Limit of Causeway, Bank Protection and Metal Culverts Contract

Limits of Bridge and Bulkhead Installation Contract

Limit of Causeway, Bank Protection and Metal Culverts Contract

Sta. 35+00 Match Line

Sta. 36+00

Sta. 40+00

Sta. 45+00

Sta. 50+00

Sta. 55+00

Sta. 60+00

Sta. 65+00

Sta. 70+00 Match Line

Match Line See Dwg. 104

Match Line See Dwg. 106

Sta. 96+00 Match Line

Sta. 96+41.65 End of transition Final super Elevation to crown

Top of Roadway El. 19.00 S: 0.00

S: 0.05

S: 0.03

R: 107

Fill

El. 17.00'

El. 10.75

Gravel

Extreme Flood

Approx. Normal Spring Flood

Bulkhead Piles

Excavated Bottom (El. 6.0)

Bulkhead piles

Vertical Datum

Top of Roadway El. 16.00

S: 0.00

Slope = 0.03

Slope = 0.08

Dn.

Sta. 87+60.25

Sta. 87+40.25

Sta. 87+40.25

Sta. 87+60.25

Sta. 87+40.25

Sta. 87+60.25

Sta. 87+40.25

Sta. 87+60

Sta. 20+14.89
℄ Dock Road
Beginning of Project

Sta. 24+36
℄ Water Line Road

Sta. 28+60.69
BC

Sta 29+41.65
EC

Sta 31+84.07
P.I.

1119.80'

Runway

Water oils receiving and storage point

Limits of Causeway, Bank Protection and Metal Culverts Contract

Bank protection. See Sheet No. 104.

Main Channel Excavation - For extent see Sheet No 102.

CURRENT CHANNEL ELEVATIONS ARE NOT AVAILABLE AT THIS TIME ELEVATIONS SHOWN ARE DESIGN ELEVATIONS.

Limit of Causeway, Bank Protection and Metal Culverts Contract

1270'

Lc 1788.75'
R 1200'

TEST HOLE A
TEST HOLE B
TEST HOLE C
TEST HOLE D

380'

TH I
TH II
TH III
TH IV

620'
500'
853'

8165.91'

S 56° 00' 00" E

"E" Line

2810.00'

7980.00'

2920'

1350'

4

3

2

(Section Number in T 10 N, R 15 E)

9

10

11

N

2350'

1880'

586'

DE 150/150'/150/150

TH IA
TH 2A
TH 3A
TH 5A
DH 6
DH 7

"A" Line

884'

2676'

1950'

Sta 113+00
End of Project

Sta 20+14.89
Beginning of Project

TEST HOLE 'A'
NTS

TEST HOLE 'B'
NTS

TEST HOLE 'C'
NTS

TEST HOLE 'D'
NTS

MIN. 36" ϕ HOLE
20' MAX.
TOP OF ICE
RIVER BED FROZEN MATERIALS
(CONDITION OF SOILS UNKNOWN)
24" OR 22" ϕ HOLE
12" TO 24" ϕ HOLE
ELEV. -6'±
ELEV. -9.5'±
ELEV. -15'±

NOTE:
TEST HOLES ARE TO BE DRILLED TO ELEVATIONS SHOWN. ELEVATIONS DO NOT REFLECT DEPTH OF HOLE.

SITE PLAN - SAG. RIVER ROAD CROSSING
Scale 1"=400'

Limit of Causeway, Bank Protection and Metal Culverts Contract

Limits of Bridge & Bulkhead Installation Contract

Limit of Causeway, Bank Protection and Metal Culverts Contract

Sta 20+00
℄ Pier No. 1

Profiles of Causeway embankment do not show vertical curve transitions where grade changes are made. All roadway grade changes along the Causeway shall be smoothly graded to safely accept vehicle traffic at speeds of up to 45 miles per hour.

El. 33.75

El. 19.00

Vehicle Bridge

Extreme Flood +16.20

Normal Spring Flood (approx.)

Exposed Bottom

Existing Gravel Fill or Sea

Top of Roadway +18.00

+14.00

+13.00

+15.00

+40
+30
+20
+10
0
-10

0+00
10+00
20+00
30+00
40+00
50+00
60+00
70+00
80+00
90+00
100+00
110+00

See Dwg. No. 104
See Dwg. No. 105
See Dwg. No. 106
Dwg. No. 107

PROFILE ℄ E OF ROAD
Horiz. 1"=400'
Vert. 1"=20'

NOTES:
1. Plan represents water level Sept. 8, 1969 based on U.S.G.S. orthophoto map Prudhoe Bay, Alaska 1969 experimental printing - Sheet No. 1 with corrections at bridge crossing based on field data. River channels in vicinity of causeways are based on Sept 1970 surveys by H.V. Lounsbury and Associates.
2. Datum based on MLLW from Prudhoe Bay base camp benchmark.
3. All bearings and stationing etc. are in relation to Alaska State Plane coordinate system, Zone 4, Alaska. Coordinates shown are based on section boundaries which are not parallel to the Alaska zone grid.
4. Symbols thus ⚠ represent soil boring locations, See Dwg. No. 105.

⚠ SOIL TEST PROGRAM

RMPCo JOB NO 4834-17

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

AtlanticRichfieldCompany
North American Producing Division
Los Angeles, California

EARL AND WRIGHT - CONSULTING ENGINEERS
637 Howard Street, San Francisco, California

DES.	HS Brown	7-[illegible]-70	74-0878
DR.	MW	2/2/0003	102

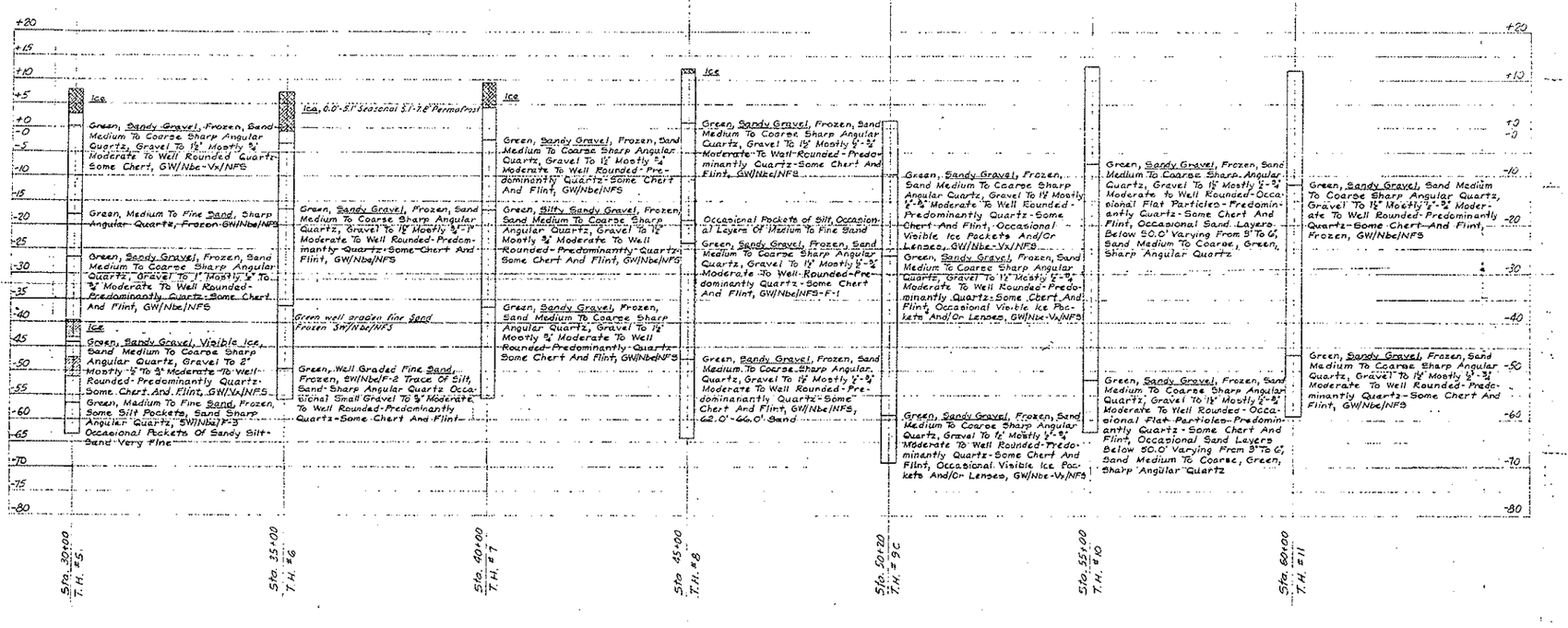
SITE PLAN & PROFILE

4	REV PER DCN 4-28-71
3	AS BUILT
DWG	Revision

CERTIFICATION/DECLARATION
SUB STANDARD ORIGINAL

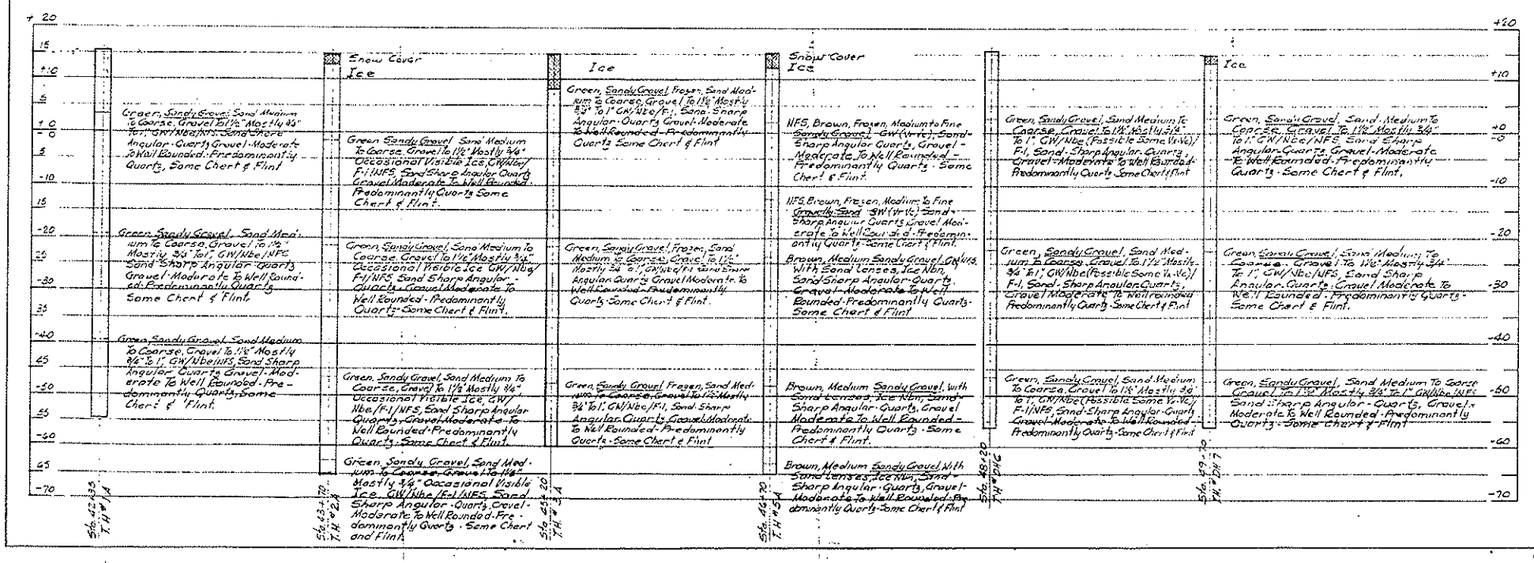
LOGS OF BORINGS LINE B

See Dwg. No. 7-750-B-102 for location
Date of Borings May 18-26, 1970



LOGS OF BORINGS LINE A

See Dwg. No. 7-750-B-102 For location
Date of Borings Apr. 11-12, 1970



NOTES:

Soil data from Foundation Exploration Report by Adams-Cortelli-Lee-Wince & Associates dated Sep. 1970.

Elevations shown are referred to C.D datum as M.L.L.W.

Notations relating to depth are measured from ground or ice surface at time of boring.

△ Additional and more current data on file with MANAGING CONTRACTOR

SOIL DESCRIPTIONS

GW	WELL-GRADED GRAVELS, GRAVEL SAND MIXTURES, LITTLE OR NO FINES
K	SEGREGATED ICE IS NOT VISIBLE BY EYE
Nbn	WELL-BONDED, NO EXCESS ICE
Nbe	WELL-BONDED, EXCESS ICE
Nf	POORLY-BONDED OR FRIABLE
V	SEGREGATED ICE IS VISIBLE BY EYE (ICE ONE INCH OR LESS THICK)
Vx	INDIVIDUAL ICE CRYSTALS OR INCLUSIONS
Vc	ICE COATINGS ON PARTICLES
Vr	RANDOM- OR IRREGULARLY-ORIENTED ICE FORMATIONS
NFS	NON-FROST-SUSCEPTIBLE MATERIAL
F-1	GRAVELLY SOILS CONTAINING BETWEEN 3 AND 20% FINER THAN 0.02 MM

M24

RMPco 4834-17

△	Changed Dwg ref. no., added note	1/25	W.W.W.
MARK	REVISION	BY	DATE

ENGINEERS APPROVAL

	BY	DATE
PROJECT ENGR.		
DIRECTOR		
DESIGN		
RECHNICAL		
SUBMERGE		
PRODUCTION		
DRILLING		

SUBMITTED BY

ALASKA INC.

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

AtlanticRichfieldCompany
North American Producing Division
Los Angeles, California

EARL AND WRIGHT • CONSULTING ENGINEERS
657 Howard Street, San Francisco, California

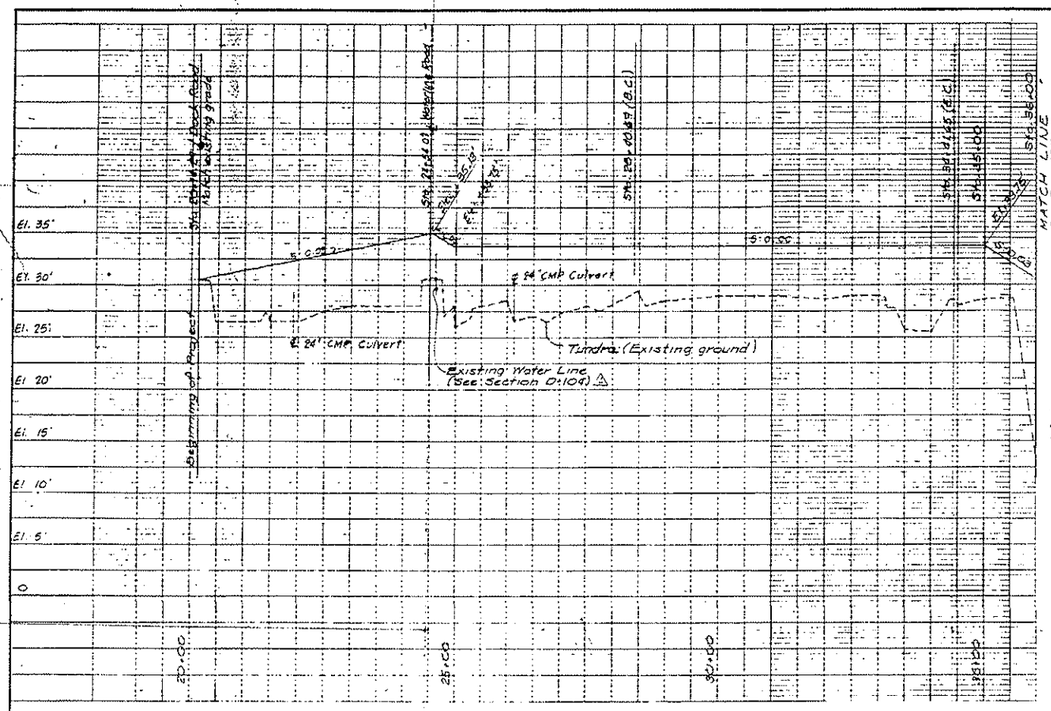
DESIGNED BY	DRAWN BY	CHECKED BY	JOB NO.
A.C.	Noted	7-1-70	7450.68
DMD	JOE	7-22-70	185

LOGS OF BORINGS

BRIDGE AND BULKHEAD INSTALLATION—RMPCO JOB NO. 4834-17

DT 17-5

1 OF 3


El. 35'
El. 30'
El. 25'
El. 20'
El. 15'
El. 10'
El. 5'
0
Beginning of Project
Sta. 20+00 Edge of Dock Road Match existing grade
Sta. 21+61.61 P.C.
Sta. 22+89.40 P.T.
Sta. 23+00 Edge of Dock Road
Sta. 23+00 Edge of Existing Road
Sta. 23+00 Edge of Existing Road
MATCH LINE See Dwg. 105
Sta. 30+00
5'-0"
5'-0"
5'-0"

Limit of Causeway Bank Protection and Metal Culverts Contract

Limits of Bridge and Bulkhead Installation Contract

Limit of Causeway Bank Protection and Metal Culverts Contract

Sta. 64+00 Match Line

Sta. 70+00 Match Line

Sta. 86+41.95 End of transition partial super Elevation to crown

R-107

Top of Roadway El. +19.00

Slope = 0.03

Slope = 0.03

Fill

El. 17.00'

El. 8.5'

El. 8.5'

Gravel

Extreme Flood

Apparent Normal Spring Flood

Existing Piles

Excavated Bottom El. +6.00

Quicksand piles

Victaulic Bridge

Top of Roadway El. +18.00

Slope = 0.03

El. 17.00'

El. 8.5'

Gravel

Sta. 67+60.25

Sta. 67+40.25

Sta. 67+60.25

Sta. 67+40.25

R-100

185°

250'

235'

350'

380'

249'

100'

200'

10'-3"

25'-3"

735'-0"

Flow

Dn.

Dn.

PIER #4 W/ 3360 SAND BAGS

PIER #5 W/ 2140 SAND BAGS

See west end approach for details not shown

PROFILE

1" = 100'-0" Horiz.
1" = 5'-0" Vert.

Limits of main channel downstream excavation for Causeway Bank Protection & Metal Culverts Contract.

PLAN

1" = 100'-0"

E Bulkhead Piles

E Pier No. 1.

E Pier No. 6

E Bulkhead Piles

"CURRENT CHANNEL ELEVATIONS" ARE NOT AVAILABLE AT THIS TIME. ELEVATIONS SHOWN ARE DESIGN ELEVATIONS.

AS BUILT NOTE

IN ACCORDANCE WITH VISUAL OBSERVATIONS BY AN EARL AND WRIGHT OBSERVER, THE CAUSEWAY AND CULVERT SECTIONS WERE CONSTRUCTED GENERALLY IN COMPLIANCE WITH THE ELEVATIONS AND GRADES SHOWN ON THIS DRAWING.

13	AS-BUILT PER 02372A	SKC	6-7-74
12	AS BUILT NOTE	JKC	2-5-73
11	AS BUILT	JKC	11-30-72
10	Re-Define Contract Limits	JKC	11-8-72
9	Rev excavation area	JKC	7-18-72
8	Rev Contract Limits and Channel Bottom	JKC	7-10-72
7	Rev Section cut	JKC	4-4-72
6	Rev elev. top of vehicle bridge	JKC	3-7-72
5	Correct toe of slope	JKC	1-28-72
4	Correct Profile, stations, add dim.	JKC	12-6-71
3	Define limits of Contracts	JKC	11-15-71
2	Revise Note	JKC	9-27-71
1	Define Excavation Limits	JKC	9-9-71

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

Atlantic Richfield Company
Pacific-Alaska Producing Division
Los Angeles, California

EARL AND WRIGHT - CONSULTING ENGINEERS
461 Bennett Street, San Francisco, California

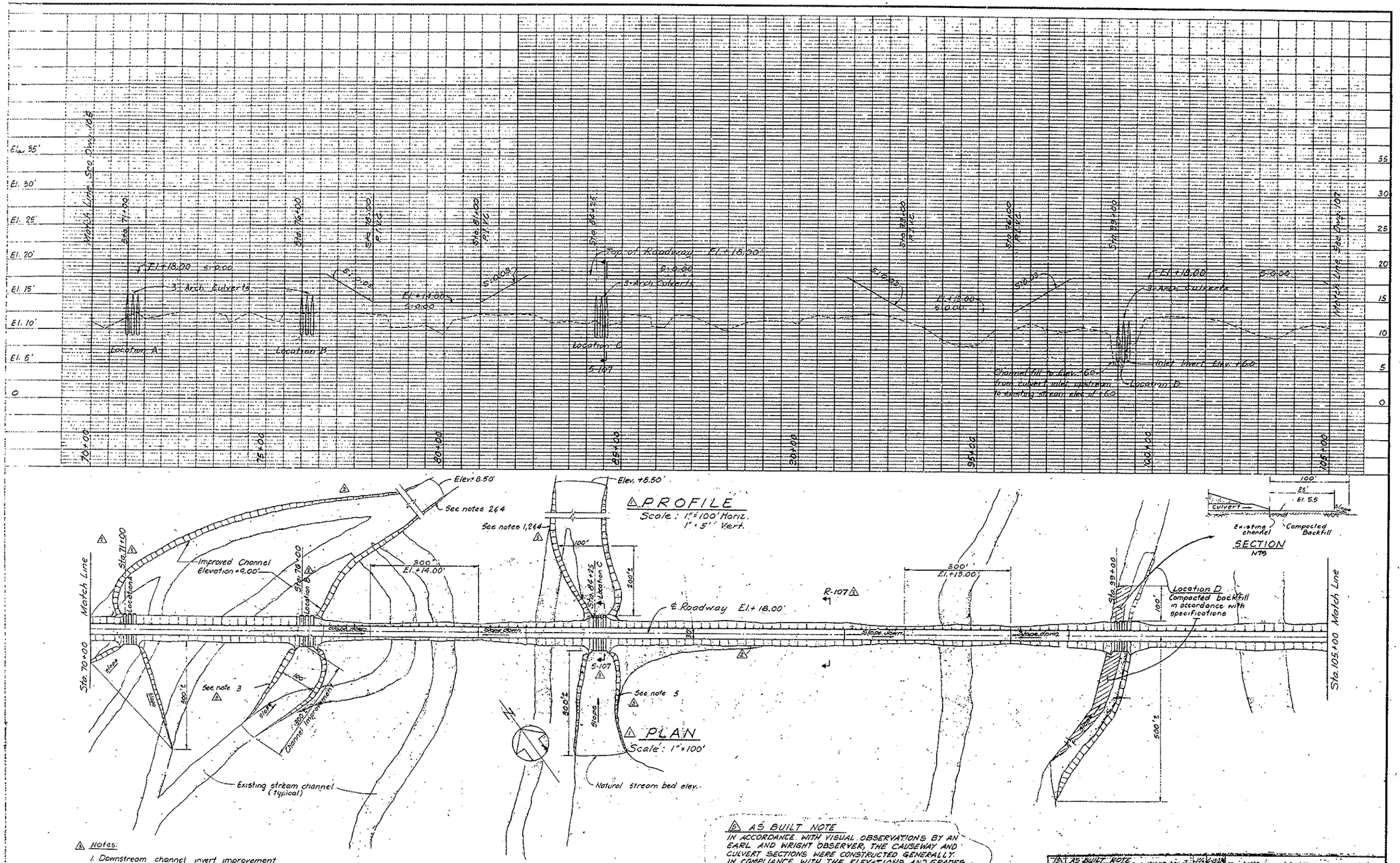
DES.	AS SHOWN	7-1-74	73-0056
DR. CBE	CH.	APP.	74-0008

105

PLAN & PROFILE, DETAILS - II

BRIDGE AND BULKHEAD INSTALLATION - PROPOSED JOB NO. 6934-17

CERTIFICATION / DECLARATION
This document attests to the originality and authenticity of the microphotograph appearing in this image area. The microphotograph is an
1128 1123
1125 1122



Notes:

1. Downstream channel invert improvement is to begin at culvert discharge and expand in width to 100' within a distance of 200'± from the point of discharge.
2. Culvert discharge invert is at Elev. +8.76 and improved channel shall extend downstream until natural river channel is Elev. +8.50 for a minimum width of 100'.
3. Culvert inlet invert is at Elev. +9.20 Improved channel to slope to this elevation. Channel improvement to be a min. of 100' wide at a point 100' upstream from the inlet, then train into culverts.
4. Length of channel improvement is unknown.

