



DESIGNATED ENGINEERING SERVICES LTD

13140 - ST. ALBERT TRAIL, EDMONTON, ALBERTA, T5L 4R8. TEL (403) 453-8111. TELEX: 037-2333

November 10, 1981

File: EQ52

FROM: INUVIK  
CHAMBER  
OF  
COMMERCEMr. Albert Pluim, President  
Inuvik Chamber of Commerce

Box 2012

Inuvik, N.W.T.

XOE OTO

Attention: Mr. Albert Pluim

Re: Dempster Highway Evaluation 1981

Enclosed please find two (2) copies of the design concept sketches and associated notes for possible bridge crossings of the Peel River transmitted via telecopier to you on 6, November, 1981.

This material was transmitted for informational purposes as discussed in our telephone conversation earlier in that week.

In order to derive more definitive information on bridge alternates for the Peel River a bridge type study should be conducted that would address the following:

- Bridge types
- Soil conditions
- River hydrology
- Availability of materials
- Construction period
- Estimated cost
- Support systems
- Ice protection

We have a staff of resource specialists with expertise in the design and construction under the prevailing climatic conditions of the north who have considerable experience with bridges crossing major waterways.

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Associated Engineering Services is confident that we can conduct a preliminary study of this nature for approximately \$20,000.00 that would identify design parameters and provide more definitive information on a crossing of the Peel River.

We would be pleased to discuss this matter further with you and others concerned with the Dempster Highway and the Transportation needs of the north.

As always, we have enjoyed being of assistance to you. Should you have any questions do not hesitate to call me.

Yours very truly,



R.L. Messier, Department Head  
Transportation

Encl.

I'VE ATTACHED SOME CONCEPT SKETCHES OF ALTERNATE BRIDGE CROSSINGS FOR THE PIEL RIVER AS REQUESTED.

ALTERNATE "A" PROVIDES FOR FILLING OF PORTAGE PIER WITH RIP RAP CARRYING AND SPANNING WITH BAILEY BRIDGE FOR REMAINDER.

PROBLEMS ARE STABILITY AS A RESULT OF THE ICE PRESSURES AND COULD REQUIRE SIGNIFICANT MAINTENANCE.

ALTERNATE "B" PROVIDES FOR BAILEY BRIDGE SECTIONS SPANNING THE TOTAL CROSSING WIDTH

ALTERNATE "C" PROVIDES FOR SKID BEARING SECTIONS FROM SHORELINES TO CENTRAL SPANS COMPOSED OF BAILEY BRIDGE SECTIONS.

ON THE ALTERNATES ARE DEPICTED TWO TYPES OF PIER PROTECTION SEE DETAILS X AND Y.

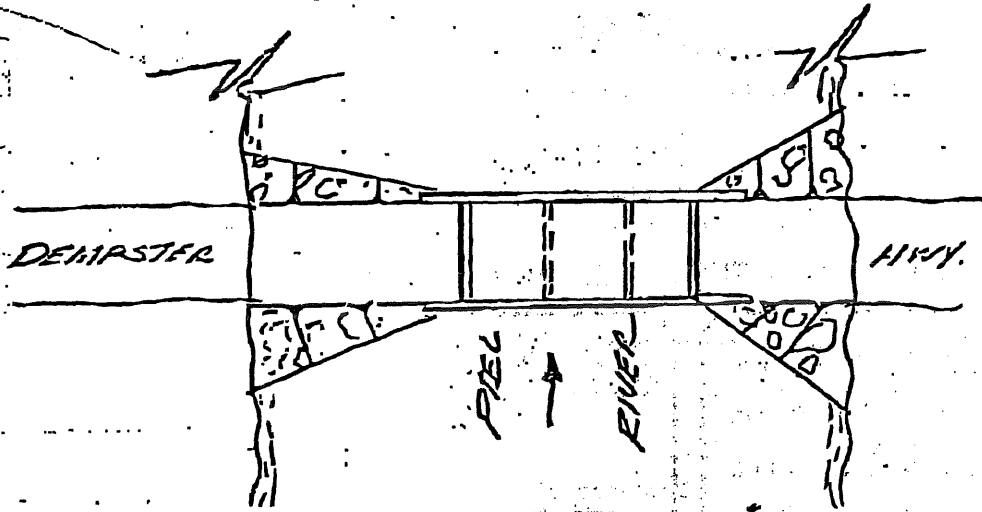
ALTERNATES B/C

- ASSUMING 700' CROSSING
- ONE CANTON BRIDGE (NOT APPROX \$2,000,000)
- TWO " " " " " \$4,000,000
- LIFESPAN 10-15 YEARS
- ADJUSTMENTS
  - WOOD PIER
  - METAL PIER
  - PIERED (B/C)
- NARROW PIERS w/ SQUARE PIERS ON JUNCTION OF STEEL SHARPER "VEE"

