APPENDIX A

COMMENTS AND COORDINATION

Responses to letters in this Appendix are addressed in the text of this document as indicated by bold page numbers on the right-hand margin of the response letters.

Highway Design and
Construction

February 24, 1978

NOTICE OF ENVIRONMENTAL EVALUATION
PRELIMINARY ENGINEERING STUDY

PROJECT RF-021-2(15)
STERLING HIGHWAY
MILE 36 TO 60 (approx.)

The Division of Highway Design and Construction is proceeding with Environmental and Preliminary Engineering Studies for the reconstruction of the Sterling Highway from the junction with the Seward Highway westerly through the Chugach National Forest to the east junction with the Skilak Lake Road. The length of this route segment is approximately 24 miles. Following the location and environmental studies, the actual design and construction will be accomplished in two or more projects of 6 to 12 miles each.

The proposed reconstruction includes widening of the roadbed to provide adequate shoulders, and minor realignment where necessary to improve driving safety. The study will also examine the feasibility of an adjacent pathway through the community of Cooper Landing. There are two minor bridges and three major bridges within the route segment. The minor bridge over Cooper Creek will require replacement in order to increase its width. The other bridges will be examined critically as to width, condition and location.

To assure that all possible factors are considered and that our final recommendations are in the best overall interest of the public, it is important that we receive all pertinent information available. We would like any information you may have concerning this project by March 31, 1978. Your comments and views will be considered in the analysis of the various alternatives.

Rowe D. Redick

ROWE D. REDICK
Regional Engineer

RDR:TRF:mr

PROJECT F-021-2(15)

STERLING HIGHWAY MILE 37-60

NOTICE OF INTENT

MAILING LIST

District Manager . . . . . No response
Bureau of Land Management
Anchorage District Office
4700 Cordova Street
Anchorage, Alaska 99501

Area Director. A-57
Heritage Conservation and
Recreation Service
Alaska Area Office
540 West 5th Avenue, Room 201
Anchorage, Alaska 99501

U.S. Fish and Wildlife Service A-27
Area Director
813 "D" Street
Anchorage, Alaska 99501

Kenai National Moose Range A-29
Refuge Manager
P.O. Box 400
Kenai, Alaska 99611

Director . . . . . No response
Alaska Operations Office
Environmental Protection Agency
Federal Building, Room G-66
Anchorage, Alaska 99501

Alaska District Engineer A-59
U.S. Army Corps of Engineers
P.O. Box 7002
Anchorage, Alaska 99510

Department of Environmental Conservation A-15
Pouch O
Juneau, Alaska 99801

Regional Supervisor. . . . . No response
Department of Environmental
Conservation
338 Denali Street
Anchorage, Alaska 99501

Regional Supervisor. A-16
Habitat Division
Department of Fish and Game
333 Raspberry Road
Anchorage, Alaska 99503

Director A-23
Alaska Division of Lands
323 E 4th Avenue
Anchorage, Alaska 99501

Mr. William Hannable, Chief. A-72/Ref. 26
Cultural Services Section
Alaska Division of Parks
323 East 4th Avenue
Anchorage, Alaska 99501

Alaska Center for the Environment. . . . . No response
913 West 6th Avenue
Anchorage, Alaska 99501

President. . . . . No response
Cook Inlet Region, Inc.
P.O. Box 515
Anchorage, Alaska 99510

Planning Director. . . . . No response
Kenai Peninsula Borough
P.O. Box 850
Soldotna, Alaska 99669

Mike Holloway, Chairman. . . . . No response
Sierra Club
Alaska Chapter
Box 2025
Anchorage, Alaska 99510

Peter Scholes. . . . . No response
Alaska Representative
The Wilderness Society
1772 Scenic Way
Anchorage, Alaska 99501

Vera Engelbach, President. . . . . No response
Anchorage Audubon Society
7813 Arlene Street
Anchorage, Alaska 99502

--ADDITIONAL RESPONSES RECEIVED--

Joyce E. Olson A-61
Mile 48.4 Sterling Highway
Cooper Landing, Alaska 99572

Charles R. and Elsye Taylor. A-62
Mile 50, Sterling Highway
Cooper Landing, Alaska 99572

Donald E. Gilman, Mayor. A-63
Kenai Peninsula Borough
Box 850
Soldotna, Alaska 99669

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
P.O. Box 1628, Juneau, Alaska 99802

1560

March 6, 1978

Mr. Rowe D. Redick
Central Regional Engineer
ATTN: Environmental Section
Pouch 6900
Anchorage, Alaska 99502

Dear Mr. Redick:

We have received your request for information concerning the proposed Sterling Highway reconstruction (Project F-021-2(15)). Your request has been forwarded to the Forest Supervisor, Chugach National Forest. He or one of his staff members will be in direct contact with you.

Sincerely,

Edgar B. Brannon

EDGAR B. BRANNON
Acting Regional Environmental
Coordinator

RECE[illegible]
[illegible]10 78
3-10-4

DOT (Central Region)	
Reg. Engr.	
Design Engr.	
Road Plans	
Region	
Utilities	
Traffic	
Environmental	
Materials Engr.	
Const. Engr.	
LSRET	
Review Engr.	
Central File	

10-78

6200-11 (1/69)

RECEIVED

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
CHUGACH NATIONAL FOREST
Pouch 6606
Anchorage, Alaska 99502

7750
Re: 245C-2505
Project RF-021-2(15)
Sterling Highway Mile

State of Alaska
Department of Transportation
Pouch 6900
Anchorage, Alaska 99502

RECEIVED
DEC 11 1979

ENVIRONMENTAL
SECTION

Dear Mr. Redick:

We appreciate the opportunity to review and comment on your proposal. The field trip led by Dave Devoe, and later communication with him, has been valuable in helping us prepare this reply. Because of high public use this is probably the most important section of highway on Forest Service land in Alaska. We have taken this opportunity to go beyond the subject of Alignment Selection, and have expanded somewhat in our presentation. We felt this was a good opportunity to further our discussion. Therefore several specific items and design elements have also been brought up with comments and suggestions. We will look forward to recieving and reviewing the Environmental Impact Statement.

From discussions we gather that no construction is expected to begin prior to 1982. It is also expect that the Cooper Landing State Selection will be conveyed to the State by next summer. We therefore, will refrain from commenting on specific alignment items confined wholly within this area.

We have enclosed copies of the "National Forest Landscape Management Handbook, Volume 2 - chapters 1 (Visual Management System) and 4 (Roads)". These should prove helpful to you. These chapters are occasionally referred to in the following text. There is also another volume that could be of assistance-"Handbook of Landscape Architectural Construction", Jot D Carpenter, Editor. In particular, chapter 10-Vehicular circulation addresses many subjects that are of direct concern.

Referencing the specific questions in your letter, we have the following comments.

1. There is a good potential for timber harvest along this route over the next 20-30 years. Commercial timber sites along this route generally consist of old growth white spruce and young growth paper birch. Commercial demand for white spruce has been increasing and we expect it to remain

at this or a higher level in years to come. Birch stands will be approaching a size for commercial harvest by the end of the design period.

Our moose burn program is indicating that vegetation manipulation can be done along a highway corridor, and, where access is available and timber warrents, harvest can be done. Road building under a timber sale contract is generally quite limited by the capabilities of the small operators, so close access to the highway is vital.

East of Station 2000 the steep slopes on the left generally preclude timber harvest, except up the Quartz Creek drainage. On the right access is from the old Sterling Highway. West of Station 1660 steep slopes are not so limiting, and timber could be harvested. It is in this area that access roads would be of great benefit. Commercial timber harvest would only require that there be suitable locations that would allow reconnection to the new highway. [10, 125]

In the past, sales have gone to mills both east and west of this road. We would expect hauling to continue in both directions.

2. You mention recreation access at Resurrection Trailhead, Russian River Campground, Cooper Creek Campground, Quartz Creek, and Tern Lake Campground. This is good and their needs are addressed elsewhere in this report. One additional area is access to the Kenai River, on the right, at Station 1430 (at the Forest Boundary). This road, and the nearby Forest Entrance sign, need serious consideration by all parties concerned. [10]

3. Where the road does deviate from the existing alignment new cut and fill slopes will be established. An attempt should be made to achieve the least amount of visual impact, and provide a positive experience for the user. Much of this can be accomplished by borrowing from existing form, line, color and texture of the characteristic landscape. Reference is made to the enclosed "Landscape Management Handbooks" for assistance in this area. [55] [C-16]

4. The fishery and wetland impact is a very sensitive issue. Any bridges over the Kenai River would have a fishery impact.

Also Route A in the vicinity of Station 2050 would strongly impact all of the area involved in a very negative way. This route has 2 bridges over Quartz Creek, and fragments a large flat wetland area that serves as a moose winter range. It would threaten a very valuable solmonid resource. [47,158] [47,123] [95, 116]

Relative to a statement on Section 4(f) concerning recreation lands, there are two possible involvements. On Route B, at the Cooper Creek Campground, any road widening must be very selective so as not to adversly impact the campground use. Trees must be left as a buffer strip. [55]

On Route A, at the Cresent Creek Campground, the final design would have to be reviewed in detail to determine the amount or degree of impact involved. These items are also referred to later in this letter under specific items. [158]

In addition to your identified questions, we have the following concerns listed under their appropriate headings.

A. Specific Items

1. Width. The overall pavement width may vary a few feet due to the type of construction encountered. The final width should, however, provide for bicycle use. This would entail two 12 foot lanes with 4 foot paved shoulders as a minimum. [10, 14, 64]

   This road is recieving a goodly amount of bicycle use that is expected to increase in the years to come. Eventually it could be incorporated into a complete State-wide bicycle route.

   The Russian-Kenai River area receives a moderate amount of pedestrian traffic, especially between the Russian River Campground and the Resurrection Trail (Station 1526 & 1549). This type of use is expected to increase, therefore design consideration should be given to including pedestrian paths along this section of highway, and across the bridge. [10, 14]

2. Slopes. Tops of cut slopes and toes of fills may be rounded. Along with slope rounding, warping of cut slopes aids in blending in with the landscape (Landscape Management Handbook chapter 4, page 12). [55, 140, C-16]

3. Excess Material. Excess or unsuitable material, and debris must be deposited only in approved, specified areas. [135] Certain of these materials may be suitable for tapering fill slopes to a more desireable slope in designated areas. All debris sites should be graded and planted and/or seeded so as to blend into the landscape. [135,145]

4. Seeding. All disturbed areas should be seeded or planted with a species indigionous to the area.

5. Soils. Along much of the alignment near Quartz Creek there are some noncohesive soils encountered in the cut bank. These are difficult to handle and expensive to stabilize and revegetate. Specific answers will have to be provided for areas where this is encountered. Retaining walls may be part of the solution. [C-33 to C-35]

6. Guard Rails. Guard rails, although necessary, should be kept to a minimum. Because of their construction and location, they have a great potential to negatively impact the viewed landscape. Therefore self-weathering steel or galvanized steel treated to turn the metal a dark grey should be considered. Posts should be similarily treated, or made of wood. [56]

7. Bridges. If any new bridges are to be built over the Kenai River, special consideration should be given to pedestrian use. This could entail a special fishing structure hung below the traffic level for use by recreationists if this was desireable.Parking should then be provided near the ends of the bridge. [14,15]

   Also, any new bridges would have significant visual impact. If steel is used in the construction, it should be treated similar to the guardrails. Concrete should have a course texture pattern to better blend with the surrounding landscape. Dye or darker aggregates might also be used. [56]

8. Culverts. Culvert end-sections should be of the flared type and backfilled to blend with the slope. These could also be dip treated to darken the metal to better blend with the landscape. Another alternative is to treat the exposed end-sections with an asphalt tack coat (Landscape Management Handbook Chapter 4, pg. 39). [56]

9. Retaining Walls. It is likely that retaining walls of some type will be necessary in certain areas. Where needed, consideration should be given to the surrounding landscape. An attempt should be made to blend any retaining walls into the landscape by borrowing from surrounding colors and textures. Crib-type metal bin walls could be of some special material, color, or of the "planter" type to minimize the visual impact (Landscape Management Handbook Chapter 4, page 42). [56]

10. Buffer Strip. In several areas there is a timber fringe or buffer strip along the route, much of which was specifically planned. There are also several areas along the Kenai River where these buffer strips are a natural product. One area is from Station 1540 to 1560 on the right. Also there are several areas along Quartz Creek. Several specific areas also are located along Daves Creek. One of these is from Station 2175 to 2210 on the right. These areas should be viewed on the ground before the design process begins, so that they can be protected and retained. [55]

11. Turnouts. There are many turnouts that presently exist. Most of them should be upgraded and paved. There are too many to list here, but the final design should be reviewed for adequacy. Three turnouts in particular need to be [56]

maintained and upgraded. These are the Sheep Viewing Turnout (Station 1914), the Moose Interpretive Turnout (Station 2187), and the Artic Tern Interpretive Turnout (Station 48 on "C" line).