AS BUILT NOTE

IN ACCORDANCE WITH VISUAL OBSERVATIONS BY AN EARL AND WRIGHT OBSERVER, THE CAUSEWAY AND CULVERT SECTIONS WERE CONSTRUCTED GENERALLY IN COMPLIANCE WITH THE ELEVATIONS AND GRADES SHOWN ON THIS DRAWING.

4	AS BUILT NOTE	10/6/83
3	Lower culverts @ sta 89+00	10/5/83
2	Rev. culverts and channels	10/5/83
1	Correct Sta. of slope brk. culverts	10/1/83
	Correct profile, river channel	10/5/83

ENGINEERS APPROVAL

		DATE
HIGHWAY DIV.		
STRUCTURAL		
HYDRAULIC		
ELECTRICAL		
MECHANICAL		
MATERIALS		

REGISTERED PROFESSIONAL ENGINEER No. 13952

SUBMITTED BY _____ DATE _____

BRIDGING OF SAGAVANIRKTOK RIVER

PRUDHOE BAY, ALASKA

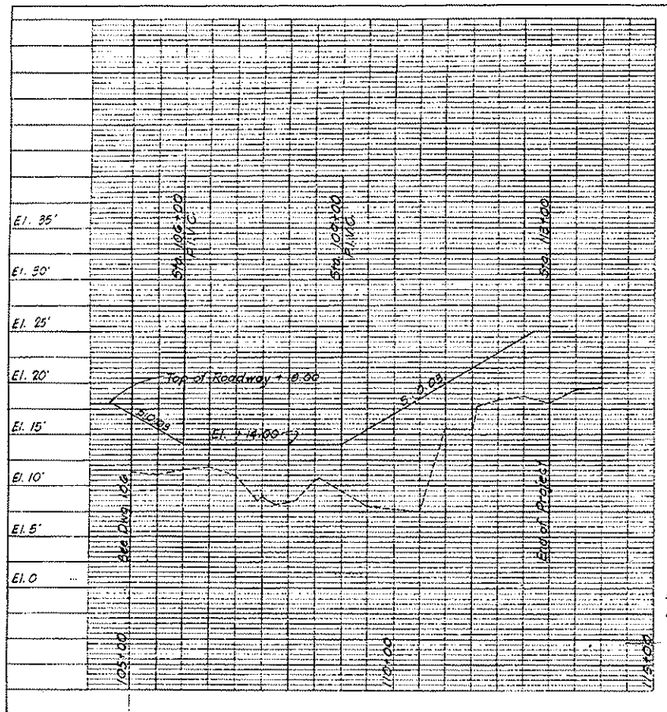
Atlantic Richfield Company
North American Producing Division
Los Angeles, California

EARL AND WRIGHT - CONSULTING ENGINEERS
837 Battery Street, San Francisco, California

JOB NO.	SCALE	DATE	DRAWING NO.
1815	AS SHOWN	7-74	74C-58
CODE	AY	74C-58	106

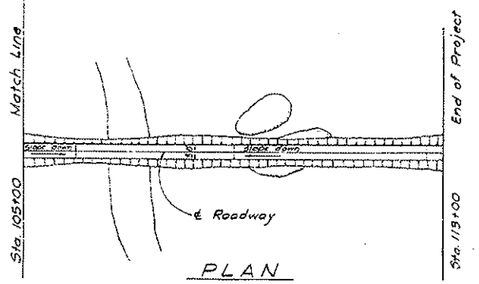
PLAN & PROFILE DETAILS III

BRIDGE AND BULKHEAD INSTALLATION—RAMPCO JOB NO. 4834-17



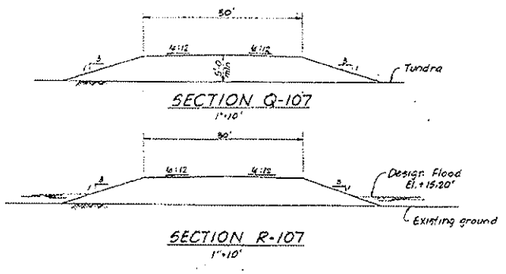
PROFILE

Scale : 1" = 100' Horizontal
1" = 5' Vertical



PLAN

Scale = 1" = 100'

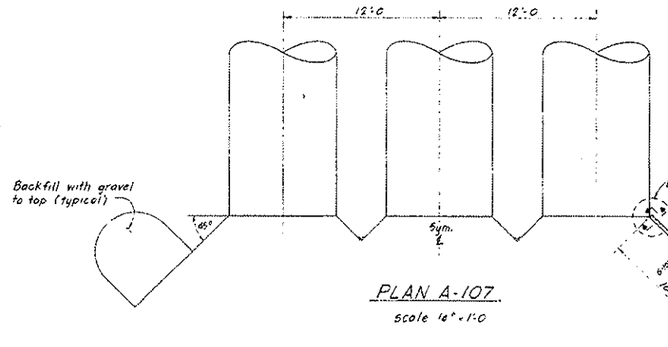


SECTION Q-107

1" = 10'

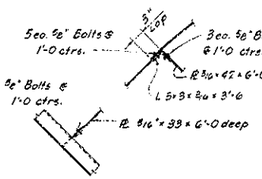
SECTION R-107

1" = 10'



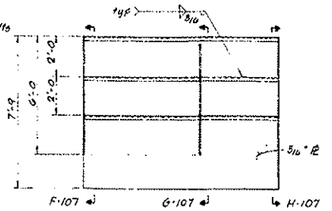
PLAN A-107

scale 16" = 1'-0



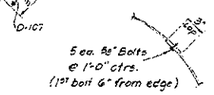
DETAIL C-107

scale 1" = 1'-0



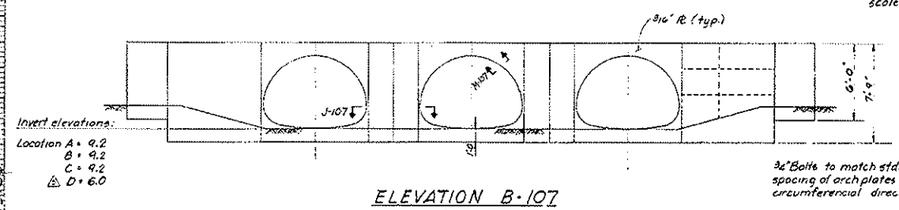
SECTION D-107

scale 3/8" = 1'-0



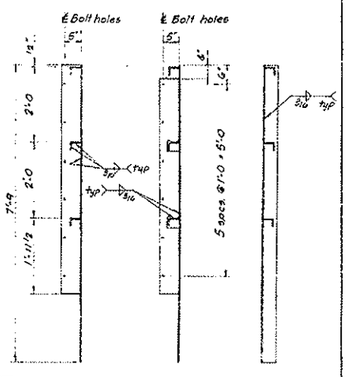
DETAIL E-107

scale 1" = 1'-0



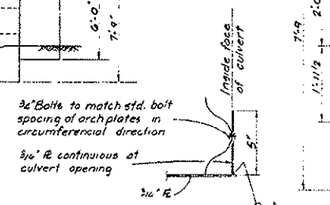
ELEVATION B-107

scale 1/4" = 1'-0



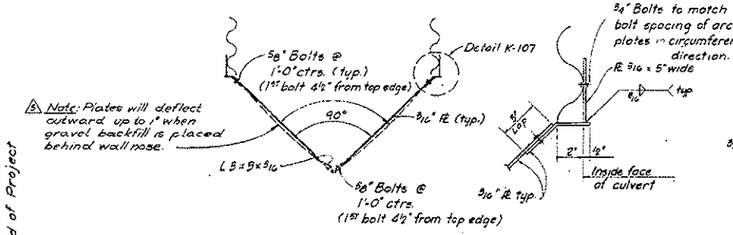
SECTION M-107

scale 3/4" = 1'-0



SECTIONS F-107 G-107 H-107

scale 3/4" = 1'-0



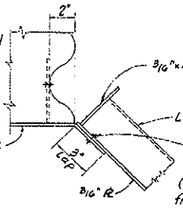
⚠ Note: Plates will deflect outward up to 1" when gravel backfill is placed behind wall nose.

SECTION J-107

scale 1" = 1'-0

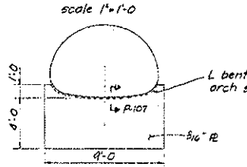
DETAIL K-107

scale 3" = 1'-0



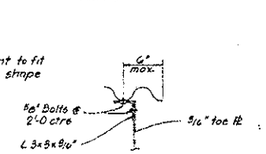
DETAIL L-107

scale 3" = 1'-0



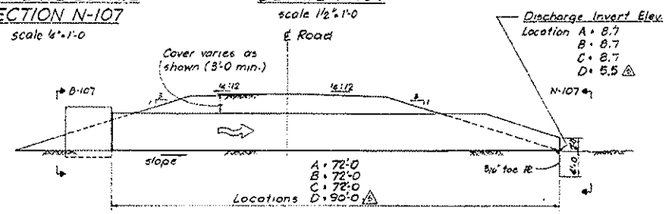
TOE PLATE DETAIL SECTION N-107

scale 4" = 1'-0



DETAIL P-107

scale 1 1/2" = 1'-0



TYPICAL CROSS SECTION AT CULVERT S-107

1/8" = 1'-0

⚠ AS BUILT NOTE
IN ACCORDANCE WITH VISUAL OBSERVATIONS BY AN EARL AND WRIGHT OBSERVER, THE CAUSEWAY AND CULVERT SECTIONS WERE CONSTRUCTED GENERALLY IN COMPLIANCE WITH THE ELEVATIONS AND GRADES SHOWN ON THIS DRAWING.

Notes

1. Culverts - Structural Steel Plate Pipe Arch: 10 gage galvanized, 6" x 2" corrugations, Span = 8'-2", Rise = 5'-9", AASHO-M.167 w/ 3/4" ϕ bolts. Bolts shall be ASTM A-325, 4 each per linear foot of seam.
2. All plates, angles and other steel shall be galvanized in accordance with ASTM A-123 after fabrication.
3. All bolts, nuts and washers shall be galvanized in accordance with ASTM A-153.
4. All bolt holes in head-walls and wing-walls shall be 1/16" oversize.
5. Upon completion of fabrication of arch or standard culverts, head-walls, wing-walls and toe plates, units shall be thoroughly checked for completeness of fabrication, in every respect, including all connection details.
6. All bolt holes in culverts, plates and shapes shall be drilled prior to galvanizing.
7. Round corrugated metal culverts shall be 14 gage galvanized with standard corrugations.

⚠	AS-BUILT NOTE	JCC	6-19-74
⚠	Modify notes 5 and add note 7.	JDC	6-19-74
⚠	Changed elevation & tenom loc. D		
	Added note to section J-107	JDC	4-17-74
⚠	Sheet recrown for new culverts	JDC	6-19-73
BASE	REVISION	BY	DATE

ENGINEERS APPROVAL

	BY	DATE
PROJECT MGR.		
DESIGN/CIVIL		
PIPING		
MECHANICAL		
ELECTRICAL		
PRODUCTION		
DRILLING		

STATE OF ALASKA — 49TH — REGISTERED PROFESSIONAL ENGINEER — No. 1375-E — SUBMITTED FOR AS-BUILT RECORDS

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

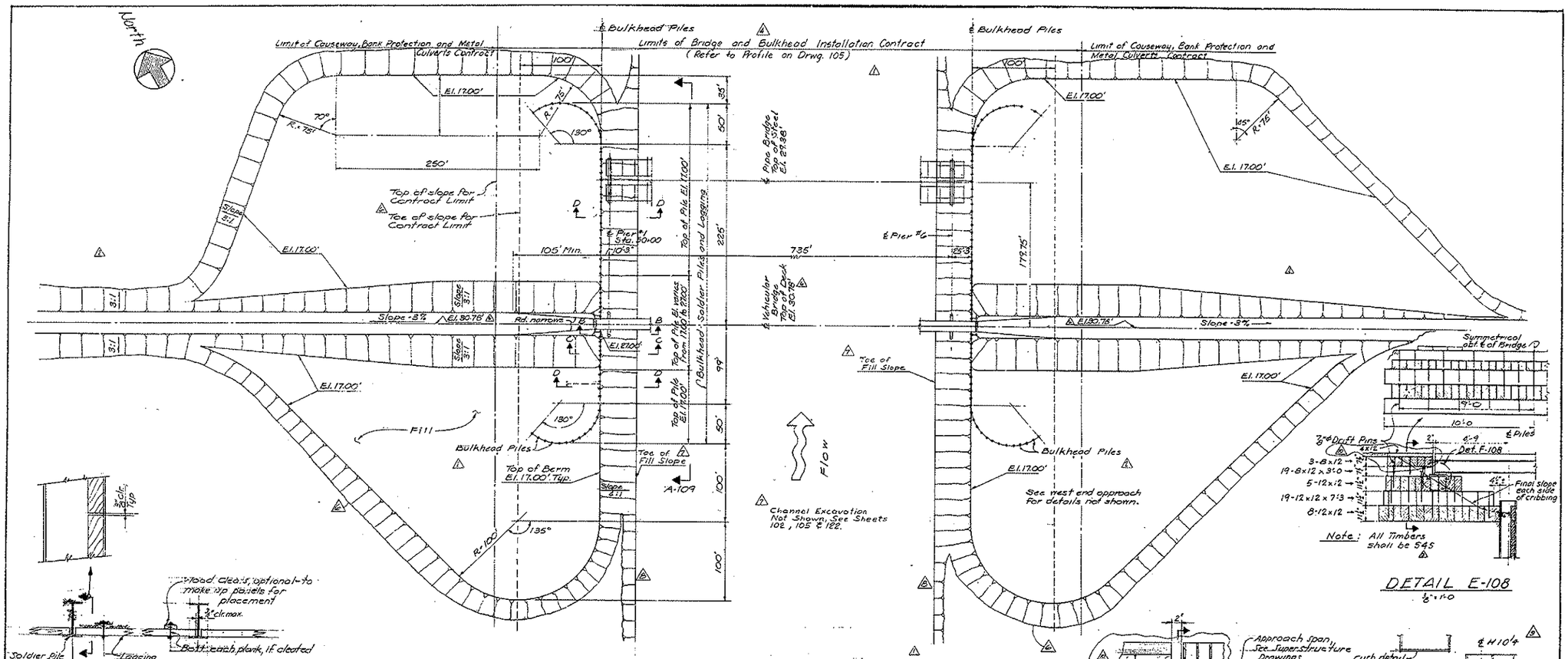
AtlanticRichfieldCompany
North American Producing Division
General Engineering Group Dallas, Texas

EARL AND WRIGHT • CONSULTING ENGINEERS
857 Howard Street, San Francisco, California

DESIGNED BY	DRAWN BY	CHECKED BY	JOB NO.
J.M.S.	BS STOWN	10-20-72	74E008
DESIGNER BY	DRAWN BY	CHECKED BY	DRAWING NO.
J.M.S.	74D008		07

PLAN & PROFILE DETAILS IV

BRIDGE AND BULKHEAD INSTALLATION—AMOCO JOB NO. 4834-17



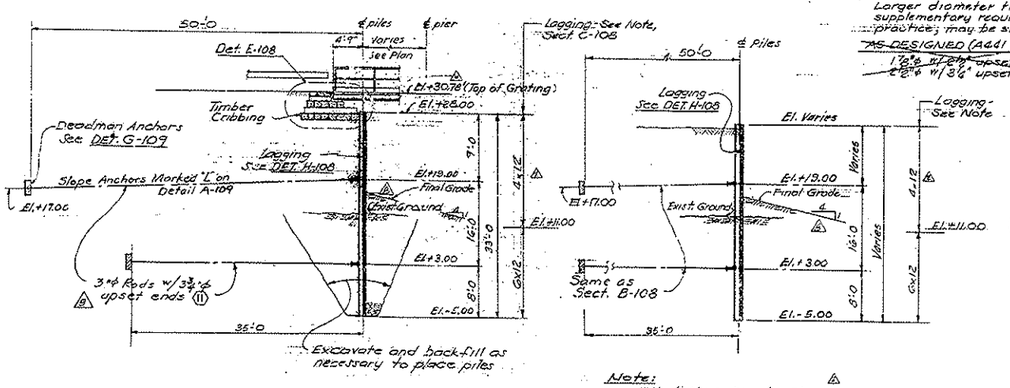
LAGGING DETAIL H-108
No Scale

PLAN A-108
Scale 1" = 50'

DETAIL E-108
1/8" = 1'-0

DETAIL F-108
1½" = 1'-0

SECTION G-108
TYPICAL AT EACH SIDE
1½" = 1'-0"



SECTION B-108
Scale 1/8" = 1'-0"

SECTION C-108
Scale 1/8" = 1'-0"

SECTION D-108
Scale 1/8" = 1'-0"

ALTERNATE TIE ROD DESIGN

Larger diameter tie rods of A36 material, conforming to supplementary requirement S2 for silicon killed, fine grain practice; may be substituted for the A681 rods as listed below:

AS DESIGNED (A681 MAT'L)	SUBSTITUTE (A36 MAT'L)
1 2¾"ϕ w/ 2¾" upset ends.	2 2¼"ϕ w/ 2¾" upset ends.
2 3"ϕ w/ 3½" upset ends	3 3"ϕ w/ 3½" upset ends

A 36 Used

6	As Built	RKP	6/1/76
5	As Built	JN	7-31-75
4	Rev. Channel Improvement	JJG	11-19-74
3	Revised slope and add notes	JJG	11-14-74
2	Rev. elev. top of vehicle bridge; toe of slope	LMS	10-29-74
1	Fabrication requested drift reinforcing	KH	9-26-74
	Define limits of Contract	LMS	6-20-74
	Added Alaska Road Commission Note	KH	5-31-74
	Rev. Reporting & Thickness Timber Slope	KH	1-31-74
	Omit Note, Sect. Road	KH	1-25-74

ENGINEERS APPROVAL		
	BY	DATE
CHIEF ENGR.		
STRUCTURES		
TRACKS		
BRIDGES		
SURVEYS		
PROCESSING		
DRAFTING		

R. V. Hayden No. 1375 Registered Professional Engineer State of Alaska

SEE SHEET 110 FOR GENERAL NOTES

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

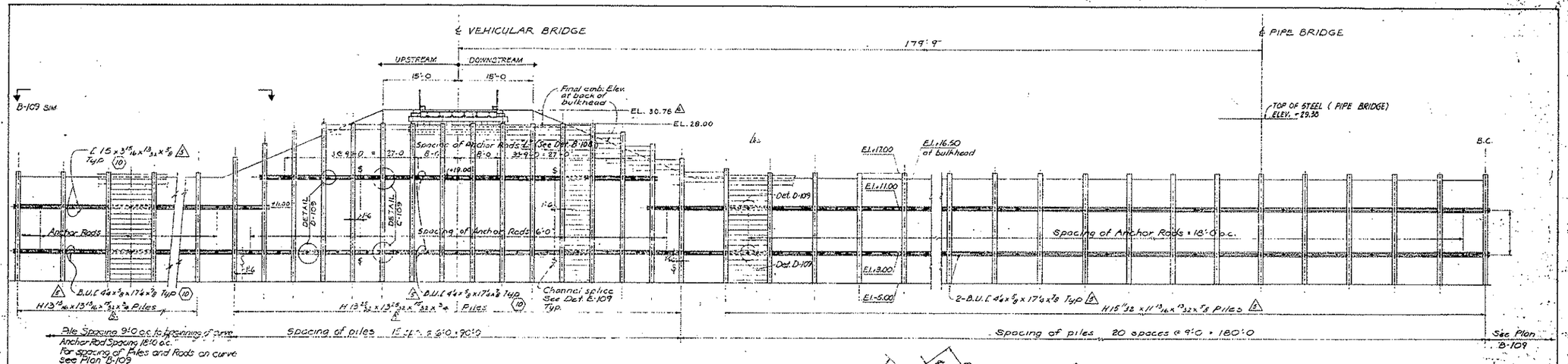
Atlantic Richfield Company
North American Producing Division
Los Angeles, California

EARL & WRIGHT • CONSULTING ENGINEERS
657 Howard Street, San Francisco, California

