Summarized Project Description

Applicant
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Agent
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Location
The project site is located at Sections 31 and 6, T 75 and 76 S, R 91 E, Copper River meridian; Latitude 55.31766° N, Longitude 131.65222° W; South end of Gravina Island Highway in Ketchikan, Alaska.

Purpose
The applicant's state purpose is to construct the infrastructure necessary to build a housing subdivision with new single-family residential homesites in the Ketchikan, Alaska area. The proposed development would be composed of ten (10) single-family homes with associated access roads, utilities, and a new boat launch and dock for the homeowners.

Proposed Work
The applicant proposes to discharge 26,107 cubic yards of shot rock, gravel, and riprap material into 2.79 acres of waters of the U.S. in order to construct ten (10) new gravel house pads, two access roads, a community boat launch parking lot, and associated utilities for the Elden Loop Subdivision. The applicant also proposes to construct a boat launch ramp, a fixed dock, and three breakwaters in and above the Tongass Narrows mean high-water mark.

Specifically, the proposed project would discharge 14,078 cubic yards of shot rock, gravel, and riprap material into 1.22 acres of wetlands for the construction of access roads. One 24-foot-wide by 1,980-foot-long gravel access road would extend north from the existing Gravina Highway. The roadway would be narrowed to 12-foot-wide for the final 800 feet for use as a utility access trail. A turnaround area and gate would be constructed where the utility trail would start. The utility access trail would include a single 24-foot-wide by 60-foot-long bridge spanning an unnamed anadromous stream. Another 24-foot-wide by 1,100-foot-long gravel road would serve the subdivision road. One (1) 24-foot-wide by 60-foot-long bridge and one (1) 24-foot-wide by 50-foot-long skewed bridge would be constructed to cross an unnamed anadromous stream along the subdivision road. The bridges and supporting embankments would be constructed outside the stream channel and above the ordinary high-water mark (OHWM), though approximately 20 cubic yards of riprap may be placed below OHWM for embankment protection.

The house gravel pads would require placing 12,742 cubic yards of shot rock and gravel material in 1.43 acres of palustrine forested and scrub-shrub wetlands. Ten (10) new gravel pads (approximately 15,000 to 19,000 square feet each) would be constructed for single family residences, including driveways and space required to install associated on-site utilities. Each gravel driveway would include an 18-inch culvert. Block 1, lot 6 has a pre-existing single residence structure installed on pilings. A 30-foot by 50-foot driveway and 30-foot by 40-foot utility pad would be constructed to access the existing house.

A boat ramp, associated turnaround, and parking lot would be constructed near the southeast corner of the project area. The boat launch and parking area would require 1,155 cubic yards of shot rock, 61 cubic yards of gravel, and 164 cubic yards of concrete planks would be discharged into 0.12 acres of wetlands.

The boat launch structure would be a 170-foot-long by 26-foot-wide ramp constructed from 85 precast concrete planks (26-feet-long by 2-feet-wide by 1-foot-deep) that would extend into the Tongass Narrows (-6.5 feet mean lower low water [MLLW]). Site preparation to place the pre-cast planks would involve using a tracked excavator at low tide. Also, 323 cubic yards of riprap (wave attenuation boulders) would be placed into 225-feet by 16-feet area below the high tide line (0.015-acre of the Tongass Narrows [+15 MLLW to -4 feet MLLW]) parallel to the boat launch.

Six (6) existing 16-inch steel piles would be removed using a barge mounted crane with a vibratory hammer. The existing steel piles would be reused to support construction of the new proposed floating dock facilities. A total of twelve (12) 16-inch piles would be used to support the boat launch, walkway, and dock. Piles would be installed from a construction barge using a crane-mounted vibratory hammer. Some piles would require rock sockets, which would be drilled using a large-diameter rock drill from the construction barge. A 260-foot-long by 12-footwide floating boat launch would be constructed parallel to the boat ramp and connect to the boat dock. A 12-foot-wide by 200-foot-long floating boat dock would be placed perpendicular to the boat launce with seven (7) designated parking bays, holding up to fourteen (14) boats total. Additional boat and seaplane parking would be available on the north side of the dock.

