Juneau Access Improvements Project
Final Supplemental Environmental Impact Statement

2014 Update to Appendix R
Bald Eagle Technical Report
2017 Errata

Prepared for:

Alaska Department of Transportation
& Public Facilities
6860 Glacier Highway
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State Project Number: 71100
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2017

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2017 ERRATA
2014 Update to Appendix R – Bald Eagle Technical Report

ERRATA

Page, Section	Reads	Should Read (changes shown)
Page 2-3, Section 1.1.2, para 1	Similar to Alternative 1, Alternative 1B includes a continuation of mainline ferry service in Lynn Canal; the AMHS would continue to be the NHS route from Juneau to Haines and Skagway; no new roads or ferry terminals would be built; and in addition to the Day Boat ACFs, programmed improvements include improved vehicle and passenger staging areas at the Auke Bay and Haines ferry terminals to optimize traffic flow on and off the Day Boat ACFs as well as expansion of the Haines Ferry Terminal to include a new double bow berth to accommodate the Day Boat ACFs. Service to other communities would remain the same as with the No Action Alternative. Alternative 1B keeps the M/V Malaspina in service after the second Day Boat ACF is brought online to provide additional capacity in Lynn Canal.	Similar to Alternative 1, Alternative 1B includes: a continuation of mainline ferry service in Lynn Canal; the AMHS would continue to be the NHS route from Juneau to Haines and Skagway; no new roads or ferry terminals would be built; and in addition to the Day Boat ACFs, programmed improvements include improved vehicle and passenger staging areas at the Auke Bay and Haines Ferry Terminals to optimize traffic flow on and off the Day Boat ACFs as well as expansion of the Haines Ferry Terminal to include a new double bow berth to accommodate the Day Boat ACFs. Service to other communities would remain the same as Alternative 1 – No Action. Alternative 1B keeps the *M/V Malaspina* in service after the second Day Boat ACF is brought online to provide additional capacity in Lynn Canal.
Page 3, Section 1.1.2, para 2	During the summer, the M/V Malaspina would make one round trip per day seven days per week on a Skagway-Auke Bay-Skagway route, while one Day Boat ACF would make one round trip between Auke Bay and Haines six days per week, and one would make two round trips per day between Haines and Skagway six days per week. The Day Boat ACFs would not sail on the seventh day because the mainliner would be on a similar schedule.	During the summer, the *M/V Malaspina* would make one round trip per day five days per week on a Skagway-Auke Bay-Skagway route. On the sixth day, the *M/V Malaspina* would sail on the Skagway-Auke Bay-Haines-Skagway route, and on the seventh day, it would sail that route in reverse (Skagway-Haines-Auke Bay-Skagway). One Day Boat ACF would make one round trip between Auke Bay and Haines seven days per week. The other Day Boat ACF would make two round trips per day between Haines and Skagway six days per week; it would not sail on the seventh day because the mainliner would be on a similar schedule.
Page 12, Section 5.2, para 1	A total of 136 bald eagle nests are located less than 0.5 mile from the work limits of the East Lynn Canal Highway alternative. Figures 2 through 8 show the proposed highway alignment for Alternative 2B and indicate the approximate	A total of 137 bald eagle nests are located less than 0.5 mile from the highway work limits of the East Lynn Canal Highway alternative. Figures 2 through 8 show the proposed highway alignment for Alternative 2B and

Page, Section	Reads	Should Read (changes shown)
	distances of the eagle nests from the work limits of the highway. Construction activity would occur within 660 feet of 99 of those nests (73 percent of nests within 0.5 mile of the work limits). Sixty-three of the 99 nests are located within 330 feet of the project work limits.	indicate the approximate distances of the eagle nests from the work limits of the highway. Construction activity would occur within 660 feet of 101 of those nests (74 percent of nests within 0.5 mile of the work limits). Sixty-five of the 101 nests are located within 330 feet of the project work limits.
Page 13, Section 5.3, para 1	A total of 63 bald eagle nests are located within 0.5 mile of the work limits of Alternative 3 (shown in Figures 2, 3, and 9 through 13). This total includes 16 nests on the east side of Lynn Canal between Echo Cove and Sawmill Cove. A total of 48 nests (76 percent of nests within 0.5 mile of the work limits) are located within 660 feet of the work limits. Thirty of the 48 nests are located less than 330 feet from the project work limits.	A total of 79 bald eagle nests are located within 0.5 mile of the work limits of Alternative 3 (shown in Figures 2, 3, and 9 through 13). A total of 56 nests (71 percent of nests within 0.5 mile of the work limits) are located within 660 feet of the work limits. Thirty two of the 56 nests are located less than 330 feet from the project work limits.
Page 14, Section 5.4, para 1	A total of 23 bald eagle nests are documented within 0.5 mile of the ferry route and a new proposed ferry terminal. Only two nests are location within 660 feet of the work limits for the highway portion of these alternatives (Table 5-1). These two nests are located along the existing Glacier Highway between Echo Cove and Cascade Point and are generally accustomed to daily activity.	A total of 16 bald eagle nests are documented within 0.5 mile of the highway route. Only eight nests are located within 660 feet of the work limits for the highway portion of these alternatives (Table 5-1). These nests are located along the existing Glacier Highway between Echo Cove and Cascade Point and are generally accustomed to daily activity.
Page 14, Section 5.4, para 2	During operation of the Glacier Highway extension to Sawmill Cove, maintenance blasting by helicopter along avalanche-prone areas of the highway would be conducted during the nest selection period in late April, as needed, to protect the highway and travelers from late spring avalanches. Bald eagle nests located in or near the avalanche-prone areas may be impacted by intermittent helicopter operations and blasting noise. Charges would be dropped into avalanche trigger zones generally located well above timberline, relatively far from eagle nests along the shoreline. Response to such disturbances may include	*Paragraph deleted.*