12. Russian River Campground Entrance. At Station 1550 we already have a traffic congestion problem. Serious consideration should be given to acceleration & deceleration lanes to facilitate turning and entering traffic. [10, 60]

13. Old Highway Junction. Near Station 2240 the old Sterling Highway joins the existing Sterling Highway. This junction should be retained. This may involve some reconstruction of this old narrow road. [10]

14. Signs. Any Forest Service signs that need removal should be moved and relocated after consultation with us. [157]

15. Graffito. The construction crews continue to paint stations and elevations on rocks along the right-of-way. This should not be allowed. Also, all construction stakes and ribbons should be removed before any contract is accepted. [157]

B. Environmental Subjects. In the area of direct concern to the Forest (ie excluding the Cooper Landing area) there are only two study alignments. These are:

1) Route A- leaves the existing road near Cooper Creek (M.P. 51), crossing the Kenai River, and again leaves the existing road near Cresent Creek (M.P. 43) with 2 bridges over Quartz Creek. [158, 19, 45] [24, 47]

2) Route B- basically follows the existing road.

a. Route A. The adverse environmental impacts of Route A would be considerable. Near Cooper Creek there would be two large bridges over the Kenai River and one bridge over Juneau Creek. There would be a large deep through-cut to the north of the river. It would enter a prime remote area with a new road. To reduce the impact of the through-cut, the slopes could be reduced to a 4:1, also thereby producing more borrow material. An alternate to this would be to shift the route to the south and avoid the through-cut. These three bridge crossings would impact important spawning and rearing habitat for several species of anadromous and resident salmonids. [96, 123, 125] [101,102]

Near Cresent Creek two bridges would be built over Quartz Creek. The road would traverse a large flat wetland area that serves as a moose winter range. It would threaten a very valuable salmonid resource in Quartz Creek. It would impact the Cresent Creek Campground by touching its lower reaches. It would fragment the Quartz Creek valley. It would leave a long stretch of old abandoned road. It would greatly effect the experience level at this campground which is currently rather isolated in respect to the experience level and recreation opportunity in relation to other campgrounds on the Forest. The Forest has no substitute or replacement if Cresent Creek Campground is adversely effected. [123] [101, 102] [47, 76, B-15]

b. Route B. Because Route B generally follows the existing alignment, impacts would be less. Through the Cooper Creek Campgound the existing highway should be widened with the addition of acceleration and deceleration lanes. [10]

The Cresent Creek Campground would not be impacted as the road would remain on its present alignment, over 1000 feet away.

There are a few spots where the widening of the existing road would impact Quartz Creek. Specific proposals reviewed in advance could help ameliorate any problems. This same situation exists at a few places along Daves Creek. [109, 115]

c. Seward Wye. The proposal for this section presents several problems. From Station 2325 to 2337 the proposed route cuts Daves Creek, its tributaries and sloughs. This area provides an important rearing habitat for silver and king salmon fry and construction would adversely effect this habitat. [110]

The proposed wye interchange seems complicated and awkward. The present problems do not appear to be really resolved. In addition, the large cuts proposed would create major visual impacts. There are no simple solutions to propose, unless it would be to retain the existing system and alignment. [56]

d. Abandoned Road. In any place where the existing road will not be utilized it should be completely rehabilitated so as to blend into the landscape. This can be done through earthwork shaping, and the planting of trees, shrubs and grasses found in the area. Planting plans may be necessary. [96]

e. Special attention must be paid to specific archaeological sites that have already been identified and referred to. [131-133]

C. Borrow Pits. Much research has been done by the State seeking a suitable borrow site. One proposal, of which we are aware, is in the vicinity of Schooner Bend, proposing an estimated 500,000 c.y. of borrow. A borrow pit of this magnitude is significant. It might - of itself - require an E.I.S. Our comments here are only cursory, but may stimulate further thought, and possibly solutions. [135-145]

The proposed construction on the Sterling Highway is expected to be done in stages, covering several individual projects over quite a span of years. If one large pit is used, its size and time impacts would be significant. [137]

General

There are advantages of one large borrow pit, but there are numerous disadvantages. Costs can be higher because of long overhaul involved. Visual impacts could be very great, and costs to ameliorate the problems could be very high.

Several smaller pits could very possibly present less environmental impact and at the same time cost less. This problem deserves serious consideration.

Because of the magnitude of the potential problems at any borrow pit, advance development and rehabilitation plans and approval will be necessary. We have listed three other possibilities that come up on our fuild trip with Dave Devoe. These are presented to possibly stimulate further thought. Before implementation of any plan several reviews and approvals must be had. These would involve the quality and volume of material, environmental impacts, stream courses, fish problems, sight impacts and other aspects.

1. Schooner Bend Area. To the north of the Schooner Bend bridge on the right side of the Kenai River is a very large cut bank averaging over 60 feet high. This is being actively eroded by the river. If borrow material were removed from this area, it could well be hidden as part of nature's scar. The damage would be no more than what the river is already doing. [137]

2. Quartz Creek. Presently Quartz Creek is moving a considerable volume of material downstream to the flats below the Quartz Creek Bridge. This is causing an impact and damage to this moose browsing area. If material were borrowed from the stream bed, upstream from the bridge, it would reduce or delay the natural damage. It would provide a "sump" that would absorb bedflow. [107, 137]

3. Road Cuts. At stations 1675, 1710 and 1730 there are cuts proposed on the right. Also, at station 1950 (as well as most of the area from site 1840 to 1950) there will be large volumes of excavation. These volumes might be utilized better as base materials than hauling borrow from a large pit several miles away. [135]

Lastly, the Forest is undergoing major rehabilitation of its recreation facilities, especially the campgrounds. When work is being done on a section of highway, we would like the opportunity to work cooperatively on associated recreation facilities. This would require advance planning, and supplemental funds to cover work done outside the requirements of the main highway work. [157]

It is hoped that this response serves to assist you in your efforts. We appreciate the opportunity to be involved at this early date.

Sincerely

for CLAY G. BEAL
Forest Supervisor

cc: Mitchell
Herbrandson
Kerry Martin
Klassen
Hennig

Enclosures: National Forest Landscape Management
Vol 2, Chap 1 (1 copy) and Chap 4 (4 copies)

RH:bgg
1832D

02-0018 (Rev. 10/76)

STATE of ALASKA

MEMORANDUM

TO: Rowe D. Redick
Central Regional Engineer
Attention: Environmental Section
Department of Transportation and Public Facilities

DATE: March 3, 1978

FILE NO:

TELEPHONE NO:

SUBJECT: Project F-021-2(15)
Sterling Highway, Mile 36 to 60
245C-2505

FROM: Ernst W. Mueller
Commissioner
Department of Environmental Conservation

We have reviewed the subject project and have no objections to the study.

Environmental concerns should be coordinated with our Southcentral Regional Office. There address is:

Mr. Kyle Cherry
MacKay Building - 12th Floor
338 Denali Street
Anchorage, Alaska 99501

Phone number is (907) 274-5527

RECEIVED

3-8-1

D.O.T. Central Region	Copy		
Reg. Engr.	D		
Design Engr.			
Road Plans			
Recon			
Utilities			
Traffic			
Environmental			
Materials Engr.			
Const. Engr.			
LDRET			
Review Engr.			
Central File			

cc: SCRO
Bob Shipley (with enclosures)

02-001B (Rev. 10/78)

STATE of ALASKA

MEMORANDUM

TO: Terry Fleming
Environmental Coordinator
Department of Transportation
Anchorage

DATE: March 9, 1978

FILE NO:

TELEPHONE NO:

SUBJECT: Project F-021-2(15)
Sterling Highway, Mile 36 to 60
(245C-2505)

FROM: Ronald O. Skoog, Commissioner
Department of Fish and Game

BY: Bruce M. Barrett
Projects Review Coordinator
Habitat Protection Section
Anchorage

The referenced highway proposal, for reconstruction of the Sterling Highway from MP. 36 to 60, has been reviewed by the Alaska Department of Fish and Game.

From a fisheries standpoint, we are concerned with a known sockeye salmon spawning area immediately adjacent to the Quartz Creek bridge. [100, 107-109] Department approval would be required for any instream work or if any road fill material would enter the active annual flow channel. Restrictions would involve project timing for said work with initiation after 1 June and termination 1 August. For all classified stream crossings, a Waterbody Use Request form must be submitted.

From a game standpoint, our concerns are possible decreases to moose winter browse due to project activities. [123] Possible borrow pit construction, lateral expansion of road fill and construction of temporary road bypasses can negatively impact browse.

We believe that amelioration of any fish or game conflicts could be achieved by consulting with this office when completed roadway reconstruction plans are available.

Thank you for this opportunity to comment.

cc: P. LeRoux/S. Logan

02-001B (Rev. 10/76)

STATE of ALASKA

MEMORANDUM

TO: Terry Fleming
Central Region Environmental Coordinator
Highway Design and Construction
Department of Transportation and P.F.
Anchorage

DATE: October 25, 1979

FILE NO:

TELEPHONE NO:

SUBJECT: Project RF-021-2(15)
Sterling Highway Project Mile 37-60

FROM: Ronald O. Skoog, Commissioner
Department of Fish and Game

Bruce M. Barrett
Projects Review Coordinator
Habitat Protection Section
Anchorage

RECEIVED OCT 29 '79 D.O.T.P.F. CENTRAL REGION HIGHWAYS

RECEIVED OCT 29 1979 ENVIRONMENTAL SECTION

The Alaska Department of Fish and Game has reviewed preliminary alignment adjustments proposed for Mile 37 to 60 of the Sterling Highway.

Perhaps the greatest impact that can be expected from this project would be that on anadromous fish. The alternatives have the potential of impacting Juneau Creek, Bean Creek, Quartz Creek, Daves Creek, and Kenai River. All of these waterbodies are important for the spawning and/or rearing of several species of salmon and also support resident fish populations. Impacts expected would range from short term turbidity to permanent loss of spawning and rearing habitat. [99]

Several of the alternatives would necessitate the placement of fill in wetland areas. Wetland areas contiguous with rivers and streams serve both important biological and physical functions. They act as buffers, absorbing flood waters and then discharging them during periods of low flow. They have the capacity to filter and condition surface runoff and are responsible for adding nutrients to waters. Wetlands provide habitat for many terrestrial animal species and at the water's edge, rearing habitat for juvenile fish. The following will be an attempt to specifically outline our major areas of concern and discuss the relative merits or disadvantages of the different alternatives. [114-119]

Cooper Creek Alternative

[19, 45, 158]

We feel that Route "B" is the preferred alternative for the Cooper Creek area. It presents very few, if any, impacts on area fisheries resources. While it is probable that the bridge at Cooper Creek will have to be replaced, this should present few impacts as Cooper Creek is virtually unused by fish because of its thermal regime. With respect to shifting alignment towards the mountain at Milepost 51.5, we concur with the assessment that this path is preferable to placing fill into the Kenai River. We agree that large amounts of cut are required but this appears feasible. [103]

Alternative "A" will result in many fish and wildlife impacts. The construction of three (3) bridges will result in a net loss of spawning and rearing areas, although this loss may not be substantial. The [114, 115]

bridges will also result in visual impacts which may be considered by some to be aesthetically displeasing as well as possible navigational hazards for recreational boaters. Seven thousand (7,000) feet of new roadway will also have the effect of destroying some terrestrial habitat and displacing a number of animals. Wildlife will be further affected because road access will now have been provided to an area where none formerly existed. [53,56] [122, 123]

Although not well versed on the subject, we would hazard a guess that implementation of Alternative "A" would be substantially more costly than implementation of Alternative "B".

Cooper Landing Alternative

It appears that the great number of alternatives for Cooper Landing are in response to the socioeconomic desires of the community rather than engineering constraints; not to say that those are not valid considerations.

From a fish and wildlife perspective, Alternative "B" is perferred. We understand that with the implementation this plan, some fill will need to be placed in Kenai River at Milepost 49.5. Generally. we are opposed to such actions. However, when one considers the impossibility of shifting the alignment into the adjacent hillside or weighs the relative impact of an additional number of bridges over the River, one might concede that if something must be done, the fill might be the lesser of all the evils. Of course, more detailed information would be needed before making such a concesssion. [104] [101]

The other alternatives will result in greater impacts to terrestrial habitat through the construction of several thousands of feet of new roadway. Terrestrial wildlife will be futher affected because road access would be available to an area where none existed previously. [122, 123]

Construction of numerous new bridges will result in a net loss of spawning and rearing habitat in the Kenai River and may be aesthetically displeasing to some. Bridges may pose a navigational hazard to recreational boaters.

We suspect that implementation of alternatives other than Alternative "B" would be substantially more expensive.

Quartz Creek Alternative

Again, we feel that Alternative "B" is is the preferred plan. With respect to encroachement of Quartz Creek on the highway, we feel that the alignment should be shifted towards the mountains. Realizing that there is a practical limit to the distance or the number of times the highway can be realigned, proposals should be developed to limit the movement of Quarz Creek.

Alternative "A" requires bridges to be constructed and will result in a net loss of spawning and rearing habitat, although this loss may not be significant. This route will also require filling of probable wetland areas, displacing some animals and providing access to a relatively undisturbed area. [47, 107]

Seward Wye Alternative

The Seward Wye alternative is acceptable but efforts should be made to not further encroach on Daves Creek. [109, 110]

Generally speaking, we favor the alternatives which closely follow the existing highway alignment because we expect less fish and wildlife impacts to occur. We foresee very few conflicts with the other minor alignment changes except near Station 2220, where Daves Creek may be affected.