A 3-foot by 130-foot steel pipe double tube floating breakwater would be installed parallel to the floating boat launch. The double tube float would be anchored in placed with three (3) 25,000-pound concrete blocks. Two (2) 3-foot by 130-foot steel pipe float tube breakwaters would be installed parallel to the dock. The two (2) breakwaters would be connected with 7-feet by 12-inch diameter galvanized steel tubes. The single tube floats would be anchored using three (3) 25,000-pound concrete blocks. All three breakwaters would be used to reduce wave action and turbulence.

Construction for the subdivision would begin in April-May 2026 and anticipated to be completed in June 2026. All in water work is anticipated to begin in April 2026 and end in July 2026. Pile installation would be completed May 2026. All work would be performed in accordance with the enclosed plan (sheets 1-21), dated October 22, 2025.

Applicant Proposed Mitigation: The applicant proposes the following mitigation measures to avoid, minimize, and compensate for impacts to waters of the United States from activities involving discharges and dredged or fill material.

a. Avoidance: The applicant states that given the nature of southeast Alaska and the temperate rainforest of Ketchikan, Alaska, it would be difficult to completely avoid impacting wetlands. The applicant had a wetland delineation completed in 2023, which was used to help inform engineering design. The applicant states that only 4.8 acres of the 19.0 acres delineated in the study area was comprised of uplands and complete avoidance of wetlands is not possible.
b. Minimization: The applicant states efforts were made to mitigate impacts to wetlands and waters by providing only the necessary fill to construct the access road, subdivision road, residential driveways, residential home sites, and boat launch facilities. Specific minimization measures include:
    i. The access road was narrowed at its second intersection with Elden Loop, as this portion of the roadway is only required to support utility construction access and maintenance.
    ii. Gravel house pads have been designed to be in uplands, when feasible.
    iii. The gravel house pads and driveways were designed to accommodate the anticipated home footprints and utilities each home site would require (e.g. septic system).
    iv. The proposed project would install three (3) prefabricated bridges for each of the crossings of the unnamed anadromous stream. The bridges would be installed without

piers or piles placed below the OHWM to ensure fish passage is maintained while minimizing the stream crossing's footprint.

v. The proposed breakwater would be constructed by placing individual large riprap (boulders) (versus constructing a solid linear feature).

vi. The proposed proposes including three (3) tubular floating breakwaters to help with wave attenuation at the dock and boat launch (versus constructing additional breakwater from riprap).

c. Compensatory Mitigation: The applicant intends to purchase compensatory mitigation credits from the U.S. Army Corps of Engineers approved Trillium Mitigation Bank.

Surface Acres in Wetlands or Other Waters Filled

The acres of wetland and uplands that will be filled by the project are summarized in **Table 1** by wetland type (Cowardin code).

Table 1. Acres of Wetland and Upland Fill by Type (Cowardin Code)

Cowardin Code	Coward Description	Area (acres)
PFO4B	Palustrine Seasonally Saturated Needle-leaved Evergreen Forest	2.5157
PSS4/EM1D	Palustrine Continuously Saturated Needle-leaved Evergreen Shrub/Persistent Emergent Scrub	0.1491
E1UBL	Estuarine Subtidal Unconsolidated Bottom	0.0480
E2RSN	Estuarine Intertidal Regularly Flooded Rocky Shore	0.0781
	Total Waters and Wetlands	**2.7908**
U	Upland	0.9600
Us	Upland (fill)	0.0882
	Total Upland	**1.0482**
	Grand Total (Waters, Wetlands, and Uplands)	**3.8391**

Fill Material Types and Volumes

Gravel, riprap, and shot rock fill will be placed by a combination of dump truck, front end loader, and excavator, and this material will be spread using excavators and bulldozers before being roller compacted. The precast concrete planks, concrete anchor blocks, and breakwater riprap will be placed by excavator. **Table 2** summarizes the fill types and volumes anticipated to be used to construct the proposed project.

Table 2. Fill Material and Fill Type Summary

Fill Material	Fill Volume (cubic yards)
Gravel	1,769
Riprap	583
Shot rock	24,078
Concrete Anchor Blocks	37
Concrete Planks	164

Detailed Project Description

The proposed project will construct new gravel roads, culverts, and bridges; construct 9 new gravel home site pads and install associated utilities; complete construction of one partially constructed home (located on Block 1, Lot 6); and construct a boat launch and dock capable of accommodating up to 14 boats and floatplanes, with vehicle and trailer parking.

