

Eagle River Greenbelt



Access Pathway Evaluation

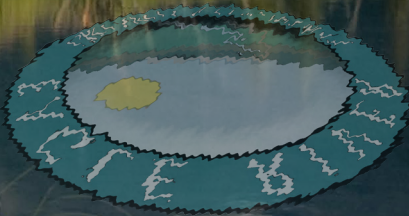


Photo courtesy of Jim Wood



Eagle River Greenbelt Access Pathway Evaluation Report

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June 2014



Executive Summary

The Eagle River Greenbelt Multi-Use Trail, also called the Eagle River Greenbelt Access Pathway (ERGAP), is a proposed 15.3-mile long, eight-foot wide, multi-use trail that would follow Eagle River for much of its length. Much of the ERGAP lies within the Eagle River floodplain and is within the boundaries of Chugach State Park (CSP), one of the largest state parks in the United States, encompassing approximately 495,000 acres.

This report was produced in June of 2014 by Luke Randall of the Department of Natural Resources, Division of Parks and Outdoor Recreation, Office of Design and Construction (DNR-DPOR) to evaluate existing site plans and other planning documents; re-evaluate existing environmental studies; investigate current land status; and update construction cost estimate worksheets.



Morning Beaver Ponds, Photo Courtesy of Jim Wood



The purpose of this report is to provide decision makers with sufficient information to plan and program future facility improvements as well as identify the reasons why the original project dissolved.

The report also details the steps required to restart project development and includes estimated costs. This report:

- Identifies past planning efforts;
- Documents previous agency and public comments;
- Offers planning level cost estimates;
- Discusses past challenges;
- Recommends future project planning development.

The past preliminary programming for this proposed project identified three alternatives and based on agency and public comment, narrowed the focus to one preferred alternative. As the planning effort advanced to the Environmental Assessment (EA), the environmental and land acquisition challenges for the project led the Department of Transportation and Public Facilities (DOT&PF) to conclude in 2007 that the no-build alternative would be selected under National Environmental Policy Act (NEPA) guidelines. The project remains on the Anchorage Metropolitan Area Transportation Solutions (AMATS) project list, project no. 701. The 2035 Metropolitan Transportation Plan can be found at <http://www.muni.org/Departments/OCPD/Planning/AMATS/Pages/2035MTP.aspx>

The proposed project hasn't progressed since 2007. Since that time, a multitude of factors have changed and the previously proposed ERGAP alignment will need to be completely reevaluated and the public process, including agency scoping, restarted. If federal funding is required for construction, a complete alignment overhaul will need to occur for Federal Highways Administration (FHWA) to consider participation. The table below is a planning level cost estimate in 2014 dollars with no contingency amounts listed.

Preliminary Cost Estimates	
Project Aspect	\$ Millions
Class V Trail	\$ 11.0
Bridges & Pedestrian Tubes	\$ 3.0
Park Amenities & Elevated Walkways	\$ 2.0
Engineering Design	\$ 2.5
Construction Administration	\$ 2.5
ICAP	\$ 0.5
Additional Right of Way	\$ 2.5
Total	\$ 24.0



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List of Acronyms

ACMP	Alaska Coastal Management Program
ADA	Americans with Disabilities Act
ADF&G	Alaska Department of Fish and Game
AMATS	Anchorage Metropolitan Area Transportation Solution
AWMP	Anchorage Wetlands Management Plan
CSP	Chugach State Park
DNR	Alaska Department of Natural Resources
DOT&PF	Alaska Department of Transportation and Public Facilities
DPOR	Division of Parks and Outdoor Recreation
EA	Environmental Assessment
ERGAP	Eagle River Greenbelt Access pathway
ERNC	Eagle River Nature Center
FHWA	Federal Highway Administration
LERT	Lower Eagle River Trail system
MOA	Municipality of Anchorage
NEPA	National Environmental Policy Act
NWI	National Wetlands Inventory
OHMP	Office of Habitat, Management and Permitting
OHW	Ordinary High Water
ROW	Right-of-Way
SHPO	State Historic Preservation Office
SWPPP	Storm Water Pollution Prevention Plan
TIP	Transportation Involvement Plan
USACE	U.S. Army Corps of Engineers



Introduction

This report is a synthesis and summary of more than a decade of work related to the ERGAP. Many people involved with the preliminary design and planning no longer work for the State of Alaska. Changes frequently occurred during the evolution of the design process, so those who may rely on the information contained in this document should contact Mr. Luke Randall, Project Manager (269-8734), with the DNR-DPOR for the most current concept.

The path was planned to begin at milepost 13.4 of the Glenn Highway and end at the Eagle River Nature Center (ERNC) at milepost 12.7 of the Eagle River Road. The preliminary designs included four trailheads, one parking area, eight viewing areas, two caretaker cabins, a pedestrian tube, and six bridges. Elevated pathways, bridges, and culverts were planned to minimize impacts to water bodies, wetlands, and wildlife.

The project area is located in the Eagle River Valley in South-central Alaska, 13 miles northeast of Anchorage and 28 miles southwest of Palmer. The project corridor is in the Seward Meridian and begins in Township 14 North, Range 2 West, Sections 13 and 14, continues through Township 14 North, Range 1 West, Sections 16 through 16 and 36, and Township 14 North, Range 1 East, Sections 31 and ends in Township 13 North, Range 1 East, Sections 16, 21, 22, 23, 26, 27, 5, 6, 8, and 9 where it ends. See USGS maps Anchorage A-7, B-7, and B-8. The beginning of the project is located at N61° 19'15" Latitude and W149° 34' 12" Longitude. The end of project is located at N61° 18'27" Latitude and W149° 9' 41" Longitude. Project area maps are included in Appendix A.

