudent and feasible under Section 4(f) of the Department of Transportation Act of 1966



SCORING CRITERIA PERFORMANCE

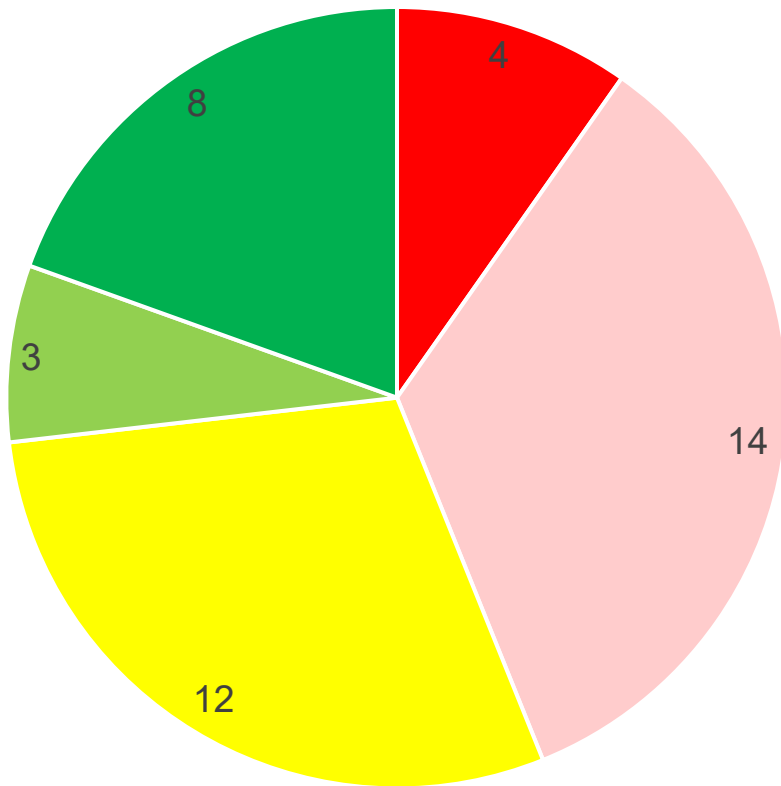
<u>Score</u>	<u>Description</u>
2	Alternative demonstrates strong performance against criteria
1	Alternative demonstrates moderate performance against criteria
0	Alternative demonstrates neutral performance against criteria
-1	Alternative demonstrates slightly weak performance against criteria
-2	Alternative demonstrates weak performance against criteria





SUNNY POINT EAST

PERFORMANCE AGAINST CRITERIA OVERALL SCORE: -3

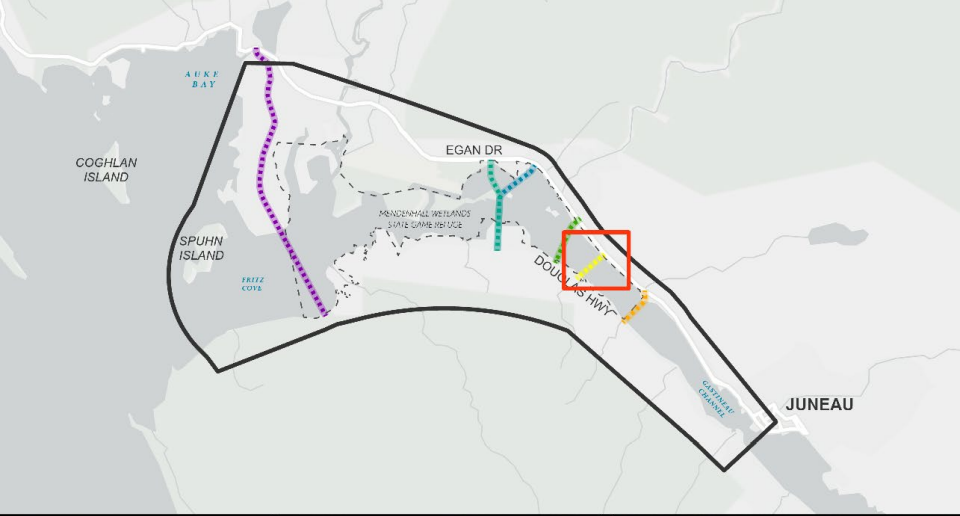


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Impacts to:

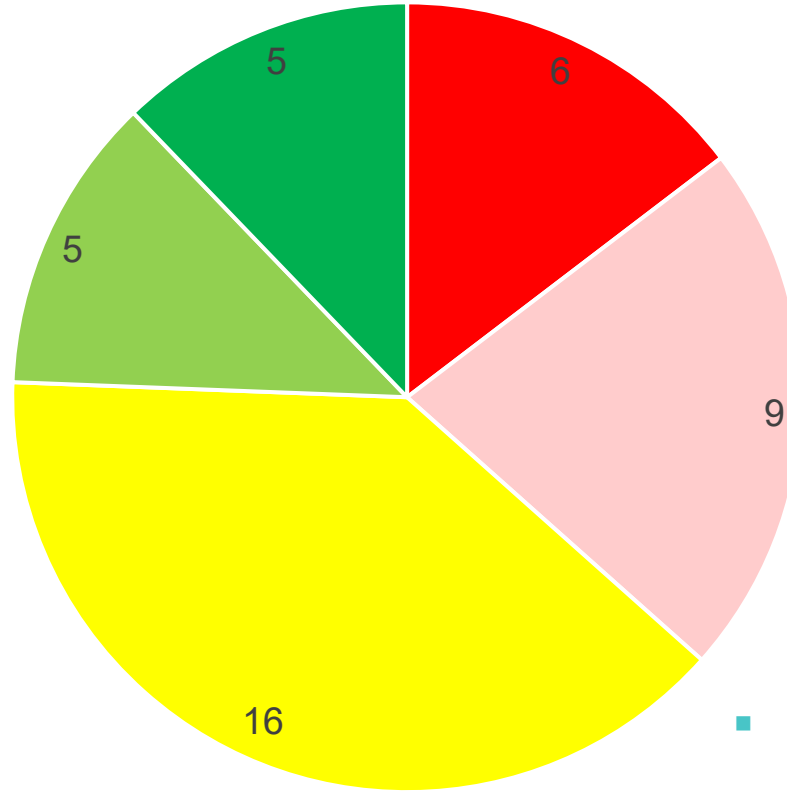
- Protected lands (.0006 acres of SEALT conservation lands)
- Neighborhoods divided or disrupted (2)
- Residential property acquisition (5.1 acres, 2 parcels)

- **Construction Cost: \$420M**
- **Annual Maintenance Cost: \$165k**



TWIN LAKES

PERFORMANCE AGAINST CRITERIA OVERALL SCORE: -6

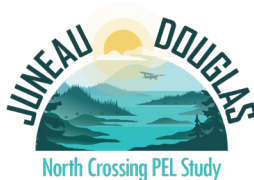


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Impacts to:

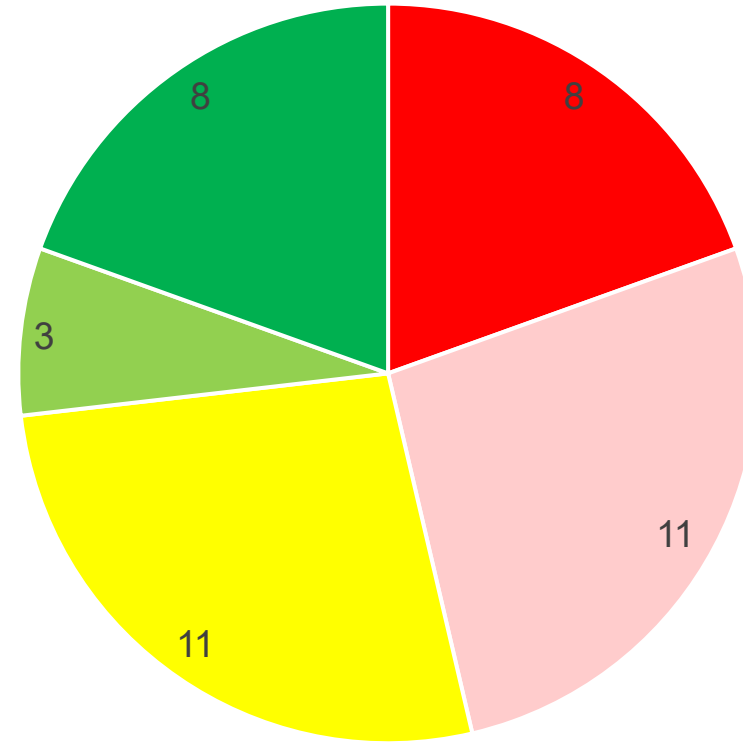
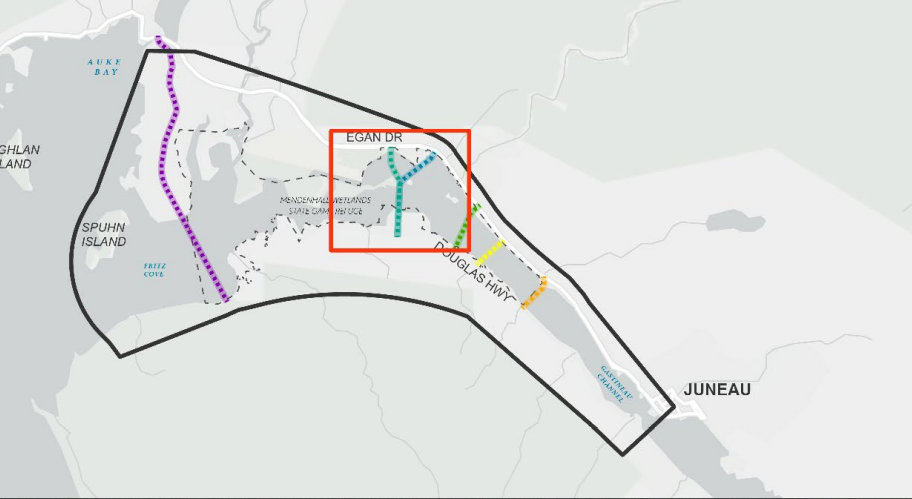
- Intertidal zone (35.9 acres)
- Essential fish habitat (45 acres)
- Impervious surfaces added (39.9 acres)
- Neighborhood divided or disrupted (2)
- Vacant commercial land (1.8 acres)

- **Construction Cost: \$320M**
- **Annual Maintenance Cost: \$65k**



SUNNY POINT WEST

PERFORMANCE AGAINST CRITERIA OVERALL SCORE: -8

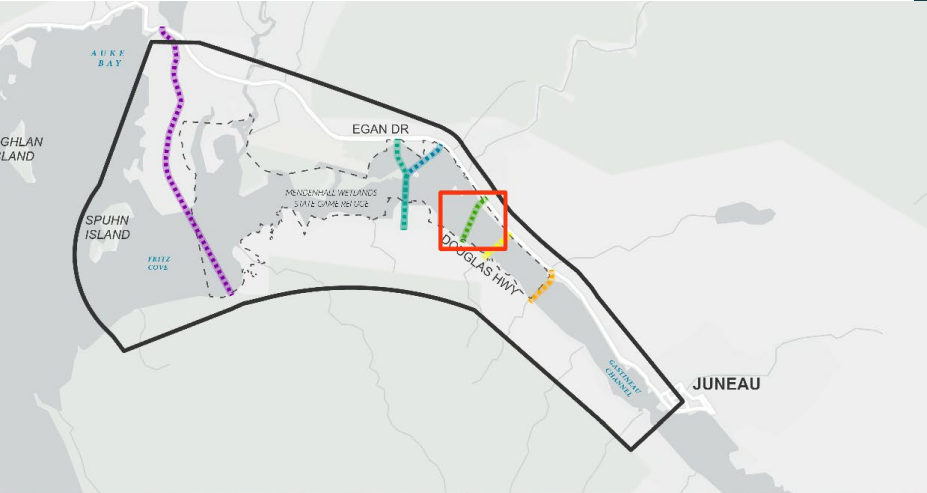


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Impacts to:

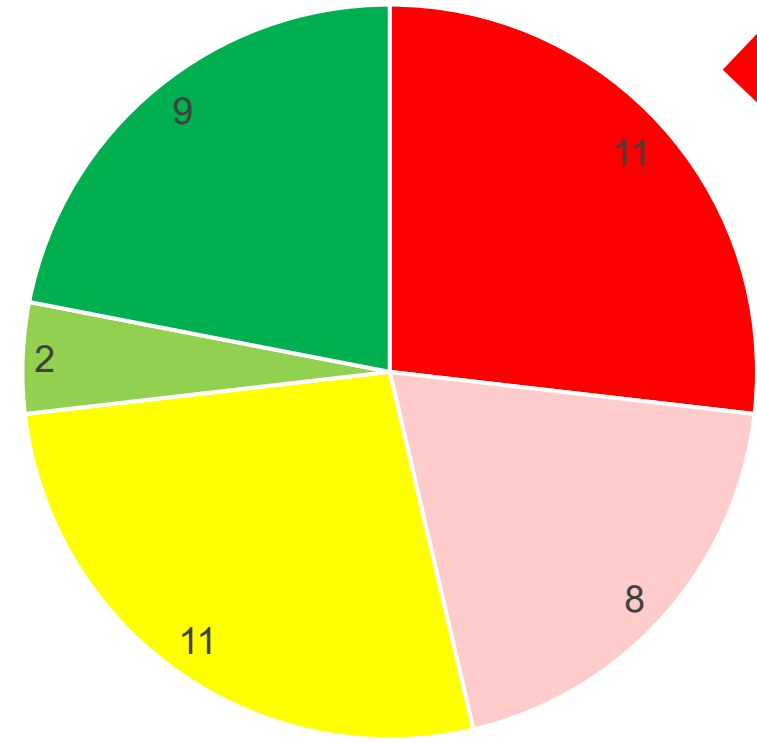
- Wetlands (7.2 acres)
- Anadromous streams (8 streams)
- Important migratory bird habitat (24.7 nesting locations)
- Impervious surfaces added (32.2 acres)
- Neighborhoods divided or disrupted (3)
- Residential properties within 100' (48)
- Residential property acquisitions (5.1 acres, 2 parcels)

- **Construction Cost: \$390M**
- **Annual Maintenance Cost: \$150k**



VANDERBILT

PERFORMANCE AGAINST CRITERIA OVERALL SCORE: -10



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- Times Scored -1
- Times Scored 0
- Times Scored 1
- Times Scored 2

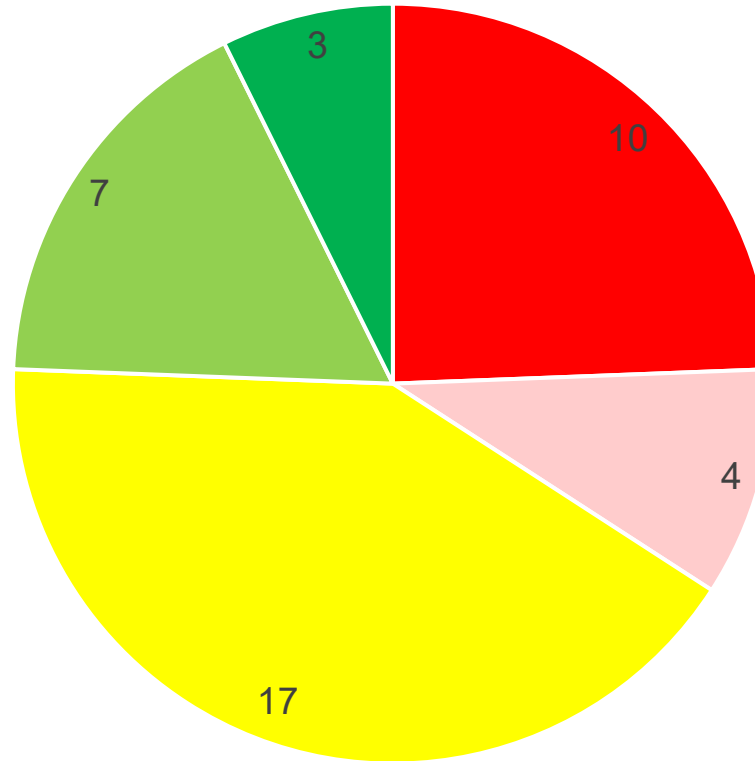
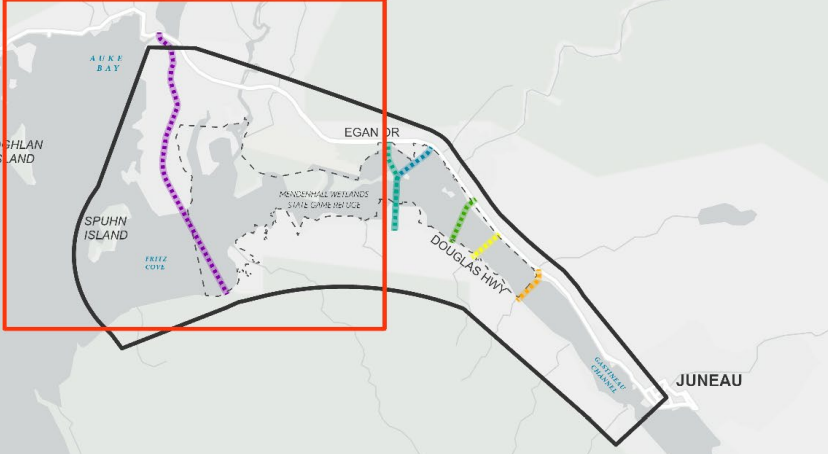
Impacts to:

- Wetlands (6.4 acres)
- Intertidal zone (27.7 acres)
- Stream and riparian habitats (2.3 acres)
- Essential fish habitat (42 acres)
- Wildlife habitat (21.5 acres)
- Impervious surfaces added (37.9 acres)
- Residential uses (6)
- Total ROW needed (13.3 acres, 11 parcels)
- Residential property acquisition (6.5 acres, 6 parcels)

- **Construction Cost: \$270M**
- **Annual Maintenance Cost: \$90k**

MENDENHALL PENINSULA

PERFORMANCE AGAINST CRITERIA OVERALL SCORE: -11

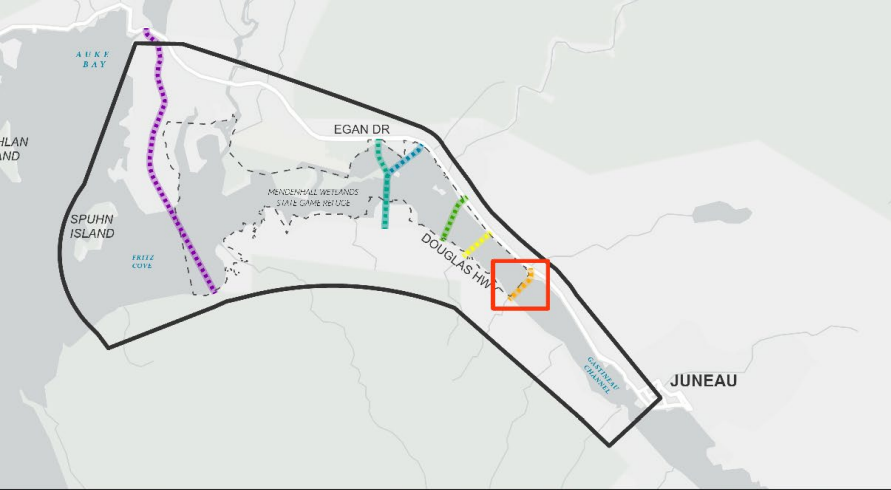


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Impacts to:

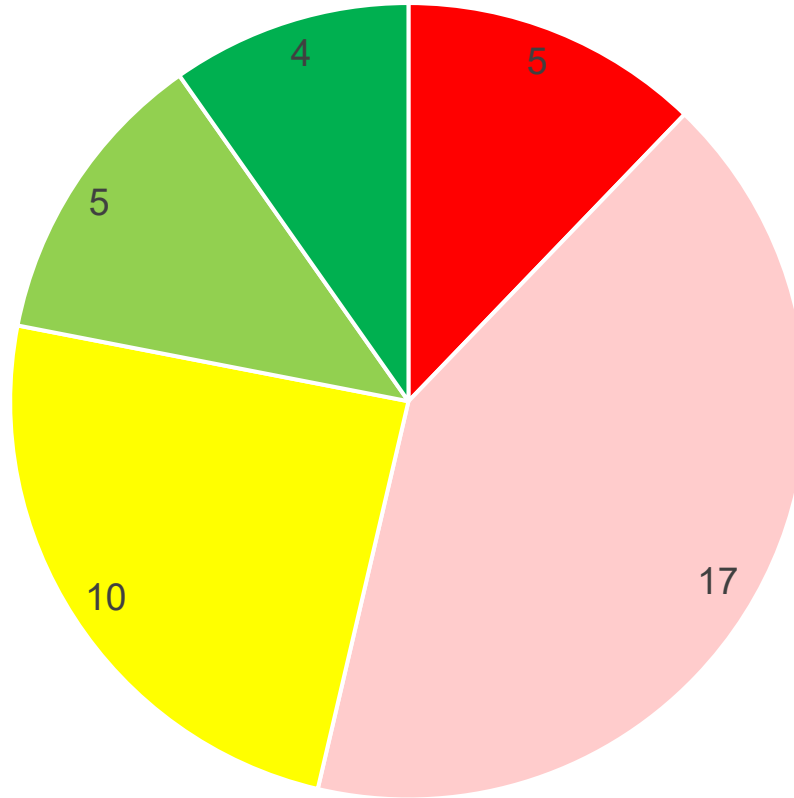
- Wetlands (5.4 acres)
- Wildlife habitat (44.3 acres)
- Nesting eagle trees (5 sites)
- Section 4(f)/6(f) (3 sites)
- Impervious surfaces added (52.8 acres)
- Vacant residential property (23.6 acres)
- Commercial uses impacted (JNU)
- ROW needed (50.8 acres, 8 parcels)

- **Construction Cost: \$1.7B**
- **Annual Maintenance Cost: \$365k**



SALMON CREEK

PERFORMANCE AGAINST CRITERIA OVERALL SCORE: -14



- Times Scored -2
- Times Scored -1
- Times Scored 0
- Times Scored 1
- Times Scored 2

Impacts to:

- Residential uses (7)
- Commercial uses (9), including commercial barge landing
- Within 100' of commercial uses (16)
- Property acquisition/ROW costs not yet calculated or included in construction cost
- More impact categories with potential adverse impacts than other alternatives
- USCG approval needed to disrupt navigable channel, or higher crossing needed

- **Construction Cost: \$330M**
- **Annual Maintenance Cost: \$70k**

NO BUILD ALTERNATIVE

PERFORMANCE AGAINST CRITERIA OVERALL SCORE: -18



- Does not provide for any action
- Does not generate impacts
- Does not meet the purpose and need
- Will be carried forward into any future NEPA processes
- Percentage of people supporting a no build alternative versus any build alternative from the survey: 30.53%

NEW INFORMATION: UPDATED PLANNING LEVEL COST ESTIMATES

Alternative	Construction	Annual Maintenance
Mendenhall	\$1.7B	\$365k
Sunny Point West	\$390M	\$150k
Sunny Point East	\$420M	\$165k
Vanderbilt	\$270M	\$90k
Twin Lakes	\$320M	\$65k
Salmon Creek	\$330M	\$70k

- Cost has not been yet been scored in draft Level 2 screening
- Property acquisition for ROW not yet calculated or included