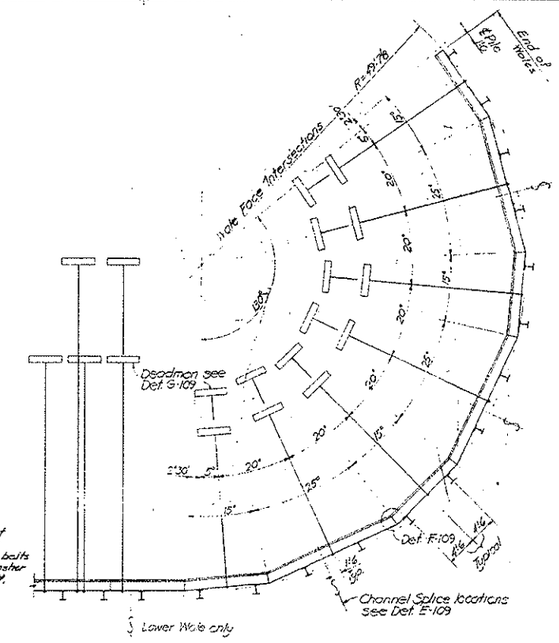
DESIGNED BY M.H.R.G.	DRAWN BY A.C.	DATE 7-11-74	JOB NO. 74000
TRACED BY DDD	CHECKED BY RV	SCALE AS SHOWN	SHEET NO. 108

ABUTMENTS AND BULKHEADS

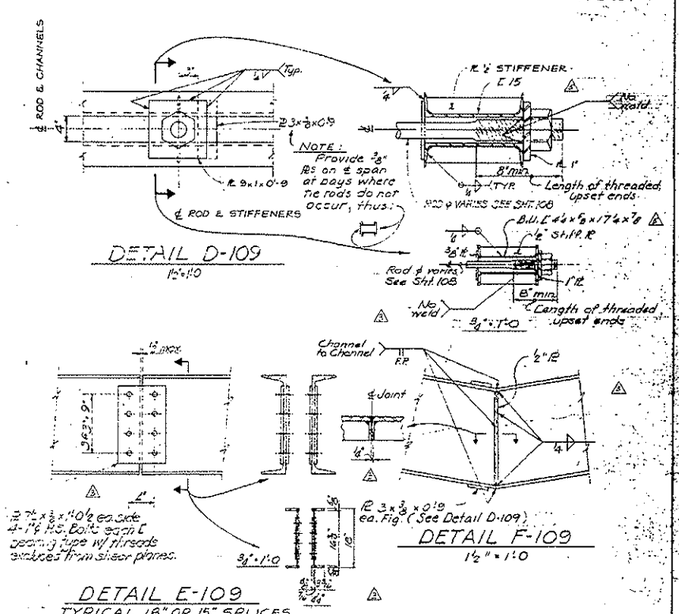
BRIDGE AND BULKHEAD INSTALLATION—RMPCO JOB NO. 4834-17



ELEVATION A-100
1/8"=1'-0



PLAN B-109
1/8"=1'-0

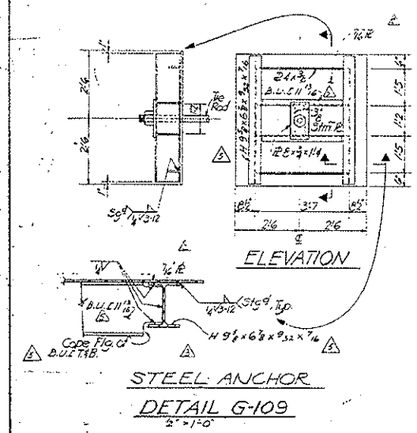


DETAIL D-109
1½"=1'-0

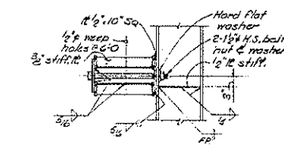
DETAIL F-109
1½"=1'-0

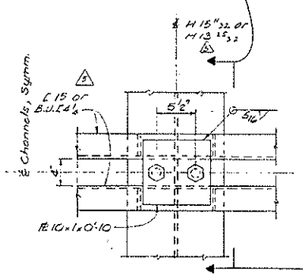
DETAIL E-109
TYPICAL 18" OR 15" SPLICES
½"=1'-0

NOTE: For areas not covered by Elev. A-109, place splice such that minimum of two tie rods occur between splices, similar to Plan B-109.

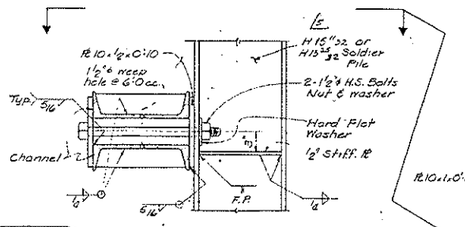


DETAIL G-109
2"=1'-0

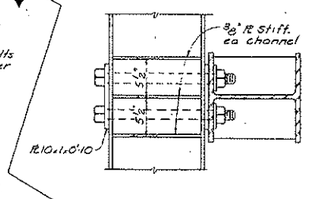




DETAIL C-109
1½"=1'-0



SECTION



PLAN SECTION

SEE SHEET 110 FOR GENERAL NOTES.

△	As Built	JM	11-31-73
△	Rev. elev. top of vehicle bridge	JM	6-28-73
△	Fabricate revised Detail Revision	KH	4-12-73
△	REV STL ANCH PL SIZE	KH	4-13-73
1.	OMIT ANCH ALT.	KH	7-9-73
MARK	REVISION	BY	DATE

ENGINEERS APPROVAL

	BY	DATE
PROJECT ENGR.		
STRUCTURAL		
PIPING		
MECHANICAL		
ELECTRICAL		
PRODUCTION		
SIMILAR		

SUBMITTED BY: ALASKA DIV.

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

AtlanticRichfieldCompany
North American Producing Division
Los Angeles, California

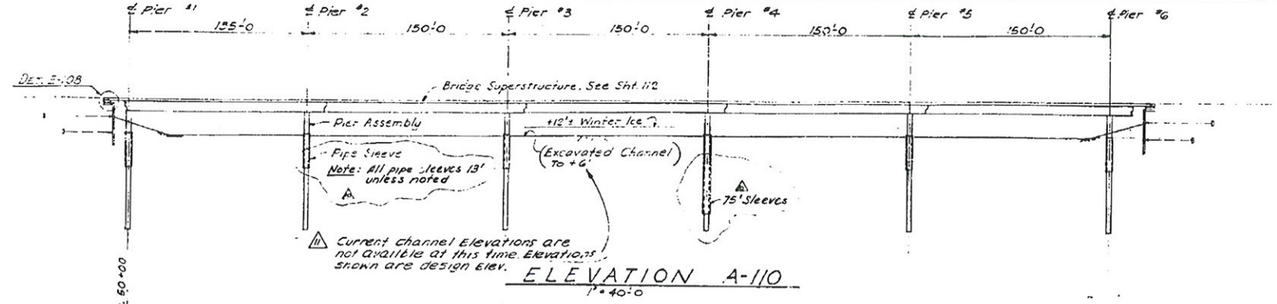
EARL AND WRIGHT - CONSULTING ENGINEERS
657 Howard Street, San Francisco, California

DESIGNED BY	SCALE	DATE	JOB NO.
N.J.	AS NOTED	7-17-74	7450058
DRAWN BY	CHECKED BY	T. & B. JOB NO.	DRAWING NO.
DMD	AV	14006B	105

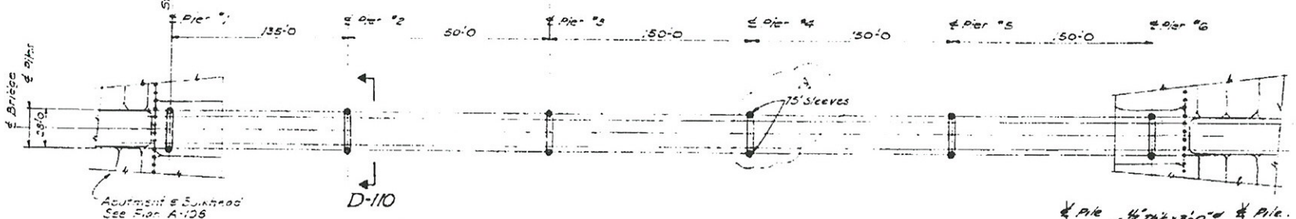
BULKHEAD DETAILS

BRIDGE AND BULKHEAD INSTALLATION - PAMCO JOB NO. 7505-172

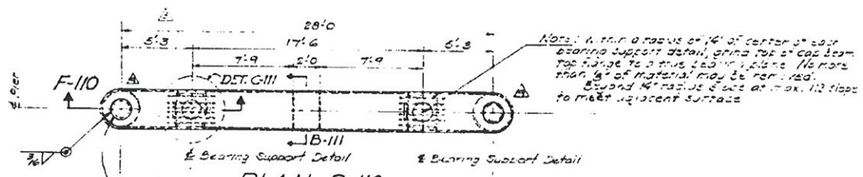
CE/105



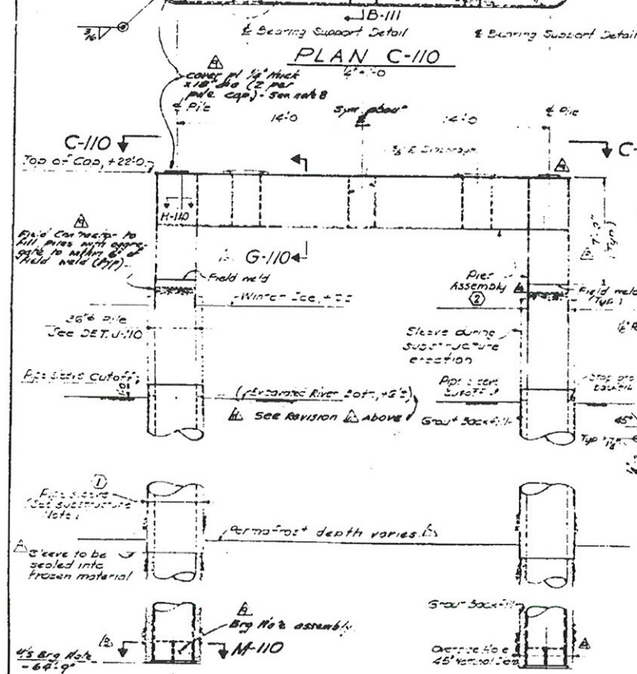
ELEVATION A-110
1" = 40'-0"



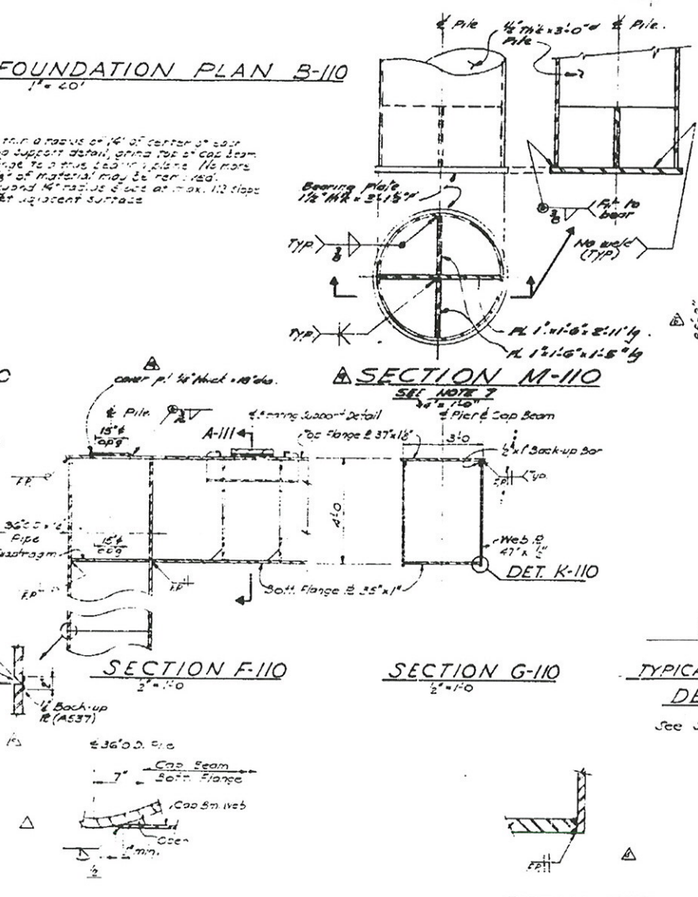
PILE AND FOUNDATION PLAN B-110
1" = 20'



PLAN C-110
½" = 1'-0"



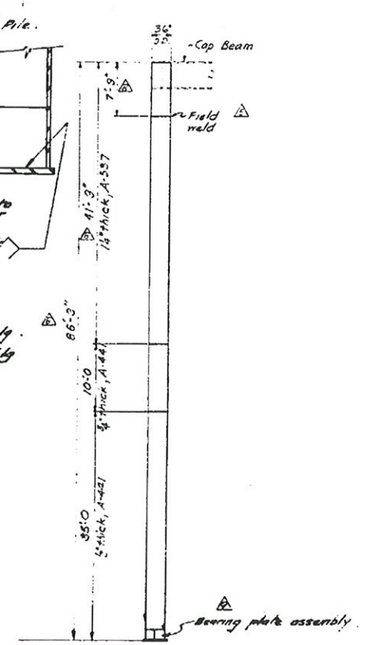
SUBSTRUCTURE ELEVATION D-110
½" = 1'-0"



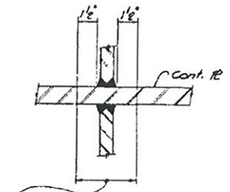
SECTION F-110
½" = 1'-0"

SECTION H-110
1½" = 1'-0"

SECTION M-110
SEE NOTE 7
½" = 1'-0"



TYPICAL FABRICATED PIPE PILE
DETAIL J-110
⅜" = 1'-0"
See Substructure Note 2.

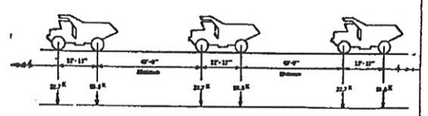


ULTRASONIC TESTING

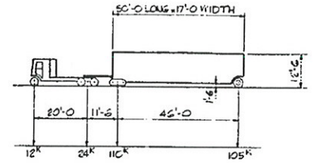
DETAIL L-110
No scale

BRIDGE DESIGN CRITERIA

1. AASHO 1969 CODE WITH 1970 REVISIONS (MODIFIED) *
2. WIND: 50 Lbs./Sq. Ft. of PROJECTED AREA
3. DECK LIVE AND UTILITY LOADS (COMBINE d WITH EITHER b OR c FOR MAXIMUM EFFECT)
   a. AASHO HS20-44 with IMPACT
   b. EUCLID R-22 with IMPACT GROSS WEIGHT = 81.2*



c. SPECIAL VEHICLE without IMPACT



GENERAL NOTES FOR STRUCTURAL STEEL *

1. Assemblies for Shipment to Site:
   Symbols noted thus: Ⓐ etc. represent items to be shipped to site as completed assemblies.
2. Datum - Elevations shown thus: +16, etc. refer to M.L.L.W. = 0 (USCGS Datum).
3. Structural Steel (except where noted on drawings):
   a. Plate - ASTM A-537, Class 2.
   b. Structural Shapes - ASTM A-441. △
   c. Tie Rods - ASTM A-36 △
   d. Pins - ASTM A-237, Class B
   e. Grabings - Bearing Bars: ASTM A-36
      Bracing Bars: ASTM A-303, Strip, Grade C
   f. Miscellaneous Pipe (handrail, etc.) - ASTM A-53, Grade B.
   g. Bolts shall be ASTM A-325 Grade L-1 with A-194 Grade 4 nuts.
4. Welding: △
   a. All welding shall conform to AWS Specification D 1.1. 4 △
   b. Symbol ▽ designates full-penetration welds qualified in accordance with AWS D1.1.
   c. Minimum size fillet weld shall be ¼-inch.
5. Dimensions shown on the design drawings are for design temperature of 0° F. Fabricator to adjust shop dimensions accordingly.
6. For Table of U.S. structural steel substitutions for Design Drawing rolled steel shapes see Sheet No 181.
7. Bry plate assembly shall be A.S.T.M. A441 grade steel or approved equal. Bry plate assembly painting: 1 prime coat after cleaning of mechanical wire brush.
8. Cover Plates shall be ASTM A36 steel. Cover plate paint shall be in accordance with the specifications

SUBSTRUCTURE NOTES

1. Fabricator shall provide 7 pieces of pipe for sleeves, 49'2" L. x 2'-4" x .50"ϕ long (A-441 steel)
2. Pipe pits may be fabricated of any length material. All splices shall be full penetration welds for splices of two thicknesses of material see DETAIL T-118.

11	AS BUILT	JOG	6-971
10	AS BUILT	GLP	1-974
9	REVISED SEC. M, NOTES 7 & 8, ADD SECT. D, PLAN G, DET. F, SEC. A	RWP	9/74 7/75
8	AS BUILT	LVR	7-1-75
7	Amend notes	JDG	10-30-74
6	Delete Substructure Note 3	JDG	10-30-74
5	Add field weld sym. details	JDG	5-2-74
4	Fabricator requested Detail revision	RWP	4-9-74
3	REV. DIAPHRAGM, ADD DET. E	LJ	9/73
2	ADDENDUM NO. 1 & REV. WELD SYMBOL	KH	7-31-73
1	CONST. NOTE	KH	7-9-73
MARK	REVISIONS	BY	DATE

ENGINEERS APPROVAL

	BY	DATE
PROJECT MGR.		
DIRECTION		
FINANCE		
DESIGNING		
ELECTRICAL		
MECHANICAL		
DRAFTING		

SUBMITTED BY: No. 1395-E ALASKA REG.

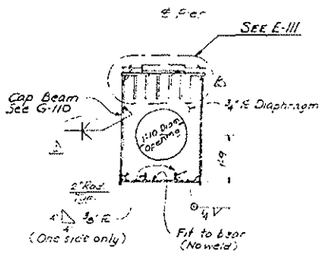
CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

AtlanticRichfieldCompany
North American Producing Division
Los Angeles, California

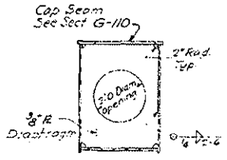
EARL AND WRIGHT • CONSULTING ENGINEERS
657 Howard Street, San Francisco, California

DESIGNED BY H.R.	SCALE AS SHOWN	DATE 7-74	JOB NO. 7466.0
DRAWN BY AAS	CHECKED BY RWP	DATE 7-74	SHEET NO. 110

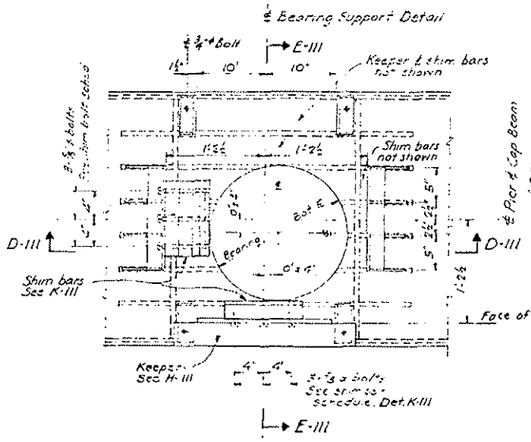
VEHICLE BRIDGE SUBSTRUCTURE



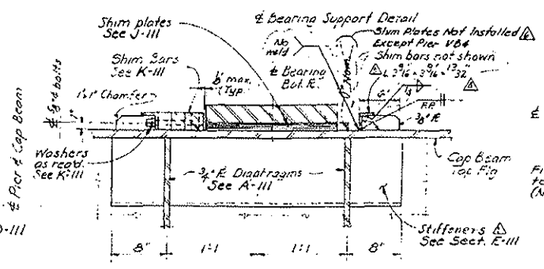
SECTION A-III
½" = 1'-0



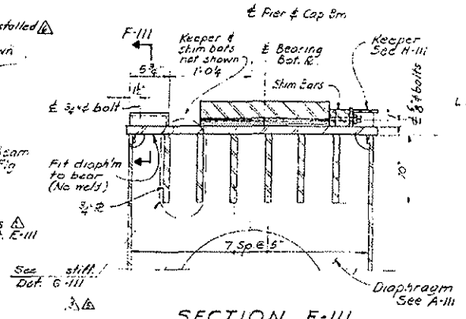
SECTION B-III
½" = 1'-0



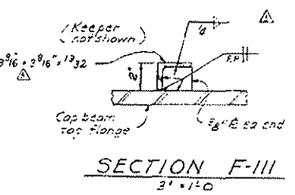
PLAN - DETAIL C-III
1½" = 1'-0



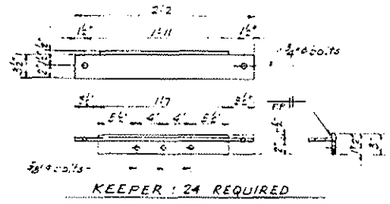
SECTION D-III
1½" = 1'-0



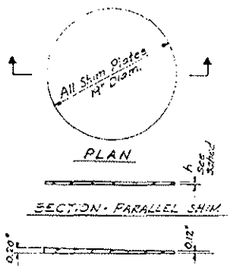
SECTION E-III
1½" = 1'-0



SECTION F-III
3" = 1'-0

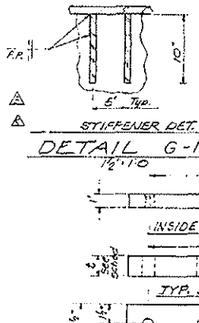


DETAIL H-III
1½" = 1'-0



SHIM PLATE SCHEDULE		
SHIM TYPE	h	NO. REQ'D.
Parallel	¼"	72
"	⅛"	12
Taper	—	24

DETAIL J-III
1½" = 1'-0



SHIM BARS
3" = 1'-0

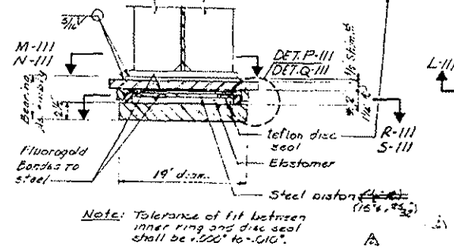
WASHER SCHED.	
d	NO. REQ'D.
¼"	504
½"	144

SHIM BAR SCHEDULE		
SHIM TYPE	t	NO. REQ'D.
TYPICAL	2"	72
"	1"	48
"	½"	48
"	¼"	48
"	⅛"	48
INSIDE	1"	48

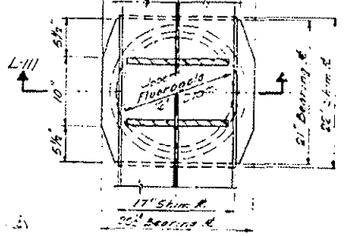
⅝"ø SHIM BOLT SCHED.	
LENGTH	NO. REQ'D.
4"	72
6"	72
8"	72
10"	72
No nuts required	

Note: Inside shim is shim adjacent to bearing assembly. Use washers as required under heads of bolts to meet penetration requirements for inside shim. Make bolts tight.