Purpose and Need

The purpose of this project is to provide safe and legal pedestrian and bicycle access to the Eagle River Greenbelt (hereafter Greenbelt) and CSP. Multiple planning documents have cited a need for this type of pathway, including the CSP Master Plan (1980), the CSP Trail Plan (1986), and the Anchorage Area wide Trails Plan (1997). Since that time, many of the above mentioned plans have changed or are in final draft status.

The project would enhance recreational opportunities by constructing a dedicated multi-use pathway that would be compliant with the Americans with Disabilities Act (ADA). The project would also minimize impacts to wetlands through the use of formal trailheads. Formal trailheads with vehicle parking would connect public-use areas and residential neighborhoods to the Greenbelt and would discourage further development of informal trails within the Greenbelt.

Project History

Eklutna, Inc. originally owned the area now known as the Eagle River Greenbelt. The Corporation managed the lands in an undeveloped state until 1987, when the State of Alaska acquired most of the Greenbelt through a land exchange with Eklutna, Inc. There are still some small parcels of private in-holdings within the Greenbelt, but the majority of land is managed by DNR-DPOR.



The ERGAP is a collaborative effort between DOT&PF, DNR-DPOR, and the Municipality of Anchorage (MOA). These three agencies began working together on this project in the early 2000s. The ERGAP was first included in the Anchorage Metropolitan Area Transportation Solution (AMATS) Transportation Improvement Program (TIP) in 2002. DNR-DPOR took the lead on the preliminary design and EA effort, with DOT&PF providing oversight.

The project was put on hold in late 2007 following a review of the EA when DOT&PF came to the conclusion that the challenges on the project would lead to a no-build alternative under NEPA guidelines. Some of the challenges include environmental constraints, difficulty obtaining land along the proposed alignment, and a tight Right-of-Way (ROW) corridor for Phase 2 (Figure 2, Appendix A). A letter dated March 13th, 2012 from DOT to the Federal Highway Administration (FHWA) explains the details further. This letter can be found in Appendix F.

ERGAP Project History Timeline	
Year	Major Tasks
1980	CSP Master Plan
1981	
1982	
1983	
1984	
1985	
1986	CSP Trail Plan
1987	CSP - Eklutna Inc. Land Exchange
1988	
1989	
1990	
1991	
1992	
1993	MOA Chugiak-Eagle River Comprehensive Plan
1994	
1995	ERGAP Project Nomination Package
1996	
1997	MOA Area Wide Trails Plan
1998	
1999	
2000	
2001	
2002	Start of Agency and Public Involvement
2003	Public Meetings and Alternative Exploration
2004	Preferred Alternative Selected, EA Started
2005	Draft EA Complete, ERGAP No. 2 Priority on AMATS
2006	Wetlands JD Complete, ERGAP No. 9 Priority on AMATS



2007	Project Put on Hold Due to EA Issues
2008	
2009	
2010	
2011	DNR-DPOR Concurrence to Remove ERGAP from TIP
2012	DOT&PF Closes Out Project with FHWA
2013	DNR-DPOR Receives Funding to Report on ERGAP History
2014	ERGAP Evaluation Report Finalized

*Major body of work for this project occurred between 2002 and 2007

Preliminary Planning

Originally, 139 route segments were analyzed as parts of three alternatives for the pathway. From these segments, three preliminary alternatives were developed for public input. Alternatives 1, 2, and 3 were identical from the Glenn Highway to river mile 15.5 where Alternative 3 crossed to the south side of Eagle River. Alternatives 1 and 2 continued on the north side until the North Fork (of Eagle River) Access parking area. Here, Alternative 1 followed the North Fork and Clearwater Creek to the ERNC, crossing the North Fork twice, and Alternative 2 followed Eagle River Road to the ERNC. Alternative 3 turned north, crossed the floodplain, and joined Eagle River Road at Prudhoe Bay Avenue to follow Eagle River Road to the ERNC. These alternatives are shown graphically in Figure 00 found in Appendix A.

When choosing routes for the three alternatives, segments that followed community trails were used as much as possible. Other factors favored in route selection were:

- Ability to develop grade of less than five percent to comply with ADA standards;
- Staying 25 feet away from waterways to adhere to MOA Riparian Setback requirements;
- Minimizing impacts to wetlands;
- Private property avoidance;
- Wildlife migration corridor avoidance.

During the scoping process a preliminary wetlands investigation was performed by DNR-DPOR using the available wetland mapping of the project area including the Anchorage Wetlands Management Plan (AWMP), U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps, and DOT&PF Eagle River Road Rehabilitation MP 5.3 to 12.6 Wetlands Report 2003, in order to make an initial determination of the presence of wetlands in the area of the three alternatives. Using an estimated 20-foot wide impact area, the area was investigated for three alternatives.

For the three preliminary alternatives, the bridges that cross Eagle River on all routes were designed to be a minimum of 15 feet above ordinary high water (OHW). The pathways were elevated on bridge approaches to provide unimpeded floodplain crossing for wildlife when recommended by natural resource agencies. The pathways were designed to be on-grade except at bridge crossings.



