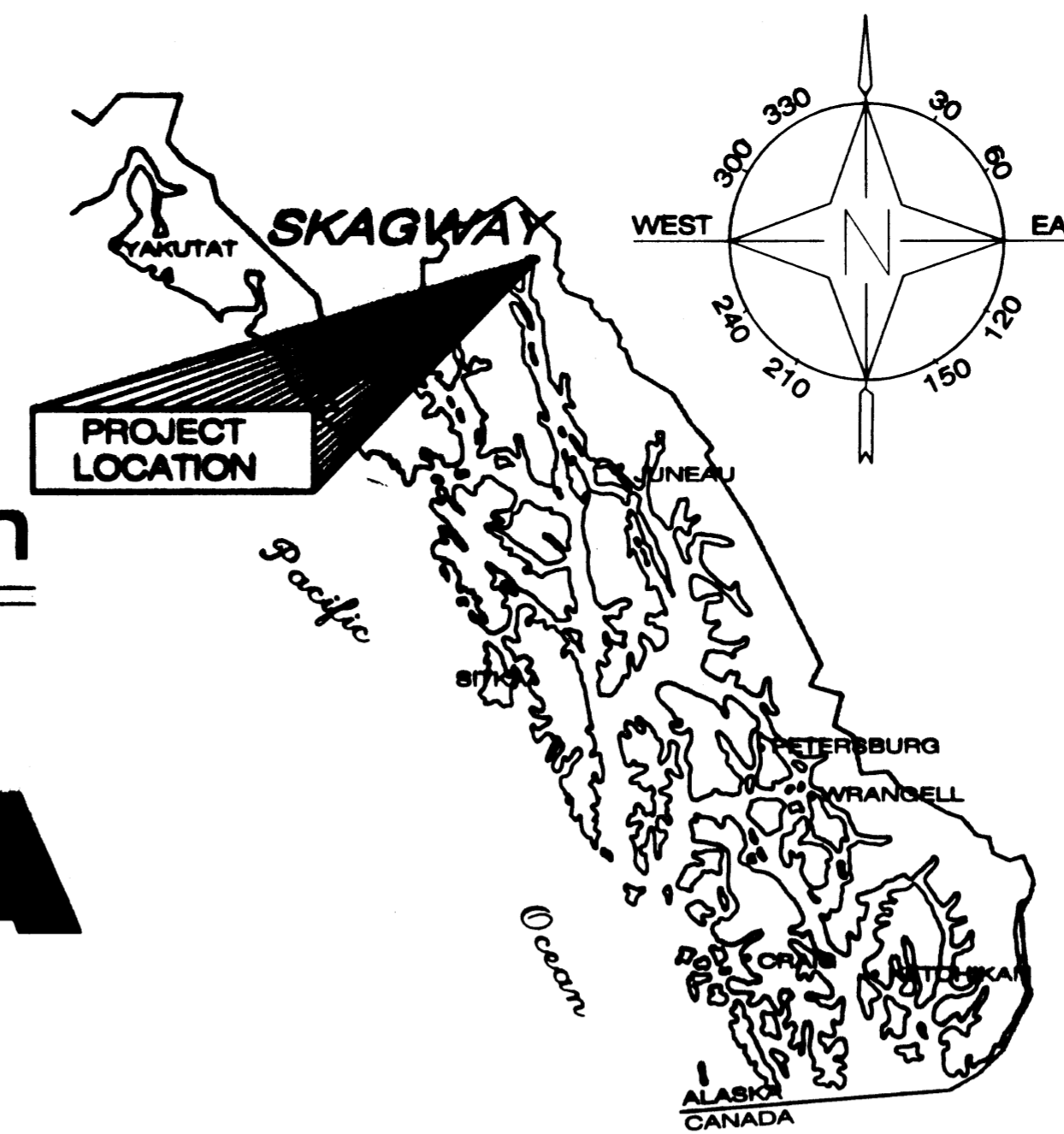


# State of Alaska

## Department of Transportation and Public Facilities

### Statewide Design and Engineering Services Division



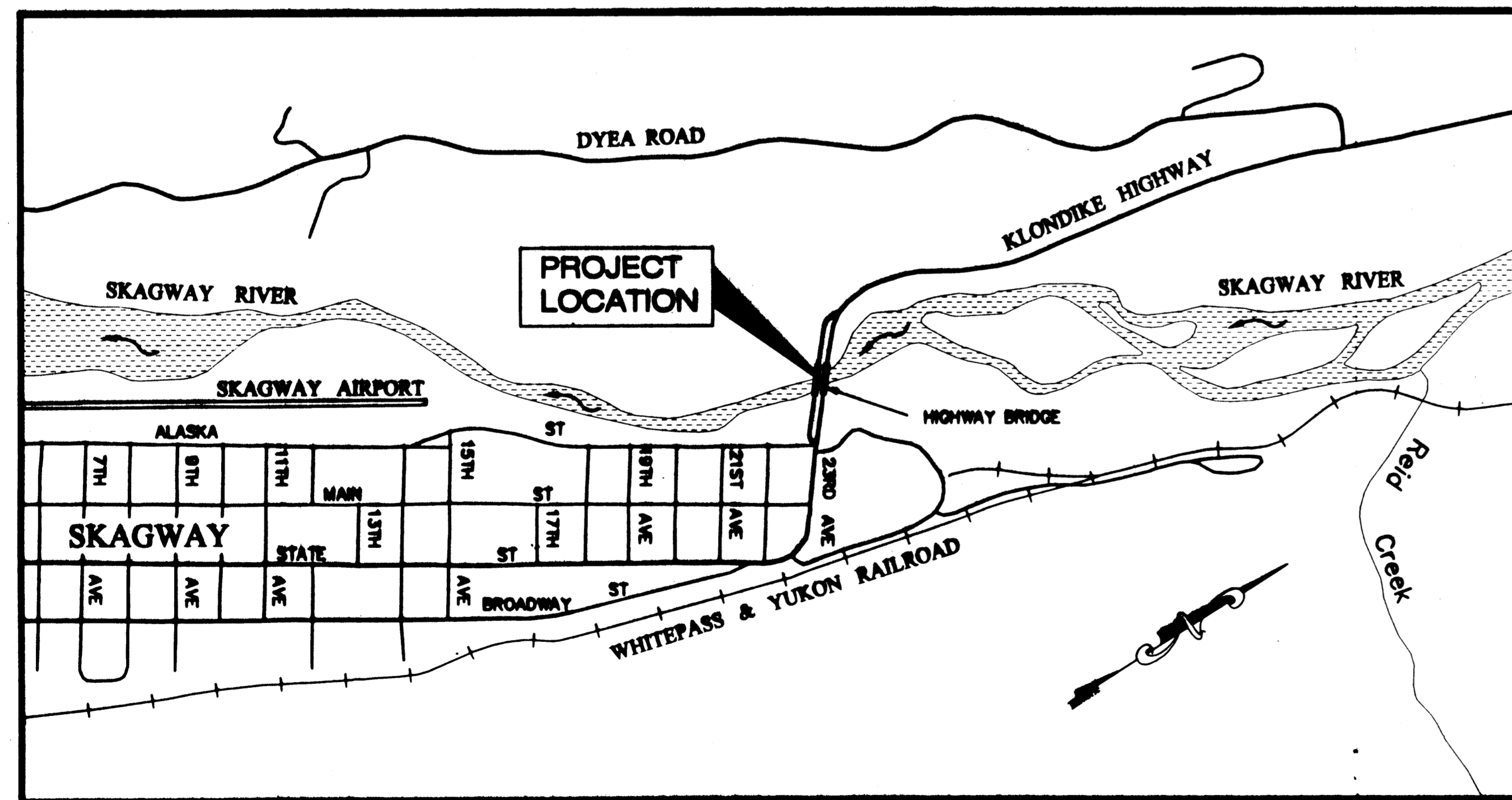
# SKAGWAY, ALASKA SKAGWAY RIVER PEDESTRIAN BRIDGE 68238 ~ NH-097-2(14)

INDEX	
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
B1	ESTIMATE OF QUANTITIES
C1	TYPICAL SECTIONS
D1	DETAIL SHEETS
E1-E2	PLAN SHEETS
J1	TRAFFIC CONTROL PLAN
L1-L2	POWER & LIGHTING PLAN AND DETAILS
M1-M10	BRIDGE PLANS & DETAILS
P1-P2	ESCP & IN-RIVER WORK PLAN

As-Built Plans

CONTRACTOR: SE ROADBUILDERS, INC.  
 PROJECT ENGINEER: JOHN HOLLATZ  
 BEGIN DATE: APRIL 6, 2003  
 END DATE: NOVEMBER 21, 2003  
 TOTAL CONTRACT AMOUNT: \$ 898,711.76

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. *[Signature]* Date: 1/14/04



VICINITY MAP

#### PROJECT SUMMARY

LENGTH OF PEDESTRIAN BRIDGE	=	482'-4"
LENGTH OF PATH	=	300'
LENGTH OF GRADING	=	300'
LENGTH OF PAVING	=	300'
WIDTH OF PAVING	=	10'

#### THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:

A-1      D-01.02      D-04.20      E-00.00      E-13.00

PATH: Q:\Sgy\68238\PlanSet\A1\_TITLEBLOCK.dwg  
 Mon, 13/Jan/03 02:46PM bwbenett  
 PLOT: PSPACE OR MSPACE: 1000mm=1m(F)      TAB: TSHT

**STATE OF ALASKA**  
 DEPARTMENT OF TRANSPORTATION  
 & PUBLIC FACILITIES  
 STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION

RECOMMENDED FOR APPROVAL:  
*[Signature]*      1/14/03  
 PATRICK J. KEMP      DATE  
 REGIONAL PRE-CONSTRUCTION ENGINEER

APPROVED:  
*[Signature]*      1/23/03  
 ROBERT DOLL      DATE  
 DIRECTOR, SOUTHEAST REGION  
 CERTIFIED TRUE & CORRECT AS-BUILT OF ACTUAL FIELD CONDITION:

CONSTRUCTION PROJECT MANAGER      DATE

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	68238 ~ NH-097-2(14)	2003	A1	21

Estimate of Quantities			
ITEM No.	DESCRIPTION	UNIT	QUANTITY
201(3B)	CLEARING AND GRUBBING	LUMP SUM	ALL REQ'D.
203(5)	BORROW	CUBIC YARD	500 886.40
301(1)	AGGREGATE BASE COURSE, CD 4	CY M-TON	100 110
501(1)	CLASS A CONCRETE, CD 3	LUMP SUM	ALL REQ'D.
502(1)	PRESTRESSED CONCRETE STRUCTURAL MEMEBERS	EACH	12
503(1)	REINFORCING STEEL	LUMP SUM	ALL REQ'D.
503(2)	EPOXY COATED REINFORCING STEEL	LUMP SUM	ALL REQ'D.
505(5A)	STRUCTURAL STEEL PILES, FURNISHED (HP 14 x 117 PILES)	LINEAR FOOT	240
505(5B)	STRUCTURAL STEEL PILES, FURNISHED (24" DIA. x 1/2" PIPE PILES)	LINEAR FOOT	650
505(6A)	STRUCTURAL STEEL PILES, DRIVEN (HP 14 x 117 PILES)	EACH	4
505(6B)	STRUCTURAL STEEL PILES, DRIVEN (24" DIA. x 1/2" PIPE PILES)	EACH	10
507(1)	METAL BRIDGE RAILING	LINEAR FOOT	1016
603(17-12)	12 INCH PIPE	LINEAR FOOT	50
608(3)	ASPHALT SIDEWALK	SQUARE YARD	500 613.80
611(1)	RIPRAP, CLASS III	CUBIC YARD	520 459.90
618(1)	SEEDING	ACRE	0.20 0.171
619(2)	MATTING	SQ. YARD	1,000 500
620(1)	TOPSOIL	SQ. YARD	1,000 826.20
628(1)	BOLLARDS	EACH	4
629(1)	TIMBER PEDESTRIAN RAILING	LINEAR FOOT	140
631(2)	GEOTEXTILE, EROSION CONTROL, CLASS 1	SQ. YARD	380 357
633(1)	GEOTEXTILE, SEDIMENT CONTROL	LINEAR FOOT	360 0
640(1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQ'D.
641(1)	EROSION & POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQ'D.
641(2)	EROSION & POLLUTION CONTROL	CONT. SUM	ALL REQ'D. 0
642(1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQ'D.
643(2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQ'D.
643(3)	PERMANENT CONSTRUCTION SIGNS	LUMP SUM	ALL REQ'D.
643(15)	FLAGGING	CONT. SUM	ALL REQ'D. 0
643(25)	TRAFFIC CONTROL DEVICES	CONT. SUM	ALL REQ'D. 0

ADDITIVE ALTERNATE 'A'			
652(1)	LIGHTING SYSTEM	LUMP SUM	ALL REQ'D.

505(12)	DYNAMIC PILE TEST, CD 1	LUMP SUM	ALL REQ'D.
505(13)	PILE WELD TESTING CREDIT, CD 1	LUMP SUM	ALL REQ'D.

Basis of Estimate		
ITEM No.	ITEM	ESTIMATING FACTOR
201(3B)	CLEARING AND GRUBBING	0.25 ACRE

Estimating Factors		
ITEM No.	ITEM	ESTIMATING FACTOR
203(5)	BORROW	1.85 TON/CY
301(1)	AGGREGATE BASE COURSE	1.95 TON/CY
608(3)	ASPHALT SIDEWALK	0.12 TON/SY

Pipe Summary							
STATION	OFFSET	STATION	OFFSET	INLET ELEV.	OUTLET ELEV.	LENGTH	REMARKS
10+40	9.3 LT	10+40	10.7 RT	79.00	78.50	20.0	12" PIPE, S=2.5%
17+10	9.6 LT	17+10	20.4 RT	80.70	79.00	30.0	12" PIPE, S=5.7%

UPDATED 11/05/2002 3:54 PM

### Survey Control Data

#### HORIZONTAL CONTROL:

The basis of bearing for this project is N45°32'52"W from the centerline monument at 1st Avenue and Broadway (#1) to the centerline monument at 1st Avenue and State Street (#2).  
 Project specific basis of bearing for the Skagway River Bridge project is N44°21'18"E from the centerline monument at 1st Avenue and State Street (#2) to the centerline monument at 11th Avenue and State Street (#52).

Local coordinates are as follows:  
 POINT 1 NORTH: 99747.1353' EAST: 50257.7473' EL: 25.39'  
 POINT 2 NORTH: 100000.0000' EAST: 50000.0000' EL: 24.56'  
 POINT 52 NORTH: 102002.0801' EAST: 51957.5003' EL: 40.45'  
 \*Elevations given for a check only. Please use "TBM B" for vertical basis.

This bearing was derived from DOT/PF as built plans. In addition, previous ties to NGS control monuments "T 187" and "SGY B2" indicate that the bearing basis is geodetic north and not grid north because the mean Corposcon convergence angle is within 5" of local computed bearing. These two NGS points are believed to have been destroyed during airport reconstruction.

Transformation parameters between local and NAD83 Alaska State Plane Zone 1 (US FT) are as follows:  
 Base point is #20 "NGS\_BC\_T-187"  
 Scale factor = 0.99999939  
 Convergence  $\angle = -1^{\circ}23'05''$   
 Local N = 100769.7922'  
 Local E = 49203.2045'  
 Grid N = 2787965.57516'  
 Grid E = 2377216.58873'

#### VERTICAL CONTROL:

The basis of vertical control for this project was R&M TBM B, a spike in a power pole on the NE side of the Skagway River Bridge with an accepted elevation of 80.68' above MLLW. R&M based their work on USC&GS tidal bench mark No. 4. They used the 1960 published elevation of 30.22' above MLLW. The 1985 published elevation for BM No. 4 is 30.73', or 0.51' higher.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. *[Signature]* Date 1/12/04

SKAGWAY RIVER  
 PEDESTRIAN BRIDGE  
 68238 ~ NH-097-2(14)

**Estimate of Quantities/  
 Survey Control Sheet**

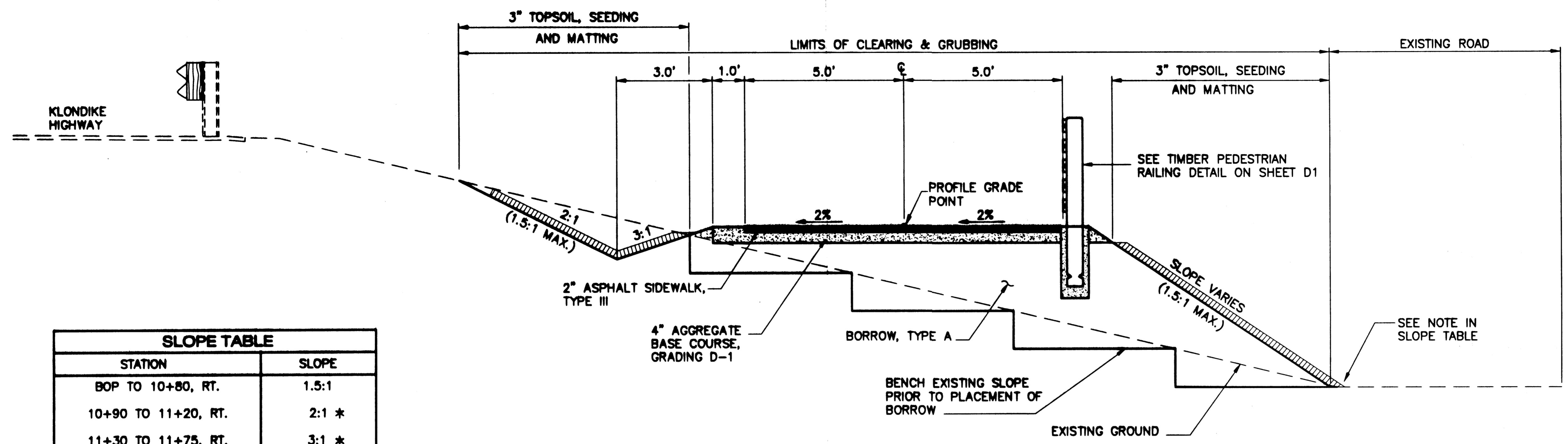
DESIGNED BY: JOEL OSBURN



CHECKED BY: LARS GREGOVICH  
 DRAWN BY: BERT BENNETT

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 & PUBLIC FACILITIES  
 STATEWIDE DESIGN & ENGINEERING  
 SERVICES DIVISION  
**SKAGWAY RIVER  
 PEDESTRIAN BRIDGE**

Estimate of Quantities	
PROJECT DESIGNATION NUMBER	
68238 / NH-097-2(14)	
STATE	YEAR
ALASKA	2003
SHEET NUMBER	TOTAL SHEETS
B1	21



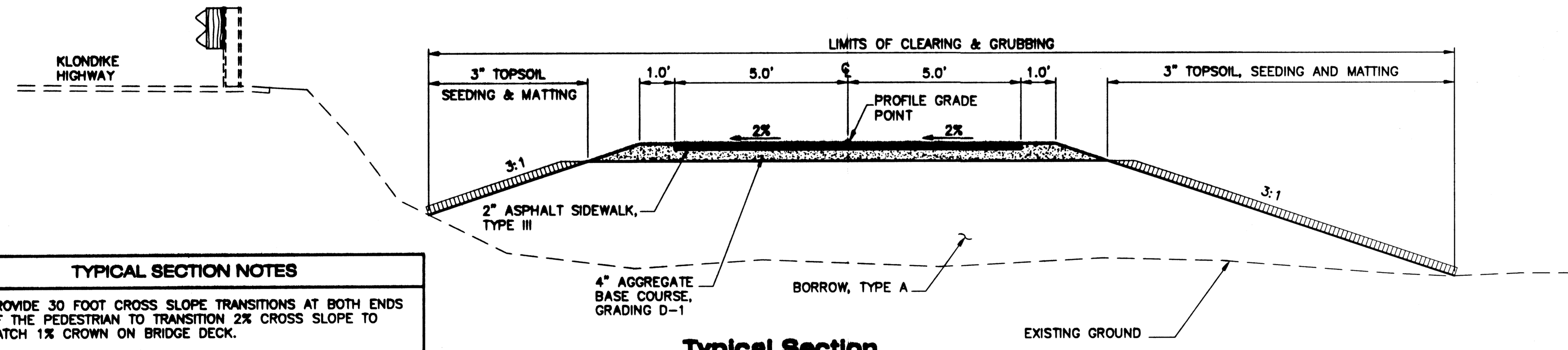
**Typical Section**  
 Sta. 9+83 TO 11+63

SLOPE TABLE	
STATION	SLOPE
BOP TO 10+80, RT.	1.5:1
10+90 TO 11+20, RT.	2:1 *
11+30 TO 11+75, RT.	3:1 *

\* NOTE:  
 FROM STA. 10+80 TO STA. 11+40 THE TOE OF SLOPE CATCH POINT SHOULD FALL ON THE EAST EDGE OF GRAVEL ROAD.

ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION

**SKAGWAY RIVER  
 PEDESTRIAN BRIDGE  
 68238 - NH-097-2(14)**  
**Typical Sections**

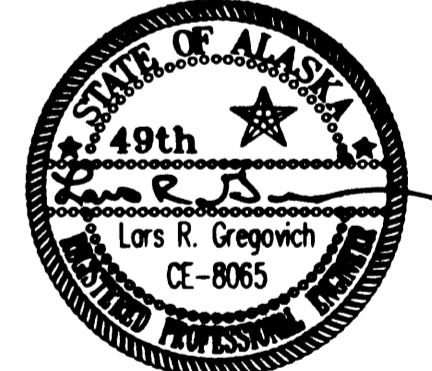


**Typical Section**  
 Sta. 16+68 TO 17+66

TYPICAL SECTION NOTES
1. PROVIDE 30 FOOT CROSS SLOPE TRANSITIONS AT BOTH ENDS OF THE PEDESTRIAN TO TRANSITION 2% CROSS SLOPE TO MATCH 1% CROWN ON BRIDGE DECK.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Eng. *[Signature]* Date 7/12/04

DESIGNED BY: JOEL OSBURN



CHECKED BY: LARS GREGOVICH

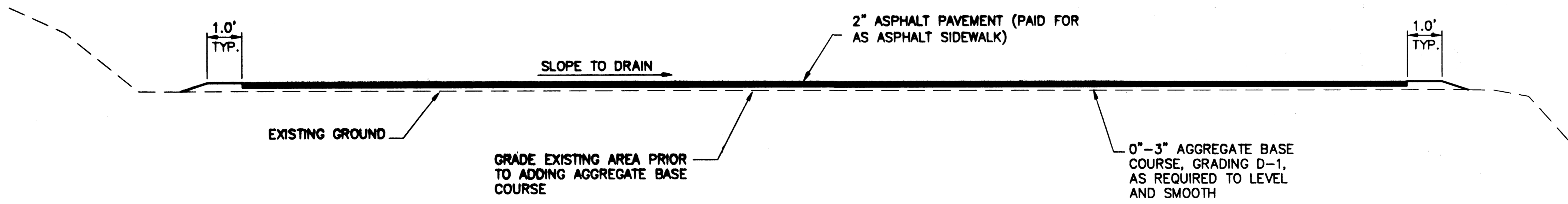
DRAWN BY: BERT BENNETT

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
 STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION  
**SKAGWAY RIVER PEDESTRIAN BRIDGE**

**Typical Sections**

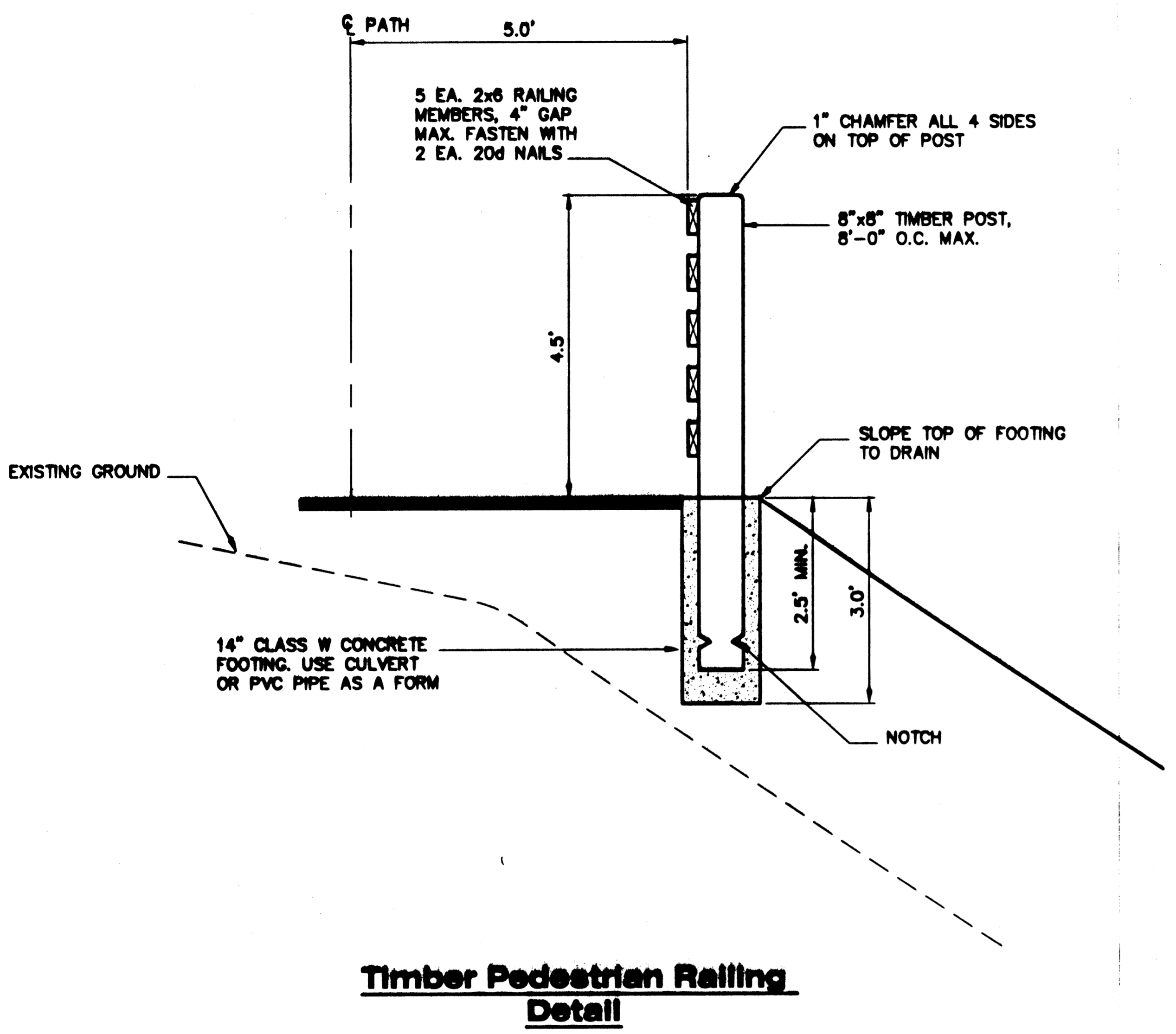
PROJECT DESIGNATION NUMBER  
**68238 / NH-097-2(14)**