For your information, all the creeks and rivers mentioned are specified anadromous fish streams and/or direct tributaries of the Kenai River. Any work in them will require an Alaska Department of Fish and Game Anadromous Fish Permit. Listed below are the species of fish found in each stream.

Waterbody	Fish
Juneau Creek	king, sockeye, and coho salmon Dolly Varden
Bean Creek	king, sockeye, and coho salmon Dolly Varden
Quartz Creek	king, sockeye, and coho salmon Dolly Varden and grayling
Daves Creek	king, sockeye, and coho salmon Dolly Varden
Kenai River	king, sockeye, and coho salmon Dolly Varden, rainbow trout, and grayling

Large mammals found in the area are moose, brown bear and black bear.

Thank you for the opportunity to comment and please feel free to contact us if any additional information is required.

MEMORANDUM State of Alaska

TO Rowe D. Redick
Highways Engineering Chief
DOTPF/Central Regional

DATE November 25, 1980

FILE NO

TELEPHONE NO 344-0541

FROM Ronald O. Skoog, Commissioner
Department of Fish and Game

SUBJECT Project RF-021-2(15)
Sterling Highway
Mile 37 to 60

BY: Bruce M. Barrett
Projects Review Coordinator
Habitat Protection Section
Anchorage

RECEIVED
DEC 1) 1980
ENVIRONMENTAL SECTION

The Alaska Department of Fish and Game has evaluated the subject proposal as requested in your memo of 6 November 1980. Mr. Phil Brna (ADFG) participated in a field inspection of the proposed project on 17 November with Mr. Dave Devoe (DOT/PF) and Mr. Brad Smith (NMFS).

In all cases we support highway realignment along the existing right of way. The project may result in some loss of rearing and spawning habitat through fill placement; however, we believe this is preferable to construction of additional bridges across the Kenai and extensive wetland fills. Additional bridges and wetland fills could result in potentially significant losses of spawning and rearing habitat and losses of wildlife habitat.

On 17 November 1980 sampling of rearing areas was conducted; however, due to time constraints, weather conditions and seasonal constraints, the sampling was limited. Rather than offering specific proposals to protect rearing areas at this time we propose to conduct a more comprehensive survey in the spring. This will enable us to make recommendations to protect those areas which we consider important and allow you to alter those areas which are not.

We do, however, have some general comments which should assist you in project planning.

1.) The project is likely to effect recreational access to the Kenai River in that several pullouts, parking areas and public access points will be lost. We recommend that consideration be given to providing additional parking areas and replacement public access points. We would be pleased to assist you in planning the locations of these areas so they provide maximum access to the river and utility to the fishing/boating public. It should be noted that this ssection of the Kenai receives heavy sport fishing pressure, especially during the red and silver salmon runs in the summer and fall. [56, 65,110] [110]

2.) We suggest that fills in wetlands and rearing areas be limited as much as possible. Utilization of crib walls or additional cuts would serve to aid in this effort. [19, 105, 107 -110, 119, 134]

3.) Culvert installations at Quartz and Daves Creek must be designed to pass juvenile as well as adult fish. Depending upon culvert length and type we will be able to provide you with maximum allowable culvert velocities during the design stage. [39, 110, 116]

4.) Some concern exists as to the effects construction noise will have on sheep and goats living adjacent to Kenai Lake. We will be able to provide you with information so that construction, especially blasting, can be conducted during low noise sensitivity periods. [82-83]

Thank you for consulting us.

cc: Brad Smith, NMFS

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DEC 10 '80

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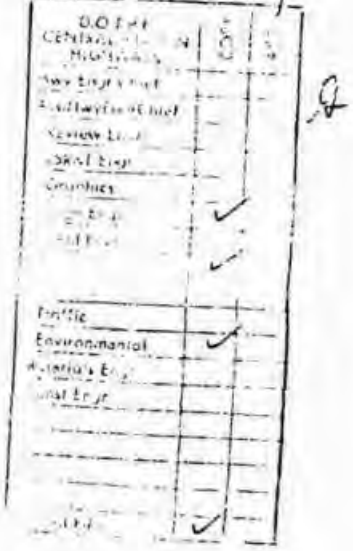

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF PARKS

JAY S. HAMMOND, GOVERNOR

Terry McWilliams, Director

Division of Parks
619 Warehouse Dr., Suite 210
Anchorage, Alaska 99501

March 14, 1978

Rowe D. Redick
Regional Engineer
Highway Design & Construction
Dept. of Transportation &
Public Facilities
4111 Aviation Avenue
Pouch 6900
Anchorage, Alaska 99502

Dear Mr. Redick:

Thank you for the recent announcement of environmental and preliminary engineering studies for the Sterling Highway Project (RF-021-2 15). At the present time we have no comment on this project but we would appreciate being kept appraised of all environmental and preliminary engineering studies prior to the reconstruction of the Sterling Highway between Miles 36 and 60.

Thank you, we appreciate being kept informed of your agency's construction planning activities.

Sincerely,

Neil C. Johannsen
Chief of Planning

NJ/jan

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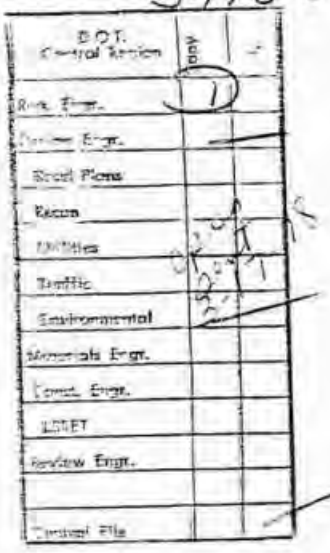
3-17-3 E



STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF PARKS

JAY S. HAMMOND, GOVERNOR

Terry A. McWilliams, Director

Division of Parks
619 Warehouse Dr., Suite 210
Anchorage, Alaska 99501

23

March 21, 1978

Re: 1120-10

Mr. T. R. Fleming
Central Region Environmental Coordinator
AK Dept. of Transportation & Public Facilities
4111 Aviation Avenue, Pouch 6900
Anchorage, AK 99502

Dear Mr. Fleming:

Reference the visit Mr. Doug Reger and I paid to your office on 15 March 1978. During that time a number of future highway construction projects were discussed, including Project RF-021-2(15) (Sterling Highway, Mile 36 to 60). Although you informed us that specific plans for this project had not yet been drawn up in finalized form, it goes without saying that this office will need to be notified as soon as this has been accomplished. [131]

Your attention to this matter will be, as always, greatly appreciated.

Sincerely,

Ty L. Dilliplane
Archaeologist

TLD:clk

10-J4LH

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

LAND AND WATER MANAGEMENT
SOUTHCENTRAL DISTRICT

JAY S. HAMMOND, GOVERNOR

3327 Fairbanks Street
Anchorage, AK 99503
~~3328 EX. ATK. AVENUE X. ANCHORAGE 99504~~

3-17-5 E

DOT Central Region	Copy	
Reg. Engr.		
Design Engr.		
Road Plans		
Recon		
Utilities		
Traffic		
Environmental		
Materials Engr.		
Const. Engr.		
LSSRET		
Review Engr.		
Central File		

March 16, 1978

Rowe D. Redick
Central Regional Engineer
Environmental Section
Department of Transportation
411 Aviation Ave.
Pouch 6900
Anchorage, AK 99502

Re: Project F-021-2(15)

Dear Mr. Redick:

In response to your letter of February 24, 1978 regarding reconstruction of the Sterling Highway please note that the State Division of Lands has selected lands from the National Forest in the Cooper Landing area (map attached).

We would be particularily interested in any realignment work under [11-26] consideration in the Cooper Landing area and would hope to have an opportunity for early input.

Sincerely,

L.A. Dutton
District Manager

By: John Wiles
Planning Officer

Attachment:

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF FOREST, LAND AND WATER MANAGEMENT
SOUTHCENTRAL DISTRICT

JAY S. HAMMOND, GOVERNOR

323 EAST DOWLING ROAD
ANCHORAGE, ALASKA 99502

RECEIVED 2-21-80

February 20, 1980

File No. 2370

RECEIVED
ENVIRONMENTAL SECTION

Mr. Dave Devoe
Regional Environmental Coordinator
Department of Transportation and Public Facilities
4111 Aviation Avenue
Pouch 6900
Anchorage, Alaska 99502

Re: Project RF-021-2(15)
Sterling Highway Realignment; Mile 37 to 60

Please excuse the delay in responding to your request for comments on the proposed Sterling Highway re-alignment between the Seward Wye and Copper Creek campground. The project consists of four major segments which will be individually discussed.

Beginning at the Seward Wye, the proposed grade separation and overpass appears to increase the free flow of traffic for both the Anchorage-Kenai roadway and the Anchorage-Seward roadway. Traffic along the Kenai-Seward roadway will be somewhat inhibited by this project; however, this roadway is clearly the least traveled. The Southcentral District Office has no objections to this portion of the project.

The Quartz Creek proposal consists of the following alternatives: (A) A 1.5 mile re-alignment east of Quartz Creek containing two bridge crossings of the creek, and (B) excavation and widening of the existing roadway. Although Quartz Creek does encroach on the existing roadbed in two locations the Southcentral District Office supports alternative "B". The potential erosion problem could be remedied by utilizing [95, 99] either sheet piling or rip rap along the exposed roadway surface and by excavating along the hillside to widen the roadbed in order to obtain [109, 114] the desired design speed. Alternative "A" in addition to requiring wetland fill and stream crossings will subject Cresent Creek campground [47, 54, to increased noise and visual impact. 76, 82]

The Copper Landing bypass proposal is by far the most significant re-alignment. I understand alternate "A" running south of Copper Landing has been dropped due to engineering considerations. [12, 24-A] Before any of the by-pass proposals are selected, the Southcentral District Office recommends that further study of the economic impacts on the local community be conducted. At this time we can support only alternative [57] "B" consisting of minor re-alignments and upgrading of the existing roadway. Further, in recognition of the Kenai River as a valuable and extensively used recreation resource, the Division would object to any proposal which includes four bridge crossings of the Kenai River within approximately one mile.

10-J7

The Copper Creek segment of the project appears to present the greatest safety hazard and maintenance problem. The existing roadway is restricted on one side by the Kenai River and on the opposite side by a steep embankment. [17, 19] Although alternative route "A", running north of the Kenai River, lies entirely within federally administered lands, the Southcentral District Office would prefer to have the existing Route "B" modified by rounding out the sharpness of the corners. [45] As discussed in the field, this would require filling a portion of the Kenai River in conjunction with some excavation and recontouring of the existing embankment. [103] The resulting alignment would still probably not meet the 60 mph design speed criteria; however, saftey problems and environmental impact would be minimized.

We appreciate this opportunity to comment and would be pleased to discuss this proposal and its alternatives in greater detail.

I look forward to working with you on this project as it progresses.

Sincerely,

L. A. Dutton
District Manager

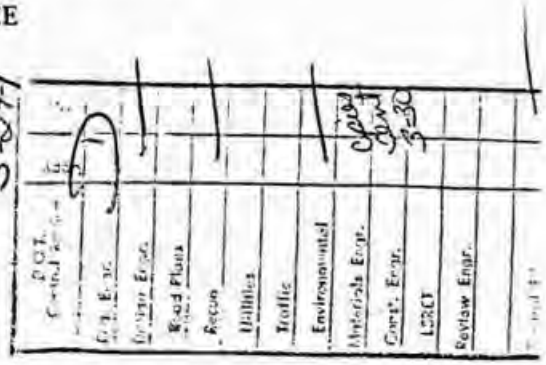
Kirk Morgan

By: Kirk Morgan
Lands Project Officer

United States Department of the Interior

FISH AND WILDLIFE SERVICE
ALASKA AREA OFFICE
813 D STREET
ANCHORAGE, ALASKA 99501

24 MAR 1978



Rowe D. Redick, Regional Engineer
State of Alaska
Department of Transportation and
Public Facilities
4111 Aviation Avenue - Pouch 6900
Anchorage, AK 99502

Dear Mr. Redick:

Reference is made to your Notice of Environmental Evaluation on the proposed Sterling Highway Project RF-021-2(15) dated February 24, 1978.

The Kenai River watershed supports plants and animals that are diverse, abundant, and ecologically sensitive. The area is relatively undisturbed compared with many places in the lower 48 states. There are habitats that exist within Federal jurisdiction that must be protected against disruption so that the present ecological condition may be preserved or improved. Wetlands represent an ecosystem that is fragile but critical to the maintenance of water quality and wildlife populations. The Kenai River system currently supports an ecologically unique and economically important salmon population. Salmon require rigidly defined high quality environments for their reproductive activities.

The Fish and Wildlife Service has responsibility for representing and protecting Federal interests in fish and wildlife resources. To that end, the following general recommendations are made relative to your proposed reconstruction project:

1. The mainstem of the Kenai River is known to be an important salmon migration, spawning, and nursery area. Activities along the river could alter stream flow, increase or change sedimentation rates or patterns, and degrade water quality. Development on the river should be conducted in a manner that minimizes or avoids such impacts.