One alternative (Alternative 1 during scoping) involved constructing a 15.9-mile shared-use pathway from the Glenn Highway to the ERNC. From the Glenn Highway, the pathway traveled east on the north side of Eagle River, crossed Meadow Creek, continued east, and included a spur over Eagle River to the Eagle River Campground. The pathway continued east, crossed to the south side of Eagle River, then back to the north side again before crossing Briggs Bridge. The route then crossed over Eagle River on Briggs Bridge, and under Eagle River Loop Road, following the south side of Eagle River for a few miles before crossing to the north side of Eagle River at Driftwood Bay Drive. The route then followed on the north side of Eagle River until reaching the North Fork Access (NFA) parking area, then followed the North Fork of Eagle River, crossing twice before coming to the ERNC. These last two crossings required 80-foot and 120-foot span bridges, for a total of 8 bridges.

Acreage of disturbed land for this alternative was 37.8 acres, of which 14.2 acres were wetlands. Approximately 76,170 cubic yards of fill were to be placed in wetlands. Approximately 3.1 miles of pathway, 8 bridges and 700 feet of elevated pathway would be built in the Eagle River floodplain. A total of 1.3 acres of right-of-way acquisition would be needed for this alternative.

Another alternative (Alternative 3 during scoping) was 16.8 miles long and followed the same path as Alternative 1 from the Glenn Highway to trail mile 7 where it crossed to the south side of Eagle River. This route then traveled east on the south side of Eagle River, following the toe of slope inside the Greenbelt boundary, minimizing impacts to wetlands, while still avoiding steep slopes and private property. The route crossed over Eagle River to the north side to connect to the NFA parking area. The pathway continued on the south side until reaching River Mile 10.5, then crossed Eagle River and then the North Fork to join Eagle River Road and follow the road ROW to ERNC.

This alternative impacted an estimated 51.32 acres, of which 10.88 acres were wetlands, with 58,370 cubic yards of fill to be placed in wetlands. This alternative included approximately 2.25 miles of pathway in the Eagle River floodplain, a total of 1,200 feet of elevated pathway, and 9 bridges, of which 4 were long-span bridges (180 to 300 feet).

Alternatives 1 and 3 were of greatest concern to land resource agencies due to their impact on floodplains, wetlands, fish, and wildlife. Mitigation measures such as bridges, arched culverts, and avoidance methods could have been used to minimize impacts to wetlands, fish and wildlife, and community resources; however, these avoidance and mitigation methods proved to be cost prohibitive and to have a greater adverse impact on wetlands and wildlife than other alternatives. Consequently, preliminary Alternatives 1 and 3 were eliminated from further consideration.

Cost Estimates

Historic cost estimates were located within the project planning files. There were many assumptions, as there have to be when creating a preliminary estimate with no surface data to design from. These assumptions are not fully known since the persons who created these estimates are no longer working for the state. The following is a summary of the historical estimates. The entire estimate package can be found in Appendix F.



ERGAP Historical Segment Costs					
Segment	2003 Est. Cost	2009 Est. Cost	Length (mi)	Disturbance (ac)	Wetlands (ac)
A1	\$4,416,164	\$5,273,131	1.48	6.27	0.86
A2	\$2,020,050	\$2,412,045	2.00	8.48	0.00
A3	\$356,859	\$426,108	0.11	0.48	0.00
A4	\$925,682	\$1,105,313	0.47	1.98	0.00
A5	\$2,090,828	\$2,496,558	1.60	6.80	0.28
A6	\$3,865,263	\$4,615,327	5.09	21.58	2.91
A6-a	\$3,088,653	\$3,688,013	2.47	10.49	0.02
A7	\$1,925,483	\$2,299,127	2.15	9.11	1.05
A8	\$1,467,989	\$1,752,856	1.11	4.72	1.16
A9	\$1,233,529	\$1,472,898	0.86	3.65	0.00
A10	\$2,405,229	\$2,871,969	2.42	10.27	0.00
A11	\$1,389,911	\$1,659,626	1.61	6.85	0.17
A12	\$3,537,077	\$4,223,455	2.09	8.87	0.17
A13	\$2,669,254	\$3,187,229	1.92	8.15	0.00
A14	\$4,197,012	\$5,011,452	4.60	2.92	0.00
Route					
1	\$17,962,809	\$21,448,533	13.95	59.17	4.04
2	\$15,851,809	\$18,927,889	13.35	40.03	4.04
3	\$21,867,901	\$26,111,417	15.02	63.72	3.70
Bridge Note: Assume all bridges to be 14 feet wide and \$250/sf.					
Route	Segment's Required for Route				
1	A1-A4-A5-A3-A6-A9-A10-A13				
2	A1-A4-A5-A3-A6-A14				
3	A1-A4-A5-A3-A6-a-A7-A8-A11-A12-A13				

The Preferred Alternative

The Preferred Alternative (Alternative 2 during scoping) would construct a 15.3-mile dedicated pedestrian pathway from the Glenn Highway to the ERNC. The trail would be paved, with a 12-foot-wide traveling surface. The preferred alternative has approximately 36.45 acres of land disturbance, of which 4.2 acres are wetlands. Approximately 25,000 cubic yards of fill (See Figure 23, Appendix A, for typical structural section) would be placed in wetlands. The planning level estimate of the 15.3 miles of pathway in the preferred alternative is \$24.0 million in 2014 dollars. This alternative includes



approximately 1.5 miles of pathway in the Eagle River floodplain, 6 bridges and 700 feet of elevated pathway. This alternative was found to need the fewest bridges, be the least expensive of all alternatives considered during the scoping period, have the fewest adverse effects to wetlands and wildlife, and is agreeable to both residents and participating agencies. The Preferred Alternative can be seen graphically in Figures 6 through 22 located in Appendix A. The preferred alternative is described by the following six segments:

Glenn Highway to Briggs Bridge (Figures 6-8, Appendix A): From VFW Road at the Glenn Highway, the pathway crosses Meadow Creek on Bridge #1, follows the north side of Eagle River and connects to a trail that was once the Old Glenn Highway. A spur pathway and Bridge #2 would connect the preferred alternative to Eagle River Campground on the south side of Eagle River. Bridge #2 would be built using existing bridge abutments. At Eagle River Campground, an existing trail would be upgraded and a parking area built. From the Eagle River Bridge #2 Spur junction, the pathway would continue east on the north side of Eagle River until reaching a canyon area with steep eroding bluffs. To avoid the bluffs and residential property, the pathway crosses to the south side of Eagle River on Bridge #3, travels east, and then crosses back again to the north side of Eagle River on Bridge #4. The pathway continues on the north side of the river, climbs to an existing community pathway, and crosses Eagle River on the shoulder of Briggs Bridge on Eagle River Road. Briggs Bridge is already built to accommodate pedestrians.

Briggs Bridge to Bridge #5 (Figures 8-9, Appendix A): Once across Briggs Bridge, the pathway would continue under Eagle River Loop Road with a lighted pedestrian tube to connect with an existing community pathway system and the Alaska State Parks Eagle River Access parking area. The pathway would then follow a dedicated trail, called the Lower Eagle River Trail (LERT), and occasionally divert from LERT to avoid areas requiring large amounts of disturbance to maintain the ADA required five percent grade. The pathway then turns north, leaving LERT to avoid wetlands, private property, and the South Fork of Eagle River, where bears are frequently sighted. The preferred alternative then crosses Eagle River on Bridge #5, and spans the floodplain an additional 230 feet on either side of the 170-foot river span. This design is per recommendations from resource agencies to provide an unimpeded wildlife river migration corridor due to high bear and moose activity in the area.

Bridge #5 to the Matanuska Electrical Association (MEA) power line (Figures 9-11, Appendix A): North of Bridge #5, a spur pathway would be constructed near Driftwood Bay Drive to connect to an existing community pathway system and parking area. The pathway would continue east on the north side of Eagle River until opposite the South Fork of Eagle River, where a loop trail would be constructed with an elevated wildlife viewing deck (South Fork Viewing Deck). The loop design conforms to a recommendation from resource agencies to provide humans and wildlife with an extra trail option, and not a “dead end” where undesirable human-moose or human-bear encounters might occur. Between the South Fork Viewing Deck and the MEA power line, the pathway stays between the 2003 regulated 25-foot MOA river setback and intermittent wetlands just uphill from the setback. An oxbow palustrine wetland could be avoided by purchasing an easement.



MEA power line to Bridge #6 (Figures 11-14, Appendix A): East of the MEA power line, the pathway continues east, paralleling the river on natural levees to avoid large wetland areas to the north and south until reaching Bridge #6, where the pathway crosses over an oxbow of Eagle River and an unnamed creek. An easement would need to be purchased in this segment at Mile 6.5 of the pathway where private property comes within 14 feet of an eroding bank of Eagle River.

Bridge #6 to the NFA Parking (Figures 14-16, Appendix A): Bridge #6 to the NFA Parking: East of Bridge #6 the pathway would leave the river and follow existing undeveloped pathways until reaching the NFA parking area. The existing pathways are located in uplands areas.

NFA Parking to ERNC (Figures 16-22, Appendix A): The pathway follows the Eagle River Road ROW from the NFA parking area to the ERNC. A wetland in the area of Moose Pond may be involved. The remainder of the segment is uplands with frequent small stream crossings. The new pathway would connect to an abandoned racetrack, where a new parking area would be created west of and downhill from the ERNC.

Wetlands are avoided where possible, except for Moose Pond, which is an old oxbow of North Fork Eagle River. An avalanche hazard exists near Moose Pond. The six bridges planned for the preferred alternative are described in the table below.

ERGAP Preferred Alternative Bridges				
Bridge #	Water Body & Location	Span Length (ft)	Elevated Walkway on Approach (ft)	Feet Above Ordinary High Water
1	Meadow Creek	20	0	15
2	Eagle River at Campground	145	0	15
3	Eagle River Canyon (West end)	130	0	15
4	Eagle River Canyon (East end)	160	250	15
5	Eagle River at Driftwood Bay	170	450	15
6	Old Oxbow of Eagle River	30	0	5

The No-Build Alternative

According to the letter dated March 13th, 2012 with a subject of AMATS: Eagle River Greenbelt Access & Pathway, DOT&PF expected "*the no-build alternative would be selected at the conclusion of the environmental document effort.*" (See Appendix F)

Development and evaluation of a no-build alternative is required by the National Environmental Policy Act (NEPA) under federal funding requirements. Under the no-build alternative, no pathway would be built and access to the Eagle River Greenbelt would remain unchanged. Recreational opportunities in the Eagle River Greenbelt and CSP would not be enhanced. State and local planning efforts would not be realized. Conflicts between neighborhood residents and pathway users would continue as pathway



users accessed the Greenbelt through residential areas and parked on private property to reach the Greenbelt. Habitat would continue to be degraded and vegetation trampled as users continued to access the Greenbelt for recreational purposes. Because population increases in the Eagle River and Anchorage Bowl are correlated with increased human use of the Eagle River Greenbelt, conflicts and habitat degradation would likely escalate as the area's population continues to grow as expected.

Public and Agency Involvement

A public involvement schedule was developed to evaluate areas of public interest and concern and to gain local knowledge of the area (Appendix B). Eight public meetings provided information on Greenbelt use and on the user's visions for its development.