STATE	YEAR
<b>ALASKA</b>	<b>2003</b>
SHEET NUMBER	TOTAL SHEETS
<b>C1</b>	<b>21</b>

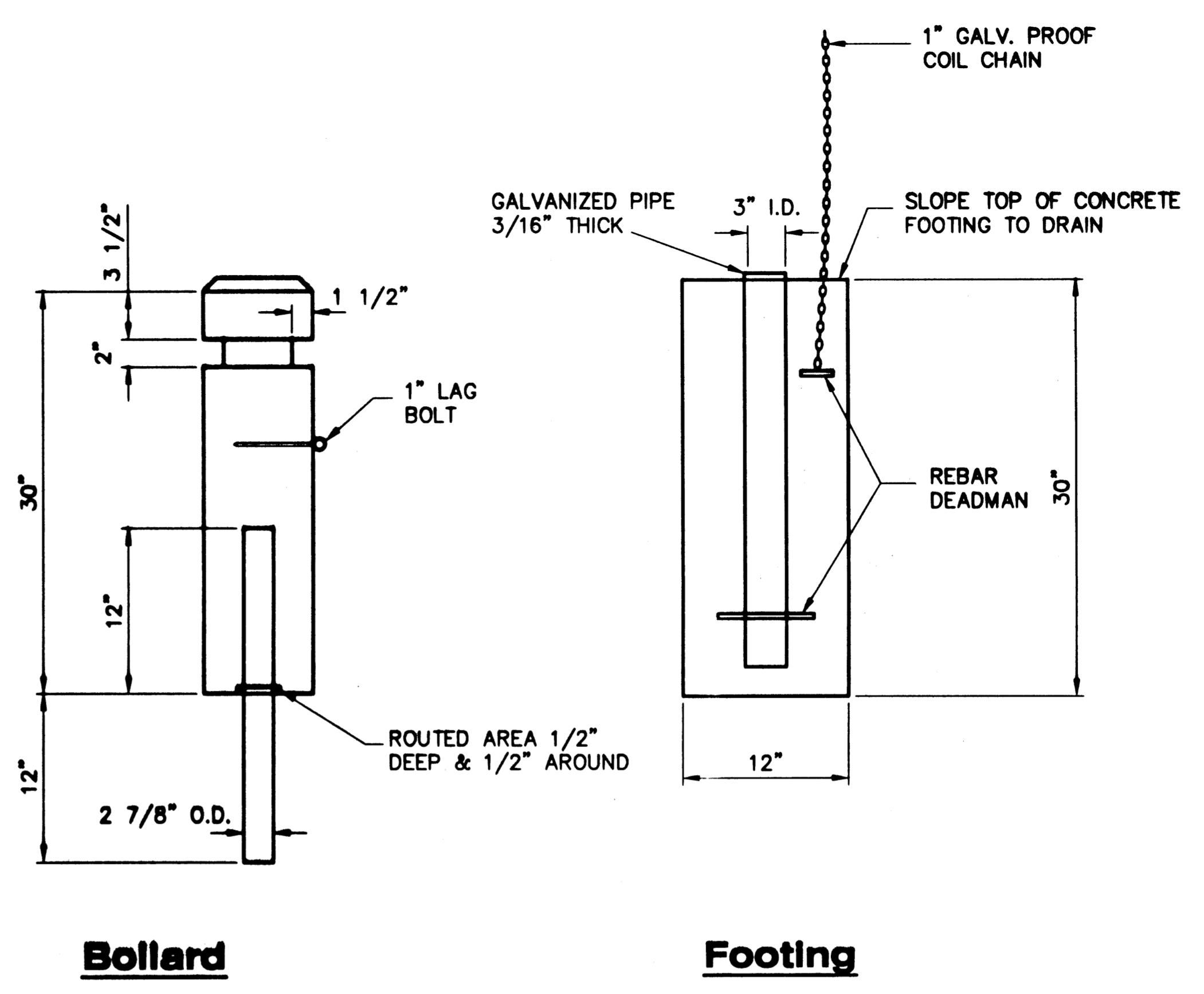


**Section A-A**

ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION



**Timber Pedestrian Railing Detail**



**Bollard** **Footing**

**Bollard Details**

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. *[Signature]* Date: 7/12/04

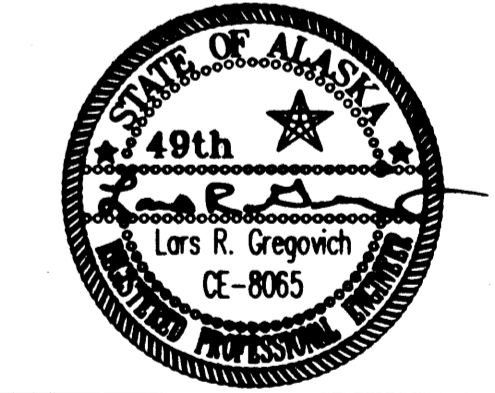
**Bollard Notes:**

1. LUMBER~PRESSURE TREATED 10"x10" HEM-FIR #2 OR BETTER.
2. BOLLARD PIPE 3/16" THICK, O.D. 2 7/8" SECURED INTO PREDRILLED 2 7/8" x 12" HOLE WITH POLYURETHANE MARINE ADHESIVE 3M-6501.
3. BOLLARD SLEEVE PIPE 3/16" THICK I.D. 3", BOTTOM SHOULD BE PLUGGED OR CAPPED TO PREVENT CONCRETE FROM SEEPING INSIDE.
4. PROOF COIL CHAIN~SHOULD REACH TO LEVEL OF 1" LAG BOLT SECURED BY LOCK.
5. ORIENT CHAIN PARALLEL TO TRAFFIC/PED FLOW.

SKAGWAY RIVER  
 PEDESTRIAN BRIDGE  
 68238 ~ NH-097-2(14)

**Miscellaneous Details**

DESIGNED BY: JOEL OSBURN



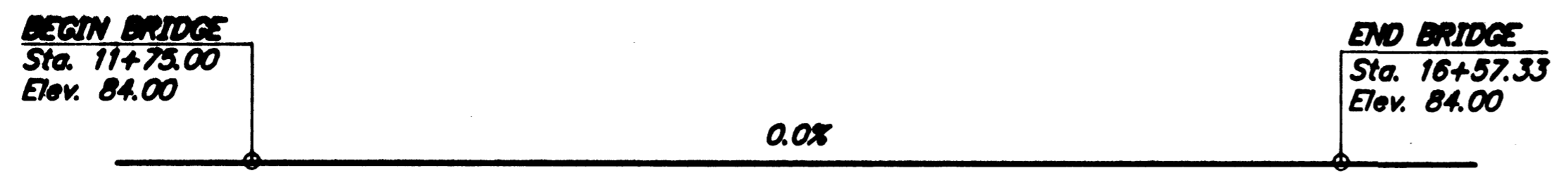
CHECKED BY: LARS GREGOVICH  
 DRAWN BY: BERT BENNETT

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
 STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION  
 SKAGWAY RIVER PEDESTRIAN BRIDGE

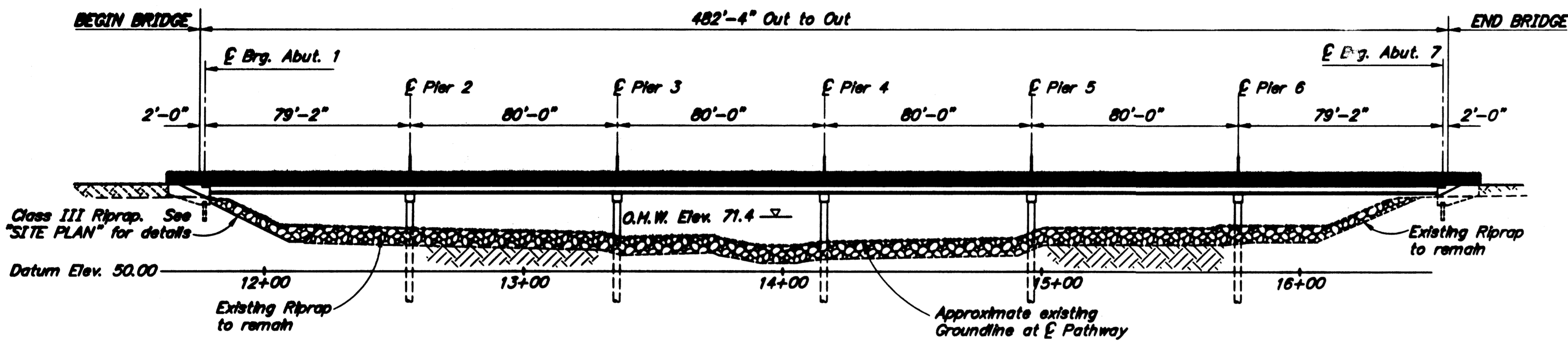
**Misc. Details**

PROJECT DESIGNATION NUMBER	
68238 / NH-097-2(14)	
STATE	YEAR
ALASKA	2003
SHEET NUMBER	TOTAL SHEETS
D1	21

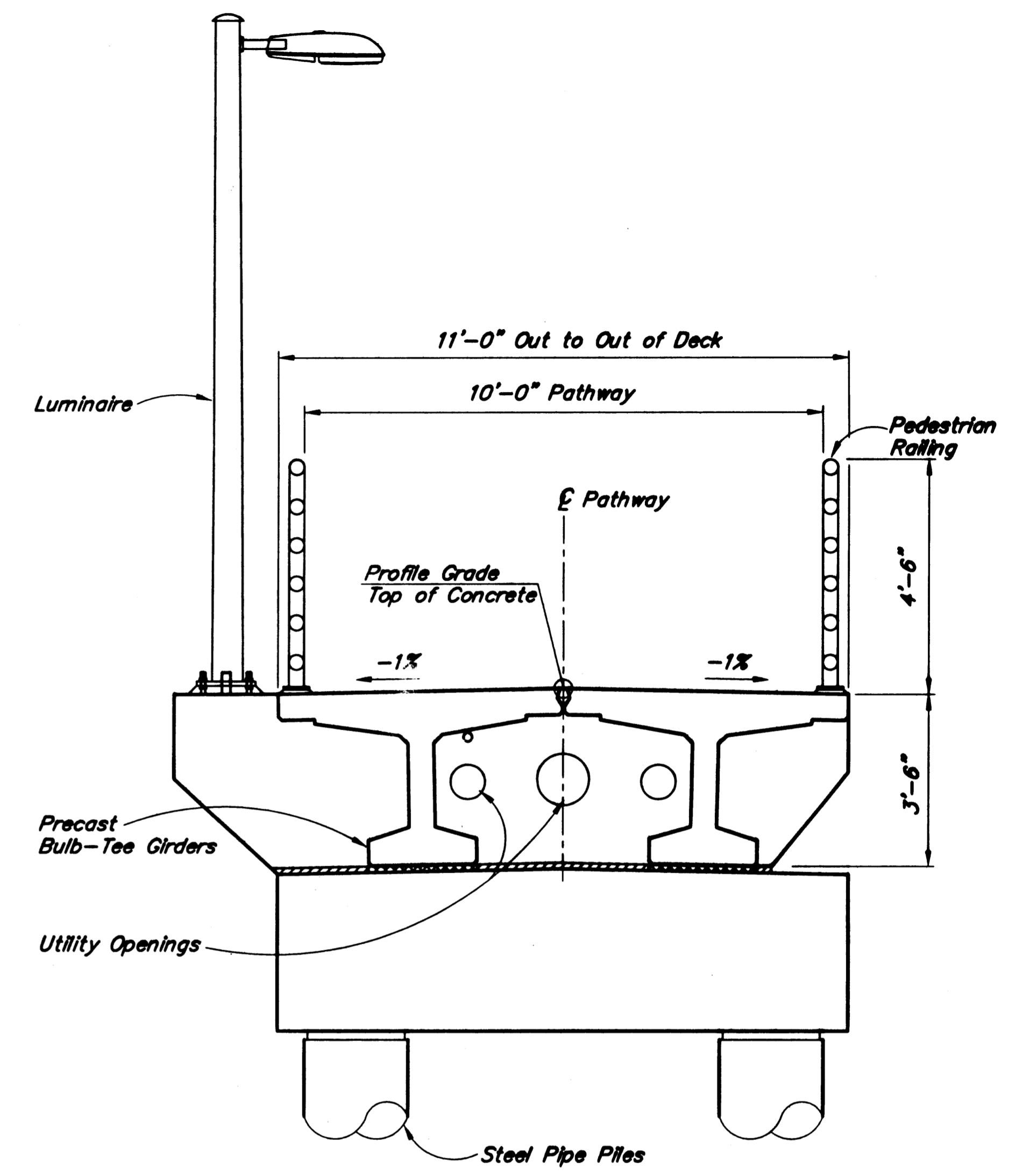
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ALASKA	NH-097-2(14)/68238	2003	MI	



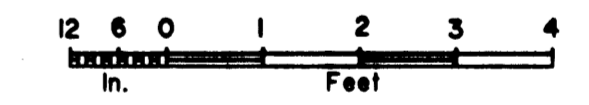
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**ELEVATION**

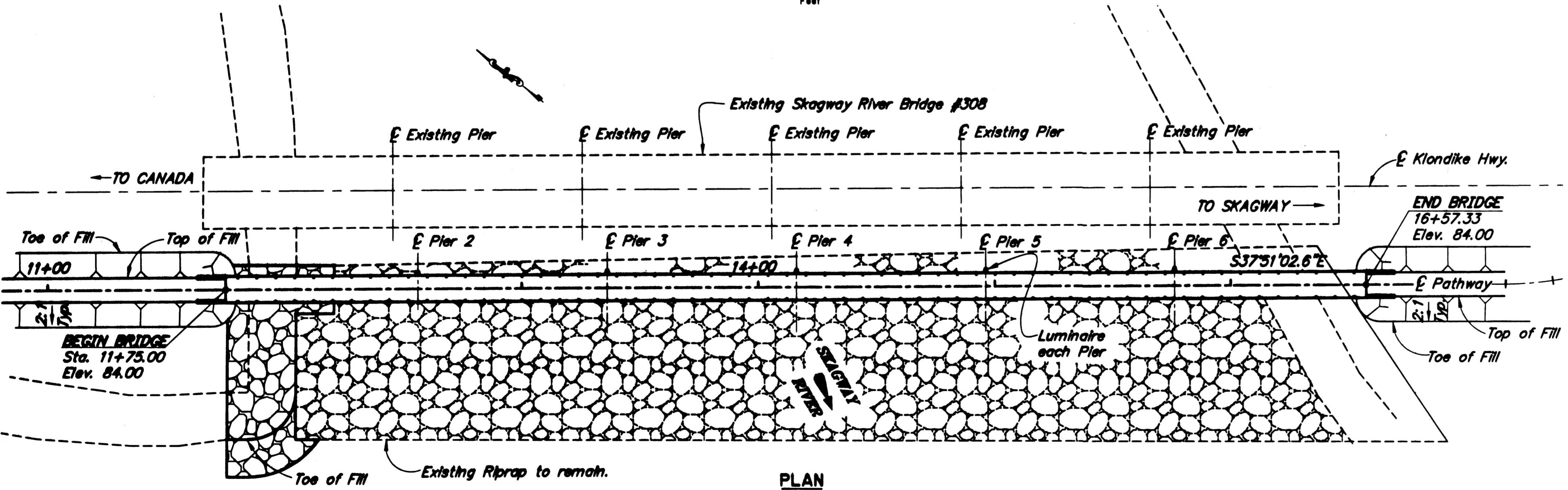


**TYPICAL SECTION**



Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj. Engr. *[Signature]* Date 7/12/04



**PLAN**



DRAWING INDEX	
TITLE	DWG. NO.
GENERAL LAYOUT	1
SITE PLAN	2
ABUTMENTS	3
PIERS	4
FRAMING PLAN	5
ABUTMENT DIAPHRAGM	6
PIER DIAPHRAGM	7
GIRDERS	8
GIRDER DETAILS	9
PEDESTRIAN RAILING	10

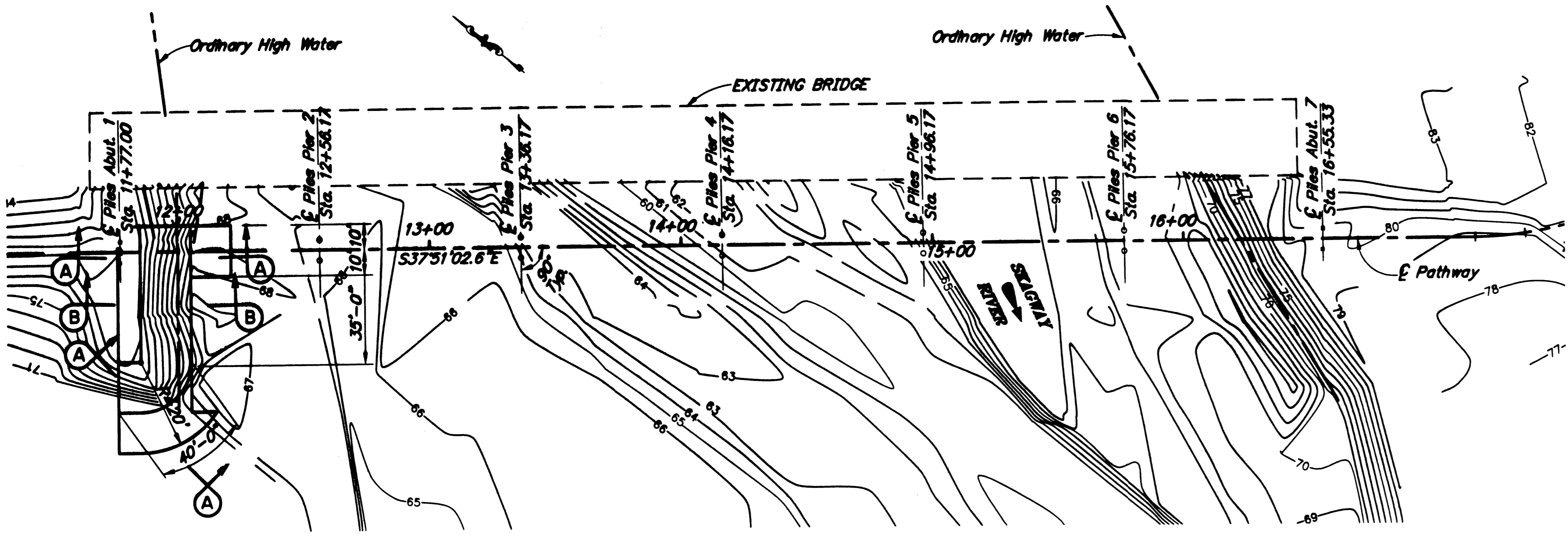
DESIGNED BY: L. Goring, P.E.	CHECKED: E. Marx	LAYOUT BY: L. Goring	CHECKED BY: E. Marx
DRAWN BY: L. Goring	CHECKED: E. Marx	SPECIFICATIONS BY: L. Goring	PLANS & SPEC. COMPARED: E. Marx
QUANTITIES BY: L. Goring	CHECKED: E. Marx	APPROVAL RECOMMENDED BY: Richard Pratt, P.E.	

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
BRIDGE SECTION

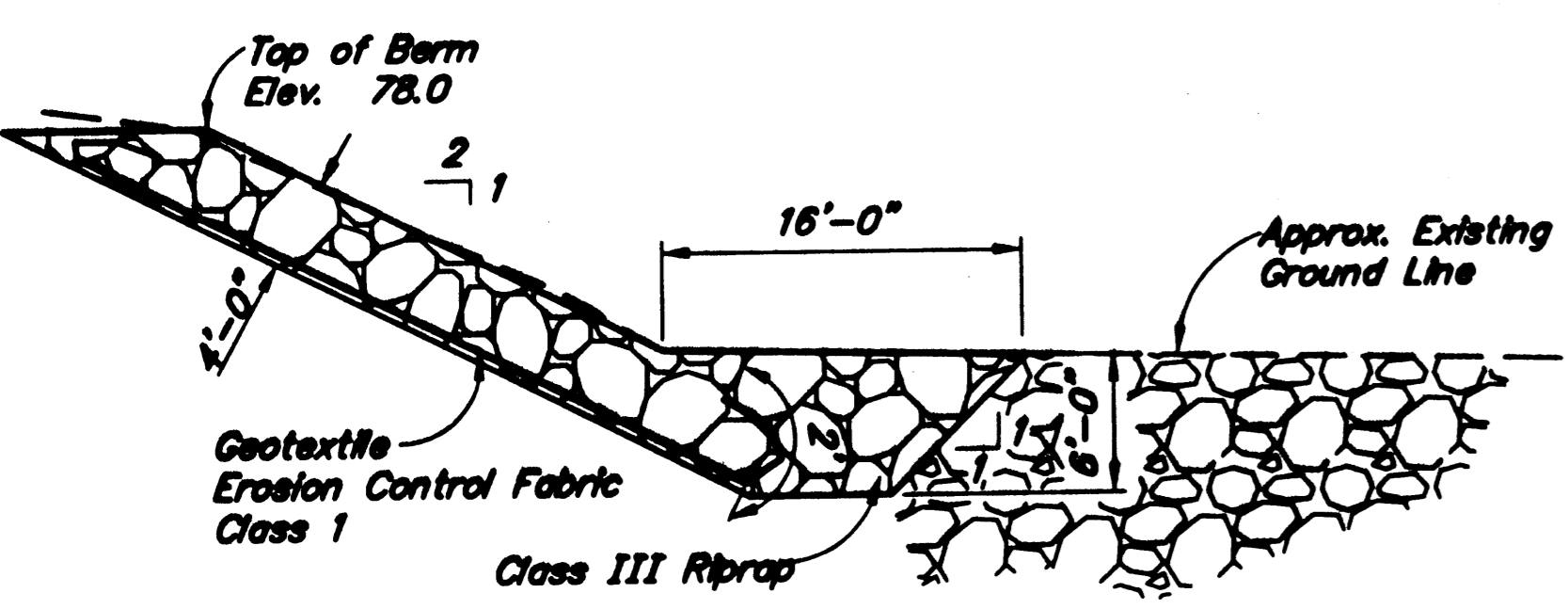


**SKAGWAY RIVER PEDESTRIAN BRIDGE**  
ROUTE  
**GENERAL LAYOUT**

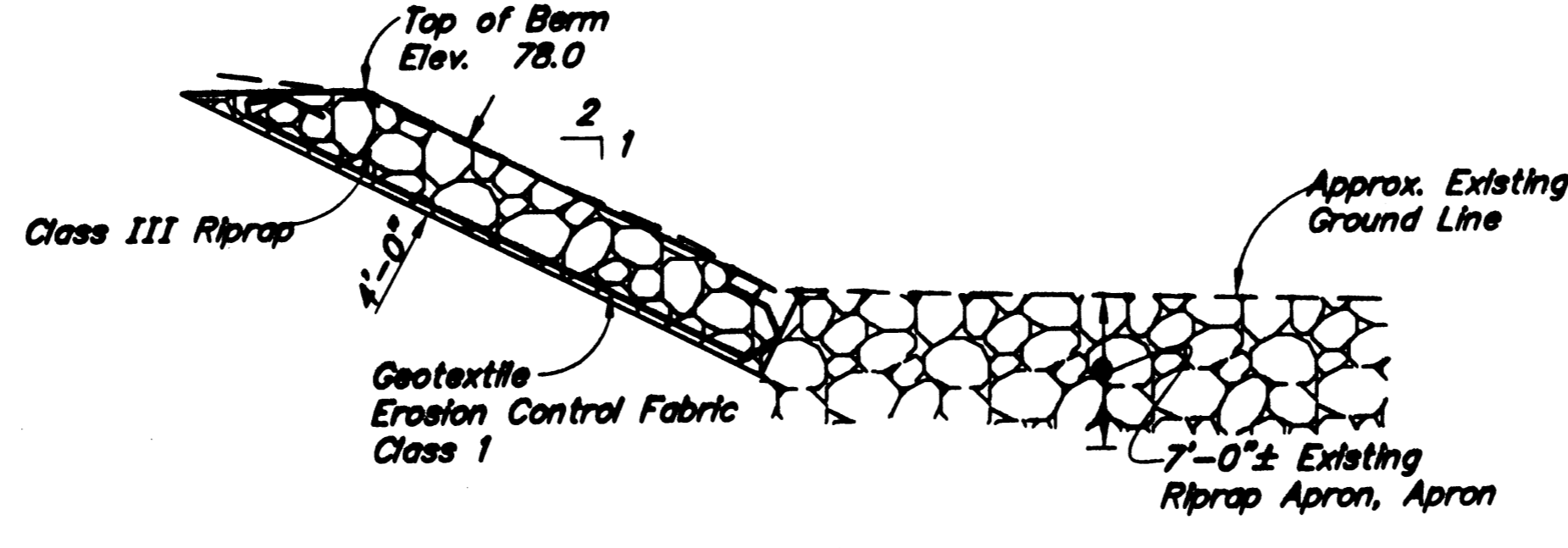
BRIDGE NO. 2100  
DWG. NO. 1



**SITE PLAN**  
 0 20 40 60  
 Feet



**SECTION A-A**  
 0 4 8 12  
 Feet



**SECTION B-B**  
 0 4 8 12  
 Feet

**GENERAL NOTES**

Design:.....AASHTO LRFD Bridge Design Specifications Second Edition 1998 with latest Interim specifications.

Live Load:.....85 psf Pedestrian Load or 10 kip service vehicle, whichever produced maximum effect.

Dead Load:.....Includes 25 psf for all paving.

Seismic:.....Acceleration Coefficient, A = 0.12g  
 Soil Type II, S = 1.2  
 Liquefaction Potential = Low  
 AASHTO 90% probability of not being exceeded in 50 years.

Concrete:.....Class "A" Concrete unless otherwise noted.  $f_c = 4000$  psi

Reinforcing Steel:.....ASTM A706.  $F_y = 60,000$  psi

Structural Steel:.....ASTM A709, Grade 36 unless otherwise noted.  $F_y = 36,000$  psi

Galvanize all structural steel except where noted otherwise.

Prestressed Concrete:.....See "GIRDER" Drawing.

Piling:.....ASTM A709, Grade 50.  $F_y = 50,000$  psi  
 or API(5L) PSL2, Grade X52  
 Pile tip reinforcement is required for all piles.  
 24"  $\phi$  x 0.625" ASTM A252, GRADE 3

FOUNDATION INFORMATION						
LOCATION	PILE TYPE	DESIRABLE TIP ELEVATION	ESTIMATED TIP ELEVATION	ULTIMATE CAPACITY	ULTIMATE UPLIFT CAPACITY	ALLOWABLE CAPACITY
Abutments	HP14x117	17.0 ft.	17.0 ft.	385 kips	280 kips	110 kips
Piers	24" $\phi$ x 1/2" Pipe Pile	13.0 Ft.	13.0 ft.	525 kips	365 kips	150 kips

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. *[Signature]* Date 7/12/04

HYDRAULIC & HYDROLOGIC SUMMARY			
Flood Frequency (Yr.)	50 Yr.	100 Yr.	500 Yr.
Exceedance Probability (%)	2	1	0.2
Design Discharge (ft. <sup>3</sup> /sec)	21,000	38,000	63,000
Design High Water (ft.)	74.03	75.99	78.53
Anticipated Add'l Backwater (ft.)	-	0	0
Contraction Scour (ft.)	-	0	0
Abutment Scour (ft.)	-	N/A	N/A
Pier Scour (ft.)	-	5.6	5.8

Drainage Area for this crossing: ..... 126 Square miles.

