#### **ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES**

#### STATEWIDE DESIGN & ENGINEERING SERVICES

#### BRIDGE STATUS REPORT – March 6, 2009

Contact: Roger Healy, P.E., Chief Engineer 465-6958

#### Project Development Timeline - Bridges

All projects take time to bring from concept through completion: federally funded projects take longer yet. It is not unusual for the project development process (funding authorization, preliminary design, permits, environmental clearances, final design, bidding, and award) to take multiple years. Bridge projects have further challenges in preconstruction and construction because of historic structure considerations, river hydraulics, wetland impacts, Coast Guard clearances, fish permit timeframes, traffic detours, temporary bridges, and seasonal construction windows.

#### **Bridge Work Present and Future**

The focus of the following lists is bridges owned and maintained by the DOT&PF. Future anticipated Project Costs are preliminary and will change. The following lists identify:

- Major Bridge work underway or completed in the 2008 construction season;
- Major Bridge work anticipated for construction in the 2009 construction season;
- Major Bridge design and construction work for Structurally Deficient bridges without complete funding through design and/or construction;
- Structurally deficient bridges of major significance that, subject to available funding, must be replaced or undergo rehabilitation in the future.

#### **Major Bridge Construction Work in 2008**

Bridge	Highway/Location	Project Cost or Bridge Component (BC) Cost	Notes
Hick's Creek	Glenn Highway	~\$4M (BC)	Open to Traffic
South Channel	Unalaska	~\$20M	Open to Traffic
North Pole Interchange	Richardson/North Pole	~\$2M (BC)	Open to Traffic
Susitna River Br. Rehab	Talkeetna	~\$5.5M(BC)	Open to Traffic
ADOT Maintenance	Statewide	~\$250K	Open to Traffic
Repairs			

# <u>Anticipated Bridge Construction Work 2009 – Funds Identified for Design/Construction</u>

Bridge	Highway/Location	Project Cost or Bridge Component (BC) Cost	Notes
Tanana River	Alaska Highway	~\$40M	Bid on 2/26/2009
Gakona River	Tok	~\$5M	2009 Stimulus - Fast List
Shaw Creek	Richardson	~\$3M (BC)	GF Funded
Barnette Street	Chena River/Fairbanks	~\$4M	FMATS TIP
Tok River	Alaska	~\$380K	2008 G.O. Bonds for
			Future STIP Eligibility

# On System Major Bridge Work - Planning and Design - Majority of Funds Identified

Bridge	Highway/Location	Project Cost or Bridge Component (BC) Cost	Notes	Proposed Funding Source
Snake River	Nome	~\$10M	Replacement	2008 G.O. Bonds
Wood River	Aleknagik	~\$20M	New Crossing	2008 G.O. Bonds
Ptarmigan Creek	Seward Highway	~\$2M	Emergency Temp. Repairs	2008 G.O. Bonds
Falls Creek	Seward Highway	~\$2.5M	Emergency Temp. Repairs	2008 G.O. Bonds
Trail River	Seward Highway	~\$6.5M	Emergency Temp. Repairs	2008 G.O. Bonds
Slana River	Tok	~\$6M	Replacement	2008 G.O. Bonds
Taiya River	Dyea/Skagway	~\$1.5M	Load Rated/Rehab	2008 G.O. Bonds
Tolsona Creek	Glenn	~\$1.5M	Replacement	2008 G.O. Bonds

#### **FUTURE FUNDING**

DOT&PF anticipate between \$20M to \$25M annually in federal Bridge Replacement monies for bridge replacement and rehabilitation. The limited federal Bridge Replacement (BR) funds will be prioritized based on needs for safety and transportation efficiency. Project costs are rough.