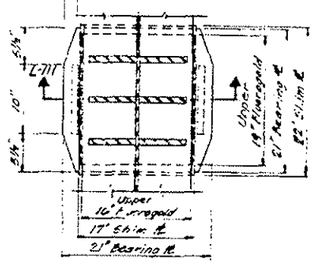
DETAIL K-III



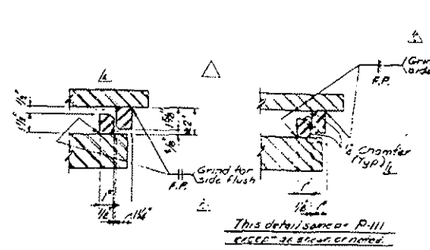
SECTION L-III
TYPE 'S' & TYPE 'F' BEARINGS
Scale 1½" = 1'-0"



SECTION M-III
TYPE 'F' BEARING
Scale 1½" = 1'-0"

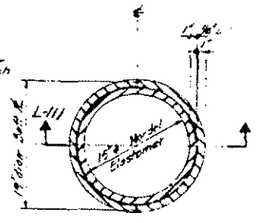


SECTION N-III
TYPE 'S' BEARING
Scale 1½" = 1'-0"

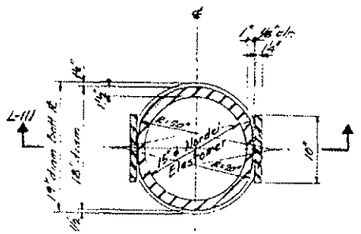


DETAIL P-III
TYPE 'S' BEARING
Scale 3" = 1'-0"

DETAIL Q-III
TYPE 'F' BEARING
Scale 3" = 1'-0"



SECTION R-III
TYPE 'F' BEARING
Scale 1½" = 1'-0"



SECTION S-III
TYPE 'S' BEARING
Scale 1½" = 1'-0"

DETAILS OF BRIDGE BEARING ASSEMBLY ③

Notes on Bridge Bearing Assemblies

1. For fabrication, see Steel Fabrication Specification.
2. Details shown are not complete. Dimensions not shown or marked with an asterisk (*) shall be provided by Bearing supplier subject to approval, in accordance with specifications.
3. Upper part of bearing shall be attached to girder of fabrication plant. Grind faying surface of shim to bearing plate, setting bearing so that Fluorogold surface is plane and square with Bridge Girder. Fair girder flange to flat surface.
4. For location of Type 'F' and Type 'S' bearings, See A-112

4	AS BUILT	RED	4-74
3	AS BUILT	JCS	3-74
2	Fabrication requested DATT revision	KW	10-73
1	400-12 STIFF. DET.	KW	9-73
3	400 CWT'S TO BAS. ASSEMBLY, REV. R-III	KW	6-72
2	REV. CORNER. DET'S P&Q-III	KW	10-71
Mark	Revision	BY	Date

ENGINEERS APPROVAL	BY	DATE
Project Engr.		
Structures		
Piping		
Mechanical		
Electrical		
Instrumentation		
Drilling		

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

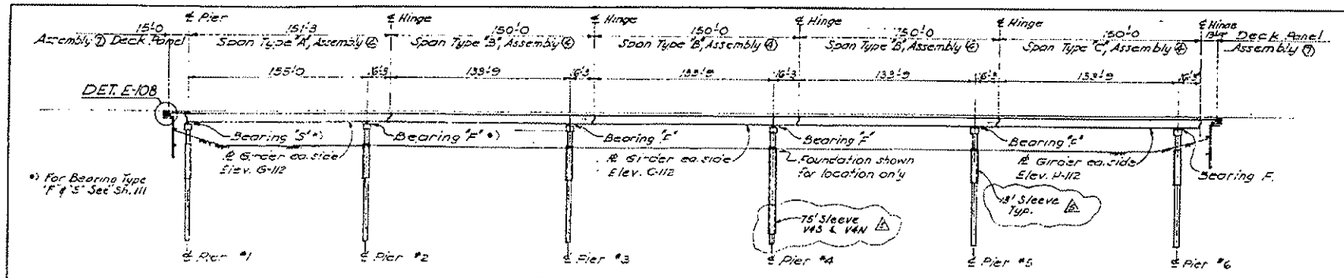
Atlantic Richfield Company
North American Producing Division
Los Angeles, California

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657 Howard Street, San Francisco, California

DRAWN	CHECKED	SCALE	JOB NO.
J.V.	R.C.	AS SHOWN	7-1-74	74CCCE
TRACED	CHECKED	SCALE	DRAWING NO.
DJDE	AY	74CCCB	III

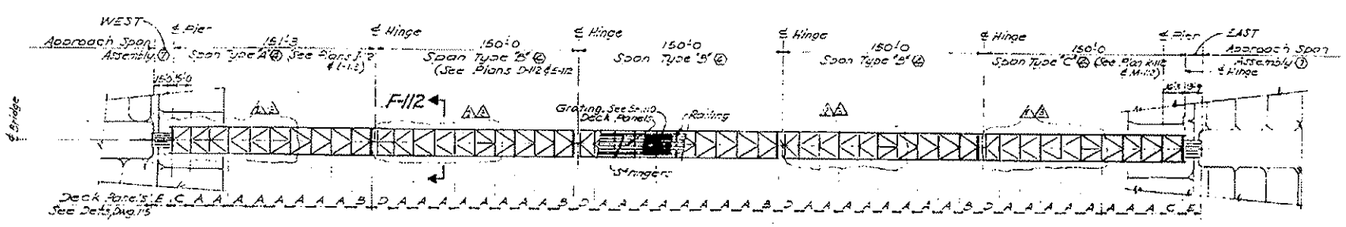
VEHICLE BRIDGE
SUBSTRUCTURE - DETAILS

BRIDGE AND BULKHEAD INSTALLATION—RIMPCO JOB NO. 8834-17



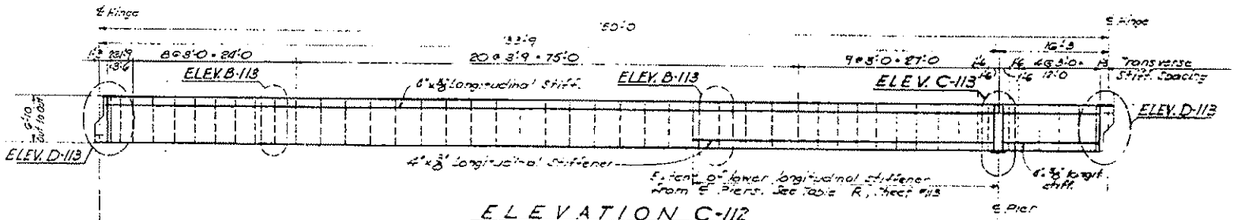
BRIDGE PROFILE A-112

1" = 40'-0"



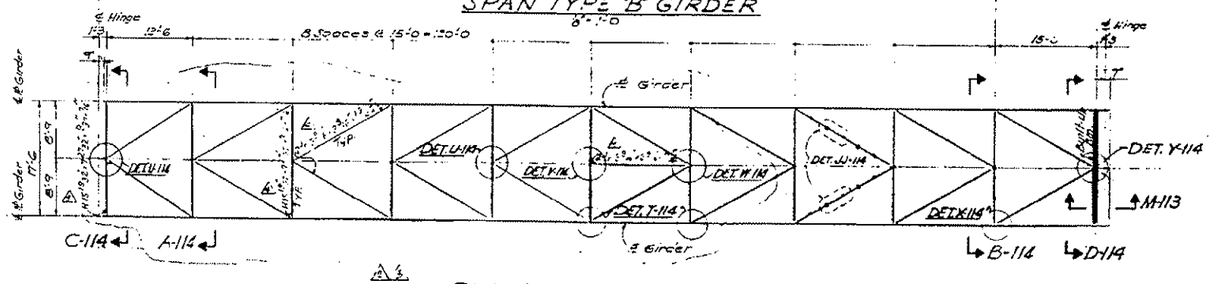
BRIDGE PLAN B-112

1" = 40'-0"



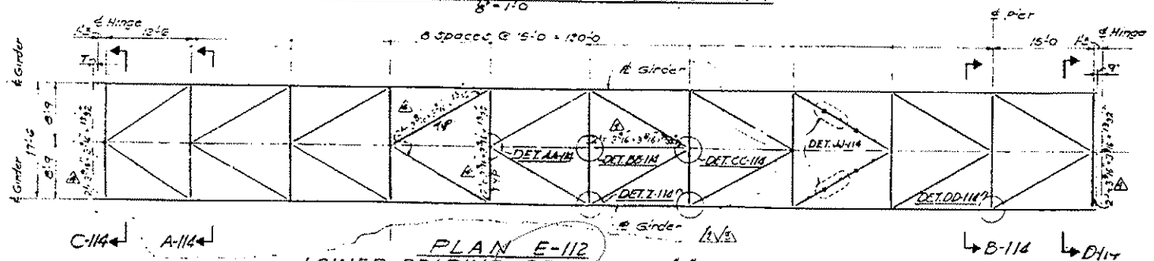
ELEVATION C-112
SPAN TYPE "B" GIRDER

8" = 1'-0"



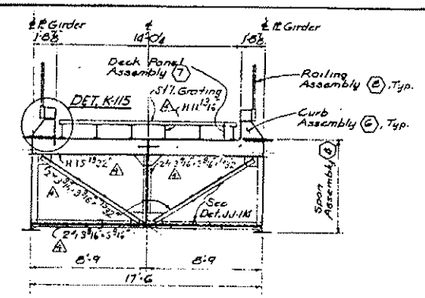
PLAN D-112
UPPER BRACING - SPAN TYPE "B" GIRDER

8" = 1'-0"



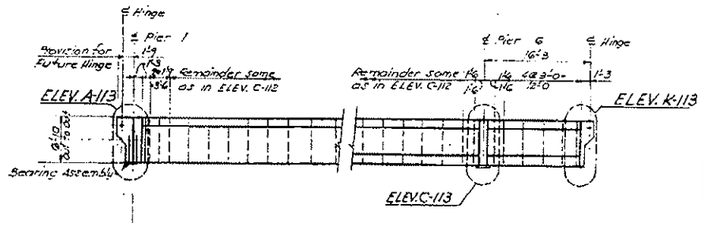
PLAN E-112
LOWER BRACING - SPAN TYPE "B" GIRDER

8" = 1'-0"



CROSS-SECTION F-112

4" = 1'-0"

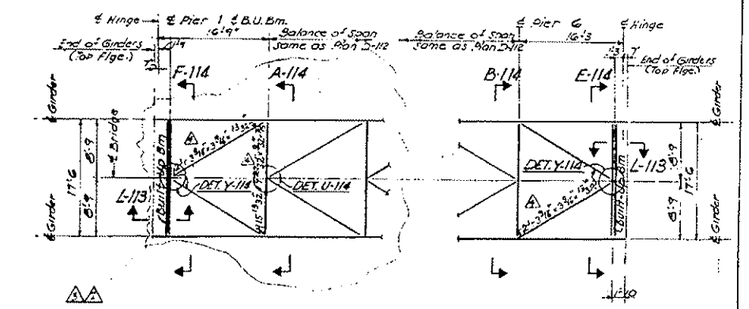


ELEVATION G-112
SPAN TYPE "A" GIRDER

8" = 1'-0"

ELEVATION H-112
SPAN TYPE "C" GIRDER

8" = 1'-0"

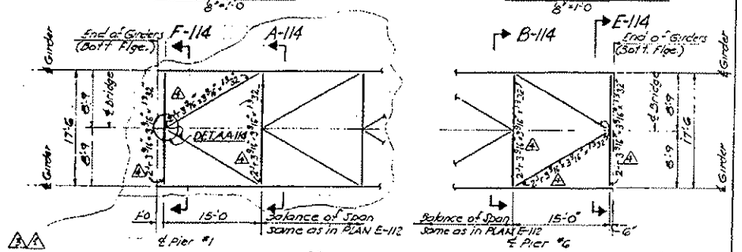


UPPER BRACING - SPAN TYPE "A" GIRDER
PLAN J-112

8" = 1'-0"

UPPER BRACING - SPAN TYPE "C" GIRDER
PLAN K-112

8" = 1'-0"



LOWER BRACING - SPAN TYPE "A" GIRDER
PLAN L-112

8" = 1'-0"

LOWER BRACING - SPAN TYPE "C" GIRDER
PLAN M-112

8" = 1'-0"

4	AS BUILT	MP	4-9-76
3	AS BUILT	LVR	7-24-75
2	Fabricator requested det'l revision	KV	11-5-74
1	DESIGN CHANGES	KV	9-17-74
0	ADD ASSEMBLY MARKS SHOT F-112	KV	7-10-74

ENGINEERS APPROVAL

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

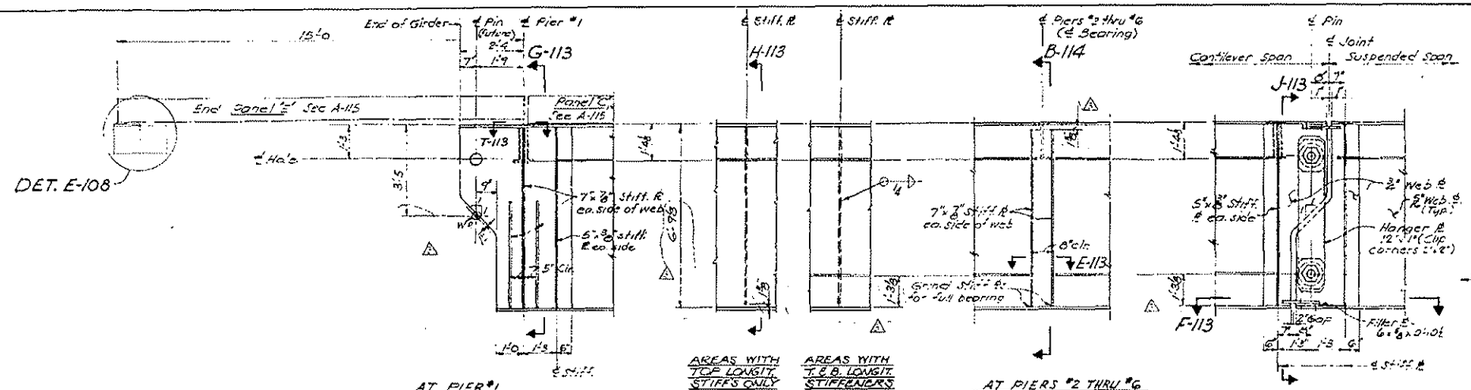
AtlanticRichfieldCompany
North American Producing Division
Los Angeles, California

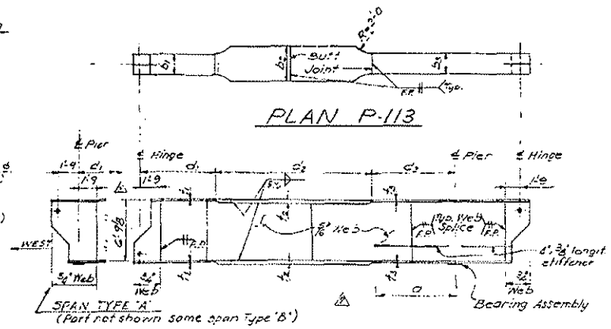
EARL AND WRIGHT • CONSULTING ENGINEERS
657 Howard Street, San Francisco, California

DESIGNED BY G.J.C.	AS SHOWN	7-1-74	76CC08
DRAWN BY A.M.S.	CHECKED BY AV	JOB CODE 76CC08	SHEET NO. 112

VEHICLE BRIDGE - GENERAL ARRANGEMENT & SUPERSTRUCTURE

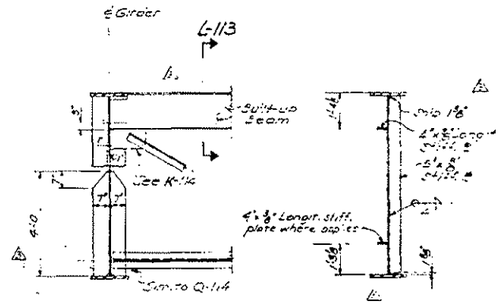
SEE SH. 110 FOR GEN. NOTES

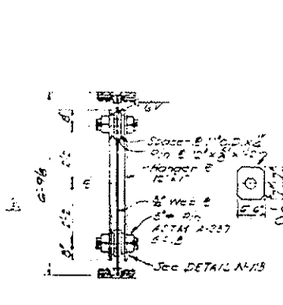


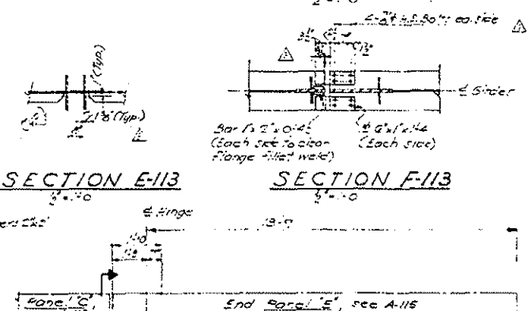


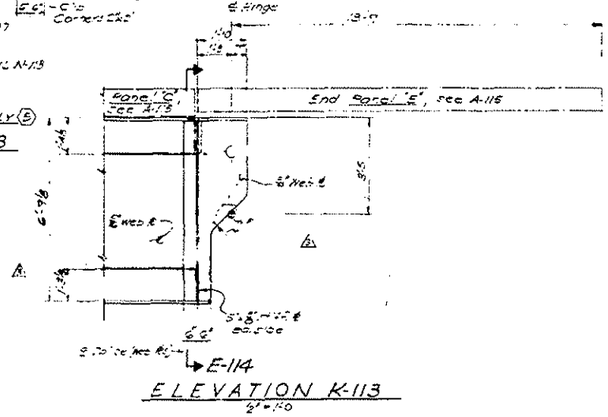
SPAN TYPE	b_1	t_1	d_1	b_2	t_2	d_2	b_3	t_3	d_3	a_1	WEST END	EAST END
'A'	16"	⅞"	29'-0	16"	1⅛"	75'-0	16"	⅞"	81'-0	65'-0	Elev. G-112	Elev. G-112
'B'	16"	⅞"	27'-9	16"	1⅛"	77'-0	16"	⅞"	29'-0	65'-0	Elev. G-112	Elev. G-112
'C'	16"	⅞"	27'-9	18"	1⅛"	81'-3	16"	⅞"	28'-9	65'-0	Elev. H-112	Elev. G-112

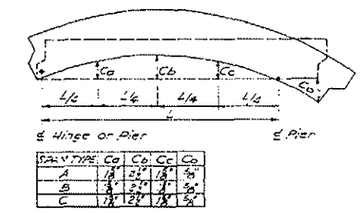
SCHEDULE OF GIRDER DIMENSIONS
TABLE R-113





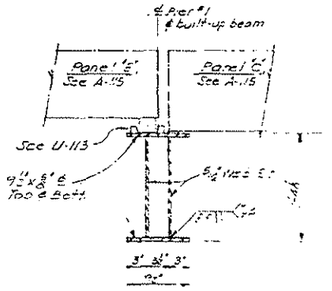


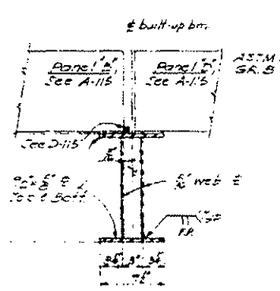


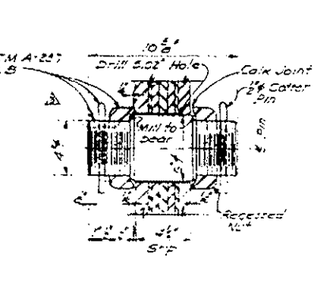


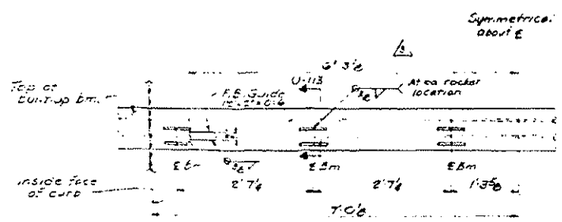
SPAN TYPE	Ca	Cb	Cc	Co
A	1⅛	2'-4"	1⅜	3⅜
B	1⅛	2'-4"	1⅜	3⅜
C	1⅛	2'-9"	1⅜	3⅜

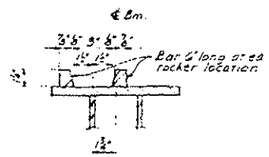
CAMBER DIAGRAM-DETAIL S-113

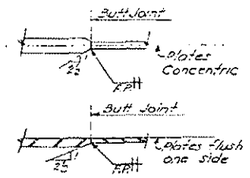












TYPICAL WELD DETAIL T-113
FOR SPLICING PLATES OF
DIFFERENT THICKNESS

SEE SH. 110 FOR GENERAL NOTES

3	THIS DWG. REFLECTS AS BUILT	JAG	4-5-77
2	Fabricator requested det'l revision	KH	11-25-76
1	REV GUSSET No.	KH	9-27-76
0	CMLT CTSK TYPE BOLT	KH	7-9-76