ESTIMATE OF QUANTITIES					
ITEM NO.	ITEM	UNIT	SUBST.	SUPERST.	TOTAL
501(1)	Class A Concrete	LS-CY	82	18	100
501(7)	Prestressed Concrete Structural Member (3'-6" deep x 79'-4" Decked Bulb Tee)	EA	—	12	12
503(1)	Reinforcing Steel	LS-LB	12,900	—	12,900
503(2)	Epoxy Coated Reinforcing Steel	LS-LB	640	3,070	3,710
505(5A)	Furnish Structural Steel Piles (HP14x117)	LF	240	—	240
505(5B)	Furnish Structural Steel Piles (24" dia. x 1/2" wall Pipe Piles) (24" $\phi$ x 0.625")	LF	647	—	647
505(6A)	Drive Structural Steel Piles (HP14x117)	EA	4	—	4
505(6B)	Drive Structural Steel Piles (24" dia. x 1/2" wall Pipe Piles) (24" $\phi$ x 0.625")	EA	10	—	10
507(2)	Pedestrian Railing	LF	—	1,016	1,016
611(1)	Rip Rap, Class III	CY	520	—	520
631(2)	Geotextile Erosion Control, Class 1	SY	380	—	380

Item numbers are for reference only. Quantities shown are not necessarily the pay quantities nor the total quantity of the particular item.

PILE DRIVING LOG DATA					
ABUT. OR PIER #	PILE	PILE TYPE	LENGTH (ft)	TIP ELEV (ft)	BEARING CAPACITY COMPUTED
ABUT #1	LT	HP 14 x 117	60	17.00	245
ABUT #1	RT	HP 14 x 117	60	16.75	290
PIER #2	LT	24" $\phi$ x 0.625	65	13.00	300
PIER #2	RT	24" $\phi$ x 0.625	65	13.00	330
PIER #3	LT	24" $\phi$ x 0.625	65	13.25	305
PIER #3	RT	24" $\phi$ x 0.625	65	13.00	310
PIER #4	LT	24" $\phi$ x 0.625	65	13.00	305
PIER #4	RT	24" $\phi$ x 0.625	65	13.00	370
PIER #5	LT	24" $\phi$ x 0.625	65	13.00	295
PIER #5	RT	24" $\phi$ x 0.625	65	13.00	305
PIER #6	LT	24" $\phi$ x 0.625	65	13.17	360
PIER #6	RT	24" $\phi$ x 0.625	65	13.17	310
ABUT #7	LT	HP 14 x 117	60	17.00	270
ABUT #7	RT	HP 14 x 117	60	17.00	300

DESIGNED BY: L. Goring	CHECKED: E. Marx	HYDRAULICS BY: M. Muro	CHECKED BY: Engineer
DRAWN BY: L. Goring	CHECKED: E. Marx	FOUNDATIONS REVIEWED BY:	
QUANTITIES BY: L. Goring	CHECKED: E. Marx		

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION



**SKAGWAY RIVER PEDESTRIAN BRIDGE**

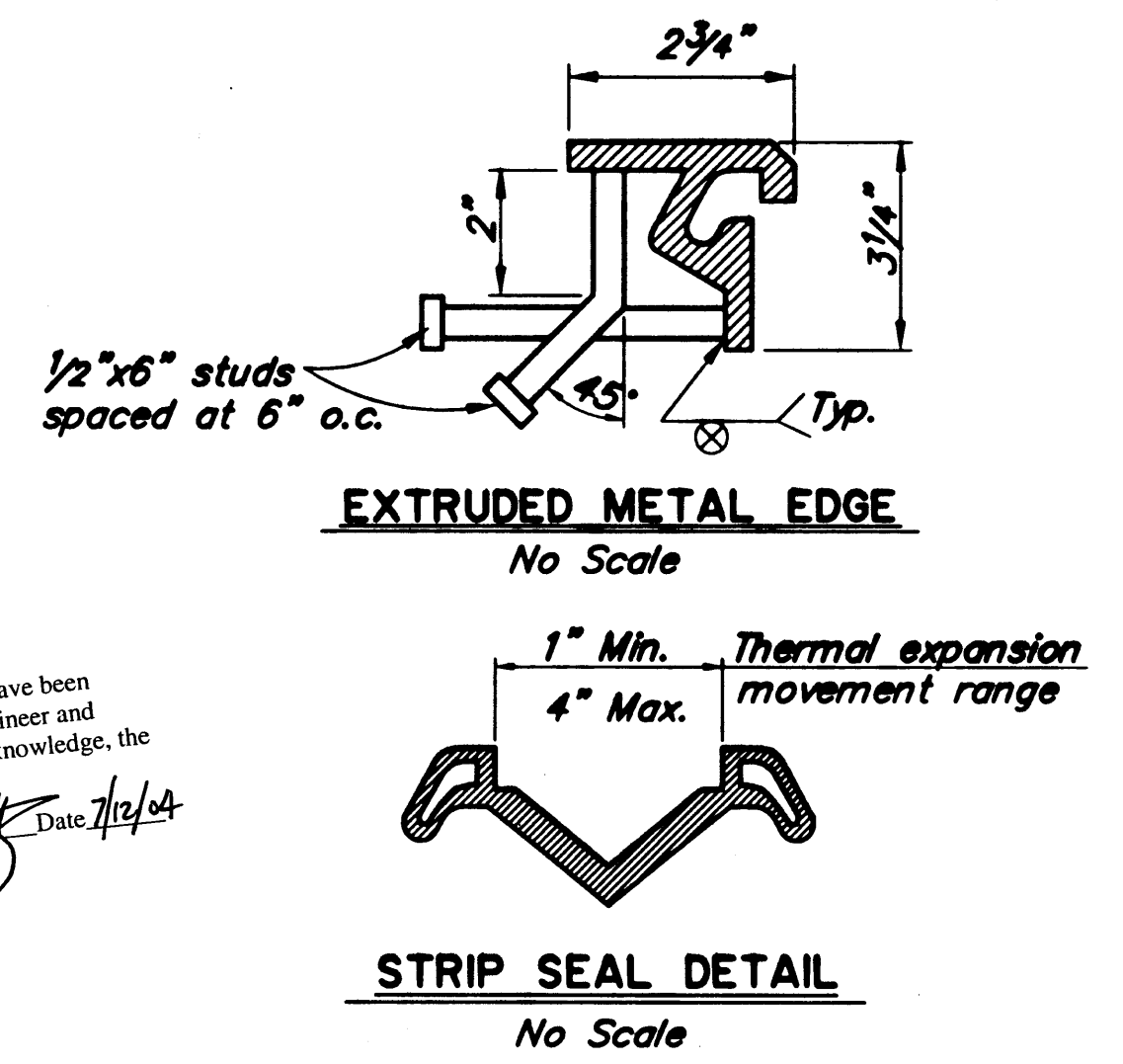
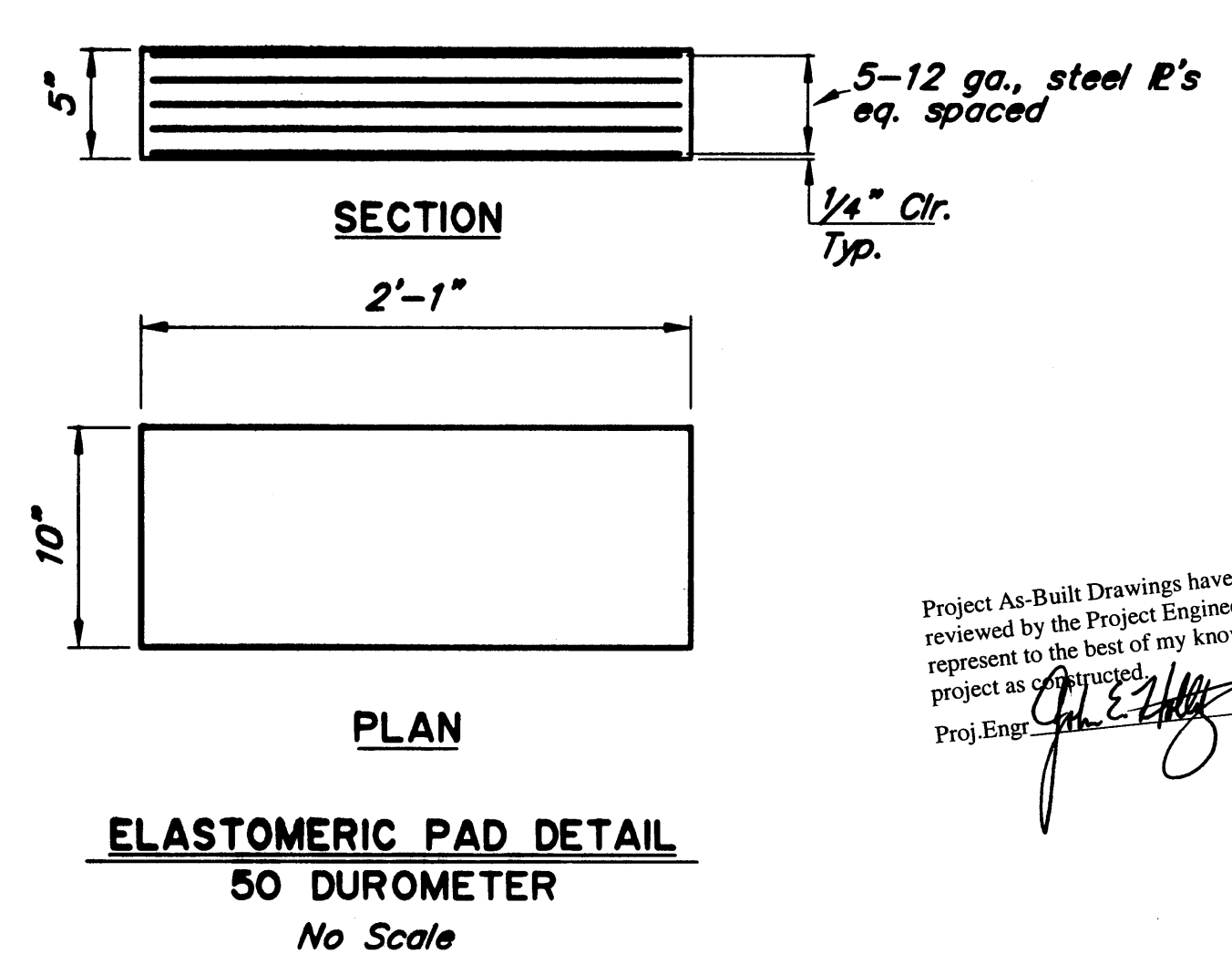
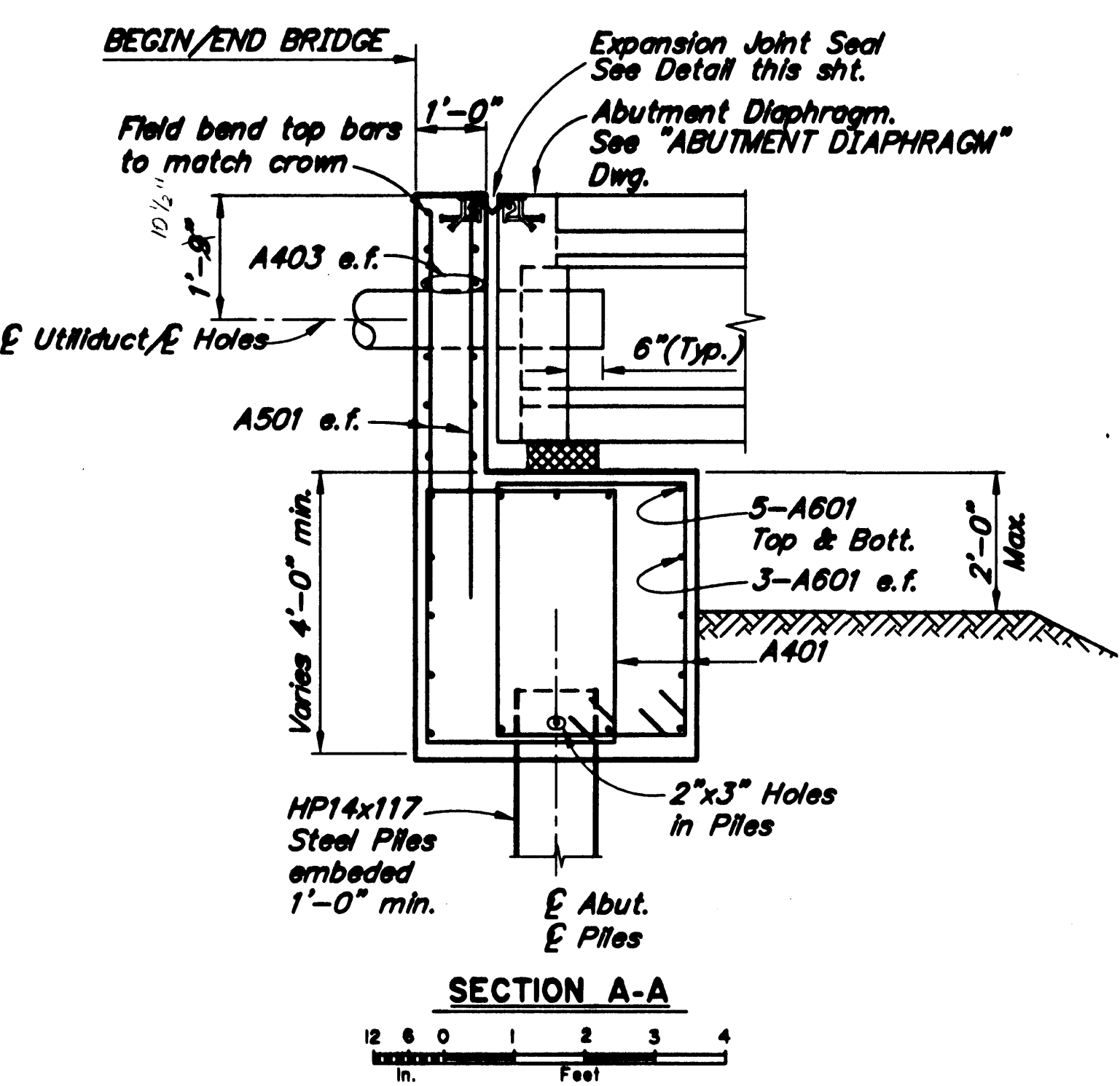
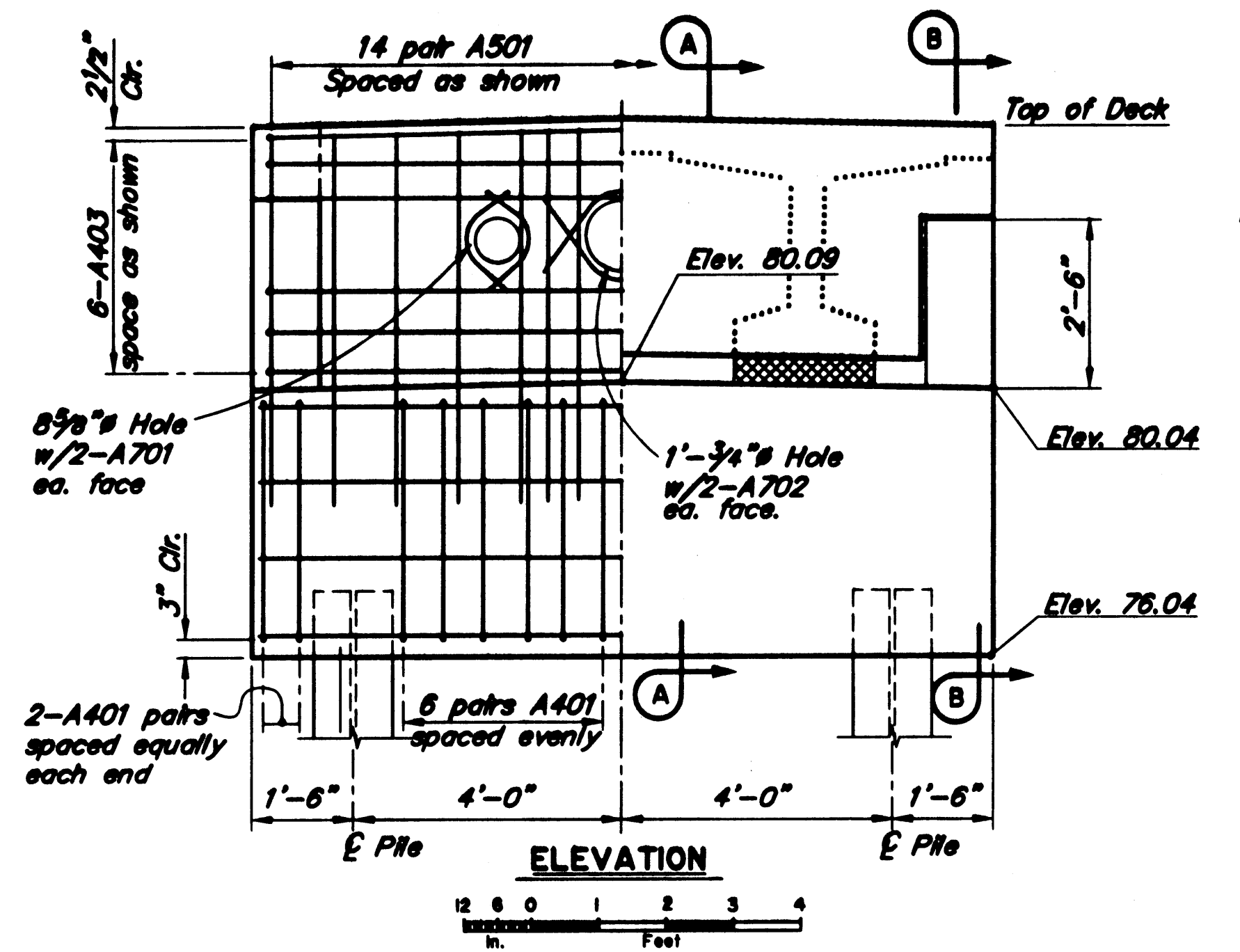
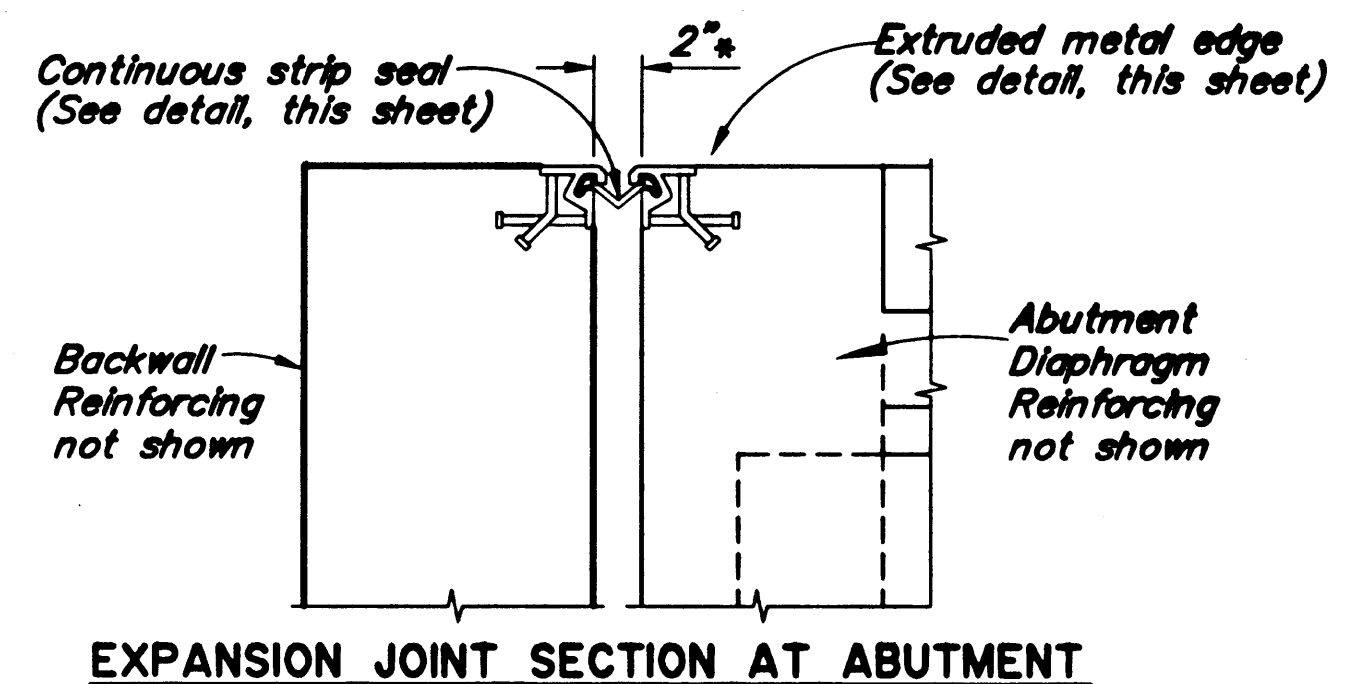
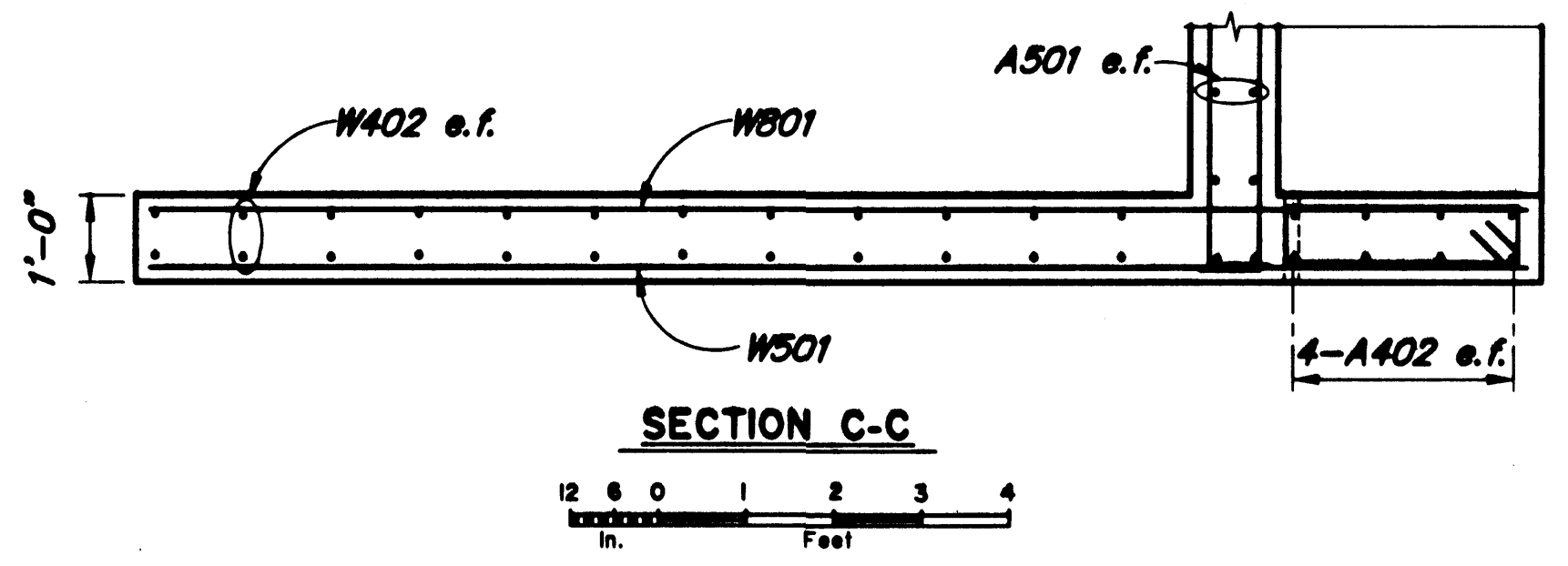
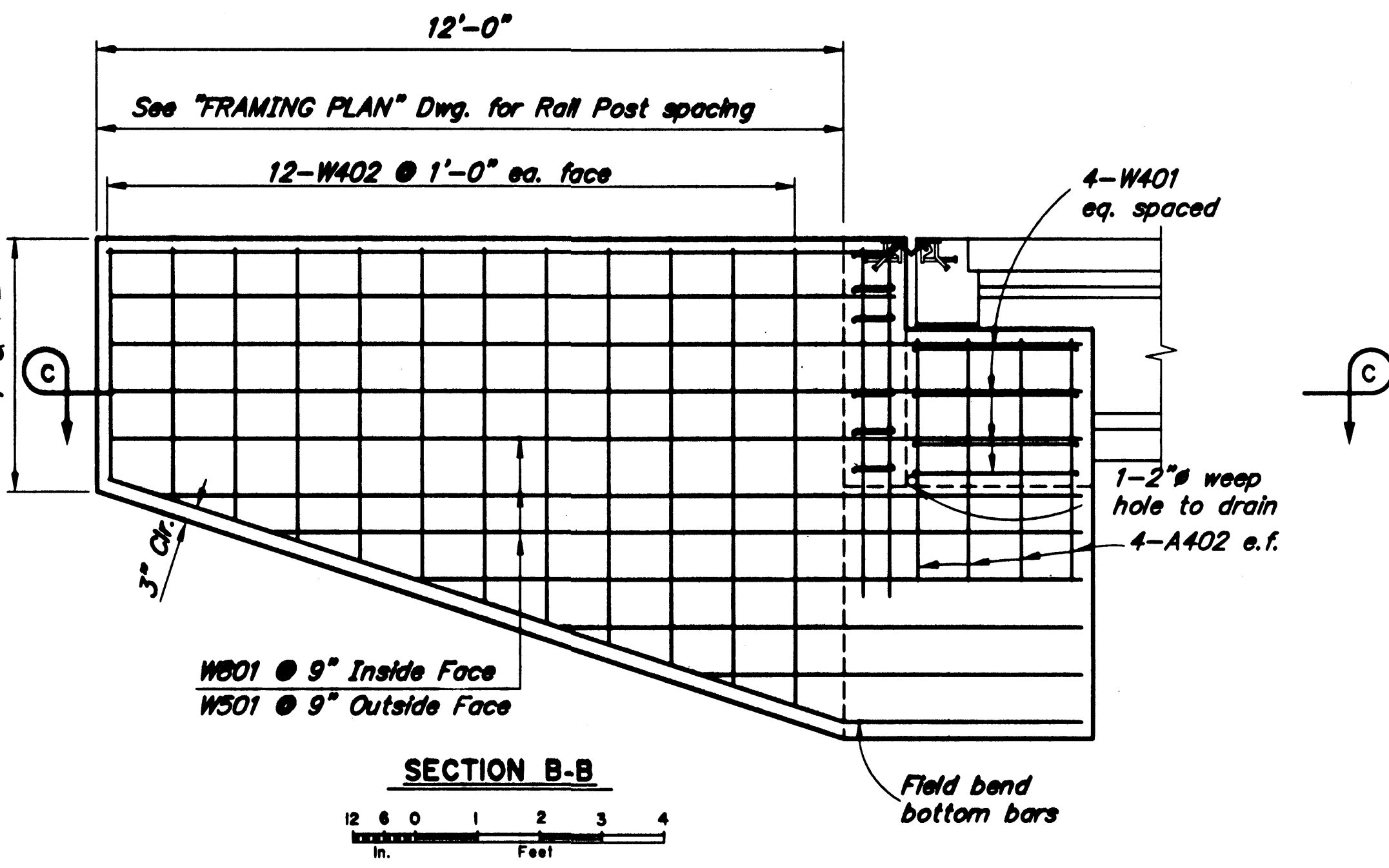
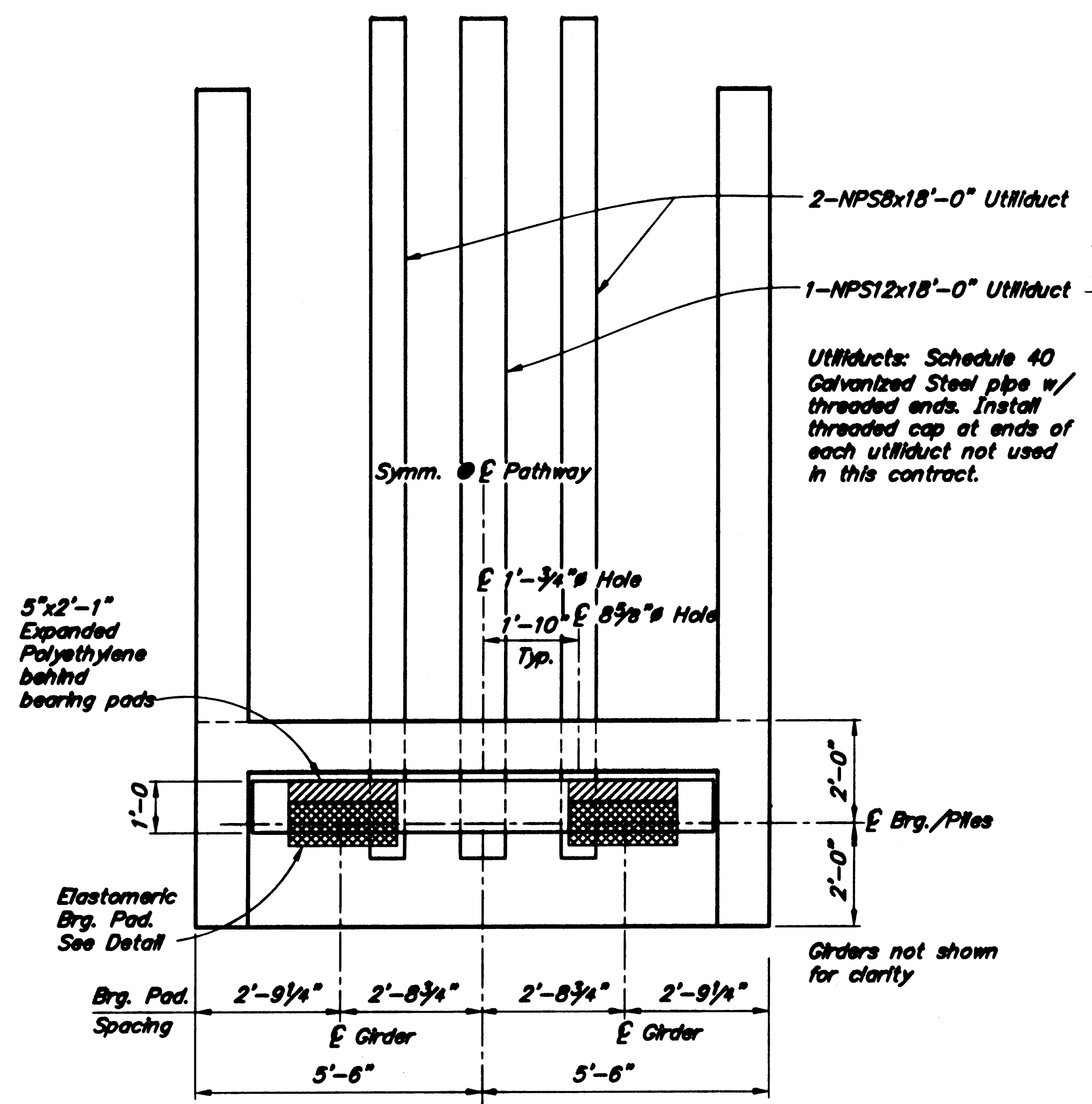
**SITE PLAN**