# On System Bridge Work – Funds Not Secured – STIP Nominations for Federal Bridge Replacement Funds

Bridge	Highway/Location	Project Cost or Bridge Component (BC) Cost	Notes	Proposed Funding Source
Tok River	Alaska Highway	~\$10.0M	Replacement – Functionally Obsolete/Gas Line Support	2009 STIP Nomination for Design
Moose Creek RR Xing	Richardson	~\$14M	Replacement	2009 Stimulus – Contingent
Ketchikan Viaducts	Tongass	~\$7.15M	Rehabilitation	2009 Stimulus – Contingent
Livengood Creek	Old Elliot	~\$1.0M	Structurally Deficient - Replacement	2009 STIP -Potential Nomination for Design Funds
Phelan Creek	Richardson	~\$2.5M	Replacement Structurally Deficient - Replacement	2009 STIP -Potential Nomination for Design Funds
Ruby Creek	Richardson	~\$2.0M	Replacement - Structurally Deficient	2009 STIP -Potential Nomination for Design Funds
Snow River Center	Seward	~\$1.8M	Rehabilitation - Structurally Deficient	2009 STIP -Potential Nomination for Design Funds
Snow River West	Seward	~\$5M	Rehabilitation — Structurally Deficient	2009 STIP -Potential Nomination for Design Funds
S. Fork Anchor River	Sterling	~\$2.5M	Replacement – Structurally Deficient	2009 STIP -Potential Nomination for Design Funds
Ptarmigan Creek	Seward Highway	~\$4.0M	Permanent Replacement	2009 STIP
Falls Creek	Seward Highway	~\$3.0M	Permanent Replacement	2009 STIP
Trail River	Seward Highway	~\$8.5M	Permanent Replacement	2009 STIP
	TOTALS	~\$55M to \$65M		FHWA BR Funds

# Structurally Deficient On-System Major Bridge Work - Future

Bridge	Highway/Location	Bridge Component Cost (est.)	Notes
Twenty Mile River	Seward Highway	~\$25M	Seward Hwy MP75 to 90 – STIP ID# 11925
Virgin Creek	Seward Highway	~\$7M	Seward Hwy MP75 to 90 – STIP ID# 11925
No Name Creek	Halibut Pt. Road	~\$3M	Future Fund Request
Mendenhall River	Glacier Highway	\$3.0M for Design	2010 Gov Budget for Design, Construction out-years
Portage Creek No. 1	Seward Highway	~\$10M	Seward Hwy MP75 to 90 – STIP ID# 11925
Portage Creek No. 2	Seward Highway	~\$12M	Seward Hwy MP75 to 90 – STIP ID# 11925
Peterson Creek	Seward Highway	~\$5M	Seward Hwy MP75 to 90 – STIP ID# 11925
Glacier Creek	Seward Highway	~\$15M	Seward Hwy MP75 to 90 – STIP ID# 11925
Placer River Main	Seward Highway	~\$20M	Seward Hwy MP75 to 90 – STIP ID# 11925
Placer River Overflow	Seward Highway	~\$13M	Seward Hwy MP75 to 90 – STIP ID# 11925
Gerstle River	Alaska Highway	~\$55M	Future Fund Request
O'Connor Creek	Goldstream Road	~\$1.5M	Future Fund Request
Klehini River	Porcupine River	~\$7M	Future Fund Request
	TOTALS	~\$160M to ~\$200M	

# PHOTOS RECENT BRIDGE PROJECTS

#### State of Alaska DOT&PF



Bridge Name: Bridge Number: **Hicks Creek Bridge** 

547

Location:

Glenn Highway

Problem:

Functionally obsolete, insufficient

seismic capacity, new alignment

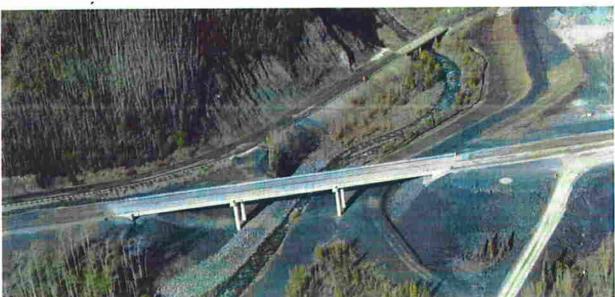
Year Built:

1956

Recommendation:

Replacement - completed 2008





# State of Alaska DOT&PF



Bridge Name: Bridge Number:

Year Built:

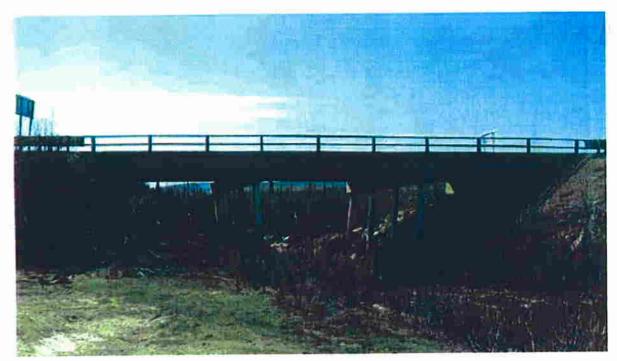
**Washington Creek** 

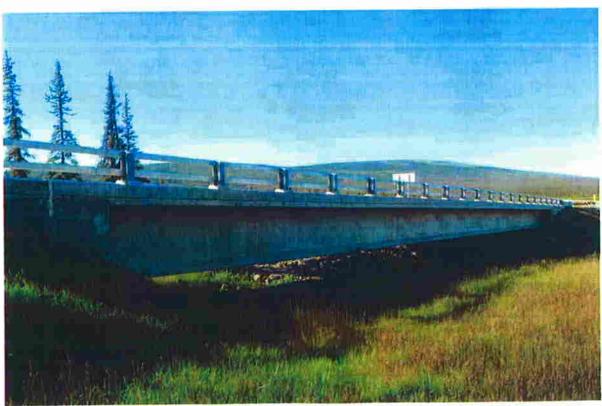
838 1969 Location: Problem:

**Elliott Highway** 

Recommendation:

Deteriorating foundations and piers on: Replaced the bridge in 2007





#### State of Alaska DOT&PF



Bridge Name:

**Bridge Number:** 1386

**South Channel Bridge** 

Location: Problem: Unalaska

Rapid condition deterioration due to

marine environment and overloading.

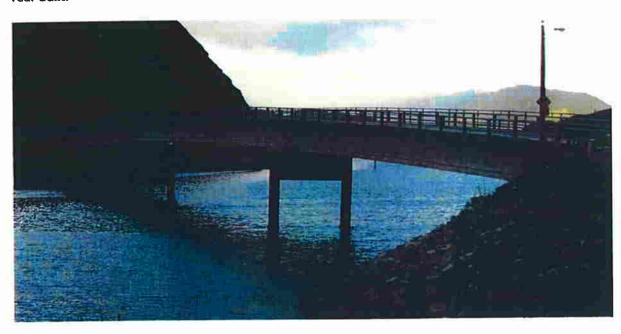
Insufficient seismic capacity

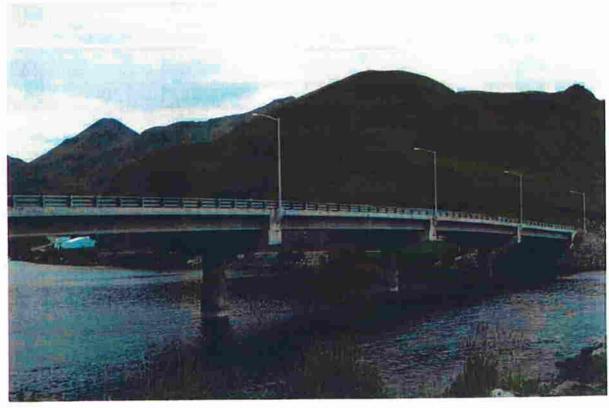
Year Built:

1981

Recommendation:

Replacement - completed 2008





#### State of Alaska DOT&PF



Bridge Name:

Susitna River Bridge

254

Location:

Talkeetna

**Bridge Number:** 

Problem:

Poor deck condition, poor paint

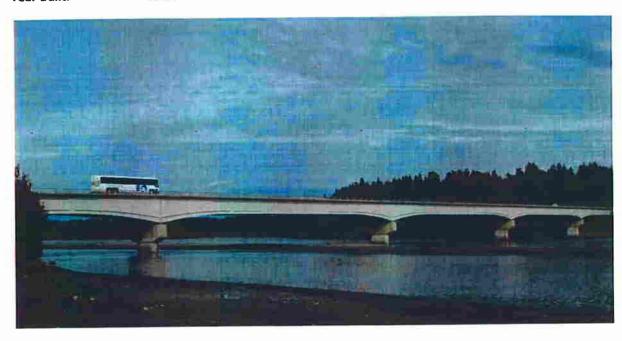
condition, insufficient seismic capacity

Year Built:

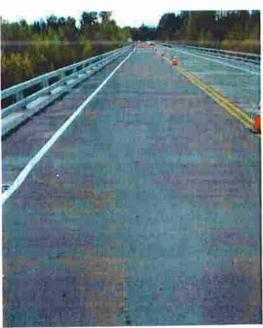
1962

Recommendation:

Rehabilitation – completed 2008







#### State of Alaska DOT&PF



Bridge Name:

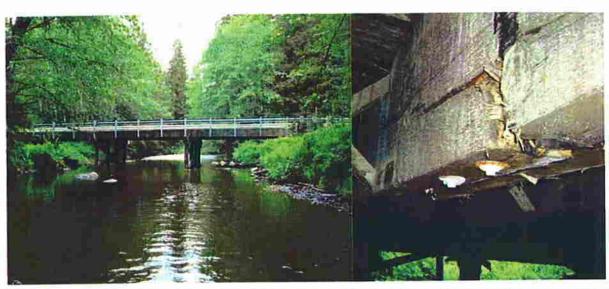
Ohmer Creek

Location:

Mitkof Highway

Bridge Number: Year Built: 388 1959 Problem: Older bridge with broken beams

Recommendation: Replaced in 2006





#### State of Alaska DOT&PF



Bridge Name: Bridge Number: **Grayling Creek** 

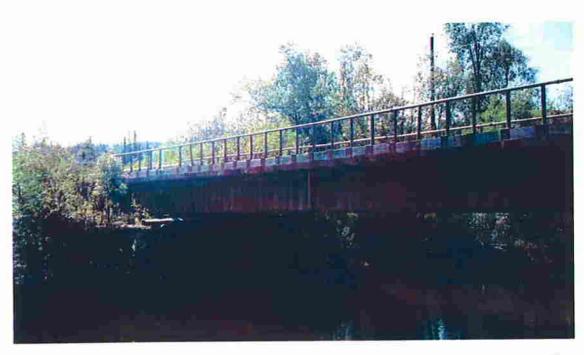
Location: Problem: Grayling

Year Built:

1298 Unknown

Problem: Action: Structurally Deficient Bridge

Replaced 2005





# **PHOTOS**

# **CURRENT BRIDGE PROBLEMS**

# State of Alaska DOT&PF



Bridge Name:

Slana River

Location:

**Tok Cutoff** 

Bridge Number: Year Built: 654 1952 Problem:

Recommendation:

Older bridge with cracked piers on: Replacement







# State of Alaska DOT&PF



**Bridge Name:** Bridge Number: **Tok River** 663

1964

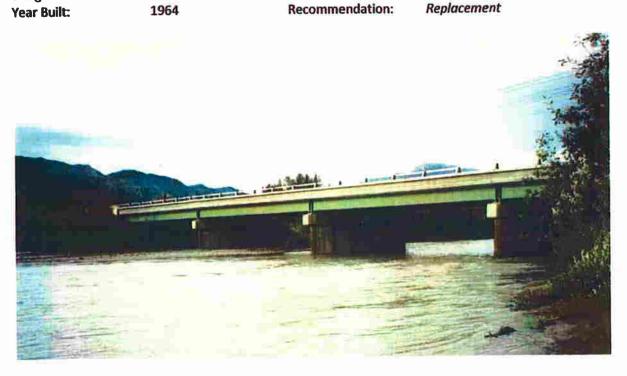
Location:

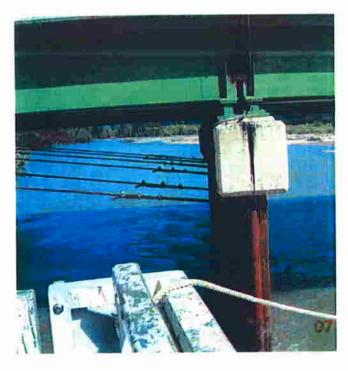
**Tok Cutoff** 

Problem:

Leaning and damaged pier on: Replacement

Recommendation:







#### State of Alaska DOT&PF



Bridge Name: Bridge Number: **Livengood Creek** 

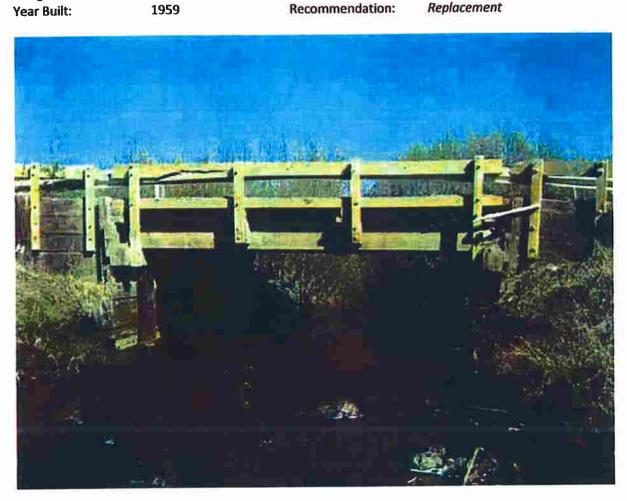
Location: 229

Old Elliott Highway

Problem:

Older, deteriorated timber bridge

Recommendation:









# State of Alaska DOT&PF



Bridge Name:

**Tolsona Creek** 

Location:

Glenn Highway

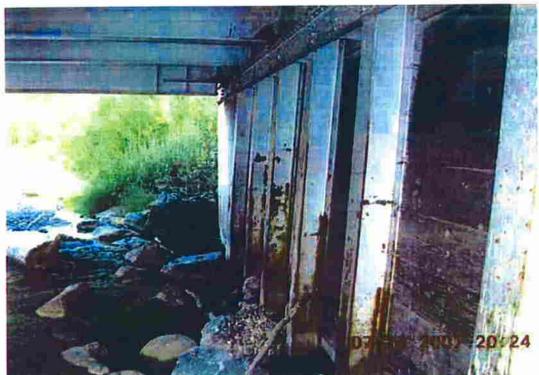
**Bridge Number:** Year Built:

**552** 1950

Older bridge with damaged abutments Problem:

Replacement Recommendation:





#### State of Alaska DOT&PF



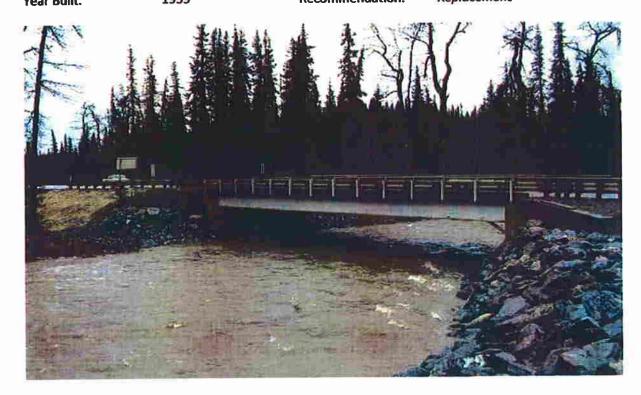
Bridge Name:

S. Fork Anchor River

Location:

Sterling Highway Flooding problems, bad abutments

Bridge Number: Year Built: 666 1959 Problem: Flor Recommendation:







#### State of Alaska DOT&PF



Bridge Name:

No Name Creek

Location:

Halibut Point Road near Sitka

Bridge Number:

327 1960 Problem: Bad pier







#### State of Alaska DOT&PF



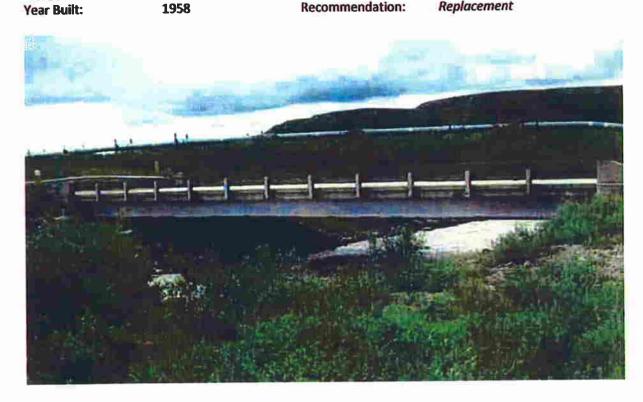
Bridge Name: Bridge Number: **Phelan Creek** 579

Location: Problem:

Richardson Highway Narrow bridge, bad abutments

1958

Replacement Recommendation:





#### State of Alaska DOT&PF



Bridge Name: Bridge Number:

Year Built:

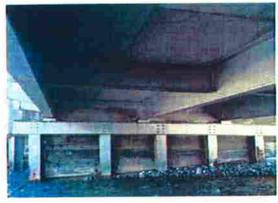
Ruby Creek 594 Location:

Richardson Highway

nber: 594 1952 Problem: Hyd Recommendation:

Hydraulic problems, narrow bridge on: Replacement







#### State of Alaska DOT&PF



Bridge Name:

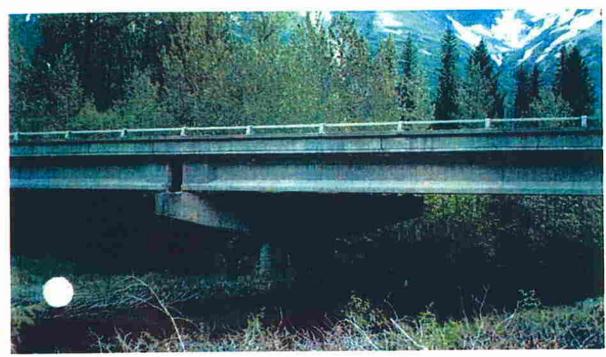
**Snow River West** 

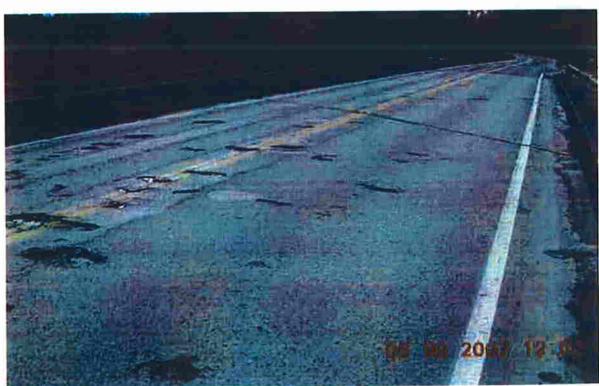
Location:

**Seward Highway** 

Bridge Number: Year Built: 603 1966 Problem: Bad deck
Recommendation: Re

Rehabilitation





#### State of Alaska DOT&PF



Bridge Name:

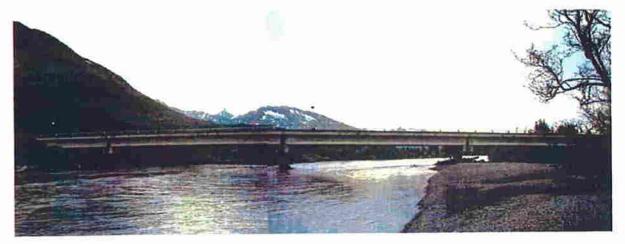
**Snow River Center** 

Location:

Seward Highway

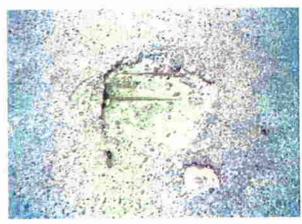
Bridge Number: Year Built: 605 1966 Problem: Bad deck Recommendation: Re

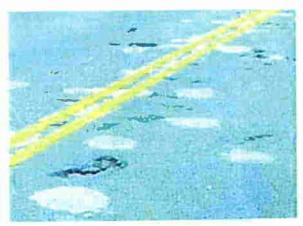
Rehabilitation











#### State of Alaska DOT&PF

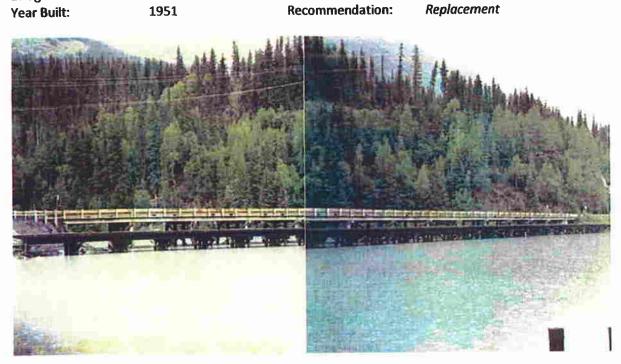


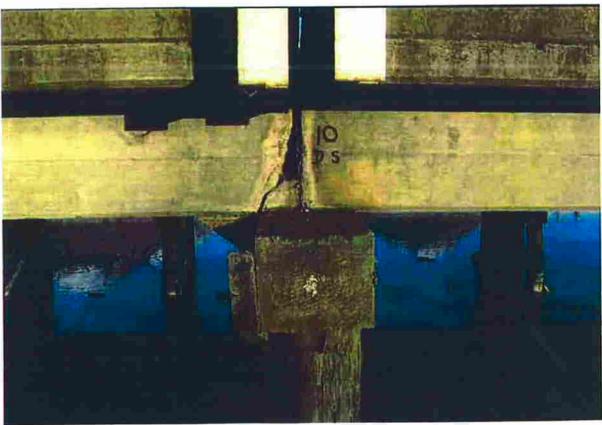
Bridge Name: **Bridge Number:**  Trail River