ENGINEERS APPROVAL

	BY	DATE
PROJECT ENGR.		
DESIGN ENGR.		
DESIGN		
DRAFTING		
ELECTRICAL		
PIPING		
WELDING		

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

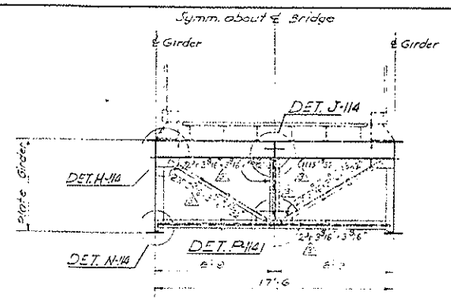
AtlanticRichfieldCompany
North American Producing Division
Los Angeles, California

EARL AND WRIGHT - CONSULTING ENGINEERS
657 Howard Street, San Francisco, California

DESIGNED BY	DRAWN BY	CHECKED BY	TRACED BY	DATE	JOB NO.
C.F.	A.J.	J.P.O'N.M.	T.T.	7-1-76	7602.0
	AMS	AV	76C02.0		115

VEHICLE BRIDGE
SUPERSTRUCTURE - DETAILS

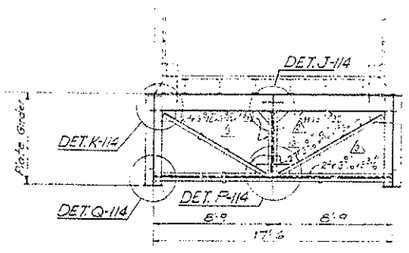
BRIDGE AND BULKHEAD INSTALLATION - RIMROCK JOB NO. 4634-17



AT TYPICAL FLOOR BEAM

SECTION A-114

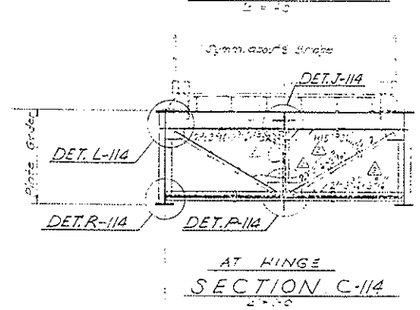
1" = 1'-0"



AT PIERS 2 THRU 6

SECTION B-114

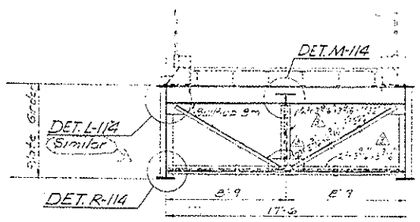
1" = 1'-0"



AT HINGE

SECTION C-114

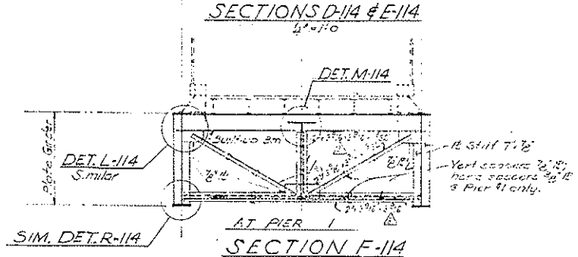
1" = 1'-0"



AT HINGE

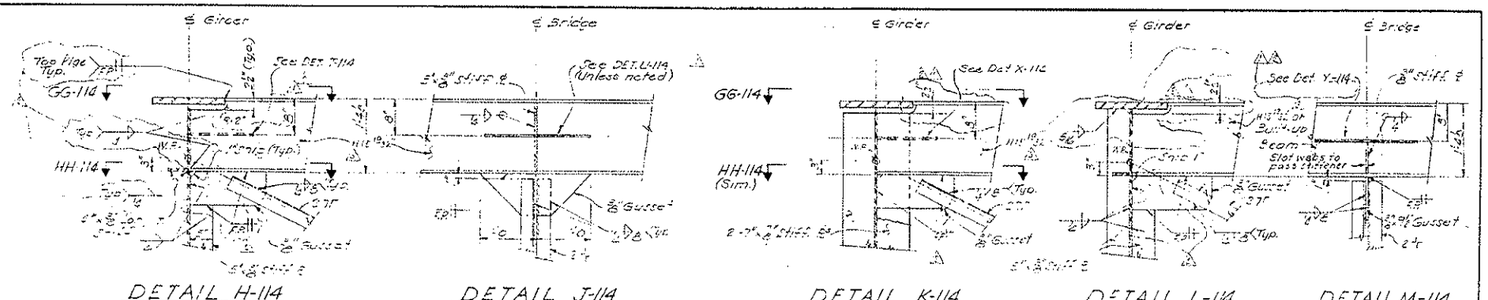
SECTIONS D-114 & E-114

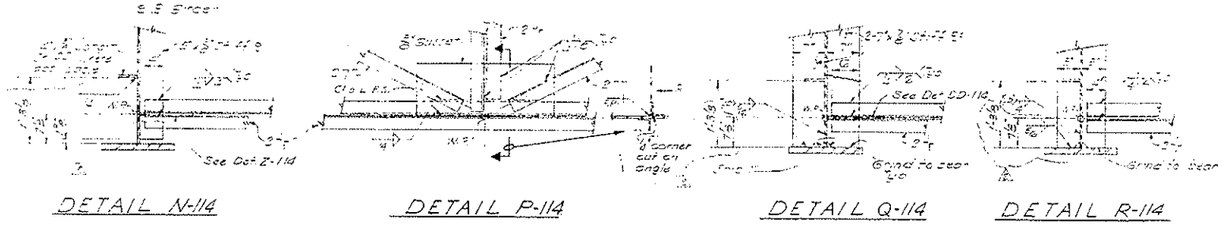
1" = 1'-0"

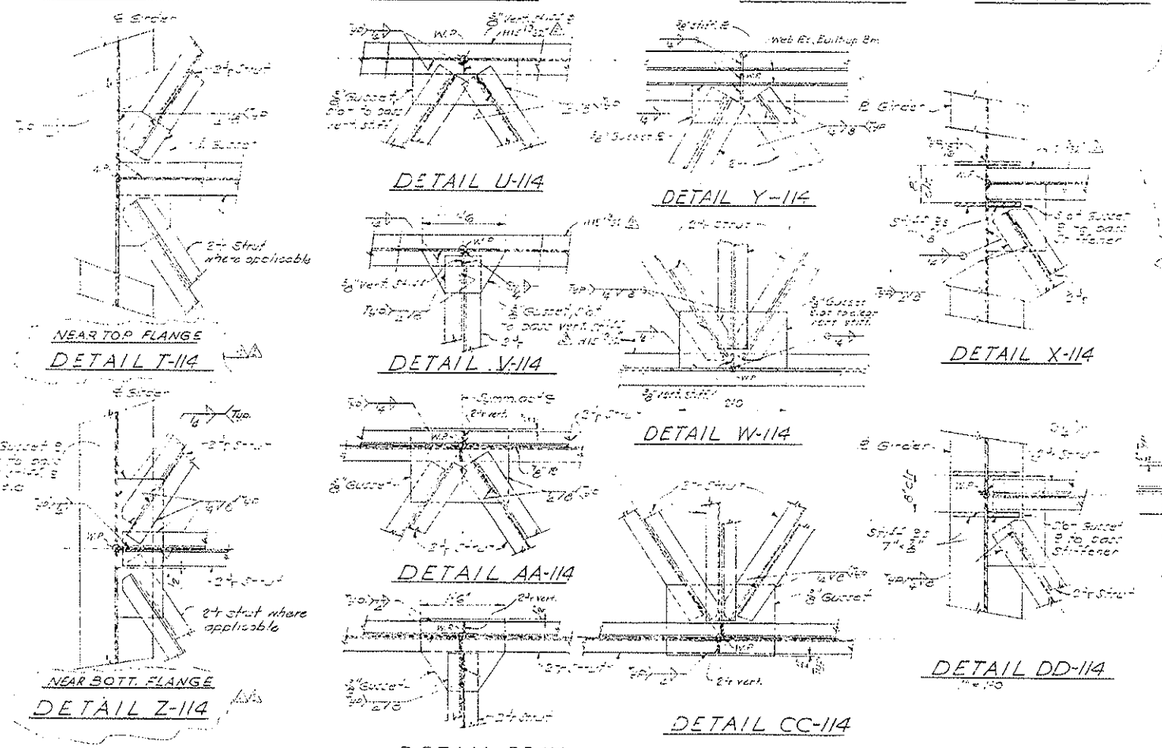


SECTION F-114

1" = 1'-0"







SEE SH. 110 FOR GENERAL NOTES

MARK	REVISION	BY	DATE
A	AS BUILT	LVK	7-24-75
B	Fabricator recorded def'l revision	KW	12-8-76
C	SEE SHEETS T & U FOR DET OF RIT TOE CLIP	KW	1-3-77

ENGINEERS APPROVAL

	BY	DATE
PROJECT ENGR.		
STRUCTURAL		
PROCESS		
MECHANICAL		
ELECTRICAL		
PRODUCTION		
DRILLING		

SUBMITTED BY _____ ALASKA NO. _____

No. 1378 E

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

AtlanticRichfieldCompany
North American Producing Division
Los Angeles, California

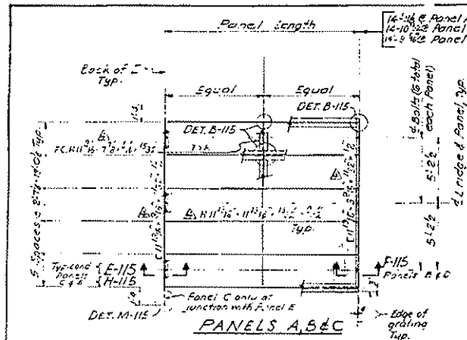
EARL AND WRIGHT • CONSULTING ENGINEERS
657 Howard Street, San Francisco, California

J. DESIGNED BY	SCALE	DATE	JOB NO.
G.V.K.	AS SHOWN	7-1-74	7066 E
DRAWN BY	CHECKED BY	E & W JOB NO.	SHEET NO.
J.M.S.	R.W.	7066 E	114

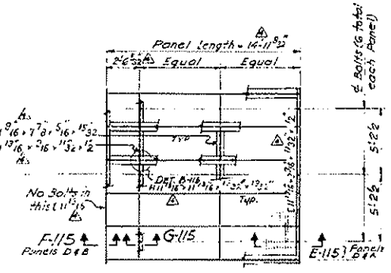
VEHICLE BRIDGE
SUPERSTRUCTURE - DETAILS II

BRIDGE AND BULKHEAD INSTALLATION - RAYCO JOB NO. 4834-17

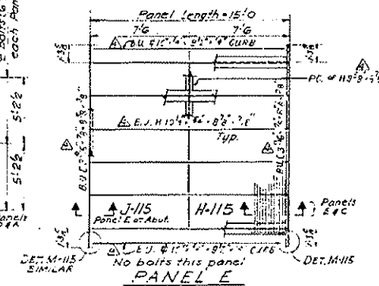
55/107



PANELS A,B&C



PANEL D

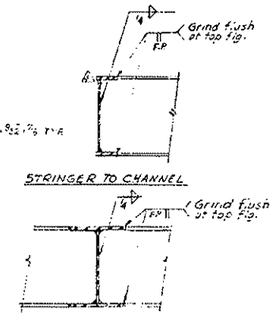


PANEL E

DECK PANEL ASSEMBLIES (7)

DETAIL A-115

1/2" = 1'-0

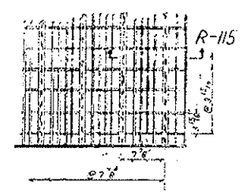


BM. OR C TO STRINGER

TYP. STRINGER CONNS.

DETAIL B-115

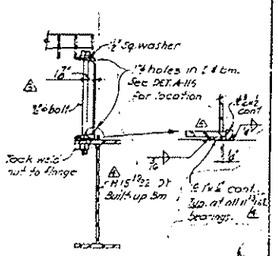
1 1/2" = 1'-0"



AT BOLTS

TYP. GRATING DETAILS

DETAIL C-115



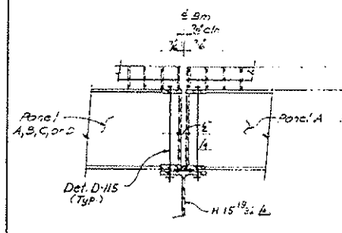
TYP. PANEL BOLTING

DETAIL D-115

1 1/2" = 1'-0"

NOTES:

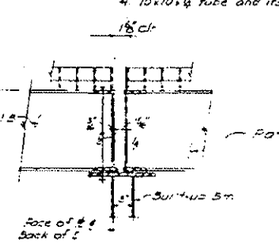
1. See Plan Sh. 113 for location of Panel Type.
2. Grating: Ref. C 10-134, open mesh grating bars with 5"x3/8" carrying I-BM and 2"x1/4" spacing bars or equal. Provide 2 3/8"x 2" banding bar at each end. See Det. C-115 for welding.
3. Carrying bars shall be in single lengths, no splices permitted.
4. 10"x10"x 5/8 tube and its connection plates shall be of A588 steel.
5. Bolts shall be H.S. (machine bolt), unless otherwise stated, of HS (high strength) A-325, Grade 3.
6. See General Notes on Sh. 110 for grade of steel.



TYPICAL INTERIOR SECTION

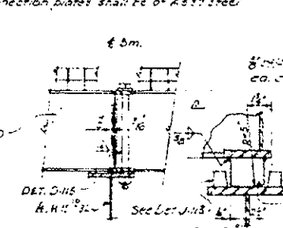
SECTION E-115

1 1/2" = 1'-0



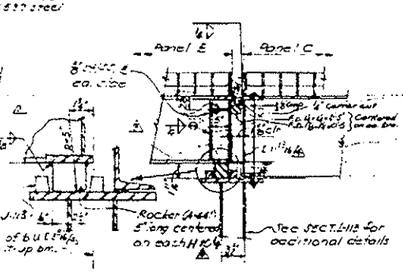
SECTION F-115

1 1/2" = 1'-0



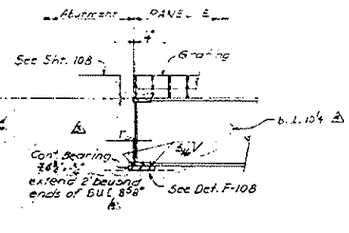
SECTION G-115

1" = 1'-0



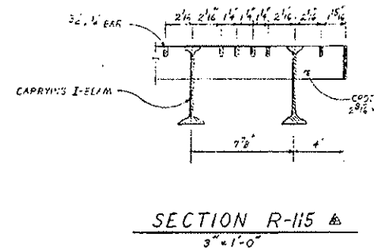
SECTION H-115

1 1/2" = 1'-0



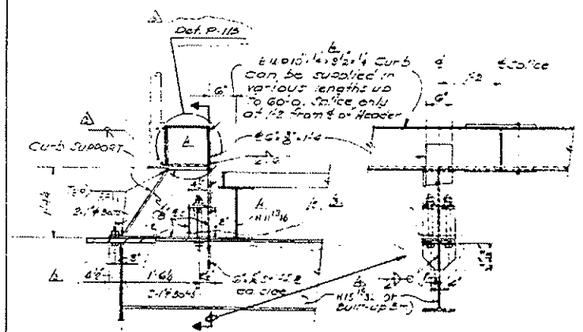
SECTION J-115

1 1/2" = 1'-0



SECTION R-115

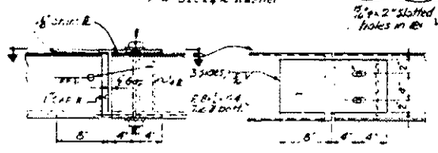
3" = 1'-0"



TYPICAL CURB SECTION (6) TYP. CURB ELEV. AT SUPPORT

DETAIL K-115

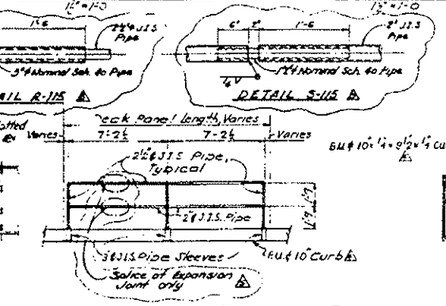
1" = 1'-0



TYPICAL CURB SPLICE

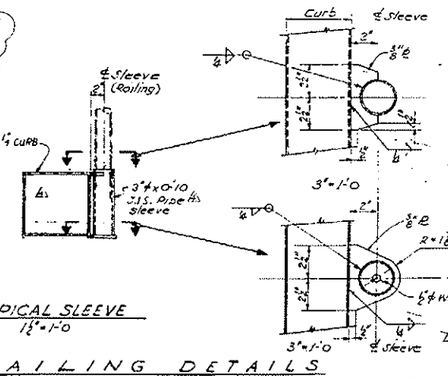
DETAIL L-115

1 1/2" = 1'-0



TYPICAL RAILING ELEVATION (8)

4" = 1'-0

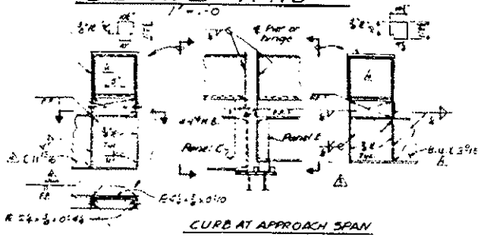


TYPICAL SLEEVE

1 1/2" = 1'-0

TYPICAL RAILING DETAILS

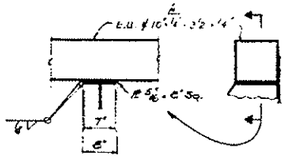
DETAIL N-115



CURB AT APPROACH SPAN

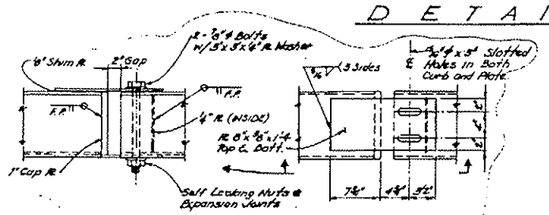
DETAIL M-115

1" = 1'-0



DETAIL P-115

1" = 1'-0



CURB SPLICE AT EXPANSION JOINTS (4)

DETAIL L-115A

1 1/2" = 1'-0

SEE SHEET 110 FOR GENERAL NOTES

4	AS BUILT	JC	1-8-76
3	AS BUILT	LVR	7-31-75
2	Fabricator requested chg'd revision	KH	10-15-74
1	REV. SCALE GRID, WHL CLOS	KH	9-26-74
	UPDATE, STEEL NOMENCLATURE	KH	7-9-74
MARK	REVISION	BY	DATE

ENGINEERS APPROVAL

	BY	DATE
PROJECT ENGR.		
DESIGN ENG.		
DETAILING		
CHECKING		
QUANTITIES		
DRAFTING		
TRACING		

CROSSING OF SAGAVANIRKTOK RIVER

PRUDHOE BAY, ALASKA

AtlanticRichfieldCompany

North American Producing Division

Los Angeles, California

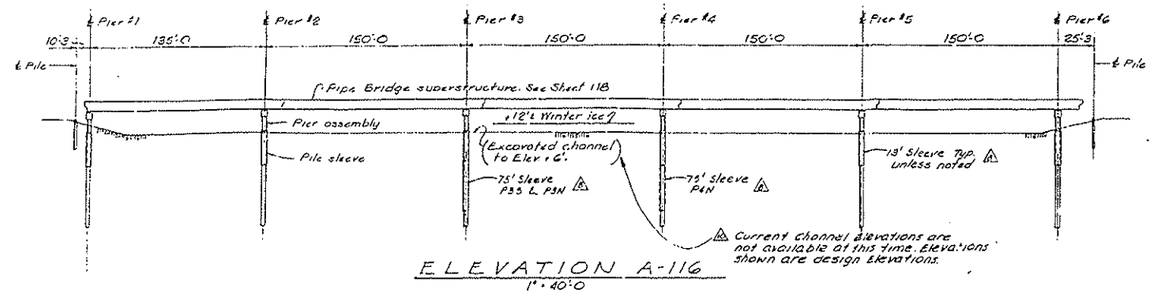
EARL AND WRIGHT - CONSULTING ENGINEERS

857 Howard Street, San Francisco, California

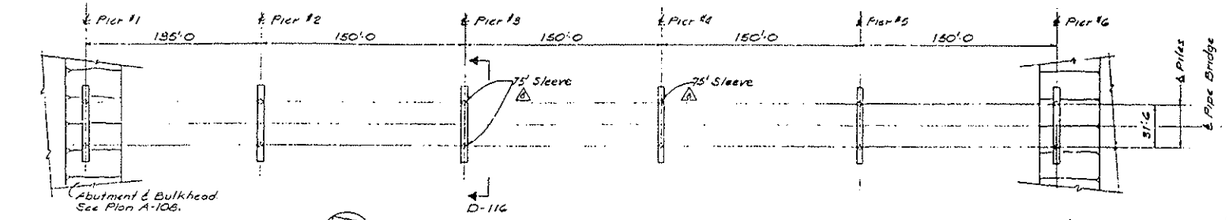
Designed by R.C.	Sheet No. 2-370NW	Date 7-7-74	Total Sheets 708
Detailed by AM.S.	Checked by AV	Date 11-15-73	Index No. 115
		Job No. 71-0008	

VEHICLE BRIDGE SUPERSTRUCTURE DETAILS III

BRIDGE AND BULKHEAD INSTALLATION—PAMPCO JOB NO. 4674-17



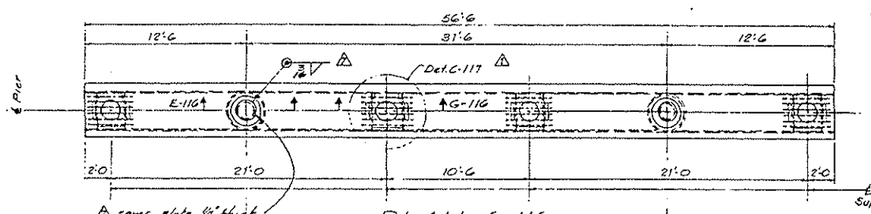
ELEVATION A-116
1" = 40'-0



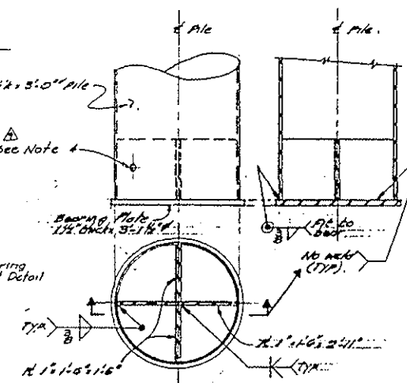
PILE AND FOUNDATION PLAN B-116
1" = 40'-0

SUBSTRUCTURE NOTES

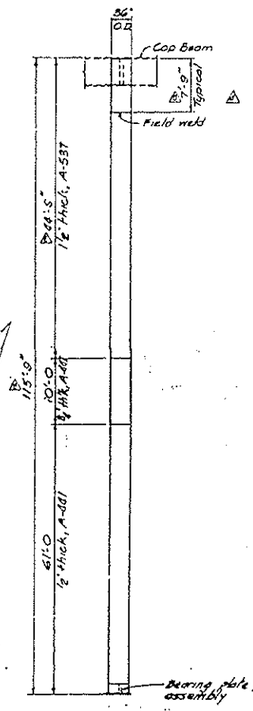
1. See General Notes, Sheet 110.
2. Fabricator shall provide 7 pieces of pipe for sleeves; 89" O.D. x ½" x 50'-0 long (A-461 steel).
3. Pipe piles may be fabricated of any length material. All splices shall be full penetration. For splices of two thicknesses of material, see Detail R-119.
4. 2" ϕ holes burned in field, near bottoms of piles P2N, P23, P3N, P33, & P43, to facilitate placement as holes were full of water that was entering at an extremely rapid rate.