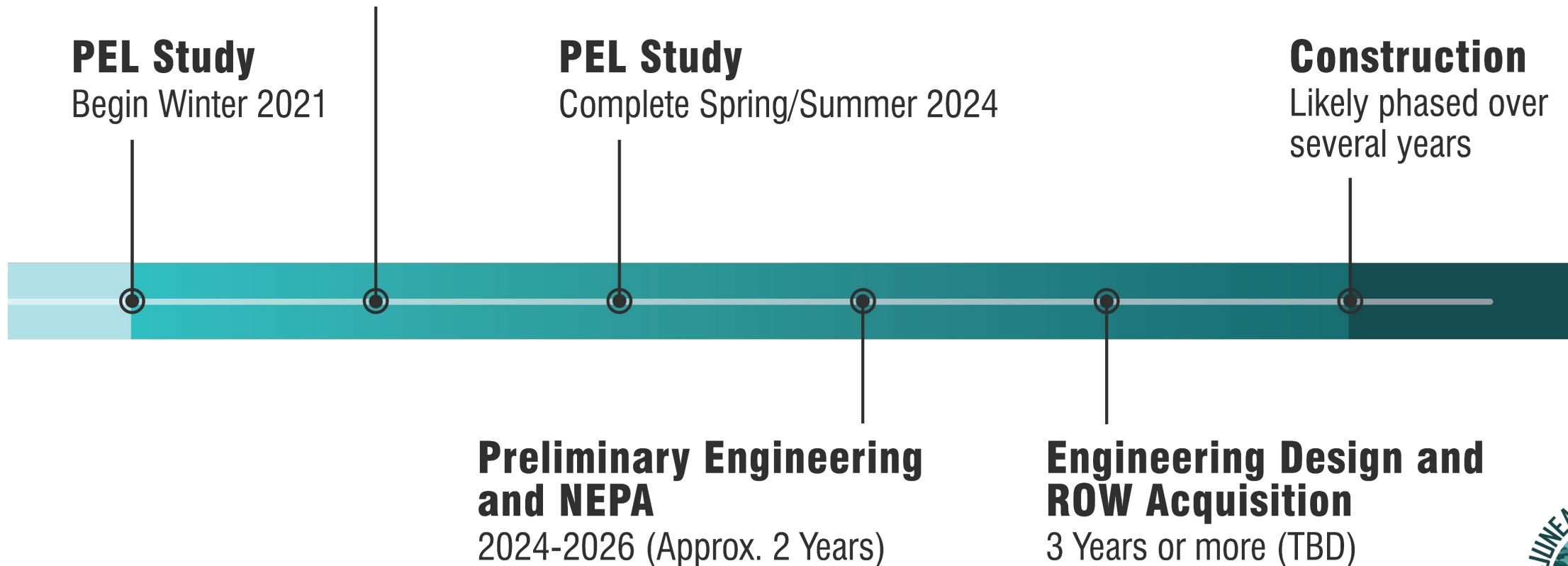
WHAT'S NEXT?

Meeting #	Focus	When
1	<ul style="list-style-type: none">▪ Baseline data and existing conditions▪ Purpose and need	Spring 2022
Workshop	<ul style="list-style-type: none">▪ Range of alternatives▪ Alternatives screening process▪ Screening criteria	Summer 2022
3 & 4	<ul style="list-style-type: none">▪ Preliminary alternative screening results▪ Detailed alternative screening criteria▪ Additional field studies	Winter 2022 - Winter 2024
5	<ul style="list-style-type: none">▪ Detailed alternative screening results▪ Recommended alternatives	Winter 2024
	<ul style="list-style-type: none">▪ Draft PEL Study▪ Final Public Open House	Spring/Summer 2024

AFTER THE PEL STUDY WRAPS UP

Funding Allocated

Funding now programmed to advance through Preliminary Engineering and NEPA



PROJECT CONTACTS:

Greg Lockwood, DOT&PF Project Manager
(907) 465-2393

Steve Noble, DOWL Project Manager
(907) 562-2000

Renee Whitesell, DOWL PEL Study Lead
(907) 562-2000

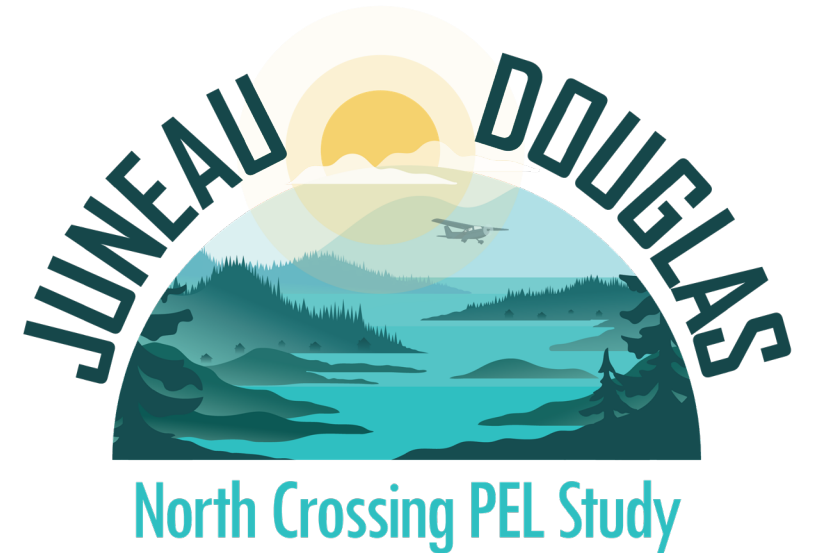
Theresa Dutchuk, DOWL Environmental
(907) 562-2000

Email:

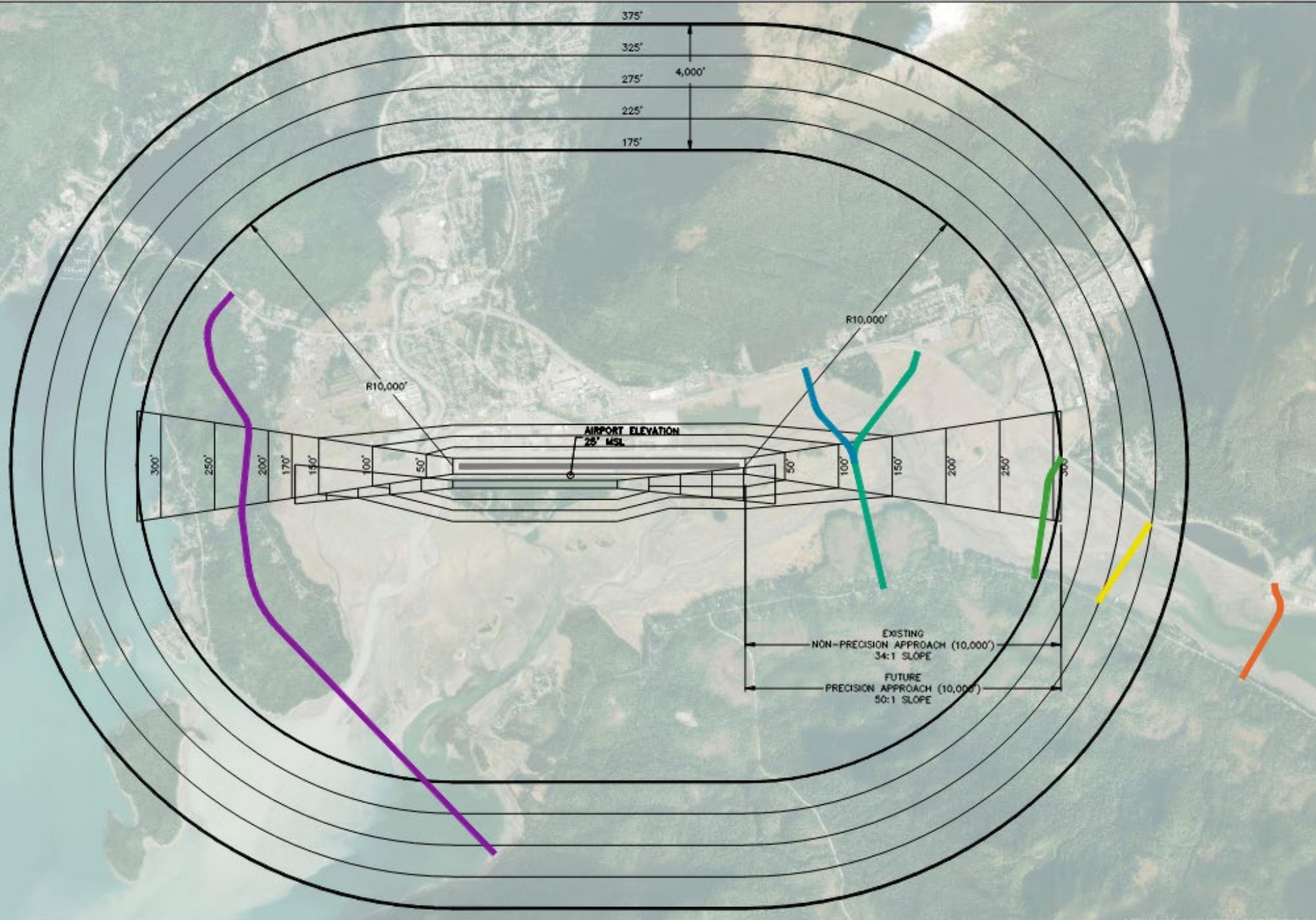
JDNorthCrossing@dowl.com

Website:

www.JDNorthCrossing.com

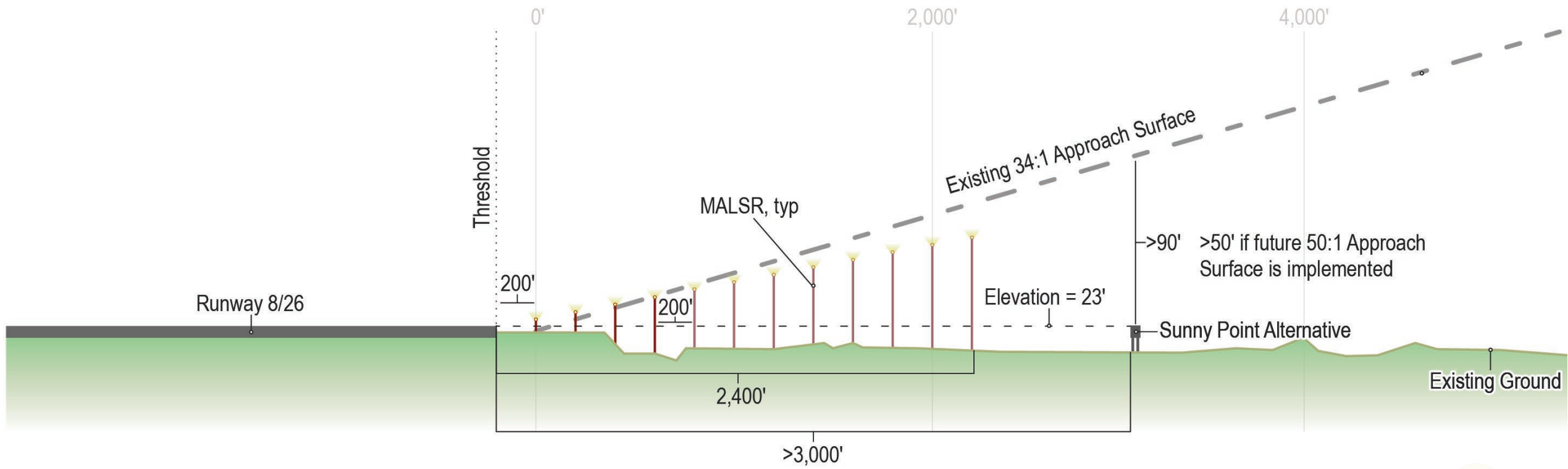


THANK YOU



ALTERNATIVES RELATIVE TO PART 77 SURFACES – MENDENHALL PENINSULA AND SUNNY POINT

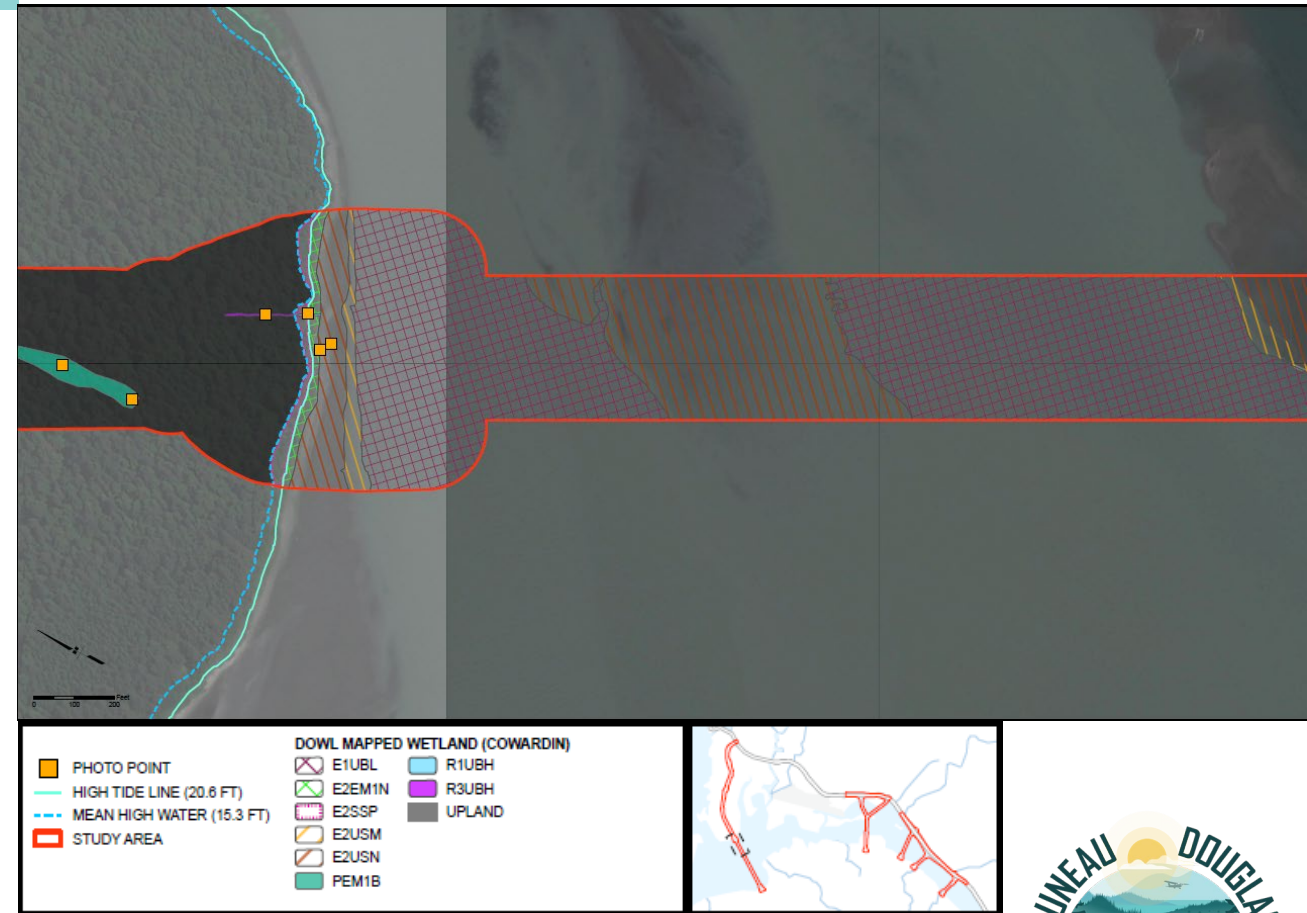
JNU RUNWAY 26 APPROACH SURFACE PROFILE AND SEPARATION FROM WEST SUNNY POINT ALTERNATIVE



WETLAND DELINEATION

Work Plan: Validate mapped boundaries between wetlands and uplands

- Data sources to be validated included:
 - USGS National Hydrography Dataset (2023)
 - Natural Resource Conservation Service Web Soil Survey (NRCS 2021)
 - CBJ Wetlands Management Plan (2016)
 - GIS Mapping for Mendenhall Wetland State Game Refuge (Carstensen 2004)
 - U.S. Fish and Wildlife Service National Wetland Inventory (NWI) (USFWS 2023).
- Conducted September 19 through 22, 2023
- Was used to re-calculate wetland impacts of proposed alternatives.