<table>
<tr><th>Page, Section</th><th>Reads</th><th>Should Read (changes shown)</th></tr>
<tr><td></td><td>flushing from the nest, or abandoning the nest (Steidl and Anthony, 2000). Maintenance blasting along avalanche-prone areas of Alternatives 4B and 4D could occur within 0.5 mile of up to 2 nests in the most severe snow circumstances, but in a typical spring fewer might be affected. DOT&PF would coordinate with USFWS to determine if a Disturbance Permit is necessary for annual maintenance blasting in avalanche areas.</td><td></td></tr>
<tr><td>Page 13, Table 5-1</td><td colspan="2">Table 5-1. Number of Bald Eagle Nests within the Study Area and Distance to Work Limits of Proposed Alignments, is replaced in its entirety with the following:
<table>
<tr><th>Distance from Highway Work Limits</th><th>Alternative 2B</th><th>Alternative 3</th><th>Alternative 4B</th><th>Alternative 4D</th></tr>
<tr><td>0-30 feet</td><td>7</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>31-60 feet</td><td>18</td><td>3</td><td>0</td><td>0</td></tr>
<tr><td>61-100 feet</td><td>11</td><td>4</td><td>0</td><td>0</td></tr>
<tr><td>101-330 feet</td><td>29</td><td>25</td><td>2</td><td>2</td></tr>
<tr><td>331-660 feet</td><td>36</td><td>24</td><td>6</td><td>6</td></tr>
<tr><td>660 feet - 0.5 mile</td><td>36</td><td>23</td><td>8</td><td>8</td></tr>
<tr><td>Total Nests within 0.5 mile</td><td>137</td><td>79</td><td>16</td><td>16</td></tr>
</table></td></tr>
<tr><td>Page 15, Section 6.0</td><td colspan="2">Section 6.0 is replaced in its entirety with the following:
The No Action Alternative would not result in impacts to bald eagles; therefore, no mitigation is required or proposed.</td></tr>
<tr><td>Table B-1, Attachment A</td><td colspan="2">Table B-1 is replaced in its entirety with attached table (removed entries that are farther than 0.5 mile from the alignment and removed station numbering).</td></tr>
</table>

Page, Section	Reads	Should Read (changes shown)
Table B-2, Attachment A	*Table B-2 is replaced in its entirety with attached table (removed entries that are farther than 0.5 mile from the alignment and removed station numbering).*	

Table B-1. Bald Eagle Nest Locations East Lynn Canal [REPLACEMENT TABLE]				
Nest number (DOT&PF No. and USFWS No.)	**Original Table B-1 offset from work limits (feet)**	**Offset from construction centerline (feet)[1]**	**Offset from work limits (feet)[2]**	**Comments for primary zone encroachments[3]**
EGL085 (FWS#4)	382	657 LT	628	N/A
EGL121 (FWS#90)	357	405 LT	382	N/A
EGL166 (FWS#99)	2122	509 LT	486	N/A
EGL154 (FWS#93)	Surveyed post FEIS	397 LT	362	N/A
EGL153 (FWS#94)	593	548 LT	507	N/A
EGL152 (EGL139)	Surveyed post FEIS	2,102 LT	2,039	N/A
EGL082 (FWS#30B)	1,361	1,386 LT	1,315	N/A
EGL165	Surveyed post FEIS	2,032 LT	1,980	N/A
EGL302	Surveyed post FEIS	1,868 LT	1,758	N/A
EGL081 (FWS#30A)	2,194	1,781 LT	1,669	N/A
EGL080 (FWS#30)	1,384	1,207 LT	1,174	N/A
EGL301	Surveyed post FEIS	1,574 LT	1,557	N/A
EGL176 (FWS#100)	Surveyed post FEIS	1,681 LT	1,656	N/A
EGL299	Surveyed post FEIS	616 LT	502	N/A
EGL300	Surveyed post FEIS	295 LT	136	N/A
EGL079 (FWS#31)	333	385 LT	304	Downhill alignment would fill onto beach. Alignment constrained by steep uphill slope
EGL078 (FWS#32)	1,609	1,646 LT	1,596	N/A
EGL077 (FWS#32A)	1,637	1,907 LT	1,833	N/A
EGL298	Surveyed post FEIS	1,983 LT	1,948	N/A
EGL120 (FWS#8)	686	466 LT	388	N/A
EGL164	Surveyed post FEIS	498 LT	382	N/A
EGL076 (FWS#2)	44	495 LT	421	N/A
EGL119 (FWS#4A)	157	706 LT	626	N/A