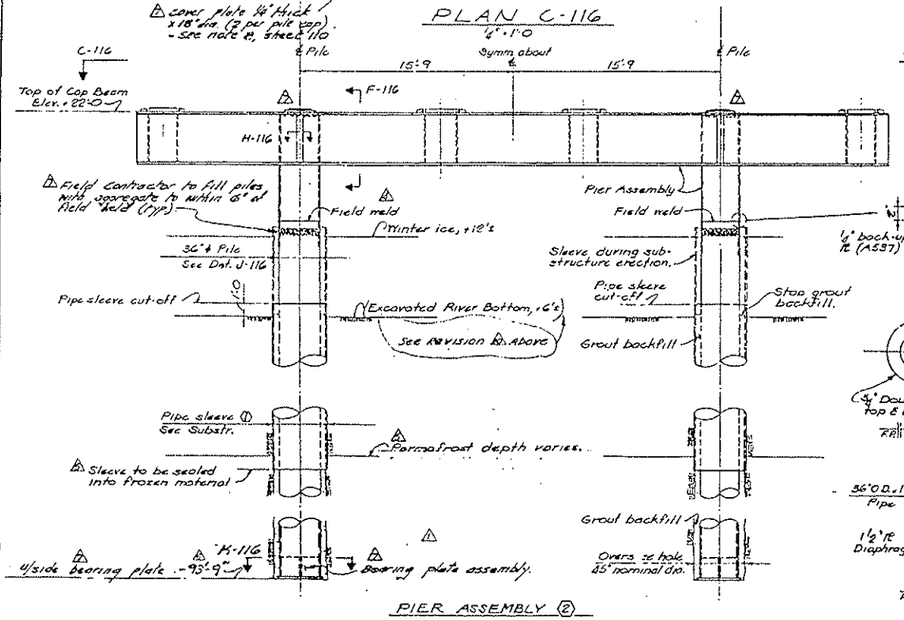
PLAN C-116
¼" = 1'-0



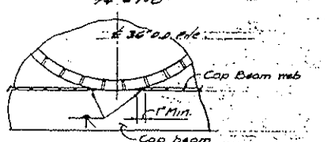
Δ SECTION K-116
See note 7, sheet 110
¾" = 1'-0"



TYPICAL FABRICATED PIPE PILE

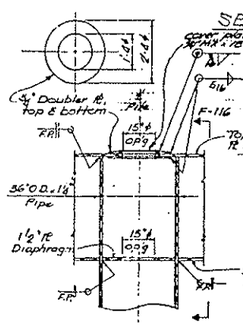


PIER ASSEMBLY ②
SUBSTRUCTURE ELEVATION D-116
¼" = 1'-0

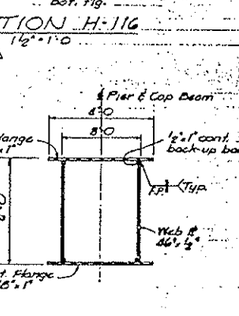


SECTION H-116
1½" = 1'-0

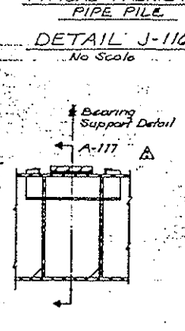
DETAIL J-116
No Scale



SECTION E-116
½" = 1'-0



SECTION F-116
½" = 1'-0



SECTION G-116
½" = 1'-0

Δ	As Built	DSC	6-27
Δ	As Built	RDP	5-29
Δ	As Built	RDP	11-29
Δ	CHANGED SIZE OF PILE PLATE D, PLATE E, AND 7" SPACER	KW	7-30
Δ	As Built	KWR	7-30
Δ	Amend notes	DC	10-30
Δ	Add field weld and details	DC	10-30
Δ	Delete Substructure Note 4	DC	10-30
Δ	REVISE SECTION MARKS	KW	10-30
Δ	OMIT NOTE	KH	7-31

ENGINEERING APPROVAL

CROSSING OF SAGAVANIEKTOK RIVER
PRUDHOE BAY, ALASKA

Atlantic Richfield Company
North American Producing Division
Los Angeles, California

EARL AND WRIGHT - CONSULTING ENGINEERS
617 Howard Street, San Francisco, California

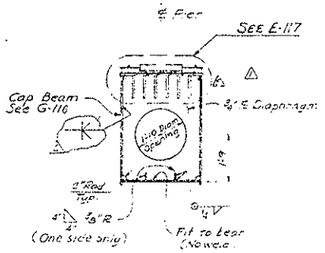
DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	JOB NO.
AF	RC	7-71	7-71	74008
DRAWING NO.	SCALE	REVISED		SHEET NO.
KD	HAIT	74008		116

PIPE BRIDGE SUBSTRUCTURE

BRIDGE AND BULKHEAD INSTALLATION - AMOCO JOB NO. 8024-17

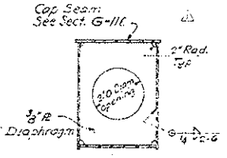
740008 Sht. 116.

REV 10



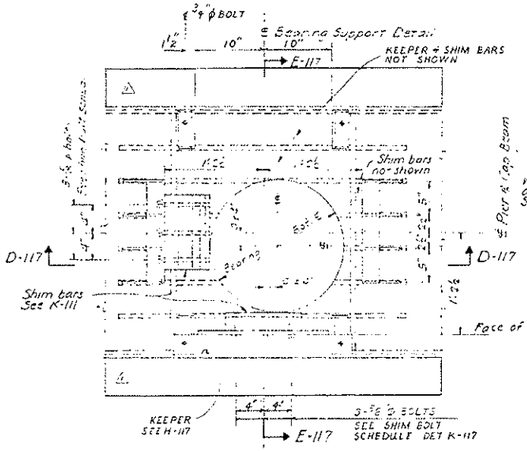
SECTION A-117

1/2" = 1'-0



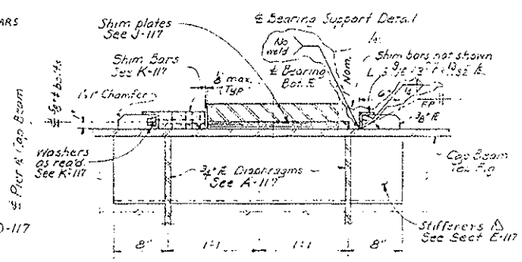
SECTION B-117

1/2" = 1'-0



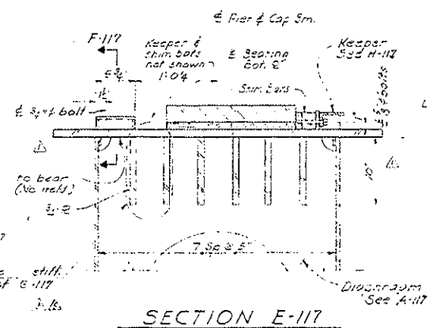
PLAN - DETAIL C-117

1 1/2" = 1'-0



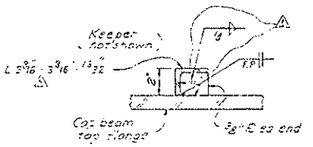
SECTION D-117

1 1/2" = 1'-0



SECTION E-117

1 1/2" = 1'-0



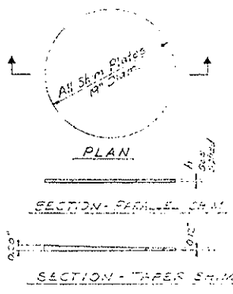
SECTION F-117

3" = 1'-0



DETAIL G-117

1" = 1'-0



SHIM PLATE SCHEDULE		
SHIM TYPE	t	NO. REQ'D.
Parallel	4"	194
"	8"	29
Taper	—	98

DETAIL J-117

1 1/2" = 1'-0

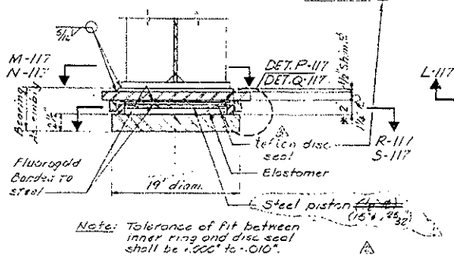
WASHER SCHED.	
d	NO. REQ'D.
2"	1206
4"	288

SHIM BAR SCHEDULE		
SHIM TYPE	t	NO. REQ'D.
TYPICAL	2"	194
"	4"	58
"	6"	58
"	8"	58
"	10"	58
INSIDE	1"	30

7/8 ϕ SHIM BOLT SCHED.	
LENGTH	NO. REQ'D.
4"	194
6"	156
8"	144
10"	194
No nuts required	

Note: Inside shim is shim adjacent to bearing assembly.. Use washers as required under heads of bolts to meet penetration requirements for inside shim. Make bolts tight.

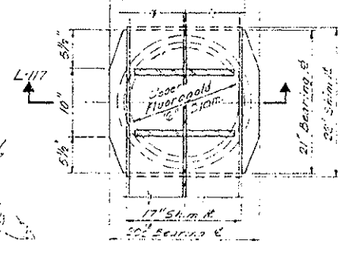
DETAIL K-117



SECTION L-117

TYPE "S" & TYPE "F" BEARINGS

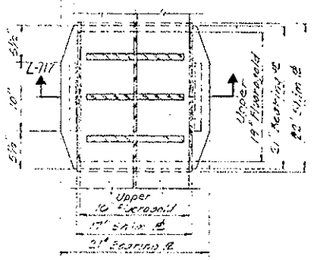
Scale 1 1/2" = 1'-0"



SECTION M-117

TYPE "F" BEARING

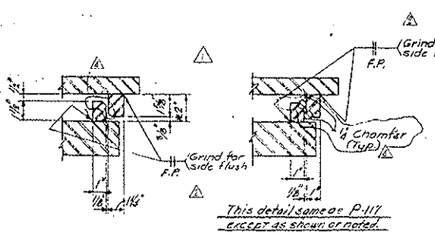
Scale 1 1/2" = 1'-0"



SECTION N-117

TYPE "S" BEARING

Scale 1 1/2" = 1'-0"



DETAIL P-117

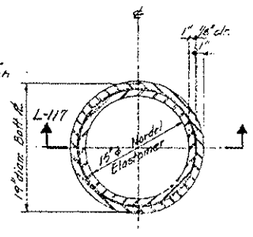
TYPE "S" BEARING

Scale 3" = 1'-0"

DETAIL Q-117

TYPE "F" BEARING

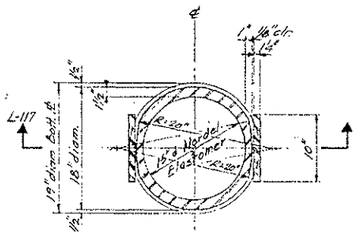
Scale 3" = 1'-0"



SECTION R-117

TYPE "F" BEARING

Scale 1 1/4" = 1'-0"



SECTION S-117

TYPE "S" BEARING

Scale 1 1/2" = 1'-0"

DETAILS OF BRIDGE BEARING ASSEMBLY ⑤

Notes on Bridge Bearing Assemblies

1. For fabrication, see Steel Fabrication Specification.
2. Details shown are not complete. Dimensions not shown or marked with an asterisk (*) shall be provided by Bearing supplier subject to approval, in accordance with Specification.
3. Upper part of bearing shall be attached to girder at Fabrication Plant. Grind faying surface of shim to bearing plate, setting bearing so that Fluorogold surface is plane and square with Bridge Girder. Pair girder flange to flat surface.
4. For location of Type "F" and Type "S" bearings, See A-118

5	AS BUILT	VK	7-31-79
4	Fabricator requested Def'l revision	KH	5-15-78
3	ADD 12" SHIM DET.	KH	9-1-77
2	ADD DIM'S TO BRG. ASSEMBLY, REV. WELD	KH	6-9-77
1	REVISIONS	KH	9-30-76
MARK	REVISIONS	BY	DATE

ENGINEERS APPROVAL

	BY	DATE
PROJECT ENGR.		
STRUCTURES		
PIPELINE		
MECHANICAL		
ELECTRICAL		
PRODUCTION		
MAPPING		

CROSSING OF SAGAVANIRKTOK RIVER

PRUDHOE BAY, ALASKA

AtlanticRichfieldCompany

North American Producing Division

Los Angeles, California

EARL AND WRIGHT ✦ CONSULTING ENGINEERS

657 Howard Street, San Francisco, California

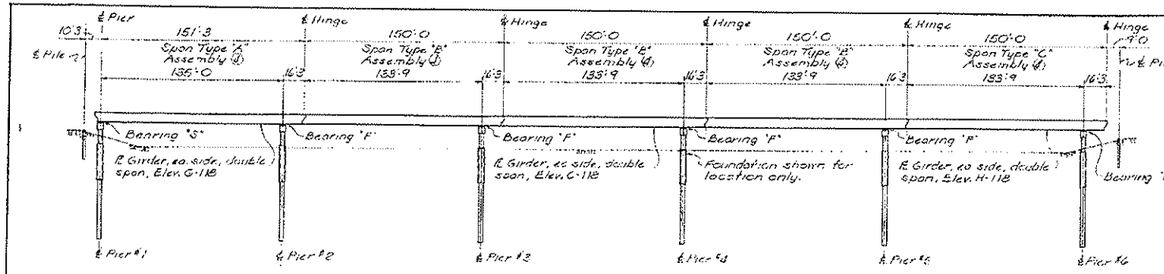
DESIGNED W	3rd Stage	FIT	7-1-79	740008
DRAWN W	1st Stage	FIT	11-14-78	740008
CHECKED R.H.				

PIPE TO BRIDGE

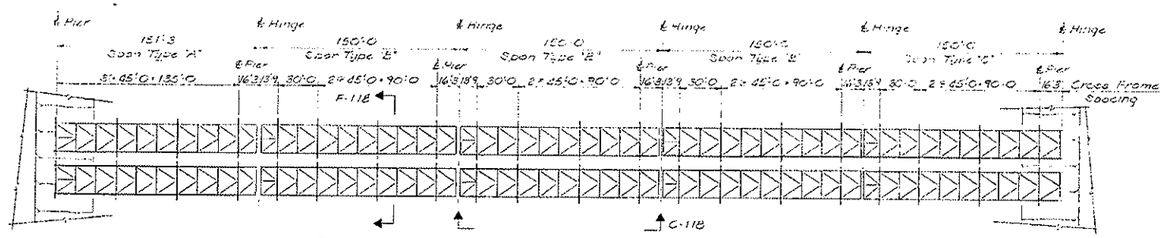
SUBSTRUCTURE - DETAILS

BRIDGE AND BULKHEAD INSTALLATION-RMPCO JOB NO. 4834-17

8/9/07

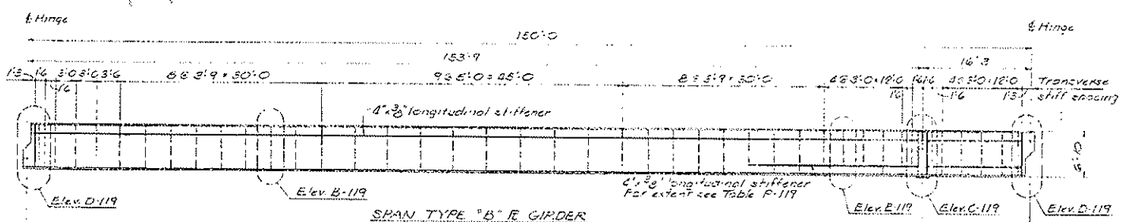


BRIDGE PROFILE A-118
1" = 40'-0"

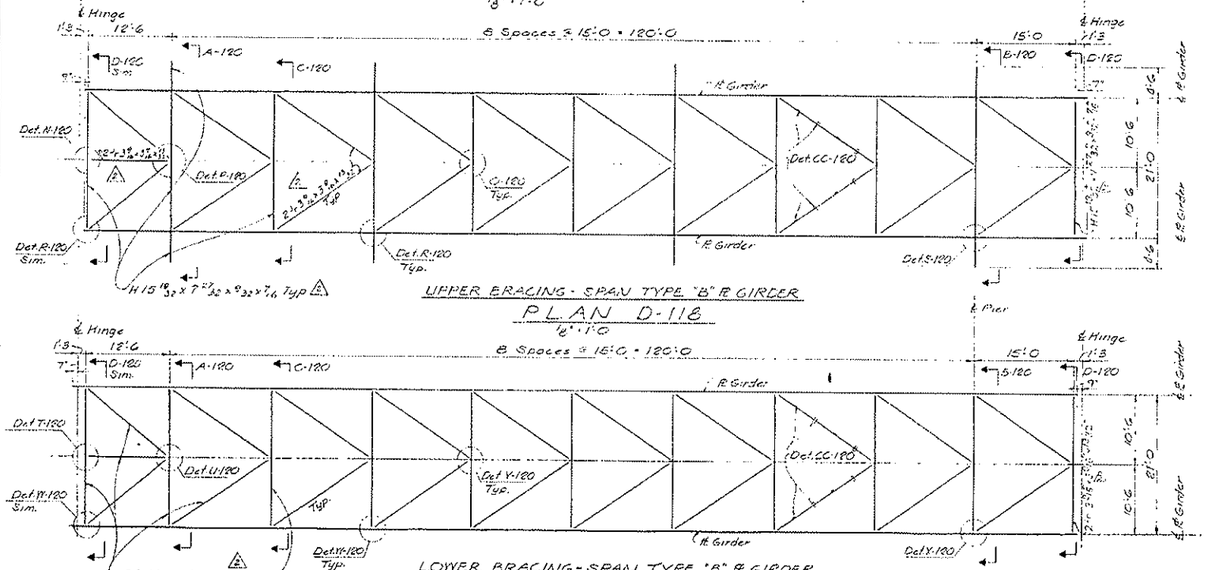


BRIDGE PLAN B-118
1" = 40'-0"

Previously 5" = 1'-0"

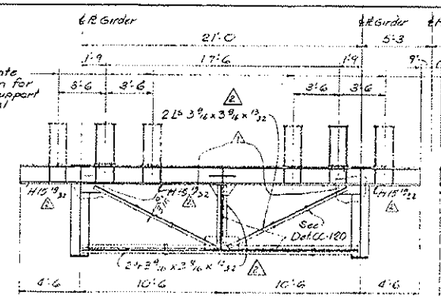


SPAN TYPE "B" ℛ GIRDER
ELEVATION C-118
1/8" = 1'-0"

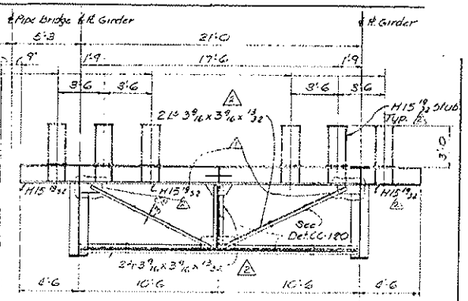


UPPER BRACING - SPAN TYPE "B" ℛ GIRDER
PLAN D-118
1/8" = 1'-0"

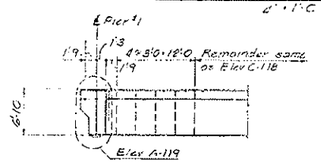
LOWER BRACING - SPAN TYPE "B" ℛ GIRDER
PLAN E-118
1/8" = 1'-0"



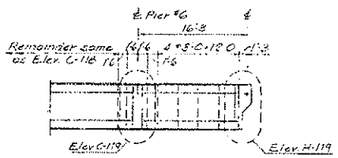
TYPICAL SECTION AT CROSS FRAME



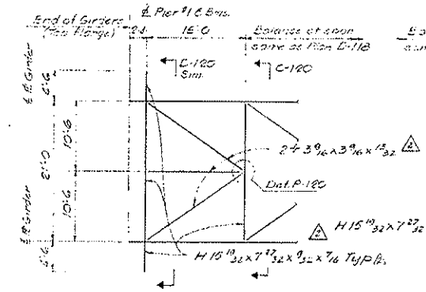
SECTION F-118
1" = 1'-0"



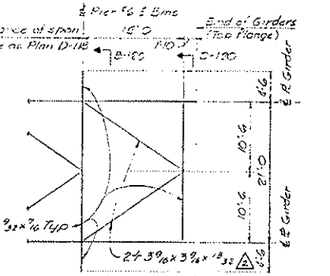
SPAN TYPE "A" GIRDER
ELEVATION G-118
1/8" = 1'-0"



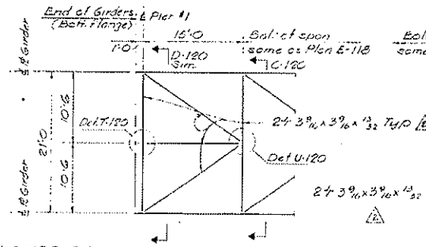
SPAN TYPE "C" GIRDER
ELEVATION H-118
1/8" = 1'-0"