Note: The *Project Engineering Design Drawings* show the boat launch parking area labeled as Block 1, Lot 5; this labeled designation is for platting reasons only and this lot will be used for boat launch facilities.

Gravel Roads

The project will construct one new 24-foot-wide gravel-surfaced access road (Stensland Avenue), extending north from the existing Gravina Highway approximately 1,250 feet to the northern intersection with Elden Loop Road. Two culverts will be placed across Stensland Avenue to maintain existing drainage patterns. From this point, the roadway will narrow to 12 feet wide and extend approximately 800 feet further north to be used as a utility access trail, providing construction and maintenance access for overhead power and communications lines. The utility access trail will be gated at the intersection with Elden Loop and include a small gravel turnaround area. The utility access trail will include installation of a single bridge spanning approximately 60 feet to cross an unnamed stream (Alaska Department of Fish and Game Anadromous Waters Catalog [AWC] number 101-47-10306); this stream has been noted as supporting rearing habitat for coho salmon. No piles or piers will be constructed below the OHWM, and no in-water work is anticipated at this location, including for bridge construction. Approximately 60 yards of riprap will be placed above the streambank as added protection for the bridge embankments.

The 24-foot-wide Elden Loop Road will serve the Elden Loop Subdivision, with the road intercepting Stensland Avenue at two locations. Elden Loop will be an approximately 24 feet wide and 1,100 feet long gravel surfaced subdivision road that will provide access to 9 new homesites and 1 existing homesite (Block 1, Lot 6). One culvert will be placed crossing underneath Elden Loop Road to convey surface water flows toward the Tongass Narrows. Two prefabricated bridges will be placed on Elden Loop Road at the unnamed stream (AWC 101-47-10306) crossing. The bridges and supporting embankments will be constructed outside of the stream channel and above the OWHM; however, approximately 200 yards of riprap will be placed below the OHWM as streambank protection.

See **Table 3** for a summary of gravel road footprint footprints and fill volumes.

Gravel Pad Homesites

Each homesite includes a gravel pad and driveway. The nine new gravel pads will support future home construction and will include space required to install associated utilities (e.g., sanitary sewer septic systems, rain catchment cisterns). Piped utilities (e.g., sanitary sewer, potable water service) are not available and all homesites will require on-site utility services. Gravel pads for homesites are intended to accommodate a 40-foot by 40-foot, single-family residence. Each homesite gravel pad includes a driveway connected to Elden Loop and a driveway culvert to maintain hydrologic connections. Individual residential lots range from approximately 15,000 square feet to 19,000 square feet. Each homesite will also provide a small amount of yard space, though most lots will only be approximately 50% filled, with the remaining lot portions kept in their current, natural state.

See **Table 3** for a summary of fill footprint sizes and fill volumes for each homesite.

Design Parameters Summary
This section summarizes the design parameters that affect the Project's footprint and fill volume requirements by Project component.

Elden Loop
- Road surface width: 24 feet
- Embankment side slopes: 1.5:1
- Embankment toe-to-toe slope width: 37.5 feet to 44 feet
- Roadway embankment depth: 4.5 feet to 6.5 feet (shot rock embankment fill capped with 6 inches of gravel surface course)
- Number of bridges: 2
- Estimated in-water riprap volume: 20 cubic yards (10% of total)

Stensland Avenue
- Road surface width: 24 feet and 12 feet (utility trail)
- Embankment side slopes: 1.5:1
- Embankment toe-to-toe slope width:
    - Road: 36 feet
    - Trail: 24 feet
- Average roadway embankment depth: 4.0 feet (shot rock embankment fill capped with 6 inches of gravel surface course)
- Number of bridges: 1
- Estimated in-water riprap volume: 0 cubic yards

Homesites
- Embankment side slopes: 1.5:1
- Embankment depth:
    - Block 1, Lots 1-4 and 6: 5 feet
    - Block 1, Lot 7: 2.5 feet
    - Block 2, Lots 1-4: 2.5 feet
- Shot rock embankment fill with 5% gravel surface course