BRIDGE NO. 2100  
 DWG. NO. 2

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	NH-097-2(14)/68238	2003	M3	

REINFORCING STEEL-ONE ABUTMENT					
MARK	SIZE	NO.	LENGTH	TYPE	BENDING DIAGRAM
A401	4	32	13'-6"	Bent	
A402	4	16	4'-0"	-	
A403	4	12	12'-0"	Bent	
A501	5	28	5'-6"	-	
A601	6	16	10'-8"	-	
A701	7	8	2'-2"	Bent	
A702	7	4	3'-6"	Bent	
W401	4	8	7'-8"	Bent	
W402	4	48	Varies	-	
W501	5	22	Varies	-	
W801	8	22	Varies	-	

a - Epoxy Coated



Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. *[Signature]* Date 7/12/04

NOTES:  
 \* Gap @ temperature = 60° F. adjust gap as follows:  
 Increase gap 3/16" per 10° decrease  
 Decrease gap 3/16" per 10° increase

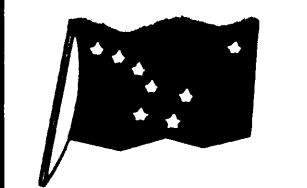
DESIGNED BY: <i>[Signature]</i>	L. Gehring	CHECKED: ELMER E. MAXX	E. Marx
DRAWN BY: <i>[Signature]</i>	L. Gehring	CHECKED: <i>[Signature]</i>	E. Marx
QUANTITIES BY: <i>[Signature]</i>	L. Gehring	CHECKED: ELMER E. MAXX	E. Marx

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION

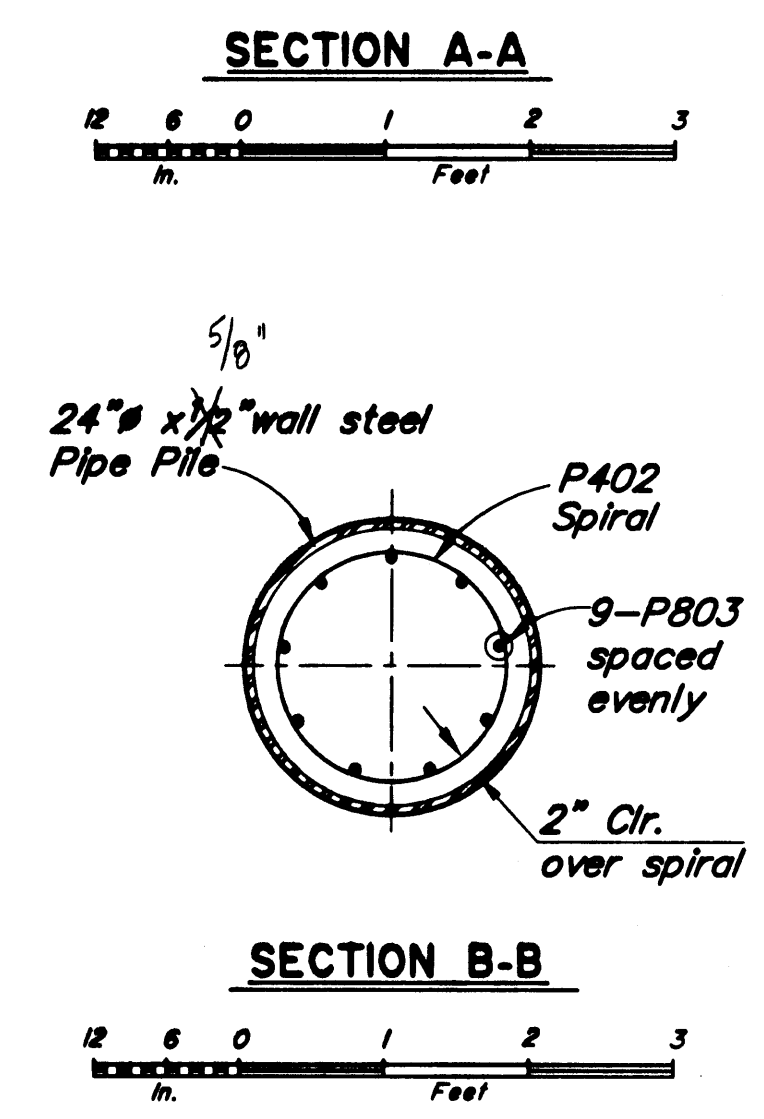
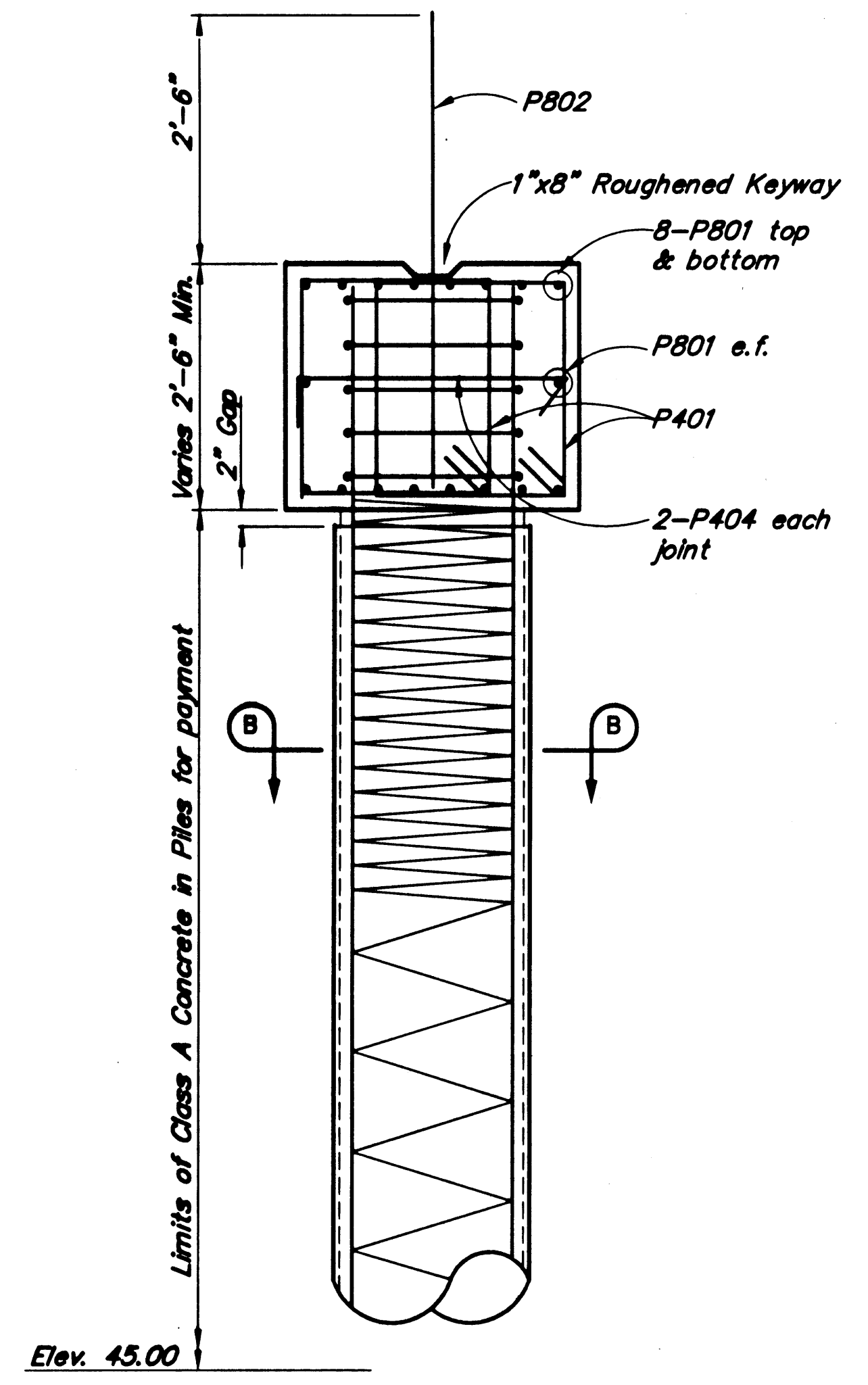
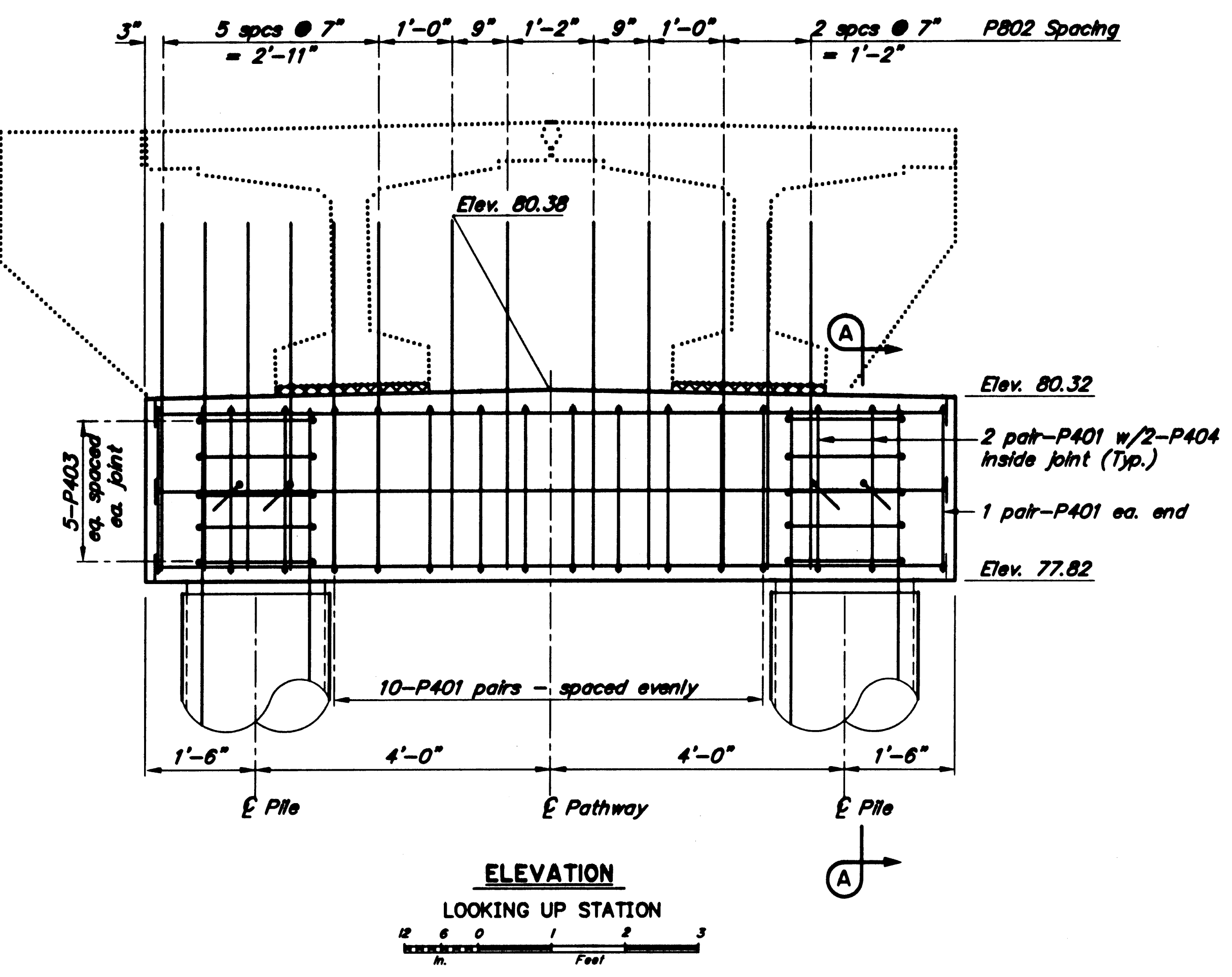
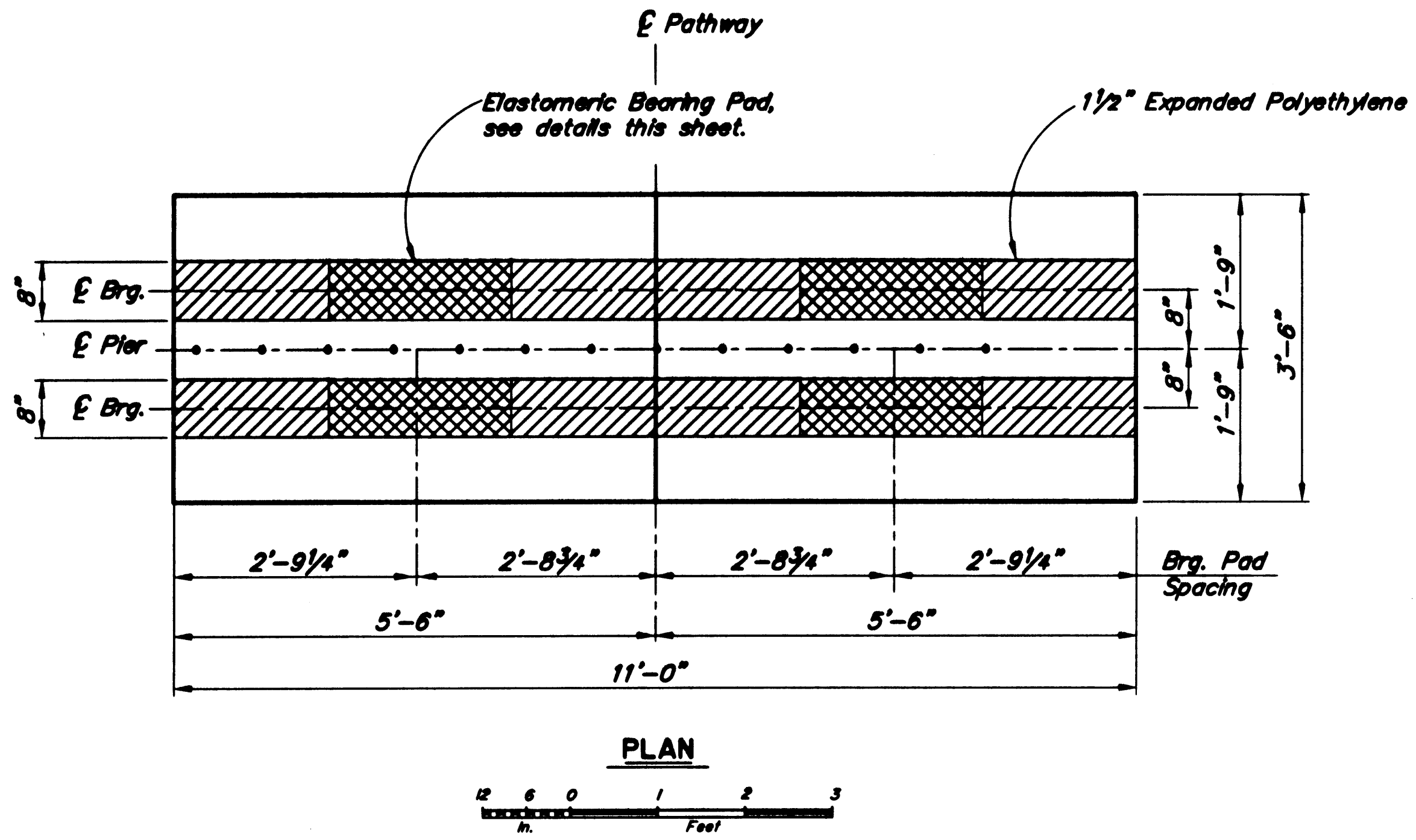


SKAGWAY RIVER PEDESTRIAN BRIDGE

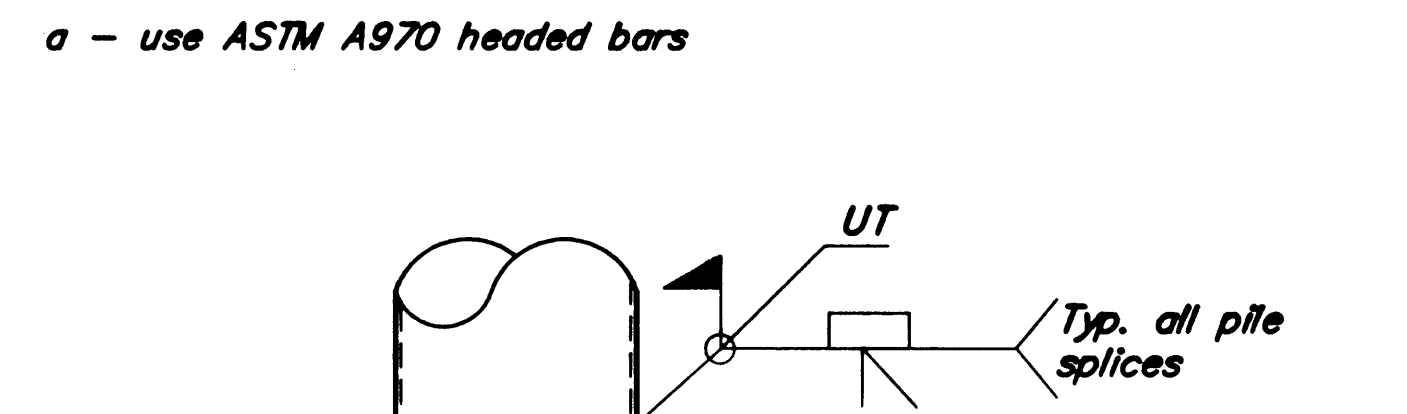
ABUTMENTS



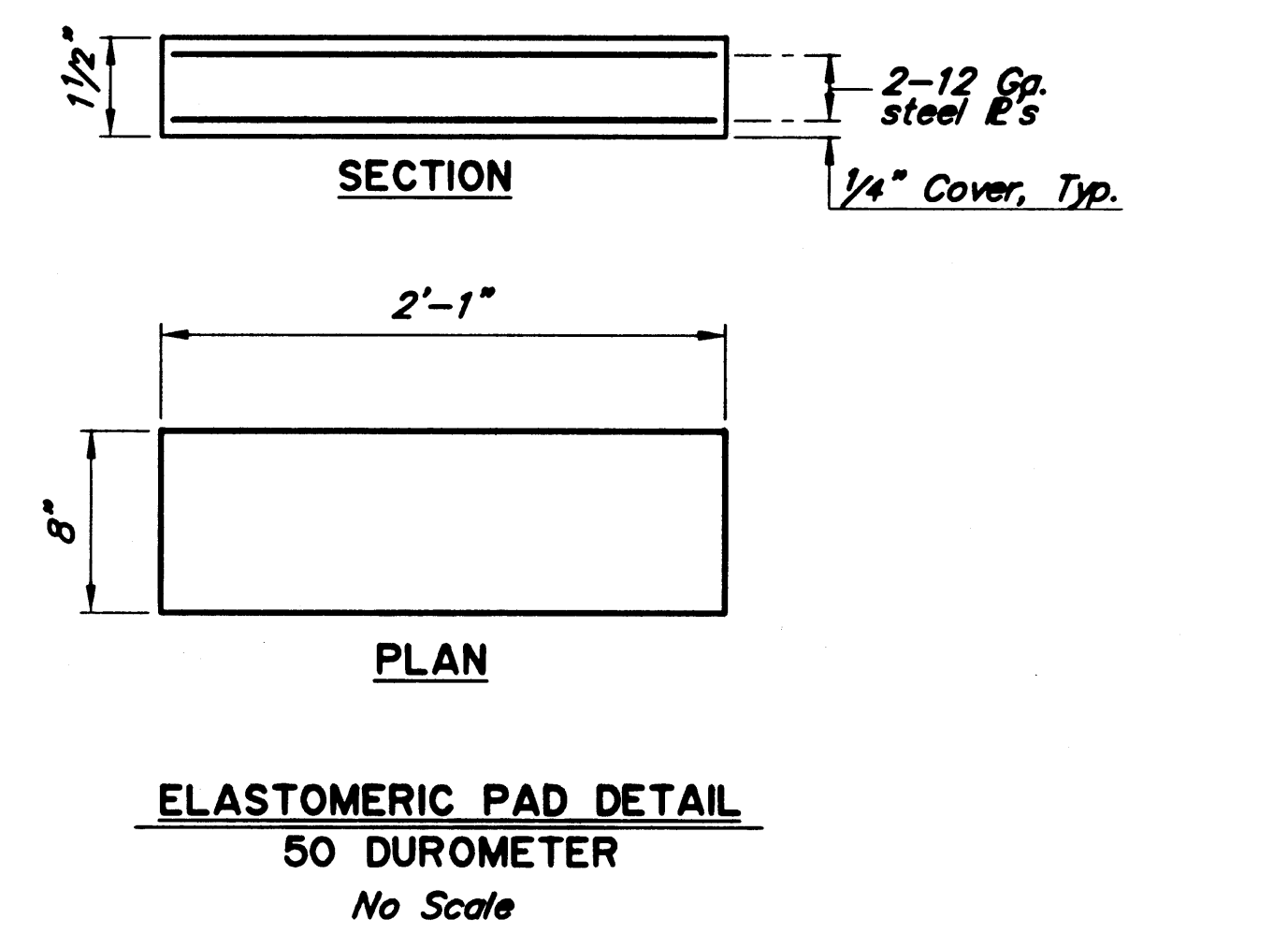
BRIDGE NO. 2100  
 DWG. NO. 3



REINFORCING STEEL-ONE PIER					
MARK	SIZE	NO.	LENGTH	TYPE	BENDING DIAGRAM
P401	4	32	10'-0"	Bent	
P402	4	2	130'-0"	Spiral	
P403	4	10	5'-10"	Hoop	
P404	4	4	4'-2"	Bent	
P801	8	18	10'-8"	Headed	
P802	8	13	4'-10"	-	
P803	8	18	15'-0"	-	

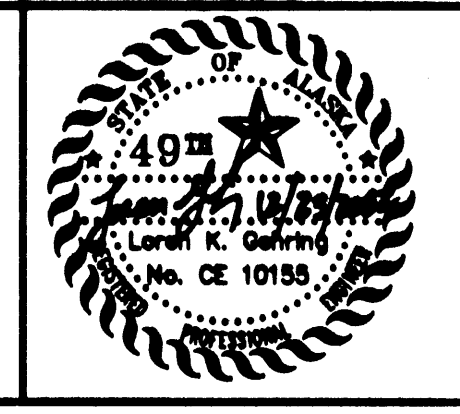


Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. *[Signature]* Date 7/12/04