- February 10, 2003 - CSP Advisory Board;
- February 24, 2003 - DNR-DPOR/MOA;
- April 3, 2003 - South Fork Community Council Meeting;
- April 9, 2003 - Eagle River Valley Community Council Meeting;
- April 10, 2003 - Eagle River Community Council Meeting;
- April 14, 2003 - Municipal Advisory Board, Chugiak-Eagle River Parks & Recreation;
- April 16, 2003 - Eagle River Chamber of Commerce;
- April 17, 2003 - Open house, Ravenwood Elementary School.

Using aerial photos and maps, attendees identified their areas of interest. In general, most people supported the project as long as it did not significantly degrade the Greenbelt's natural environment (Appendix B). The following topics surfaced as key areas of interest and concern:

- Unsightly views into Eagle River Campground and trailhead from neighborhoods;
- Noise from trailhead to neighborhoods;
- Additional vehicle traffic to neighborhoods;
- Trespassing through neighborhoods to access Greenbelt;
- Increased fire risk;
- Wildlife impact;
- Additional maintenance needs on a shrinking budget;
- The sentiment that the Greenbelt is a unique resource that needs to be protected.

Following the first round of meetings, DNR-DPOR staff performed preliminary field investigations of potential pathway segments in the area. One hundred and thirty-nine potential pathway segments were identified and presented to the MOA Advisory Board, Chugiak-Eagle River Parks & Recreation and to a public open house. These comments, along with agency comments, were used to narrow potential pathway segments to four alternatives—three build alternatives and one no-build alternative. These alternatives were presented at the following community meetings:

- December 8, 2003 - CSP Advisory Board;



- February 4, 2004 - South Fork Community Council;
- February 9, 2004 - MOA Advisory Board, Chugiak-Eagle River Parks & Recreation;
- February 11, 2004 - Eagle River Valley Community Council;
- February 12, 2004 - Eagle River Community Council;
- February 17, 2004 - Open house, Eagle River Elementary School.

To avoid and minimize conflict between trail users, bears, and local residents, the South Fork Access Alternative was withdrawn from consideration following this round of meetings (South Fork Community Council letter, Appendix C).

Agency Scoping

ADOT&PF Environmental staff sent a scoping letter to Federal, State, local and tribal governments in December of 2003 (Appendix D). Comments were received from Alaska Department of Fish and Game (ADF&G) and DNR Office of Habitat, Management and Permitting (OHMP) (Appendix D). A summary of agency comments is included in the following table:

2003 Agency Scoping comments		
Agency	Comment	Date
OHMP	Bridge abutments should be placed above ordinary high water	1/30/2003
	Bridge abutments should be designed to allow moose to pass beneath	
ADF&G	Concerned about increased fishing pressure	2/6/2003
	Concerned about an increase in human/bear and moose interactions	
	Concerned that the trail may cause habitat fragmentation, affecting movement of wildlife to and from the river corridor.	
	Trail should avoid Clearwater Creek and the South Fork of Eagle River	
	Trail should use elevated walkway to protect wetlands	
	Trail should avoid salmon spawning areas (to ½ mile if possible)	
	Trail should have bear-proof trash receptacles	
	Trail should remain unpaved to slow bikers and joggers	
	Managers should consider season or night time closures	
	DPOR should provide public education on wildlife safety	
	Invited ADOT & PF to accompany ADF&G staff on field studies (summer 2004) to identify undocumented salmon spawning areas in the trail corridor.*	
	Recommend that ADOT&PF and DPOR should identify a purpose and need for the project.	
	*Note: these studies were not completed.	



DNR-DPOR presented the alternatives to Eklutna, Inc. They showed support for the project (Appendix D), specifically Alternative 3. The first 6 segments of Alternative 3 are identical to those included in Alternatives 1 and 2, though segment 7 branches off from segment 6 between the MEA powerline and the NFA point (See figure 00, Appendix A). The remaining sections of trail follow natural benches on the south side of the valley until the trail crosses the floodplain in the vicinity of Clearwater Creek. However, most of the route is within wetlands and is prone to flooding; the trail would have to be designed to have minimum impact on base flood elevation. ADF&G advised that the trail stay away from the South Fork of Eagle River and from Clearwater Creek, due to potential bear-hiker conflicts. There was also much public opposition to a trail on the south side of the valley. Based on the opposition, Alternative 3 was dropped from consideration.

The new pathway would continue north across the floodplain and connect to the existing trail near Clearwater Creek. This route would require two clear span bridges across the Eagle River as well as wetland crossings. Much of this segment is located in flood prone areas; the trail would have to be designed to have minimum impact on base flood elevation.

During the summer of 2004, DNR-DPOR staff walked the alignment of the preferred alternative and located the proposed route, delineated wetlands, and described plant communities. DNR Office of History and Archaeology surveyed the corridor for cultural resources. DNR-DPOR and DOT&PF conducted two field trips involving representatives from USFWS, USACE, DNR OHMP, ADF&G, and the MOA. Both field trips covered the same 2-mile section of the preferred alternative. DOT&PF received comments from ADF&G, MOA, and OHMP (Appendix D). ADF&G reiterated many of the comments from the January scoping letter response. A summary of agency comments is included in the following table:

2004 Agency Scoping comments		
Agency	Comment	Date
OHMP	Verbal Comments: bridge abutments should be placed above ordinary high water	9/8/2004
MOA	Ground-truth NWI and MOA Wetland Maps	9/27/2004
	Avoiding wetlands and use of boardwalks to retain wetland functions encouraged	
	Avoid drainages and coordinate with MOA to share our information	
	Evaluate wetland functions and values	
	Use MOA Wetlands mgmt. plan to avoid or minimize impacts to "A" wetlands.	
	MOA code for stream setbacks must be adhered to, it is under revision.	
	Must acquire flood hazard permit	
	(Continued next page)	



ADF&G	Construction of two entrances /exits at the South Fork Overlook, to allow bears and people to avoid each other on the viewing deck.	10/22/2004
	Preference of bridges that span the floodplain and allow wildlife to cross under and avoid human interaction on bridge	
	Appreciation of attention given to avoiding bear-human conflicts on the trail.	
	Support negotiation/land exchange w/Eklutna, Inc. to minimize wetlands impacts.	