Boat Launch and Parking Area
- Embankment side slopes: 1.5:1
- Embankment depth:
    - Parking area: 5 feet
    - Boat ramp: 3.5 feet
- Shot rock embankment fill with 5% gravel surface course

Existing, Partially Constructed Home
On Block 1, Lot 6, there is an existing, partially constructed residence (see **Photos 1** and **2**, below). This homesite was constructed by the previous property owners in uplands. At the time the applicant's acquired the property, the homesite was partially constructed but exposed to the elements. The current property owners "closed in" the structure to prevent environmental degradation, but no further work at this site has been conducted.

Examination of the existing disturbance suggests the previous owners did not import fill material for the homesite but instead cleared the vegetation and underlying organic soils away, and then graded the

existing soils to provide a level surface to construct the home's foundation. No additional ground disturbing activities have been conducted by the applicants.

Photo 1. Aerial view of the partially completed existing home (Block 1, Lot 6) constructed by the previous property owners.

Photo 2. Ground-level view of the partially completed home (Block 1, Lot 6) constructed by the previous property owners.

Boat Launch Ramp and Dock

A boat launch ramp and associated gravel turnaround and parking area will be constructed near the southeast corner of the project area. The boat launch facilities will also include a floating dock and walkway paralleling the boat launch, a riprap breakwater, and three floating tubular wave attenuators. A

total of six concrete blocks weighing approximately 25,000 pounds each would be placed in marine waters to anchor the two floating breakwaters (Attachment 2, *Project Engineering Design Drawings*).

Boat Ramp Proposal History

The previous property owner (Tab McNabb) was issued a USACE Letter of Permission (POA-2018-00379) on November 6, 2018, to construct a floating dock in the adjacent Tongass narrows. USACE authorized the applicant (Tab McNabb) to:

> *"Build a 14- by 60-foot aluminum dock supported by two 12-inch steel piles bolted to bedrock and two 12-inch steel piles driven to 10-foot minimum, a 5- by 70-foot aluminum ramp, a 12- by 100-foot float and a second 12- by 50-foot float supported by a total of seven 16-inch piles driven to 10-foot minimum. At latitude 55.3174° N., longitude 131.6501° W.; on Gravina Island, located on U.S. Survey Number 3536 along Tongass Narrows West Channel, near Ketchikan, Alaska."*

On February 26, 2024, Monrean Engineering and Associates sent a letter to Bryan Herczeg (USACE) requesting a transfer of the existing permit to the applicants. The Monrean Engineering letter noted that the project is partially completed with a total of 6 steel piles having been installed by the properties prior owner (Tab McNabb). This request has been rescinded and is superseded by the applicant's proposal to construct a boat launch ramp, dock, and associated facilities, as described below.

Proposed Boat Launch Ramp and Dock

The current property owners previously sought to transfer the McNabb permit (POA-2018-00379) for dock construction to the Elden Loop Subdivision. Further investigation into the previously permitted project and the partially installed piles has identified that the dock as proposed would be insufficient to support multiple private residences concurrent use of the facilities. As such, the Elden Loop Subdivision project proposes to construct an expanded boat launch ramp, dock, and support facilities that would meet the needs of a subdivision (versus a commercial skiff rental and tour operator).

The proposed boat launch ramp (Attachment 2, *Project Engineering Design Drawings*) and dock would include:

1. A 39-foot-long by 29-foot-wide boat launch apron that would provide the transition from the boat launch parking area to the boat launch ramp. The apron would be constructed from clean, locally sourced shot rock (3-inch minus).
2. A 170-foot-long by 26-foot-wide concrete boat ramp extending from the boat launch apron into the Tongass Narrows at an approximate 13.0% gradient, from an elevation of approximately 18.0 feet to an elevation of -6.5 feet. The boat launch ramp would be constructed using 85 pre-cast concrete planks (26-feet-long by 2-feet-wide by 1-foot-deep). The concrete planks would be placed directly on the prepared ground surface, which will require some excavation and the placement of fill to smooth the surface. Shot rock will be used as fill where needed. Excavated material is anticipated to largely consist of fractured rock and it will be beneficially disposed of and used as Project fill (e.g., road embankment, homesite pad). Site preparation to place the concrete planks will be completed using a tracked excavator working from the beach at low tide and the precast concrete planks will be also placed from the tracked excavator at low tide.
3. Removing six previously installed 16-inch steel piles (placed during initial construction by McNabb under POA-2018-00379). It is anticipated the existing piles will take one to two days to remove using a barge mounted crane with a vibratory hammer. The steel piles will be reused to support construction of the new proposed floating dock facilities.