DESIGNED BY: <i>[Signature]</i>	L. Gundry	CHECKED: <i>[Signature]</i>	E. Mark
DRAWN BY: <i>[Signature]</i>	L. Gundry	CHECKED: ELMER E. MARK	E. Mark
QUANTITIES BY: <i>[Signature]</i>	L. Gundry	CHECKED: ELMER E. MARK	E. Mark

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION

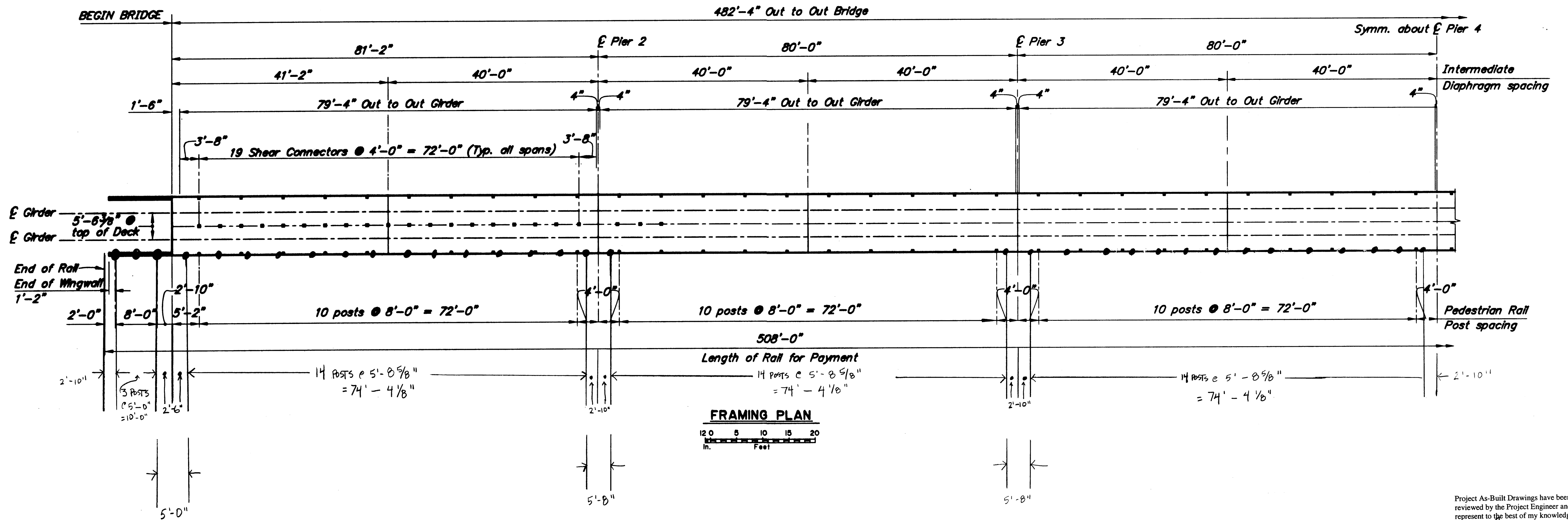


SKAGWAY RIVER PEDESTRIAN BRIDGE

PIERS

BRIDGE NO. 2100  
 DWG. NO. 4

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	NH-0997-2(14)/66238	2003	M5	



Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Eng. *[Signature]* Date 7/12/04

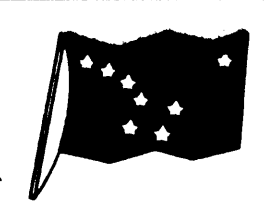
DESIGNED BY: <i>[Signature]</i>	L. Galtrey	CHECKED: ELMER E. MARK	E. Mark
DRAWN BY: <i>[Signature]</i>	L. Galtrey	CHECKED: ELMER E. MARK	E. Mark
QUANTITIES BY: <i>[Signature]</i>	L. Galtrey	CHECKED: <i>[Signature]</i>	E. Mark

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION



SKAGWAY RIVER PEDESTRIAN BRIDGE

FRAMING PLAN

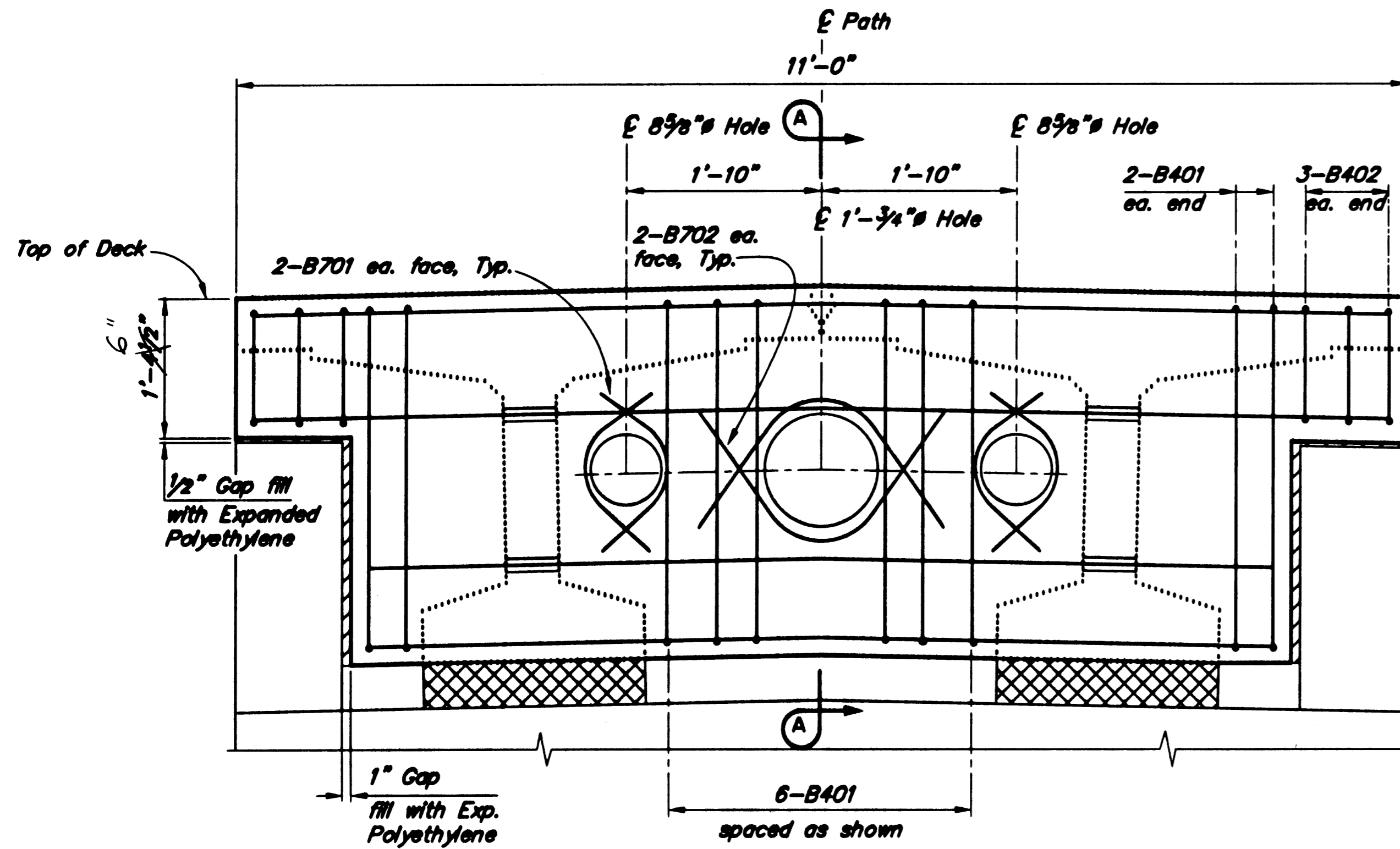


BRIDGE NO. 2100  
 DWG. NO. 5

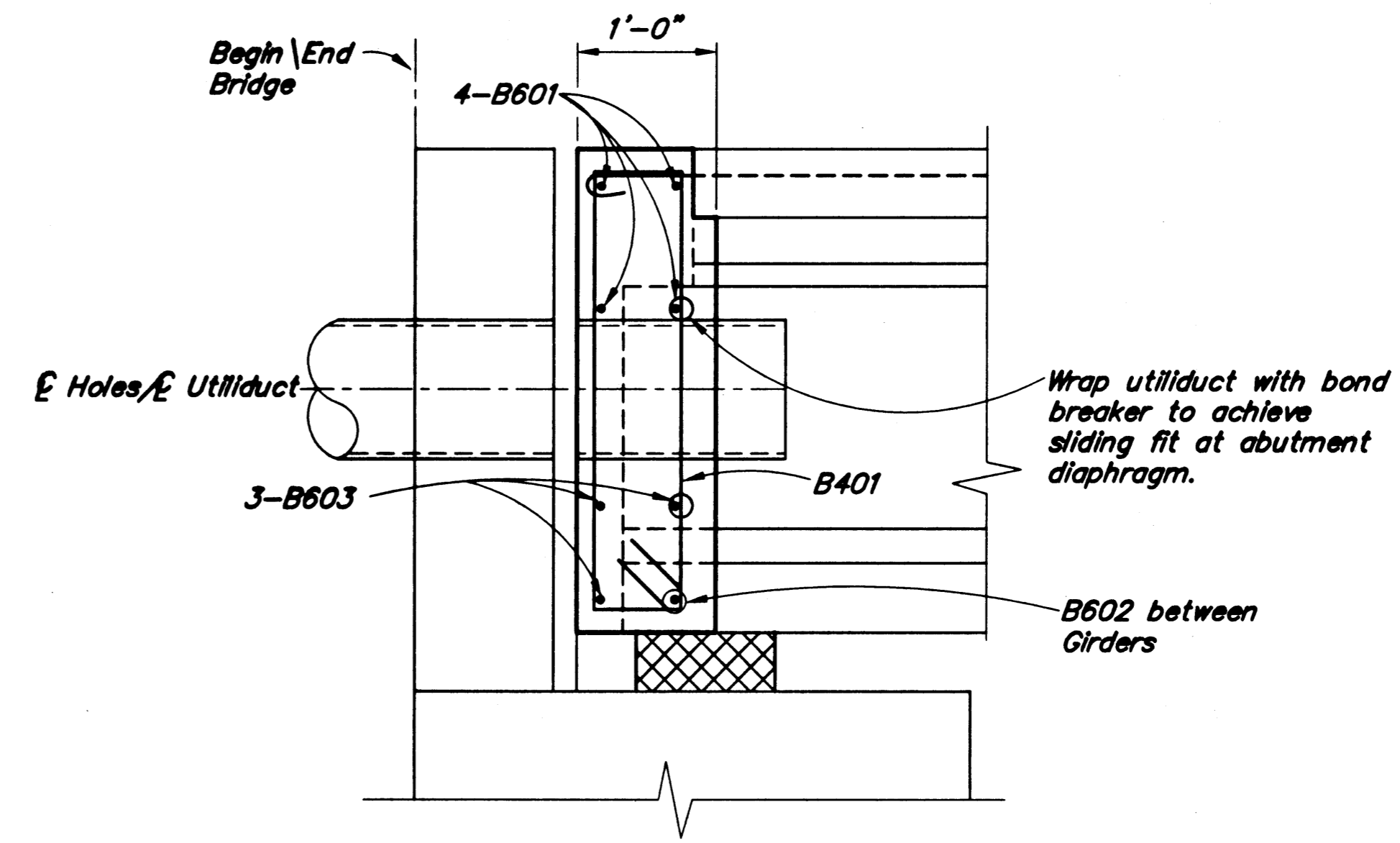
**a REINFORCING STEEL-ONE ABUTMENT DIAPHRAGM**

MARK	SIZE	NO.	LENGTH	TYPE	BENDING DIAGRAM
B401	4	10	8'-6"	Bent	
B402	4	6	4'-2"	Bent	
B601	6	4	10'-8"	-	
B602	6	1	3'-0"	-	
B603	6	3	8'-6"	-	
B701	7	8	2'-2"	Bent	
B702	7	4	3'-6"	Bent	

a - Epoxy coat all reinforcing steel  
b - Field bend top bars to match crown.



**ELEVATION ABUTMENT DIAPHRAGM**



**SECTION A-A**

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. *[Signature]* Date 7/14/04

DESIGNED BY: <i>[Signature]</i>	L. Oulvey	CHECKED: ELMER E. MARK	E. Marx
DRAWN BY: <i>[Signature]</i>	L. Oulvey	CHECKED: ELMER E. MARK	E. Marx
QUANTITIES BY: <i>[Signature]</i>	L. Oulvey	CHECKED: ELMER E. MARK	E. Marx

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION



**SKAGWAY RIVER PEDESTRIAN BRIDGE**

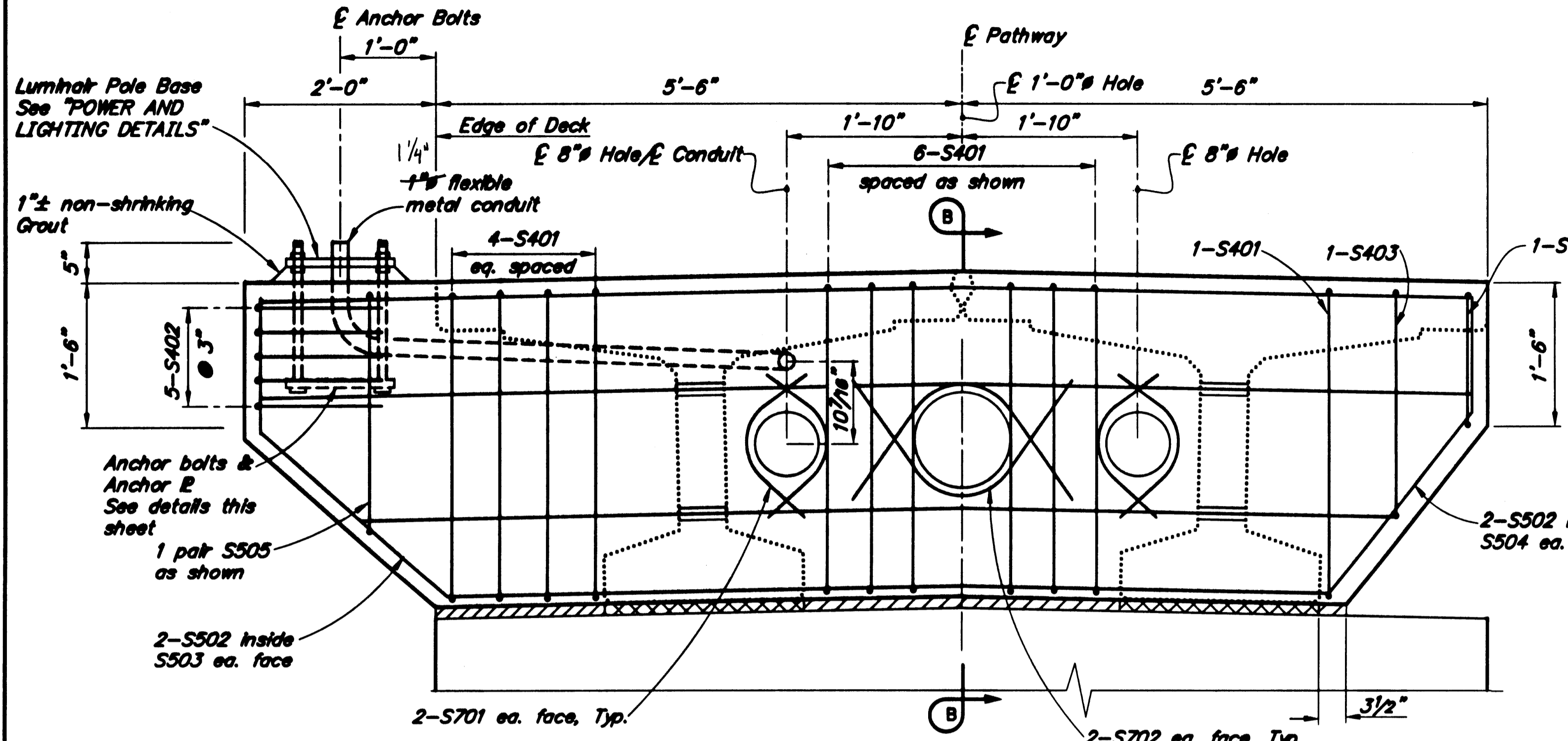
**ABUTMENT DIAPHRAGM**



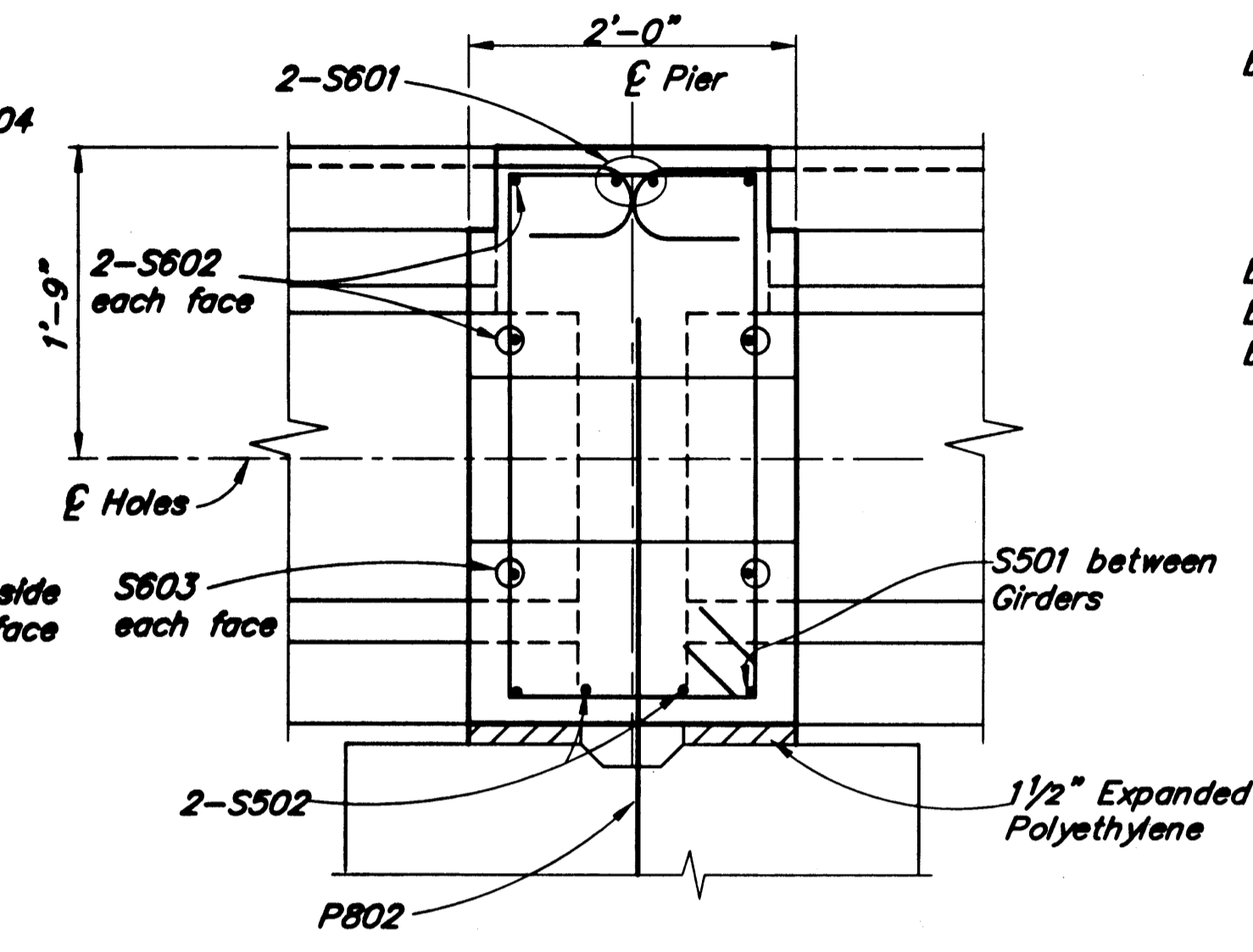
BRIDGE NO. 2100  
 DWG. NO. 6

**a REINFORCING STEEL-ONE PIER DIAPHRAGM**

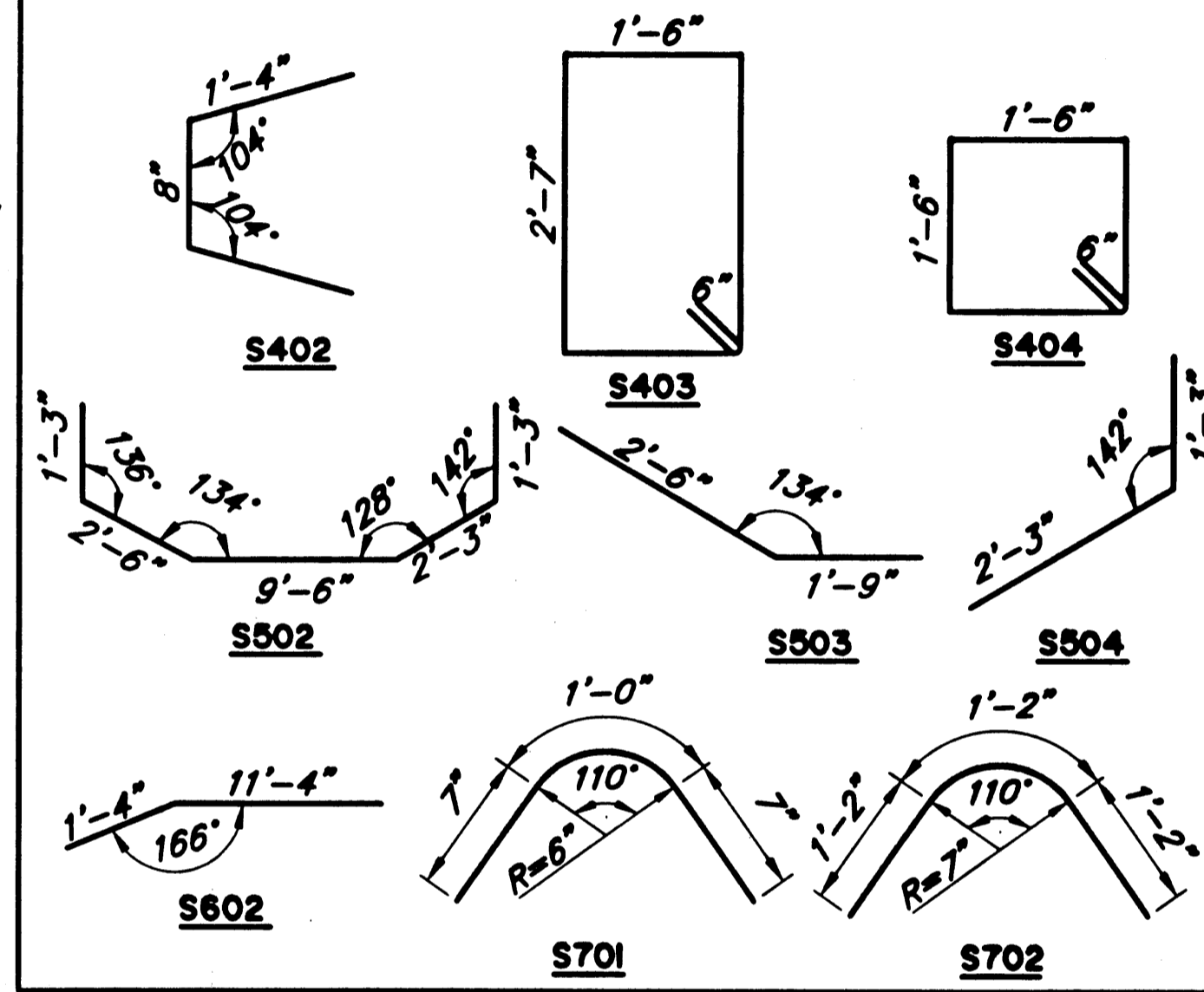
MARK	SIZE	NO.	LENGTH	TYPE	BENDING DIAGRAM
S401	4	11	10'-4"	Bent	
S402	4	5	3'-4"	Bent	
S403	4	2	9'-2"	Bent	
S404	4	1	7'-0"	Bent	
S501	5	2	3'-0"	-	
S502	5	2	16'-9"	Bent	
S503	5	2	4'-3"	Bent	
S504	5	2	3'-6"	Bent	
b S601	6	2	12'-8"	-	
b S602	6	4	12'-8"	Bent	
b S603	6	2	10'-10"	-	
S701	7	8	2'-2"	Bent	
S702	7	4	3'-6"	Bent	



