HB

209

Funding Information
General Fund $1,070,000
Other Funds -0-
$1,070,000
(960,000)

Introduced: 2/23/81
Referred: Transportation and Finance

IN THE HOUSE BY CHUCKWUK

HOUSE BILL NO. 209

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWELFTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act making a special appropriation to the Department of Transportation and Public Facilities for dock facilities at Aleknagik; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. The sum of $1,070,000 is appropriated from the general fund to the Department of Transportation and Public Facilities for dock facilities at Aleknagik ~~to be allocated~~ as follows:

North shore barge landing and haul-out ramp for fishing boats $ ~~810,000~~ 580,000

South shore launching ramp ~~260,000~~ 188,000

* Sec. 2. The appropriation made by this Act is for capital projects and is subject to AS ~~37.25~~.020. $193,000 payment in full

* Sec. 3. This Act takes effect immediately in accordance with AS 01.10.-070(c).

Remember at 3 & 3 & 4

Alaska State Legislature

TRANSPORTATION COMMITTEE HEARINGS

DATE: 3-3-81
LOCATION: Juno
SUBJECT: HB 209

NAME	REPRESENTING	ADDRESS	PHONE	HERE TO TESTIFY	HERE TO OBSERVE
Gail Nordberg	Rep. Ken Fanning	P.O. Box 197 Auke Bay Ak	789-7371		✓

COMMITTEE REPORT

HOUSE

2/23/81 FURTHER: FINANCE

(7)

Date: ____________________

Mr. Speaker:

The Committee on TRANSPORTATION has had HB 209

"An Act making a special appropriation to the Department of Transportation and Public Facilities for dock facilities at Aleknagik; and providing for an effective date."

under consideration and (a majority of the committee) (the committee) reports it back with the following recommendations:

[x] do pass [ ] do not pass

[ ] do pass with attached amendments(s)

[x] replace with CS for HB 209 [ ] same title [x] new title

and recommends ____________________

[ ] AND attaches a "Letter of Intent" [ ] New Fiscal Note

[ ] reports it back without recommendation

[ ] referred to the ____________________ Committee

MEMBERS SIGNING
DO PASS

[signatures]

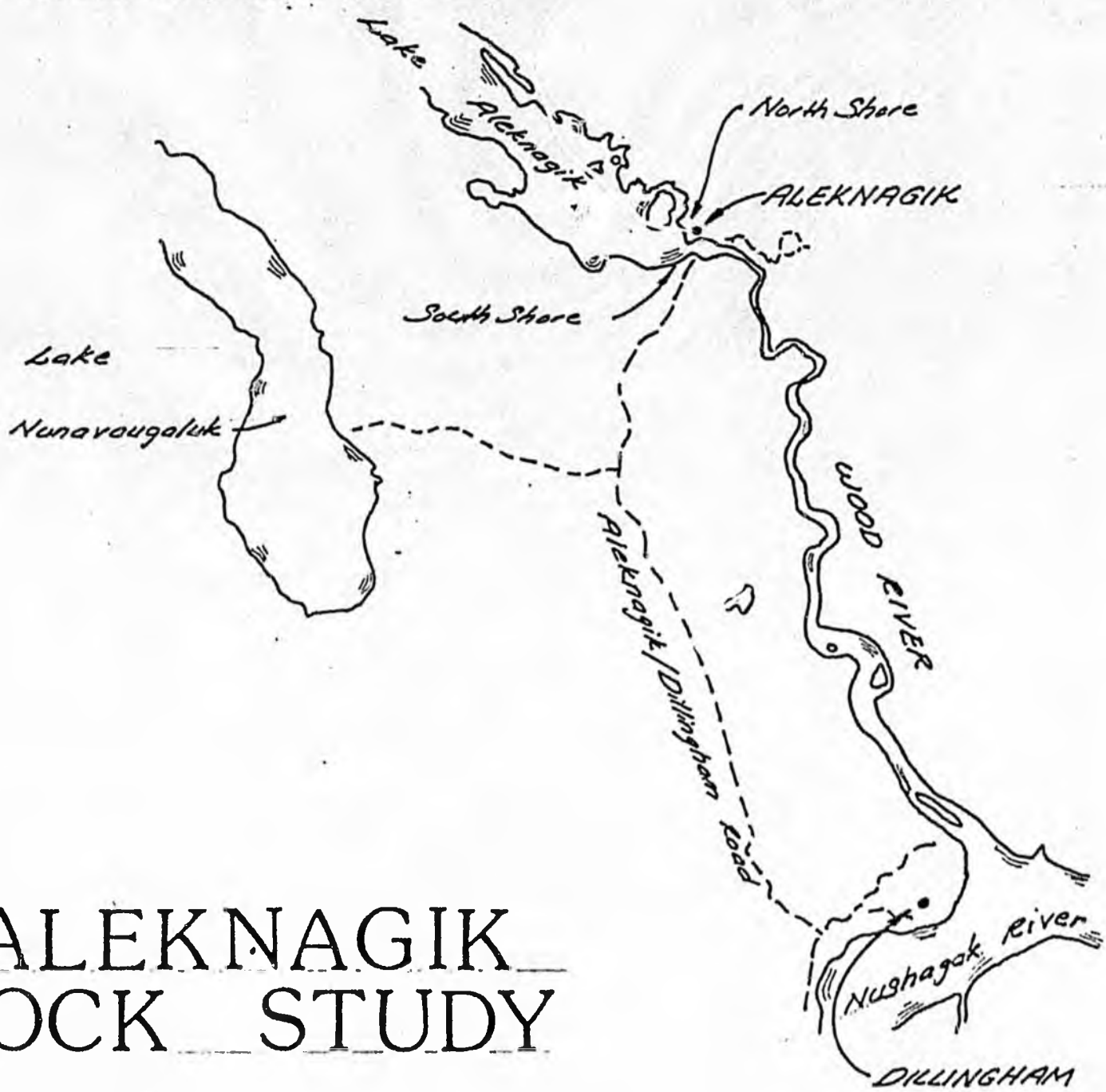
MEMBERS HAVING
OTHER RECOMMENDATIONS:

KEN FANNING - NO RECOMMENDATION

[signature]
CHAIRMAN

H 60 (Rev. 12/78)

Engineering
(907) 586-1164
P.O. Box 208, Douglas, Alaska



ALEKNAGIK DOCK STUDY

STATE of ALASKA, DOTPF
Div. of Harbor Design & Const.

January 1981

ALEKNAGIK DOCK STUDY

PREPARED FOR:

STATE OF ALASKA

JAY HAMMOND, GOVERNOR

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

ROBERT W. WARD, COMMISSIONER

DIVISION OF HARBOR DESIGN AND CONSTRUCTION

DON STATER, DIRECTOR

JANUARY 1981

BY:

LIUM ENGINEERING

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ALEKNAGIK DOCK STUDY

INTRODUCTION

A professional services contract between Lium Engineering and the State of Alaska, DOTPF, Division of Harbor Design and Construction became effective on October 9, 1980. The purpose of the contract (DOTPF project K31401) was to study the feasibility of developing docks at Aleknagik, Alaska.

The study was proposed in the spring of 1980 by Representative Nels A. Anderson, Jr. and was funded by the 1980 legislature under FCCSHB 60, section 227 (page 30). Section 227 as amended by Governor Jay Hammond reads: "The sum of $25,000 is appropriated from the General Fund to DOTPF, Division of Harbor Design and Construction for a feasibility study of a dock facility at Aleknagik."

The study, reported herein, defines the needs for docks at Aleknagik and describes feasible alternatives to satisfy these needs.

Mr. Pat Kohler, Aleknagik Administrator, explained the village's needs for docks during an inspection of the proposed sites by Lium Engineering on November 7, 1980.