4. A total of 12 16-inch piles (6 reused and 6 new) are planned for installation to support the floating dock. Piles would be installed from a construction barge (traveling from its homeport in Ward Cove) using a crane-mounted vibratory driver. Some of the proposed piles will likely require rock sockets, which will be drilled using a large-diameter rock drill from the construction barge. It is anticipated installing the 12 piles will take approximately 12 days to complete, though this timeframe may be shortened if some of the piles do not require rock sockets.
5. An approximately 260-foot-long floating boat launch walkway paralleling the boat launch ramp, which will connect the shoreline to the floating boat dock. The floating boat launch walkway will be constructed offsite and towed or barged to the site where it will be secured in place to the piles. The floating boat launch walkway will likely be removed from its anchored location during winter to avoid the potential for damage from winter storms. The dock would either be pulled from the water and placed on land in the boat launch parking area or potentially towed to a more sheltered site (e.g., cove) where it can be safely secured.
6. A floating boat dock (12-feet-wide by 200-feet-long) placed perpendicular to the boat launch dock with 7 designated parking bays capable of handling up to 14 boats total. Additional boat and seaplane parking would be available on the other side of the dock. The floating boat dock will be constructed offsite and towed or barged to the site where they will be secured in place with the piles. The floating boat dock will likely be removed from its anchored location during winter to avoid the potential for damage from winter storms. The floating dock would either be pulled from the water and placed on land in the boat launch parking area or potentially towed to a more sheltered site (e.g., cove) where it can be safely secured.
7. Heavy riprap wave attenuation boulders placed from the shoreline, parallel to the boat launch ramp (from approximately +15-foot mean lower low water (MLLW) elevation to -4 MLLW elevation). A total of 21 heavy riprap wave attenuators would be installed, with each being approximately 15 cubic yards. The 21 heavy riprap attenuators would be discontinuously spread over an approximately 225-foot by 16-foot area.
8. A 3-foot by 130-foot steel pipe double-tube floating breakwater will be installed parallel to the floating boat launch walkway to reduce wave action and turbulence at the floating dock and boat launch ramp. The double tube float would be anchored in place with three 25,000-pound concrete blocks.
9. Two 3-foot by 130-foot steel pipe float tube breakwaters will be installed parallel to the floating dock to reduce wave action and turbulence at the floating dock and boat launch ramp. The single-tube floats would be anchored using three total 25,000-pound concrete blocks.

Fill Materials

Fill material to construct project roads, pads, boat launch, and breakwater will be a combination of gravel, shot rock, riprap, and pre-cast concrete members.

Gravel material in southeast Alaska is not always readily available, and this is the case in Ketchikan, where the underlying material is primarily comprised of bedrock. To mine this rock for use as fill material, the bedrock must be blasted and then the fractured material needs to be graded to provide a proper mixture of sizes to minimize voids and provide for proper compaction. The blasted material (i.e., shot rock) creates angular material that promotes interlocking between individual particles, which promotes long-term stability. Shot rock can be generated for deeper fills as required by this project in sizes ranging from 18 to 24 inches, with proper compaction between each lift.

Gravel, typically considered particles ranging in size from 1 inch to 3 inches, is more expensive to produce due to the additional processing (e.g., crushing) the material requires. Gravel will be used as a

capping and surfacing material for the project roads and homesite pads to provide for a more readily workable surface that can be smoothed and graded to promote proper drainage. The gravel surface course, approximately 4 to 6 inches deep, will minimize large rock protrusions that create tripping hazards and can result in damaged vehicle tires.