Environmental Studies and Permits

DNR-DPOR staff conducted site visits and drafted an environmental assessment for the Greenbelt in March 2006 (Appendix E). The assessment identifies the purpose and need for the project, discusses alternatives and focuses on the preferred alternative, describes the geographic setting, and identifies wetland areas and previous studies in the project area. The report also describes typical wildlife in the corridor and discussed the frequency of bear and moose encounters and anadromous fish streams. The draft report details land use and cultural resources in the project area. The final piece in the draft goes into detail about the potential benefits and adverse social, economic, and environmental effects of each of the proposed alternatives.

DNR-DPOR staff also completed a wetlands survey and turned in a Jurisdictional Determination to the U.S. Army Corps of Engineers (USACE) that has since expired.

Permits

The following permits would need to be secured prior to construction:

- Alaska Department of Environmental Conservation 401 Water Quality Certification;
- DNR OHMP Title 41 Fish Habitat Permit for culverts or bridge below OHW;
- DNR ACMP Coastal Zone Consistency Review;
- MOA flood Hazard Permit will be required;
- USACE Section 404/10 permit for fill in wetlands and navigable water bodies;
- U.S Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Construction General Permit for storm water discharges;
- Nationwide Permits (FR Vol.72, No.47 March 12, 2007);
- Mitigation Statement [33 CFR 325.1 (D) (7), 332.4 (b)(1)].

Existing Site Plans

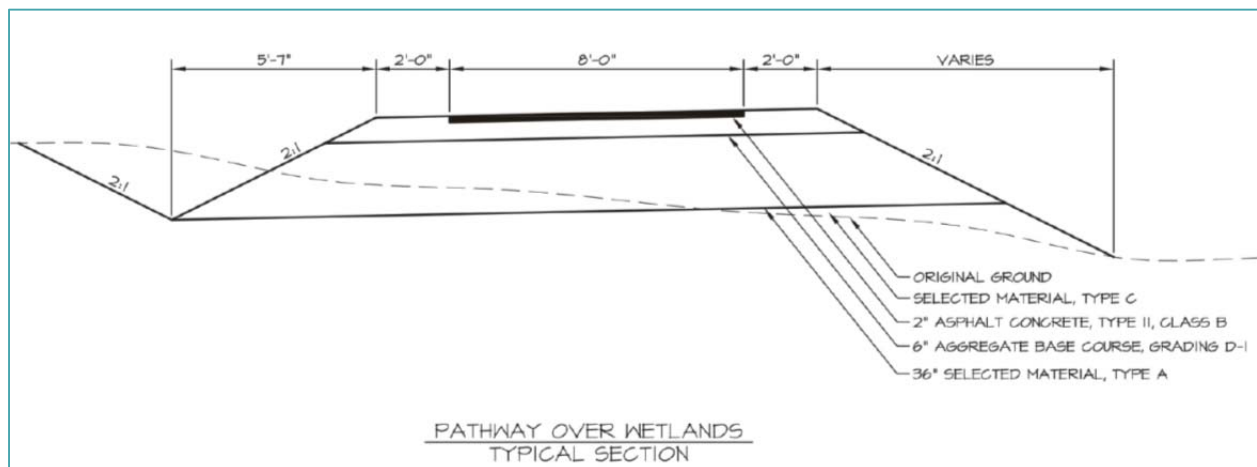
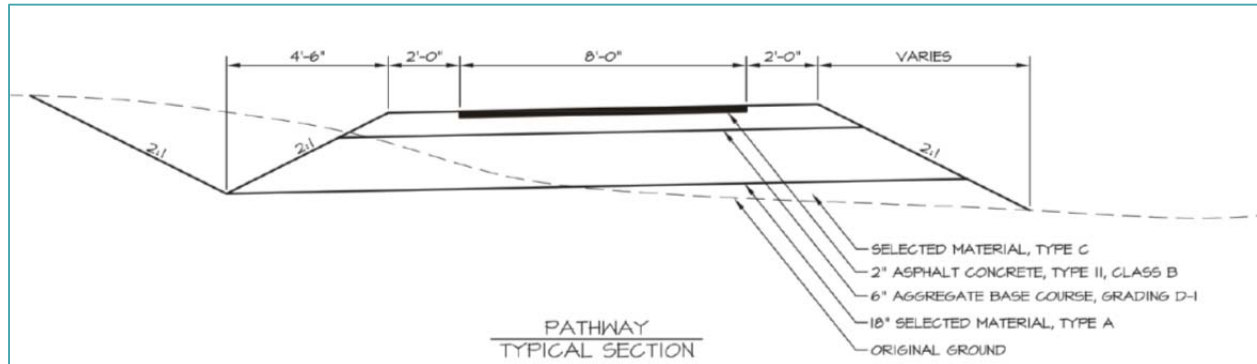
Appendix A includes a comprehensive list of figures and site plans.