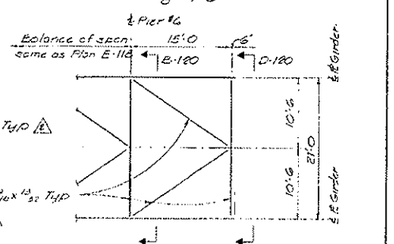
UPPER BRACING - SPAN TYPE "A" GIRDER
PLAN J-118
1/8" = 1'-0"



UPPER BRACING - SPAN TYPE "C" GIRDER
PLAN K-118
1/8" = 1'-0"



LOWER BRACING - SPAN TYPE "A" GIRDER
PLAN L-118
1/8" = 1'-0"



LOWER BRACING - SPAN TYPE "C" GIRDER
PLAN M-118
1/8" = 1'-0"

See Sheet 110 for General Notes

1	As Built		
0	Cable-color reworked drill revisions	KH	12-6-76
MARK	REVISION	BY	DATE

ENGINEERS APPROVAL

	BY	DATE
PROJECT ENG.		
STRUCTURAL		
PROCESS		
MECHANICAL		
ELECTRICAL		
PRODUCTION		
DRILLING		

SUBMITTED BY: Milkey

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

AtlanticRichfieldCompany
North American Producing Division
Los Angeles, California

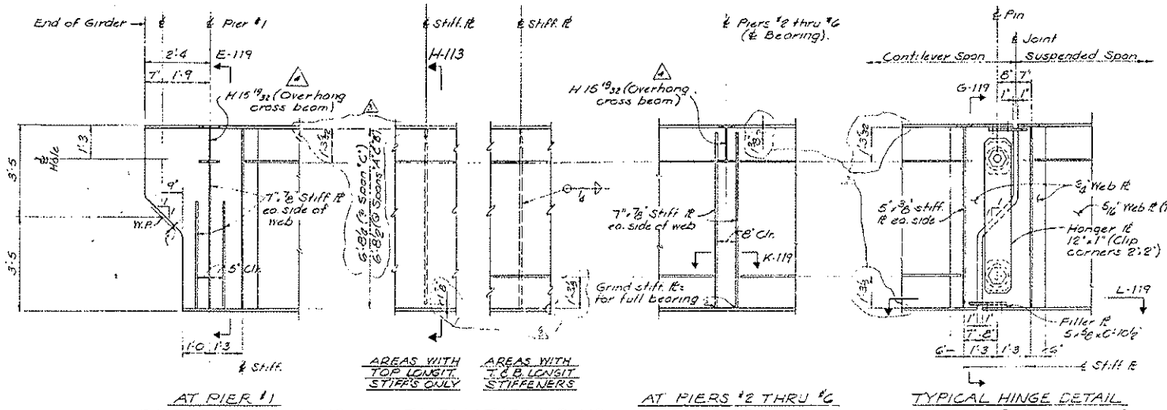
EARL AND WRIGHT · CONSULTING ENGINEERS
657 Howard Street, San Francisco, California

DESIGNED BY	SCALE	DATE	JOB NO.
AL	As Shown	7-7-76	740008
DRAWN BY	CHECKED BY	U.S. SURVEY	SHEET NO.
KH	HAW	740008	108

PIPE BRIDGE SUPERSTRUCTURE
GENERAL ARRANGEMENT

BRIDGE AND BULKHEAD INSTALLATION - SIMCO JOB NO. 4634-12

54707

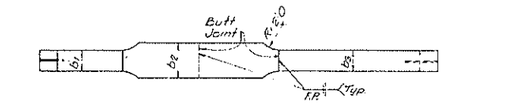


AT PIER #1
ELEVATION A-119
1/2" = 1'-0

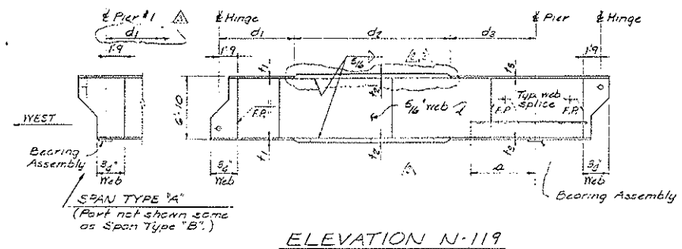
ELEVATION B-119
1/2" = 1'-0

AT PIERS #2 THRU #6
ELEVATION C-119
1/2" = 1'-0

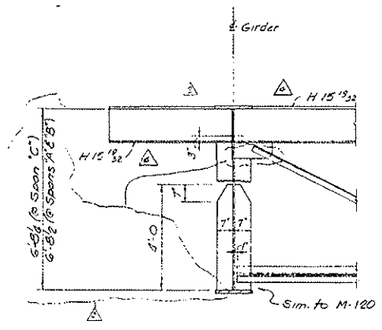
TYPICAL HINGE DETAIL
ELEVATION D-119
1/2" = 1'-0



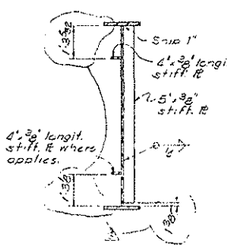
PLAN M-119



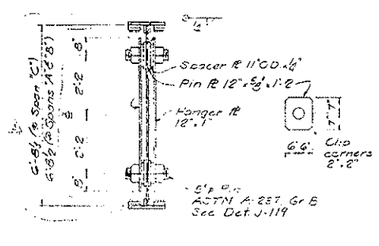
ELEVATION N-119



SECTION E-119
1/2" = 1'-0

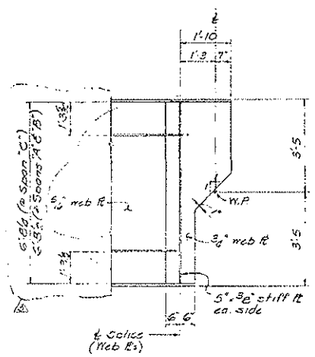


SECTION F-119
1/2" = 1'-0



HANGER AND PIN ASSEMBLY (5)

SECTION G-119
1/2" = 1'-0

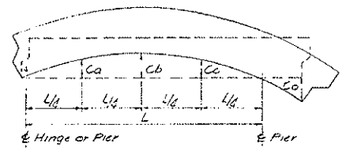


ELEVATION H-119
1/2" = 1'-0

SPAN TYPE	b_1	t_1	d_1	b_2	t_2	d_2	b_3	t_3	d_3	a
"A"	12"	3/8	20'-6	16"	1/2	73'-6	12"	3/8	27'C	25'-8
"B"	12"	3/8	23'-3	16"	1/2	73'-4	12"	3/8	37'-2	25'-3
"C"	14"	7/8	26'-9	16"	1 1/8	76'-6	14"	7/8	26'-6	26'-3

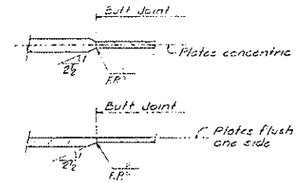
SCHEDULE OF GIRDER DIMENSIONS

TABLE P-119



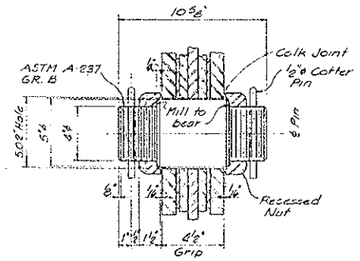
SPAN TYPE	Ca	Cb	Cc	Co
"A"	2 3/8"	3 5/8"	2 3/4"	2"
"B"	2 3/4"	3 3/4"	2 5/8"	2"
"C"	2 5/8"	3 5/8"	2 3/4"	2"

CAMBER DIAGRAM-DETAIL O-119

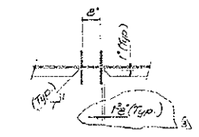


SPLICING PLATES OF DIFFERENT THICKNESSES

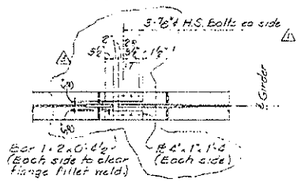
TYPICAL WELD DETAIL R-119



DETAIL J-119
3" = 1'-0



SECTION K-119
1/2" = 1'-0



SECTION L-119
1/2" = 1'-0

See Sheet 110 for General Notes

3	As Built	TSJ	7-7-74
2	Fabricator requested diff revision	KH	6-17-74
1	REV G.FDER A3, 5 & INCLUDE	KH	6-17-74
0	ONIT CTSK TYPE BOLTS	KH	7-19-74
MARK	REVISION	BY	DATE

ENGINEERS APPROVAL

	BY	DATE
PROJECT ENGR.		
STRUCTURAL		
PROCESS		
MECHANICAL		
ELECTRICAL		
PRODUCTION		
PUBLIC		

SUBMITTED BY: Kirk Hayes

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

AtlanticRichfieldCompany
North American Producing Division
Los Angeles, California

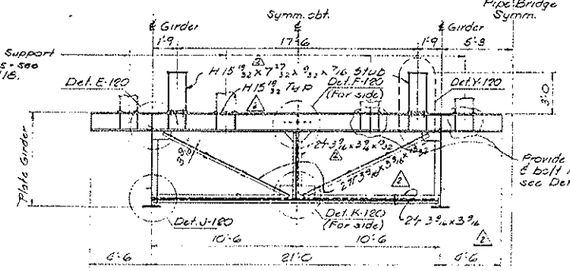
EARL AND WRIGHT • CONSULTING ENGINEERS
657 Howard Street, San Francisco, California

DESIGNED BY	SCALE	DATE	JOB NO.
AY	As Shown	7-1-74	740008
DRAWN BY	CHECKED BY	2 & 3rd SUB.	SHEET NO.
KH	H.AY	740008	119

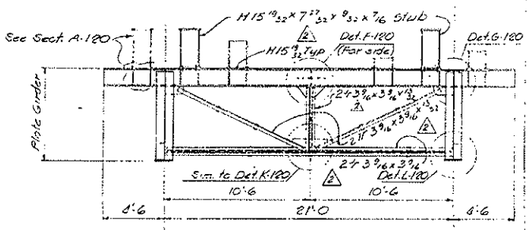
PIPE BRIDGE
SUPERSTRUCTURE - DETAILS I

BRIDGE AND BULKHEAD INSTALLATION-AMPOD JOB NO. 4834-17

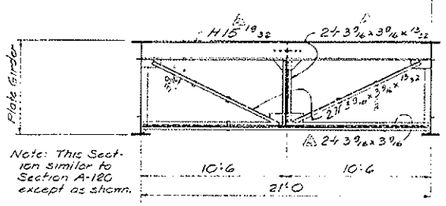
59/107



AT CROSS FRAME
SECTION A-120
1/4" = 1'-0"

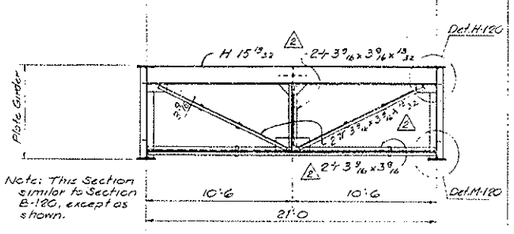


AT PIERS
SECTION B-120
1/4" = 1'-0"



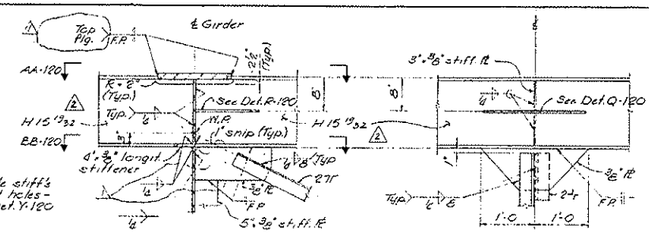
Note: This Section similar to Section A-120 except as shown.

TYPICAL, UNLESS OTHERWISE NOTED
SECTION C-120
1/4" = 1'-0"



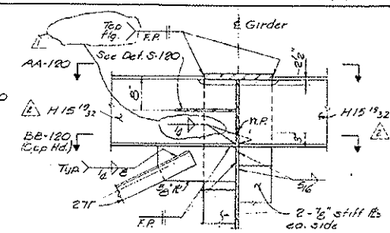
Note: This Section similar to Section B-180, except as shown.

AT HINGE
SECTION D-120
1/4" = 1'-0"

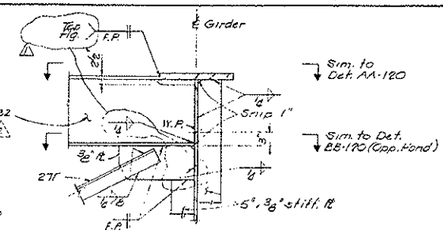


DETAIL E-120
1" = 1'-0"

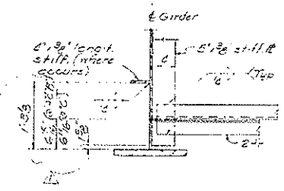
DETAIL F-180
1" = 1'-0"



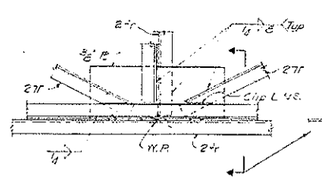
DETAIL G-120
1" = 1'-0"



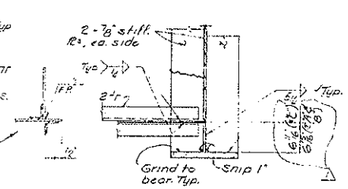
DETAIL H-120
1" = 1'-0"



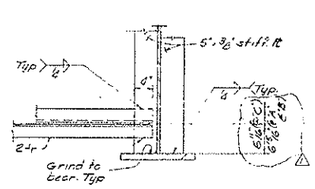
DETAIL J-120
1" = 1'-0"



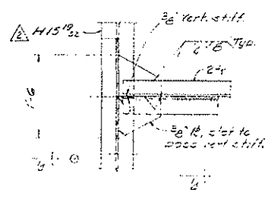
DETAIL K-120
1" = 1'-0"



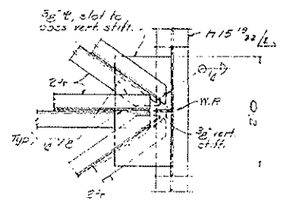
DETAIL L-120
1" = 1'-0"



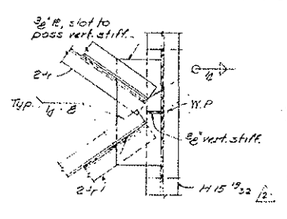
DETAIL M-120
1" = 1'-0"



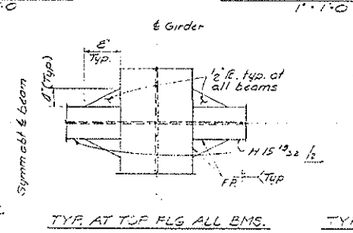
DETAIL N-120
1" = 1'-0"



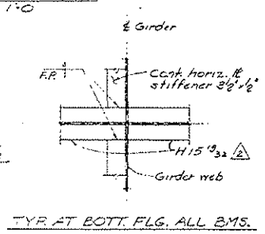
DETAIL P-120
1" = 1'-0"



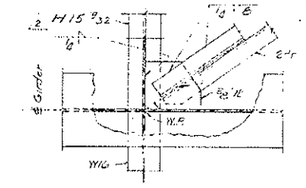
DETAIL Q-120
1" = 1'-0"



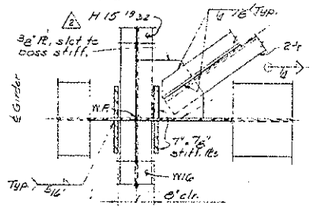
TYP. AT TOP FLG. ALL BMS.
DETAIL AA-120
1" = 1'-0"



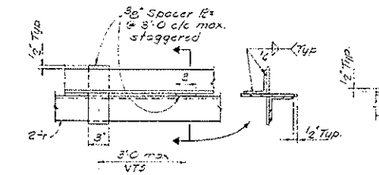
TYP. AT BOTT. FLG. ALL BMS.
DETAIL BB-120
1" = 1'-0"



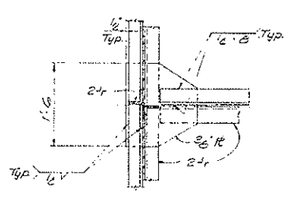
DETAIL R-120
1" = 1'-0"



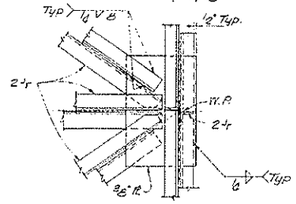
DETAIL S-120
1" = 1'-0"



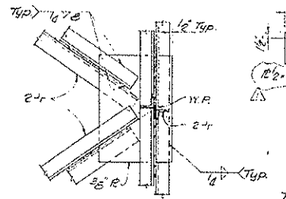
TYPICAL SPACER DETAILS
DETAIL CC-120
1/2" = 1'-0"



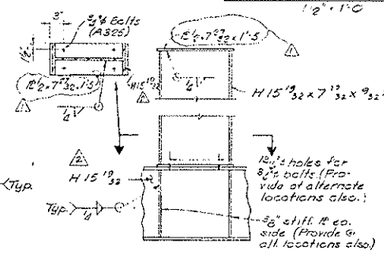
DETAIL T-120
1" = 1'-0"



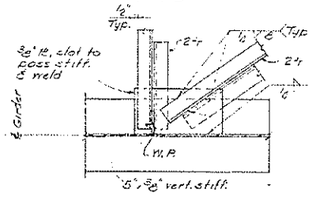
DETAIL U-120
1" = 1'-0"



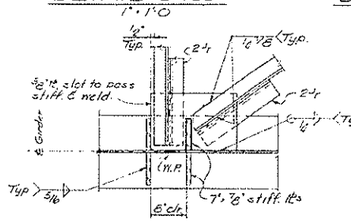
DETAIL V-120
1" = 1'-0"



PIPE SUPPORT
DETAIL Y-120
1" = 1'-0"



DETAIL W-120
1" = 1'-0"



DETAIL X-120
1" = 1'-0"

See Sheet 110 for General Notes

MARK	REVISION	BY	DATE
1	As Built	JM	7-30-76
2	Fabricator requested drawing revision	KH	1-3-77

ENGINEERS APPROVAL	BY	DATE
PROJECT ENG.		
STRUCTURAL		
PROCESS		
INSTRUMENTATION		
ELECTRICAL		
PRODUCTION		
DRILLING		

SUBMITTED BY: W.H. Hayes

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

AtlanticRichfieldCompany
North American Producing Division
Los Angeles, California

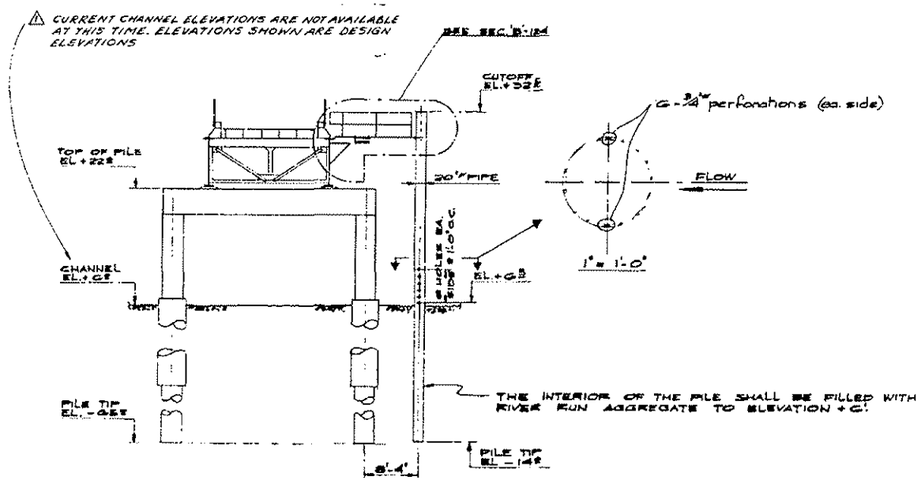
EARL AND WRIGHT • CONSULTING ENGINEERS
657 Howard Street, San Francisco, California

DESIGNED BY	SCALE	DATE	JOB NO.
J.T.	As Shown	7-75-74	7402.38
DRAWN BY	TRACED BY	CHK'D BY	CONTR. NO.
W.H.	J.T.	740008	120

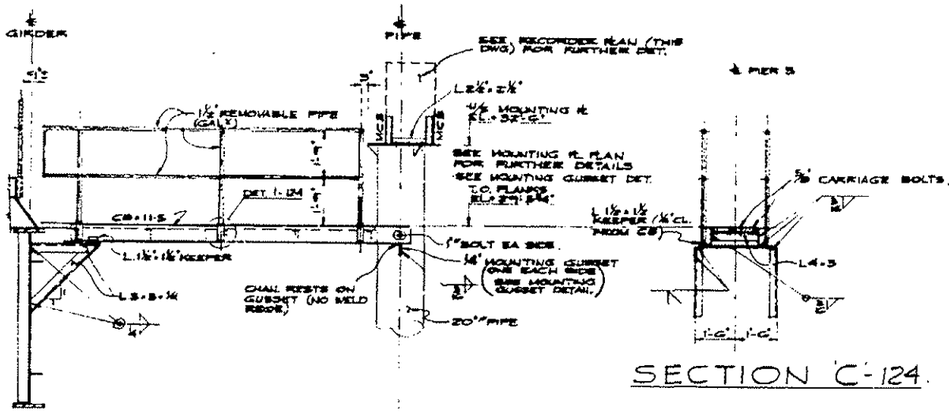
PIPE BRIDGE
SUPERSTRUCTURE - DETAILS II

BRIDGE AND BULKHEAD INSTALLATION - RMPCO JOB NO. 4834.17

SH 102 (17)

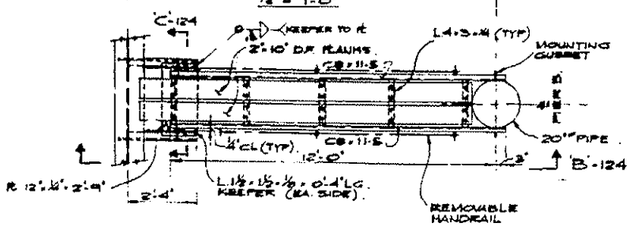


SECTION A-124
⅛" = 1'-0"

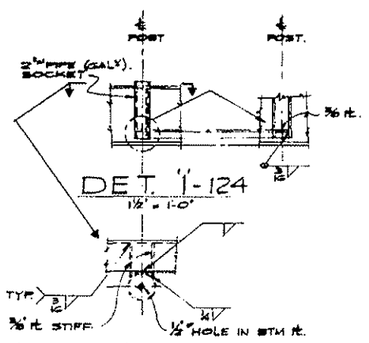


SECTION B-124
½" = 1'-0"

SECTION C-124
½" = 1'-0"

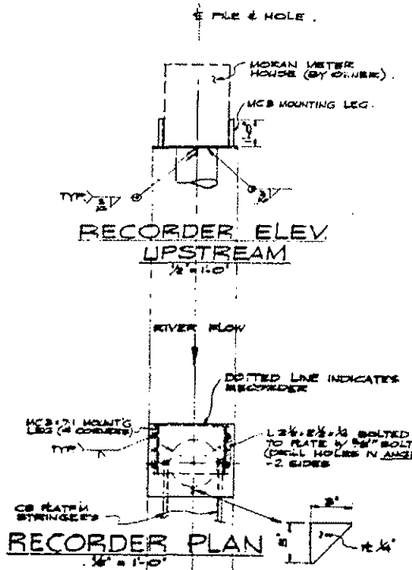


PLATFORM PLAN
½" = 1'-0"



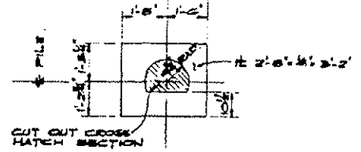
DET. 1-124
1½" = 1'-0"

PIPE SOCKET PLAN
3" = 1'-0"

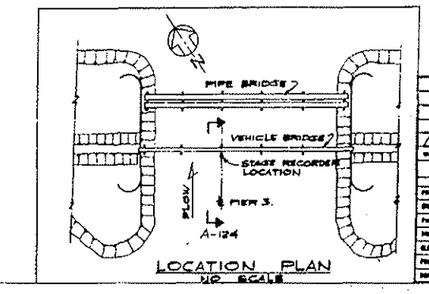


RECORDER PLAN
½" = 1'-0"

MOUNT'G GUSSET
5 REQ'D.