Riprap consists of large stones that can be used as armoring along shorelines or stream, river, or lake banks. Riprap will be used to create the boat launch ramp wave attenuating breakwater from the high tide line (approximately 19.7 feet mean lower low water [MLLW]) to -4.0 feet MLLW. A total of 21 riprap wave attenuators are planned with each individual attenuator being approximately 15 cubic yards each.

Pre-cast concrete planks will be placed to make up the boat launch surface. The concrete planks will be placed directly on the prepared ground surface, extending from the edge of the boat launch apron to -4.0 feet MLLW at an approximate 13.0% slope. The concrete planks will be precast at an offsite location and barged to the project site for placement. Approximately 104 cubic yards of material is anticipated to be excavated to provide the necessary surface preparation before the concrete planks are installed.

Fill materials by Project element, including the boat launch and parking area, are summarized in **Table 3**.

Table 3. Fill Areas and Volumes by Project Element

No.	Project Element	Fill Material	Footprint Area (acres)	Fill Volume (cubic yards)	Wetland Impacts (acres)
Roads					
1	Stensland Avenue	Shot rock, gravel, riprap	1.075	Shot rock: 6,639 Gravel: 729 Riprap: 60 Total: 7,368	0.910
2	Elden Loop	Shot rock, gravel, riprap [1]	0.563	Shot rock: 6,011 Gravel: 439 Riprap: 200 Total: 6,450	0.510
Boat Launch					
3	Boat launch and parking area	Shot rock, gravel	0.173	Shot rock: 1,155 Gravel: 61 Total: 1,216	0.120
4	Boat launch ramp preparation (below OHW)	Excavation	0.101	Excavation: 104	
5	Boat launch ramp structure (below OHW)	Precast concrete planks		Concrete planks: 164	
6	Breakwater	Riprap	0.016	323	0.016
7	Floating boat ramp, dock, and piles	Pile (12, 16-inch piles) supported floating ramp	0.000	Not applicable	<0.000
8	Dock anchor blocks (6 total)	25,000-pound concrete blocks	0.008	37	0.008
House Pads					
9	House pads (10 total)	Shot rock, gravel	2.100	Shot rock: 12,742 Gravel: 671 Total: 13,413	1.425

No.	Project Element	Fill Material	Footprint Area (acres)	Fill Volume (cubic yards)	Wetland Impacts (acres)
9-a	House pad, Block 1, Lot 1		0.168	Shot rock: 1,231 Gravel: 65 Total: 1,296	0.168
9-b	House pad, Block 1, Lot 2		0.190	Shot rock: 1,231 Gravel: 66 Total: 1,315	0.0000
9-c	House pad, Block 1, Lot 3		0.229	Shot rock: 1,435 Gravel: 76 Total: 1,511	0.036
9-d	House pad, Block 1, Lot 4		0.223	Shot rock: 1,478 Gravel: 78 Total: 1,556	0.007
9-e	House pad, Block 1, Lot 6 [2]		0.161	Shot rock: 1,478 Gravel: 78 Total: 1,556	0.0890
9-f	House pad, Block 1, Lot 7		0.199	Shot rock: 578 Gravel: 30 Total: 608	0.199
9-g	House pad, Block 2, Lot 1		0.243	Shot rock: 1,425 Gravel: 75 Total: 1,500	0.243
9-h	House pad, Block 2, Lot 2		0.227	Shot rock: 1,390 Gravel: 293 Total: 1,463	0.227
9-i	House pad, Block 2, Lot 3		0.201	Shot rock: 1,381 Gravel: 73 Total: 1,454	0.201
9-j	House pad, Block 2, Lot 4		0.259	Shot rock: 1,449 Gravel: 76 Total: 1,525:	0.259
		Project Totals	**4.035**	**Shot rock: 24,078** **Gravel: 1,769** **Riprap: 583** **Concrete Planks: 164** **Concrete Blocks: 37** **Excavation: 104** **Total Fill: 26,625**	**2.987**

NOTE: OHW (ordinary high water). The boat launch and parking area is designated as Block 1, Lot 5 in the *Project Engineering Design Drawings*.

[1] Estimated volume of riprap below ordinary high water is approximately 10% of total (approximately 20 cubic yards)

[2] The homesite at Block 1, Lot 6 is an existing lot with a partially constructed residence that was previously permitted by the prior property owners.