2. Because wetlands are critical habitats for a variety of wildlife, and because they are important to the ecological integrity of the area, any activity that would alter them should be conducted in a manner that minimizes or avoids adverse impacts.

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3. Tributaries to the Kenai River are known, or believed to be important salmon spawning and nursery areas. Construction activities in these areas are likely to cause siltation, alter or destroy habitat, change stream flow, and degrade water quality. Because these impacts will severely degrade the suitability of the area for salmon spawning or for use as a nursery, activities in these areas should be conducted in a manner that minimizes or avoids these impacts.

As your design plans are being formulated, we would like to continue the early participation initiated by your February 24, 1978 letter. This will facilitate development of an environmentally acceptable plan with minimum disruption of your schedules.

We appreciate the opportunity to offer our comments on this highway project.

Sincerely yours,

Raymond D Cowing

Acting Assistant Area Director

United States Department of the Interior

FISH AND WILDLIFE SERVICE
KENAI NATIONAL MOOSE RANGE
P. O. Box 500
KENAI, ALASKA 99611

April 4, 1978

Mr. Rowe D. Redick
Central Regional Engineer
State of Alaska
Department of Transportation
ATTN: Environmental Section
Pouch 6900
Anchorage, AK 99502

RE: Project F-021-2(15)

Gentlemen:

In reply to your February 24, notice regarding project RF-021-2(15), Sterling Highway, Mile 36 to 60, we would appreciate receiving any information involving those lands between Mile 55 to 60, Kenai National Moose Range.

We would like the opportunity to review and comment on any construction proposals you may authorize within this section.

Thank you kindly for your assistance.

Sincerely,

James E. Frates

James E. Frates
Refuge Manager

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4-5-4

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Design Engr.		
Road Plans		
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Materials Engr.		
Const. Engr.		
LSSET		
Review Engr.		
Central File		

Answered 4-5-78

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UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
1011 E. TUDOR RD.
ANCHORAGE, ALASKA 99503
(907) 276-3800

IN REPLY REFER TO:

24 JAN 1979

Mr. T.R. Fleming
Regional Environmental Coordinator
Alaska Department of Transportation and Public Facilities
4111 Aviation Ave, Pouch 6900
Anchorage, Alaska 99502

Re: Project ~~RF-021-2(15)~~
Sterling Highway,
Mile 37-60
242C-2505

Dear Mr. Fleming:

This letter is in response to your request for our evaluation of general impacts upon streams, wetlands, fisheries, and endangered species which would result from the proposed Sterling Highway Project. The area of consideration extends from the junction with the Seward Highway south and west to the first junction with the Skilak Lake Loop Road.

We have discussed the project by telephone with Mr. DeVoe of your office and it is our understanding that a draft Environmental Impact Statement (EIS) has not been completed for this proposal, however, that such a document will be prepared. It is suggested that you review recent changes to the EIS document as discussed in the Federal Register, "National Environmental Policy Act-Implementation of Procedural Provisions;" Final Regulations of the Council on Environmental Quality, dated Wednesday, November 29, 1978.

Based upon our review of the air photo maps which accompanied your letter, it appears that much of the highway reconstruction project will follow the existing road alignment. We favor this alternative whenever possible since it will reduce impacts upon both terrestrial and aquatic habitats.

The Kenai River system supports an ecologically important fishery of anadromous and resident species which includes: two runs of chinook, sockeye, and coho salmon; a single run of pink salmon, rainbow trout and Dolly Varden. Two larger tributaries which will be affected by the proposed project, Quartz and Dave Creeks, support Dolly Varden and grayling as well as runs of sockeye and coho salmon. Other tributaries to the Kenai River are believed to be important salmon spawning and nursery areas.

RT-1

The entire proposed reconstruction project is located within the drainage basin of the Kenai River, therefore project planning should avoid areas or practices that could degrade the suitability of the Kenai River system as a salmon spawning and rearing area. Those areas of most concern within the proposed highway alignment and into which encroachment would be most damaging ecologically include: wetlands, tributary streams, highwater sloughs, ponds, lakes, and the mainstem of the Kenai River.

Wetlands can be degraded or lost due to adverse impacts resulting from placement of fill materials or other construction activities such as equipment operations. The protection of wetlands is essential to prevent or minimize adverse impacts. If care is not taken during construction, some of the adverse impacts which could occur include: loss of nursery areas for fish, alteration of water flows, siltation to streams, alteration of water quality, and a decrease or loss of habitat available to furbearers, birds, waterfowl, and other wildlife.

The terrestrial environment would be adversely affected by the proposed project through the elimination of habitat, disturbance to wildlife populations, and destruction of some immobile species. Disturbed areas would be more susceptible to erosion.

The Kenai River, its tributaries, and high water sloughs would be adversely affected by alteration and destruction of aquatic habitats, alteration of natural flow regimes, degradation of water quality due to an increase in levels of suspended solids and turbidity, and alteration of natural sedimentation rates. Impacts upon the fishery resource would be a direct result of these impacts. Valuable spawning, rearing, and nursery habitats could be degraded, fish passage could be restricted or eliminated, and reproductive and early lifestage functions could be restricted or lost.

Measures can be taken to reduce or minimize adverse impacts resulting from project construction. Care should be taken during project planning to avoid ecologically important areas; construction should be strictly controlled to minimize damages; timing of work should be approved by [99-101, appropriate resource agencies; restoration and revegetation should be 110, 114-done at sites of land disturbance; protection measures should be taken 119] during construction to prevent sediment and turbidity in streams through runoff from disturbed lands; and the use of petroleum products for equipment should occur away from aquatic areas.

None of the species inhabiting the project area have been identified as "threatened or endangered." The southern bald eagle is on the endangered species list, but not the northern subspecies of bald eagle which inhabits this area.

The opportunity to provide these comments is appreciated.

Sincerely yours,

Ronald B Thurston

Acting Field Supervisor

cc: WAES
AO Read File
FHWA, Juneau

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
1011 E. TUDOR RD.
ANCHORAGE, ALASKA 99503
(907) 276-3800

IN REPLY REFER TO:

4 JAN 1980

Rowe D. Redick
Highway Engineering Chief
Department of Transportation
and Public Facilities
4111 Aviation Ave., Pouch 6900
Anchorage, Alaska 99502

Re: 245C-2505
Project RF-021-2(15)
Sterling Highway Mile 37-60

Dear Mr. Redick:

In response to your letter of September 20, 1979, the Fish and Wildlife Service (FWS) has prepared comments relating to the proposed Sterling Highway realignment pursuant to the Fish and Wildlife Coordination Act and Executive Orders 11988 (Floodplains) and 11990 (Wetlands).

Our comments are as site-specific as possible to answer your questions and provide information to assist you in the preparation of a draft environmental impact statement. In addition, a compatibility statement and recommendations pertaining to that portion of the project requiring a right-of-way on the Kenai National Moose Range are submitted in compliance with the National Refuge System Administration Act and Section 4(f) of the Department of Transportation Act (see Attachment A).

A copy of these comments will also be forwarded to the Corps of Engineers for their future evaluation of the biological effects of this project under the Clean Water Act, Section 404, and the River and Harbor Act, Section 10.

The evaluation of the project as it applies to fish and wildlife resources of the Kenai River and its tributaries is based on information provided by the Alaska Department of Transportation and Public Facilities (ADOT/PF), three reconnaissance trips, consultation with the Alaska Department of Fish and Game (ADF&G), and a literature review. The compatibility statement pertaining to that portion of the realignment on the Moose Range was prepared in accordance with FWS refuge policy.

PROJECT DESCRIPTION

The ADOT/PF is planning to upgrade the Sterling Highway from the Seward Highway junction (MP 37) westerly to the junction with the Skilak Lake Loop road (MP 60). The project lies within lands administered by the Chugach National Forest, Kenai National Moose Range, and Kenai Peninsula Borough.

Preliminary information provided by ADOT/PF indicates that the proposal will basically follow the alignment of the present road for most of its length. Major deviations may occur at four locations described by ADOT/PF as: (1) Seward Wye; (2) Quartz Creek; (3) Cooper Landing; and (4) Cooper Creek. Alternatives have been generated for each of these deviations. Minor deviations would occur mainly due to the constraints imposed by a 60 mph design speed. The width of the proposed realignment would be 40' compared to the 28' width of the present road.

DESCRIPTION OF RESOURCES

The entire project lies within the Kenai River drainage. Along most of its length, the present highway parallels either the Kenai River or a tributary. From on-site inspections, it is anticipated that the proposed project will mostly involve the fishery resource due to the proximity of the present road bed to these watercourses. Three miles of the proposal lie on the Kenai National Moose Range. This three mile length of highway is a highly scenic and popular recreation corridor.

The most important biological characteristic of the Kenai River system is its use by salmon as a spawning and nursery area. Nearly all of the mainstem Kenai River and tributaries are known or suspected spawning sites for salmon. Anadromous and resident fish species present include: two runs of chinook, sockeye, and coho salmon, a single run of pink salmon, rainbow trout, Dolly Varden, and grayling. Quartz Creek and Daves Creek, tributaries of the Kenai that will be affected, support Dolly Varden and grayling as well as runs of sockeye and coho salmon.

After emerging from the gravel, salmon fry take up residence in the more shallow, slower moving portions of the river and its tributaries before migrating to the ocean. Thus, the Kenai system also serves as an important nursery and rearing area.

Kenai River salmon stocks are commercially harvested in Cook Inlet. The most important species economically are sockeye, chinook, pink, and coho. The annual commercial harvest of thousands of pounds of fish from the Cook Inlet has made salmon a dominant factor in the area economy.

Sport fishing in the Kenai River drainage has increased markedly in the past few years. The chinook salmon runs in the lower Kenai and

the sockeye runs in Russian River have attracted nationwide attention. The Kenai system is currently the most heavily used sport fishery in Alaska.

The Kenai Peninsula is well known for the abundance and variety of wildlife it supports. Moose, brown bear, black bear, bald eagles, and a myriad of small mammals and birds inhabit the area and are commonly seen along or crossing that portion of the Sterling Highway to be upgraded.

The Kenai National Moose Range was specifically created in 1941 to protect the natural feeding and breeding habitat of the Kenai moose and other native wildlife. That portion of the refuge affected by the realignment is in reality a scenic corridor and viewed by many as the typical "Alaska Image." The area has a variety of resources which include spruce and birch forest, glacial rivers, lakes, mountains, an excellent fishery, and free roaming wildlife. Visitor use along this section of the refuge is very high. Highway counters record over 1,500,000 visitors each year. The threshold experience visitors receive in this area can set the tone for public awareness and appreciation elsewhere on the refuge.

POTENTIAL IMPACTS

In most cases, the potential adverse impacts of the realignment identified by field review were the result of the new road being wider (40' versus 28') and the preferred design speed being 60 mph. These potential impacts include but are not limited to: filling wetlands, stream bank encroachment, streambed alteration, and possible increase in sedimentation and turbidity. The impacts described above are capable of reducing the net productivity of any salmonid stream ranging from the permanent loss of spawning and/or rearing habitat to low impacts associated with short term turbidity.

Wetlands are vital areas that constitute a productive and valuable public resource performing many important natural biological and physical functions. The unnecessary alteration or destruction of wetlands should be discouraged as contrary to the public interest. Wetlands provide valuable habitat for spawning and rearing of fish species. [111]

Due to multiple junctions of the present Sterling Highway with the previous historic road grade, an excessive number of pullouts, defacto camping areas, and defacto parking areas exist along the three mile portion of the project on the Moose Range. These areas were not designed for public use; they are not safe; and funds are not available for management of these areas. [65]

The present design and speed limit of the highway does not allow for safe pedestrian traffic and also imposes a safety hazard to vehicles entering and leaving the road from parking areas. This is especially true of the Russian River Ferry parking lot where an estimated [8, 16] [60, C-59, Sht. 7]

70,000 visitor days were recorded this past year. The new road will only make the situation worse. The road will be wider and the design speed faster.

DISCUSSION

As mentioned earlier, most of the biological impacts of the realignment concerning fish and wildlife resources are due to trying to accommodate 60 mph traffic within the existing corridor. Reductions in the design speed at appropriate places will eliminate some of our concerns. [15, 130, 160]

The existing road generally runs east and west and lies on the north side of the Kenai River and its tributaries for most of its length. Moving the new centerline north so the road edge of the realignment coincides with the edge of the existing road will also eliminate some of our concerns by alleviating adverse impacts upon the aquatic environment.

The design and subsequent use of the new road will not only set the tone for visitor use and resource protection, but can contribute toward a positive public image of the Kenai National Moose Range and to the National Wildlife Refuge System. With the opportunity for direct input into the highway alignment process, the FWS has an ideal opportunity to influence long range patterns for access and public use, which is expected to continue to increase in future years.

RECOMMENDATIONS

A brief description of each impact, and recommendations are provided. Each impact or set of impacts is identified by map sheet number and station number(s) in order to be as site-specific as possible.