ALEKNAGIK

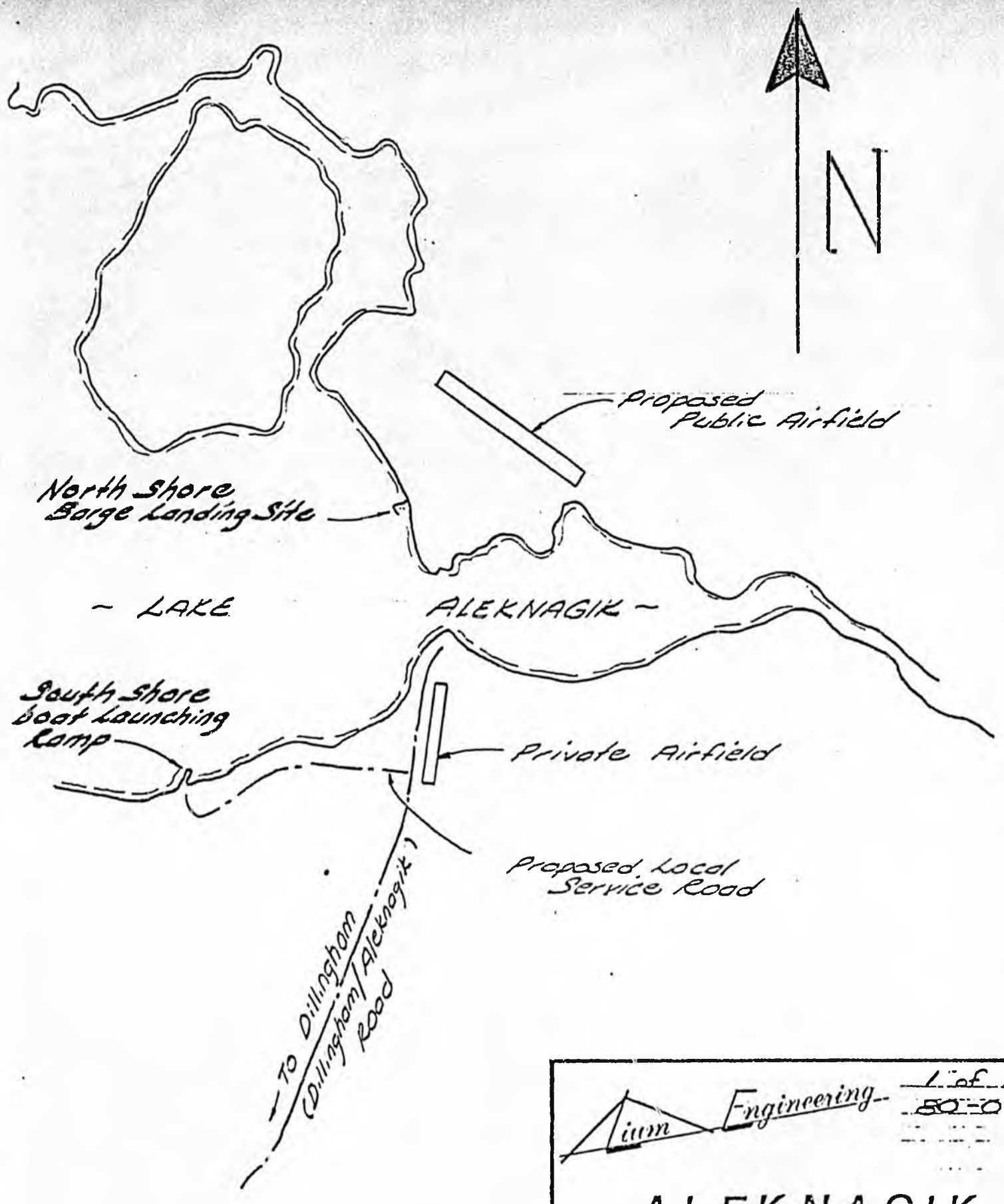
Aleknagik is located in the Bristol Bay region of Southwestern Alaska. The outlet of Lake Aleknagik into Wood River splits the village into two settlements called North Shore and South Shore.

South Shore, at the end of a 20 mile gravel road from Dillingham, contains the school, post office, several residences and a private airport. Approximately 30 persons live at South Shore. A boat launching ramp is needed here to accommodate the pleasure boats of Dillingham residents.

Approximately 100 persons reside at North Shore. In addition to the residents, North Shore contains the village offices and a street system developed by DOTPF Local Service Roads Section in 1977. A public airport for light planes is now being developed here. A barge landing, haul-out ramp for fishing boats, and temporary protection for skiffs are the needs at North Shore.

Skiffs with outboards provide access from North Shore to South Shore except when the lake is frozen over. The natural sandy gravel beaches on both shores provide satisfactory beaching for the skiffs during calm weather. Protected beaches for temporary mooring during windy weather are needed.

Two local barge services transport fuel and dry goods up the Wood River from Dillingham to Aleknagik.



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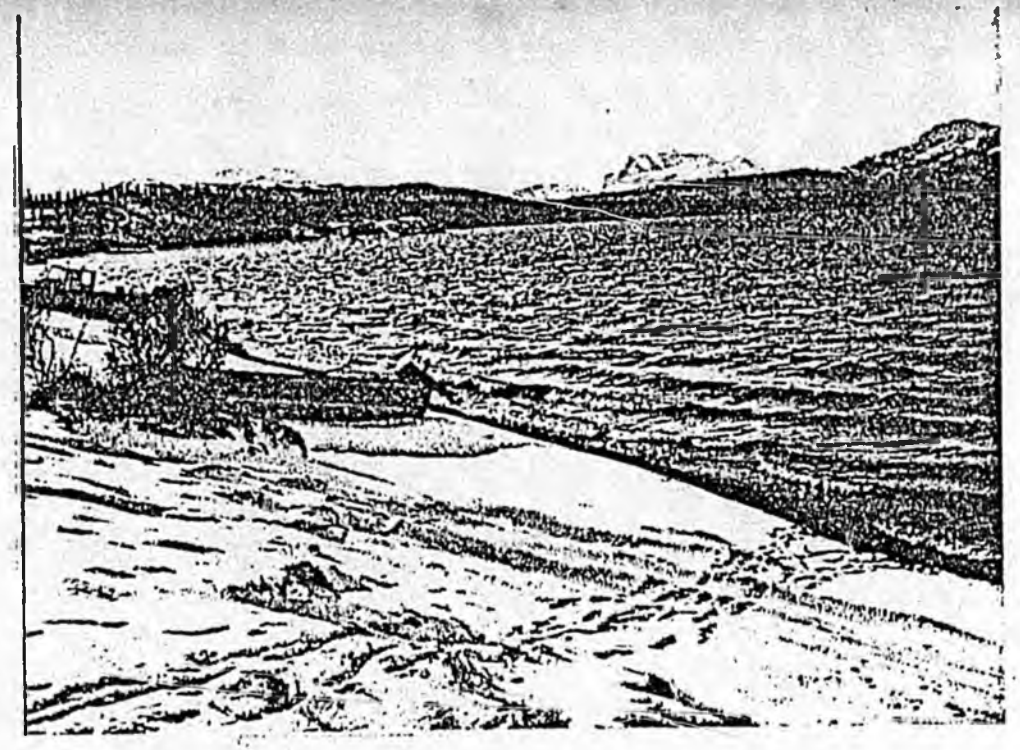
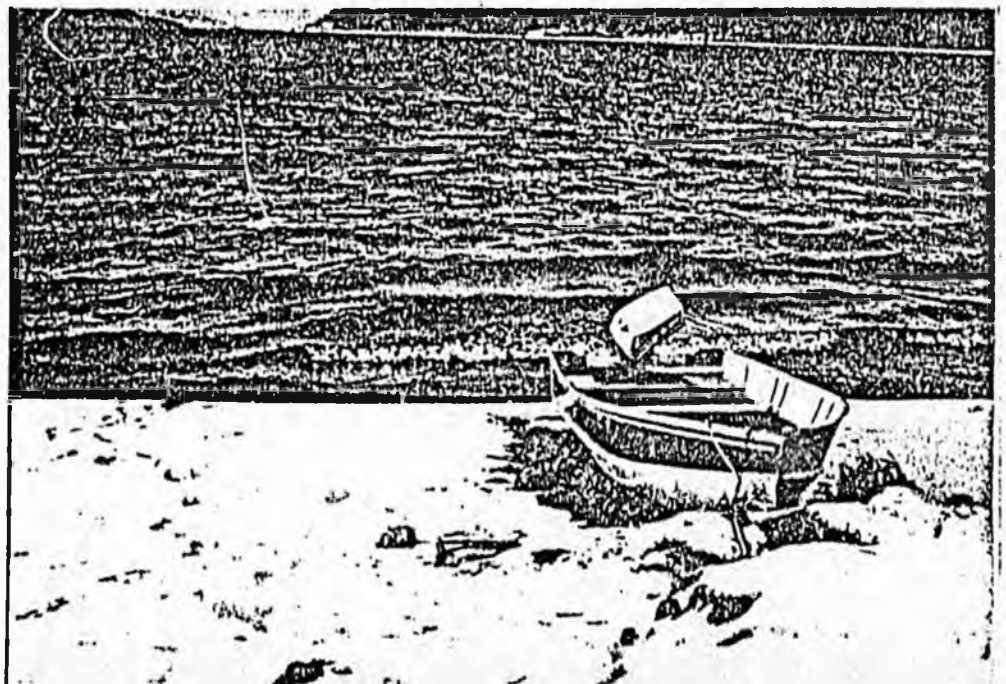
ALEKNAGIK DOCK STUDY

SITE MAP

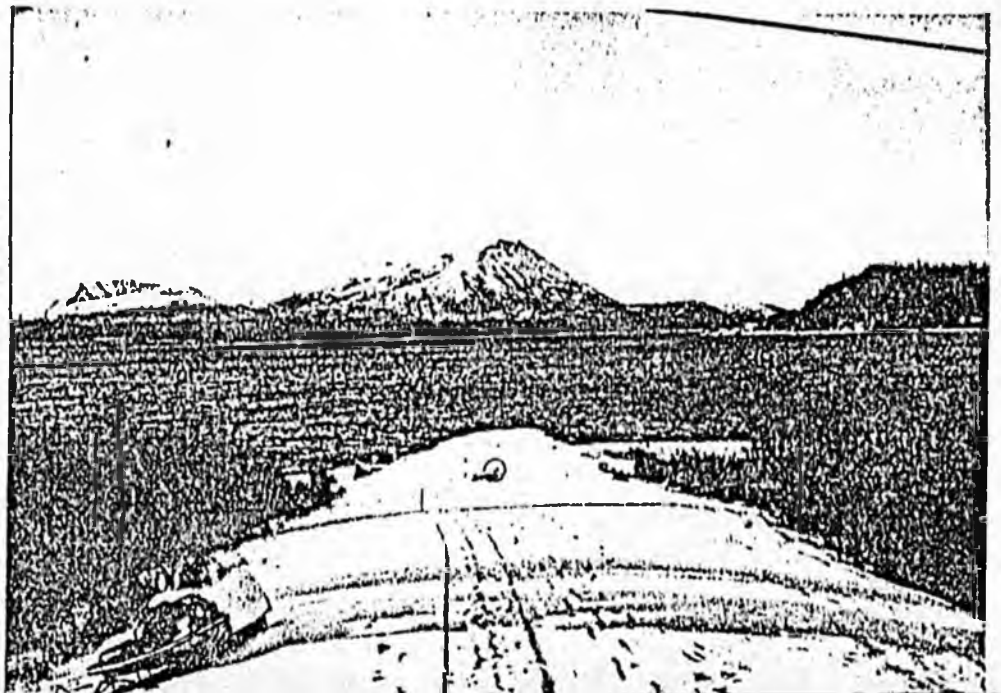
LAKE ALEXANAGIK OUTLET INTO WOOD RIVER
(From North Shore)



TYPICAL SKIFF
(at North Shore)



FISH STREET AT NORTH SHORE



NORTH SHORE ALTERNATIVES

The needs at North Shore are a barge landing, haul-out ramp for fishing boats, and protected beach for skiffs.

The proposed site at the end of Fish Street is sheltered from south, southeast, and east winds, is adjacent to public property available for boat or freight storage, and is conveniently located for ready access through the newly developed street system to the entire community. Currently there is no barge landing adjacent to the street system. Goods, therefore must be transported by hand.

Sketches of Alternative B show a feasible dock and ramp for North Shore. The dock is a steel pile, steel beam structure supporting precast concrete deck panels. It is sized for a barge 32 ft. wide and 80 ft. long with draft not greater than 4 feet. Because barges do not operate during the extremely low water of winter months, a bottom elevatior three feet below lowest water level will be satisfactory at face of dock.

Adjacent to the dock is a sixteen foot wide boat launching ramp with surface of precast concrete planks. Details for this ramp are typical of the latest ramps developed by Alaska's Division of Harbor Design and Construction. The sides of the launching ramp embankment slope 5 units horizontal to 1 unit vertical. During design development the actual fill slope that will accom-

modate wave action will be determined. Conversely, steep slopes with slope protection or a bulkhead retained fill may replace the slopes shown.

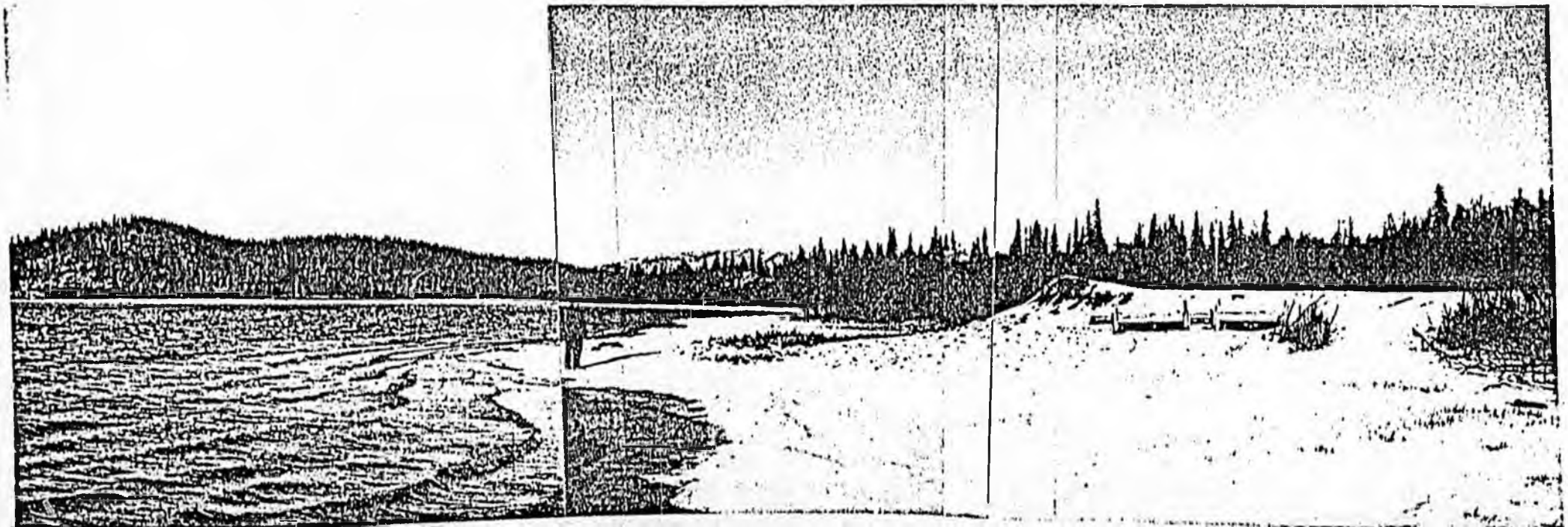
Alternative B will present the least obstruction to any parallel-with-shore currents that may be present, but are not evident, along this shore. The alternative has one serious fault, however: it does not provide any protection from north, northwest, or west winds for skiff beaching. The estimate for Alternative B indicates a total cost of $810,000.

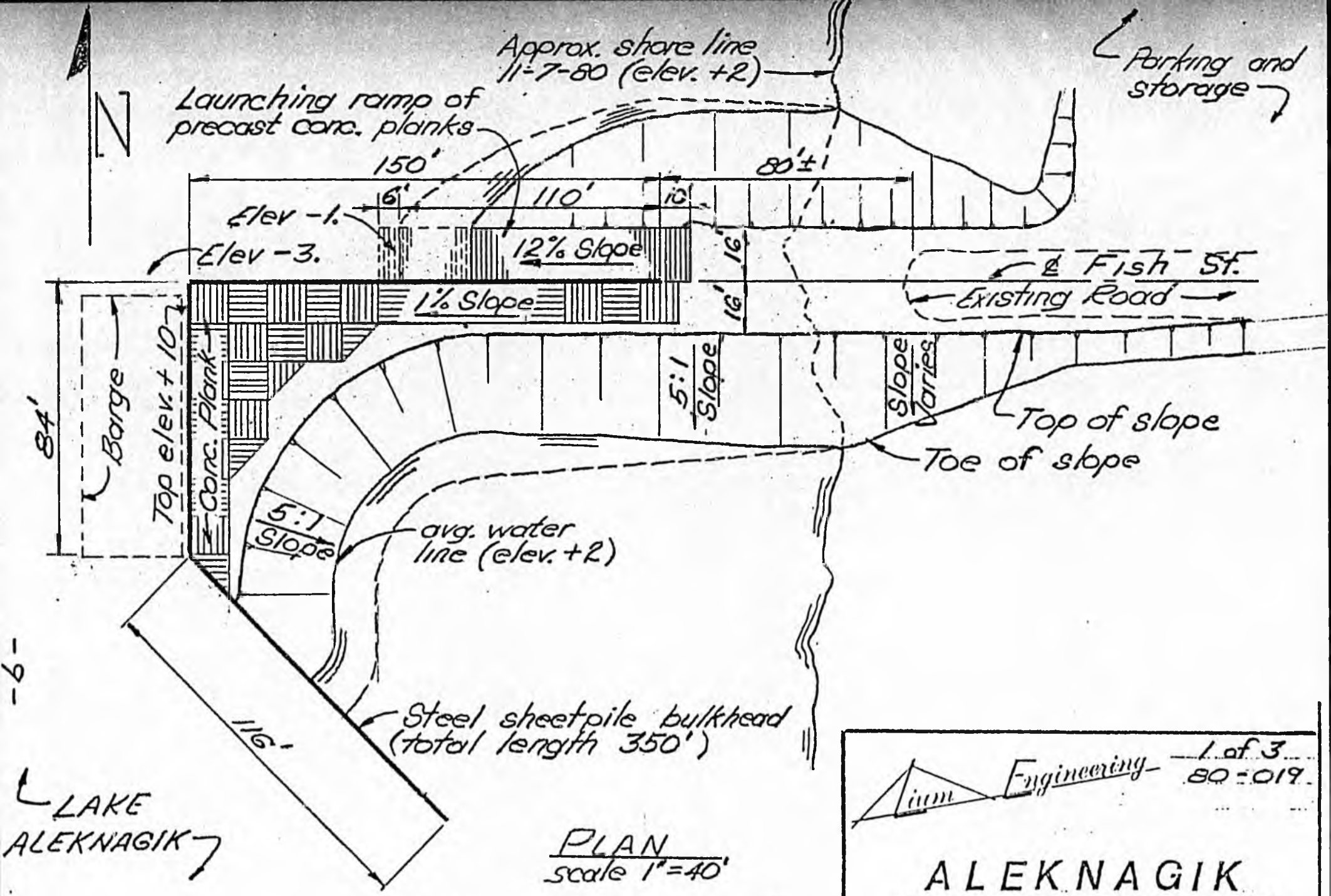
Alternative A substitutes a steel sheetpile bulkhead and gravel fill topped with precast concrete planks for the steel frame dock. Otherwise it is very similar to Alternative B. The sheetpile bulkhead extends south far enough to provide excellent protection for the 5 to 1 side slope of gravel fill and any skiffs that are beached on this slope. The only expected detrimental effect of obstructing the (possible) along-shore current by selecting Alternative A would be a slow accumulation of soil at the entrance to the skiff beaching area. Because the entrance now conceived will go dry during extreme low water it will be easy to maintain with a small backhoe, front end loader or dozer. Alternative A costs $60,000 less than Alternative B. At this early stage of project development the estimated difference of cost cannot be considered significant.

Alternative A is superior to B because of the skiff protection provided and should, with the similar estimated costs, be selected unless there are environmentally valid objections to placing the bulkhead contained fill into the lake.

BORROW PT. at NORTH SHORE
(1/4 mile from dock site)

NORTH SHORE DOCK SITE AT END OF FISH STREET




N
Approx. shore line 11-7-80 (elev. +2)
Parking and storage
Launching ramp of precast conc. planks
150'
80'±
6'
110'
10'
Elev -1.
Elev -3.
12% Slope
16'
16'
℄ Fish St.
Existing Road
1% Slope
5:1 Slope
Slope Varies
Top of slope
Toe of slope
84'
Barge
Top elev. +10
Conc. Plank
5:1 Slope
avg. water line (elev. +2)
116'
Steel sheetpile bulkhead (total length 350')
LAKE ALEKNAGIK
PLAN
scale 1"=40'
NOTE: Elevations are based on low lake water surface elev. 0.0
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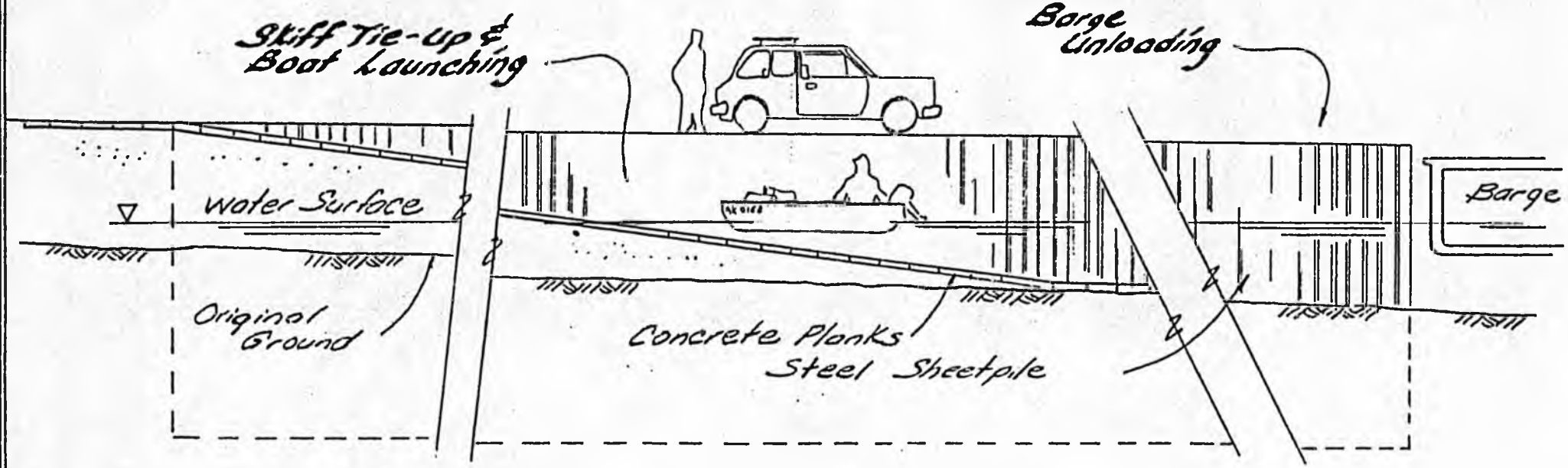
ALEKNAGIK DOCK STUDY
NORTH SHORE
ALTERNATIVE A



RAMP ELEVATION

1" = 10'

-10-

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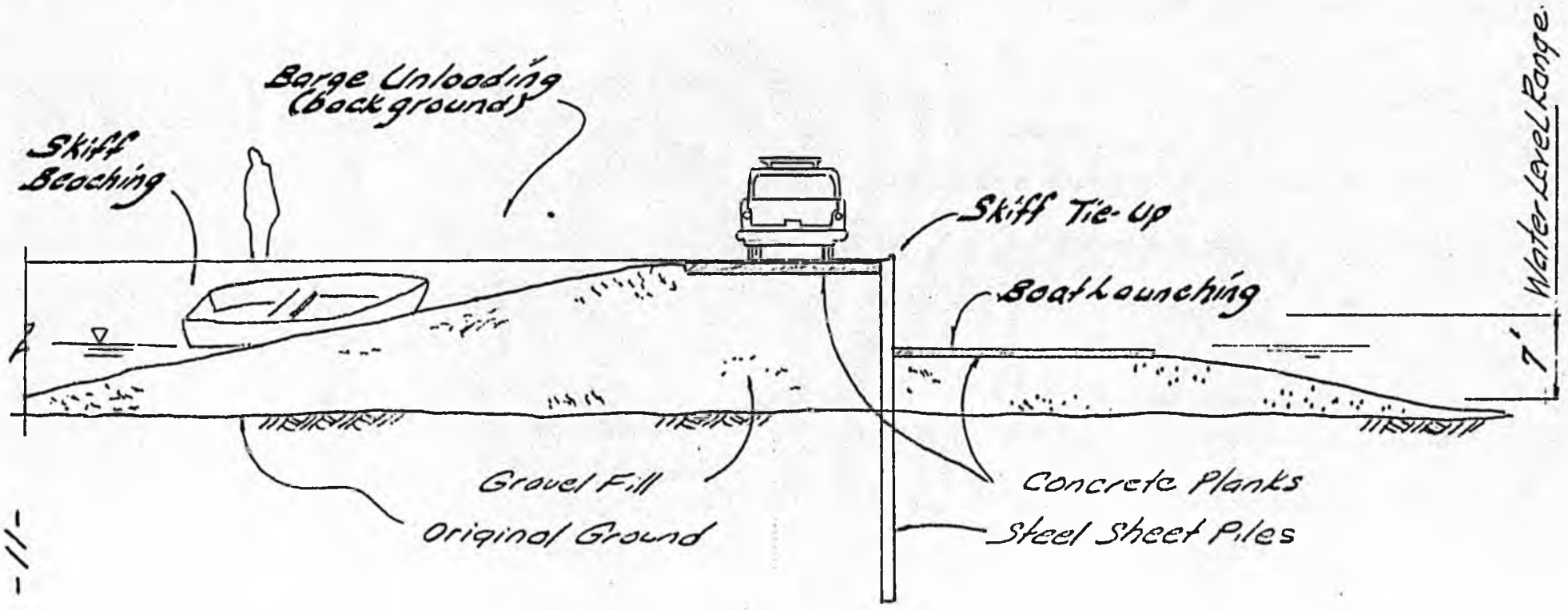
ALEKNAGIK DOCK STUDY

NORTH SHORE
ALTERNATIVE A



TRANSVERSE SECTION

1"=10'

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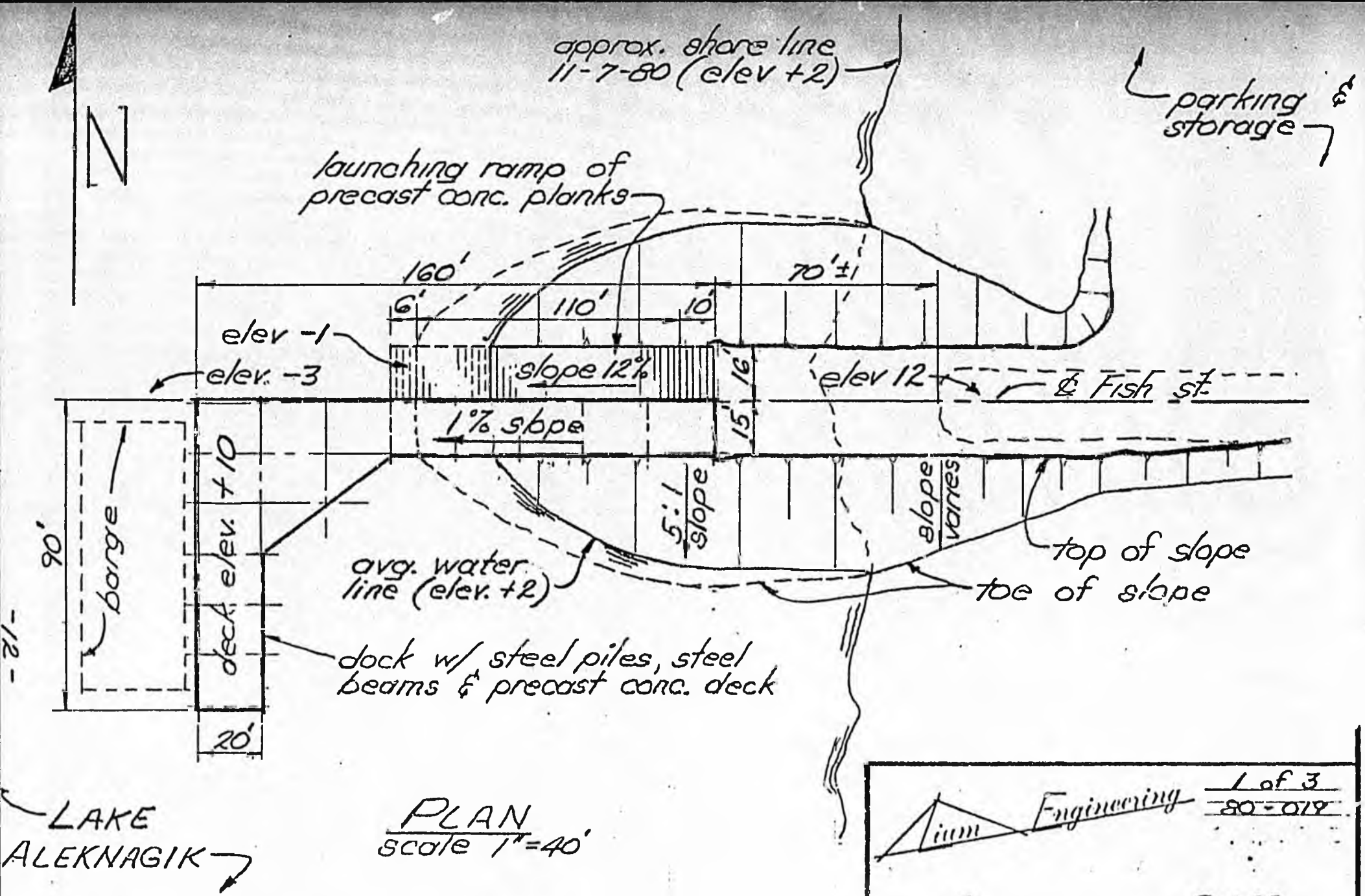
ALEKNAGIK DOCK STUDY

NORTH SHORE
ALTERNATIVE A



PLAN
scale 1"=40'

NOTE: Elevations are based on low lake water surface elev. 0.0

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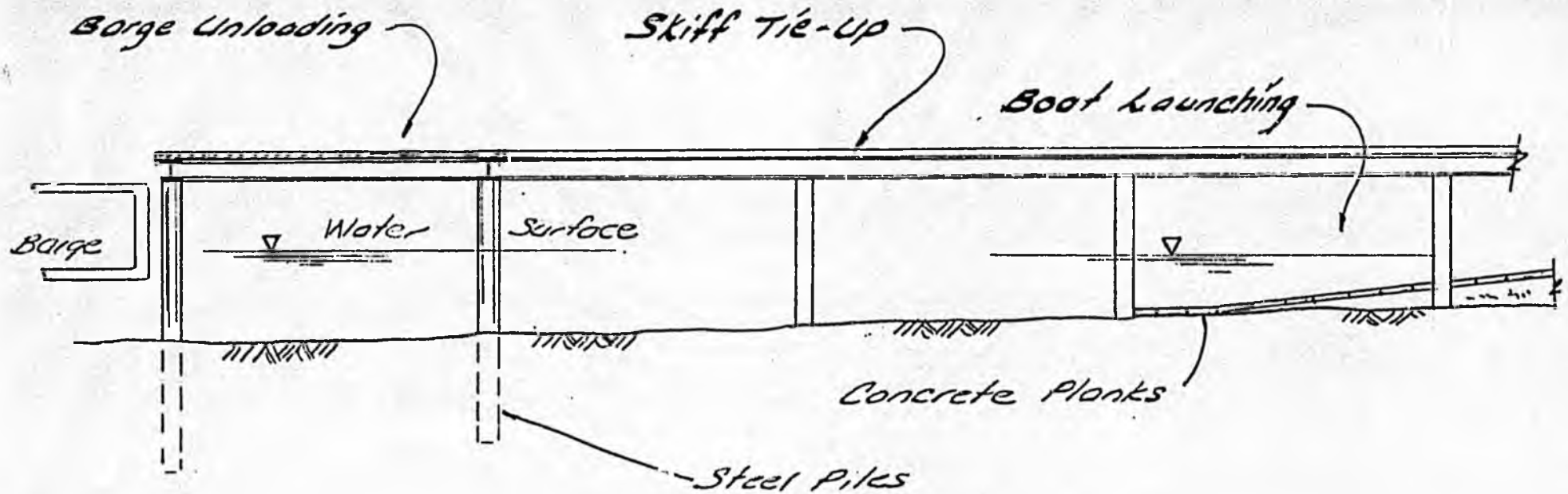
ALEKNAGIK DOCK STUDY

NORTH SHORE
ALTERNATIVE B



ELEVATION

1"=10'

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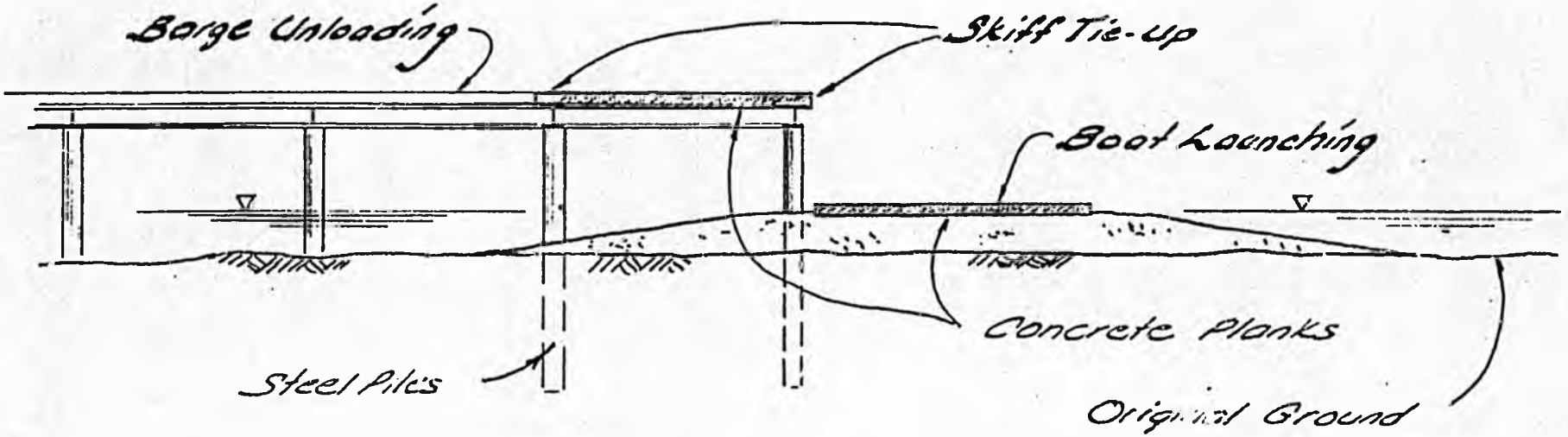
ALEKNAGIK DOCK STUDY

NORTH SHORE

ALTERNATIVE B



TRANSVERSE SECTION
1"=10'

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ALEKNAGIK DOCK STUDY

NORTH SHORE
ALTERNATIVE B

SOUTH SHORE ALTERNATIVES

The needs at South Shore are a launching ramp for recreational boats and protected beach for skiffs.

Currently, Dillingham residents lauch their boats at the beach adjacent to the end of the Aleknagik/Dillingham Road. This beach property belongs tc Mr. Sherburne Smith. The beach does not provide satisfactory boat launching for several reasons: the beach slope is too shallow; access from road to beach is rough; beach surface of sandy gravel provides unstable traction; the private property could be blocked off at any time.

Several alternatives were considered for a launching ramp at South Shore. They included a ramp extending perpendicular to shore into lake and a hammerhead at end of causeway with ramp either paralleling the shore or angling out into lake. The only alternative proposed is a further development, or outgrowth, of these alternatives. It illustrates satisfactorily the most feasible direction for further development. It is simply a 16 foot (surfaced width) ramp that angles into lake so as to provide a beach with protection from north and west winds. A turnaround area on shore and parking space for 20 pickups with trailers are included.

The steep slope covered with riprap on lakeward side of ramp presumes development of a rock source prior to construction.

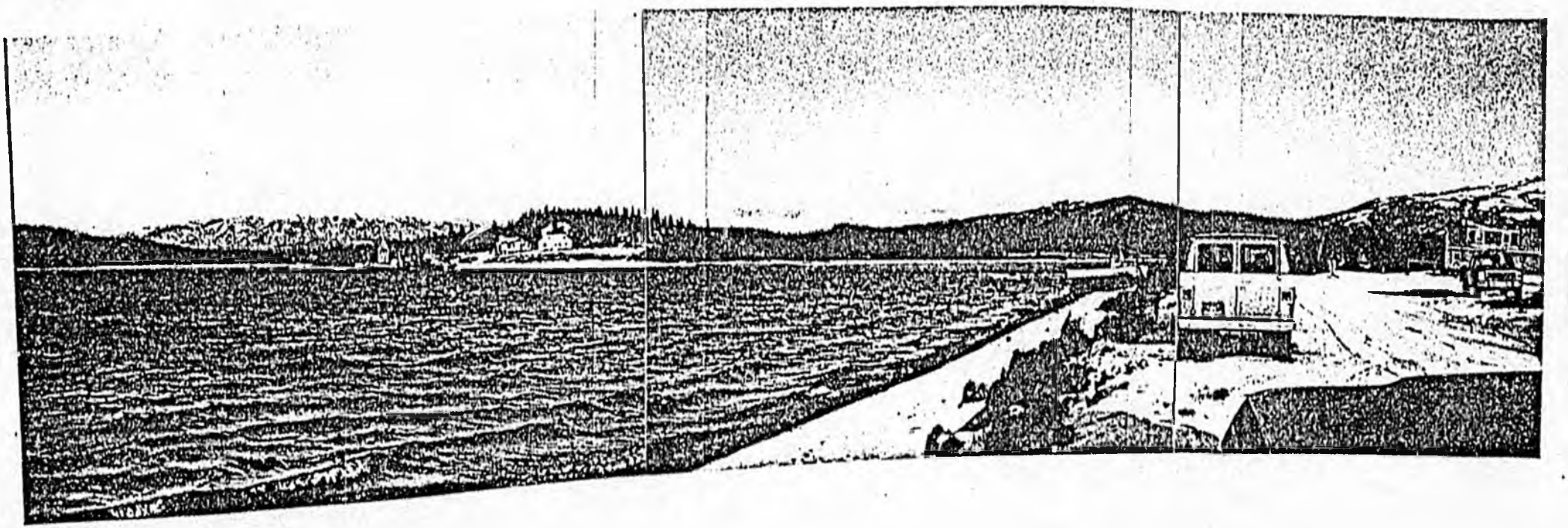
(Dillingham Construction Company tentatively plans to open a rock pit between Dillingham and Aleknagik during the summer of 1981) If, for some reason, rock is not available, concrete mattress or sacked concrete slope protection will substitute for the riprap.

Because ice builds up on the South Shore almost every spring a moorage float included with the ramp is not practical. The float would have to be dragged to the parking area each fall and re-anchored each spring. The gently sloping gravel fill on shoreward side of ramp combined with stable water level will satisfactorily substitute for a float at this site and provide the short term mooring necessary immediately after launching a boat.

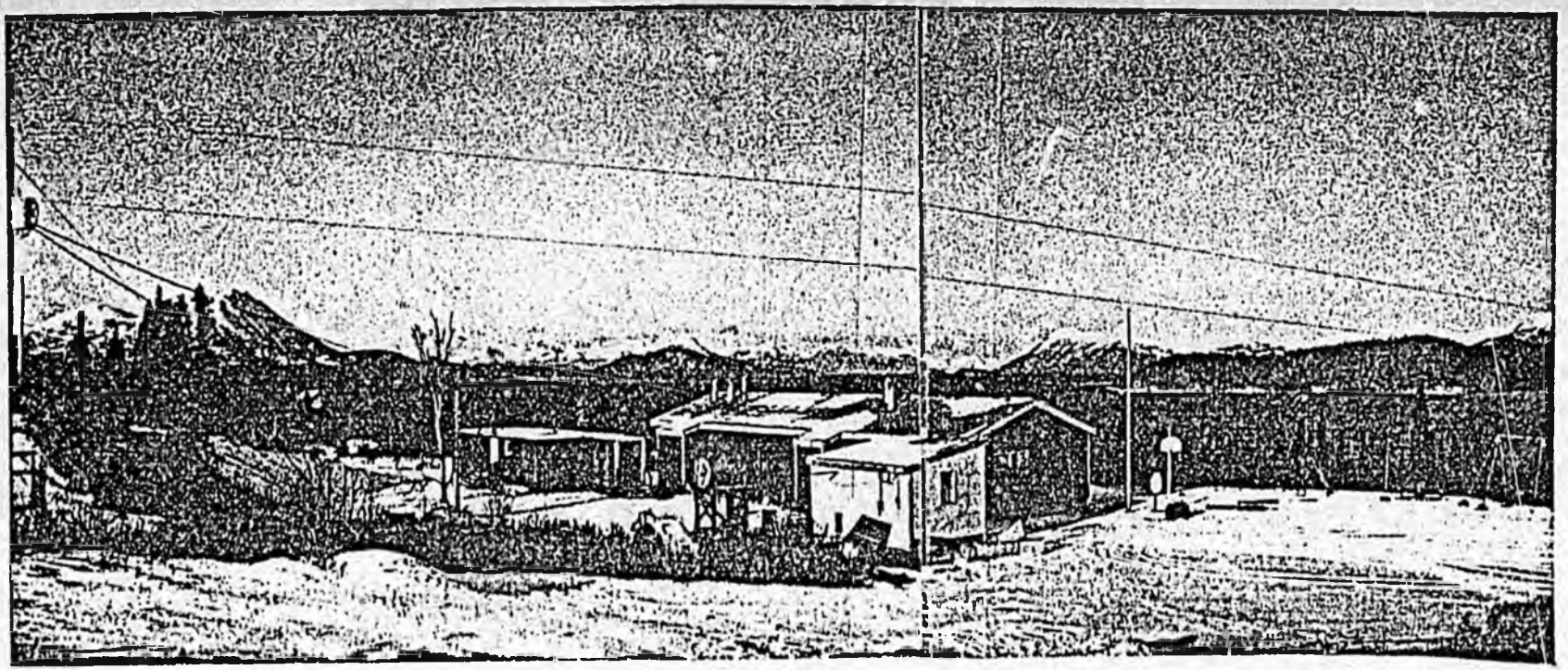
A proposed local service road (DOTPF project G10131) leads from the existing Aleknagik/Dillingham Road to the boat launching site that is on public property. The construction contract for the local service road will be advertised this (1980-1981) winter. Development of the launching ramp is contingent upon construction of the road.

The estimate for South Shore lauching ramp indicates a total cost of $260,000.

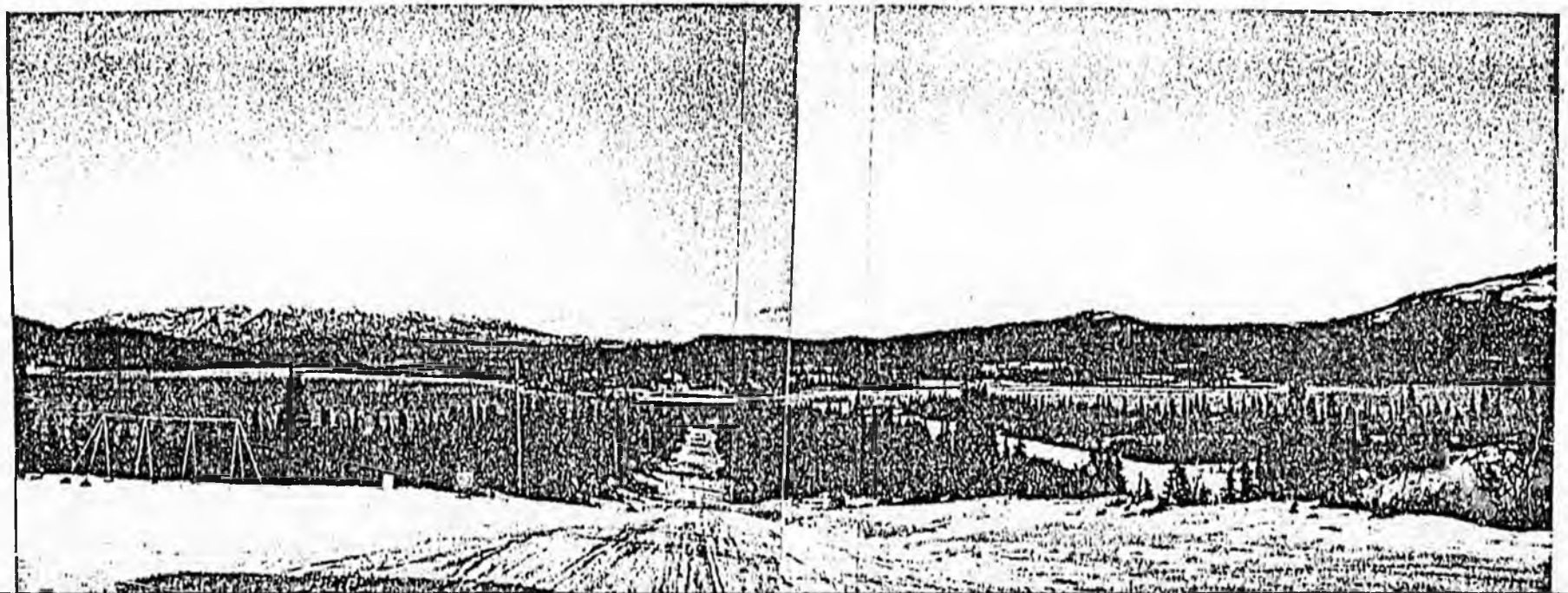
PRESENT BOAT LAUNCHING BEACH - NORTH SHORE IN BACKGROUND

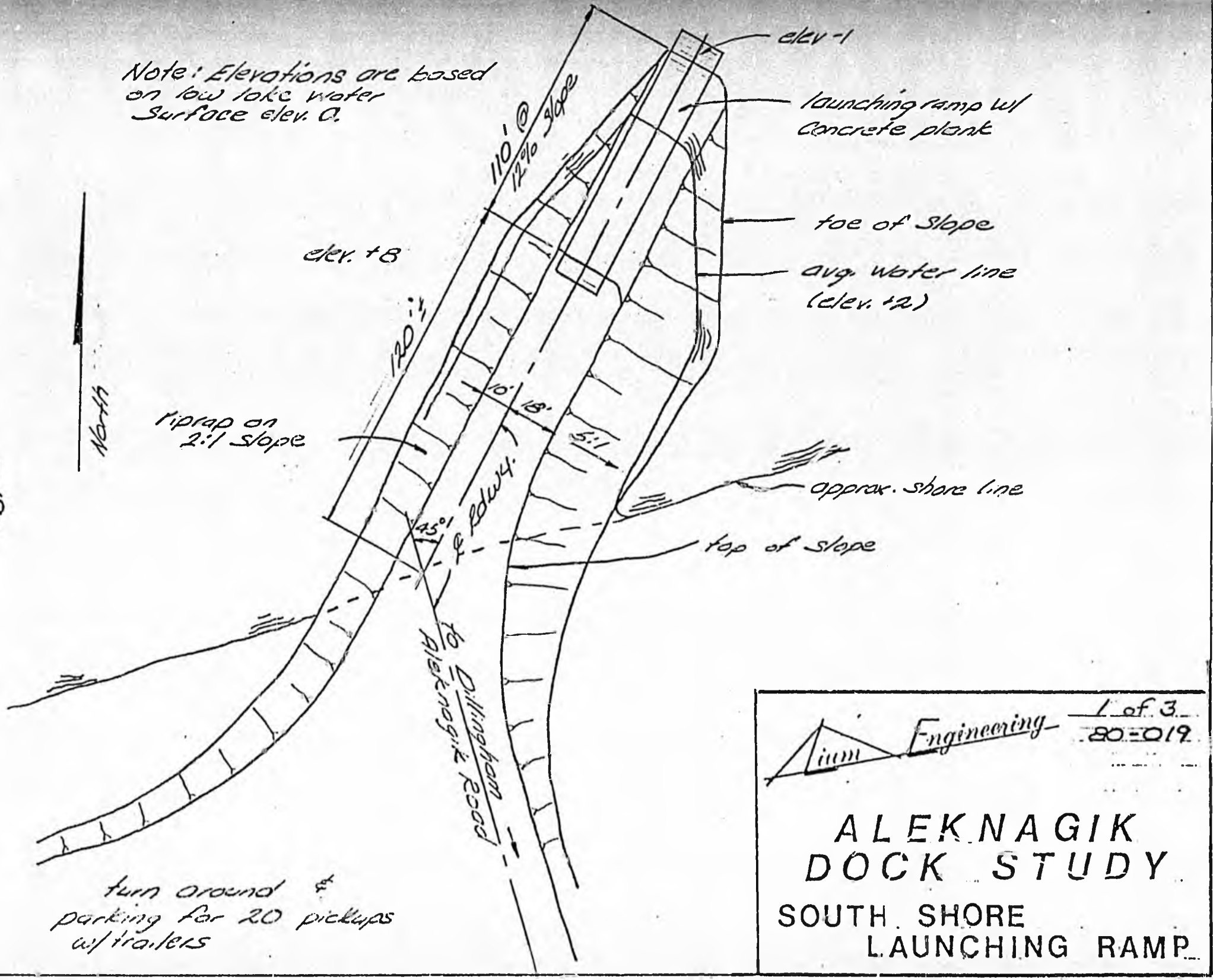


SCHOOL AT SOUTH SHORE



END OF ROAD - NORTH SHORE IN BACKGROUND - AIRPORT AT RIGHT





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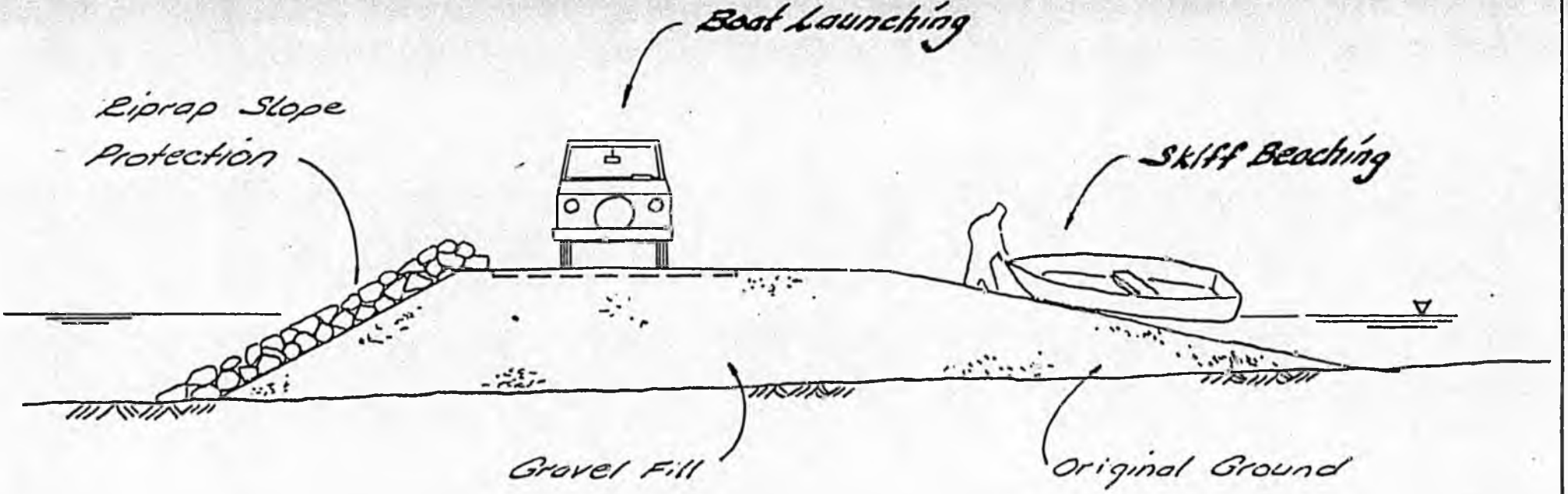
ALEKNAGIK DOCK STUDY

SOUTH SHORE LAUNCHING RAMP



TRANSVERSE SECTION
1"=10'

-20-

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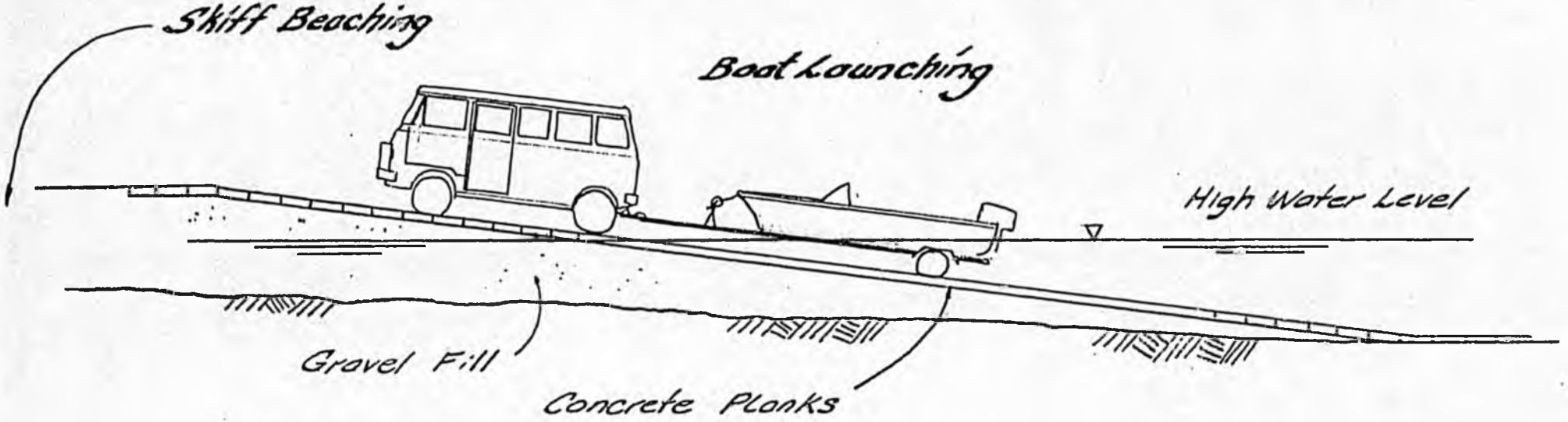
ALEKNAGIK DOCK STUDY

SOUTH SHORE LAUNCHING RAMP



ELEVATION

1" = 10'

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ALEKNAGIK DOCK STUDY

SOUTH SHORE LAUNCHING RAMP

CONCLUSIONS AND RECOMMENDATIONS

Mathematical benefits and benefit/cost ratios for this project have not been computed. Construction of both North Shore dock and South Shore ramp are feasible. Construction will cost $750,000 for the North Shore sheetpile dock and $260,000 for the South Shore ramp.

Benefits of the North Shore dock are:

1. direct transportation of supplies to North Shore residents from currently operating barge systems, over the proposed dock, to newly constructed street system;
2. dry land storage of fishing boats over proposed launching ramp to adjacent storage area, and
3. protected beach for temporary mooring of skiffs.

Benefits of the South Shore ramp are:

1. convenient access for Dillingham residents to Lake Aleknagik and other areas of the Wood - Tikchik State Park by use of the existing Aleknagik/Dillingham Road, the proposed boat launching ramp, and
2. protected beach for temporary mooring of Aleknagik residents' skiffs.

Because of these benefits and the relatively low costs, both the North Shore dock and South Shore ramp should be fully developed as soon as possible.

APPENDIX

NORTH SHORE ALTERNATIVE A

ESTIMATED COSTS

Sheetpiles 10,500 sq. ft.	$210,000
Embankment 5,000 cu. yd.	75,000
Concrete Planks 5500 sq. ft.	130,000
Subtotal	$415,000
Misc. (15% ± for items not yet defined)	65,000
One-half year's inflation	50,000
July 81 Contract Amount	$530,000
DOT/PF project development charges (40% ±)	220,000
TOTAL PROJECT COSTS	$750,000

NORTH SHORE ALTERNATIVE B

ESTIMATED COSTS

Embankment	2600 cu. yd.	$ 39,000
Steel Piles	1000 lin. ft.	70,000
Structural Steel	80,000 lbs.	160,000
Concrete Deck	4800 sq. ft.	144,000
Concrete Planks	2000 sq. ft.	40,000
	Subtotal	$453,000
Misc. (15% for items not yet defined)		67,000
One-half year's inflation		60,000
	July 1980 Contract Amount	$580,000
DOT/PF Project Developmen Costs (40% +)		230,000
	TOTAL PROJECT COST	$810,000

SOUTH SHORE

ESTIMATED COSTS

Concrete Planks	2000 sq. ft.	$ 40,000
Embankment	3000 cu. yd.	45,000
Slope Protection	500 sq. yd.	25,000
Parking Area	2000 sq. yd.	30,000
	Subtotal	$140,000
Misc. (20% for items not yet defined)		28,000
One-half year's inflation		20,000
	July 1981 Contract Amount	$188,000
DOT/PF project development charges (40% ±)		72,000
	TOTAL PROJECT COSTS	$260,000