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EGL074 (FWS#4)	104	413 LT	370	N/A
EGL294	Surveyed post FEIS	76 LT	23	New nest - downhill alignment would fill into herring spawning area. Uphill alignment constrained by high cliffs
EGL163	Surveyed post FEIS	177 RT	151	New nest - alignment is downhill of nest due to extremely steep uphill terrain. Alignment constrained by herring spawning area.
EGL292	Surveyed post FEIS	62 RT	32	New nest - alignment is downhill of nest due to extremely steep uphill terrain. Alignment constrained by herring spawning area.
EGL181	Surveyed post FEIS	2,306 LT	2,246	N/A
EGL162	Surveyed post FEIS	1,349 RT	1,286	N/A
EGL161	Surveyed post FEIS	1,738 RT	1,683	N/A
EGL160	Surveyed post FEIS	1,499 RT	1,444	N/A
EGL180	Surveyed post FEIS	385 RT	331	N/A
EGL287	Surveyed post FEIS	736 RT	702	N/A
EGL175 (FWS#35)	Surveyed post FEIS	514 RT	483	N/A
EGL174 (FWS#36)	Surveyed post FEIS	186 LT	152	Alignment location driven by need to avoid wetlands, other eagle nests and the need to minimize the impacts at the beaver slough crossing
EGL290	Surveyed post FEIS	733 LT	717	N/A
EGL138 (FWS#85A)	N/A	436 LT	323	Nest downhill from alignment along lace river
EGL073 (FWS#?)	>330	1,033 LT	954	N/A
EGL116 (FWS#7)	775	1,614 LT	1,547	N/A
EGL072 (FWS#69	1211	1,406 LT	1,366	N/A
EGL151	Surveyed post FEIS	2,016 LT	1,979	N/A
EGL284	Surveyed post FEIS	1,998 LT	1,965	N/A
EGL071 (FWS#102A)	685	745 LT	713	N/A
EGL070 (FWS#102)	N/A	1,851 LT	1,808	N/A

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EGL066 (FWS#46C)	1706	1,606 LT	1,548	N/A
EGL065 (FWS#46B)	1315	1,279 LT	1,211	N/A
EGL064 (FWS#46)	831	799 LT	729	N/A
EGL274	Surveyed post FEIS	2,465 LT	2,428	N/A
EGL063 (FWS#46A)	517	604 LT	567	N/A
EGL057 (FWS#99)	2122	1,638 LT	1,600	N/A
EGL253	Surveyed post FEIS	1,738 LT	1,702	N/A
EGL056 (FWS#97A)	962	648 LT	601	N/A
EGL251	Surveyed post FEIS	1,081 LT	1,056	N/A
EGL055 (FWS#97)	729	1,063 LT	1,022	N/A
EGL054 (FWS#89)	910	892 LT	849	N/A
EGL053 (FWS#64)	439	455 LT	418	N/A
EGL247	Surveyed post FEIS	480 LT	443	N/A
EGL248	Surveyed post FEIS	484 LT	453	N/A
EGL052 (FWS#65)	417	434 LT	393	N/A
EGL246	Surveyed post FEIS	471 LT	447	N/A
EGL050 (FWS#95)	707	528 LT	463	N/A
EGL244	Surveyed post FEIS	656 LT	595	N/A
EGL245	Surveyed post FEIS	522 LT	476	N/A
EGL049 (FWS#94)	593	540 LT	509	N/A
EGL243	Surveyed post FEIS	467 LT	438	N/A
EGL241	Surveyed post FEIS	734 LT	707	N/A
EGL242	Surveyed post FEIS	646 LT	615	N/A