Problem: 610

Seward Highway near Seward Location: Older bridge with deteriorating piers

Recommendation:





#### State of Alaska DOT&PF



Bridge Name:

**Gakona River** 

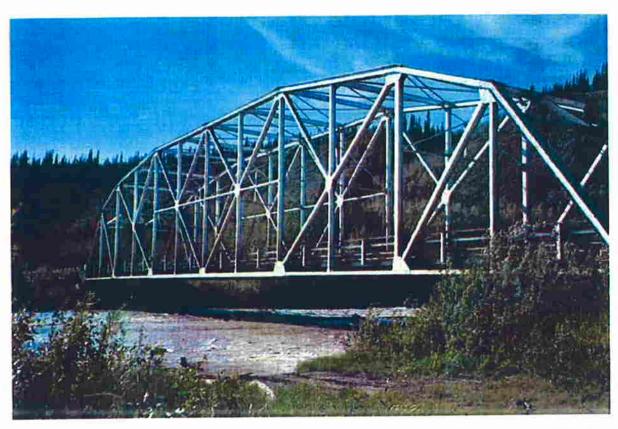
er Location:

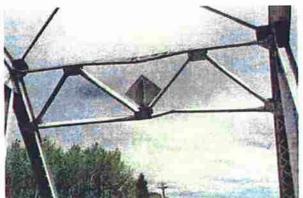
**Tok Cutoff** 

Bridge Number: Year Built: 646 1950 Problem: Older br

Older bridge, inadequate for pipeline

Recommendation: Replacement







#### State of Alaska DOT&PF



**Bridge Name:** 

**Chilkat River** 

Location:

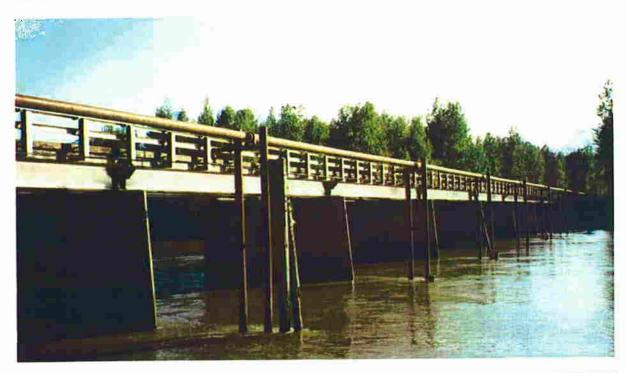
**Haines Highway** 

Bridge Number: Year Built:

742 1958 Problem:

Older bridge, inadequate for pipeline

Recommendation:





#### State of Alaska DOT&PF



Bridge Name: **Bridge Number:**  **Twenty Mile River** 

Location: 634

**Seward Highway** 

Narrow, structurally deficient bridge Problem: Replacement

Year Built:

1967

Recommendation:







#### State of Alaska DOT&PF



Bridge Name:

Virgin Creek

Location:

**Seward Highway** 

Bridge Number: Year Built: 638 1966 Problem:

Recommendation:

Narrow, structurally deficient bridge on: Replacement







#### State of Alaska DOT&PF



Bridge Name:

Mendenhall River

Location:

Glacier Highway Narrow, structurally deficient bridge

Bridge Number: Year Built: 737 1965 Problem: Na Recommendation:







#### State of Alaska DOT&PF



Bridge Name:

**Falls Creek** 

Location:

**Seward Highway** 

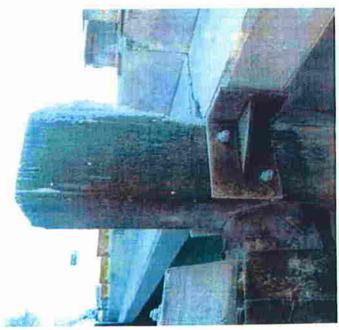
Bridge Number: Year Built:

609 1952

Older bridge with deteriorating piers Problem: Recommendation:







#### State of Alaska DOT&PF



Bridge Name: Bridge Number:

Year Built:

**Ptarmigan Creek** 

1952

Location: 608

**Seward Highway** 

Problem:

Older bridge with deteriorating piers

Replacement Recommendation:





# State of Alaska DOT&PF



**Bridge Name:** Bridge Number:

Year Built:

Portage Creek No. 1

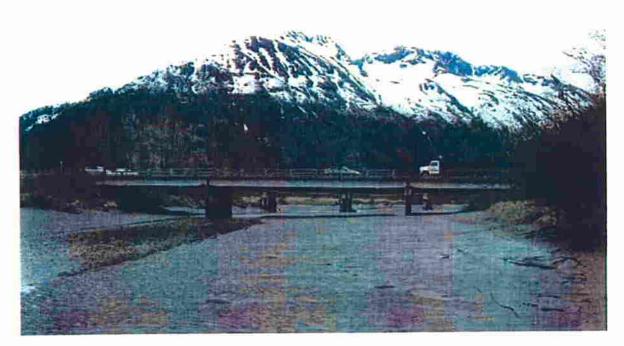
630 1966 Location:

**Seward Highway** 

Problem:

Narrow, structurally deficient bridge on: Replacement

Recommendation:







#### State of Alaska DOT&PF



Bridge Name:

Portage Creek No. 2

Location:

**Seward Highway** 

Bridge Number: Year Built:

631 1967

Narrow, structurally deficient bridge Problem: Recommendation:





#### State of Alaska DOT&PF



Bridge Name:

Peterson Creek

Location:

Seward Highway

Bridge Number: Year Built: 636 1966 Problem: Narrow, structurally deficient bridge

Recommendation: Replacement





#### State of Alaska DOT&PF



Bridge Name:

**Glacier Creek** 

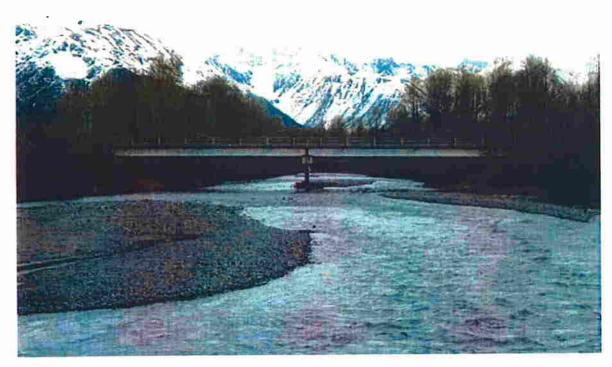
Location:

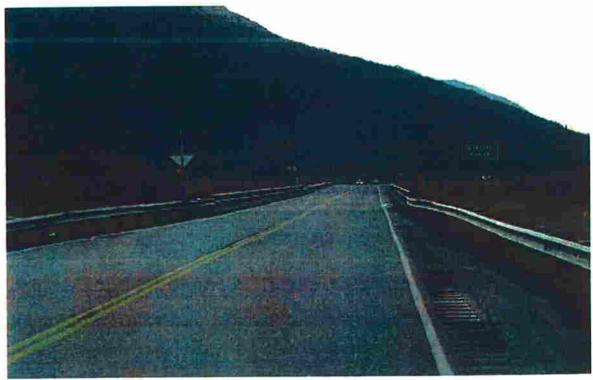
**Seward Highway** 

Bridge Number: **Year Built:** 

639 1966

Narrow, structurally deficient bridge Problem: Recommendation:





#### State of Alaska DOT&PF



Bridge Name: Bridge Number: **Placer River Main** 629

Location: Problem:

Seward Highway Narrow, structurally deficient bridge

Recommendation:





#### State of Alaska DOT&PF



Bridge Name:

Placer River Overflow Location:

**Seward Highway** 

Bridge Number: Year Built:

627 1967

Narrow, structurally deficient bridge Problem: Recommendation:





#### State of Alaska DOT&PF



**Bridge Name:** Bridge Number:

Year Built:

**Dowling Road UC** 

1324 1974 Location:

Seward Highway

Problem:

Narrow, vertical clearance restricted on: Replacement

Recommendation:



