2117 HT HB 368/HB 369 - HB 536

2117

Chamber of Commerce and it started a vigorous campaign of support.

The name of another Anchorage resident who has long been associated with the campaigns for the two crossings came into the story at this point. He was Jack White, real estate developer and businessman, who has been serving the chamber for many years as a leader in its highway development program.

On January 29, 1960 he was writing a letter to Richard Downing, then state commissioner of public works (and at that time responsible for the highway program). The letter noted:

'During the past several months considerable interest has developed locally concerning the economic and engineering feasibility of building a causeway or bridge across Turnagain Arm in order to shorten the distance between Greater Anchorage and the communities of the Kenai Peninsula . . ."

White went on to tell the results of an open meeting held with representatives of interested agencies and to list the advantages which it appeared would accrue from construction of such a span. He closed by urging the state to act favorably and "order the necessary study."

At this point the wheels of government seemed to spin at an amazingly fast speed. On March 1, Downing was replying:

"My opinion is that this project is worthy of investigation." He added that it appeared the Alaska Division of Highways, which was then under his control, would be able to provide funds for the study.

In less than two months, H. M. Pentecost, then planning director of the Division of Highways, completed a document titled: "Preliminary Report, Proposed Crossing, Turnagain Arm."

While the action was speedy, the results were far from what the Turnagain Arm boosters might have hoped. In his recommendations, Pentecost turned thumbs down on further study:

"A thorough feasibility study of a Turnagain Crossing might cost from $50,000 to $300,000 depending on the extent of borings and other foundations investigations. Such an expenditure would hardly seem justified unless the Highway Division is definitely prepared to program a minimum of 18 million dollars for construction of a crossing if its feasibility is conclusively demonstrated. If the programming of this amount is not considered to be a possibility, then no further study should be undertaken at this time . . ."

And, just before he had given *his* opinion of programming that amount:

". . . However, an initial investment of about 18.5 million dollars would be necessary before any benefits could be enjoyed. This would represent approximately 40 per cent of the total annual highway construction funds available at present, and the wisdom of such an expenditure in Alaska's present circumstances might be questioned by the general public, the state government, and the U.S. Bureau of Public Roads . . ."

The reasons and reasoning behind the speedy report and its unfavorable recommendations can only be guessed. Pentecost was apparently a sincere critic of the project. Five years later, when the project was again in the limelight, he would write a letter to the editor of the Anchorage Times defending his report. He said in part:

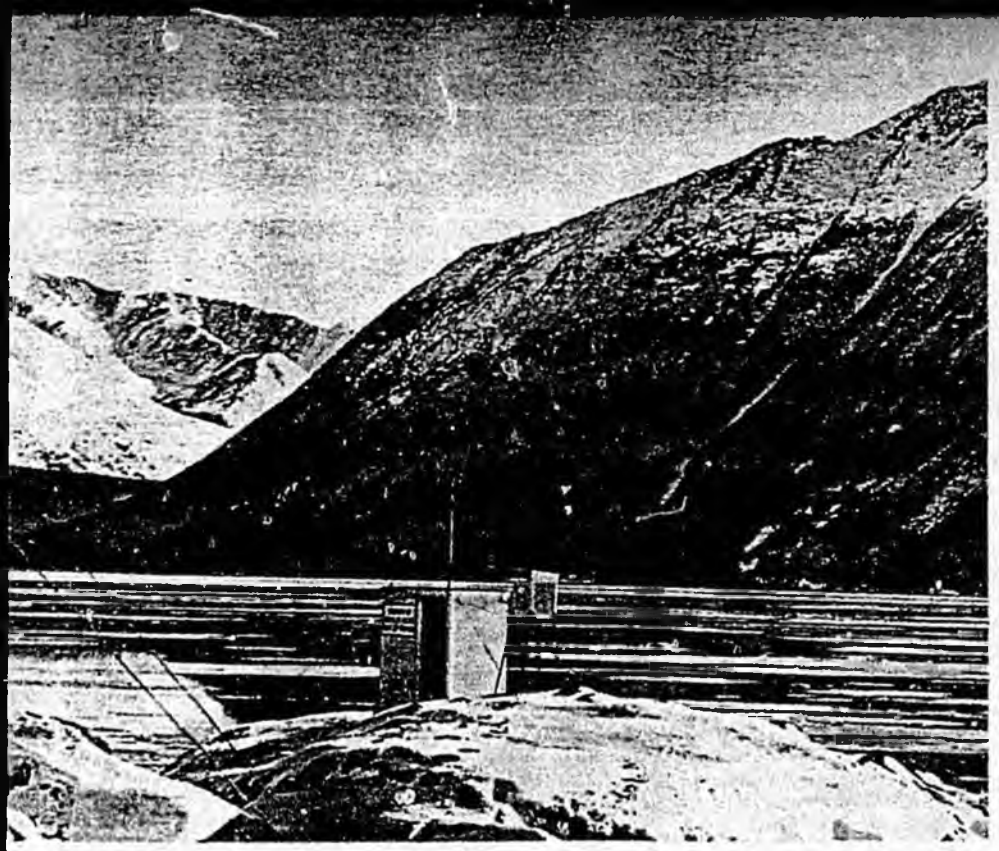
" . . . In Alaska there are many potential highway and bridge projects which would produce annual benefits 5 to 10 times their annual costs. A Turnagain crossing will not do that well, even if the earthquake damage has greatly changed the cost factors in favor of its feasibility."

In the letter—written from Santiago, Chile where he was then employed—Pentecost concluded this way:

"Cautious planning reports deserve just as much consideration by the public, and by the press, as those which are highly favorable. In both cases they are a sincere attempt to estimate how the people will be served by a proposed improvement. Chambers of commerce and public figures play an im-

—Continued

The fast-growing city of Anchorage is hemmed in by the Chugach Mountains that rise right at the end of its main streets and encircle it on three sides. Crossing of the two arms of Cook Inlet could provide the needed room for future expansion.



This is the proposed site for the Turnagain Arm bridge crossing looking from the Anchorage side. In foreground is weather equipment station erected in mid-channel beyond this point. Mountains in background are on far shore of Turnagain Arm, 3.5 miles away.

The Crossing Question

—Continued

portant part in the U.S. drive for constant improvement, but the feasibility of large engineering projects should not be decided by civic programs and pressures alone."

There could be little arguing with that thought but it did appear that in this particular case there might have been some pressures from the other side to dispose of the Turnagain Arm crossing idea with as much speed as possible. It did seem the report was issued with more than usual speed (according to some sources Pentecost received exactly one week to write the report) and there was no denying that it was effective in at least delaying the project. The crossing plan was to take on some of the aspects of a political football in the still-continuing game of sectional politics in Alaska before it advanced its next step.

It would get to the point in fact where two state senators—from Nome and Sitka—would enter a bill providing an election on the question of a sal of $10 million in bonds to build a causeway across Turnagain Arm.

To the Anchorage Times this appeared only an effort to "cloud the issue" and damage chances for approval of another then-pending bill to provide $300,000 for serious engineering studies of the project.

Whatever the motives of the sponsors, the bond-issue bill quietly disappeared and the funds were approved for the first full-scale engineering study of the proposed project.

The state invited proposals in July, 1962 and signed a contract on September 28 after looking over some 22 proposals. Selected to make the study was a joint venture of two engineering firms: Porter, O'Brien & Armstrong of Sacramento, California and Tryck, Nyman and Associates of Anchorage. The contract covered a study to be conducted in four phases—but all of them were not to be completed.

FIRST phase consisted mainly of research of existing data and it was completed and a report submitted on March 8, 1963. On April 1 the order was issued to go ahead with Phase II—consisting primarily of alternate crossing studies—and this report was submitted in January, 1964. By this time some estimates were beginning to be made:

- Construction costs were estimated in a range from about $14.1 million to $95.3 million depending on the location and type of structure used.
- Of the three possible crossings studied, it appeared the most feasible was Cape to Isle which would be 18,500 feet long. This would leave the Seward Highway four miles south of Potter and connect with the Kenai Peninsula near Gull Rock.
- At this location, costs were estimated to range from $27.8 million for a bridge to $93.7 for a fill-type crossing with three-foot shoulders; and $95.3 million for a fill with 10-foot shoulders.

These were only general estimates and there were no specific recommendations made as traffic data for the various crossing locations were yet to be developed and evaluated under later studies. The preliminary cost estimates presented were also based on very meager foundation and ice-load data. The detailed foundation studies were to be made in the following phase—which was never ordered.

However, some general shapes of the project were beginning to emerge. For instance, engineer Harmon's original plan for an impervious-fill causeway-type of crossing was fading further and further into the background. Too, the Isle-Cape crossing site seemed to be the obvious choice of locations for what apparently would be a bridge-type crossing.

While the Phase II report was still under study in the offices of the Department of Highways the March, 1964 earthquake struck. This changed the whole situation.

The then-existing highway around Turnagain Arm was a shambles. Nearly every one of the numerous bridges across creeks and rivers flowing into the arm had been destroyed. In many spots the highway itself was now under water of the arm at high tide due to the sinking of the land level in the quake. It appeared quite likely it might be more feasible now to build the arm crossing rather than rebuild the highway.

With this in mind, the state did not order Phase II of the study but instead started on a route study to determine which would be most feasible: Build a crossing of the arm at one of four possible locations or rebuild the existing highway around the arm. (Of course, if a crossing was selected it would still be necessary to rebuild the existing road but not to first-class standards. It would then become a secondary road and department officials sai it probably would not be maintained during the winter months.)

This route study took the remainder of 1964 and meanwhile the existing

highway around the arm was being patched up so that it was at least marginal for traffic. That was the only possible description as the road often closed—during high tide periods—and traffic between Anchorage and the Kenai Peninsula was a mere trickle that summer.

Early in January, 1965 the state announced its recommendation and it appeared the causeway boosters had won at least a partial victory.

The state recommended construction of a bridge crossing of Turnagain Arm at the Isle-Cape site. It estimated the cost of the bridge crossing and the connecting roads (a short road connection to Hope and a completely new road west of the Kenai Mountains to the Sterling Highway) in excess of $60 million. The recommendation did torpedo the original causeway plan but at least it recommended a crossing of the arm rather than rebuilding the existing highway around the arm. Also, it came out for the Isle-Cape crossing, the most westerly of the possible crossings and the one long sought by the Anchorage boosters.

But while the state recommendation was at least a partial victory it was far from the end of the war. Because it was only that: a recommendation.

If the crossing was to be built—at least at this time—it would have to be done with federal emergency aid. The idea in the route study was to see if emergency earthquake aid could be obtained for building the crossing by substituting it in effect for rebuilding of the highway lost in the quake. Unfortunately, for the crossing backers, the federal government did not see fit to go along with the state recommendation.

The federal refusal was known by spring, but the announcement did not come officially until June. Then Rex M. Whitton, federal highway administrator, said the crossing plan had been rejected in favor of rebuilding the quake-damaged portions of the highway. He gave two reasons: The crossing was beyond the scope of the emergency repair program and the negative decision was also prompted by the recently-completed U.S. Department of Commerce Alaska highway needs study.

With that plan shot down in flames the crossing backers had to regroup. Jack White suggested a closer look at paying for the crossing with tolls:

"I suggest charging a reasonable toll —say $3 per car," White said. "At the rate of 2,000 cars a day this would raise enough money to finance the whole bridge without cost to taxpayers . . ."

OPENING of the next session of the Legislature, in January 1966, saw a bill tossed into the hopper to build the crossing. Four state senators, Howard Pollock, Brad Phillips and Nick Begich, all of Anchorage, and Yule Kilcher of Homer, introduced SB210 which called for a $28 million general obligation bond issue to finance the project.

The session passed several other bond issues but not the one for the crossing. In fact, that was the last heard of the crossing until after the fall elecions that year. When the elections were over the man who had made the first presentation of the causeway plan back in 1959 was in the governor's mansion in Juneau. Not surprisingly, the Turnagain crossing was soon back in the headlines. On March 1, 1967 the main story on the front page of the Anchorage Times started out like this:

"Gov. Walter J. Hickel today said he is 'completely confident' a vehicular causeway and bridge across the Turnagain Arm of Cook Inlet near Anchorage will be operational within five years."

By the middle of May the state was announcing it had signed a contract with the Newark, New Jersey engineering firm of Porter, Armstrong, Ripa and Associates for a financing study of the crossing. The contract called for a review and analysis of all methods which might be used to finance the proposed crossing and the study was also to include a review of available traffic data for the area. The study was to determine first if the project was feasible from a financial standpoint and, if so, how best it could be financed.

Results of that study were announced early this year and they came in the form of seven chief findings:

"1. The Turnagain Arm Crossing is an economically justified project.

"2. The average saving per passenger car using the crossing would be $8.43 and would be $28.71 per truck.

"3. On the basis of present data and assumptions, the estimated cost of the crossing is $47 million.

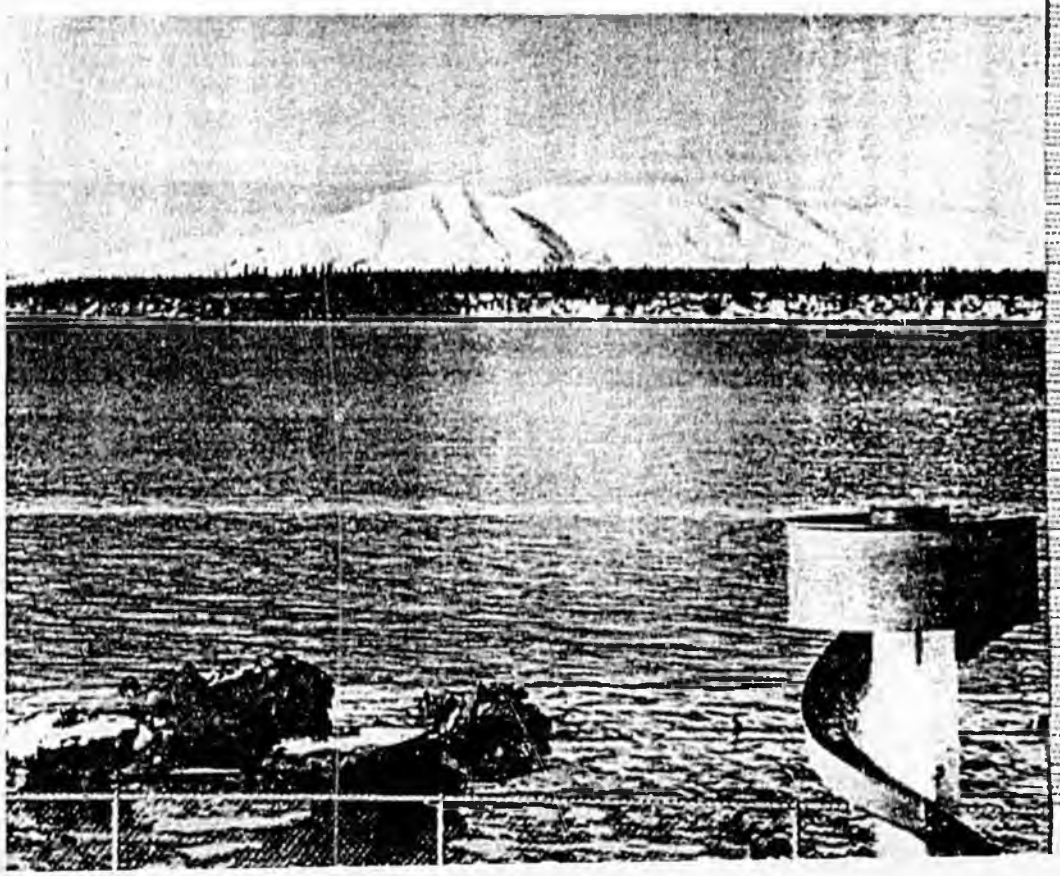
"4. The crossing could be financed with a bond issue supported by tolls of $3 for passenger cars and $15 for trucks, on the basis of assumptions made in this report. Extensive foundation and ice investigation studies will be required before decision to proceed.

"5. Utilizing Federal Aid to assist with the financing of the project can be accomplished in several ways. Determination of the best method will require evaluation at the time decision is made to proceed with constructing the project, in view of the overall highway financing situation at that time.

"6. The state is justified in proceeding with detailed foundation and

—Continued

The children's slide is in a park in downtown Anchorage. The narrow unbridged stretch of water is Knik Arm. Rising above the far shore of Point MacKenzie is the sleeping lady — Mount Susitna.



Crossing Knik Arm can be done speedily now by airplane. This bush plane—landing on a strip on Point MacKenzie—brings supplies to homesteaders in that area who live just four miles from Anchorage but are hours and hours away by land.

The Crossing Question
—Continued

ice pressure investigations necessary to establish the engineering feasibility and firm up the estimated project cost. The major portion of this work can be financed with Federal Aid one and one-half per cent planning funds.

"7. The time required to complete the investigations, engineering and construction would be about six years."

The study continues the recommendation of earlier reports for a continuous plate girder structure with spans of about 130 feet, supported by eight-food diameter, concrete filled caissons. "The most economical solution appears to be a pier design using two eight-foot diameter caissons, 20 feet on centers, tied together by a six-foot thick concrete cap," the study noted. The wall thickness of the caisson steel is one inch and the piers were estimated at 150 feet in length, with an average of 80 to 90 feet embedded in the foundation. The study also noted:

Special provisions will be made in the design to provide integrated movement of the structure so that earthquake action will not result in sections battering against each other. On the basis of the assumptions made, it is believed the proposed design will withstand severe earthquake stresses satisfactorily."

Problems involving the ice movement in the arm were also checked. One special problem was researched and the report noted it will require further detailed study as design plans are firmed up. This involves the abrasion of the steel caisson shells by ice floes. "The ice in Cook Inlet and Turnagain Arm contains many particles of sand and silt," the report noted. "As the ice floes pass by the caissons, a sandpapering effect occurs on the steel shell with a consequent loss of section estimated at 0.3 mills per year."

Epoxy coatings were considered for stopping the erosion but were not considered durable enough. A stainless steel wrapper, applied within the ice-abrasion reach is suggested as a solution and is to be investigated further.

The problems caused by the extremely strong winds that sweep through the arm, and winter snow conditions, were also noted:

"In order to reduce wind resistance and to facilitate snow removal, solid curbs and parapets have been replaced by a standard guard rail system. This treatment will need further evaluation at the time of design. The protection supplied by a solid parapet to vehicles against strong winds needs further consideration."

The report also noted that some superstructure revisions had been made as a result of experience during the 1964 earthquake. "The precast composite concrete deck has been modified to a cast-in-place deck which is effectively tied to the girders with shear connectors to provide integrated action. Special stay-in-place bridge deck forms can be effectively utilized."

Due to the estimated increased cost of the proposed bridge structure, the report said further studies were made of the possibility of building an embankment across the arm—but the studies were not encouraging:

"Further detailed study was given to the method of effecting closure. This involves some tremendous problems and great difficulties with any method of closure which could be devised. Increasingly high velocities will result as closure progresses. This is the most difficult problem, as evidenced by the great difficulties encountered elsewhere in making similar closures . . .

"In view of these difficulties, it does not appear economically feasible to construct an embankment crossing as compared to a bridge structure. However, detailed foundation investigations may suggest additional consideration."

The report also noted that studies were made of a possible crossing which would utilize part fill and part bridge. It said that hydraulic calculations showed that any appreciable length of fill would increase tidal velocities and consequent scour at the bridge piers and at the ends of the fill.

"The economics of mass production or repetitive construction methods would be reduced because in Turnagain Arm mobilization for either type of operation is a major item. For the minimum height of fill the cost per lineal foot will be nearly the same as for a bridge.

"Thus, a combination type crossing does not offer economical advantages."

IN ADDITION to discussing its findings, and making its recommendations, the study pointed the way toward the next necessary steps. It noted that before studies can proceed to definitely establish the design and cost of the structure, extensive foundation investigations must be made to establish characteristics of the foundation material. "The density of the material in place at the various depths, along with its other characteristics need definition," it noted.

It was also suggested that a part of this investigation should include construction of a prototype pier with extensive instrumentation to provide data on ice pressures, including size and direction of travel of ice floes, for use in the final design. Information concerning the wind velocities at the actual location of the structure can also be obtained from this prototype test pier.

A short time after the report was made public in March, Governor Hickel announced that he had given the crossing priority engineering and testing status with the aim of being able to start construction a year earlier than proposed in the study.

Under the new timetable announced by the governor, the actual construction job would begin in May 1970 and be completed in October of 1973.

At the same time Charles S. Matlock, Anchorage area district engineer for the Highway Department, said that the observation and test pier was currently being designed and would be placed in the inlet this summer to collect wind and ice data next winter. He said the test pier would contain various weather data gathering instruments and would be equipped with a small helicopter landing pad on top to allow for servicing and checking of the pier.

Hickel noted that the next step planned by the Highway Department was to carry out extensive drilling in Turnagain Arm at the proposed crossing site to determine soil types and conditions and the bearing capacity of the underlying materials.

"If we can produce this material and get the data into final form a year

ahead of schedule, we will have crossed a major hurdle toward final completion of a Turnagain Arm crossing," Hickel said.

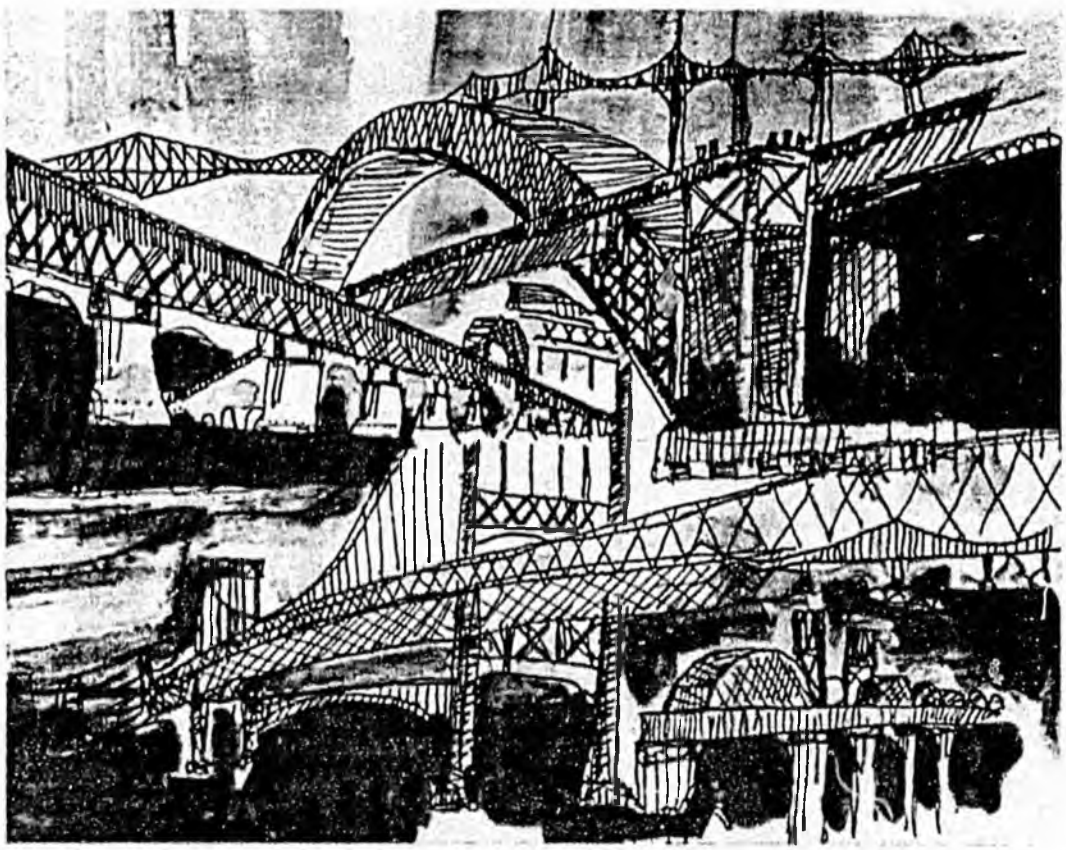
Thus it appears the crossing is on a timetable which will lead to an early engineering decision—the crossing will prove feasible and move on toward an actual letting of a construction contract or it may be necessary to modify the project or perhaps even drop it if it appears too costly to be feasible. But at the least now a real and final decision seems assured.

As yet no such definite answer is in sight for the other crossing question—the question about Knik Arm. At the start of the 1968 Legislature session a bill was introduced to appropriate funds for a new study but legislators were reluctant to give their approval. The thinking—even of supporters of the crossing—was that with Turnagain so close to getting final approval it would only confuse the issue and perhaps hinder the cause if Knik Arm was also pushed at this time.

But the Knik Arm project certainly has not been abandoned. The Highway Department is continuing to make some informal studies as time and funds permit and the civic campaign is still very much in existence. It appears it is only a matter of time until it will be vitally necessary to secure the answer to this second crossing question. At the present rate of growth of Anchorage the time remaining is not too long—if that growth rate speeds up as is very possible—the time remaining will disappear in a hurry.

It is more than just possible that the contractor who some day gears up to build a bridge—or other crossing—of Turnagain Army will be figuring bids on a second crossing, of Knik Arm, before he is finished with the first job.

(Cook Inlet—1998?)



Resource Development Council for Alaska, Inc.

444 West 7th Avenue, Anchorage, Alaska 99501
Box 516, Anchorage, Alaska 99510 - 907/278-9615

Testimony:
Knik Arm Crossing
May 2, 1981

My name is Joyce Munson. I am Deputy Director of the Resource Development Council for Alaska, Inc..

The Council was organized in 1975 and is the largest citizens group in Alaska with a membership of nearly 10,000. Members are individuals, companies, labor and other organizations and municipalities.

Our objectives are to create a broadbased, diversified economy, long-term, stable employment, industrial growth and improved living standards for Alaskans, while at the same time assuring reasonable protection for the environment Alaskans cherish.

The Resource Development Council strongly supports the Knik Arm Crossing, which is in the best interests of Alaska. In developing our resources, the state needs a transportation infrastructure for the exportation and importation of goods at a reasonable cost. Long range planning is required for this to happen. We view the construction of the Knik Arm Crossing as a valuable part of the infrastructure and the long range plan.

The linking of Point MacKenzie to Anchorage, an already established hub in the transportation system, is a logical step in the right direction. The economic advantages can only be measured in time

but the potential is already noted. The need for the extraction of coal and other mineral resources as well as the development of agriculture depends on marketing, marketing depends on getting the product to the market. Without a port at Point MacKenzie the crossing is an absolute necessity. If a port is established the connection as a link is advantageous to both ports.

The social impact is even greater. At present, Anchorage has almost outgrown the available land not only for development but housing. The competition for scarce and highly desirable suburban land continues to intensify at an alarming rate. Anchorage has long experienced this growth and unless we visualize the city becoming a sprawling metropolis there must be development in other areas of the state but without proper access this will not happen. People will continue to come and development will not cease as long as Alaskans strive to improve their lifestyles. Growth is healthy for any community and it's the State's responsibility to coordinate progress with long range planning. Furthermore, the Mat-Su Borough is seeking a stable and stronger tax base not just serving as a bedroom community for Anchorage. We believe the Knik Crossing will promote a partnership between Anchorage and the Valley. The Mat-Su Borough has the land and the resources while Anchorage has the financial-business community to promote these developments. In a time of increasing energy conservation, the need for shorter transportation distances becomes imperative.

The Resource Development Council recommends a three-phase funding program. First year funding should pertain to preliminary engineering, soil testing, right o of way acquisition, securing permits, environmental impact statements etc, as well as a time line for completion. The next phase would be the funding of design and the final for construction. Funding for the entire project should not be made all at once because of inflation.

The Council does support the inclusion of tidal hydorelectric power.

Many feasibility studies have been completed over the last twenty years, the information is there whether it be a bridge or causeway. We've studied it, now lets build it.

I would like to thank the Committee Chairman, Rep. Cato for this opportunity to testify in Anchorage and the committee for its time.

3:30 p   58 people

Knik Arm hearing   5-2-81
Wassilla

Dr. Jack - Kopetz

Edgar Johnson

Bob Risley - get on with it!
Ralph Foster - " " " "
Chuck Smith - " " " "
Bill Heim · 87. McKinsey Development
Jim Laufflin -
Bill Devine
Else O'Brien
John Rusgrove -
Paul Hubbert
Bob Risley - no give away money
Elleanor Malepouges
John Nystrom -
Mary Sue Foster -
Don Smider

Knik Arm Crossing 5-2-81 Anchorage -
HB's 368/369

cable stay bridge new concept
not considered '71

Keith Morbey -
Riley Snell

Orsin Smith (Corps Engineers) March '66 study
Karen PT
6 mi creek.

Mr. Nickoli (Mathew) Chalistie - new study
To determine crossing employ 600 people
7% come from Palmer Wassilla area
Hank sailor - Pres. Alaska Hoover craft
inexpensive - 10 mm 7 min Travel
operator requirements -
super 4 100 cars - ⅓ full
classification of hoover craft under USCG
Dorothy Jones - Mat-Su borough support
Mr Nadell - chamber of Commerce of Anch
update of '77 survey
design cap (30 yrs concern)
Tidal power
economic access-?
Gerald Hood - Teamsters 959 support jobs/travel/etc-
written testimony
Warren Rythel - Pennsylvania company
hoover craft
Jack Spaeth - Transportation for Alaska
Obee Weeks - Chief engineer of R.R.
in support -

page 2

Knik Arm Test. (Anch) 5/2/81

Peter Ecklund - self desireable but not essential - incremental approach
hoover craft approach - 5-10 yrs -
Toll road - economic feasible -

Howard Long - (Material Science U of A) pro-

Emil Parslell - anti
hold off for more studies

Bob Penny - Cham. of Com -

Mike Calohan - hang in Limbo till population warrants the need - anti

Joyce Munson R.D.C.
Marsh / Anchorage Mun. Assembly + Adm.

Robert Bhenker -

Mrs. Green written -

Dan Marren self - professional student anti

Lydia Selcrig - Anch. Mun. Assembly but
Testifying as self

~~David~~ Harold Pomeroy . self - pro-

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STATE OF ALASKA

JAY S. HAMMOND, GOVERNOR

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

DEPUTY COMMISSIONER – DESIGN AND CONSTRUCTION

POUCH Z
JUNEAU, ALASKA 99811

(907) 465-3900

200H-3076

Re: Knik Arm Crossing

The Honorable Joe Hayes
Alaska State House
of Representatives
Pouch V
Juneau, Alaska 99811

Dear Representative Hayes:

Attached is a memo and attachments from our Highway Design and Construction Division which gives the information you requested on the estimated costs of route location and design studies (not including final design plans or right-of-way acquisition) which was discussed in your letter from the Chamber of Commerce.

If you have any further questions, please let me know.

Sincerely,

R. D. Shumway, P.E.
Deputy Commissioner

Attachments

25A-T4LH

MEMORANDUM State of Alaska

TO: R. D. Shumway
Deputy Commissioner
Design and Construction

DATE: April 24, 1981

FILE NO: 240H-3076

TELEPHONE NO: (907) 364-2121 Ext. 111

FROM Charles S. Matlock
Director
Highway Design and Construction

SUBJECT: Knik Arm Crossing

As requested, following is our best estimate of the work and funding which would be necessary to carry this project to the design study stage. That is, basic location and configuration would be established and a reasonably good cost estimate prepared based on an assumed time-table of development. It would not include final roadway or structure design and would not cover any right-of-way costs other than for information needed for preliminary location studies.

Also, this is based on a location at or very near to Crossing IV in the original consultant's study. It would not include other studies (e.g. tidal hydroelectric generation, etc.) or other locations.

CSM/kgm

Attachments

cc: R. D. Redick
Don Halsted

Knik Arm Crossing

Estimated costs in 1981 dollars to develop an approximate location and basic design criteria and estimated right-of-way and construction cost for a Knik Arm Crossing and connections to the Parks and Glenn Highways. This does not include final design and plan preparation or right-of-way acquisition.

A.	Structure (Crossing IV)	
1.	Foundation exploration and soil testing	$ 1,005,000
2.	Model testing and/or test structure	1,275,000
3.	Evaluate span lengths, bridge types and update structure estimates. (Does not include final design.)	750,000
	Subtotal	$ 3,030,000
B.	Access Routes	
1.	South access to connect to Glenn Highway in the vicinity of Elmendorf Air Force Base: Location route studies, traffic, environmental and right-of-way studies and determination of design criteria, preliminary right-of-way and construction estimates.	$ 1,000,000
2.	North access route on new alignment to connect with the Parks Highway in the Wasilla to Willow area: Location route studies, traffic, environmental, and right-of-way studies and determination of design criteria, preliminary right-of-way and construction estimates.	1,500,000
	Subtotal	$ 2,500,000
	Total cost exclusive of final design and right-of-way acquisition	$ 5,530,000
	or, rounded,	$ 5,500,000
		(1981 Dollars)

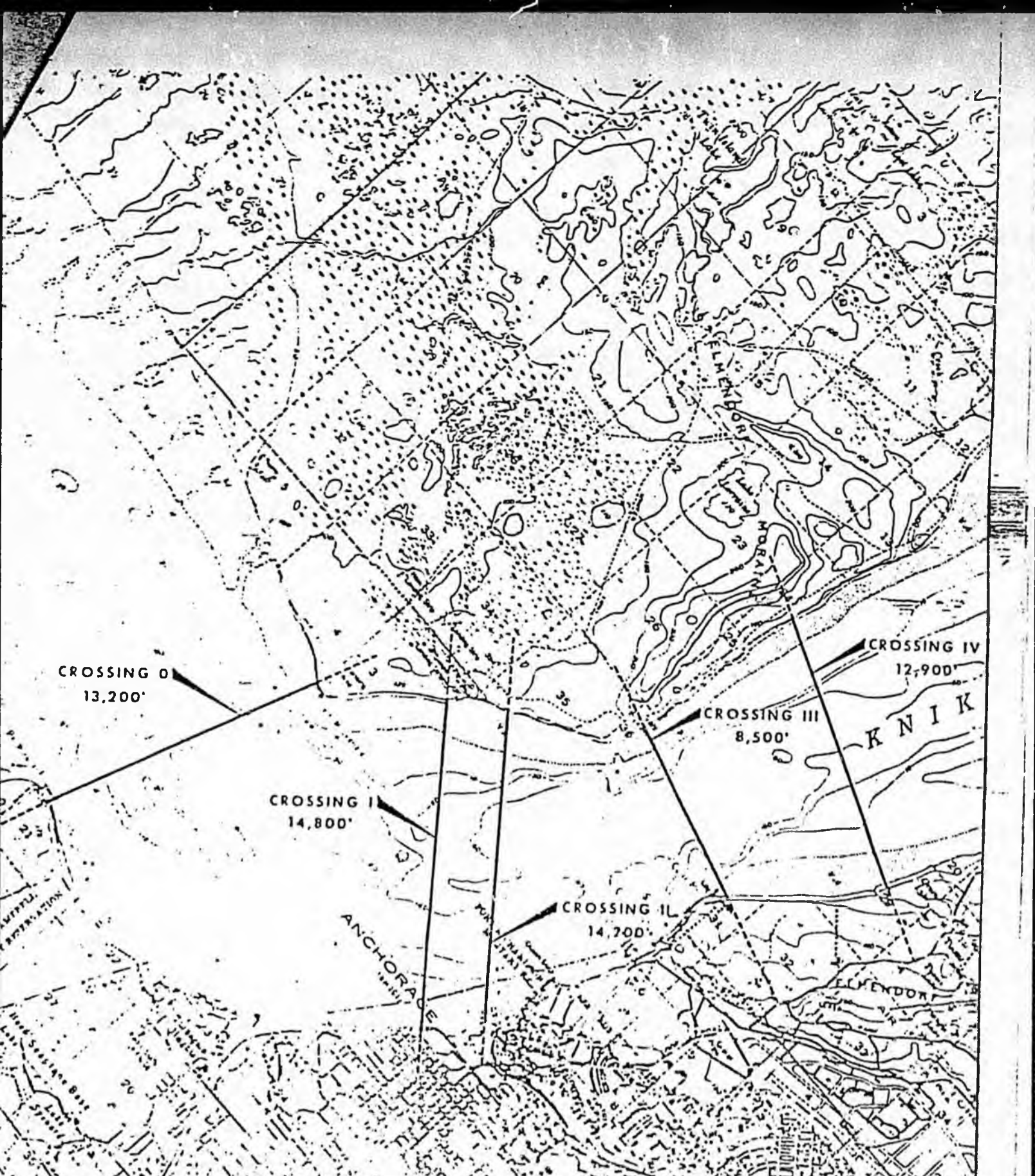


Figure II-1

TERNATIVE LOCATIONS OF CROSSING

PLEASE NOTE: THE PRECEDING PAGES WERE TREATED AS A UNIT IN THE ORIGINAL DOCUMENT.

PLEASE NOTE: THE FOLLOWING PAGES WERE TREATED AS A UNIT IN THE ORIGINAL DOCUMENT

STATE OF ALASKA

JAY S. HAMMOND, GOVERNOR

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

DEPUTY COMMISSIONER – PLANNING AND RESEARCH

(907) 465-3900

POUCH Z
JUNEAU, ALASKA 99811

February 4, 1981

Honorable Joe Hayes
Alaska State Representative
Pouch V
Juneau, AK 99811

Dear Representative Hayes:

The following is in response to an information request by Red Swanson of your office concerning the road system associated with the proposed Knik Arm Crossing:

Access to Port McKenzie will require construction of 20 miles of highway, connecting to the Wasilla-Goose Bay route at Mile 19, as shown on the attached map. The port route terminates about 0.5 miles below the proposed Knik Crossing on Alternate IV.

At present, the Matanuska-Susitna Borough has the first 12 miles from Goose Bay Road under construction, using funds from state grants totalling $4.5 million. We anticipate that the first and second phase, to gravel surface, will be complete this summer.

The design is basically complete for the remaining 8 miles in phase III, to the port, and could be advertised if funds were made available. The cost is estimated at $7.2 million. The Department of Transportation and Public Facilities has recommended a following base and pavement project for FY 1983 for $4.0 million to bring the entire route up to paved primary standards.

The Agricultural Project Access Road System, comprised of 16 miles of 24 foot gravel road is complete except for finishing touches. The Matanuska-Susitna Borough also managed that $1.0 million project. As shown on the map, access by automobile is possible to the north-west corner of the Agriculture Project, and southerly past the middle entrance to the Agriculture Project.

CLH

To complete the connection to the Parks Highway near Houston, it would require 2.0 miles along the Tyonek Route and about 18 miles on the Little Susitna alignment. As a matter of interest, our application for the right-of-way was for a 600-foot wide corridor so that all modes of transportation, including the railroad, may be accommodated.

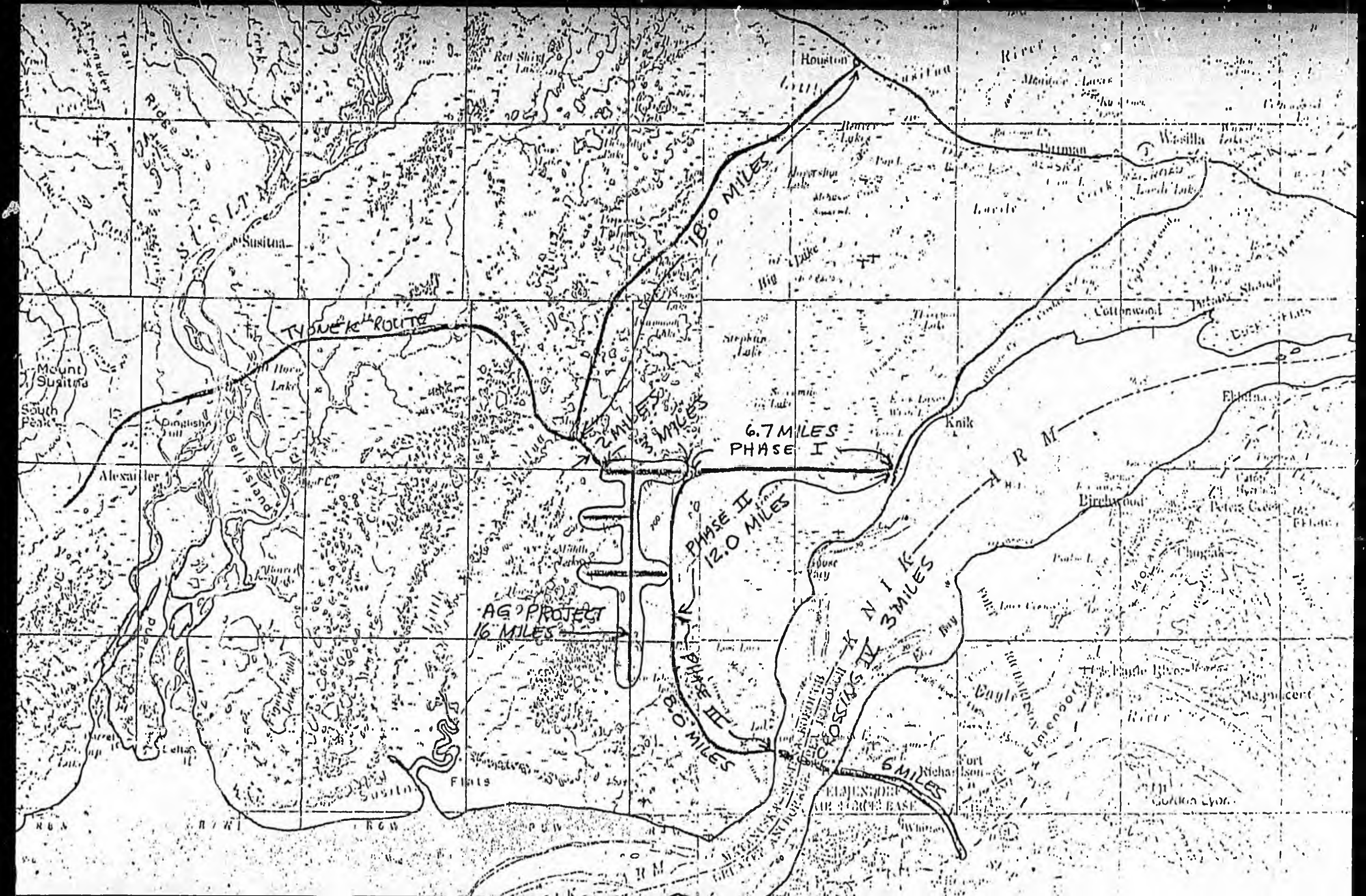
The Houston connection will take several years to develop because of the obvious problems associated with a new route. As of this date, we do not have an estimate of what road or railroad construction would cost.

If you have further questions, please feel free to contact my office or the office of Kit Duke, Director, Central Division Planning and Programming, Pouch 6900, Anchorage, AK 99502, telephone number 266-1462.

Sincerely,

John Bates
Deputy Commissioner

Attachment


TYONEK ROUTE
18.0 MILES
2 MILES
3 MILES
6.7 MILES
PHASE I
PHASE II
12.0 MILES
AG PROJECT
16 MILES
PHASE III
8.0 MILES
CROSSING IV
3 MILES
6 MILES
KNIK
ARM
Houston
Wasilla
Susitna
Mount Susitna
South Peak
Alexander
Bell Island
Knik
Birchwood
Cottonwood
Fort Richardson
Flats
Eklutna

ROAD CONSTRUCTION BETWEEN bridge CROSSING AND parks HIGHWAY, MATANUSKA-SUSITNA Borough = 26 miles (PHASE III & 18 miles to HOUSTON ON ATTACHED MAP) AT A COST of $30 million.

SINCE PHASE III (8 miles) IS SIMILAR TERRAIN AS the 18 miles to HOUSTON, WE CAN USE the $7.2 million AS OUR cost estimate BASE for every 8 miles of construction NOTED ON the Feb 4 letter to Rep. HAYES. So the total cost of gravel top for 26 miles is $23,400,600. IT COSTS AN ADDITIONAL $4,264,000 for black topping 26 miles AT $164,000 per mile for a 34 ft width road. THIS ALLOWS for $2 million plus for contingencies when one subtracts total from the 30 million appropriation. ALSO, $1.5 million is estimated for land and right of way acquisition. Cost breakdown is as follows:

— ROAD CONSTRUCTION BETWEEN KNIK RIVER bridge CROSSING AND parks highway, MATANUSKA-SUSITNA Borough:

gravel top	= $23,400,000	$30 MILLION APP.
black top	= 4,264,000	- 27,964,000
[illegible]	= [illegible]	$2,036,000 CONTINGENCY
	$27,964,000 *	

LAND AND RIGHT OF WAY ACQUISITION = $1.5 million

[illegible]

[illegible]

* Figures supplied by Dept of D.O.T via Pat Stanton.

JAY S. HAMMOND, GOVERNOR

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

DEPUTY COMMISSIONER – DESIGN AND CONSTRUCTION

POUCH Z
JUNEAU, ALASKA 99811

(907) 465-3900

January 14, 1981

200H-

RE: Surface Transportation
Route Estimates
(1) Juneau-Haines-Skagway,
(2) Knik Arm Crossing,
(3) Railroad Route Study
Nenana to Nome

Representative Joe Hayes
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Attn: Red Swanson

In accordance with Mr. Red Swanson's request through the office of Representative Joe Hayes, I am attaching preliminary estimates for the following projects as prepared by our Highway Design & Construction Section.

(1) Juneau-Haines-Skagway Route

A highway conforming to minimum federal-aid standards connecting Juneau with Skagway with route as follows:

A highway with bridge and ferry crossings, connecting Juneau North of Berners Bay, and the West shore of Lynn Canal and Sullivan Island, with Haines and Skagway.

(2) Knik Arm Crossing, connecting Glenn Highway to Parks Highway.

(3) Railroad Route Study, Nenana to Kobuk to Nome with Spur to Allakaket to Bettles.

It must be emphasized that these estimates are very preliminary and must be expanded from the 1981 costs at approximately 10% per year depending on year of construction.

Sincerely,

R. D. Shumway, P.E.
Deputy Commissioner

Attachments

cc: Robert W. Ward
Commissioner, DOT/PF

John Bates
Deputy Commissioner
Planning & Programming, DOT/PF

Charles S. Matlock
Director
Highway Design & Construction, DOT/PF

RDS/sh

COST ESTIMATE

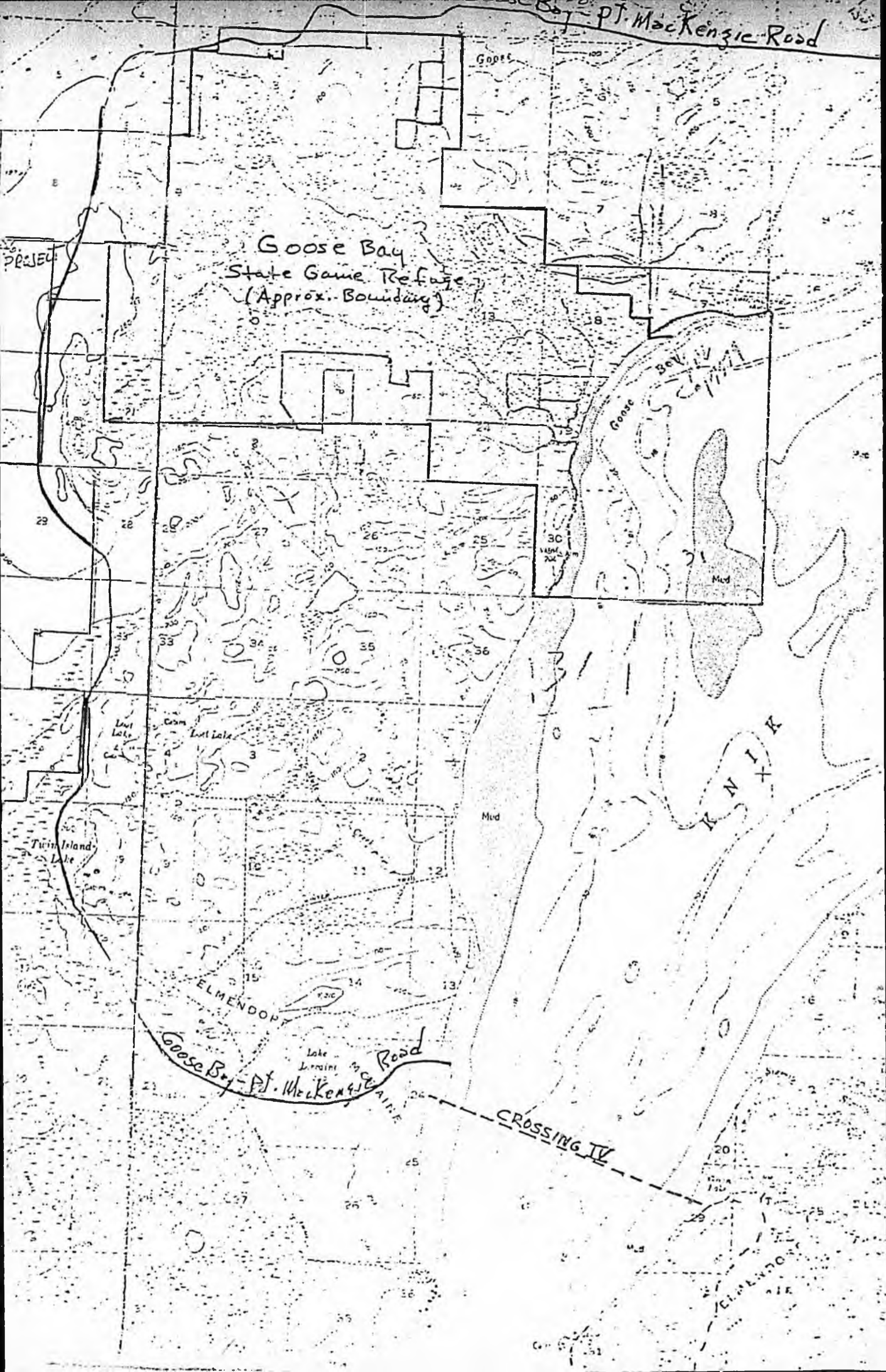
KNIK ARM CROSSING

	1971 Estimate		1981 Estimate	
	BRIDGE CROSSING IV	CAUSEWAY DAM CROSSING V	BRIDGE CROSSING IV	CAUSEWAY DAM CROSSING V
Total for Crossing	$114,938,200	$189,590,600	$281,598,600	$464,497,000
Contingencies and Variations (10%)	11,061,800	19,409,400	27,101,400	47,553,000
Estimated Construction Cost	* $126,000,000	* $209,000,000	308,700,000	512,050,000
Borings and Soil Testing	** 410,000	** 837,000	** 1,004,500	** 2,050,600
Hydrographic and Land Surveys (0.75%)	945,000	1,567,500	2,315,200	3,840,400
Model Testing and/or Test Structure	520,000	225,000	1,274,000	551,300
Engineering and Administration				
Basic Design (4.0%)	5,040,000	8,360,000	12,348,000	20,482,000
Construction Supervision (4.0%)	5,040,000	8,360,000	12,348,000	20,482,000
Administration (1.5%)	1,890,000	3,135,000	4,630,500	7,680,800
Estimated Crossing Cost	$140,000,000	$231,000,000	$343,000,000	$567,000,000
Estimated Approach Cost			88,000,000	84,000,000
Total Project Cost			$431,000,000	$651,000,000

(Based on January 1981 Dollars)

* Based on 1971 start and 1975 finish

** Includes Geophysical Surveys


Goose Bay - Pt. MacKenzie Road
Goose Bay
State Game Refuge
(Approx. Boundary)
Goose Bay
Mud
Mud
Twin Island Lake
Lost Lake
Lost Lake
ELMENDORF
Lake
Goose Bay - Pt. MacKenzie Road
CROSSING IV

PLEASE NOTE: THE PRECEDING PAGES WERE TREATED AS A UNIT IN THE ORIGINAL DOCUMENT.

HB

378

City of Whittier

TELEPHONE (907) 472-2337
P.O. BOX 608
WHITTIER, ALASKA 99693

January 16, 1981

Betty Cato;

Please consider our request for a new fire truck for Whittier, Alaska. The bid for this truck comes to $162,650.00 from Becker Fire Equipment of Casper Wyo. The bid for 2 way radios from Motorola of Anchorage comes to $15,689.00. These radios are for 2 fire trucks, 1 ambulance, 1 base station and 3 portable units. This is a considerable sum, however I will attempt to justify it.

1. This truck is a class "A" pumper, and is basically the same truck that the Steese VFD received last year at approx. $129.000.00. The chassis price alone went up $10,000.00 due to inflation since last year. This is the only 4 wheel drive chassis we have found heavy enough to meet our needs. We are also asking for extra capabilities that the Steese truck does not have.
   A. Full foam capability with 150 gal foam tank, turret and portable monitor for petroleum and harbor fires.
   B. 1500 gallon per min. vs 1000 gal per min. on the Steese truck.
   C. Built in 3 kw generator with 2 telescoping floodlights for emergencey lighting.
2. Of our present 2 trucks, the 1949 Ford is inoperable due to various leaks incurred when it froze during a power outage in 1975. The standby generator was inoperable at that time. The 1952 Howe is operational but is hard pressed to maintain 150-200 gallon per min. This truck was straight through from hydrant to the fire. After approx 2 1/2 min. pumping we must shut down for 1 min. and recharge the truck tank. On a fire of any magnitude this is a very unworkable situation. Most of our members are not profesional truck drivers and have troubles shifting the spur gear 5 speed with any degree of success. Our present pumper summed up is complicated to operate, hard to drive and needs more Geritol that we can afford.

The new unit would have the ability to serve Whittier as it grows in years to come, plus meeting our present needs.

Becker Fire Equipment has supplied the majority of fire trucks for Alaska for the past 2 years and has enjoyed a good reputation in our state.

We would appreciate your help as our elected representative on this matter. Becker Equipment advised us that Senator Sacketts office has been of great assistance in securing trucks for other communities on a very short time basis.

Thank you for your time and consideration.

Sincerely, Michael Livingston

Michael Livingston
Fire Chief
Whittier Volenteer Fire Dept.

MOTOROLA INC.

proposal

City of Whittier
Fire Chief
Whittier, Alaska 99502

QTY		DESCRIPTION	UNIT PRICE	EXTENDED PRICE	
1	L53JJB1190M	- VHF, 4 frequency, 60 watt MITREK SUPER CONSOLETTE Base Station (local control)	~~1,930.00~~ 2250.00	$1,930.00	2250.00
1	TDD6481	6 dB Gain Base Station Artenna	~~244.00~~ 298.00	244.00	298.00
1	TDN6596	100' ½" Foam Heliax Transmission Line	~~180.00~~ 223.00	180.00	223.00
2	T53JJA1900K	MITREK Mobile, VHF, 4 Frequency, 60 Watts	~~1,325.00~~ 1330.00	~~2,650.00~~	2660.00
1		with Touch side assy.	1580.00		1580.00
3	H33BBU1144N	MT500 Portable, UHF, 4 Frequency, 5 Watts	~~1,398.00~~ 1670.00	~~4,194.00~~	5010.00
		with Nicad batt. Case & Touch Code			
~~3~~	~~NLN4528~~	~~Swivel Case With T Strap~~	~~30.00~~	~~90.00~~	
3	NLN4565	Rapid Rate Charger	~~120.00~~ 129.00	360.00	384.00
		TOTAL		~~$8,648.00~~	12,405.00

Airfreight - FOB Destination

Installation at ~~$600.00~~ 750.00 per day (Time and Materials) not including transportation from Portal to Portal. 2950.00

Total monthly maintenance including parts and labor on mail in basis at ~~$59.50~~ 69.50 per month. X 12 = 834.00

Customer to provide 2" mounting pipe for base station antenna Total $15,689.00

Terms: 20% downpayment - net 10 days on balance

Prices quoted are FOB factory. Quotation good for 60 days.

Delivery in approximately 56 days from receipt of order

Prepared by: ~~William J. Morrison~~ Dave Mantter

Date: ~~October 30, 1979~~ Jan 14 - 1981

NOTE: Conversion of the Auto-Phone Patch and Air Raid Siren can be done with (1) Encoder Board and (1) Decoder Board and some minor modifications to the Auto-Phone Patch. Total cost including labor $1,750.00.

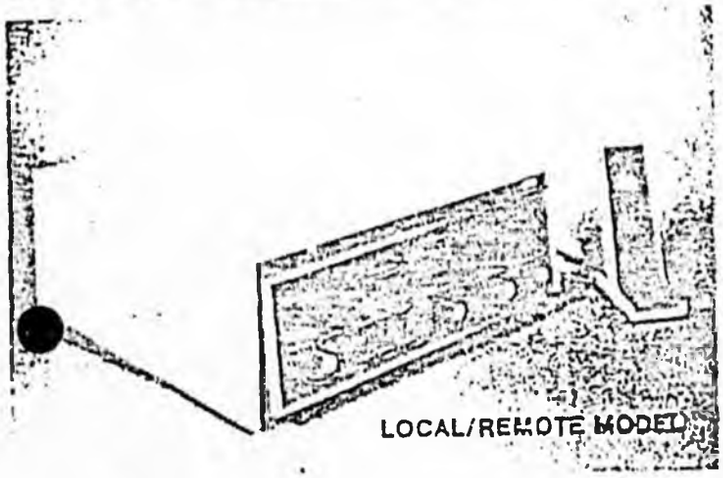
Eq. Cat.	Sec.	Item
R3	2.1	63

MOTOROLA

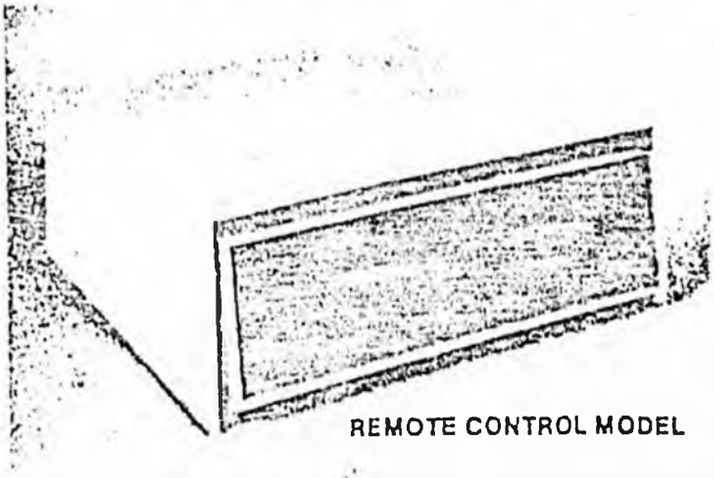
Solid-State

MITREK Super CONSOLETTE Base Stations

Local, Local/Remote and Remote Models
29.7-50 MHz, 60 Watts
136-174 MHz, 40/60 Watts
406-420 MHz and 450-512 MHz, 30/50 Watts



LOCAL/REMOTE MODEL



REMOTE CONTROL MODEL

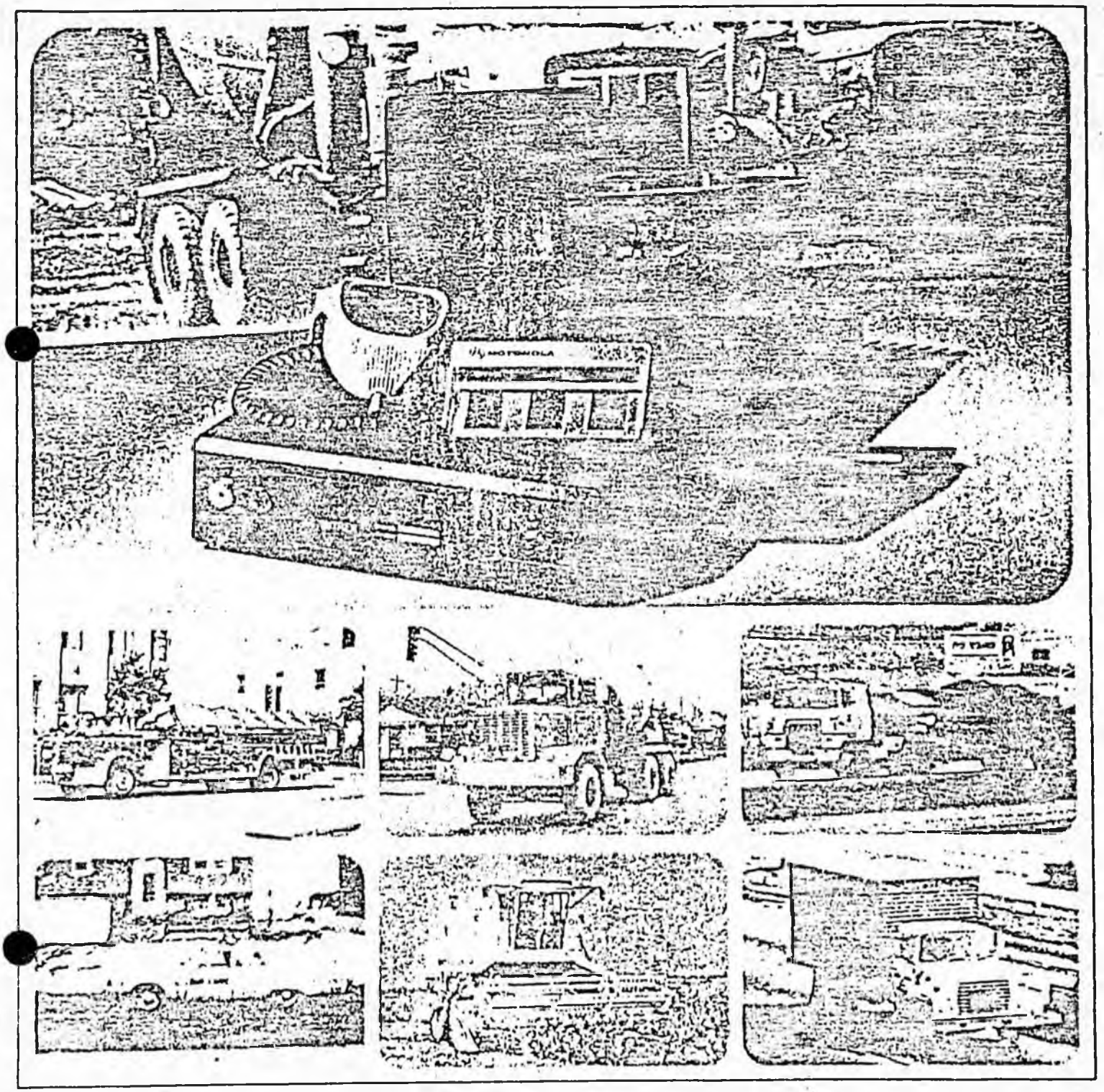
Eq. Cat.	Sec.	Item
R3	1.1	60A

MOTOROLA

MITREK

FM Two-Way Radio

29.7-50 MHz 60/110 Watts
136-174 MHz 40/60 Watts
146-174 MHz 75/110 Watts
406-420 MHz & 450-512 MHz 30/50 Watts
450-512 MHz 75/100 Watts



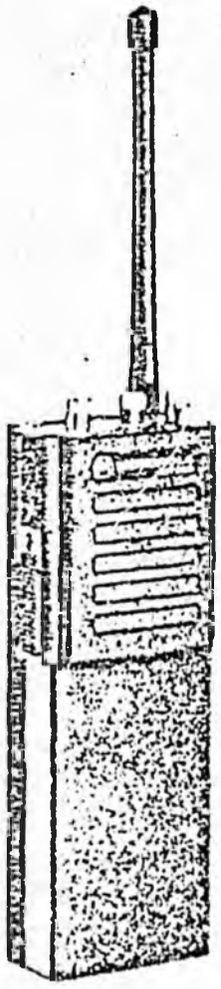
MOTOROLA

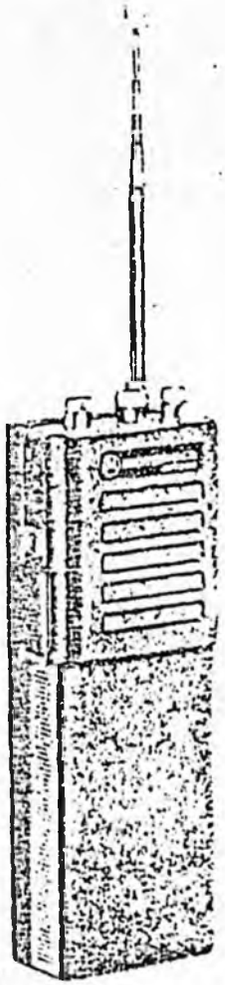
MT 500 Series HANDIE-TALKIE

Two-Way FM Portable Radios

5 or 2 Watts RF Power
136-174 MHz

MOTOROLA
Technical communications supplier to the United States Olympic Committee





Motorola's MT 500 Series Handie-Talkie radios offer an optimum balance of high performance, reliable advanced engineering and hybrid circuit design, convenient small size and weight, operational flexibility, and system cost. Major features include.

- Current Systems Compatible
- Rugged Construction
- Top Performance Specifications
- Superior Serviceability
- Improved Audio
- Choice of Power Levels
- 8 Frequency Capability
- Hybrid Modules
- Plug-In Channel Elements
- Basic or Universal Models
- Four Model Sizes
- Selectable Standard Options
- Complete Accessories

FEATURES • BENEFITS

Current Systems Compatible

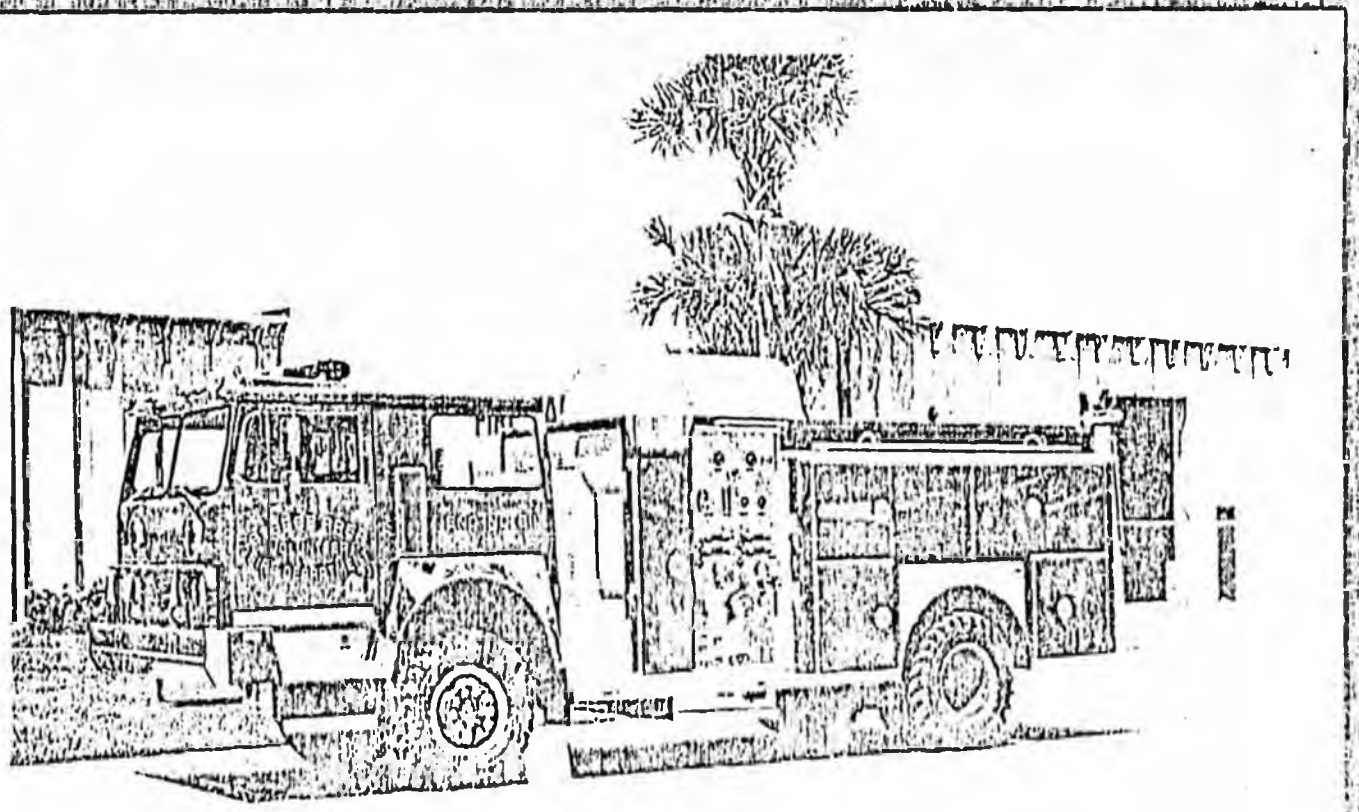
The MT 500 radio is a natural extension of the present HT 220 system. It provides for both upgrading and expansion with maximum ease. Many accessories are common and can be used on both lines.

Rugged Construction

Designed for everyday rough handling, the MT 500 radio exceeds the EIA Drop Test Standard RS-316-A. In addition, the radio is weather-sealed against dust, moisture and splashing water. These features increase dependability when the going gets rough.

Choice of RF Power

Available in either 5-watt or 2 watt models. Motorola's team of experts will help you select the correct model mix to assure that the power levels best meet the needs of your particular system design. You buy what you need for full communications coverage.



February 6, 1980

Copy

Whittier Volunteer Fire Dept.
P. O. Box 722
Whittier, Alaska 99502

Mike Lewis
Alaska Highway Planning Agency
Pouch N
Juneau, Alaska 99811

Dear Mr. Lewis:

We are inquiring about the possibility of obtaining financial aid along with other assistance to improve the Whittier Volunteer Fire Department. Our concern centers around the present inadequacies of our department to meet fire fighting needs should structural, fuel explosions or chemical fires occur in Whittier. The limited fire fighting budget of Whittier's local government prevents our fire department from purchasing much of the needed equipment.

There are numerous immediate fire hazards in our town - the Alaska Railroad and their transporting of materials and storage structure; the United States Army Tank Farm with storage and transporting of fuels, the fuel dock, buildings such as Begich Towers (a fourteen story residential building) The Anchor Inn, the Spoetsman Inn, Buckner Building, two fish processing plants, the Small Boat Harbor, the airport - and future coal storage must be considered as well as keeping pace with future local development.

Due to the Alaska Railroads frequency of transporting explosives such as liquid propane, liquid oxygen, liquid nitrogen, chlorine gas, gasoline, jet fuel, diesel and radioactive materials by Hydrotrain, we perceive our fire fighting needs to be especially accute. The Alas' Railroad has had fifty percent of the major fires in Whittier. These include box car fires, two wood bridge fires and two warehouses destroyed by fire. In 1971, the Alaska Railroad Whittier train station was destroyed by fire. A major problem is that there are fourteen fire hydrants on Alaska Railroad property and only two of these hydrants work. Should one of the hazardous material box or tank cars catch on fire or derail, it places Whittier in grave danger. The location of the Alaska Railroad Whittier Yard is such that there can be a problem evacuating people out of Whittier. Therefore, we need to be prepared for and capable of meeting and fighting the problems that arise. We have asked for a Mutual Support Agreement with the railroad but have been ignored.

The United States Army has a large tank farm located two miles West from the center of town. The fuel that is stored there is jet and diesel fuel. They have a pipeline that starts from the U.S. Army fuel dock, one-half mile East of Whittier running underground through the middle of Whittier to the tank farm. They can either load railroad tank cars or use the pipeline that runs to the Anchorage U.S. Army tank farm. The only major fire involving the U.S. Army tank farm was a fuel dock destroyed in 1959. They have since maintained a good safety record.

The army, like the railroad, has very little equipment to deal with a tank farm fire. The city does have a Mutual Aid Agreement with the army. We asked for a Mutual Support Agreement in 1978 and received 1,600 feet of 2½-inch fire hose and 150 gallons of fire foam which was outdated. They intended to throw it away so we ask for and received it. In the fall of 1979 we requested additional equipment; thus far we have had no reply to that request. We also asked for petroleum fire fighting training but, at this point we have not heard from them concerning this.

The Begich Towers is a fourteen story building, built of concrete and steel rebar by the U.S. Army in 1957 for dependent housing. There are one hundred ninty-nine apartments and rooms in the building. Some are used for and by Begich Towers Condominium Associations offices, City of Whittier offices, Chugach Elementary School for classrooms and school offices, the Donut Shop, hairdresser, museum, church, movie theater and two Begich Tower public activities rooms. During the history of the building, there has not been a fire with damage over $500.00. We feel fortunate in that respect. The worst fire in the building was a dryer fire on the eleventh floor in the fall of 1977. Presently, we have 45% occupancy in the building and there are smoke detectors in every apartment and alarms in every hall. However, most of these are not working due to lack of upkeep.

The Anchor Inn is a two story building, built of concrete and steel rebar by the U.S. Army in 1953 for dependent housing, general offices and a telephone communication center. The building is now a bar, restaurant, and hotel with ten rooms on the second floor. This building has no smoke or fire alarms and would be difficult for the establishment to extinquish a blaze once it started.

Next, the Sportsman Inn. This is a wood building with aluminum siding. It is divided into eleven sections called "Bays". Each Bay is divided by concrete and steel rebar fire walls. There are ten apartments in each Bay. The building was built in 1952 by the U.S. Army for civilian dependents working in Whittier during construction of the Port of Whittier. The building was given it's present name in 1967. In the main section there is a restaurant, bar, liquor store, grocery store and gift shop. It also has control of Bay 1 and Bay 2 giving them twenty apartments to utilize as hotel rooms. The other Bays - 3 through 10 - are condominiums. The history of fire in the Sportsman Inn is a long one; in 1968 there was a loss of life in Bay 2 caused by a mattress fire. Four apartments were destroyed in Bay 7 in 1963. The last fire was in the basement of Bay 1 when a boiler blew out

the North wall. The big problem - the nearest working fire hydrants are about 3,000 feet away. There are no fire alarms or smoke detectors in the buildings and there is about 40% occupancy at the present time.

The Buckner Building is a concrete and steel rebar building that is six stories high and two city blocks long. It was built in 1954 by the U.S. Army. People who used the building in the 1950's call it a self-contained city. There were people who worked, played, ate and slept in the structure. Though the building is presently not in use, the Buckner Building has facilities for a hospital, church, commissary, PX, cafe, a cafeteria that once fed 4,000 G.I.'s every day, a theater, bowling alley, Tv station, rifle range, bakery, Navy brig (jail), officer's club, transit quarter (hotel), post office, library, bank, office rooms and dormitories to house 4,000 enlisted men. The Buckner Building was sold in 1977 and the owner has cleaned and installed new windows in the building. The owner wants to remodel the structure into a forty-eight apartment condominium, two bars, two cafes, a one hundred room hotel, theater, bowling alley, bank, food and clothing store and rent out space he does not utilize himself. There is a possibility that the building will be open by 1985.

We presently have two fish processing plants in Whittier, However, neither is in use at this time. Both structures are of concrete and steel rebar. They were built by the U.S. Army - one for a cold storage warehouse and the other as a maintenance shop. In both buildings the greatest fire hazzards are electrical equipment and maintenance of equipment. We did have one other fish processing plant, constructed of wood with aluminum siding, which was destroyed in 1967 by a space heater used to heat the building during the winter. It was in operation only three months.

The Whittier Small Boat Harbor was built in 1973 by the State of Alaska. There have been two major fires since it's construction. Four boats and one float plane were involved in fires; one person was air-vacked out to Anchorage, Alaska because of burns. All of these incidents occured during the summer under high use times. The Whittier Small Boat Harbor has one hundred thirty slips currently, but we have had as many as two hundred fifty boats in the harbor at one time. The boat harbor has the capacity to fight small fires but a major fire would result in a high loss of property. The Whittier Small Boat Harbor is going to be expanded up to three hundred slips in 1981. This will create more pressure on the Whittier Volunteer Fire Department.

Whittier also has a small plane landing strip that is 1,700 feet long. Since 1964, twenty-two people have died in small plane accidents around and in Whittier. If we would have had a four-wheel drive fire pumper, we could have saved some of these lives.

The Alaska Railroad has been talking about transporting to and storing coal in Whittier while awaiting transportation out of Whittier by ship. This is to come about in the near future. Hopefully, the Alaska Railroad

will have the necessary perception to insure that this will be a safe operation.

As far as future development of Whittier is concerned, during the next ten years we expect more housing construction around Whittier. They will not have access to local fire hydrants. The Shotgun Road which is East of our town, follows the bay out to Shotgun Cove which is zoned for housing, a business area and a one thousand slip boat harbor. This project is now under study by the Corp of Engineers.

Please find enclosed, a list of equipment - with prices - needed to adequately equip our fire department and enable us to handle any type of problem that can arise in our town.

Sincerely yours,

Fred L. Joiner
Fire Chief
Whittier Volunteer Fire Department

cc: Jay Kertulla
Margaret Branson

FLJ/jih

Reason for Equipment Needed

1 tanker, 4,000 gal booster tank $85,000.00

Inadequate water supply in and around the city of Whittier, due to the lack of or broken fire hydrants.

1 pumper 1,000 gpm, 4 wheel drive 750 gal. booster tank $65,000.00

The fire trucks that we now have are not adequate to fight a major fire because of conditions of the fire engines. (During the winter of 1975 both pumpers were frozen solid because of a power outtage ever since then even after both pumpers were overhauled we can only pump up to 150 gal. per minute at best.

1 ambulance with adapters to run on rail $40,000

We need an emergency vehicle to evacuate injured persons to Anchorage. Air vacs take a minimum time of three hours while the ambulance we are asking for will take one and one half hours to get to Anchorage.

1 communications equipment $17,000

a. alert fire fighters
b. communications during a fire or rescue

10 MSA air packs $8,000.00

air packs will be used as a breathing apparatus in fires, uses:
a. to enter a fire
b. and toxic smoke

1 air compresssor $5,000.00

to recharge air pack tanks locally

2 emergency generators $1,598.00

will be used to fun flood lamps, smoke ejectors, and emergency power when the local power is out.

2 chain saws $800.00

Chain saws are used in ventilating roofs, cutting tool used in salvage, and as a forest fire tool.

2 smoke ejectors $1,000

clearing building of smoke and gases so fire fighters can extinguish the fire and rescue people safely.

1 multipurpose saw $680.00

used to cut through concrete and steel
a. ventilating building through the roof and floors
b. rescue of persons that are trapped.

1 heavy duty trash pump $900.00

pumping water out of buildings after a fire; or a flooded area; also used for a attack line from a natural water supply.

16 wheel hand lights, rechargeable $1,180.00
use in fires to see with smoke filled areas and to rescue people in a a building during a fire, a tool for search and rescue at night.

8 wheel light chargers $800.00
to charge batteries

4 heavy duty extension cords $1,000.00
use in operation of flood lights and smoke ejectors

1 portable cutting TORCH $900.00
used in cutting heavy steel in a short amount of time, also used in fire fighting and rescue.

3 pry axes $300.00
special force entry tool used in fire fighting to open doors/windows.

3 hooligan entry tool $265.00
a sprcial pry bar used in opening heavy main doors and rescue work.

1 PRT-6 Striker Rambar Kit $300.00
used by two men to breal 'lls and heavy duty doors.

2 Pike Poles $170
used in ventitating buildings and pulling down electric power line's off object's with out endangering the rescuer's .

2 Axe's Fire $87.00
used for ventilation and rescue work.

1 10 ton Rescue Kit Porto-Power $950.00
used in lifting or moving heavy objects, out of the way.

3 Aluminum Fire Ladders $1620.00
used in fire and rescue work to reach high places.

2000ft 2 I/2 fire hose $5,600.00
main water supply line to the fire and used in major fire fighting also used as a supply for multiversal monitors.

1500ft 1 1/2 fire hose $2775.00
main attack line for ging into building.

1 hose dryer $3,200.00
used in cleaning and drying hose after use. This machine will make the fire hose last three time's longer under normal use.

HENDRICKSON CUSTOM CHASSIS

39,120 GVW 178" WB

FRONT AXLE :	16,000 capacity Rockwell FDS #1600 series front drive axle
REAR AXLE :	23,120 capacity Eaton #23121 with power divider rear axle 4.56 to 1 maximum road speed 63 m.p.h.
BRAKES :	Full air brakes, 12 CFM compressor - low pressure indicator (Buzzer and Light) FMVSS 121 Auto skid brake system Extra cooling with auto shutters and manual overide
ELECTRIC :	145 amp Delco alternator MOD 1117152 Two 220 amp batteries with Cole Hersee switch Hinged electric panel in cab dash Front turn signals and single headlights Cab and canopy dome lights
ENGINE :	Detroit Diesel 8V-71 in W/C-70 injectors 316 HP
TRANSMISSION:	Allison automatic HT-740 with lock-out and heat exchanger
FUEL TANK :	50 gallon fuel tank mounted behind rear axle
FRAME :	9-13/16" x 3-1/4" x 5/16" mild carbon steel Frame 50,000 PSI yield - 14.43 C.I. S, per rail RBM 721,235
STEERING :	Shepkard HD M-492 power steering
FRONT SUSPENSION :	Progressive vari rate
WHEELS :	Front - 11:00 x 20 16pr Michelin Rear - 11.00 x 20 16 ply - Mud and Snow Michelin
CAB :	Model 1871 S, 5-man square canopy cab Two-piece tinted glass windshield Chrome cab frame trim Variable speed air operated windshield wipers and washers Gauge package - speedometer, tachometer, Hourmeter, voltmeter, ammeter, oil pressure, Water temperature, fuel and air pressure Transmission temperature gauge, transmission pressure Gauge, ingition pilot light AB battery starter buttons and glove box Polished aluminum louvered air intake grille,each side Custom padded dash, doors, headliners and seats Black Bostrom T-bar Viking, 4-way adjustable - black Passenger bench seat with storage compartment - black 34,000 BTU Heater and Defroster Dual SS wide angle Vel-Vac , Two-piece stainless steel front bumper, 95" wide with chrome tow eyes Bendix and Westinghouse Air Dryer Spare front tire and rim Two (2) defroster fans Parking brake with indicator light Phillips 1500 watt block heater w/110 volt Plug mounted at left cab step

CHASSIS TRIM PACKAGE:

Chassis trim package shall include front fenders trimmed with 1/8" aluminum diamond plate on both horizontal and vertical surfaces.

Cab entrance steps shall be constructed of 1/8" aluminum diamond plate to provide a skid resistant surface for easy access to cab, also inside lower portion of cab doors shall have 1/8" aluminum diamond kick plates.

Two (2) vertical handrails shall be mounted behind each cab door, handrails shall be 1-1/4" diameter stainless steel tubing with chrome stanchions.

Two (2) aluminum louvered air intakes located behind cab doors shall be provided.

Two (2) stainless steel wide angle mirrors shall be provided.

FRONT BUMPER:

One (1) heavily chromed front bumper 12-½" high and full 95" wide shall be provided.

CHROME TOW HOOKS:

Two heavily chromed tow hooks shall be mounted directly to frame extension, using ½" stainless steel bolts.

TRANSMISSION LOCKOUT: (Automatic Transmission)

The automatic transmission shall be equipped with a power lockout device. The transmission lockout shall prevent down shifting of transmission when engine speed is decreased or during pump operations, thereby maintaining a constant gear ratio. Transmission lockout shall be solenoid controlled type, automatically activated when placing pump in gear. Transmission lockout shall be automatically deactivated when disengaging pump for normal road operation.

GEAR SHIFT MANUAL LOCK:

Gear shift lever shall be equipped with a positive manual locking device as to eliminate transmission being accidentally knocked out of gear during pumping operations. The use of this device will also determine proper gear selection for pump operation.

REAR TOW EYES:

Two rear steel tow eyes 3/4" in thickness, solid type, directly attached to chassis frame and extended under tail board.

FUEL PACKAGE:

Rear mounted fuel tank shall have a 50 gallon capacity and shall meet requirements as specified in NFPA #1901. Fuel fill shall be located on left side of apparatus body. Fuel tank shall be constructed of 3/16" spark resistant aluminum. Fuel tank shall be insulated at mount using 1/4" rubber pads.

A canopy extension for the seating of two (2) additional men in jump seats, facing aft, shall be provided. Canopy shall be an integral part of chassis cab. Canopy shall be heavily reinforced steel. Canopy roof shall have a removable steel plate, 32-1/2" x 44", to facilitate engine removal without cutting or burning of canopy should it ever become necessary. Two full windows, one each side, fitted to contour of canopy sides shall be provided.

Backrest and seat portion of jump seats shall be equipped with Emergency-One Mark IV air pack brackets. One jump seat shall be placed on each side of engine enclosure. Each jump seat shall be equipped with seat belts.

Engine enclosure between jump seats shall be constructed of 1/8" (.125) aluminum diamond plate. Engine compartment shall be readily accessible by horizontally hinged compartment doors. Complete engine enclosure shall be lined using 1/2" thick acoustical foam having a facing of aluminized polyester film for sound reduction, as well as high thermal reflectivity.

Sliding glass windows, easily accessible and removable for service, shall be provided in cab between jump seat compartment and cab interior.

Pump shall be a Hale 1500 GPM, single stage, midship mounted, centrifugal type. Two 6" suction tubes, one each side, with chrome plated caps shall be included. Suction tube strainers shall be of the brass free flow rigid type of minimum flow resistance.

The pump body shall be of the split casting type. Lower casting can be easily removed for maintenance or inspection when required. Pump can be overhauled without disturbing piping or main pump body mounting. The pump shaft shall be ground, heat treated, stainless steel. Shaft shall be supported close to impeller to minimize deflection and whip. Minimum shaft deflection means less wear on shaft, packing, impellers, clearance rings and bearings. The impeller shall be of fine grain bronze mixed flow design. Individually hand balanced. Double suction inlets shall be opposed so that the axial hydraulic forces balance each other. Clearance rings shall be renewable bronze of wrap around design for higher efficiency. The packing shall be on low pressure side only with external adjustment. Outboard bearing built inside main pump body completely eliminates the need for packing on the high pressure side, normally a prime source of trouble. Packing rings shall be separated by corrosion inhibiting rings. Pump shall be constructed with a bronze split ring packing gland for easy replacement. Pump drive shaft shall be ground, heat treated, chrome nickel steel with 2: x 10" spline. The entire pump, both suction and discharge passage, shall be hydrostatically tested at 600 psi.

CAPACITY RATINGS:

Pump, when dry, shall be capable of taking suction and discharging water in compliance with NFPA #1901. Pump shall be the class "A" type and shall deliver the percentage of rated capacities at pressures indicated below:

100% of rated capacity at 150 PSI net pump pressure
100% of rated capacity at 165 PSI net pump pressure
70% of rated capacity at 200 PSI net pump pressure
50% of rated capacity at 250 PSI net pump pressure

HEAT PAN:

The pump compartment shall be enclosed at the bottom by a removable heat pan for winter use. Engine exhaust heated.

PUMP COMPARTMENT HEATER:

A hot water type heater shall be installed in pump compartment and plumbed to engine cooling system.

PUMP AIR BLOW OUT:

An air blow out shall be plumbed to truck air system pump to blow out water for winter use.

PUMP SHIFT:

Shift from road to pump shall be power operated with pump in gear indicator light on cab dash. Pump shift shall be 1/4 turn twist lock in either road or pump position.

ELECTRIC PRIMER:

The priming pump housing is constructed of heat treated, hard anodized aluminum. Pump shall be electrically driven, positive displacement, rotary vane type.

Priming pump shall be automatically lubricated by means of a separate oil reservoir and shall be connected to prevent siphoning. Oil reservoir tank shall be located to allow for easy filling as well as checking of oil level. The pump and its priming valve are simultaneously actuated by a single panel control, located on pump operators control panel.

RELIEF VALVE:

A relief valve for greater by-pass flow with less restriction and consequently, less pressure rise, shall be provided. The valve body shall be bronze and mounted in a bronze housing. Pressure is set by a chromed hand wheel using panel indicator light that is illuminated when valve is operating. The relief valve control wheel indicator light shall be mounted on the pump operators panel.

PUMP COOLER:

Pump shall have a 3/8" line installed from pump discharge to booster tank to cool pump during sustained periods of pumping when water is not being discharged. Pump cooler shall be controlled from pump operators panel.

AUXILIARY ENGINE COOLER:

Engine cooler used to lower engine water temperature during prolonged pumping operations and controlled at pump operators panel shall be provided. Engine cooler shall be installed in line with the engine water intake line in such a manner as to allow cool pump water to circulate around engine water, thus forming a true heat exchanger action. Cooler inlet and outlet shall be continuous, preventing intermixing of engine coolant and pump water.

GATED INLET SUCTION:

Two (2) 2-1/2" gated suction valves with locking handle with strainer, controlled at operators pump panel, shall be provided. The valve shall be piped to suction tube with valve body behind pump panel. Suction inlet strainer shall be of the brass, free flow rigid loop type with minimum flow resistance. NST chrome inlet swivel with cap and chain shall be provided. Valve control handle shall be installed to operate vertically. One left and one right. Bleeders to be furnished.

DECK GUN:

A Stang type 3" flange based monitor shall be piped to pan area directly over pump compartment. Plumbing shall be three inch gated at pump panel. Deck gun shall be equipped with an Akron 1750 master stream fog nozzle.

DISCHARGE VALVES:

There shall be one 2-1/2" discharge gate at pump panel per 250 GPM capacity of pump. Valves shall be constructed of bronze and be quarter turn ball type of fixed pivot design, allowing for ease of operation at all operating pressures. Operating handles will be of the swing type locking into position by a slight clockwise twist of the handle. Valve controls shall be installed as to operate horizontally. National standard thread on all discharges and intakes. Chrome plated caps with chains will be included. All 2-1/2" discharges shall be furnished with a 3/4" line drain. Two left, two right, two rear.

CROSSLAY HOSEBEDS (2):

Double crosslays shall be provided above front transverse compartment. Each crosslay section shall have capacity of 200' of 1-1/2" double jacket hose. Crosslay hose divider shall be extruded, ribbed type of aluminum to permit cross ventilation of hose and division of hose lines. Crosslay deck shall be entirely constructed from maintenance free 3/4" x 2-3/4" hollow aluminum extrusion.

Crosslay hose bed extrusion shall have a radiused ribbed top surface that is completely anodized.

Each crosslay section shall have one (1) 1-1/2" mechanical chicksan swivel hose connection, to permit use of hose from either side of apparatus without kinking, or restricting water flow.

Horizontal and vertical, 1-1/2" stainless steel, roller type, hose guides mounted in polished castings shall be furnished on each end of crosslay hose bed. A stainless steel roller with nylon guides set in a polished aluminum casting shall also be provided at each end of double crosslay hose divider.

Each 1-1/2" crosslay shall be individually controlled using chrome push-pull locking "T" handles located on pump operations panel. Each control shall be properly labeled for identification. A vinyl nylon reinforced crosslay cover shall be furnished to protect hose load.

FOAM SYSTEM:

A Rockwood B-2 around the pump foam proportioning system shall be furnished and plumbed to allow foam discharge from all outlets. A 150 gallon stainless steel foam tank shall be furnished and plumbed directly to eductor. All controls to be pump panel mounted.

PUMP TO TANK FILL LINE:

A 1-1/2" pump to tank line having a 1-1/2" valve shall be controlled at pump operators position using a locking chrome "T" handle.

TANK TO PUMP:

One (1) 3" tank to pump line, having a 3" valve controlled at pump operators panel by locking chrome "T" handle, shall be provided. Tank to pump line shall also have a 3" check valve located within rear pump housing eliminating tank expansion from high inlet pressure surges. Connection from valve to tank shall be made using a noncollapsable, flexible rubber hump hose.

PUMP PANELS:

Left and right pump panels shall be constructed of 14 gauge stainless steel. Panels shall have brushed satin nonglare finish for lasting appearance. Operators controls and gauges will be located at forward most portion of body on left side of body. All pump controls shall be marked with identification plates. Operators panel will be well lighted with lights protected from breakage. Pump panels will be completely removable.

The following gauge instruments and controls shall be provided at operators control panel:

- One (1) master pressure gauge, 4-1/2" diameter, 30-0-600 graduated
- One (1) master vacuum gauge, 4-1/2" diameter, 30-0-600 graduated
- Individual pressure gauges, 3-1/2" diameter, for all 2-1/2" and 1-1/2" discharges and deck gun
- One (1) deck gun control
- One (1) tank fill valve
- One (1) engine oil pressure gauge
- One (1) engine water temperature gauge
- One (1) electric tachometer
- One (1) engine speed counter outlet
- One (1) vernier engine throttle
- All discharge controls
- One (1) relief valve control with indicator light
- One (1) primer control
- One (1) auxiliary engine cooler control
- One (1) pump cooler control
- One (1) electric MC tank level gauge
- One (1) U.L. test gauge panel
- One (1) panel light with polished stainless steel cover
- One (1) 6" pump suction inlet with chrome long handle cap
- One (1) Underwriters' Laboratories acceptance test plate
- One (1) 2-1/2" gated suction control
- One (1) Tank to pump control

COMPOUND PRESSURE GAUGE:

The compound pressure gauge shall be of the liquid filled type, using a liquid silicone solution to assure visual reading to within 1% accuracy for convenience and positive identification. This feature eliminates the need for snubber valves. Also eliminating the possibility of condensation forming on inner face of gauge.

MASTER DRAIN VALVE:

A master push-pull drain valve, controlled at pump panel, shall be provided. Valve shall be located in pump compartment lower than main pump body and connected in such a manner as to allow complete water drainage. Water shall drain below apparatus body, away from pump operator.

Booster tank shall have a capacity of 1000 gallons. Booster tank shall be "T" shape in configuration, to permit deep side body compartments.

Tank shall have a combination surge tower, manual fill and overflow located at forward left-hand side of hose bed. Tank overflow shall be 3" diameter and dump behind rear wheels to permit maximum traction. Surge tower shall also have a stainless steel hinged cover with a removable expanded aluminum screen.

Tank outlet shall be located in sump, which is the lowest portion of the tank. Tank to pump line shall be a direct straight line to permit maximum water flow. Swash partitions and baffles shall be installed as specified in NFPA #1901. An antiwhirlpooling plate shall also be installed.

Tank will be mounted on hard rubber cushions to prevent metal to metal contact and isolate tank from road shock and vibration. Tank cushions shall be permanently mounted to body frame.

Booster tank shall be constructed of 1/4" marine grade aluminum plate All water tank components shall be full seam corner welded internally and externally.

Booster tank shall be permanently protected from corrosion by a self power generating sacrificial zinc anode system. Anodes are to be permanently installed and completely maintenance free. Internal surfaces, sides, and bottom of tank shall be sandblasted to assure adhesion of a neoprene coating to further protect against corrosion.

Booster tank shall be completely removable without disturbing apparatus body or cab.

BOOSTER TANK COVER:

Tank cover to be gasketed and bolted externally to outside flange of tank to eliminate any rusting of bolts and be completely removable to permit full access and entrance to all swash partitions.

TANK LEVEL GAUGE:

Water level gauge shall be MC 5 bulb type, having five (5) lights and shall indicate water level at each graduation. Water level gauge shall be located on pump panel and placed in a well lighted position for night apparatus operation.

Apparatus body shall be entirely constructed of aluminum. Body framework shall be completely constructed from aluminum extrusions, that are beveled and electrically seam welded internally and externally at each joint. Each body corner shall be a 5" x 5" hollow aluminum extruded corner section with 1/8" wall thickness and be welded as an integral part of the frame. Corner extrusions shall have a 1-1/2" outside radius and a full length 1/8" internal extruded gusset. Horizontal frame members shall be aluminum extruded 1-1/2" x 4" with 3/16" wall thickness and 3/16" outside corner radius. Frame cross members shall be 3" x 3" x 3/8" wall structural aluminum extrusions. Cross members shall extend full width of body to support compartments. Wheel well frame shall be constructed from 1-1/2" x 4" hollow aluminum extrusion slotted full length to permit an internal fit for aluminum diamond plate which is internally fitted into these extrusions, and shall be held in place by electric welds. Complete apparatus body shall be free from all nuts, bolts, and sharp edges. Hose body shall be constructed of 3/16" aluminum plate welded to extruded superstructure frame. All horizontal surfaces, rear step, running board, walkways, and rear body surface shall be of welded aluminum diamond plate. Rear step shall be of 3/16" aluminum diamond plate.

Slanted beavertails to be provided at rear of body, shall give added support to rear step, and be framed with 3" x 3" square aluminum tubing with 1/4" radiused corners and 3/16" wall thickness.

Body shall have a heavy ribbed aluminum rub rail along each side of compartments and rear step. Rub rail shall be 3-1/4" wide with 1/4" wall thickness.

Each hose bed side shall be of 3/16" aluminum plate with a heavy ribbed aluminum extrusion welded to top and to match the lower body rub rails. The top of the hose bed sides shall be 3" wide and shall have rounded corners with 1/4" radius. All compartments shall be constructed from 1/8" formed aluminum plate. Compartment floors shall be constructed from 1/8" aluminum diamond plate welded in place. All compartment seams shall be sealed by using a permanent plyable silicone caulking, and machine louvered for adequate ventilation. External side compartment tops shall be constructed from 1/8" aluminum diamond plate formed outward to deflect water.

Compartment doors shall be constructed entirely from aluminum plate using a box pan configuration. Outer door plate shall be constructed from 3/16" aluminum plate and inner pan shall have 95 degree bends to form an internal drip rail. Compartment doors shall have double catching two point safety slam latches, Eberhard #206, (or equal). Latches to meet strength requirements for passenger doors, Federal Motor Vehicle Safety Standard #206. Door handles shall be heavy duty, stainless steel Hansen flush D-ring handles. D-ring handles shall have a slight break to facilitate easy access while using gloves. Latch mechanism shall be recessed inside double pan door. Doors shall be attached with full length stainless steel piano hinges. All vertically hinged doors shall have a stainless steel spring type door hold-open device. An inner spring shall have stainless steel restraining cable to limit door opening and case aluminum attach brackets.

Doors shall be fully gasketed with closed cell Neoprene sponge. Gasket shall have drip rail shape to carry off water.

APPARATUS BODY COMPARTMENTATION:

Compartments shall have a minimum of 106 cubic feet total useable storage space. This area shall be divided into compartments as follows:

Left Side:

One (1) ahead of rear wheels with vertically hinged single door, compartment shall be approximately 24" wide x 20" deep x 27" high and contain 7.5 cubic feet of storage. Opening shall be 27" wide x 24" high.

Two (2) over rear wheels with vertically hinged double doors. Each compartment shall be approximately 59" wide x 29-3/4" high x 10" deep and shall contain 5.0 cubic feet of storage. Opening shall be 57" wide x 24-3/4" high.

One (1) behind rear wheels with vertically hinged double door. Compartment shall be approximately 36" wide x 21" deep x 27" high and contain 12.0 cubic feet of storage. Opening shall be 34" wide x 27" high.

Rear:

One (1) double door at rear step between beavertails. Compartment shall be approximately 48" wide x 27" high by 25" deep. Compartment shall connect with rear side compartments to form transverse compartment and contain 17.0 cubic feet of storage. Opening shall be 46" wide x 27" high.

Right Side:

One (1) behind rear wheels with vertically hinged double door. Compartment shall be approximately 36" wide x 21 deep x 27" high and contain 12.0 cubic feet of storage. Opening shall be 34" wide x 27" high.

One (1) ahead of rear wheels with vertically hinged single door. Compartment shall be approximately 24" wide x 20" deep x 27" high and contain 7.5 cubic feet of storage. Opening shall be 23" wide x 27" high.

HOSE BED COMPARTMENT:

The hose bed compartment deck shall be entirely constructed from maintenance free 3/4" x 2-3/4" hollow aluminum extrusion welded into a one piece grid. Hose bed extrusion shall have a radiused ribbed top surface that is completely anodized. Hose bed shall be located directly above the booster tank and shall be completely removable for access to booster tank. Three (3) hose bed dividers shall be furnished to divide hose load. Three (3) vinyl nylon reinforced hose bed covers shall be furnished to protect hose load.

BODY TRIM PACKAGE:

The body trim package shall include the following:

- Bright finished aluminum extruded drip rail shall be mounted over rear compartment doors.

- Two (2) rear chrome stanchion castings shall be mounted above hose bed on each side. Stanchions shall be 12" wide with 3-3/4" thickness. Stanchions shall have integral cast socket for stainless steel handrail. All wiring for deck lights and flashing lights shall be concealed inside stanchion for proper protection. Stanchion shall be easily removable for wiring access.

- One (1) stainless steel horizontal grabrail shall be provided between rear stanchion castings.

- Four (4) polished aluminum corner castings, one on each corner of body shall be welded to apparatus body. Casting shall be 5" x 5" and 3" deep.

- Two (2) vertical handrails shall be mounted with stainless steel bolts to apparatus body, one to each side of beavertail. Handrails shall be 1-1/4" diameter stainless steel tubing with chrome stanchions. Horizontal step inside beavertail shall be covered with 1/8" aluminum diamond plate formed to provide a nonskid surface for easy access to hose bed area.

All electrical equipment shall be installed to conform to the latest Federal standards as outlined in NFPA #1901. Wiring installed by body builder shall be run in a loom where exposed and shall be protected by automatic circuit breakers of the reset type.

All electrical equipment switches shall be mounted on a switch panel mounted in the cab convenient to the driver. Light switches shall be of the rocker type with integral indicator light to show when lights are energized. All switches shall be appropriately identified.

The following electrical equipment shall be supplied:

- One (1) Federal Aerodynic light bar model 24 color code "A" with red domes and TS 24 speaker shall be switch controlled on dash.
- Federally required clearance lights, marker and chrome license plate bracket with light.
- Rear mount cluster marker lights to be recess mounted in a channel under rear step for protection from breakage.
- Signal stat with stop, turn, and back-up light (one each side at rear of truck).
- 7" single faced flashing red light, with chrome housing, shall be mounted on front of cab (one each side). Lights shall be switch controlled on dash.
- 7" double faced flashing red lights shall be mounted above beavertail on rear stanchion casting (one each side).
- Compartment lights. Lights shall be switch controlled on dash.
- Pump compartment light.
- Two (2) pump panel lights - 3 bulb cluster with three way switch. One left, one right
- One Federal PA 150 siren with microphone. Includes wail, hi-lo and yelp modes and PA system. Also includes provision for radio hook up.
- Two (2) cab post mounted spot lights.

BATTERY:

Battery shall be mounted in an enclosed compartment directly at the end of the canopy walkway. Battery compartment shall be self draining, adequately ventilated and battery shall be readily accessible for examination, testing and maintenance. Battery capacity shall be commensurate with the size of engine and anticipated electrical load in full compliance with pamphlet #1901.

Battery hold down shall be 1" x 1-1/2" x 1/8" aluminum angle completely

framing top perimeter of battery. Framing shall be constructed as to allow bolting to a formed aluminum plate attached to chassis.

BATTERY CHARGING RECEPTACLES:

Battery charging receptacle, having standard trickle charger lug connections, shall be provided. Receptacle shall be flush mounted and placed in a readily accessible location and shall be connected in such a manner as to allow direct charging to battery system.

GENERATOR:

One (1) Onan 3000 watt electric start diesel driven 110/220 volt generator shall be mounted in left rear compartment. Generator to be fueled from truck fuel system. Two (2) 500 watt Quartz telescoping lights and (2) external weather proof twist lock receptacles shall be wired to generator through a four way breaker box.

APPARATUS PAINT FINISH:

All exposed metal surfaces, not being chrome plated or of aluminum diamond plate, shall be thoroughly sanded, cleaned and phosphatized in preparation for painting. Paint shall be ultra high lustre Dupont "Imron" polyurethane paint. Complete apparatus cab shall be sanded and finish painted before mounting of body to assure full coverage of paint to all cab surfaces. Both cab and body shall be painted to allow for identical finish. All removable items; i.e., wheels, brackets, compartment doors, etc., shall be painted separately to insure finish paint behind mounted items. Body components that cannot be finish painted upon assembly are to be finish painted before assembly. All unwelded seams exposed to high moisture environments shall be sealed using permanent plyable silicone caulking.

Inside door and door jambs on chassis shall be sanded and painted with Dupont "Imron" to match the finish of the exterior of the truck. Pump shall also be painted with "Imron" matching the apparatus exterior. Wheels and wheel well liner shall be painted to match apparatus wheel finish. Chassis frame and under carriage components shall be finish painted black.

Apparatus doors shall be finished with gold leaf design and highlighted with black outline. Gold leaf will be thoroughly coated for protection against wear and weathering.

Entire unit to be painted lime yellow Dupont "Imron" #7744UH. Fire Department Red Dupont "Imron" #20726. Cab top to below window line to be painted Dupont "Imron" white #817.

Shaded gold leaf lettering shall be furnished to fire department specifications - up to 60 letters.

BASIC 1901 EQUIPMENT PACKAGE

LADDERS AND MOUNTING:

One (1) 14' roof ladder, aluminum extension type, and one (1) 24' ladder, aluminum extension type, shall be furnished and mounted with a heavy chrome plated hold down handle and swivel base.

HARD SUCTION:

Two sections of 10' long by 6" diameter hard suction hose, with bright chrome plated couplings attached, shall be furnished. 3/16" wall extruded aluminum mounting rack shall support suction hose. Hose shall be held in place by unique stainless steel springs and bright finish catch handles.

HARD SUCTION STRAINER:

One (1) hard suction basket type strainer shall be furnished with mounting bracket. Mounting bracket shall be attached to apparatus body.

FIRE AXES:

Two (2) fire axes, six pounds in weight, one flat head and one pick head, shall be furnished with chrome and stainless steel mounting brackets. Brackets and axes to be mounted to apparatus body.

PIKE POLE:

One (1) 10 foot and one 6 foot fiberglass pike pole and mounting brackets shall be furnished and mounted to apparatus body.

HAND LANTERNS:

Two Koehler rechargable (with charger) type hand lanterns with batteries shall be furnished.

FIRE EXTINGUISHERS:

Two (2) fire extinguishers, 20 pound ABC cartridge type with mounting brackets shall be furnished and mounted on apparatus body.

EXTRA EQUIPMENT

- 750 ft. 2-1/2" all polyester double jacket 600# fire hose coupled lightweight NST
- 600 ft. 1-1/2" all polyester double jacket 600# fire hose coupled lightweight NST
- Four (4) Akron #1730 2-1/2" turbo-jet nozzle with playpipe
- Five (5) Akron #1720 1-1/2" turbo-jet nozzle with pistle grip
- None (9) Ziamatic spring clip air pak brackets
- Six (6) Scott IIa Pressure Demand (3 with case, 3 without case)
- Six (6) Scott aluminum spare cylinder
- 750 ft. 3" all polyester double jacket 600# fire hose with 2-1/2" couplings NST
- Two (2) 2-1/2" Female NST x 1-1/2" Male NST chrome adapter
- One (1) Akron #588 hose clamp
- Six (6) Akron #78 hose strap
- One (1) Akron #501 multiversal complete with stream shaper and stack tip. Top mount fixture shall be furnished.
- One (1) Akron #1750 master stream nozzle
- Tire chains for all wheels - rear to be three rail style

WHITTIER MANOR

FEB 24 1981

portsmans Inn esturaunt Bar Gift Shop Grocery	Bay 1	Bay 2	Bay 3	Bay 4	Bay 5	Bay 6	Bay 7	Bay 8	Bay 9	Bay 10

- Each bay has 10 appartments owned as a condominium.
- Whittier Manor is a frame building.
- Fire occured in Bay 4.
- Bay 1 and 2 are owned by Sportsmans Inn as rental units.
- Bays 3-10 apartments are owned by individuals.
- Fire wall between each bay.
- Mary Lee Brown is the building manager.

Address: Whittier Manor Bay 10 Box 714
Whittier, Alaska 99502
472-2355

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Address: Whittier Manor Bay 10 Box 714
Whittier, Alaska 99502
472-2355

February 20, 1981

STATE OF ALASKA
State Capital Building
Juneau, Alaska 99811

Attn: Rep. Bette Cato

Dear Rep. Cato;

As residents of Whittier Alaska my wife and I are concerned about community safety.

Recently we had a local fire. Though it could have been much more disasterous the fire fighting facilities were extremely poor. We understand a new fire engine is in the process of being built for us and only lacks appropriate funding.

Is there anything we, as citizens, can do to expediate this funding?

Once the vehicle is funded it will still be some time before we receive it. We shudder to think of the consequences of another fire; no matter how minor it may be. The city desperately needs the equipment as soon as possible!!!!!!!

Thank you kindly for your attention.

Sincerely,

David Clemens

David Clemens

DC:mc

cc: City of Whittier City Council

PAT'S 4 x 4 CENTER

GENERAL REPAIR WORK
AAA CERTIFIED REPAIR STATION
POWER TAKE-OFF
WINCHES
WRECKER SERVICE

PAT JOHNSON
OWNER

PHONE 458-5429

1380 COLLEGE PLACE
HELENA, MONTANA 59601

Wed evening

Dear Betty,

Here is the information I promised you. Sorry about the handwritten, letter & disorganized contents but that's the way it's been since monday.

The fire started, apparently caused by a child, in the upper floor of Bay 4 of Whittier Manor during the noon hour. I live right under neath & hear a lot of commotion from above. One of the tenants was running down the stairs screaming "Call the Fire Dept." I grabbed my radio & ran upstairs encountering another tenant who yelled to get another extinguisher. I directed him to the nearest one & continued up but was stopped by dense smoke spreading rapidly. During this I radioed for the fire truck & got my police sgt. who was on duty. As I was closer to the fire hall & unable ~~to~~ without air packs, I went for the truck &

PAT'S 4 x 4 CENTER

GENERAL REPAIR WORK
FAA CERTIFIED REPAIR STATION
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HELENA, MONTANA 59601

PHONE 458-5429

2

Activated the siren. On response time was very rapid due to the fact I was on the scene & the fire hall is approx. 3 blocks away. Volanteers took a 2½" line to the Backers building hydrant while we drove to Bay 4 & got the truck pump going. About this time we were informed the hydrant was frozen. We pumped for a short time from our 500 gal tank on the pumper & then it lost suction. There was a 1½" line into the building by this time & volanteers were robbing hoses from adjacent bays so we could couple them together & use other building hydrants. I headed up the stairs with an air pack to see if I could reach the 1½" building hose. I was forced back by hot gases with "0" visibility smoke & became disoriented when my air hose took hold on something. Lt. Avery from P.D. helped me find my way down. He later called out our asst Chief ~~[illegible]~~ who suffered smoke inhalation

PAT'S 4 × 4 CENTER

3

General Repair Work
FAA Certified Repair Station
Power Take-Off
Winches
Wrecker Service

1380 College Place
Helena, Montana 59601

Pat Johnson
Owner
Phone 458-5429

~~[illegible]~~. I'm only aware of a small portion of all that happened. The flames were large by this time. Apparently they got the truck pumping again & had another 1½" line from Bay 3 or 5 but it was a losing battle at this point. I went to check on another hydrant approx. 1500' away & it was inoperable. Apparently a snow plow knocked out the one right behind our place early last winter & the city shop hadn't replaced it yet even though they had been ordered to in June. By this time the truck had run out of water & we knew we were in real trouble even though it was a calm day windwise. A call was put out to Girdwood for help & the Alaska R.R. had an engine in portage in an hour to bring them in. The cooperation from everyone was amazing. At the scene the ARR was bringing a large crane & a platform of some sort to hoist a large 2½" hose team to top floor level. While this was going on all other hitters was responding.

PAT'S 4 x 4 CENTER
GENERAL REPAIR WORK
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OWNER
PHONE 458-5429

The army people at the tankfarm brought a large pump to the dock & were setting it up to pump seawater into our truck which boosted & regulated the pressure on the 2½" line to the crane. While ~~this~~ this was all being set up people were making lines on the roof which had started falling in. They got these ~~ladders~~ up by our FD ladder on the backside of they threw them out the windows on bayside & slid out the windows on them as there was a shortage of ladders initially (We had just purchased the one we were using on the backside last week).

One person even crawled ~~out~~ out a window to climb onto the roof. They were not trained firefighter but people who wanted to help. And thanks to them (even though it was stupid in many cases) they & many others turned the tide. No major injuries. All of us have many bruises sprained ankles etc. But truly amazed no one was killed in the

PAT'S 4 × 4 CENTER
General Repair Work
FAA Certified Repair Station
Power Take-Off
Winches
Wrecker Service

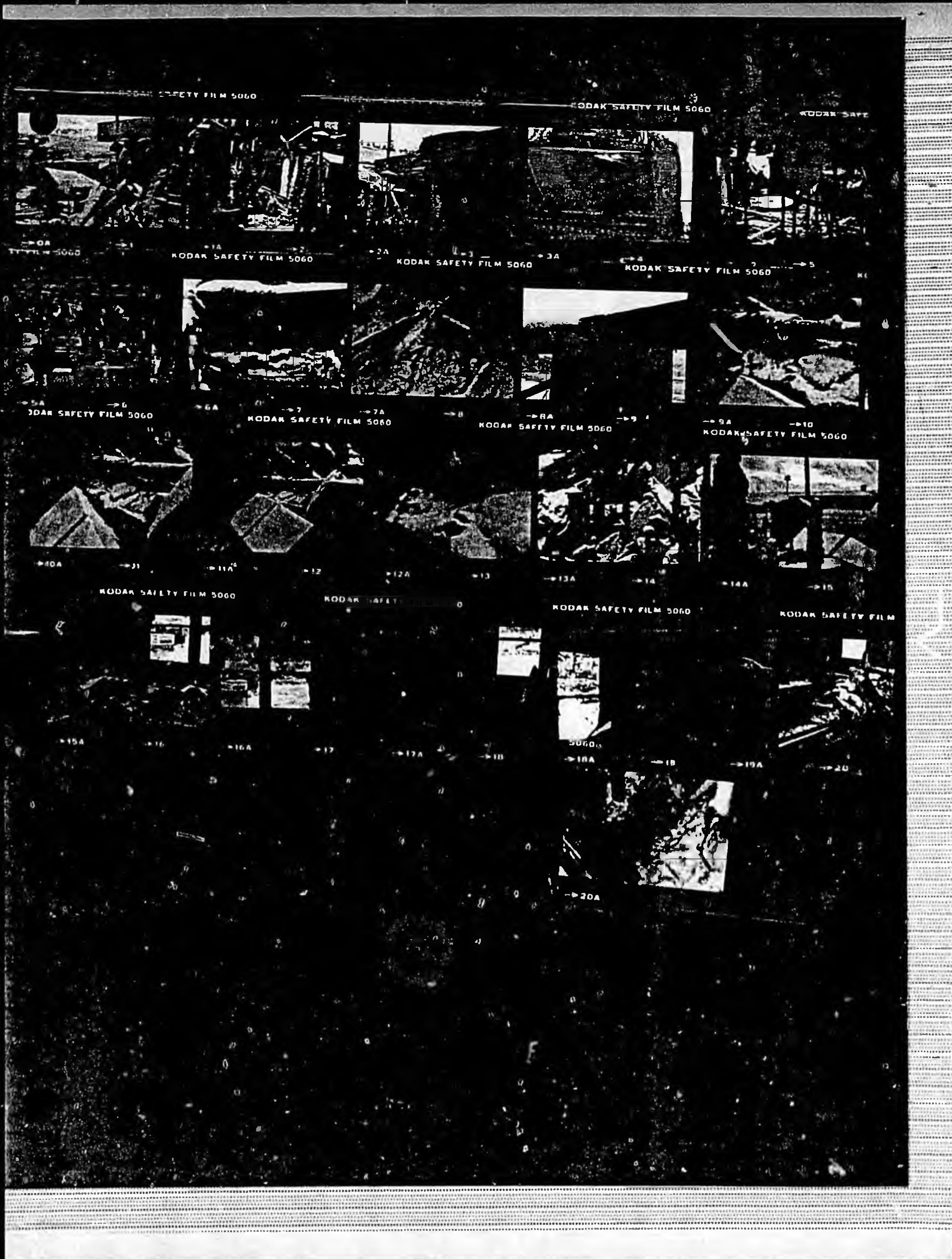
1380 College Place
Helena, Montana 59601

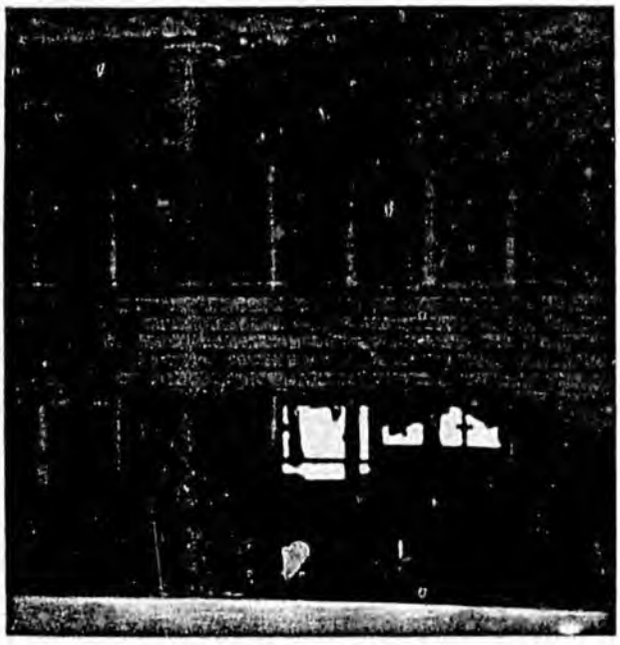
PAT JOHNSON
OWNER
PHONE 458-5429

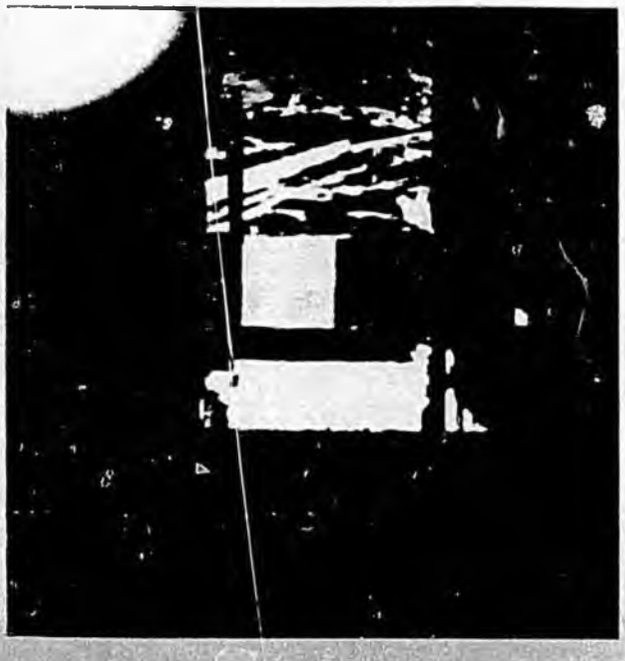
fire as they were taking real chances to make up for a lack of equipment.