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EGL048 (FWS#27)	709	743 LT	712	N/A
EGL047 (FWS#83)	498	523 LT	490	N/A
EGL240	Surveyed post FEIS	609 LT	577	N/A
EGL115 (FWS#57)	82	182 LT	154	Offset increased. The nest buffer encompasses the beach and an uphill bench at the base of steep terrain. The beach alignment would have had cuts into the cliff face below the nest tree, so the alignment was set on the east edge of the bench uphill from the nest.
EGL159	Surveyed post FEIS	196 RT	158	The nest buffer encompasses the beach and an uphill bench at the base of steep terrain. The beach alignment would have had cuts into the cliff face below the nest tree, so the alignment was set on the east edge of the bench uphill from the nest.
EGL114 (FWS#82)	113	142 RT	113	This nest is on the base of a rock knob overlooking a beach area. Alignments on either side of the tree would enter the buffer. The beach alignment was chosen for its smaller footprint (fill vs. Rock cuts) and to avoid encroachment into nest FWS#81 buffer.
EGL113 (FWS#81)	355	389 RT	361	N/A
EGL170 (FWS#118)	Surveyed post FEIS	85 RT	49	New nest - alignment downhill of nest due to very steep slopes on the uphill side. The alignment is constrained on the downhill side by the high tide line.
EGL111 (FWS#81A)	296	276 RT	247	Nest sets at the bottom of very steep terrain, with relatively gradual slope down to the beach. Alignment on the outer edge of buffer on the beach.
EGL112 (FWS#81B)	366	361 RT	333	N/A
EGL236	Surveyed post FEIS	62 RT	30	New nest - alignment downhill of nest due to very steep slopes on the uphill side. The alignment is constrained on the downhill side by the high tide line.

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Nest number (DOT&PF No. and USFWS No.)	**Original Table B-1 offset from work limits (feet)**	**Offset from construction centerline (feet)[1]**	**Offset from work limits (feet)[2]**	**Comments for primary zone encroachments[3]**
EGL109 (FWS#79A)	110	231 LT	119	Nest on narrow bench a short distance from waterside cliffs and deep water to the west and steep terrain to the east. The alignment loops uphill to the base of a cliff in the steepest part of the slope to minimize encroachment.
EGL108 (FWS#79)	133	179 LT	53	Close to nest FWS#79, it is on a narrow bench a short distance from waterside cliffs and deep water to the west and steep terrain to the east. The alignment loops uphill to the base of a cliff in the steepest part of the slope to minimize encroachment.
EGL234	Surveyed post FEIS	130 LT	94	New nest - grouped with EGL108 and EGL109. The alignment loops uphill to the base of a cliff in the steepest part of the slope to minimize encroachment.
EGL233	Surveyed post FEIS	62 RT	30	New nest – grouped with EGL107. The alignment loops uphill to the base of a cliff in the steepest part of the slope to minimize encroachment.
EGL107 (FWS#78)	109	148 RT	106	Nest located on very steep hillside 160 feet from beach. Alignment spotted on bench near beach.
EGL232	Surveyed post FEIS	136 RT	104	New nest - grouped with EGL107. The alignment loops uphill to the base of a cliff in the steepest part of the slope to minimize encroachment.
EGL106 (FWS#32)	291	285 LT	156	Nest located at top of beach cliff into deep water. Alignment set as far as possible to the east at the base of very steep slope.
EGL105 (FWS#77)	71	106 LT	71	Nest positioned midway between beach and base of very steep slope. Alignment set at the base of the steep slope.
EGL229	Surveyed post FEIS	81 RT	54	New nest - nest located at the base of a very steep slope. The alignment is positioned downhill of the nest as far as possible while avoiding beach fills.
EGL103 (FWS#84)	88	114 LT	27	Nest is located on a bench above beach cliffs. The alignment is positioned uphill as far a possible at the base of very steep terrain.
EGL101 (FWS#93A)	217	87 RT	56	Nest is under cliffs in very rugged terrain. Alignment is positioned downhill of nest and above beach cliffs to avoid deep water fills and to minimize encroachments at nests EGL102 and EGL149 ahead on line.

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EGL102 (FWS#93)	76	127 LT	31	Nest is in the middle of a 100 foot wide bench between beach cliffs and very difficult uphill terrain. The alignment is located uphill as far as possible to minimize encroachment into the buffer while minimizing encroachment into the EGL101 buffer.
EGL149	Surveyed post FEIS	132 LT	58	Nest is next to EGL102 - the alignment is located uphill as far as possible to minimize encroachment into the buffer while minimizing encroachment into the EGL101 buffer.
EGL227	Surveyed post FEIS	226 RT	196	New nest - nest is located on steep talus slope. Alignment is positioned downhill on the beach at the toe of the talus.
EGL100 (FWS#76)	152	59 RT	29	Nest located high on steep talus slope. The alignment is positioned between the nest and the beach cliffs.
EGL099 (FWS#75)	93	169 LT	82	Nest is at the top of beach cliff above deep water. East buffer is in very steep terrain. Alignment is at the base of the steep terrain.
EGL178	Surveyed post FEIS	685 RT	655	N/A
EGL177	Surveyed post FEIS	549 RT	519	N/A
EGL124 (FWS#?)	91	103 RT	75	Nest is on steep terrain under cliffs. Alignment is on bench just above beach cliffs to allow it to be positioned above EGL125.
EGL125 (FWS#?)	135	162 LT	132	Nest on top of beach cliff, forcing alignment uphill to the base of steep talus slope.
EGL215	Surveyed post FEIS	504 RT	475	N/A
EGL098 (FWS#74)	76	102 RT	73	Nest is just above the beach cliff and below very steep terrain. Beach fill alignment is the minimum impact alignment.
EGL095 (FWS#38C)	53	116 LT	34	Nest is just above the beach on a talus slope. To avoid beach fill, alignment loops above nest on a fill across the gradual talus slope.
EGL096 (FWS#38B)	94	205 LT	150	Nest is the top of a low beach cliff and at the toe of a gradual talus slope. The alignment continues from EGL095 and crosses this slope above the nest on a slight bench.
EGL213	Surveyed post FEIS	72 RT	44	New nest - nest located at the base of a steep slope. The alignment drops off a bench and runs below the nest, but off of the shoreline.

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EGL146	Surveyed post FEIS	101 RT	68	New nest - nest located at the base of a steep slope. The alignment drops off a bench and runs below the nest, but off of the shoreline.
EGL212	Surveyed post FEIS	64 RT	35	New nest - nest located on bench at base of steep mega-talus slope. Alignment runs below the nest and above the high tide line.
EGL211	Surveyed post FEIS	68 RT	37	New nest - nest located near the base of very steep terrain. The alignment angles below this nest and above the three nests ahead on line.
EGL158	Surveyed post FEIS	127 LT	99	New nest - on steep slope 108 feet from high tide line. Alignment runs above nest to avoid deep water fills and to get above nests EGL094 and EGL209. Constrained by very steep uphill slope
EGL094 (FWS#41)	33	245 LT	155	Nest on steep talus slope close to beach. Alignment runs uphill to avoid deep water fills. Constrained by very steep uphill slope
EGL209	Surveyed post FEIS	145 LT	57	New nest - nest on steep talus slope. Alignment uphill of nest. I constrained by downhill by preceding nests and uphill by very steep terrain.
EGL034 (FWS#36)	190	349 LT	219	Nest off beach on steep terrain. Alignment towards uphill limits of buffer at base of cliffs.
EGL033 (FWS#35A)	99	139 LT`	58	Alignment set at base of steep terrain on uphill side of nest. Downhill alignment precluded by beach cliffs and beach location of nest FWS#35.
EGL032 (FWS#35)	229	303 LT	253	Nest on bench above beach cliffs. Alignment moved uphill to base of steep terrain near outer limits of buffer.
EGL206	Surveyed post FEIS	507 LT	455	N/A
EGL157 (FWS#607)	65	65 LT	30	New nest? May be project nest 607 in Table B-1. Nest located on a bench near the bottom of a very steep talus slope. Below the nest are steep beach cliffs. The alignment runs uphill of the nest on a fill against the talus. The alignment is constrained to very steep terrain and the talus both back on line, and ahead on line.
EGL031 (FWS#39)	56	94 RT	52	Nest located on steep hillside. Very steep terrain back on line prevented moving alignment for an uphill encroachment. Beach alignment is the minimum impact alignment.