1. Timing - The timing of all construction activities that involve impacting the streambed (culvert installation, fill placement, and bridge construction) of the Kenai River, Quartz Creek, or Daves Creek should be coordinated with the ADF&G. [100, 103]

2. Arctic Tern Reserve (Tern Lake) - Sheet 39, "C" line, 31-39 and 45-50. Realignment would result in a new center line north of the present road. Due to the lack of viable alternatives, some fill of wetlands would be involved. The present road already cuts off and isolates two small wetland areas here. By increasing the proposed road width to 40' (over the present 28'), the new road would encroach on wetlands approximately 6' more on each side than the original road does. This will be an unavoidable impact. Moving the existing centerline north of the present centerline is preferable to encroaching any further on the main body of Tern Lake. [116]

3. Seward Wye - Sheet 38, "C" line, 1-30. Our major concern with the project at this junction is the proposed fill (roadway) that will be used to carry the Kenai to Seward traffic and vice versa. Where the realignment swings away from the present road, it will be necessary to cross a very small tributary of Daves Creek before it swings back with a "tee" intersection. The area is boggy and drainage occurs beneath the present roadway into Daves Creek. A fill and culvert large enough to carry flood waters of [110] this tributary will be necessary. The ADF&G indicates that Daves Creek has some sockeye salmon spawning and serves as a rearing area for sockeye, chinook, and coho salmon. Culvert installation and placement of fill should be done to minimize the amount of sediment entering Daves Creek. The southern edge of the road bed should be situated in such a way that no fill enters the main channel of Daves Creek.

   The portion of the Seward Wye alternative that will carry the Anchorage to Kenai traffic (Sheets 37 and 36, "A" line) requires two large cuts and three large fills in order to lose elevation, avoid the dangerous intersection, and drop back to the present road grade. Our concern here is that the overburden be used in the fill areas and that the resultant fill and culvert be placed so as to preclude very large amounts of sediment entering Daves Creek. A small oxbow wetland (2341-2345) will almost be entirely filled in. This oxbow probably was a former channel of Daves Creek but is no longer connected due to the present road. In the interest of public safety to eliminate the present dangerous intersection, the loss of this wetland area appears to be unavoidable.

4. Encroachments on Daves Creek - Sheets 35 and 34, 2285 to 2305. The original road already encroaches on Daves [109, 110] Creek. The realignment will encroach even more if the centerline is identical because of the additional 6' width required. We do not favor placement of fill in Daves Creek or rerouting the channel to accommodate the realignment. We recommend that the new centerline be moved far enough north of the road so that the new and old road edges overlap and no fill enters Daves Creek.

5. Encroachment on Daves Creek - Sheet 33, 2231 to 2246. Daves Creek winds under the present road within this stretch and appears to be adequately carried by culverts. The realignment proposes a large fill to cross Daves Creek at the east culvert crossing to cut down on the present curvature of the road. We question the need for a 60 mph design speed throughout the entire length of the project because of areas like this. To make this corner negotiable at 60 mph, it will be necessary to pull

out the existing culvert and sink a longer one in Daves Creek, causing sedimentation and stream bed disturbance in addition to a large fill. We support a reduction in design speed to eliminate unnecessary stream bed disruption or sedimentation whenever the original road can be properly signed to warn motorists to slow down. [100, 109, 110]

6. Encroachments on Daves Creek and Associated Wetlands - Sheet 32, 2212 to 2230. The original road already encroaches on Daves Creek (2218-2221) and isolates several small wetlands (2216-2220 and 2223-2230). We recommend that the new centerline be situated far enough north of the road so that the new and old road edges overlap and no fill enters Daves Creek. Due to the lack of viable alternatives, the loss of portions of the small wetlands is unavoidable and is preferable to encroaching on the creek. [109, 110]

7. Quartz Creek Bridge and Floodplain - Sheet 31, 2167-2176. Since the realignment will require a 40' road span, we are not certain whether or not the bridge will have to be replaced. If the bridge is replaced, extreme care must be taken during construction. Salmon spawn in the stream beneath the bridge and immediately above and below it. Sixteen adult coho salmon were observed in the immediate vicinity of the bridge on October 19, 1979. Should the bridge be removed or widened and a detour installed, a temporary wooden structure or Bailey type bridge would cause the least impacts to the spawning area and is preferred. A large culvert and associated fill would be least desirable. It would require disruption of the streambed and loss of spawning gravel. Also, any fill for the approaches that encroached on the floodplain would have to be removed. [107]

   It is apparent from the small dike on the upstream side of the bridge that the channel of Quartz Creek was confined in the past in order to reduce the span length of the present bridge. Although this type of activity is no longer recommended for good floodplain management, we question whether the dike is adequate enough to withstand the 100-year flood. Should the dike fail, the western approach to the bridge could be breached.

8. Quartz Creek Alternatives - Sheets 26A through 28B. Our recommendation where Quartz Creek is constricted by the present roadway in the vicinity of MP 43.0 is Alternative "B." Even though the road would move slightly into the mountain, this alternative is preferable to the bypass proposal which requires approximately 1.5 miles of new road, resultant fill, and two new bridge crossings. [107]

Where Quartz Creek has been constricted, there currently is not a lot of bank cutting due to the presence of armoring with large angular rock. We recommend that the new centerline be moved far enough north of the road so that the old road edge will provide the needed shoulder width. Additional armoring of the bank may be necessary.

9. Encroachment on Quartz Creek - Sheet 25, 2010 to 2013. The centerline for the realignment should be moved north so that no further encroachment into the creek takes place. A 6' wider road bed may enter the creek here and that is unacceptable. Sufficient armoring of the bank will protect the road bed. [107]

10. Cooper Landing Alternatives - Sheets 15A through 19. The most complicated portion of the project is the numerous alternatives arrayed to put the highway through or around the community of Cooper Landing. From the standpoint of the fish and wildlife resource, the least detrimental and preferable alternative is to use the present road, Alternative "B." The impacts of the present road have already taken place and in terms of structures, are already in place. Impacts associated with building new bridges when the present road can be used are not favored. [24-D] [104-106]

The eroding cut bank in the vicinity of MP 49.5 (Sheet 15B, 1706-1711) may be a maintenance problem, but it does not appear to be actively adding sediment to the Kenai River. We agree that if it were excavated much more, there would be the possibility of a slope failure that could cover the road and end up in the river. We would prefer that the design speed be reduced and funds spent to build a bin wall or other structure to alleviate the eroding cut bank. [104, 105]

The same reasoning applies to the approaches of the present Kenai River bridge. A design speed of 50 mph utilizing the present bridge is preferable to building a bridge in another location just to accommodate 60 mph traffic. [15, 130, 160]

Alternative "B" indicates that the Kenai River bridge is only 30' wide and is in need of repair due to ice damage. With the exception of Alternative B-1, no matter what action is chosen, eventually some work will have to be done on the bridge. Bridge repairs and widening the span could be incorporated into Alternative B. [18]

On Sheet 16B, 1713-1714 the centerline of the realignment is in the Kenai River. We assume this was to avoid cutting into the eroding bank near MP 49.5 and still allow for a higher design speed. Putting fill in the river here is unacceptable when the alternative to reduce the design speed exists. [15, 17, 130, 160]

11. Cooper Creek Alternatives - Sheets 12A through 14B. It is difficult for us to assess the two alternatives presented here without a definite statement that the risk of mass failure by cutting into the exposed banks at MP 50.5 and MP 51.0 makes one option unfeasible. Our preference is to utilize the existing road (Alternative "B") because it is already in place and to reduce the 60 mph design speed. The present erosion of the road bed by the Kenai River could be minimized by armoring the banks in both locations, but may entail placing rock in the river. We could accept that because the road is vulnerable in both places and armoring the bank could someday prevent the loss of the entire road bed. In order to widen the road, excavation of the erosive cutbanks is preferable to filling in the Kenai River provided the banks can be stabilized. [17] [103]

    Should Alternative "A" be chosen, that portion of the present road that would be bypassed would still be open to traffic due to some private residences and the Forest Service campground. The erosive cutbanks should be stabilized and revegetated even if this section is no longer the main road. [20-21]

12. Encroachment on the Kenai River - Sheet 7, 1449-1452. The new centerline wanders south of the old centerline and would require fill in the river. This is unacceptable. The new centerline should be positioned north so that the present road edge becomes the road edge of the new alignment. [108]

13. Coastal Zone Management - The ADF&G has determined biophysical boundaries for Alaska's coastal zone and it appears that a significant portion of this project lies within this boundary. We recommend that you contact the Office of Coastal Management in Juneau for a consistency determination with the state's coastal zone program. [110]

The remaining recommendations pertain to the Moose Range. The highway realignment should include all possible planning to minimize harm to the refuge resulting from public use. It is the FWS's intent to maintain or enhance the natural beauty of the refuge and provide for proper visitor safety on and along the highway.

a. Wetlands Adjacent to Kenai River - Sheet 6, 1414-1425. A clear water slough is adjacent to the highway in this section. Field reconnaissance indicates there is no surface connection with the Kenai River. Floodwaters occasionally connect the area, but any salmonid fry would be trapped once the floodwater receded. The realignment would require some fill in order to negotiate the curve at station 1413. Due to the massive amount of fishing pressure from the Russian River sockeye runs this section of road is dangerous because people park along the road any place there is a wide spot. The present curve at station 1413 [117]

restricts visibility and should be straightened. In the interest of public safety and lack of alternatives, the loss of some wetlands here may be unavoidable.

b. Encroachment on the Kenai River - Sheet 6, 1412-1414. A high water channel of the Kenai River washes into the road [108, bed and is causing erosion. This bank needs to be armored 117] with large angular rock or some other protective bank structure.

c. Wetlands Adjacent to Kenai River - Sheets 5 and 4, 1367-1383. Another clear water slough lies adjacent to the highway. There is little or no surface connection [108, with the Kenai River at normal flows. In order to avoid 117] fill in these wetlands, the centerline should be moved north so the new road edge will coincide with the old one as much as possible.

d. Sloughs Connected to the Kenai River - Sheet 4, 1351 to approximately 1360. This area is a salmon nursery and/or rearing area. The milky color obviously indicates there [108, is a connection with the main river. The water does not 117] appear to move much and the slough in many cases is more shallow than the main river. Close inspection on October 19, 1979, revealed this area contains parr marked fry. This slough should be treated like the main river channel and no placement of fill material should occur.

e. Slough Connected to the Kenai River - Sheets 1 and 2, [101, C-59] 1274-1281. Comments identical to #15. No fill should enter the slough.

f. Encroachment on the Kenai River - Sheet 1, 1260-1267. The existing road already encroaches on the river. The new centerline is depicted north of the old centerline and thus avoids any further encroachment.

g. Design Concept - The highway corridor should be physically designed as a day use area. To accomplish this will involve blocking off access for all areas which attract overnight camping, and providing pulloffs at access points for day use areas. Viewing and potential interpretive areas are recommended at stations 1260, 1320, 1370, and 1410. The specific location will be determined by the actual topography and the best aspect for viewing, photography, etc. Design and construction plans for the pulloffs should be incorporated in the project. The FWS [65] may construct interpretive signs at these pullouts at a later date.

h. Defacto Parking and Camping Areas - Access to the following pullouts which encourages camping should be

blocked off with physical barriers:

1. Station #1272 north side of road
2. Station #1284 gravel pit on north side of the road.
3. Station #1296 south side of road
4. Station #1305 south side of road
5. Station #1322 north side of road
6. Station #1332 north side of road
7. Station #1360 south side of road
8. Station #1388 north side of road
9. Station #1392 south side of road
10. Station #1398 south side of road
11. Station #1423 south side of road

i. Speed Limit - This corridor should be accepted as a scenic drive and as such, the speed limit should be reduced to 45 mph. We feel this is a high priority for obvious safety reasons. An examination of methods (bike trail, 8 foot wide shoulders, walkways or a combination thereof) which will provide visitor safety along the entire realignment area should be incorporated in the project. This should be coordinated with the U.S. Forest Service for their land adjacent to the refuge. [15, 130, 160] [10, 13, 64]

j. Fuller Lakes trailhead - The gravel pit at station 1300 should be developed into a parking lot for the Fuller Lakes Trail.

k. Refuge Signs - Large base pads for the refuge entrance and exit signs situated at the east boundary need to be constructed on both sides of the road. The highway realignment will remove the old signs and their foundations. These pads will need to be located where the signs can be seen from a considerable distance when approaching or leaving the refuge.

l. Russian River Ferry parking lot - The entrance into the Russian River Ferry parking area at station 1430 should be widened and access to the highway improved. A center turning lane is definitely required here due to the very high visitor use. [10, 60, C-59, Sht. 7]

m. Revegetation - All areas which are disturbed by construction (cuts and fills along highway) or old road which are no longer needed should be stabilized with vegetation. [96] [C-34, C-35]

n. Coordination - The Project Inspector should coordinate with the Refuge Manager on construction impacts and possible mitigation measures for that portion of the project on the Moose Range.

o. Department of the Interior review - The Office of Environmental Project Review (Department of the Interior) must review and comment on the 4(f) requirement of Public Law 90-495 (82 Stat. 915) Section 18.

p. Department of Transportation approval - The U.S. Department of Transportation must approve the use of the land for transportation purposes in accordance with the two provisions of Section 4(f), Public Law 90-495 (82 Stat. 915) Section 18.

q. Right-of-Way application - Once the Section 4(f) statement has been approved by the U.S. Department of Transportation, and the Alaska Department of Transportation and Public Facilities is so notified by a copy of the approved Section 4(f) determination, the state should take appropriate subsequent action to either update its right-of-way amendment or apply for a new easement.