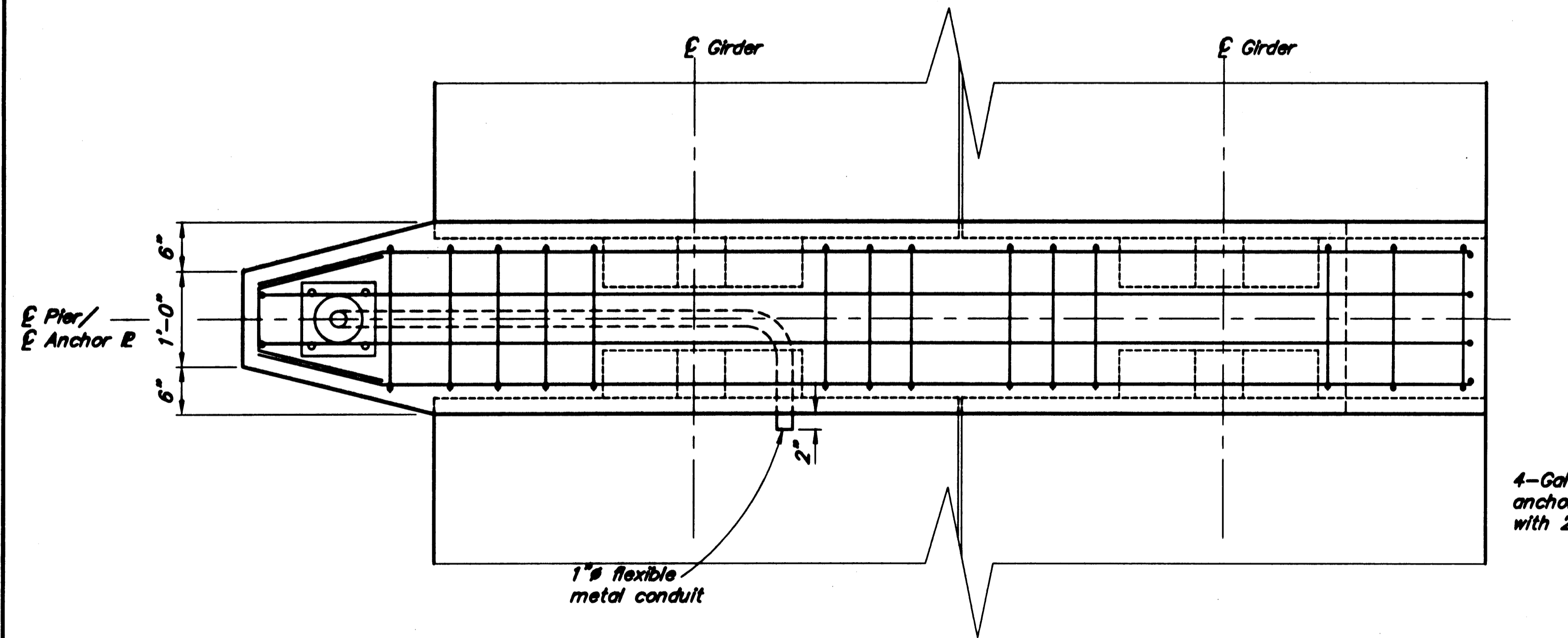
**ELEVATION**  
 12 6 0 1 2  
 in. Feet



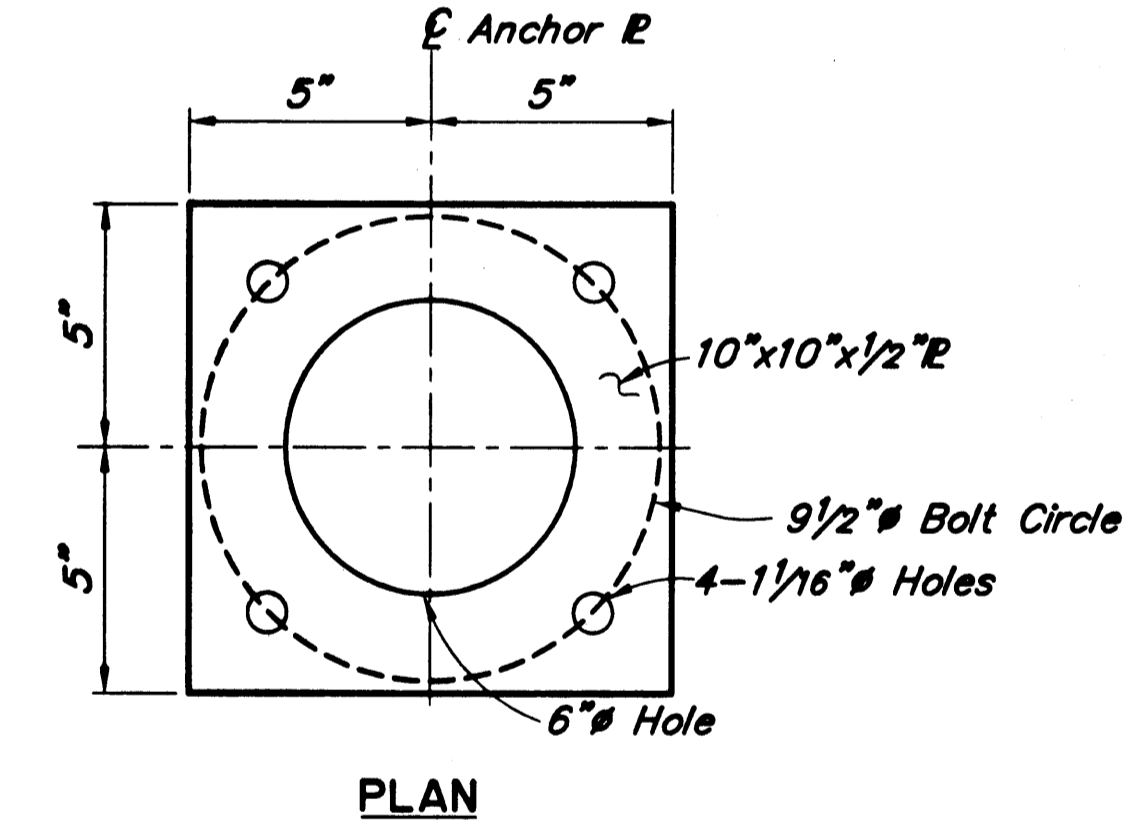
**SECTION B-B**  
 12 6 0 1 2  
 in. Feet



a - Epoxy coat all reinforcing steel.  
 b - Field bend top bars to match crown.

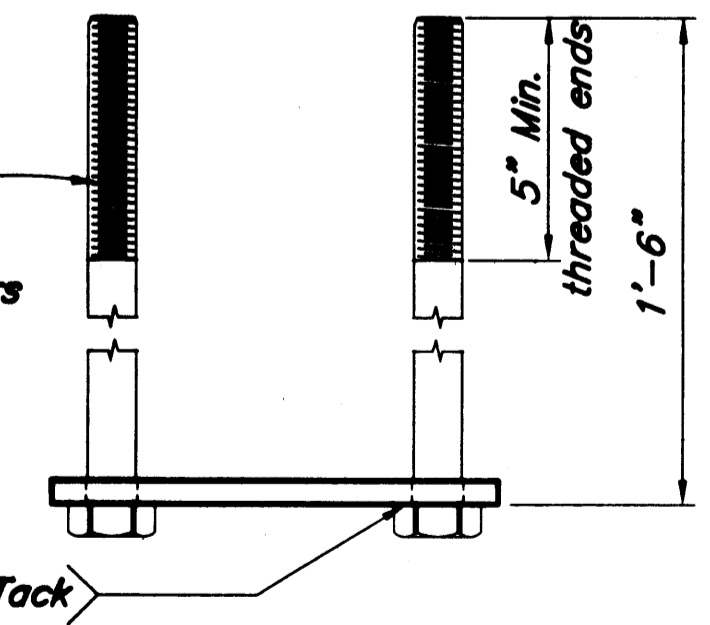


**PLAN**  
 12 6 0 1 2  
 in. Feet



**PLAN**

4-Galv. 1" headed anchor bolts (ASTM A307) with 2 nuts & plate washers



**ANCHOR BOLT - DETAIL**  
 6 3 0 1  
 in. Feet

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. *[Signature]* Date 7/12/04

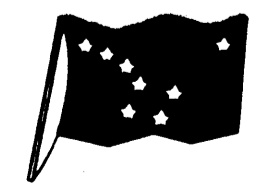
DESIGNED BY: <i>[Signature]</i>	L. Gundry	CHECKED: <i>[Signature]</i>	E. Marx
DRAWN BY: <i>[Signature]</i>	L. Gundry	CHECKED: <b>ELMER E. MARX</b>	E. Marx
QUANTITIES BY: <i>[Signature]</i>	L. Gundry	CHECKED: <b>ELMER E. MARX</b>	E. Marx

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION

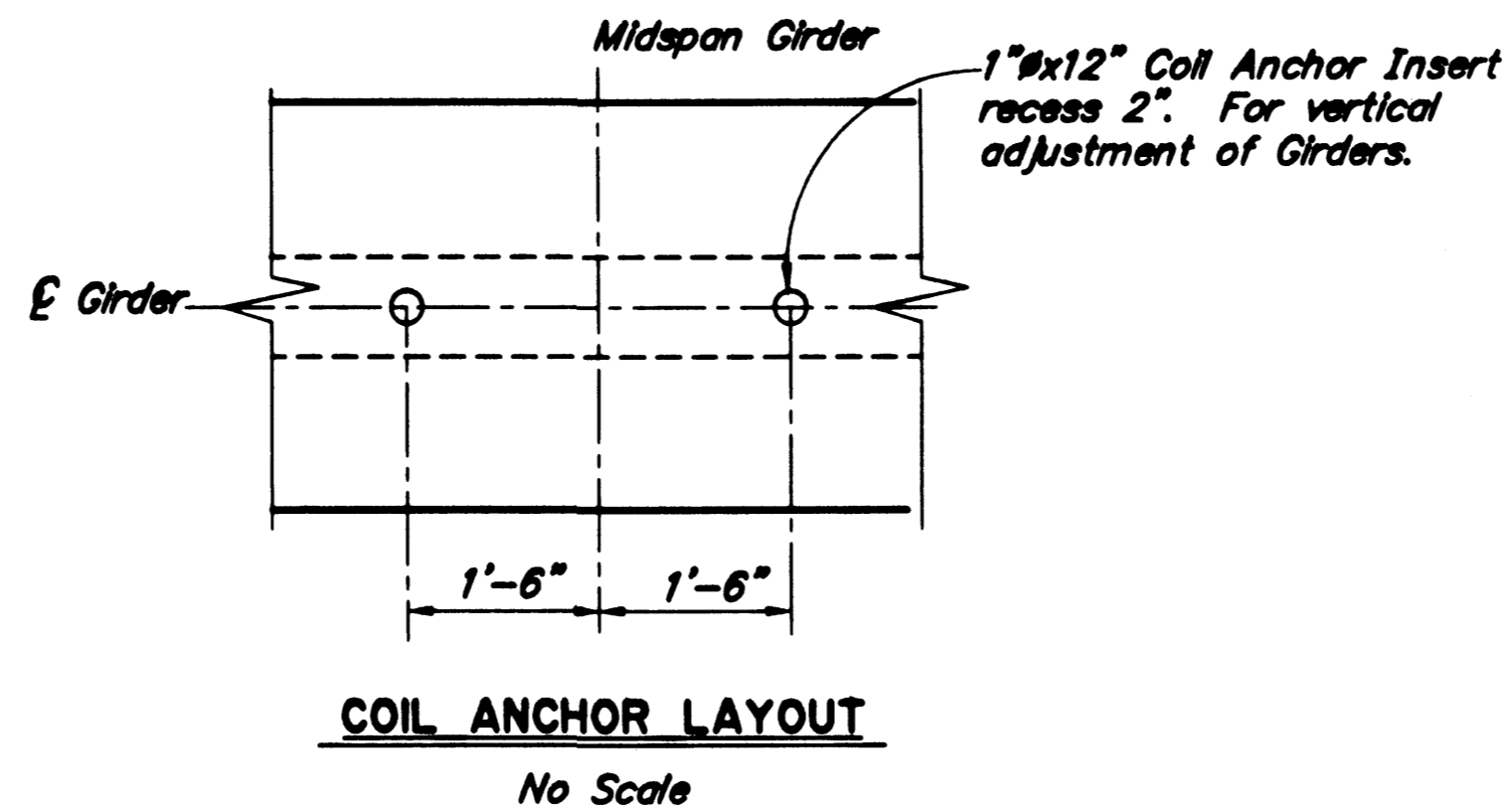
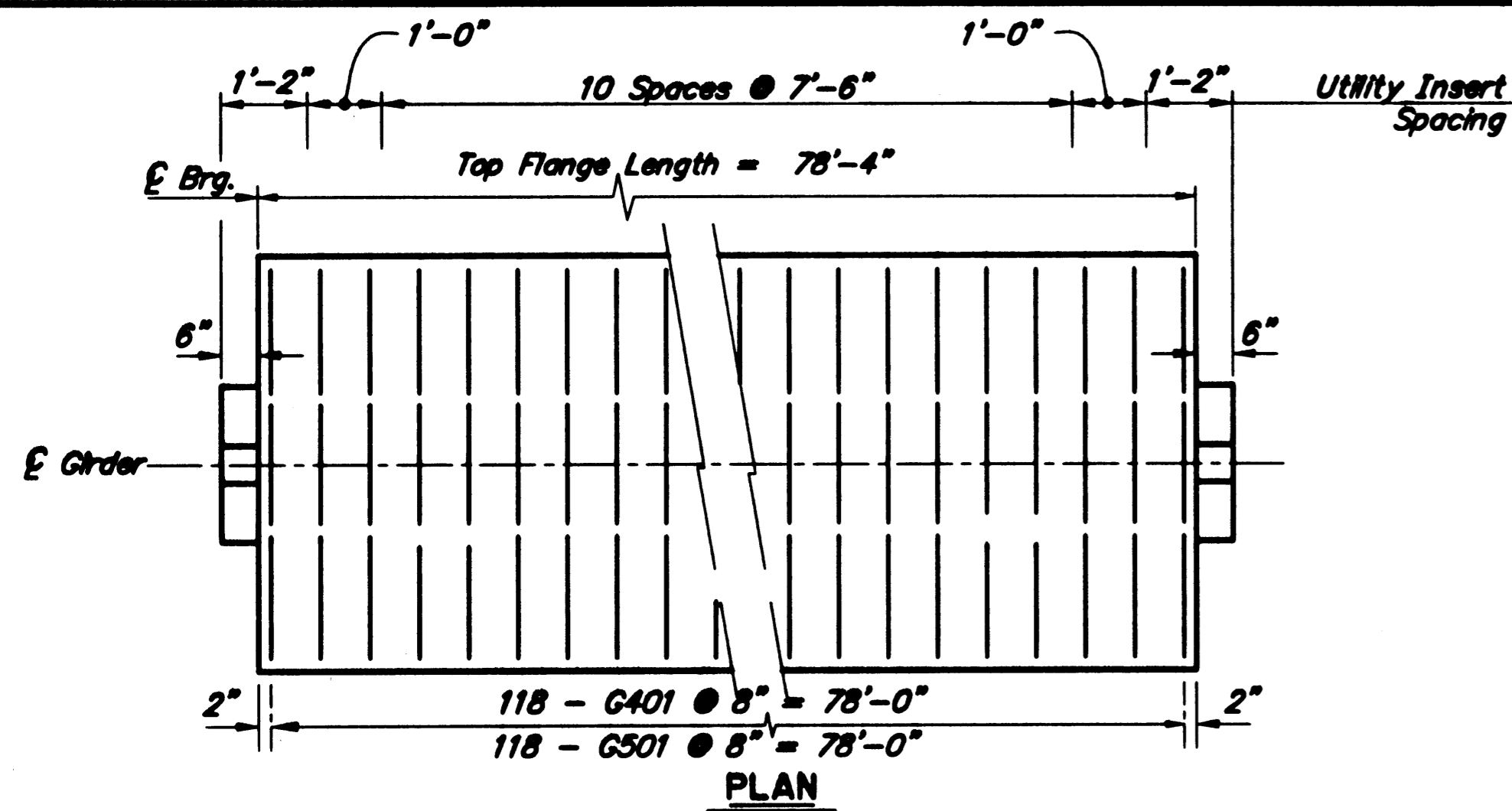


**SKAGWAY RIVER PEDESTRIAN BRIDGE**

**PIER DIAPHRAGM**



BRIDGE NO. 2100  
 DWG. NO. 7



**a REINFORCING STEEL-ONE GIRDER**

MARK	SIZE	NO.	LENGTH	TYPE	BENDING DIAGRAM
G401	4	118	5'-0 1/2"	Bent	
G402	4	8	78'-0"	-	
G403	4	212	5'-0"	Bent	
G404	4	44	3'-3"	Bent	
G501	5	118	5'-8"	Bent	
G502	5	8	81'-2"	Bent	

a - Epoxy Coat all reinforcing steel.  
 b - Length does not include splices. Minimum lap length for splices shall be: 1'-6" for No. 4 Bars, and 2'-0" for No. 5 Bars.

**GIRDER NOTES**

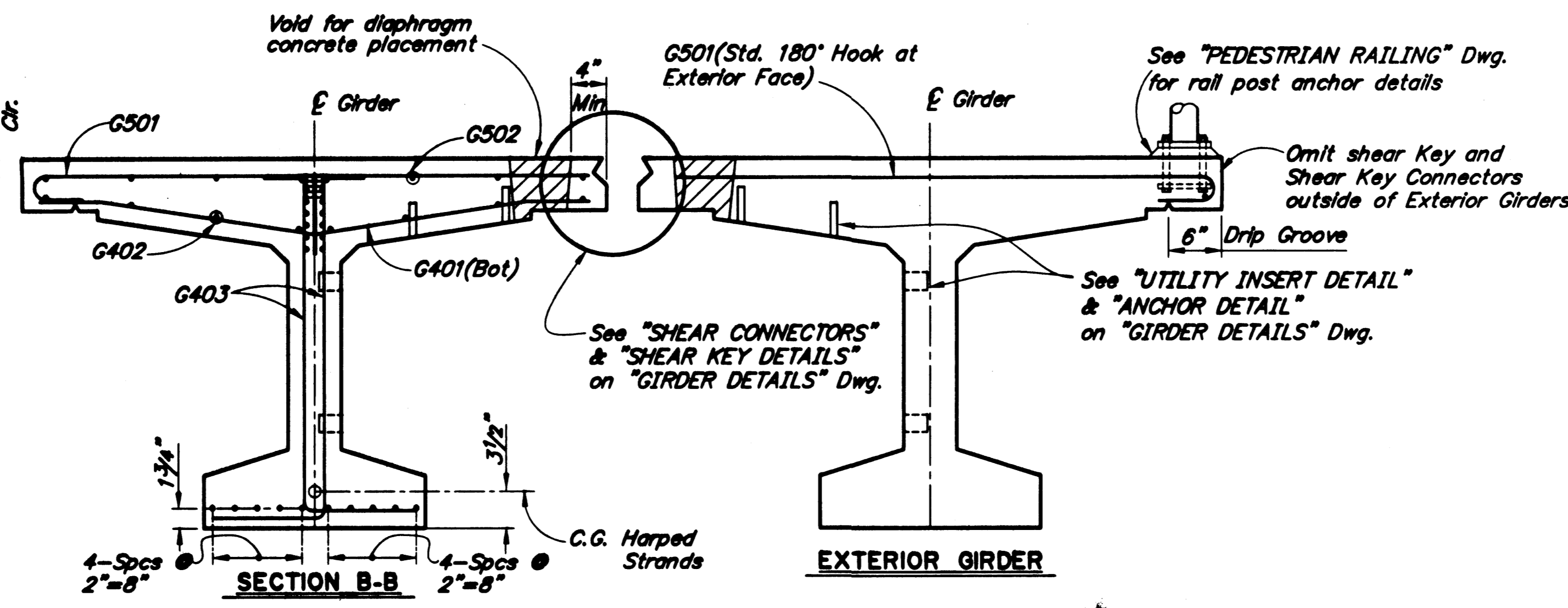
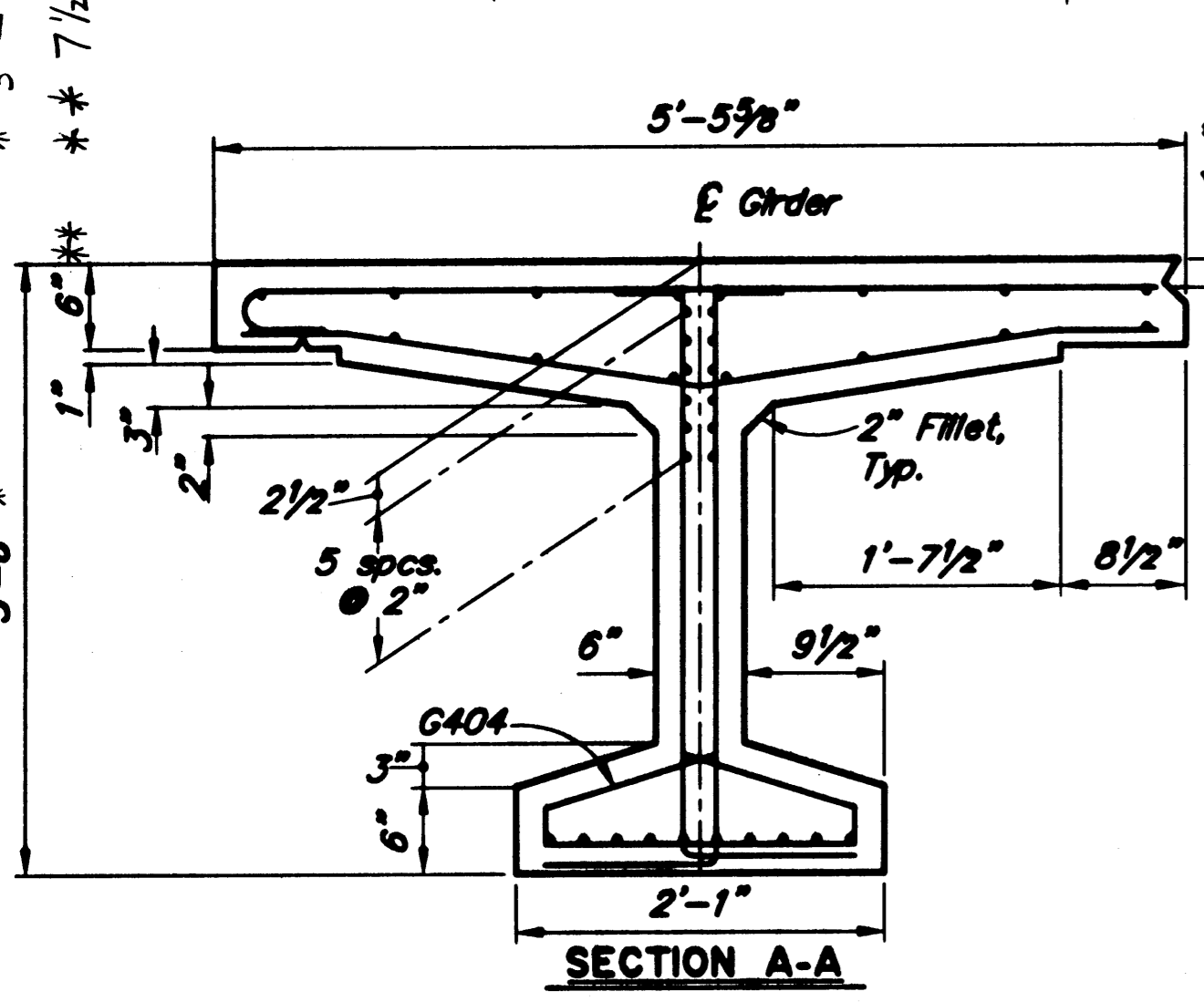
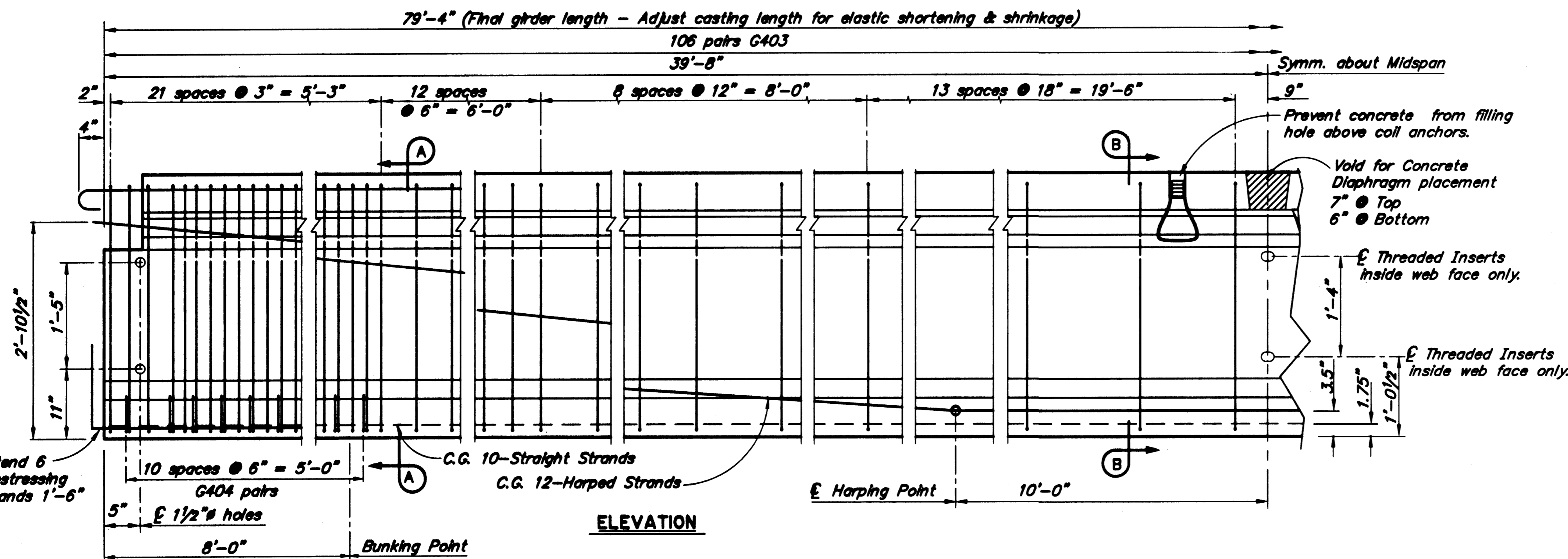
Use normal weight concrete with the following strengths:  
 at Stress Transfer..... $f'_{ci}$  = 5000 psi  
 at 28 Days..... $f'_c$  = 6000 psi

Use 1/2" low-relaxation prestressing strands with an ultimate strength of 270 ksi and a cross section area of 0.153 in<sup>2</sup>

Design is based on the following steel stresses:  
 Pretensioning - Jacking Stress 189 ksi after initial losses 179 ksi after all losses 152 ksi

One inch clear on all reinforcing except as noted.  
 See "FRAMING PLAN" Dwg. for Shear Connector Spacing & Rail Post Spacing.  
 Deflect forms to compensate for camber - see Specifications.  
 Finish top flange surface with heavy broom finish.  
 Galvanize all steel embedded in girders except for shear connectors.