Current Cost Estimates

In order to create a current estimate, up-to-date quantities needed to be calculated.

The entire project alignment was drafted in AutoCAD Civil 3D 2013. The existing site plans were traced, the known wetland boundaries were drawn, as well as approximate land boundaries. The length of the proposed alignment, areas of disturbance, and wetland impact areas were calculated. Figures 23 and 24 from Appendix A were used as the standards for our estimating assumptions.



There are many factors that make the unit prices of quantities higher than normal for this job. Some of these factors include:

- Difficult access leading to longer truck cycle times;
- Smaller footprint means smaller equipment would be required. Smaller equipment are not as efficient as larger earth working equipment.
- Bridges would need to be designed to handle emergency response vehicles because some areas of the trail would be only accessible by crossing multiple bridges (between Bridge #3 and #4)

Figures 6 through 22 from Appendix A were used as the alignment and site amenities catalog. All of the assumptions from the previously completed preliminary design were upheld. Some items such as the viewing areas and caretaker sites had to be approximated because of the low detail nature of the



planning documents. Greater accuracy on an estimate could be completed with a surveyed ground surface and more detail on exactly what site amenities would be included in each area. A project contingency line item is included to account for unknowns during preliminary design, design, bidding, and construction phases of the project.

COST ESTIMATE JUNE 2014					
ITEM NO.	ITEM	UNIT	UNIT PRICE	QUANTITY	AMOUNT
201(1A)	Clearing	Acre	\$10,000.00	4.10	\$41,000
201(3A)	Clearing and Grubbing	Acre	\$25,000.00	33.70	\$842,500
203(3)	Unclassified Excavation	C.Y.	\$10.00	42,000	\$420,000
203(5A)	Borrow, Type A	C.Y.	\$25.00	86,000	\$2,150,000
301(1)	Aggregate Base Course, Grading D-1	Ton	\$45.00	32,000	\$1,440,000
401(1)	Asphalt Concrete, Type II; Class B	Ton	\$200.00	8,300	\$1,660,000
505(5)	Furnish 6" Diameter Structural Steel Piles	L.F.	\$35.00	5,600	\$196,000
505(6)	Drive Structural Steel Piles	Each	\$500.00	140	\$70,000
506(5)	Timber Retaining Wall	S.F.	\$60.00	4,560	\$273,600
515(1)	Meadow Creek 20' Long x 12' Wide Ped Bridge	L.S.	\$70,000.00	All Req'd	\$70,000
515(2)	Eagle River Campground 145' Long x 12' Wide Ped Bridge	L.S.	\$507,500.00	All Req'd	\$507,500
515(3)	Eagle River Canyon W. 130' Long x 12' Wide Ped Bridge	L.S.	\$455,000.00	All Req'd	\$455,000
515(4)	Eagle River Canyon E. 160' Long x 12' Wide Ped Bridge	L.S.	\$560,000.00	All Req'd	\$560,000
515(5)	Eagle River at Driftwood Bay 170' Long x 12' Wide Ped Bridge	L.S.	\$595,000.00	All Req'd	\$595,000
515(6)	Old Oxbow of Eagle River 30' Long x 12' Wide Ped Bridge	L.S.	\$105,000.00	All Req'd	\$105,000
602(1)	Structural Plate Pipe Arch 120" Diameter	L.F.	\$2,300.00	250	\$575,000
603(1)	24 Inch CSP	L.F.	\$60.00	1,296	\$77,760
603(3)	End Section for 24 Inch CSP	Each	\$500.00	108	\$54,000
611(2)	Riprap, Class I	Ton	\$100.00	1,200	\$120,000
615(1)	Standard Sign	S.F.	\$125.00	500	\$62,500
618(2)	Seeding	Pound	\$125.00	2000	\$250,000
620(1)	Topsoil	S.Y.	\$3.00	220,000	\$660,000
630(1)	Geotextile, Separation	S.Y.	\$3.00	19,830	\$59,490
640(1)	Mobilization and Demobilization	L.S.	\$750,000.00	All Req'd	\$750,000
641(1)	Erosion, Sediment, and Pollution Control Administration	L.S.	\$65,000.00	All Req'd	\$65,000
641(2)	Temporary Erosion, Sediment, and Pollution Control	C.S.	\$500,000.00	All Req'd	\$500,000
641(6)	SWPPP Price Adjustment	C.S.	\$0.00	All Req'd	\$0.00
642(1)	Construction Surveying	L.S.	\$525,000.00	All Req'd	\$525,000