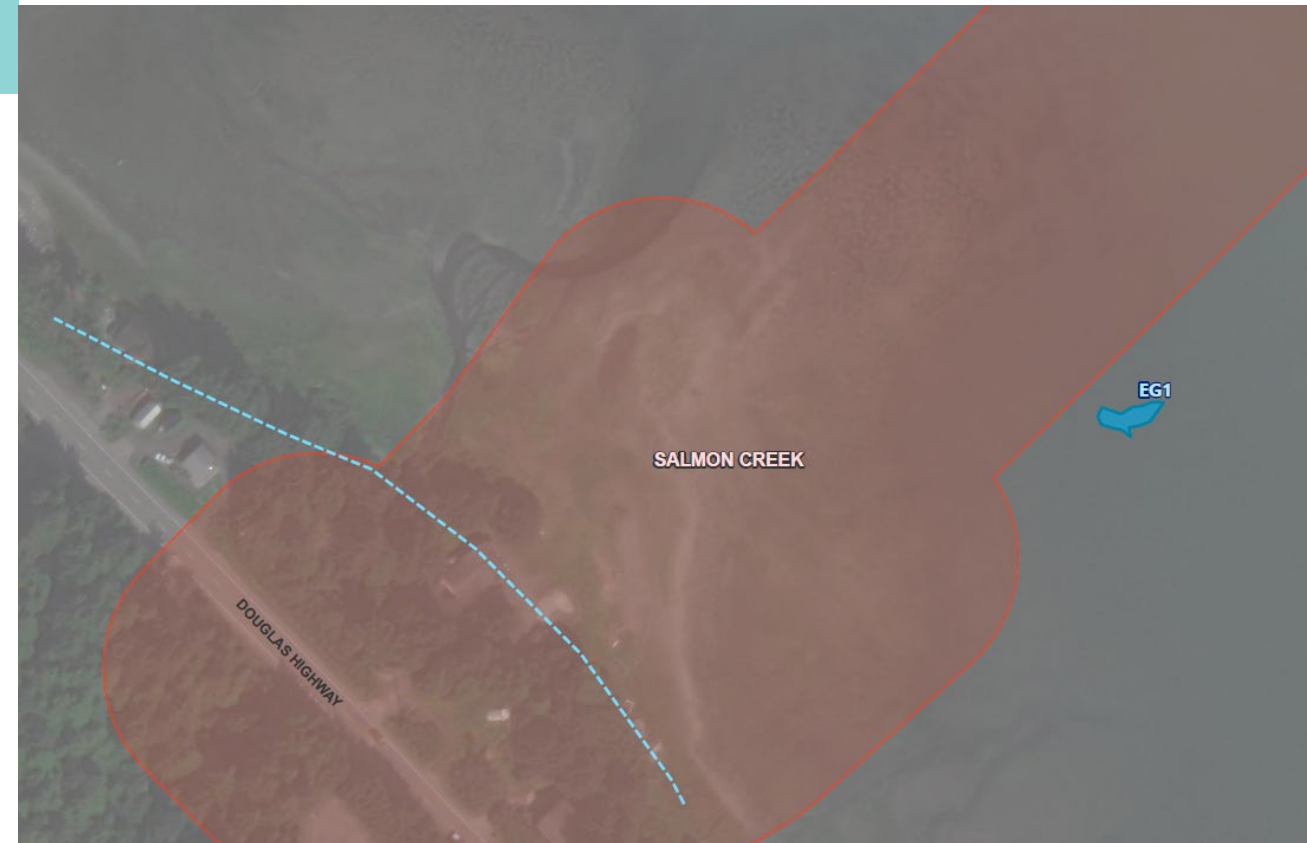


Mapped wetland area at Mendenhall Peninsula alternative

EELGRASS SURVEY

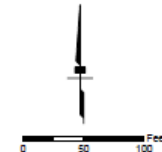
Work Plan: Map patches and beds of native eelgrass and introduced “dwarf” eelgrass within the footprints of the potential alternatives

- Conducted September 27 through 29, 2023, within four hours of low tide
- Pedestrian survey completed in the intertidal areas of each alternative
- Documented one location of “dwarf” eelgrass *Zostera japonica* on the south side of the Salmon Creek alternative



STUDY AREA FIELD VERIFIED EEL GRASS NOAA MAPPED EEL GRASS (PATCHY)

[No Title]



INTERTIDAL HABITAT MAPPING

Work Plan: Evaluate the potential impacts of the proposed alternatives on intertidal habitats

- Results of the survey largely confirm information from prior efforts
- Documented vertical gradient of habitats based on proximity to deeper marine water and freshwater sources
- Further analysis of the potential effects on intertidal habitat would be performed during the NEPA process



VANDERBILT STUDY AREA

- ALTERNATIVE FOOTPRINTS
- Salmon Creek Footprint
 - Twin Lakes Footprint
 - Vanderbilt
 - Sunny Point East
 - Sunny Point West
 - Mendenhall Peninsula

INTERTIDAL HABITAT*

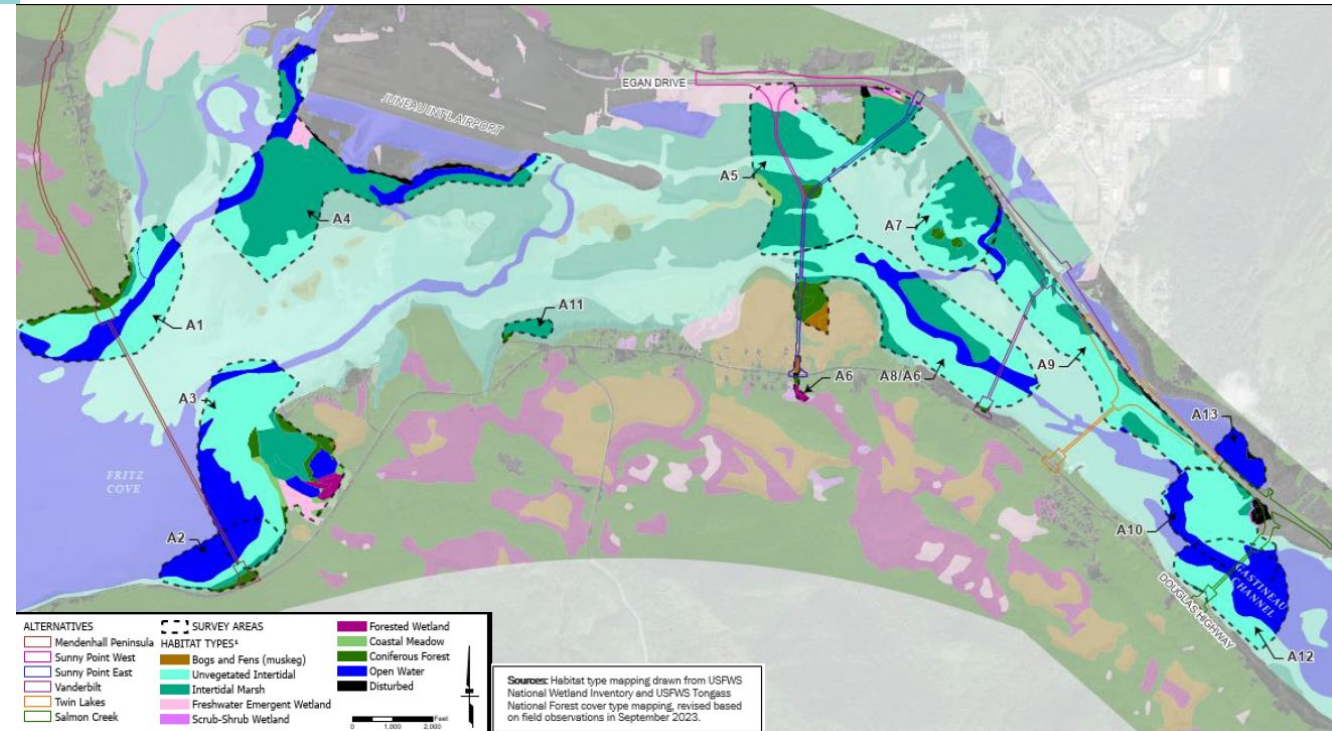
- Subtidal
- Channel
- Lower Intertidal Mudflat
- Lower Intertidal Emergent Marsh
- Intertidal Rocky
- Upper Intertidal Natural
- Upper Intertidal Developed
- Impounded
- Upland

0 500 1,000 Feet

MIGRATORY BIRD SURVEY AND UPLAND BIRD HABITAT MAPPING

Work Plan: Evaluate the potential impacts of the proposed alternatives on birds and bird habitat

- Field surveys occurred from September 19 through September 28, 2023
- Biologists:
 - Conducted field surveys in 13 areas, with 10 habitat types
 - Observed 55 bird species, noting species, abundance, and associated habitat type
 - Identified the Bog/Fen cover type and recommended it be incorporated into GIS data