TOP FAMILIE THICKENS TO 7 1/2" @ ENDS  
 \* 3'-7 1/2" @ END  
 \* 7 1/2" @ END



Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. [Signature] Date 7/12/04

DESIGNED BY: L. Gundry	CHECKED: ELMER E. MARK
DRAWN BY: L. Gundry	CHECKED: ELMER E. MARK
QUANTITIES BY: L. Gundry	CHECKED: ELMER E. MARK

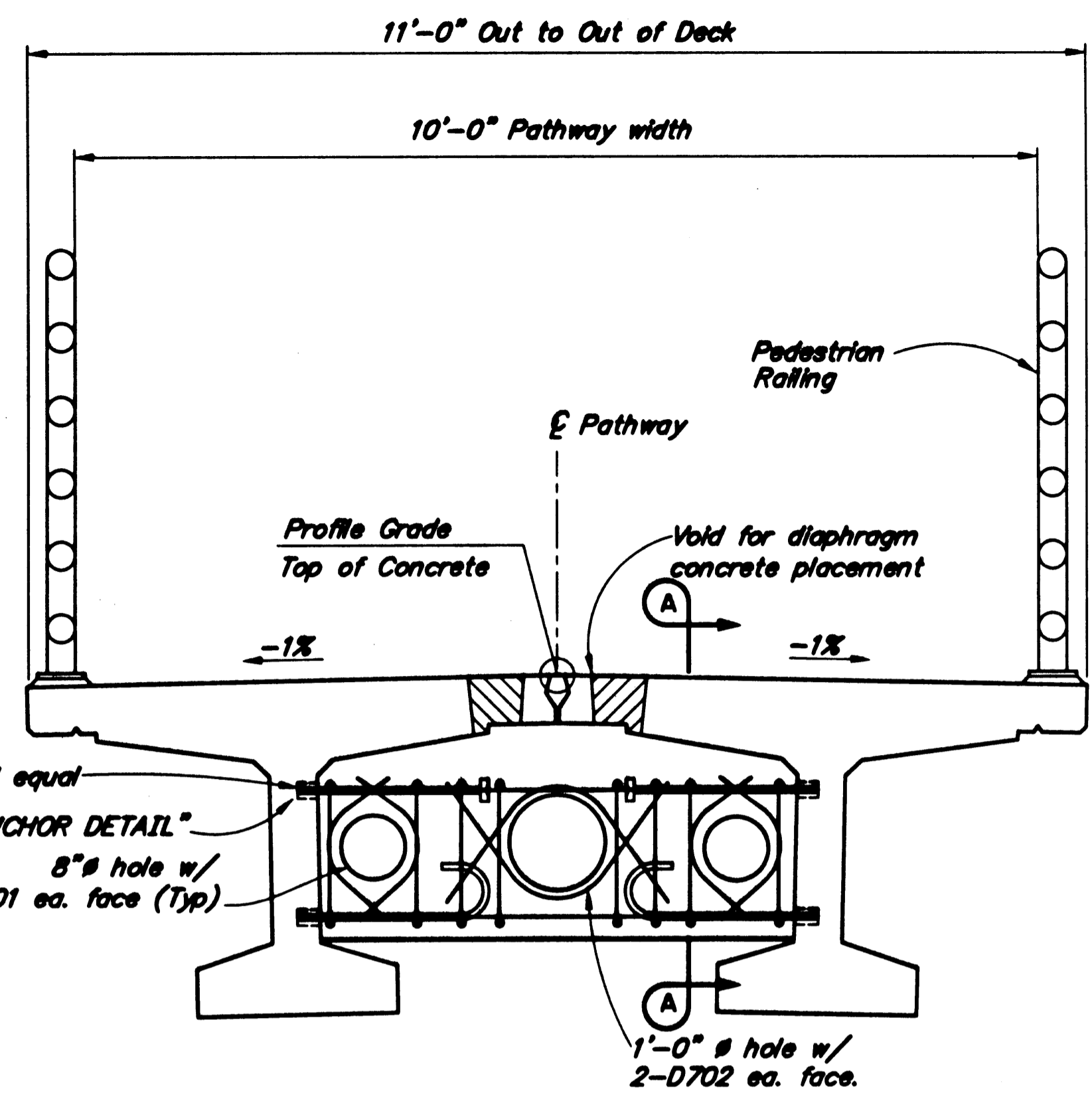
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION



**SKAGWAY RIVER PEDESTRIAN BRIDGE**

**GIRDERS**

BRIDGE NO. 2100  
 DWG. NO. 8

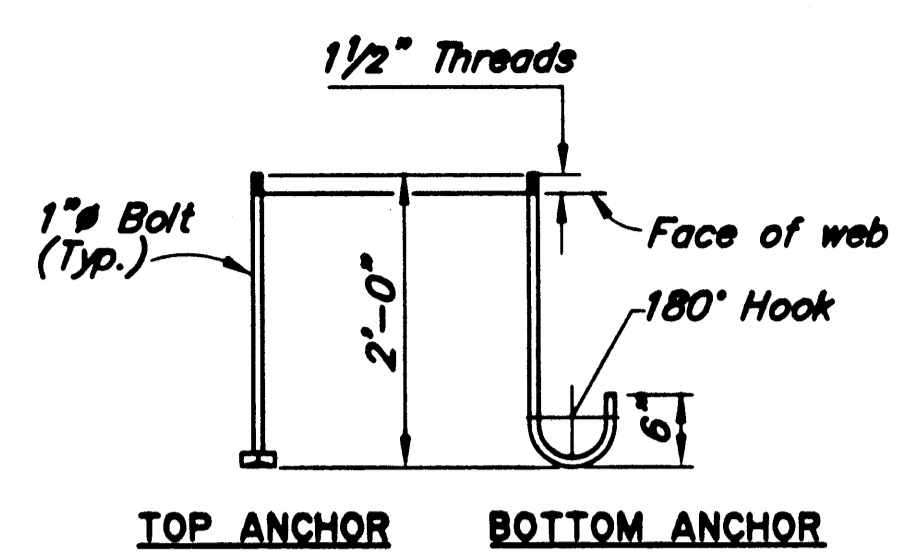
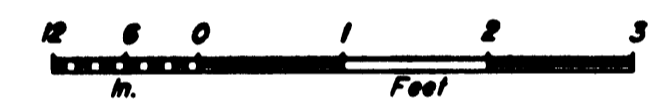


Bolt Anchors with 1" # Richmond Rocket, Burke HI-Tensile, Lancaster Malleable or approved equal

See "ANCHOR DETAIL" 8" # hole w/ 2-D701 ea. face (Typ)

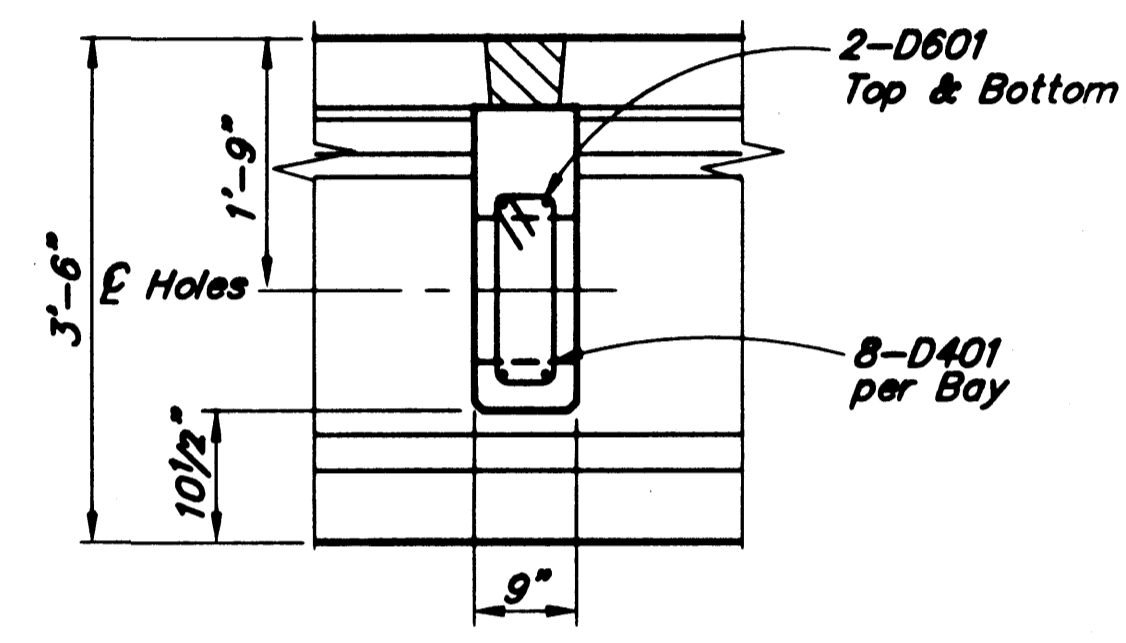
1'-0" # hole w/ 2-D702 ea. face.

**INTERMEDIATE DIAPHRAGM**

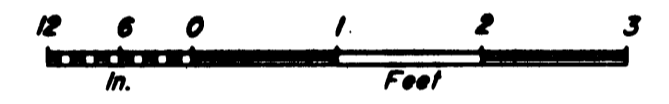


**TOP ANCHOR BOTTOM ANCHOR**

**ASTM A307 ANCHOR DETAIL**



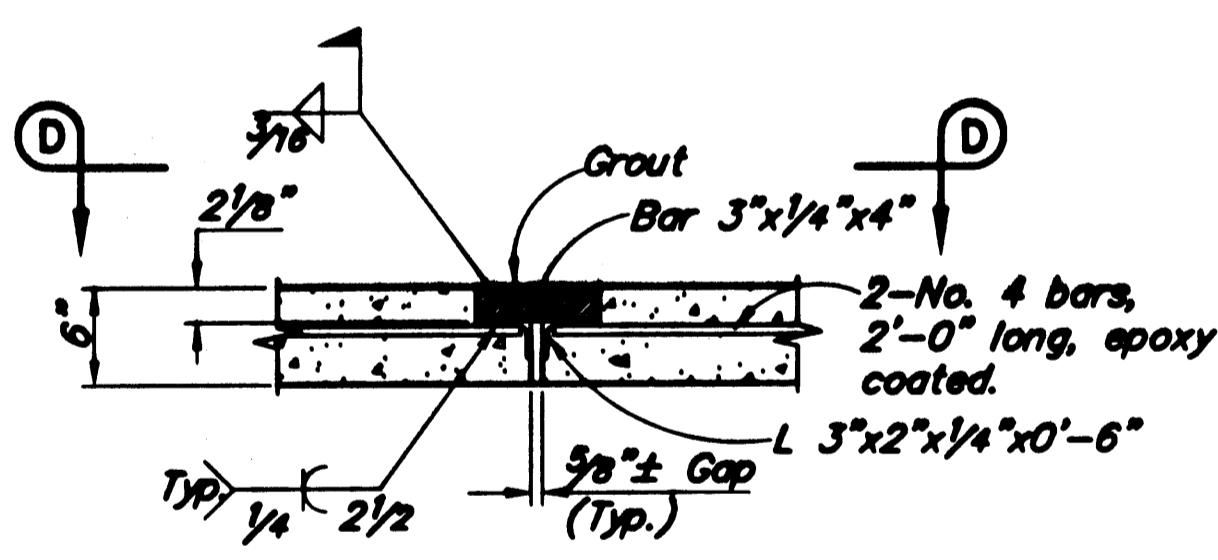
**SECTION A-A**



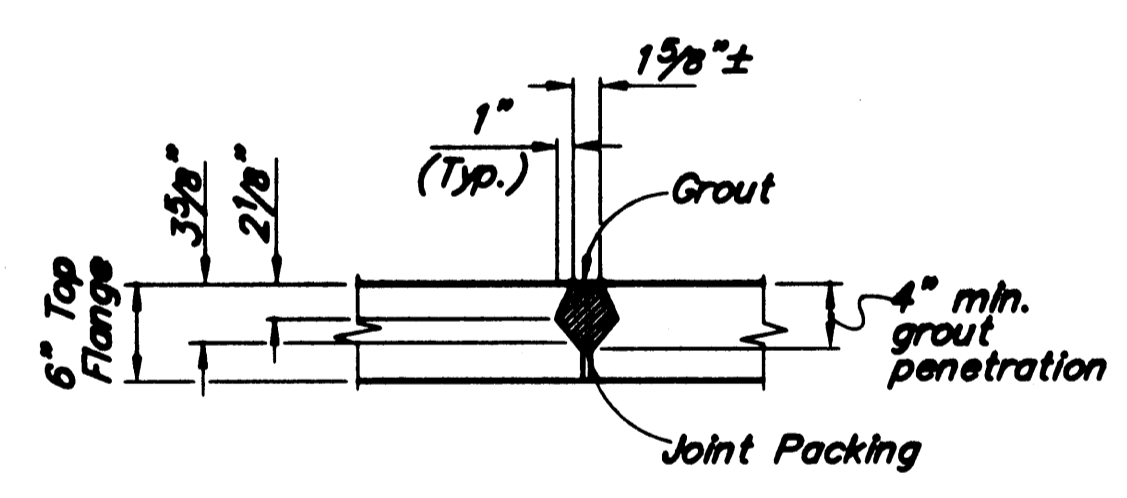
**a REINFORCING STEEL - ONE INTERMEDIATE DIAPHRAGM**

MARK	SIZE	NO.	LENGTH	TYPE	BENDING DIAGRAM
D401	4	8	4'-10"	Bent	
D601	6	4	4'-8"	-	
D701	7	8	2'-2"	Bent	
D702	7	4	3'-6"	Bent	

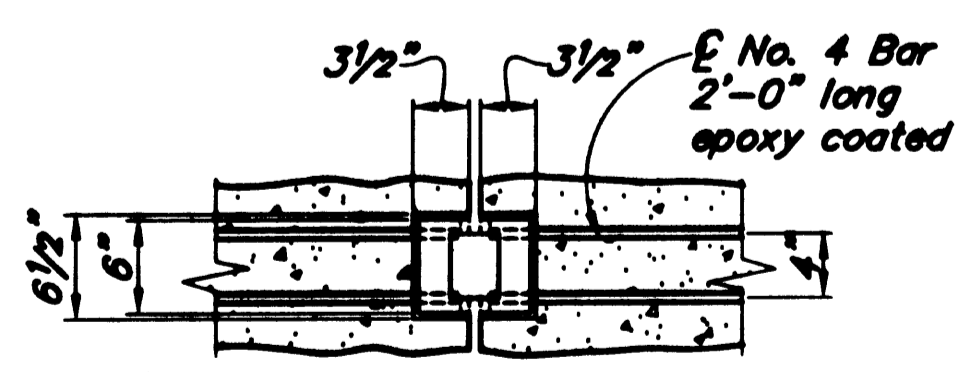
a - Epoxy coat all reinforcing steel



**SHEAR CONNECTOR DETAIL**



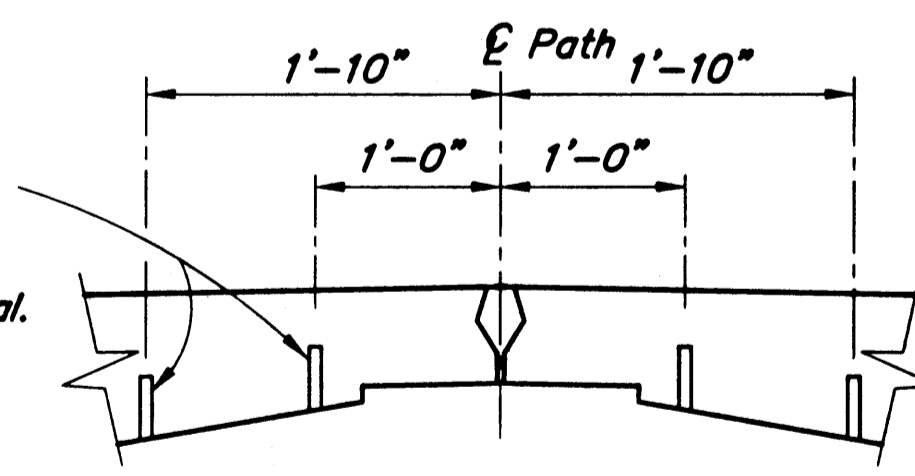
**SHEAR KEY DETAIL**



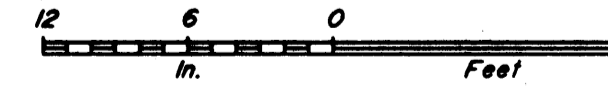
**VIEW D-D**



3/4" # Utility Inserts: Richmond Rocket, Burke HI-Tensile, Lancaster Malleable or approved equal.



**UTILITY INSERT DETAIL**



Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj Engr. *[Signature]* Date 1/12/04

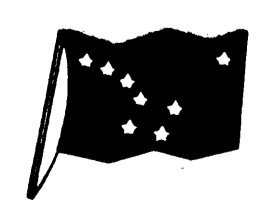
DESIGNED BY: <i>[Signature]</i>	L. Gundry	CHECKED: <i>[Signature]</i>	E. Marx
DRAWN BY: <i>[Signature]</i>	L. Gundry	CHECKED: <i>[Signature]</i>	E. Marx
QUANTITIES BY: <i>[Signature]</i>	L. Gundry	CHECKED: <i>[Signature]</i>	E. Marx

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION



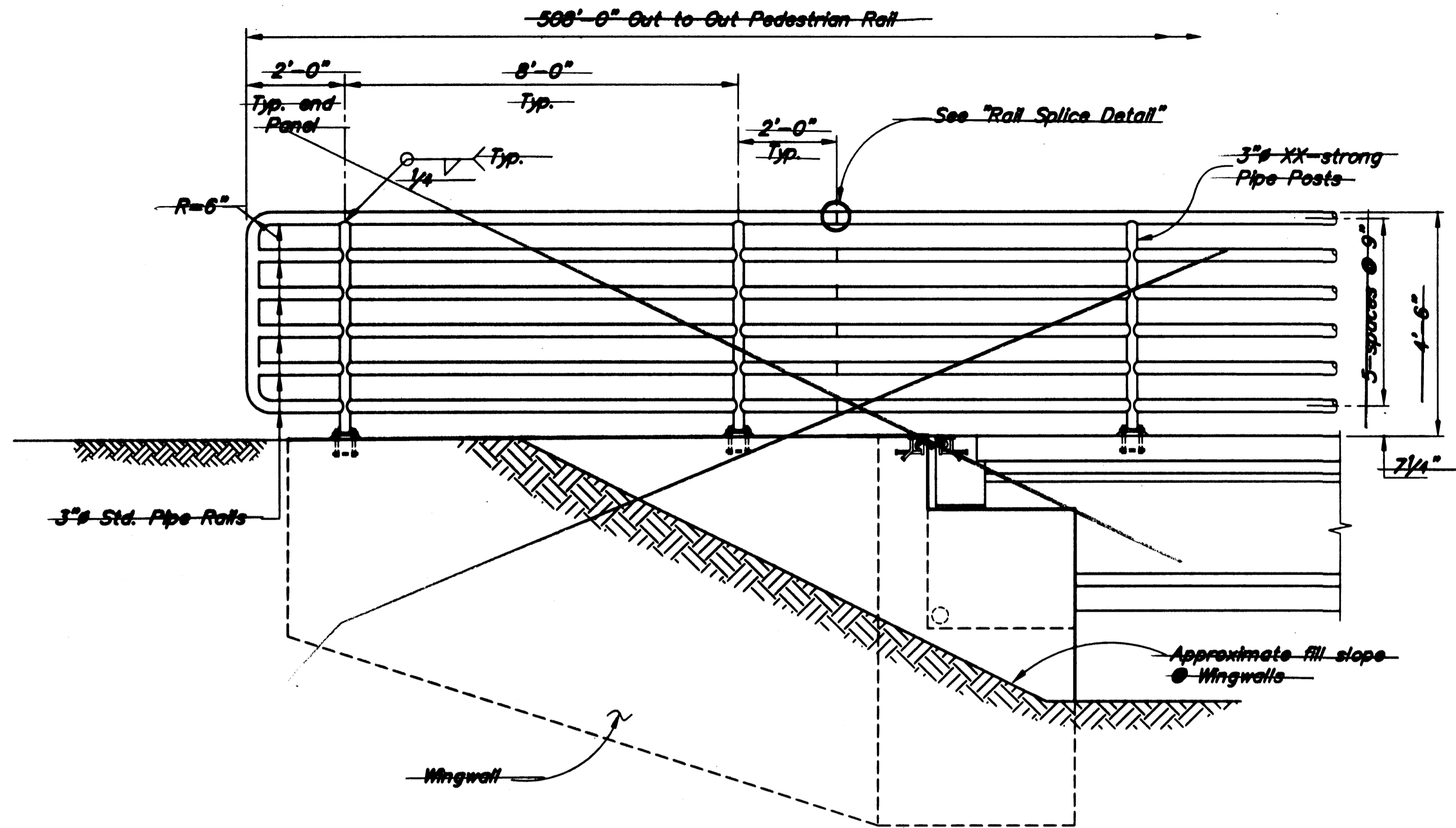
**SKAGWAY RIVER PEDESTRIAN BRIDGE**

**GIRDER DETAILS**



BRIDGE NO. 2100  
 DWG. NO. 9

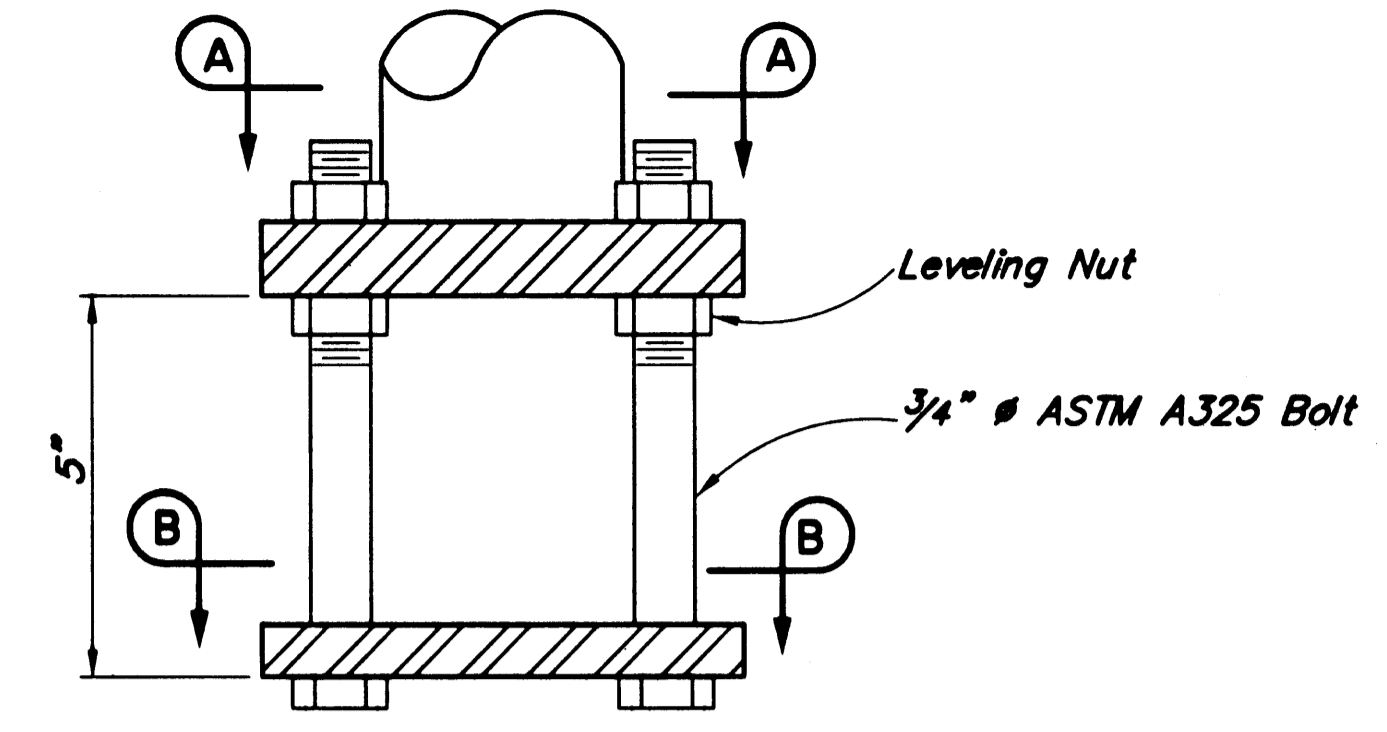
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	NH-097-2(14)/68238	2003	M10	



**PEDESTRIAN RAIL ELEVATION**

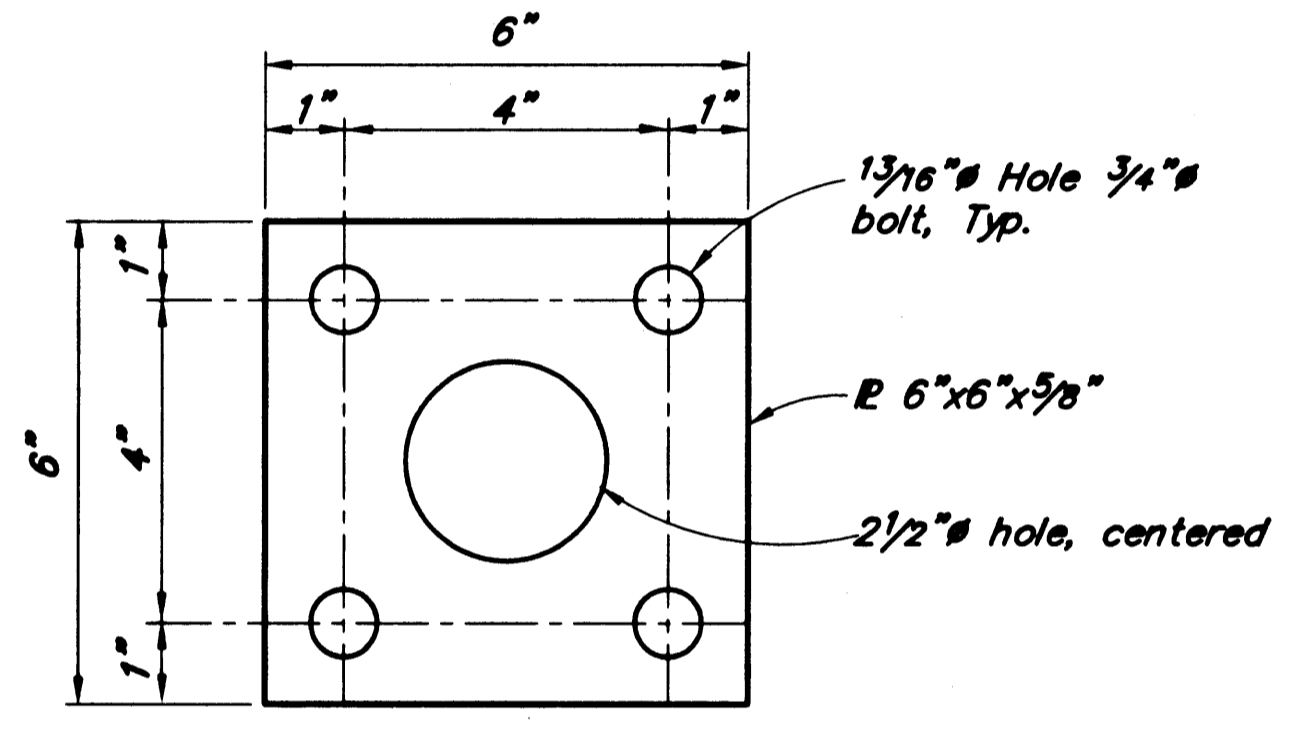


ALTERNATIVE  
ALUMINUM RAIL DESIGN.  
REFER TO BECKER  
SHOP DRAWINGS.