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Nest number (DOT&PF No. and USFWS No.)	**Original Table B-1 offset from work limits (feet)**	**Offset from construction centerline (feet)[1]**	**Offset from work limits (feet)[2]**	**Comments for primary zone encroachments[3]**
EGL156	Surveyed post FEIS	395 LT	363	N/A
EGL145	Surveyed post FEIS	117 LT	61	Nest is located on a bench above beach cliffs and deep water fills. The alignment runs above the nest, and is constrained by steep talus slopes back on line, and high bedrock cliffs ahead on line.
EGL029 (FWS#32)	54	124 LT	32	Nest is located on a bench above beach cliffs and deep water fills. The alignment is pinned the base of high cliffs on the uphill side of the nest.
EGL028 (FWS#31)	76	270 LT	240	Nest on bench above initial beach cliff. Alignment set on top of next cliff and at the base of steep terrain.
EGL027 (FWS#30)	97	207 LT	164	Nest is located on steep talus slope. In order to avoid deep water fills, the alignment crosses the talus slope above the nest and at the toe of very steep slopes.
EGL026 (FWS#29)	86	190 LT	96	Nest is located on steep talus slope. In order to avoid deep water fills, the alignment crosses the talus slope above the nest and at the toe of very steep slopes.
EGL143	Surveyed post FEIS	152 LT	117	Nest located on steep talus slopes just above beach. The alignment avoids deep water fills by crossing above the nest. The alignment is constrained by very steep slopes and cliffs ahead on line.
EGL127 (FWS#?)	93	317 LT	283	Alignment determined by downhill sea lion haulout and uphill cliffs.
EGL142	Surveyed post FEIS	324 LT	280	Nest is located on a very steep slope above the beach cliffs. The alignment is uphill of the nest due to the need to skirt around the sea lion haulout at grand. It is constrained by steep cliffs at the nest location.
EGL025 (FWS#27B)	74	548 LT	487	N/A
EGL024 (FWS#27A)	75	132 LT	47	Nest on steep hillside below cliffs. Alignment constrained to location by steep terrain before and after the nest and deep-water beach fills.
EGL204	Surveyed post FEIS	71 RT	389	New nest - located on steep slope back from beach. Alignment is downhill from nest where it is constrained by beach cliffs and very steep terrain back on line.

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Nest number (DOT&PF No. and USFWS No.)	**Original Table B-1 offset from work limits (feet)**	**Offset from construction centerline (feet)[1]**	**Offset from work limits (feet)[2]**	**Comments for primary zone encroachments[3]**
EGL023 (FWS#25)	94	104 RT	76	Nest on bench below very high cliffs. Alignment runs below nest into beach fills which constrain the alignment from further increases in offset.
EGL202	Surveyed post FEIS	86 LT	38	New nest - nest located near the beach, which prevents running the alignment on the downhill side of the nest. The alignment is on the uphill side of the nest, and is constrained by steep slopes and nest EGL093.
EGL093 (FWS#24)	44	100 RT	61	Nest on very steep slope below cliffs, pushed the alignment onto the beach. Deep water constrains the alignment from increasing the offset from the nest.
EGL021 (FWS#44A)	139	184 LT	146	Nest located on a wide bench above the beach cliff. The alignment is pinned below a cliff preceding the nest and has to drop quickly past the nest to get below a massive vertical face. A downhill alignment would encroach on the buffer and have back slopes daylighting near the base of the tree.
EGL168 (FWS#66)	Surveyed post FEIS	63 RT	31	Nest at the foot of a very steep slope. The alignment set to the west, where it is constrained by intertidal wetlands.
EGL020 (FWS#44)	270	248 RT	207	Nest is on a relatively gradual slope. The alignment is on the beach at the base of the slope. The alignment is constrained by intertidal wetlands.
EGL016 (FWS#42)	771	720 RT	675	N/A
EGL015 (FWS#23B)	340	642 RT	314	Nest high on steep slope. Alignment follows base of slope and is constrained by wetlands ahead on line.
EGL196	Surveyed post FEIS	82 LT	21	N/A
EGL014 (FWS#23A)	197	234 RT	176	The nest is on the east edge of a wide bench that abuts very tough terrain. Alignment is on the flats of the Katzehin delta in outer limits of the buffer.

[1] Offset from Centerline of alignment based on current Draft SEIS Alignment (RT = right; LT = left)

[2] Offset from edge of work limits based on current Draft SEIS Alignment

[3] Nests that are 330 feet or less from the work limits are considered within the primary zone.

[4] Offset from edge of work limits was not calculated for nests greater than 0.5 mile.