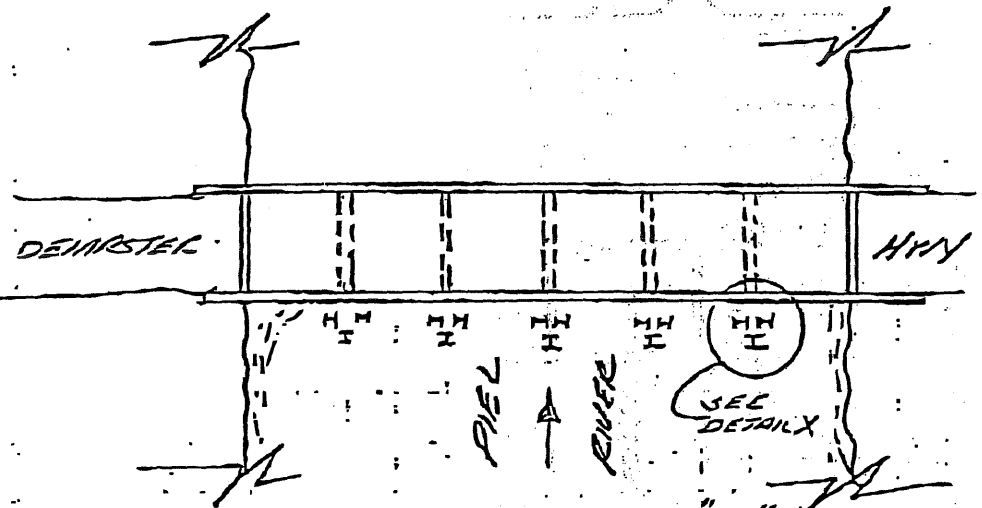
ASSOCIATED  
ENGINEERING  
SERVICES LTD

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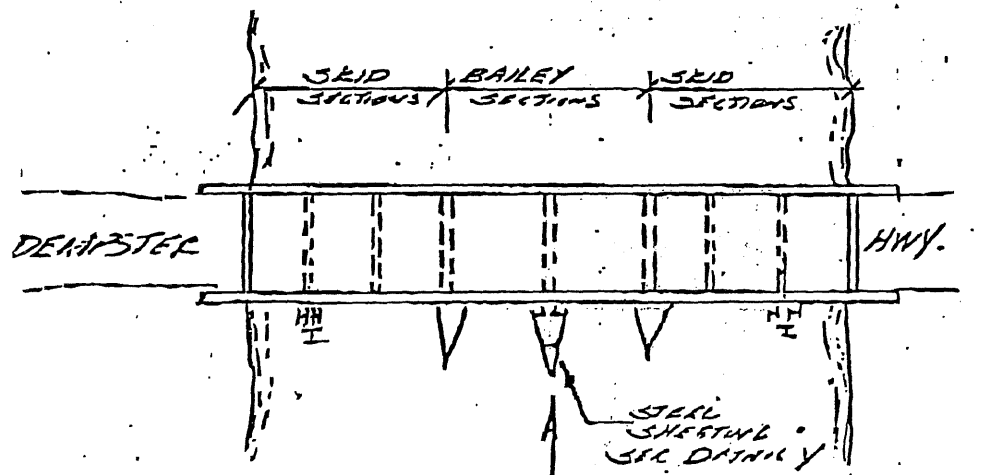
JOB NO. E052 ) SHEET 1 OF         
CLIENT A. PRUM - INUVIK C.O.C.  
SUBJECT PEL RIVER CROSSING  
BY P. L. HARRIS DATE 6-14-81 CHK'D        DATE       



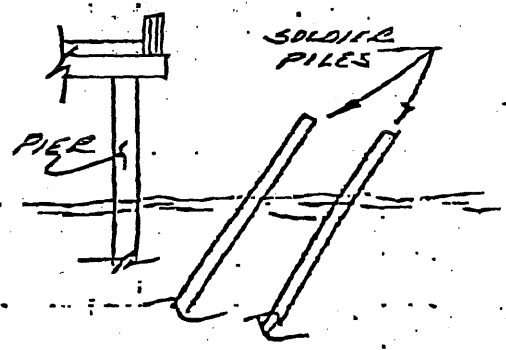
ALTERNATE "A"



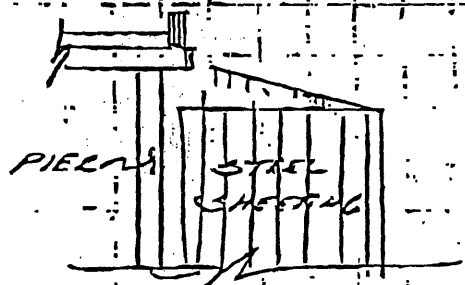
ALTERNATE "B"



ALTERNATE "C"



DETAIL X



DETAIL Y