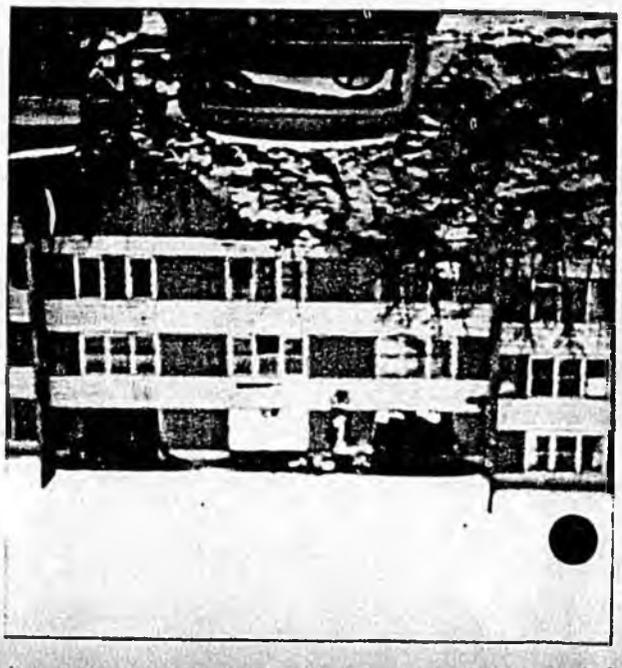
2 citizens "buddy breathing" on an aqualung & no mask while manning a hose on 2nd floor. Numerous ones working with no breathing gear at all just wet hankys or towels. Most struggling to stay in the building or on the roof to man a 1½ building hose with a poor ("useless" is a better term) nozzle that could only reach 10-15 feet at times with a stream a little larger than a garden hose. And yet they stayed were overcome came out or were drug out & went back in. (Hose pressure was low because of so many on the building hydrants. There's much more Bette & I apologize for this messy letter but I've been trying to keep heat in our building for the rest of the tenants get our fire gear back in order for the next one & trying to clean up what I salvaged from my own apartment. I sent a neater & more complete report next week.

Sincerely Pat Johnson
Whitehall VFD


KODAK SAFETY FILM 5060







HB

523

ALASKA
STATE LEGISLATURE

MEMORANDUM

May 20, 1981

TO: Representative Bette Cato, Chairman
Transportation Committee

FROM: Senator Mike Colletta Mike Colletta

SUBJ: Whittier Access/Portage Road (SB 122, HB 535)

Please find attached for your information a petition in support of SB 122 and HB 535. I would like to request your consideration to speedy hearing on this issue.

Thank you.

WHITTIER, ALASKA 99693
BOX 727
(907) 472 2350

MAY 15 P.M.

TO WHOM IT MAY CONCERN:

FROM KAY SHEPHERD, CITIZEN

The enclosed petition portrays the feeling of most of the residents of Whittier concerning the access road from Portage Glacier Lodge to Bear Valley. The number of voters at any election in Whittier ranges from about 85 to 90.

Whittier would certainly benefit from this improved access but, beyond that fact, Anchorage and a great part of interior Alaska could have better advantage of the extensive recreation area of beautiful Prince William Sound.

The new addition to the small boat harbor, for which there is a long waiting list, and the great interest in the potential harbor for Shot Gun Cove indicate the intense interest that Alaskans have in Prince William Sound, the finest recreation spot in the State of Alaska.

Thank you for giving sincere attention to this petition from Whittier.and if it is possible to move SB 122 and HB 535 through the committees and to the respective floors for vote, it our desire that you do so.

Again, thank you.

Kay Shepherd

WE, THE UNDERSIGNED, BEING RESIDENTS OF THE CITY OF WHITTIER, ALASKA, ARE IN FAVOR OF A ROAD BEING BUILT FROM PORTAGE TO BEAR VALLEY IN ORDER TO DECREASE THE EXPENSE AND TRAVEL TIME AND TO INCREASE ACCESS TO WHITTIER.

Date		SIGNATURE	PRINTED NAME	ADDRESS
May 3, 1981	1.	Judith M. Youngquist	Judith M. Youngquist	Box 741 Whittier, Ak. 99693
5-3-81	2.	[illegible]	Joipel Fred Platt	Box 722 Whittier AK
5/3/81	3.	[illegible]	FRED D. JOINER	[illegible]
5/3/81	4.	[illegible]	Michael Livingston	Box 692 Apt 5 Whittier
5/3/81	5.	[illegible]	DARLENE MORTON	Box 673 Whittier
5/3/81	6.	[illegible]	GEOFFREY [illegible]	Box 673 Whittier
5/3/81	7.	[illegible]	Betty S. Chance	Box 951 Whittier, AK. 99693
5/3/81	8	[illegible]	Rowley E Lewis	Box 633 Whittier AK 99693
5/3/81	9	[illegible]	Michelle E Lewis	Box 633 Whittier AK 99693
5/3/81	10.	[illegible]	JANE D STRAUS	Box 662 Whittier AK
5/3/81	11	[illegible]	Randall G Hartman	Box 615 Whittier
5/3/81	12.	[illegible]	P.O. Box 615 Whittier	
5/3/81	13.	[illegible]	Robert L Wadlow	PO Box 72 Whittier AK
5-3-81	14.	[illegible]	[illegible]	PO Box 615
	15.	[illegible]	Box 696 Whittier, AK	
5/3/81	16.	[illegible]	Box 632 Whittier	
5/3/81	17.	[illegible]	Box 668 Whittier AK 99693	GERALD H. PROTZMAN
5/3/81	18.	[illegible]	Gloria Protzman	Box 664 Whittier
5/3/81	19.	[illegible]	Marcia L Paulson	Box 694 Whittier
5/3/81	20.	[illegible]	Box 707 Whittier AK 99693	
5/3/81	21.	[illegible]	RAWSON E. KNIGHT	Box 698 Whittier AK
5-3-81	22.	[illegible]	Linda Rosales	Box [illegible] Whittier AK
5-3-81	23.	[illegible]	LORI SIMMONS	Whittier Box 683
5/3/81	24.	[illegible]	Box 711 Whittier	DORIS V. BENDER
5/3/81	25.	[illegible]	ROSCOE HERRELL	Apt 1403 Begich Towers
5/3/81	26.	[illegible]	Armanda Hale	#705 Whittier AK.
5/3/81	27.	[illegible]	Tom Hale	#705 Whittier AK
5-3-81	28.	[illegible]	Ray Shepherd	[illegible]
5/3/81	29.	[illegible]	[illegible]	[illegible]
5/3/81	30.	[illegible]	Robin A. Gregory	[illegible]
5/3/81	31.	[illegible]	[illegible]	[illegible]
5/4/81	32.	[illegible]	Daniel N. Holgate	Box 131 Whittier AK 99693
5/4/81	33.	[illegible]	[illegible]	[illegible]
5/4/81	34.	[illegible]	[illegible]	[illegible]

36.	[illegible] Lopez	William A. Lopez	Box 641 Whittier, AK 99693
37.	Elsie S. Yeagle	ELSIE S. YEAGLE	BOX 653 WHITTIER AK 99693
38.	John D. LaBowe	JOHN LABOWE	903 Begich Towers Whittier
39.	Jerry L. Lewis	JERRY L. LEWIS	POBox 621 Whittier AK 99693
40.	Gene Alvarez	GENE ALVAREZ	BOX 693 WHITTIER AK 99693
41.	Charles R. Hutchinson	Charles R. Hutchinson	P.O Box 711 Whittier 99693
42.	Sharon Miles	Sharon T. Miles	Box 662 Whittier AK 99693
43.	Steve Hartman	STEVE HARTMAN	BOX 675 WHITTIER AK 99693
44.	Marilyn Holroet	Marilyn Holroet	Box 621 Whittier, AK
45.	Harold Bishop	HAROLD BISHOP	BOX 701 WHITTIER AK 99693
46.	Darlene L. Deyo	Darlene L. Deyo	Box 734 Whittier AK 99693
47.	Apryle Worden	Apryle Worden	Box 681 WHITTIER AK 99693 5/4/
48.	Bernadine Zeigler	Bernadine Zeigler	Box 686 Whittier AK 99693
49.	Kenneth Barker	KENNETH BARKER	BOX 607 WHITTIER, AK 99693
50.	Chas F. Miller	CHAS F MILLER	Box 614 Whittier AK 99693
51.	David Clemens	DAVID CLEMENS	BOX 645 Whittier AK 99693
4-8/52.	Mary Clemens	MARY CLEMENS	Box 645 Whittier AK 99693
5/5/53.	Robert M. Wheelright	ROBERT M. WHEELRIGHT	BOX 647 Whittier AK 99693
5/4/8/54.	Geraldine Wheelright	Geraldine L. Wheelright	Box 647 Whittier AK 99693
5/4/8/55.	[illegible]	[illegible]	[illegible]
56.	Rita S. Lopez	Rita S. Lopez	Box 641 Whittier, AK 99693
57.	Willie J. Robert	Willie J. Roberts	APT-321 B.T. Whit, AK
58.	Florence K. Rawhouser	Florence K. Rawhouser	Bay 3, Apt 12 Whittier Manor
59.	Stacey A. Smith	Stacey A. Smith	Apt. 1009 BTI Whittier, Ak. 99693
60.	Dennis P. Hutchinson	DENNIS P. HUTCHINSON	APT 712 BTI Whittier
61.	Jeanne D. Heflin	JEANNE D. HEFLIN	Apt. 712 BTI Whittier 99693
62.	Jack D Coffman	JACK D COFFMAN	Apt 702 BTI Whittier
63.	[illegible]	[illegible]	[illegible]
64.	Jeffrey A. Jackman	Jeffrey A. Jackman	Box 685 Whittier Ak. 99693
65.	Vicki L. Hartman	Vicki L. Hartman	Box 675 Whittier Ak. 99693
66.	Irma R Knight	IRMA P. Knight	Box 698 Whittier Ak. 99693

Eighteens

67. Timothy Key Timothy (J) Key P.O. Box 735 Apt 104

68. Linda Key Linda Key P.O. Box 735 Whittier, AK 99693

69. Linda D Harker Linda D Harker P.O Box 621 Whittier AK 99693

70. Peggy A Gallacher Peggy Gallacher Box 669 Whittier AK 99693

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THE LEGISLATURE OF THE STATE OF ALASKA
TWELFTH LEGISLATURE

FISCAL NOTE

APR 7 1981

I. REQUEST

Bill/Resolution No. SB 122

Title Special Appropriation for Whittier - Portage Access Const.

Requested by Colletta Date

II. FISCAL DETAIL

Agency Affected DOT/PF

Program Category Affected Planning & Programming, Design & Construction

BRU, Program, or Subprogram(s) Affected

(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 81	FY82	FY83	FY84	FY 85	FY 86
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL						
400 COMMODITIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS, ETC.						
TOTAL		15,000.				

FUNDING (Thousands of Dollars)

GENERAL FUND		15,000.				
FEDERAL FUNDS						
OTHER (Specify Fund Source)						

POSITIONS

FULL TIME						
PART TIME						
TEMPORARY						

III. ANALYSIS (See Fiscal Note Preparation Instructions, Section III)

Maintenance Costs: $12,000/mile corrected for inflation with 35% for equipment.

Assumes:

1. Project scope includes construction for 1 1/2 miles of Bear Valley Road, auto parking, construction and rail modification in Bear Valley and Whittier Station improvements.
2. No maintenance of the rail facilities.
3. Utilization of consultant in project development.

IV. DATE 2/20/81 PREPARED BY Central Div. Planning & Programming

AGENCY Dept. of Transportation & Public Facilities

PHONE 266-1462

Original: Legislative Finance

cc: Budget and Management

Prime Sponsor (First Legislator Named)

33-001 (Rev. 12/79)

HB

536

NORTH SLOPE BOROUGH
P. O. BOX 69
BARROW, ALASKA 99723

TELEPHONE (907) 852-2611

Marla 4-21-81 ABR

April 16, 1981

Is this a duplication? ✓ State funds

The Honorable Al Adams
House of Representatives
Pouch V
Juneau, Alaska 99811

Dear Sir:

Detailed below is a schedule of estimated costs involved in the Borough's monitoring, planning, management and environmental protection program for the Haul Road. Please note that we have differentiated between basic administrative work and emergency support (i.e., medical services and public safety) but this in no way implies that the emergency support receives lesser priority.

STAFF AND RESPONSIBILITIES	SALARY
1 PLANNER - Update comprehensive plan, zoning, historic analysis	$65,000
1 EPO OFFICER - Monitor spills, streams, culverts, camp clean-up and operation, and gravel use	60,000
2 SUBSISTENCE & WILDLIFE OFFICERS - Analyze caribou migration patterns and impact of road and corridor use on all subsistence species and habitat	120,000
1 VILLAGE LIAISON - Establish and maintain 2-way communications on haul road uses with villages of Anaktuvuk Pass, Nuiqsut and Kaktovik	50,000
SUBTOTAL:	$295,000
TRAVEL - Per diem, etc.	50,000
VEHICLES, FIELD EQUIPMENT, ETC.	75,000
SUBTOTAL:	$420,000

CONTRACT WORK	CONTRACT COSTS
1. Finish nomination of at least 10-20 cultural sites for the National Register of Historic Places	$100,000
2. Establish base-line data on environment, pollution, subsistence, user patterns and impact, etc. with literature research, limited field work, analysis of records, and interviews. Use various combinations of written and audio-visual material to communicate the results and findings.	180,000
SUBTOTAL:	$280,000

PUBLIC SAFETY & EMERGENCY MEDICAL SERVICES	SUPPORT COSTS
4 PUBLIC SAFETY/EMS OFFICERS - Provide emergency and medical support as needed	200,000
TRAVEL - Per diem, etc.	50,000
VEHICLES, FIELD EQUIPMENT, ETC.	75,000
SUBSISTENCE AND SUPPORT SERVICES	65,000
SUBTOTAL:	$390,000

To provide the staff, complete the contract work, and provide emergency and public safety services, the grand total will be $1,090,000.

If you need additional information, please call me at your earliest possible convenience.

Yours truly,

Jacob Adams
Mayor

cc: Conrad Bagne
Borough Attorney

JA:eap

(CONFIRMATION COPY: TELECOPIED ON 4/16/81)

CS

SP

SS HB -

Dalton Highway, Disaster Creek

introduced by Gov - ① ② 3

Yukon River — Disaster Creek -

Section 4 — Capital Cost
N Slope Borough
- to prepare for opening -
Sec 5 -
Sec 6 -
7 new positions -

2 mil continuing funding
3 mil 1 time only.

additional item - Division of Parks -

Ward.
1 yr. acceleration of DOT - advanced 1 yr. -

emission personell & capital -
helicopter request
(rent & utility) 7 new troopers 5 mi Coldfoot.
charge Sag River Deadhorse -
troopers do not have housing -
sec 6 housing & helicopters -

maintenance south of Shandalen
Dugan Gen } no complaint
no support for AIC → mileage adjusted
for lesson Northern end.

NR
~~DEC~~ Contract with DOT for Cleaning up –

section 5 – 365 miles –

– Want breakdown on section 5 –
Resident ○ 2 units – 1800 sq feet.

1.6 1.7.
2 units (400, thou)

7 years

section 4 –
mile 153 – after that N. Slope boundary.
on their portion

= user fees –
possibly toll (suggestion of N. Slope)
toll not legal –

John Forceskie - Teamsters - 276-4334

Teamsters can not strike. If the owner/operators go out on strike it will not be and can not be Teamster sanctioned. BUT.....

John Forceskie expressed a real problem with the road. The maintenence now and in the past is very bad. Everyone is complaining about the potholes, etc. I gather part of the problem is not just the regular break-up blues, but that maintenence during the winter (snow removal, ashing the passes, etc) has been bad. The passes were so bad that the truckers had to use chains going up and down the passes.

Mr. Forceskie indicated that complaints come from everyone about the road during meetings, not just a few and not just "cowboys."

An added factor is that not all camps along the way are open to the truckers. This necessitates long stretches of road where there are no rest areas. For some truckers it is so bad that they are carrying barrels of diesel fuel.

Frontier company did lose a few rigs due to road conditions.

* *

A completely different subject that John Foceskie brought up
Canadians are bringing loads in through the border. It used to be that the Canadians would bring there load to the boarder and an Alaskan would take over the rig. They're real hot about that too, so I thought I'd mention it.