Table B-2. Bald Eagle Nest Locations West Lynn Canal [REPLACEMENT TABLE]				
Nest number (DOT&PF No. and USFWS No.)	**Original Table B-2 offset from work limits (feet)**	**Offset from construction centerline (feet)[1]**	**Offset from work limits (feet)[2,3,4]**	**Comments for primary zone encroachments[3]**
EGL301 (FWS#73)	Surveyed post FEIS	2,292	2,270	Nest is southeast of the project start point
EGL360 (FWS#8)	164	193 RT	164	Alignment on bench uphill from nest to get around rock knob ahead on line. Beach alignment would have encroached on buffer and increased the impacts to FWS#9.
EGL361 (FWS#9)	155	188 RT	102	Nest on east edge of bench overlooking beach. Beach alignment would have had cut daylighting near base of tree. Alignment at base of mountain uphill from tree.
EGL362 (FWS#57)	139	314 RT	247	Buffer encroachments on beach and uphill alignments. Chose lesser impact on uphill bench at base of hill.
EGL305 (FWS#6)	93	183 RT	128	Nest overlooking beach at the end of a ridge. Beach alignment would most likely be a "take". Chose an uphill thru-cut.
EGL306 (FWS#7)	101	182 RT	167	Nest overlooking beach on the south-facing slope of ridge that extends to the beach. Beach alignment would have had cut daylighting near base of tree. Moved alignment uphill as far a possible into a thru- cut.
EGL307 (FWS#68)	85	123 RT	84	Nest overlooking beach on the north facing slope of ridge that extends to the beach. Beach alignment would have had cut daylighting near base of tree. Alignment exits thru-cut from FWS#7 and runs along the back edge a bench uphill from the nest.
EGL363 (FWS#43)	381	414 LT	389	N/A
EGL378	Surveyed post FEIS	372 RT	434	N/A
EGL308 (FWS#43A)	81	161 RT	61	Nest on top of cliff overlooking Endicott R. Uphill alignment at base of mountain gives greatest offset from nest and best approach for Endicott R. Bridge.
EGL364 (FWS#9)	177	213 RT	172	Nest at base of cliff and on beach. This is a karst area. Alignment set at base of mountain as far as possible uphill from nest and karst.

Table B-2. Bald Eagle Nest Locations West Lynn Canal [REPLACEMENT TABLE]				
Nest number (DOT&PF No. and USFWS No.)	**Original Table B-2 offset from work limits (feet)**	**Offset from construction centerline (feet)[1]**	**Offset from work limits (feet)[2,3,4]**	**Comments for primary zone encroachments[3]**
EGL365 (FWS#10)	348	423 RT	391	N/A
EGL313 (FWS#70)	116	166 LT	127	Nest on steep rock bluff. The alignment goes in between EGL313 and EGL379. Only alignment alternative was on the beach.
EGL379	Surveyed post FEIS	106 RT	247	Nest is on top of beach cliff. Uphill alignment avoided undercutting nest incurred on beach alignment
EGL314 (FWS#14A)	54	155 RT	54	Nest on wide bench in karst area. About equal encroachment on alignment uphill and downhill from nest. Chose uphill alignment at base of mountain to stay out of high vulnerability karst.
EGL381	Surveyed post FEIS	771 RT	759	N/A
EGL317 (FWS#91B)	97	143 LT	98	This nest is on a bench between the beach and a steep bluff in a high vulnerability karst area. The alignment moved onto the beach below the nest as the low impact and karst avoidance option.
EGL366 (FWS#91)	150	191 LT	150	This nest is on a bench between the beach and a steep bluff in a high vulnerability karst area. The alignment moved onto the beach below the nest as the low impact and karst avoidance option.
EGL315 (FWS#91A)	140	160 LT	128	Beach alignment, below nest, driven by nests FWS#91 and FWS#91B.
EGL318 (FWS#71)	68	209 RT	100	Nest on top of cliff overlooking the beach and the base of a very steep bluff. Encroachment either way. Beach alignment cut slope would have daylighted close to nest tree. Chose to set alignment at base of bluff uphill of the nest. This set the alignment to avoid encroachment into nest FWS#72 buffer and high vulnerability karst ahead on line.
EGL319 (FWS#72)	606	641 RT	605	N/A
EGL320 (FWS#17)	339	374 RT	342	N/A

Table B-2. Bald Eagle Nest Locations West Lynn Canal [REPLACEMENT TABLE]				
Nest number (DOT&PF No. and USFWS No.)	**Original Table B-2 offset from work limits (feet)**	**Offset from construction centerline (feet)[1]**	**Offset from work limits (feet)[2,3,4]**	**Comments for primary zone encroachments[3]**
EGL385	Surveyed post FEIS	333 RT	274	Nest on top of steep beach cliff. A few hundred feet away from the nest is a knob requiring a cut. Uphill alignment proved to be the minimum impact option to avoid the need for excessive material removal.
EGL321 (FWS#73)	377	414 RT	386	N/A
EGL322 (FWS#18)	589	615 RT	522	N/A
EGL389	Surveyed post FEIS	1,173 RT	1191	N/A
EGL326 (FWS#1A)	438	462 RT	436	N/A
EGL390	Surveyed post FEIS	523 RT	535	N/A
EGL327 (FWS#17)	338	373 RT	338	N/A
EGL367 (FWS#18A)	593	632 RT	601	N/A
EGL328 (FWS#18)	N/A	769 RT	728	N/A
EGL369 (FWS#19)	313	341 RT	314	Nest located on wide bench between beach and base of mountain. Choose minimum impact alignment at base of mountain uphill from nest.
EGL392	Surveyed post FEIS	459 RT	488	N/A
EGL393	Surveyed post FEIS	255 RT	174	Nest located on wide bench above beach. High beach cliffs ahead on line forced alignment above nest. The road alignment goes in between EGL393 and EGL330 in order to equally avoid each nest.
EGL330 (FWS#10A)	123	152 LT	121	Nest buffer encompasses the beach and steep uphill terrain. Buffer encroachment about the same uphill and downhill. Choose downhill alignment for the easier terrain and smaller footprint.
EGL331 (FWS#20A)	284	328 RT	278	Nest located on top of cliff above beach. Minimum impact alignment set on uphill bench at base of mountain.