SUMMARY

Because the existing road already crosses wet areas, in some places there will be unavoidable filling of wetlands. However, in the case of the main channel of Daves Creek, Quartz Creek, the Kenai River, and those connective backwater sloughs of the Kenai we have specifically identified, filling is not a viable option as long as other practicable alternatives exist.

The National Wildlife Refuge System Administration Act is the source of the FWS's authority to permit areas of the various National Wildlife Refuge System to be used for purposes unrelated to wildlife conservation. The Act gives the Secretary of the Interior and the FWS authority to grant right-of-way across Refuge lands only if an affirmative finding can be made that the proposed use is compatible with the purposes for which the particular refuge was established.

The Sterling Highway proposal has been determined to be compatible with the purposes for which this refuge was established, provided the recommendations contained in the attached compatibility statement are considered and incorporated into the design.

Should you have any problems, I will be happy to meet with you to discuss our recommendations and to clarify our position relative to any of the enclosed information.

Sincerely,

Raymond V Conning

Acting Assistant Area Director

Enclosure: Attachment A

Attachmemt A

Compatibility Analysis and Recommendations for Sterling Highway Realignment Proposal

Kenai National Moose Range
Boundary to Skilak Loop Junction

December 17, 1979

U.S. Fish and Wildlife Service
Anchorage Area Office
Anchorage, Alaska

TABLE OF CONTENTS

INTRODUCTION

The Alaska State Highway Department has proposed to realign the Sterling Highway from the Refuge Boundary to Skilak Loop Junction. This three mile length of highway under study is a highly scenic and popular recreation corridor. The design and subsequent use of this realignment project will not only set the tone for visitor use and resource protection, but can contribute toward a positive public image of the Kenai National Moose Range and to the National Wildlife Refuge System. With the opportunity for direct input into the highway alignment process, the refuge has had an ideal opportunity to influence long range patterns for access and public use, which is expected to continue to increase in future years. A team of several employees from the Anchorage Fish and Wildlife Service office and the Kenai National Moose Range analyzed the proposal and made recommendations to the Alaska Area Director. The following report is an analysis of the project and recommends methods which will make it compatible with and beneficial to the Refuge.

Activities along the Refuge portion of the Sterling Highway must be appropriate to the purpose of the refuge and should emphasize appreciation of wildlife and ecological values. Public use management should promote appreciation and understanding of refuges, what they contribute to society, what management functions are being performed for wildlife and other resources and why they are being implemented. Appropriate effort should be made to assure an opportunity for outdoor experiences for visitors. Public awareness of wildlife and ecological values can be exemplified with well planned interpretation areas along the highway.

This area and the Skilak Loop road are in reality a scenic corridor and provide a typical "Alaska Image". The area has a variety of resources which include spruce and birch forest, glacial rivers, lakes, mountains, an excellent fishery, and free roaming wildlife. Visitor use along this section of the refuge is high. Highway counters record approximately 1,500,000 visitors each year. The threshold experience those visitors receive in this area can set the tone for public awareness and appreciation elsewhere on the refuge. The refuge entrance sign, scenic drive, vehicle wayside parking, interpretation areas, visitor contact station and visitor safety are the primary components that need to be addressed.

LEGAL MANDATES:

Refuge Recreation Act

The Refuge Recreation Act of 1962 (16 U.S.C. 460k) authorizes the Secretary of the Interior to administer such areas for public recreation as an appropriate incidental or secondary use only to the extent that it is practicable and not inconsistent with the primary objectives for which the area was established. In addition, the Refuge Recreation Act requires (1) that no area of the refuge system is to be used for forms of recreation not directly related to the primary purposes for which the area was estabished; and (2) that funds are available for the development, operation, and maintenance of the permitted forms of recreation.

Department of Transportation Act

The Department of Transportation Act, October 15, 1966 Section 4(f) states:

> The Secretary shall cooperate and consult with the Secretaries of the Interior, Housing and Urban Development, and Agriculture, and with the States in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of the lands traversed. After the effective date of this Act, the Secretary shall not approve any program or project which requires the use of any land from a public park, recreation area, wildlife and waterfowl refuge, or historic site unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use.

National Refuge System Administration Act

The National Refuge System Administration Act gives the Secretary of the Interior and the U.S. Fish and Wildlife Service authority to grant rights-of-way on or across Refuge lands only if an affirmative finding can be made that the proposed use is compatible with the purposes for which the refuge was established.

REFUGE SYSTEM POLICY GOALS:

1. The special mission of the National Wildlife Refuge System is to provide, preserve, restore, and manage a national network of lands and waters sufficient in size, diversity, and location to meet society's need for areas where the widest possible spectrum of benefits associated with wildlife and wildlands is enhanced and made available. (This is the Mission Statement as presented and accepted as the guiding principle for the NWRS.)

2. Refuges are established primarily for the protection and enhancement of indigenous wildlife and their habitat.

3. Public use will be in strict conformance with applicable Federal statutes, and should be compatible with the well-being of the resources and the habitat.

4. Public hunting, fishing, and trapping are appropriate use of refuge lands so long as they are consistent with the NWRS objectives to preserve, protect, and enhance all fish and wildlife resources and their habitat.

5. Public use activities should be appropriate to the purpose of each refuge and planned operations which emphasize appreciation of wildlife and ecological values.

6. The Service should aggressively pursue environmental education opportunities within refuge boundaries and externally, which will contribute to a better understanding of the Nation's fish and wildlife resources and the ecosystems that support them.

7. The FWS through public affairs efforts, improved working relationships with all media, interpretive programs on refuges and encouragement of visits by the public in designated areas and time, will make the public aware of wildlife and ecological values, as exemplified by the NWRS.

8. Management plans for individual refuges must be designed to assist in accomplishing the goals, objecties, and long-range plans of the Fish and Wildlife Service.

Primary Recreation Goal for Kenai National Moose Range

The primary recreation goal is to provide for a limited range of wildlife/wildland recreational opportunities that are consistent with the primary wildlife management objectives for which Kenai National Moose Range was established. Public use on the Kenai National Moose Range shall have minimum impact on wildlife resources and be accomplished with minimal developement.

Objectives of Kenai National Moose Range Recreation Program

1. To provide for and encourage an informed and ethical use of various land based resources on the KNMR, based on a sensitivity to paramount wildlife values.

2. To encourage an understanding of ecological relationships by making refuge resources available for educational purposes.

3. To provide types of access, recreation trails, and recreational facilities that are necessary to minimize human use impacts, while still accommodating basic use of certain resources.

4. To provide only a limited and manageable number of activities and facilities on refuge lands.

5. To monitor human use and human impacts on the KNMR, so that wilderness, historic, cultural, habitat, and wildlife values are not adversely impacted over time.

6. To protect all identified historic and archeological resources from impacts caused by developmental projects or recreational uses of FWS lands.

PROBLEM STATEMENT FOR STERLING HIGHWAY:

1. Due to multiple junctions of the present Sterling Highway with the previous historic road grade, an excessive number of pullouts, defacto camping areas, and defacto parking areas exist along a three mile highway section on the Kenai National Moose Range. These areas were not designed for public use; they are not safe; and funds are not available for management of these areas.

2. Several access points encourage unmanaged overnight camping and camping associated impacts.

3. Trail head parking is unsafe at Fuller Lakes trail.

4. The present design of the Sterling Highway does not allow for safe pedestrian traffic.

5. Maintenance, litter pickup, visitor contacts, and impact monitoring is made difficult because of the large number of available access areas.

6. A safety hazard exists to vehicles entering and leaving the highway from parking and visitor use areas.

7. The proposed design as submitted by ADOT, does not allow for either safe visitor vehicle access into parking areas, or potential wayside viewing and interpretation areas.

8. The present speed limit imposes a safety hazard to visitors at congested areas.

RECOMMENDATIONS:

The highway realignment should include all possible planning to minimize harm to the refuge resulting from public use. We must maintain or enhance the natural beauty of the refuge and provide for proper visitor safety on and along the highway.

SPECIFIC (Ref. Alaska Department of Transportation Sterling Highway mile 37 to 60; Recon A09812 sheet 1 of 9).

1. The entire highway corridor will be physically designed as a day use area. To accomplish this will involve blocking off access for all areas which attract overnight camping, and providing pull offs at specified access points for day use areas. Day use areas, viewing and potential interpretive areas are situated at stations 1260, 1320, 1370, 1410. The specific location will be determined by the actual topography and the best aspect for viewing, photography etc. Design and construction plans for the pull offs should be incorporated in the project. The Fish and Wildlife Service may construct interpretive signs at these pull outs. [56, 65, 130]

   Access to the following pullout which encourage camping should be blocked off with physical barriers:

   A. Station #1272 north side of road
   B. Station #1284 gravel pit on north side of road
   C. Station #1296 south side of road
   D. Station #1305 south side of road
   E. Station #1322 north side of road
   F. Station #1332 north side of road
   G. Station #1360 south side of road
   H. Station #1388 north side of road
   I. Station #1392 south side of road
   J. Station #1398 south side of road
   K. Station #1423 south side of road

2. This corridor should be accepted as a scenic drive and as such the speed limit should be reduced to 45 mph. We feel this is high priority for obvious safety reasons. An examination of methods (bike trail, 8 foot wide shoulders, walkways or a combination) which will provide visitor safety along the entire realignment area should be incorporated in the project. This should be coordinated with the U.S. Forest Service land adjacent to the Refuge. [15, 130, 160]

3. The gravel pit at station 1300 should be developed into a parking lot for the Fuller Lakes Trail. [56, 65, 130]

4. A large base pad for the refuge entrance sign situated at the east boundary needs to be constructed on both sides of the road. The highway realignment will remove the old signs and their base pad. This base pad needs to be located where the sign can be seen from a considerable distance when approaching or leaving the refuge. [159]

5. Improve access and entrance into the Russian River Ferry parking lot at highway station 1430. Entrance should be widened and access to the highway should be improved. A center turn lane is definitely required at the Russian River Ferry entrance. [C-59, Sht.7] [10, 60]

6. A center turning lane should be designed into the plans for areas which have high visitor use. [10,60]

7. All areas which are disturbed by construction (cuts, and fills along highway) or old road which are no longer needed should be stabilized with vegetation. No wet lands should be filled. [96,153] [C-34,C-35]

8. The Project Inspector should coordinate with the Refuge Manager on construction impacts and possible mitigation measures for the refuge portion of the project. [103, 130, 154]

9. The Office of Environmental Project Review (Department of the Interior) must review and comment on the 4(f) requirement of Public Law 90-495 (82 Stat. 915) Section 18.

10. The Department of Transportation must approve the use of the land for transportation purposes in accordance with the two provisions of Section 4(f), Public Law 90-495 (82 Stat. 915) Section 18.

11. Once the Section 4(f) statement has been approved by US-DOT, and the State of Alaska Department of Transportation is so notified by copy of the approved Section 4(f) determination, the Alaska Department of Transportation should take appropriate subsequent action to either update your right-of-way amendment or apply for a new easement.

12. The requirements of the Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et. seq.) Section 307 - should be implemented. [110]

APPROVAL:

The National Wildlife Refuge System Administration Act which is the source of the Fish and Wildlife Service's authority to permit areas of the various National Wildlife Refuge System to be used for purposes unrelated to wildlife conservation, provides, inter alia:

> The Secretary is authorized, under such regulations as he may prescribe, to— (B) permit the use of, or grant easements in, over, across, upon, through, or under an areas within the [National Wildlife Refuge] System for purposes such as ... roads ... including the construction and maintenance thereof, whenever he determines that such uses are compatible with the purposes for which these areas are established. (16 U.S.C. §668 dd (d)(1) (1976)).

In other words, it gives the Secretary and the Service authority to grant rights-of-way across Refuge lands only if an affirmative finding can be made that the proposed use is compatible with the purposes for which the particular refuge was established. If that finding cannot be made, the right-of-way simply cannot be granted.

I find that the Sterling Highway proposal to realign the existing highway by widening the shoulders and straightening corners is compatible with the purposes for which the refuge was established; provided the recommendations enclosed are considered and incorporated into the design.

Please be advised that in addition to the enclosed recommendation final approval of the right-of-way permit or a amendment to your existing permit for this project is subject to approval of Section 4(f) of the Department of Transportation Act, October 15, 1966 by Department of Transportation.

The enclosed recommendations are designed to minimize harm to the refuge, maintain and enhance the natural beauty, provide for visitor safety and enjoyment and to assist our management. If a particular recommendation is objectionable to your office or not feasible from a engineering standpoint please contact this office for resolution and modification.

Keith M. Schreiner

Keith M. Schreiner
Area Director

United States Department of the Interior

IN REPLY REFER TO:

FISH AND WILDLIFE SERVICE
1011 E. TUDOR RD.
ANCHORAGE, ALASKA 99503
(907) 276-3800

14 NOV 1980

Rowe D. Redick
Highway Engineering Chief
Alaska Department of Transportation
and Public Facilities
4111 Aviation Ave. - Pouch 6900
Anchorage, Alaska 99502

Re: Project RF-021-2(15)
Sterling Highway Mile 37-60

Dear Mr. Redick:

We have reviewed the Plan and Profile for the Sterling Highway, Mile 37-60 Project, which we received in October 1980. The following comments are in addition to the recommendations we provided for this project in the January 4, 1980, letter to you. (Paragraph numbers correspond to numbered recommendations in that letter.)