MOUNTING PLATE PLAN
SEE RECORDER PLAN FOR GUSSETS
½" = 1'-0"



LOCATION PLAN
NO SCALE

NOTES:

1. TWENTY-INCH (20") PIPE PILE WILL BE PROVIDED BY THE MANAGING CONTRACTOR.
2. SUBCONTRACTOR SHALL BORE TWELVE EACH ¾-INCH ROUND PERFORATIONS IN PIPE PILE AS SHOWN.
3. SUBCONTRACTOR SHALL PREPARE ALL METAL SURFACES TO BE PAINTED IN ACCORDANCE WITH SSPC-SP3 AND COAT AS FOLLOWS:

ITEM	COATING	THICKNESS
PIPE PILE EXTERIOR ABOVE EL.+4.0	CARBO ZINC 11	3.0 MILS
CATWALK, MOUNTING FRAMES	-DO- -DO-	-DO-
METER BOX BASE PLATE AND MOUNT ASSEMBLY.	-DO- -DO-	-DO-

4. SUBCONTRACTOR SHALL INSTALL PIPE IN THE POSITION AND TO THE ELEVATIONS SHOWN BY PREDRILLING AND SETTING THE PILE. PIPE SHALL BE VERTICAL AND POSITIONED ON A LINE PASSING THROUGH THE CENTERLINES OF THE PIER PILINGS FOR BRIDGE BENT NO. 3. IF PILE HOLE IS LARGER THAN THE PILE O.D., THE REMAINING ANNULUS SHALL BE BACK FILLED WITH RIVER-RUN GRAVEL.
5. SUBCONTRACTOR SHALL CUT OFF PIPE PILE, IN A HORIZONTAL PLANE, AT ELEVATION +32.5. AFTER CUTOFF THE DAMAGED PAINTED AREA SHALL BE WIRE BRUSHED WITH POWER TOOLS AND REPAINTED AS STATED ABOVE.
6. HANDRAILS AND CATWALK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 AND SECTION 8 OF THE SPECIFICATIONS AFTER FABRICATION.
7. GALVANIZED SURFACES DAMAGED BY WELDING SHALL BE PREPARED IN ACCORDANCE WITH SECTION 8 OF THE SPECIFICATIONS AND PAINTED WITH 3 MILS OF CARBO ZINC 11 (AS MANUFACTURED BY CARBOLINE).
8. PAINTED SURFACES DAMAGED BY WELDING SHALL BE PREPARED AND REPAINTED WITH THREE COATS OF THE BRIDGE IN ACCORDANCE WITH SECTION 8 OF THE SPECIFICATIONS AND WITH ONE 3.0 MIL COAT ON THE PIPE PILE AS DESCRIBED IN NOTE 3 ABOVE.
9. ALL CATWALK AND MOUNTING STEEL SHALL BE ASTM A-36
10. ALL BOLTS SHALL BE ASTM A-307.
11. ALL TIMBER SHALL BE DOUGLAS FIR, CONSTRUCTION GRADE.
12. ALL BOLT HOLES TO BE OVERDRILLED BY 1/16 IN.
13. HANDRAILS SHALL BE WELDED CONSTRUCTION. WELDS SHALL BE GROUND SMOOTH AND FLUSH WITH SURROUNDING SURFACES BEFORE GALVANIZING.

⚠ AS BUILT	JOG	6-7-71	
DRAWN REP	CHECKED	APPROVED	DATE 10-21-75
ENGINEERS APPROVAL			
PROJECT ENGR. TOG			
STRUCTURAL REP			
PIPING			
MECHANICAL			
ELECTRICAL			
PROPERTIES			
WELDING			

STATE OF ALASKA 49TH ★ No. 1336-E REGISTERED ENGINEER

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

AtlanticRichfieldCompany
North American Producing Division
Los Angeles, California

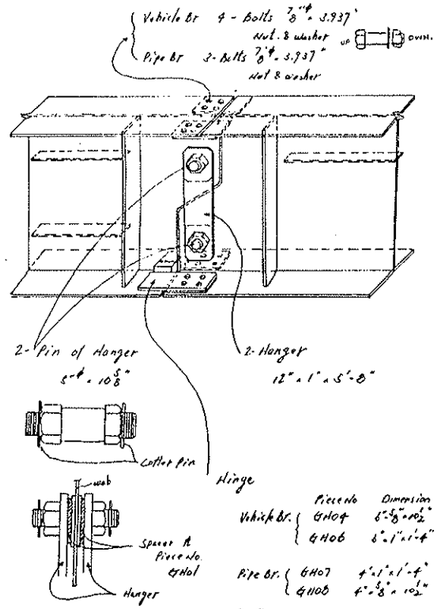
EARL AND WRIGHT · CONSULTING ENGINEERS
657 Howard Street, San Francisco, California

DESIGNED BY	SCALE	DATE	JOB NO.
REP	AS SHOWN	10-21-75	740008
DRAWN BY	CHECKED BY	TRACED BY	SHEET NO.
A.FRICANO	REP	740008	124

STAGE RECORDER & CATWALK DETAILS

BRIDGE AND BULKHEAD INSTALLATION—RUMPOO JOB NO. 6834-17

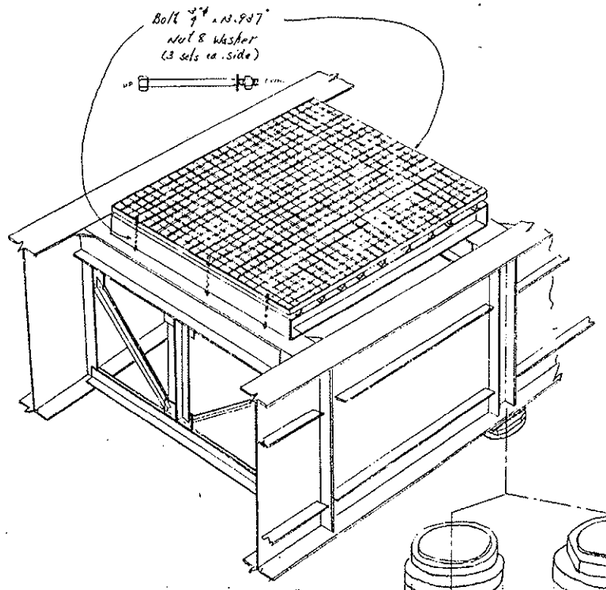
Joint of Main Girder



Detail "A"
Ref. Drawing FE-1

Deck Panel on Main Girder

Deck Panel Piece No ST09 ~ 52

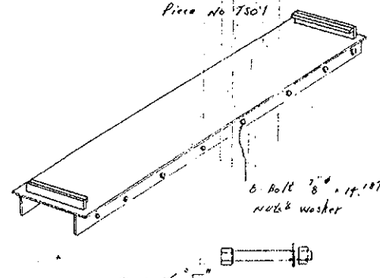


Detail "G"
Ref. Drawing FE-1

Type "F" Bearing

Type "S" Bearing
(Only P1 and P2 pair)

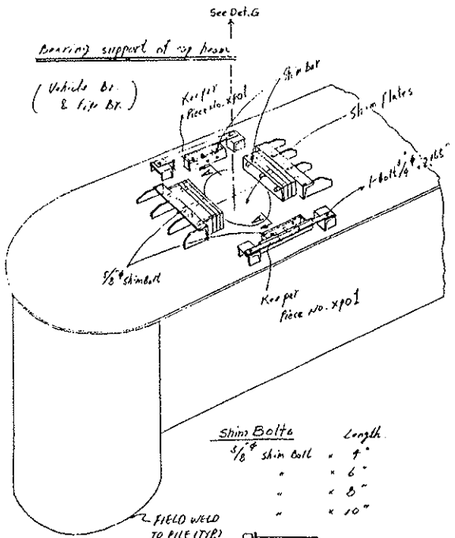
Base Plate of Deck panel



Detail "E"
Ref. Drawing FE-1



Sections A - A



Shim Bolts

5/8" ø Shim Bolt	Length
"	4"
"	6"
"	8"
"	10"

Shim Bar

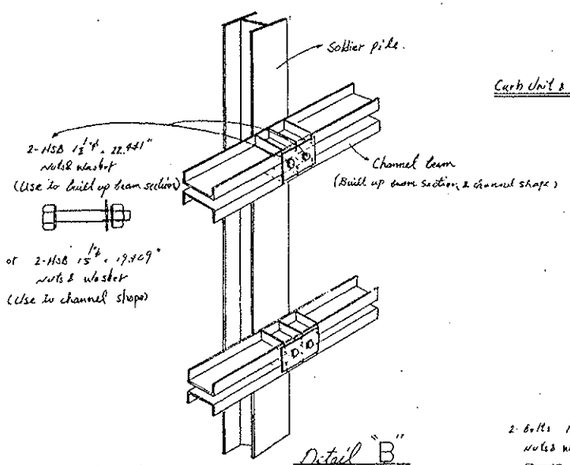
Piece No	Dimension
SB01	2 1/2" × 2" × 11"
SB02	2 1/2" × 1" × 11"
SB03	2 1/2" × 1/2" × 11"
SB04	2 1/2" × 1/4" × 11"
SB05	2 1/2" × 1/8" × 11"
SB06	2 1/2" × 1" × 11"

Shim Plates (SH00)

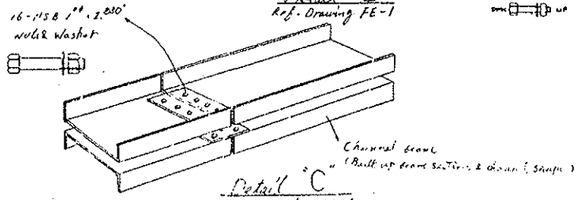
Piece No	Dimension
SH01	1/4" × 19"ø (Parallel)
SH02	1/8" × 19"ø (")
SH03	α20" × 19"ø (Taper)

Detail "H"
Ref. Drawing FE-1

Soldier pile & Channel beam of Bulk head.

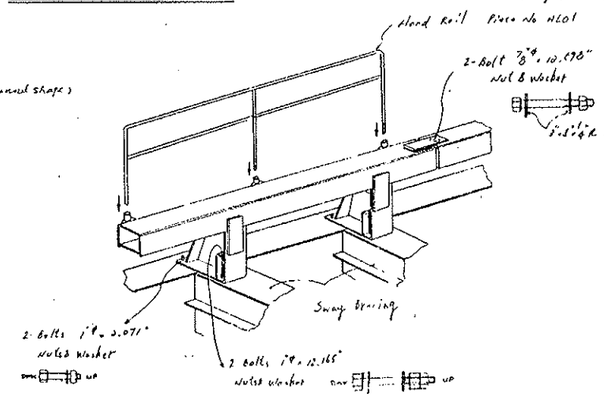


Detail "B"
Ref. Drawing FE-1



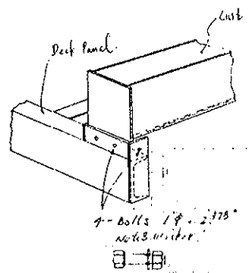
Detail "C"
Ref. Drawing FE-1

Curb Unit & Hand Rail on Main Girder



Detail "D"
Ref. Drawing FE-1

Curb unit on Deck panel

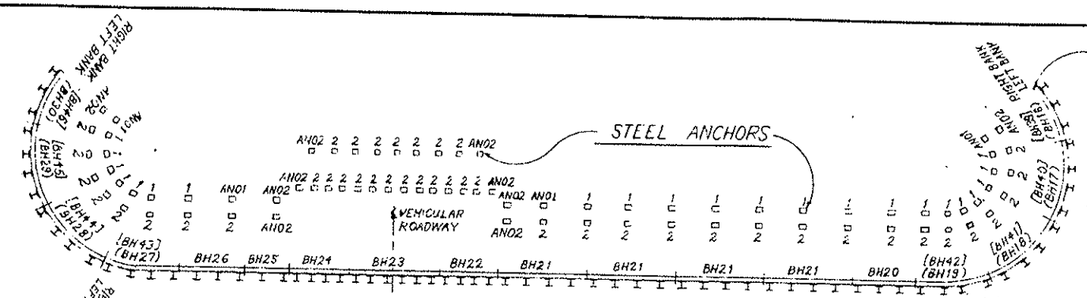


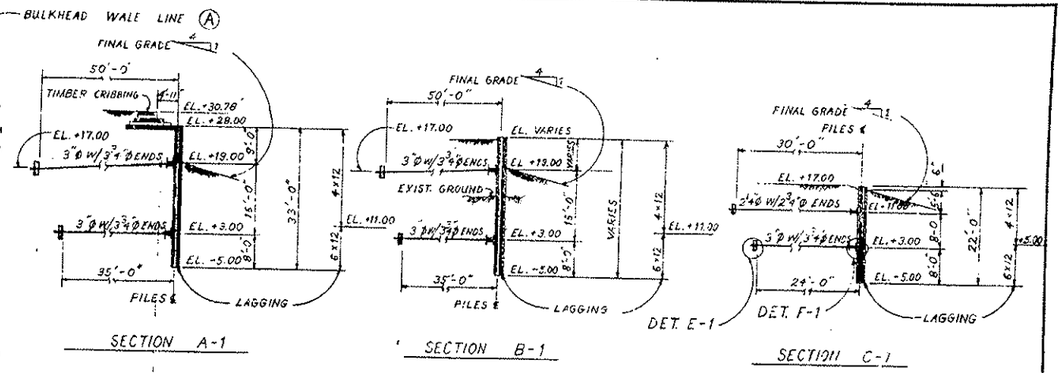
Detail "F"
Ref. Drawing FE-1

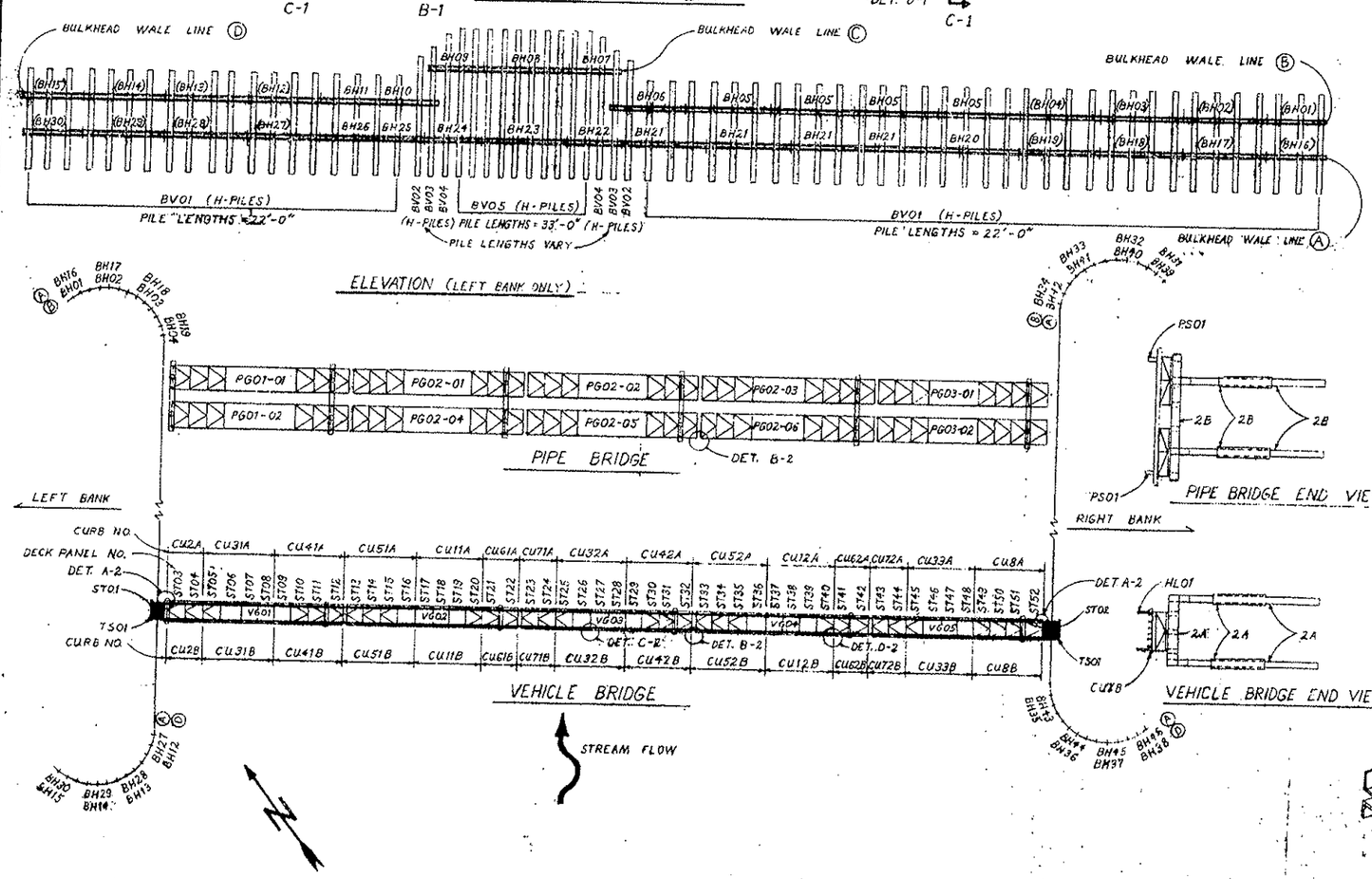
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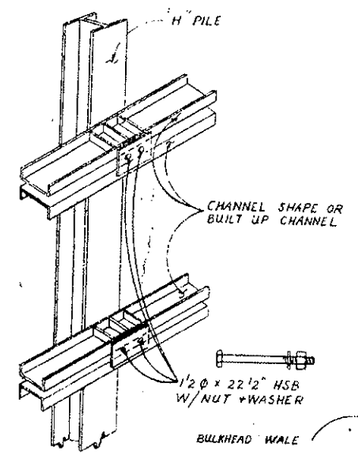
TSU SHIPYARD NIPPON KOKAN K.K		SAGAWANIRTOK RIVER CROSSINGS	
MANAGER	H. Oka	FIELD ERECTION DRAWINGS	
ASSISTANT MANAGER	T. Shirahama		
CHECKED BY	Y. Narisawa		
DRAWN BY	K. Abe		
DATE OF DRAWING	June 25 '75	SHEET NO	FE-2 Rev 1

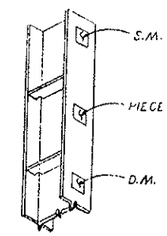
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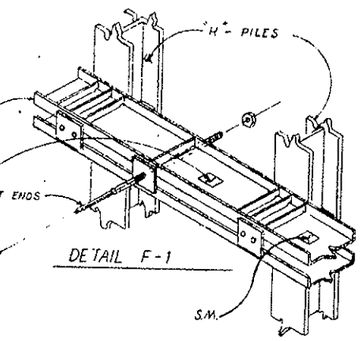


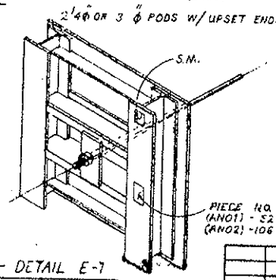


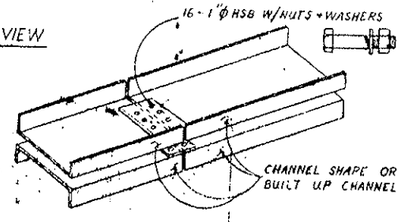












NOTE:
SEE DRAWING FE-2 FOR GENERAL NOTES.

CROSSING OF SAGAVANIRKTOK RIVER
PRUDHOE BAY, ALASKA

ERECTION DETAILS
PLANS AND BULKHEAD DETAILS

TYPE 3 — ARCO Alaska, Inc.

JOB NO. NSDP 0000 — DRAWING NO. 95D-0700-D26 — SHT. 1 — REV.

EARL AND WRIGHT • CONSULTING ENGINEERS
461 HOWARD STREET • SAN FRANCISCO, CALIFORNIA 94105

DRAWING NO. FE-1

DESIGNED BY: JOG — SCALE: NO SCALE
DRAWN BY: LVR — DATE: JULY 1975
CHECKED BY: JOG — PROJ. ENGR.: JOG
SUBMITTED BY: [illegible] 1379 E

BRIDGE AND BULKHEAD INSTALLATION - PARCO JOB NO. 4824