642(3)	Three Person Survey Party	Hour	\$250.00	225	\$56,250
643(2)	Traffic Maintenance	L.S.	\$50,000.00	All Req'd	\$50,000
646(1)	CPM Scheduling	L.S.	\$22,600.00	All Req'd	\$22,600
647(6)	Hydraulic Excavator, 1 CY, 100HP Minimum	Hour	\$250.00	250	\$62,500
650(3A)	Park Bench, Type A	Each	\$1,200.00	5	\$6,000
650(9)	Double Entrance Gate	Each	\$12,500.00	3	\$37,500
650(11)	Spotting Scope	Each	\$2,500.00	3	\$7,500
650(12)	Elevated Walkway	S.F.	\$50.00	8400	\$420,000
650(13)	Viewing Deck	S.F.	\$100.00	2000	\$200,000
650(20)	Removable Barrier Post	Each	\$800.00	6	\$4,800
650(21)	Barrier Rock	Each	\$350.00	50	\$17,500
650(30C)	Interpretive Kiosk, Type C	Each	\$5,000.00	2	\$10,000
650(39B)	Orientation Kiosk	Each	\$22,000.00	1	\$22,000
654(2)	Double Concrete Vaulted Toilet	Each	\$75,000.00	5	\$375,000
655(1)	Caretaker Cabin	Each	\$350,000.00	2	\$700,000
660(14)	Pedestrian Tube Lighting System	L.S.	\$75,000.00	1	\$75,000
BASIC BID (BB) TOTAL					\$15,110,000
PROJECT CONTINGENCY(PC, 15% OF BB)					\$2,266,500
ENGINEERING DESIGN (DS, 8% OF BB)					\$1,208,800
CONSTRUCTION ADMINISTRATION COSTS (CA, 12% OF BB)					\$1,813,200
CAP (4.5% OF DS AND CA)					\$135,990
WETLANDS MITIGATION					\$682,020
ADDITIONAL ROW ACQUISITION					\$2,783,490
PROJECT TOTAL					\$24,000,000



Future Considerations and the Next Steps

There are many outside factors that have changed since this project was shelved in 2007 and there are a few things that must be discussed and evaluated before the project can be fully revived.

The entire public process was based on the figures and contents of the site plans shown in Appendix A. The proposed alignment and typical sections are fundamental design features that cannot be changed without another public process. If state funding is the only funding source, the amount of public interface required will not be as robust as required under NEPA guidelines. If federal funding is targeted to help fund the construction, the NEPA guidelines would need to be adhered to. Changes to the alignment will also require an additional environmental assessment and public process. Additionally, the following items need to be accounted for:

- Changes to the river channel and stream bank erosion may impact the planned alignment. Recent flood events may have changed the channel and river bank. The current river channel and river banks need to be verified and mapped.
- The MOA has changed their Riparian zone setback from 25 feet to 100 feet. This change may have significant impact on the proposed alignment. A variance may be able to be obtained to avoid this change.
- From the NFA located at MP 7.8 to the ERNC, the trail was anticipated to be included in the recently completed DOT&PF Road Project (Eagle River Road Rehabilitation, Milepost 5.3 to 12.6, Project No. STP-0551(3)/53943). DOT&PF did not include the trail or a separated pathway of any kind in their environmental assessment for the project, so the trail was not included. This change would require the following:
 - Additional ROW acquisition
 - This would require a redesign and possibly a very costly set of retaining structures and guardrail to separate traffic from the trail;
 - Change of alignment from NFA to the ERNC to all ER Greenbelt Land
 - This would require a new public planning process and preliminary design
- The division's current operating budget and future budget projections do not include resources to manage large new facilities, such as the ERGAP. A viable plan for operating the ERGAP would need to be developed prior to construction.
- Proposed trail would need to be reevaluated using the most recent versions of all applicable master planning documents.
- The Wetlands Determination that was completed in 2006 expired as of 2011. A new Wetlands Determination and JD would need to be submitted to the USACE.
- The areas of the alignment that cross through private landholdings need to be reevaluated or conversations with the private landholders need to be held to gauge their support or opposition.
- The section of the trail that runs through the Harmon Property (Figure 12, Appendix A) needs to be reevaluated and moved. Since the planning was completed, that area of land has been converted to a wetlands bank, protecting it from development in perpetuity.



- New neighborhoods have been developed along the Greenbelt since 2007 and public support needs to be reevaluated.

In early 2014, \$280,000 was estimated for advancing the project and performing the following tasks with estimated costs:

- Develop updated base map (\$140,000);
- Identify and evaluate 3 distinct trail alignment alternatives (\$50,000);
- Engage in agency scoping and public involvement (\$40,000);
- Establish trail design criteria (\$20,000); and
- Produce cost estimates for each trail alignment alternative (\$30,000).

In FY15, \$240,000 was appropriated. The lists below are the anticipated tasks after those funded by the \$240,000:

1. Project Development including the following tasks:

- Preliminary Design
 - Finalize initial agency scoping and public involvement (\$40,000);
 - Refine the 3 distinct trail alignment alternatives based on agency scoping and public involvement (\$90,000);
 - Final wetlands delineation/determination (\$80,000);
 - Finalize cost estimates (\$30,000); and
 - Identify preferred alternative through final round of public involvement; (\$60,000).
- Engineering design
 - Design to 35% (\$180,000);
 - Design to 65% (\$230,000);
 - Row acquisition preparation (\$150,000);
 - Design to 95% (\$75,000); and
 - Design to 100% /Advertise (\$25,000).

Estimated cost of engineering design is \$1.2 million (~8% of basic bid estimate). At this time, DNR-DPOR estimates the design phase to take approximately 30 months. See appendix F for a detailed timeline and task list of design. Please note, the described timeline and budgets are based on best case scenario. Actual schedule and budget may not be fully realized until after subsequent tasks have commenced or have been completed.

2. ROW/Property acquisition (\$2,800,000)

3. Construction

- Phased Construction (if funding restricts full build out)

Estimated cost of construction and all other items ~ \$23 Million (Project total minus engineering design)



It is recommended that the entire design process be completed prior to moving forward with a construction plan. Construction phasing (as required) will be evaluated and selected during the preliminary planning phase.

DNR-DPOR recommends construction of the entire trail in one project to decrease overall construction costs from all of the setup and teardown costs associated with a construction project.

There are many potential cost saving opportunities including class of trail, decreasing the scope of work, and reassigning priorities. All of these would require an additional planning effort and systematic approach to project development. The existing appropriated funding does not encompass this scope of work.