Paragraph 7. This area of Quartz Creek is a large braided floodplain. The existing bridge is not large enough to pass flood flows. Consequently, maintenance diking with instream gravels has been necessary to direct flow through the bridge. Perhaps additional bridge sections or a bridge with a longer span might alleviate the chronic maintenance problems and possibly prevent a complete road washout. [107]

Paragraph 8. Our recommendation of utilizing the present roadway is still favored over the proposed new road, fill, and two new bridges over Quartz Creek. [107]

Paragraph 9. The addition of a crib wall at Station 2012 on Sheet #25 is favored over filling a portion of Quartz Creek channel thereby constricting the channel and resulting in increased stream velocity. [107]

Paragraph 10. We prefer the existing route through the Cooper Landing area (Alternate B). The reinforced earth wall planned for Station 1714-1717 with large riprap stone in the channel is the least damaging alternative. Alternate B_1 is also acceptible as the new road portion would be located entirely on upland area. Impacts associated with building new bridges (alternates A and C) when the present road can be used are not favored. [104-106]

Paragraph 11. Under the present alternative, a chronic erosion problem may result from cutting into an existing slope. This alternative also requires placement of fill up to 30 feet in the Kenai River from the mouth of Cooper Creek extending upstream nearly 1,000 feet. We believe that Alternative 14-A which incorporates two bridges crossing the Kenai [17, 103]

River may be the least damaging alternative. However, if a roadway and bank stabilization plan utilizing existing alignment can be designed to minimize potential erosion problems and reduce the amount of fill in the Kenai River, then we would prefer that alternative.

Paragraph 12. The addition of a crib wall at Station 1450 is more acceptable than placing fill in the river which can constrict the channel and increase velocity. [108]

We appreciate the opportunity to provide these comments.

Sincerely,

Acting Assistant Area Director

cc: AOES, WAES
FHWA, Juneau

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Western Alaska Ecological Services
733 W. 4th Avenue, Suite 101
Anchorage, Alaska 99501
(907) 271-4575

IN REPLY REFER TO:

18 MAR 1981

RECEIVED
MAR 22 1981
ENVIRONMENTAL SECTION

Rowe D. Redick
Alaska Department of Transportation
and Public Facilities
Highway Design and Construction
411 Aviation Ave.
Anchorage, Alaska 99502

Dear Mr. Redick:

We have reviewed the preliminary draft Section 4(f) evaluation for the Sterling Highway reconstruction project on the Kenai National Wildlife Refuge.

The document appears to adequately address the impact of the project on the Section 4(f) land. Attached is a copy of the preliminary draft with minor comments for your consideration as you develop it for public review.

Sincerely,

Robert Bowker

Field Supervisor

Attachment

RECEIVED
MAR 17 '81

19 -13

UNITED STATES
DEPARTMENT OF THE INTERIOR
HERITAGE CONSERVATION AND RECREATION SERVICE
Alaska Area Office
540 W. 5th Avenue, Room 201
Anchorage, Alaska 99501

MAR 28 1978

Re: Project F-021-2(15)
Sterling Highway, Mile 36
to 60
245C-2505

Mr. Rowe D. Redick
Central Regional Engineer
Dept. of Transportation and
Public Facilities
Pouch 6900
Anchorage, Alaska 99504

Attn: Environmental Section

Dear Mr. Redick:

We have reviewed the subject notice and offer the following comments for your consideration.

As you are aware, the portion of the Sterling Highway under consideration passes through an outstanding scenic and recreational area. Site specific plans for the proposed highway reconstruction should be designed to preserve and enhance the scenic and recreational values of the area (eg. the Kenai River). Any such plans should be closely coordinated with the US Forest Service since they are the predominate recreational land manager in the area. The US Fish and [154]
Wildlife Service should be consulted on that portion of the project in the Kenai National Moose Range.

Specifically, we were pleased to note that you will be looking at the feasibility of a pathway through Cooper Landing. In addition, we recommend that you consider providing a shoulder of sufficient width to safely accommodate bicycle use through [10, 64,
the entire project area. In the short term, this could C-25, C-27]
facilitate local bicycle traffic. A long term objective could be the establishment of a trans-peninsula bicycle route.

We also suggest that you consider providing public access through development of pull-offs and parking areas at stream crossings and other locations where recreational use (eg. fishing, sightseeing, boating) would benefit from such [65]
development. These pull-offs should be designed to not only

facilitate recreational use and enjoyment of the area but also enable such use to be carried out in a safe manner for both recreationist and motorist. The Forest Service and Fish and Wildlife Service would be in the best position to advise you on the locations of such areas.

The Federal Aid Highway Act of 1976 (Section 147) authorizes the use of federal highway funds for the construction of access ramps to public boat launching areas adjacent to bridges under construction, being reconstructed, replaced, repaired or altered on federally-aided highway systems. If you feel this program would be applicable to this project, we would be willing to assist you in exploring the possibilities.

Because of the established recreational use of the area, you should be aware of potential section 4(f) situations. The Forest Service and Fish and Wildlife Service would again be in the best position to advise you on this. [146]

Thank you for the opportunity to comment.

Sincerely,

Bill Thomas

Bill Thomas
Area Director

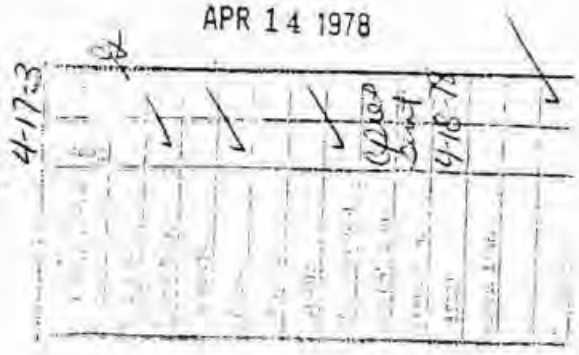
cc: Supervisor, Chugach National Forest
Area Director, Fish and Wildlife Service
Special Assistant to the Secretary - Alaska

DEPARTMENT OF THE ARMY
ALASKA DISTRICT, CORPS OF ENGINEERS
P.O. BOX 7002
ANCHORAGE, ALASKA 99510

REPLY TO
ATTENTION OF:

NPACO-RF

APR 14 1978



Mr. Rowe D. Redick
Central Regional Engineer
ATTN: Environmental Section
Ak Department of Public Transportaion
and Public Facilities
4111 Aviation Avenue, Pouch 6900
Anchorage, AK 99502

Reference: Project RF-021-2 (15)
Sterling Highway

Dear Mr. Redick:

This letter is in response to your request for comments concerning the proposed reconstruction of the Sterling Highway between Mile 36 and Mile 60.

If construction is planned below the ordinary high water line of the Kenai River, a Department of the Army permit will be required under Section 10 of the River and Harbor Act of 1899 and the discharge of [121, 145] dredge or fill material into the Kenai River or wetlands would require a permit under Section 404 of the Federal Water Pollution Control Act (Public Law 92-500) as amended by Clean Water Act of 1977 (Public Law 95-217). The bridge structures across a navigable stream would require U.S. Coast Guard authorization.

A nationwide permit has been authorized for minor fills, less than 200 cubic yards, in conjunction with road crossings of nontidal waterbodies of the United States if specific conditions and management practices are adhered to. For example, the fills required for the minor bridge crossings that are being evaluated may fall in this category.

We have no further comments on this notice at this time and appreciate the opportunity to review the subject matter. If you should have any questions on our regulatory requirements, please contact our office at 752-4942 or 279-4123.

Sincerely yours,

Paul Chatari

PAUL CHATARI
A-59 Chief, Regulatory Functions Branch

Sept. 11

General Merchandise, Hardware,
Arts & Crafts.

The SHREW'S Nest

LARRY & JOYCE OLSEN
P. O. BOX 797, COOPER LANDING, ALASKA 99572

September 8, 1978

Mr. Terry Fleming
Environmental Coordinator
Central Region
Department of Transportation
Pouch 6900
Anchorage, Alaska 99502

Dear Mr. Fleming:

As a 13 year resident of Cooper Landing, and the owner of a local business, I would like to register my opinion of the proposed changes in the highway through our community.

I have seen the route lines marked on a photo-map carried by the archeologist-historian team now assigned in this area for preliminary study. There are two routes marked, one called "A" route, and the other, "B" route. The "B" route generally follows the existing highway, which in itself would not raise many objections. But- it is my understanding that the proposed construction is not merely for up-grading, but for a four-lane freeway requiring 300 feet of right-of-way. [11-16]

I can think of no more effective way to destroy our community! Most of Cooper Landing was built up along the highway between mountain slope and Kenai Lake or Kenai River on narrow lots. It has taken years of hard work and struggle in most cases for residents of our picturesque valley to build their homes and businesses. These would have to be re-located, and between freeway, lake, and river, there just isn't enough space left over unless we were "rowed-up" side by side like a ticky-tacky subdivision! This is not the quality of life we came to this area to find.

As for the "A" route, I find it particularly objectionable as it cuts a swath through the middle of our property, [12, 24-A]

rendering it useless for our living. We had planned building our home in the "back" corner - which would be inaccessible with a freeway between it and our business. There would be seven or eight other property owners adjacent who would be in the same dilemma, just in the mile of proposed "A" route between Kenai Lake bridge and the post office. As the owner of a business depending on highway traffic for at least 50% of my income, I would like to see the highway stay right where it is. But, if this involves 300 feet of right-of-way, we would have to be re-located, and in this country that can't be done overnight, nor cheaply.

Not marked on the map, but I understand being surveyed, is another proposed route, parallel-ing the existing Bean Creek road, through un-occupied State selection land. I am not opposed to that route, as long as access to the [22, 24-D] Cooper Landing business area be only at the north(east) and south (west) ends where it would connect with the existing highway. This controlled access would provide all the businesses with equal exposure, regardless of their location. A by-pass of the community would preserve our unique setting and local flavor, which is worth a lot to [59, 69,70] a resort area, and would also enable residents the continued pursuit of happiness in semi-isolation. The elimination of heavy traffic going through our area would be a benefit, I believe, in allowing safer entrance and exit to businesses and residences alike.

If your highway design engineers could see the actual terrain in this valley, instead of just working from an aerial map, I'm sure they could come up with a more feasible, sensible, and less costly route than either "A" or "B", and that would agree with most of our community. The 238 people living in our valley should be considered, informed, and heard in this matter of great importance to all.

Thank you for your careful consideration, and I hope to hear from you as plans progress.

Sincerely,

Joyce E. Olsen

(Mrs.) Joyce E. Olsen
Mile 48.4 Sterling Highway
Cooper Landing, Alaska 99572

Mile 50, Sterling Highway
Cooper Landing, AK 99572
September 13, 1978

RECEIVED
SEP 19 1978
ENVIRONMENTAL SECTION

Mr. Terrill Fleming
Environmental Coordinator
Ak. Dept. of Transportation & Public Facilities
Pouch 6900
Anchorage, AK 99502

Subject: Sterling Highway upgrading at Mile 50 1/10, specifically concerning the Old Coursen Place, Lot 11, U. S. S. 2526, Cooper Landing.

Dear Sir:

The upgrading of the highway as proposed on the aerial survey would be a catastrophy for my wife and I, completely wiping out our home, which we purchased in 1966 anticipating retirement. I retired as Chief Engineer in the Alaska Ferry System in 1973 with no pension benefits.

We moved into the bare, unfinished log house in 1966. Since then, all our savings have been invested in interior construction, wiring, plumbing, sewerage system, fixtures, and furniture plus the expenses of raising four children.

We lost 50 feet on our frontage to the original highway. The additional 150 feet right of way as proposed will wipe us out.

Our log home is built around an 8' x 10', 3-flue concrete central chimney with log beams running through it and first and second floor joists tied into it. Therefore, the house cannot be moved!

Our back acreage is inundated by the Kenai River at flood stage. The river rises within 100 feet of our home every three or four years when the "Pothole" above Snow River dumps into Kenai Lake.

Because of our location at the beginning of the recreational area on the Kenai Peninsula, we have been able to supplement my social security checks with boat and trailer space rentals during the summer - our total income. At our age and modest savings, we could never recover from the loss of this place.

A mere straightening of the highway to the south, beginning at Mile 49 9/10 through Mile 50 1/10, would, in my view, enhance the highway design and save our homestead.

[161, C-59, Shts 14-A, 14-B_3]

Grateful for your consideration,

Charles R. (Russ) Taylor

Charles R. and Elsye Taylor

Elsye Taylor

KENAI PENINSULA BOROUGH
BOX 850 · SOLDOTNA, ALASKA 99669
PHONE 262-4441

September 15, 1978

DON GILMAN
MAYOR

Terrill Fleming
Environmental Coordinator
Dept. of Transportation
Southcentral District
Pouch 6900
Anchorage, Alaska 99502

Dear Sir:

Recently some of my constituents from the Cooper Landing area informed me that the proposed right-of-way for the Cooper Landing section of the Sterling Highway renovation would cut through their properties. It was their opinion that there were two routes, entitled Route A and Route B. Route B, being the least expensive, would require that one home be moved as well as taking about 300 feet from another property owner. Both of these owners had previously dedicated a substantive amount to the existing right-of-way and feel that further encroachment on their property was not needed.