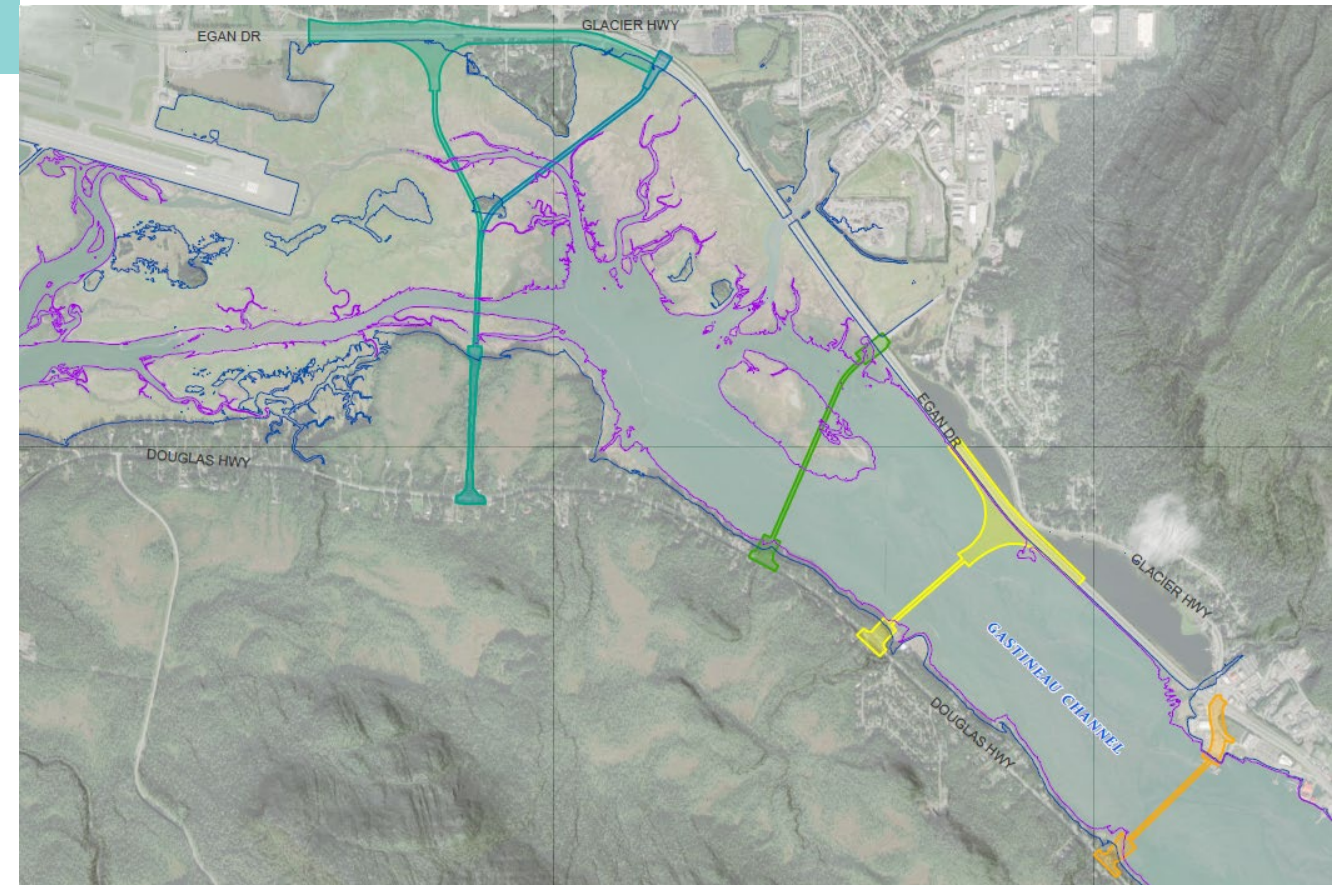


Bird Survey Areas and Habitat Types

GEOPHYSICAL SURVEYS

Work Plan: Collect Geophysical data on proposed alternatives to characterize material types/depths

- Non-destructive geophysical survey methods:
 - Seismic Refraction and Multichannel Analysis of Surface Waves (MASW)
 - Electrical Resistivity
- Conducted during low tide during times with sufficient ambient lighting through publicly available access points
- Data collected will assist in confirming feasibility and future detailed cost estimate
- Report expected March 2024



PROPOSED PROJECT STUDY AREA

SALMON CREEK	TWIN LAKES	LOW TIDE (3.4 FT)
SUNNY POINT EAST	VANDERBILT	HIGH TIDE (20.6 FT)
SUNNY POINT WEST		



VISUAL ANALYSIS

Work Plan: Conduct a visual impact assessment of the proposed alternatives

- Using detailed design to create crossing simulations
- Photographed tie-in locations on both the Douglas and Juneau sides of alternatives
- Using photos to create simulations of each alternative to assist in review of visual impacts
- Drafting a report with field methods and results, including photo simulations of tie-in locations and birds-eye view
- Report expected April 2024

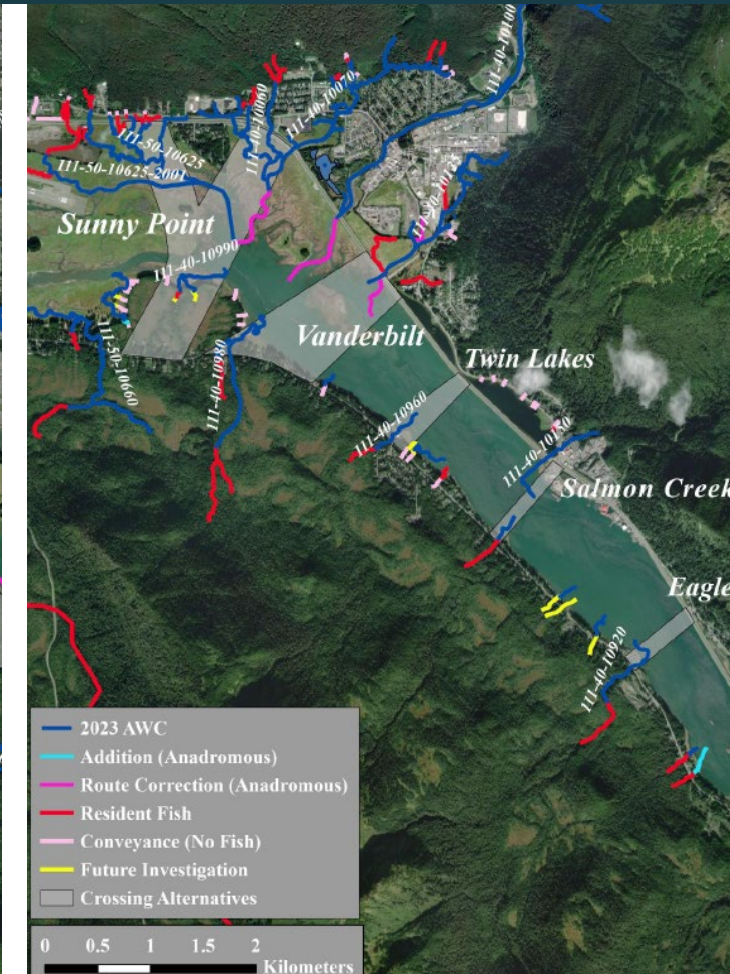


Summer and winter images of Egan Drive facing southwest, Sunny Point East

ALASKA DEPARTMENT OF FISH & GAME FISH STREAM SURVEYS

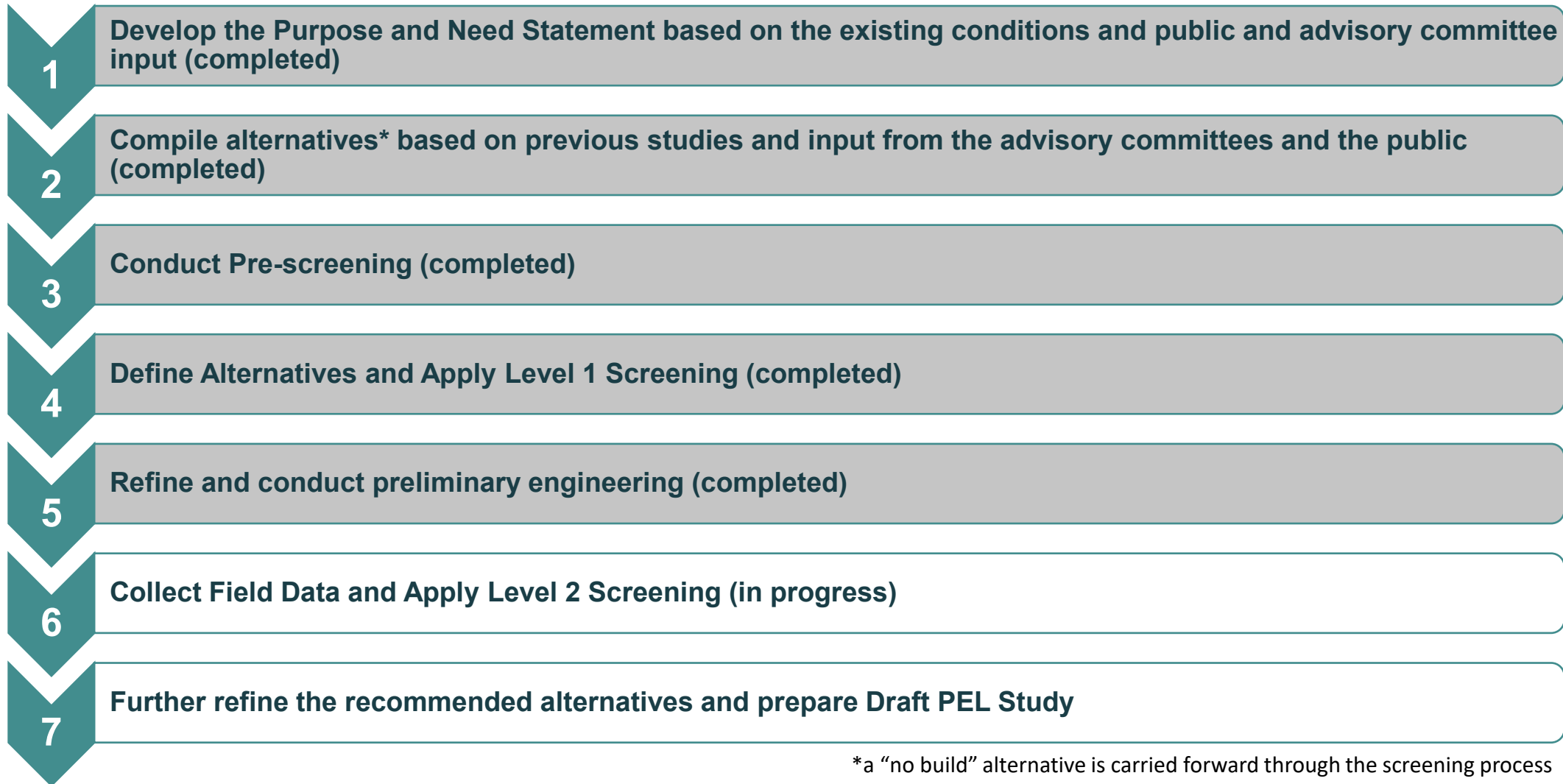
ADF&G shared their memo results of fish stream surveys

- Conducted between October 19 and 31, 2023
- Surveyed all streams in the study area for fish presence
- Used backpack electrofisher and baited minnow traps
- Resulted in 20 nominations to the anadromous waters catalog based on finding of rearing juvenile coho salmon
- Data incorporated into Level 2 Screening Analysis

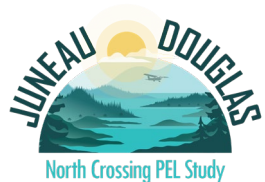


LEVEL 2 SCREENING

ALTERNATIVE DEVELOPMENT & SCREENING PROCESS

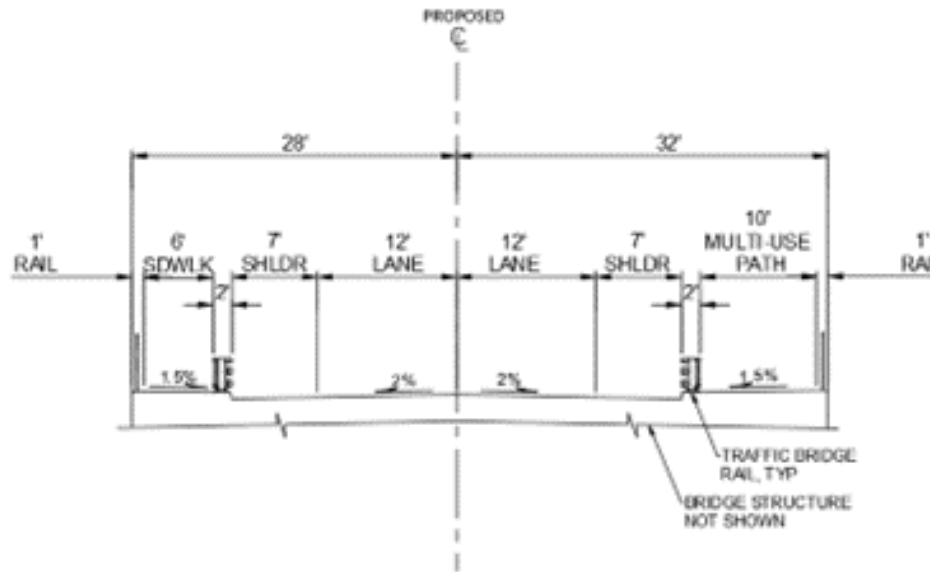


*a “no build” alternative is carried forward through the screening process



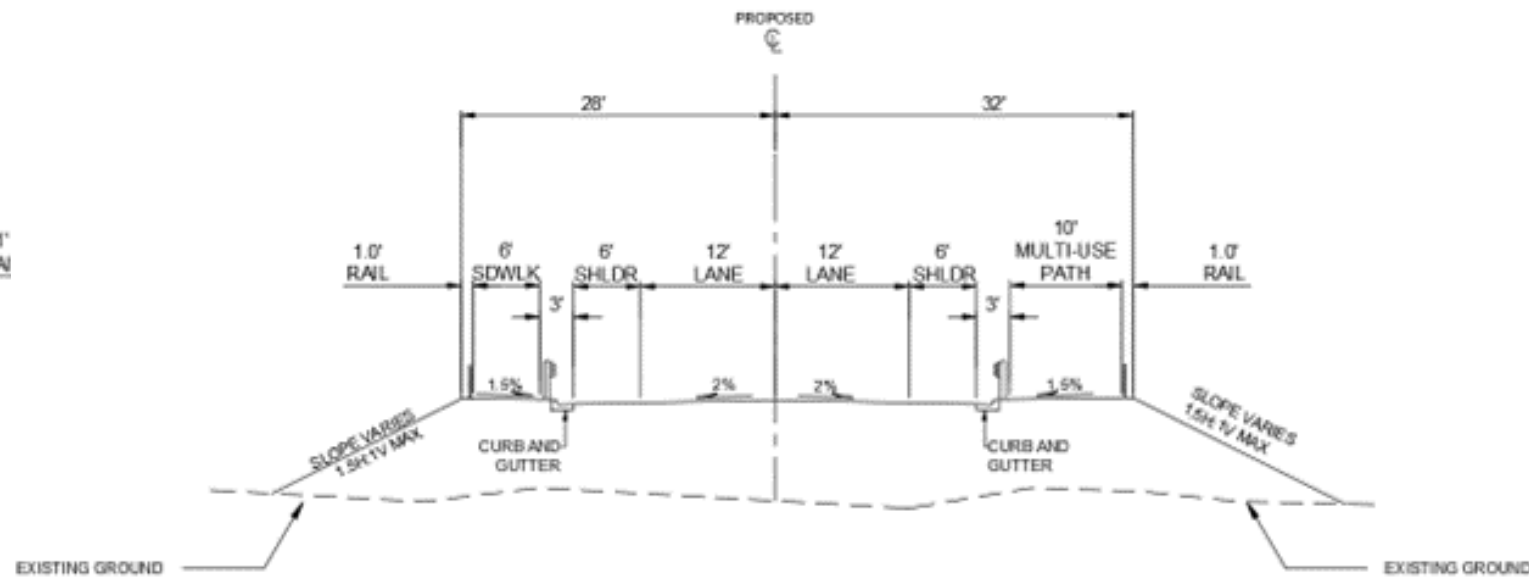
DETAILED ENGINEERING TYPICAL SECTIONS

Bridge Deck Typical Section



JUNEAU-DOUGLAS CROSSING
BRIDGE DECK

Approach Typical Section



JUNEAU-DOUGLAS CROSSING
APPROACH