Table B-2. Bald Eagle Nest Locations West Lynn Canal [REPLACEMENT TABLE]				
Nest number (DOT&PF No. and USFWS No.)	**Original Table B-2 offset from work limits (feet)**	**Offset from construction centerline (feet)[1]**	**Offset from work limits (feet)[2,3,4]**	**Comments for primary zone encroachments[3]**
EGL370 (FWS#20)	145	192 RT	144	Nest located on top of cliff above beach. Minimum impact alignment set on uphill bench at base of mountain.
EGL332 (FWS#20)	N/A	274 RT	230	N/A
EGL333 (FWS#21)	1242	1,269 RT	1,241	N/A
EGL334 (FWS#7)	240	277 RT	245	Nest located on top of cliff above beach. Minimum impact alignment set on uphill bench at base of mountain.
EGL371 (FWS#20)	226	258 RT	224	Nest located at the base of cliff and on the beach. Set the alignment at back edge of uphill bench at the. Base of the mountain.
EGL396 (FWS#19)	48	144 LT	106	Nest located on top high cliffs approximately 450 feet from the beach. Alignment located between the base of the high cliffs and the beach cliffs.
EGL397	Surveyed post FEIS	457 RT	449	N/A
EGL372 (FWS#4)	358	392 RT	357	N/A
EGL335 (FWS#23)	680	715 RT	664	N/A
EGL398	Surveyed post FEIS	913 RT	917	N/A
EGL399	Surveyed post FEIS	243 RT	243	Nest located in wetland flats approximately 1800 feet from beach. Alignment is located west of nest and is constrained by the need to avoid wetland impacts. This alignment had been previously shifted to avoid wetlands.
EGL336 (FWS#24)	2,583	2,615 RT	2,583	N/A
EGL401	Surveyed post FEIS	2,558 RT	2,533	N/A
EGL337 (FWS#25A)	2196	2,220 RT	2,194	N/A
EGL338 (FWS#6)	219	273 RT	222	Nest located at the base of cliff and on the beach. Set the alignment at back edge of uphill bench at the base of a steep cliff.

Table B-2. Bald Eagle Nest Locations West Lynn Canal [REPLACEMENT TABLE]				
Nest number (DOT&PF No. and USFWS No.)	**Original Table B-2 offset from work limits (feet)**	**Offset from construction centerline (feet)[1]**	**Offset from work limits (feet)[2,3,4]**	**Comments for primary zone encroachments[3]**
EGL402	Surveyed post FEIS	115 RT	421	Nest is located on the top of beach cliffs. The alignment is located west of the nest at the base of steep terrain to avoid beach alignment cutslope impacts to nest tree and tideland fills.
EGL339 (FWS#17)	260	310 RT	260	Nest located at the base of cliff and on the beach. Set the alignment at back edge of uphill bench at the base of the mountain.
EGL340 (FWS#17A)	1,008	1,036 RT	977	N/A
EGL403	Surveyed post FEIS	70 LT	52	Nest located on bench above beach cliffs. To avoid steep terrain and fill impacts to the nest, the alignment was shifted downhill to the top of the beach cliffs.
EGL404	Surveyed post FEIS	369 RT	334	N/A
EGL341 (FWS#8A)	1,404	1,512 RT	1,490	N/A
EGL342 (FWS#8)	1,041	1,081 RT	1,039	N/A
EGL406	Surveyed post FEIS	79 RT	51	Nest located on top of beach cliff. The alignment was moved uphill to avoid beach alignment, tideland fills and cut slope impacts to nest tree.
EGL343 (FWS#28)	2399	1,380 LT	1349	N/A
EGL344 (FWS#15)	1345	2,434 LT	2402	N/A
EGL355 (FWS#?)	N/A	436 RT	421	N/A
EGL373 (FWS#29)	368	421 RT	406	N/A

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[2] Offset from edge of work limits based on current Draft SEIS Alignment

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[4] Offset from edge of work limits was not calculated for nests greater than 0.5 mile.