While the Kenai Peninsula Borough does not have jurisdiction of such matters, I believe that the Department of Transportation is required to submit to the Borough Planning Commission for its review and comment any plans for such construction. [161]

Please advise my office of the procedures these people should follow to be able to protest acquisition of their property and whether the plans will be submitted to the Borough Planning Commission. [71]

If I have directed this letter to the wrong division, please forward it to the proper authority.

Thank you for your assistance.

Sincerely,

Donald E. Gilman

Donald E. Gilman, Mayor
Kenai Peninsula Borough

DEG:mw
cc: Max Hamilton
Cooper Landing, Ak. 99572

Mr. & Mrs. Taylor
Cooper Landing, Ak. 99572

10/25/78

If you are looking for ideas =

Why don't you consider upgrading our present road thru Cooper Landing like the stretch that was done West of here this summer [13]

And build a tall causeway across the "Arm" West of the mountain when it has been proposed (in at least three places). [12]

Betty J. Fuller
Cooper Landing AK 99572
25 year resident + property owner -

RECEIVED

OCT 26 '78

25 November 1978
P.O. BOX 782
ELMENDORF AFB ALASKA 99506

Mr. Walter D. Garrett
Project Engineer
Design and Construction, Highways
Pouch 6900
Anchorage, Alaska 99502

Dear Mr. Garrett,

This letter is in reference to the proposed road construction at Mile 49 of the Sterling Highway at Cooper Landing, Alaska. I own Lot #8 in Block #1 in Nelson Subdivision. I am in the process of constructing a log home at this location and strongly oppose any highway construction which would alter in anyway the property lines at this location. [70,71,24-D & C-59, Sht 16-C]

Will you please include this letter in the file on Cooper Landing Highway Construction.

Sincerely,

Delbert S Allen

DELBERT S. ALLEN
P.O. Box 782
Elmendorf AFB Ak, 99506

RECEIVED

DEC 04 '78

12-4-9

D.O.T. CENTRAL [illegible] HIGHWAYS	Copy	Act.
Reg. Engr.		
Asst. Reg. Engr.		
Design Engr.		
Road Plans		
Recon		
Utilities		
Traffic		
Environmental		
Materials Engr.		
Const. Engr.		
LSTRET		
Review Engr.		
Central File		

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
632 Sixth Avenue, Suite 408
Anchorage, Alaska 99501

RECEIVED
271-5006

RECEIVED
OCT 11 1979

ENVIRONMENTAL
SECTION

October 9, 1979

Mr. Rowe D. Redick
Central Regional, Highway Engineering Chief
Alaska Dept. of Transportation & Public Facilities
4111 Aviation Avenue
Pouch 6900
Anchorage, Alaska 99502

Dear Mr. Redick:

We have received your letter of September 20, 1979, regarding the Sterling Highway project, mile 37-60. A review of the study alignments indicates that one or more of the proposed alternate routings could have significant impact on freshwater and anadromous fishery resources, fishery habitat, wetlands and National Forest lands.

Additional information will be required before all environmental concerns can be properly identified and addressed. These include detailed inventory of wetland involvement along the ROW and a description of the type of structure used at all water crossings.

We are sure you are aware of the value of rivers, lakes and wetlands as habitat necessary to the survival of various fish and wildlife species. Quartz Creek, Juneau Creek and the Kenai River are important anadromous fish streams, while lesser drainages in the area are also likely to support resident or anadromous populations of fishes. The ADFG may be able to quantify the importance of these waters in terms of fish production. We can recommend at this time that all highway construction and alignments be designed to minimize impacts to these waters. In most instances this would mean maximizing the physical separation between the project and effected water. Based on the preliminary information provided, we feel that reconstruction within the original corridor (alternate "B") would be most desirable for the Cooper Creek Alternative, alternate "B" or "AB" for the Cooper Landing Alternative and alternate "B" for the Quartz Creek alternative. We would like to know what additional encroachment into the Kenai River and Quartz Creek would be necessary in utilizing the existing ROW (alternate "B").

We believe this proposed construction should be addressed through the EIS process. An inter-agency meeting may aid in the development of a more thorough EIS. We would provide whatever assistance is necessary here, and strongly suggest that

such a meeting be scheduled at the earliest possible opportunity. Thank you for soliciting our comment, we would appreciate an opportunity to review the DEIS upon its completion.

Sincerely,

Ronald J. Morris

Ronald J. Morris
Supervisor, Anchorage Field Office

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
701 C St., Box 43
Anchorage, Alaska 99513

November 20, 1980

Mr. Rowe D. Redick
Department of Transportation and Public Facilities
4111 Aviation Avenue
Pouch 6900
Anchorage, Alaska 99502

Dear Mr. Redick:

We have received your letter of Nov. 6, 1980, regarding project RF-021-2(15), Sterling Highway Mile 37 to 60. The preliminary comments of our agency have been provided earlier, letter dated Oct. 9, 1979.

We have reviewed the plan set accompanying your letter and concur with the revised alignment alternatives to be addressed in the Environmental Impact Statement (EIS). Selection of the proper alternative(s) should work to reduce the adverse impacts of construction and operation to the environment. However even with selection of the "most desirable" alternative it appears that a real potential exists for impact to the Kenai River and its resources. These impacts could result through direct loss of habitat (fills) or secondary effects such as siltation resulting from cut slopes, improperly placed/designed stream crossing structures or induced changes in river hydrology. Consideration of the area's recreational importance should be made in the Draft EIS. Such things as roadside pullouts, trails, litter control and roadside facilities should be incorporated into the final design plans. Because many of these concerns are localized and in order to present them in a useable form, we have made the following comments based upon the map set (Nos. 1 through 39) provided. While we realize the impact statement will not be able to go to this level of detail, it should convey the likelihood of these impacts, their potential damage to the resources, and all mitigative measures that may be employed to reduce such impact.

Sheet No. 1 through Sheet 5

Sloughs, wetlands and small drainages along the south side of this section of the Sterling Highway will be reduced through widening of the roadway. These waters provide spawning and/or rearing habitat to resident freshwater and anadromous fish species. [101, 102]

The value of small wetland areas is often disproportionately high in relation to their size. Brief examination of wetland areas between stations 1350 and 1370, for example, showed these areas to support juvenile salmonids and several species of aquatic insects and other invertebrates. [117] Undoubtedly each of these waters connected, even periodically, with the mainstem Kenai River provides nursery habitat for juvenile stages of various fishes. It will be important for the final design to minimize encroachment to this system. Where further cutbacks are not feasible or undesirable for other valid reasons, serious consideration should be given to such structures as the crib wall at station 1382 being used at several locations throughout this section. In some areas conditions may allow small drainages to be relocated and new wetlands created.

This section of the Sterling Highway is within easy walking distance of the mainstem Kenai which, of course, receives intensive recreational useage during the summer and fall months. Several pullouts exist alongside the [65, 130] highway. The proposed construction presents an opportunity to improve this recreational access. The Draft EIS should note that such access will be maintained (or improved) and should consider such related factors as public facilities, litter and traffic hazard areas. The number and specific location of these pullouts should be a final design feature arrived at after consultation with the state and federal resource agencies.

Sheet No. 6

The revised alignment (A2) would be closer to the mainstem Kenai at approximately station 1410, encroaching on an outside bend of the River. Constriction of flows at this site may lead to velocity increases and erosion. We recommend the crib wall be utilized between stations 1407 and 1410 to avoid this [108, 117] encroachment.

The slough and beaver pond, from station 1412 to 1415 would be largely destroyed through filling. This area is a popular sport fishing area which receives intensive use, particularly during the red salmon migrations. The large [117, 118] bedrock outcropping at station 1412 creates an upstream eddy which is used as a holding area by salmon. Both the slough and the beaver pond are likely to provide nursery habitat. If at all feasible, a crib wall would be preferable to the planned embankment. An additional recreational consideration in this section is the proximity of the Russian River Ferry. This area has been overcrowded during the red salmon runs of the past few seasons, with parking overflowing the Fish and Wildlife Service lot onto the highway. A large pullout or lot adjacent to the highway could alleviate this congestion.

Sheet No. 7

No Comment

Sheet No. 8

The wetland adjacent to the culverted crossing at station 1477 is contiguous to the mainstem Kenai, and is likely to provide rearing habitat. Alternatives should be considered to avoid loss of this area through filling. [108, 118]

Sheets No. 9 through 12

No Comment

Sheets No. 13-A, 14-A, 15-A, 16-A, 16-C, 17-C

The environmental impacts associated with these alignment alternatives cannot be accurately determined using existing information. It appears that these [101] alignments would result in increased construction and encroachment within the Kenai River. We believe the adverse impact generated by these alternatives would be unacceptable. However we realize that, as technically feasible options, they should be included into the EIS. The Draft EIS should include

a discussion of the impacts associated with these alternatives, and acknowledge the lack of information as to the degree of wetland involvement, the resource value of effected habitat and the impact of increased access to these areas. [118, 119]

Sheet No. 14-B3

Construction along alternative B3 in this section would require large amounts of fill between stations 1662 and 1671. The area of the River to be filled is quite deep and swift. Unfortunately, we cannot see any reasonable alternatives to relocating the roadway toward the River. The Draft EIS should note the potential impacts associated with this work including direct loss of habitat, constriction of the River and hydrological changes. Should this alignment be selected we will request that this feature be closely reviewed by a qualified hydrologist. If potential changes in river hydrology are indicated, alternative structures may be necessary to support the road bed. [103]

Sheets No. 15-BA, 15-B3

No Comment

Sheets No. 16-BA and 16-B3

These alignments would require a large fill and retaining wall to be placed in the Kenai River. This area is an important recreational access site and the large pullout can presently accomodate several vehicles. Realignment of the BA alternative, near station 1700, could allow for this fill to be avoided. We realize sub-surface soil conditions may prevent this, but suggest that test holes be drilled to assess the feasibility of this realignment. If the fill and retaining wall are unavoidable, we believe alignment alternative BA may be preferable to B3 in that the retaining wall would not extend as far downstream, thus avoiding a deep, fast flowing portion of the River. We believe this fact may offset the increased length of the B3 wall. [104, 105]

Sheet No. 17-A2

No Comment

Sheets No. 18-B, 18-BA

Boat access to the Kenai River from the highway should be maintained. Presently a public boat ramp exists at the south end of the Kenai Lake bridge. [65, 107]

Sheets No. 18-C, 19-B, 19-C, 19-BA, 20-B, 21-A2, 22-A2, 23-A2, 24-A2, 25-A

No Comment

Sheets No. 26 through 28

We believe that alternative alignment "B" would result in less adverse impact than alternative "A". The degree of wetland involvement with alternative "A" is not known, but would certainly exceed that of widening along the existing roadway. Encroachment into Quartz Creek with alternative B does not appear to be of sufficient magnitude to warrant objection.

[107, 109, 115]

Sheets No. 29-A through 33-A2

Quartz Creek, Daves Creek and many of the small drainages in this section support spawning populations of salmon. [107, 110]

Sheets 33-A2 through 39-A

No Comment

All bridges and culverts should be designed to allow unobstructed passage of fish, including juvenile stages. Several culverted crossings which require widening will need to be redesigned for larger capacity or lower velocities. The Alaska Dept. of Fish and Game should be consulted prior to installing any new crossing structures for information on this subject. [100, 107, 110]

The large areas of cut depicted in these plans may present erosion and siltation problems within the Kenai River. This in turn may lead to silt deposition within the River and possible loss of spawning habitat. Existing cuts along the Sterling Highway vary from bedrock to steep, unvegetated slopes of loose materials which continually degrade. The EIS should recognize this potential problem and set forth a program to minimize erosion through revegetation or other slope retention devices. [99, C-34, C-35]

We hope these comments will be useful to your office. We appreciate this opportunity to comment and look forward to reviewing the Draft EIS when it becomes available.

Sincerely,

Ron Morris
Supervisor, Anchorage Field Office

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF PARKS

JAY S. HAMMOND, GOVERNOR

619 WAREHOUSE DR., SUITE 210
ANCHORAGE, ALASKA 99501

PHONE: 274-4676

November 9, 1981

Re: 3330-1 (Sqilantnu Archaeological District)

Terry Fleming
Environmental Coordinator
Central Region
Pouch 6900
Anchorage, Alaska 99502

Dear Terry:

We have reviewed the attached nomination form for the Sqilantnu Archaeological District to ascertain its eligibility for inclusion on the National Register of Historic Places. We feel the district has cohesiveness for its evidence of long-term use of the fish resources concentrated at the confluence of the Russian and Kenai Rivers. We feel the district is eligible for inclusion on the National Register but that additional research is required to obtain more information for each site prior to a formal nomination process.

Sincerely,

Chip Dennerlein
Director

By: Robert D. Shaw
State Historic Preservation Officer

DR:clk