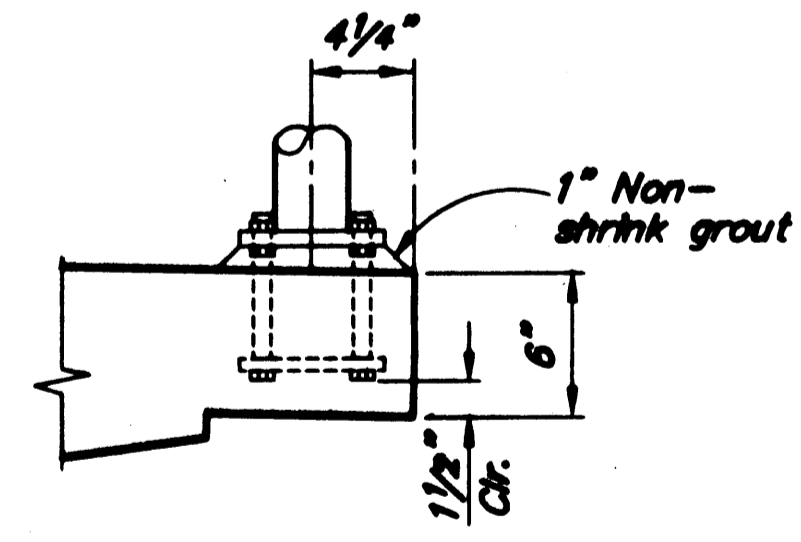
**DETAIL "A"**

No scale

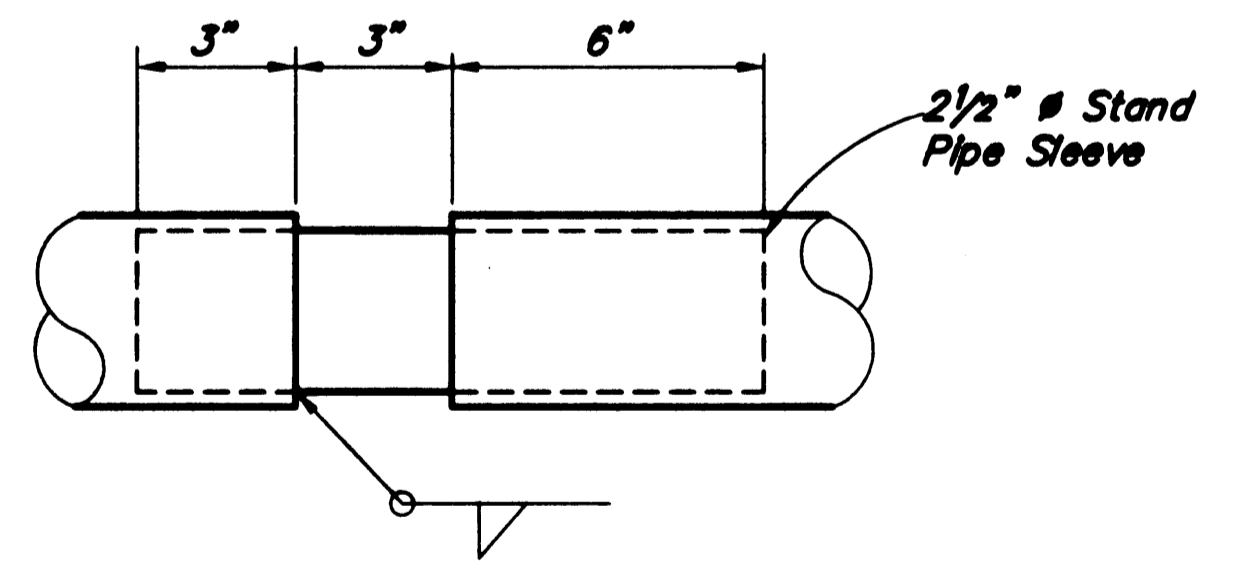


**SECTION B-B**

No Scale

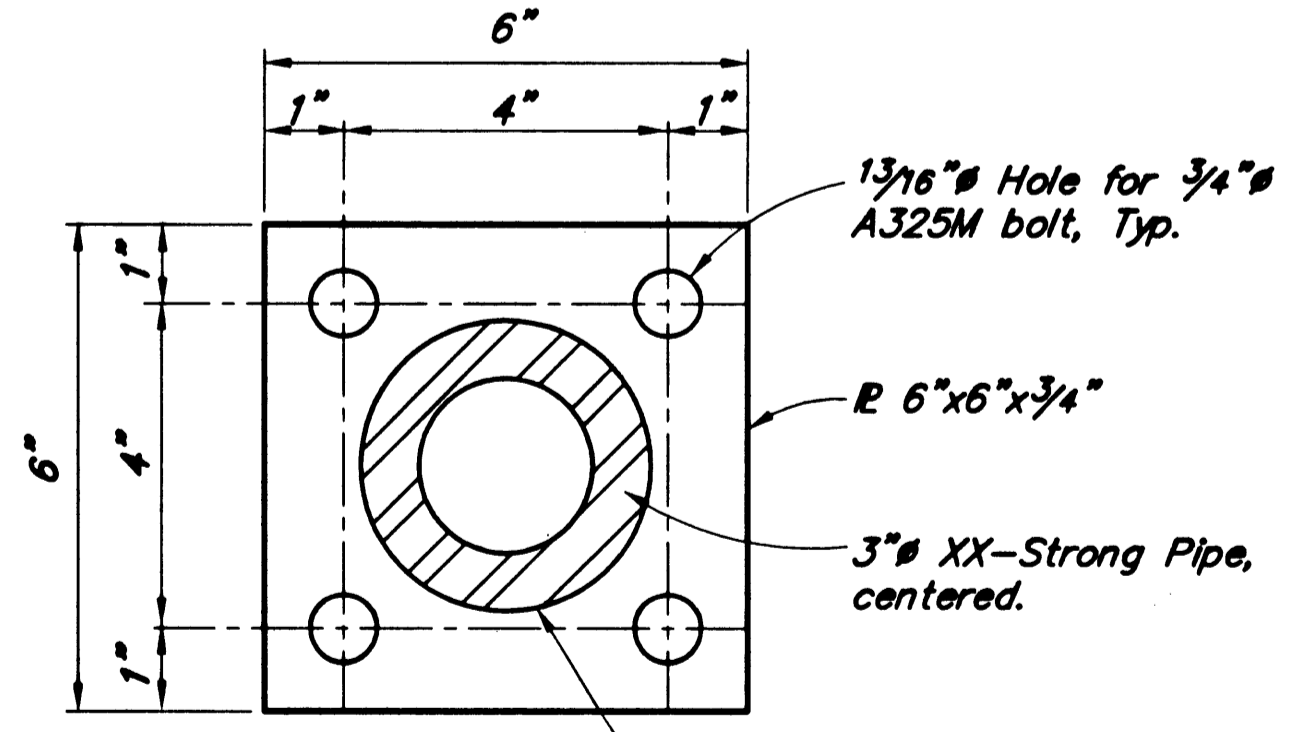


**SECTION AT EDGE OF DECK**



**RAIL SPLICE DETAIL**

No scale



**SECTION A-A**

No Scale

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
Proj. Engr. *[Signature]* Date: 2/12/04

**NOTES:**

- Galvanize all steel for railing in accordance with AASHTO M111.
- Install all rail posts plumb.
- Space Rail Splice @ 40' intervals, max. Rail splice required at panel over abutment expansion joint.
- See "Framing Plan" for rail post layout.

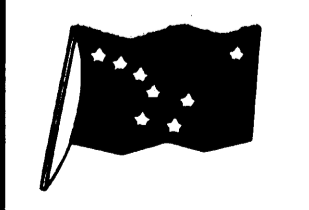
DESIGNED BY: <i>[Signature]</i>	L. Goring	CHECKED: <i>[Signature]</i>	E. Marx
DRAWN BY: <i>[Signature]</i>	L. Goring	CHECKED: <b>ELMER E. MARK</b>	E. Marx
QUANTITIES BY: <i>[Signature]</i>	L. Goring	CHECKED: <i>[Signature]</i>	E. Marx

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
BRIDGE SECTION



**SKAGWAY RIVER PEDESTRIAN BRIDGE**

**PEDESTRIAN RAILING**

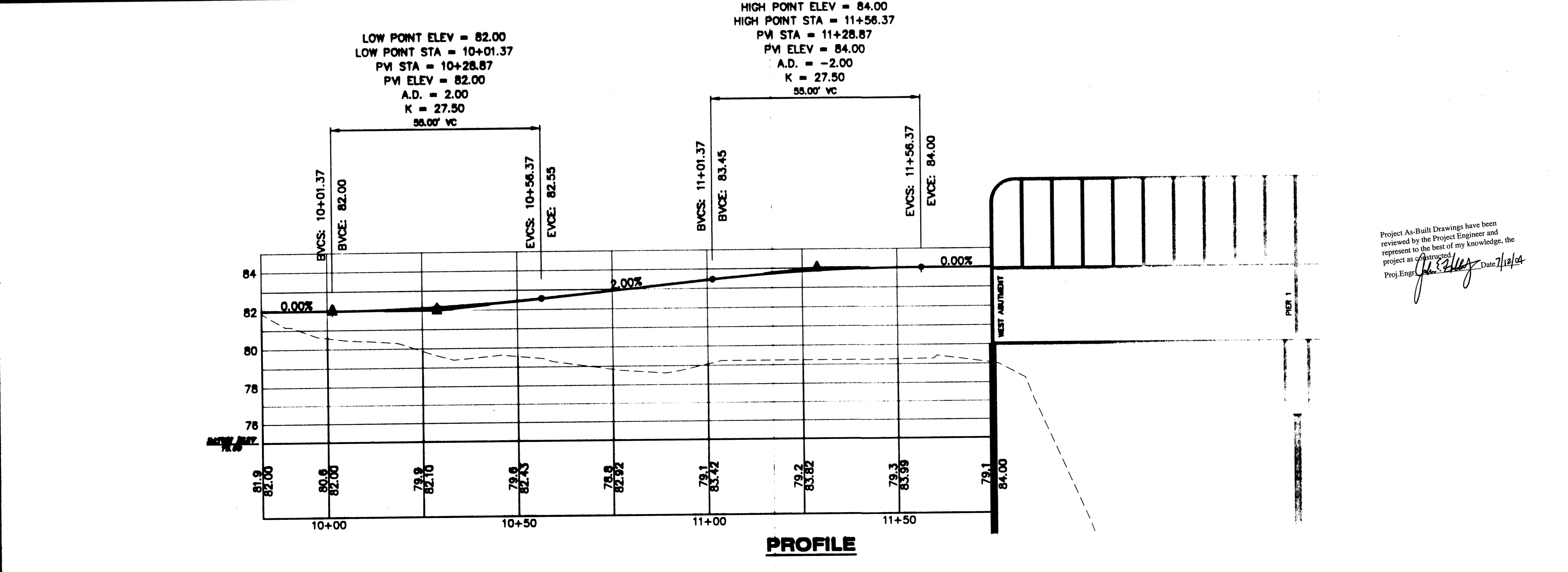
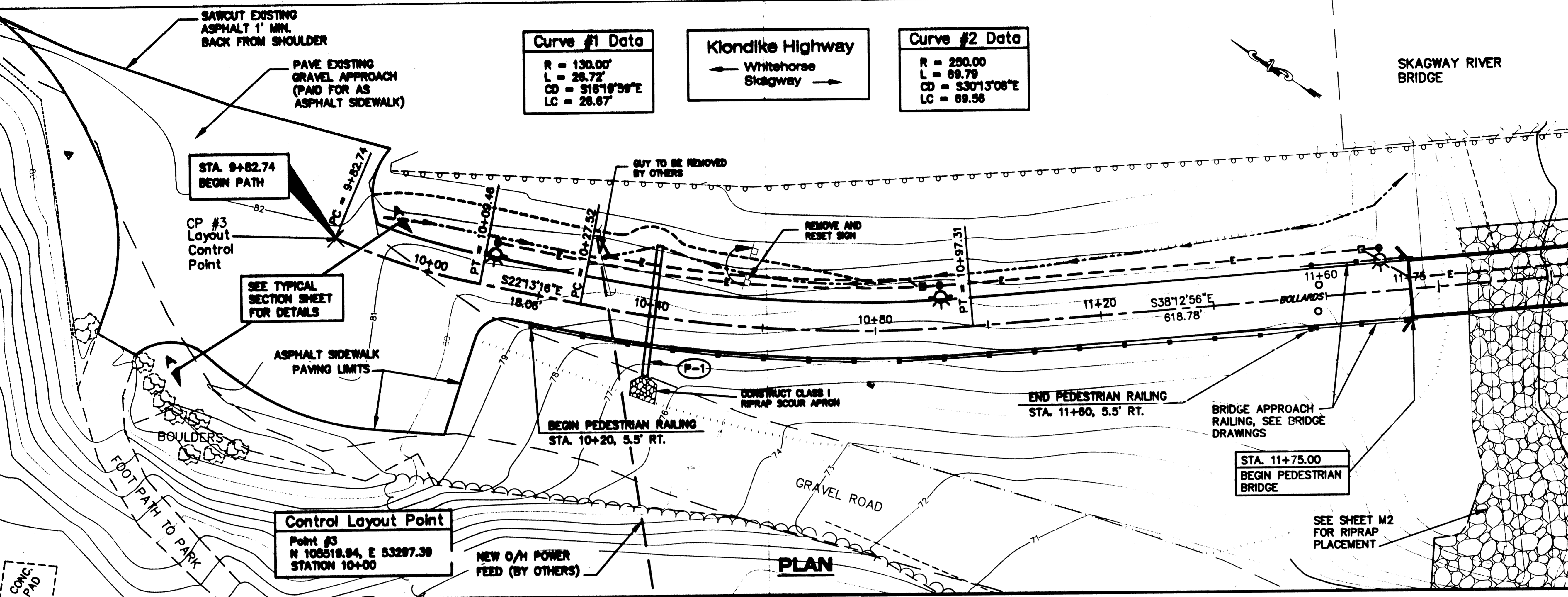


BRIDGE NO. 2100  
DWG. NO. 10

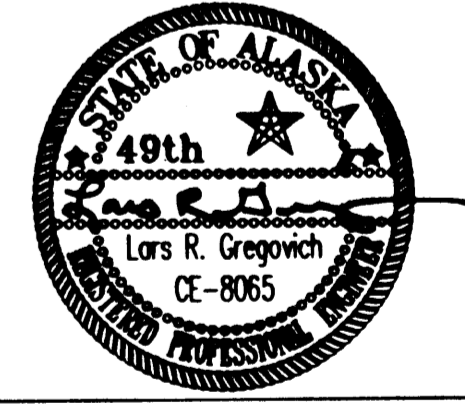
ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION

**SKAGWAY RIVER  
 PEDESTRIAN BRIDGE  
 68238 ~ NH-097-2(14)**

**West Bridge Approach  
 Plan & Profile**



DESIGNED BY: JOEL OSBURN



Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Eng. *[Signature]* Date 7/12/04

CHECKED BY: LARS GREGOVICH  
 DRAWN BY: BERT BENNETT

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 & PUBLIC FACILITIES  
 STATEWIDE DESIGN & ENGINEERING  
 SERVICES DIVISION  
**SKAGWAY RIVER  
 PEDESTRIAN BRIDGE**  
**West Bridge  
 Approach  
 Plan & Profile**

PROJECT DESIGNATION NUMBER	
<b>68238 / NH-097-2(14)</b>	
STATE	YEAR
<b>ALASKA</b>	<b>2003</b>
SHEET NUMBER	TOTAL SHEETS
<b>E1</b>	<b>21</b>

ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION

**SKAGWAY RIVER PEDESTRIAN BRIDGE**  
 68238 - NH-097-2(14)

**East Bridge Approach**  
**Plan & Profile**

DESIGNED BY: JOEL OSBURN



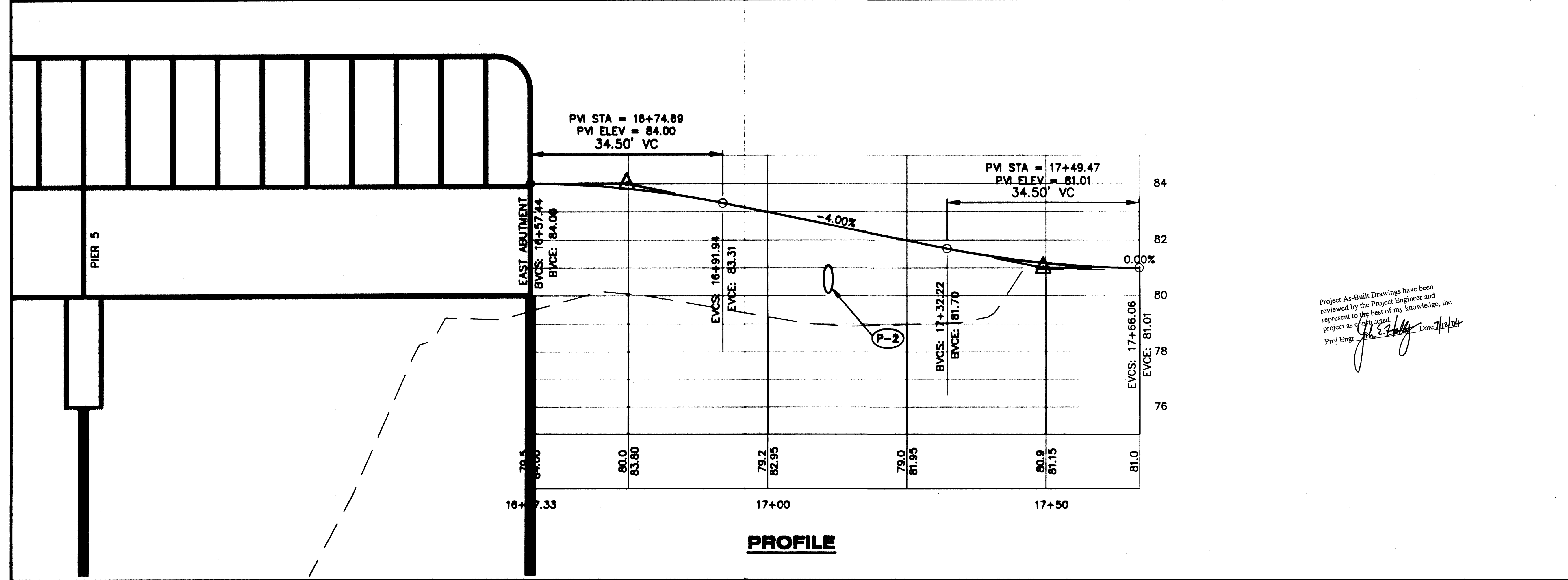
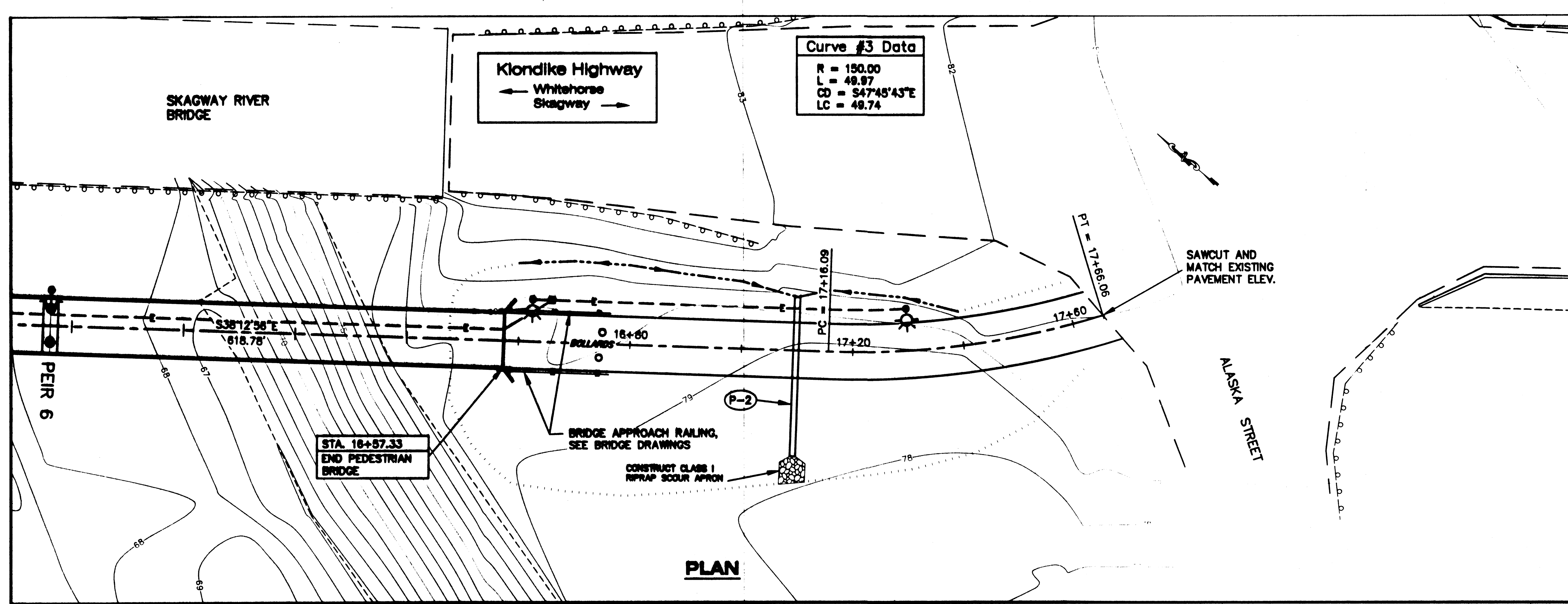
CHECKED BY: LARS GREGOVICH  
 DRAWN BY: BERT BENNETT

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
 STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION  
**SKAGWAY RIVER PEDESTRIAN BRIDGE**

**East Bridge Approach**  
**Plan & Profile**

PROJECT DESIGNATION NUMBER  
**68238 / NH-097-2(14)**

STATE	YEAR
<b>ALASKA</b>	<b>2003</b>
SHEET NUMBER	TOTAL SHEETS
<b>E2</b>	<b>21</b>

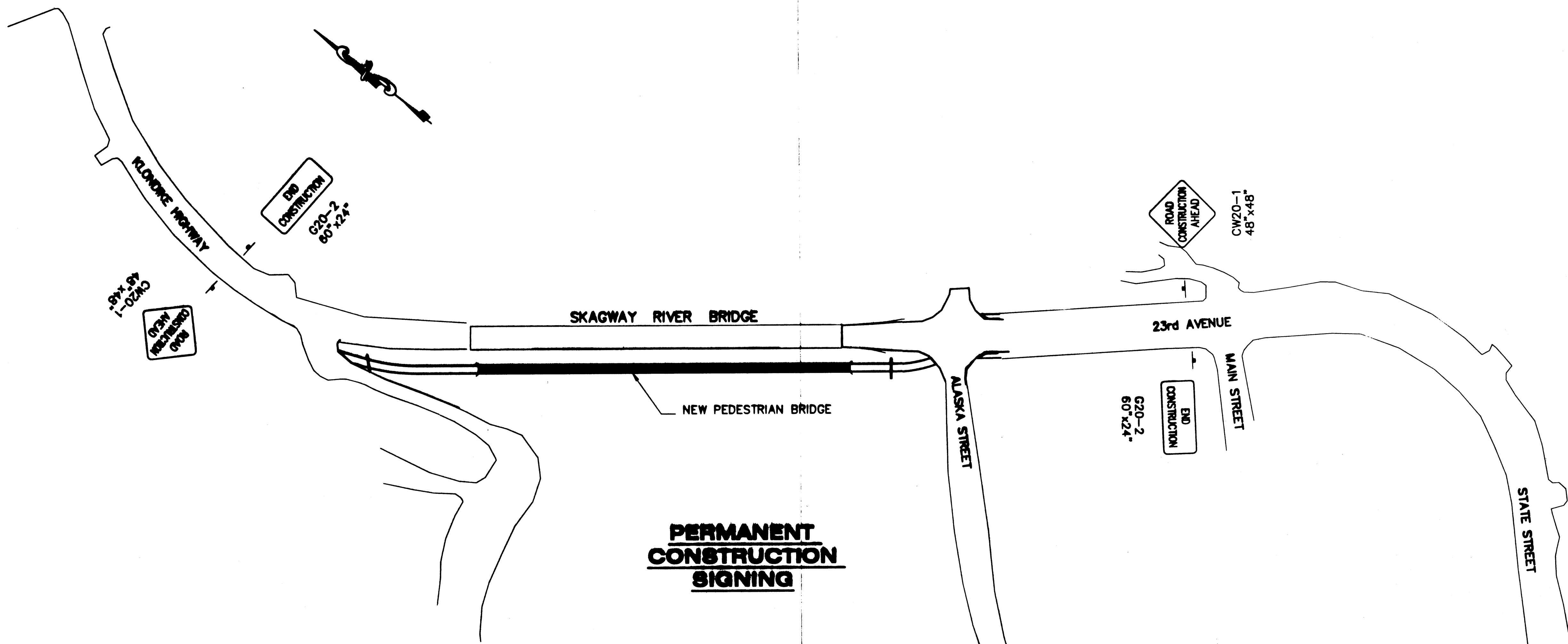


Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. *[Signature]* Date 7/12/04

ADDENDUM NUMBER		
ATTACHMENT NUMBER		
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**SKAGWAY RIVER  
 PEDESTRIAN BRIDGE  
 68238 ~ NH-097-2(14)**

**Traffic Control Plan**



**PERMANENT  
 CONSTRUCTION  
 SIGNING**

**LEGEND**

- ..... SIGN
- ..... CONE
- ..... DRUM
- ..... TYPE III BARRICADE
- ..... FLAGGING STATION

**TRAFFIC CONTROL NOTES:**

- TEMPORARY DRIVING LANES SHALL HAVE A MINIMUM WIDTH OF 10'-0".
- CONSTRUCTION SIGNING SHALL BE IN PLACE ONLY WHEN THE CONDITIONS EXIST FOR WHICH THE SIGNS ARE INTENDED.
- IT IS THE INTENT OF THIS TRAFFIC CONTROL PLAN (TCP) TO ILLUSTRATE SOME, NOT ALL, OF THE TRAFFIC CONTROL SETUPS WHICH WILL BE REQUIRED ON THIS PROJECT. PLANS FOR CONFIGURATIONS NOT COVERED BY THE TCP SHALL BE CREATED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL WHERE APPROPRIATE. THEY SHALL INCORPORATE APPLICABLE PORTIONS OF DETAILS ON THESE SHEETS.

**FORMULAS FOR L (TAPER LENGTH)**

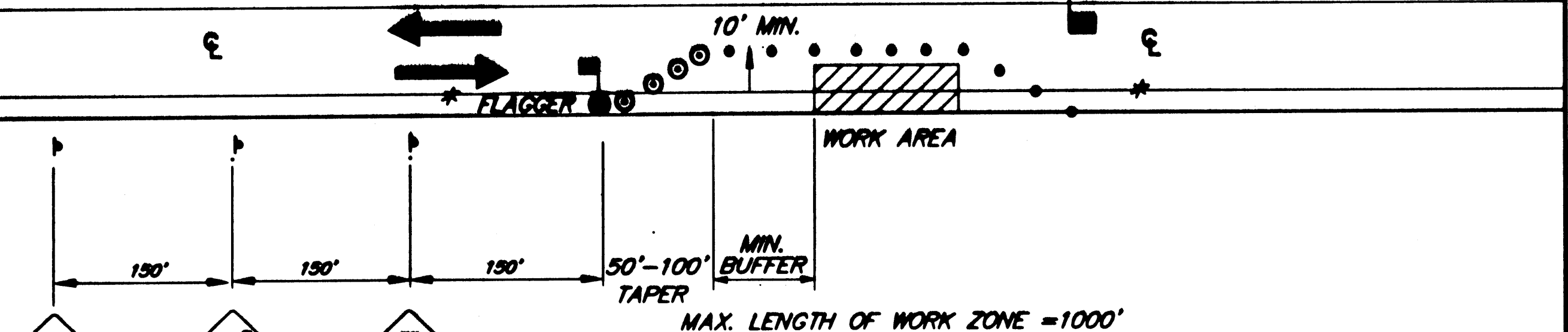
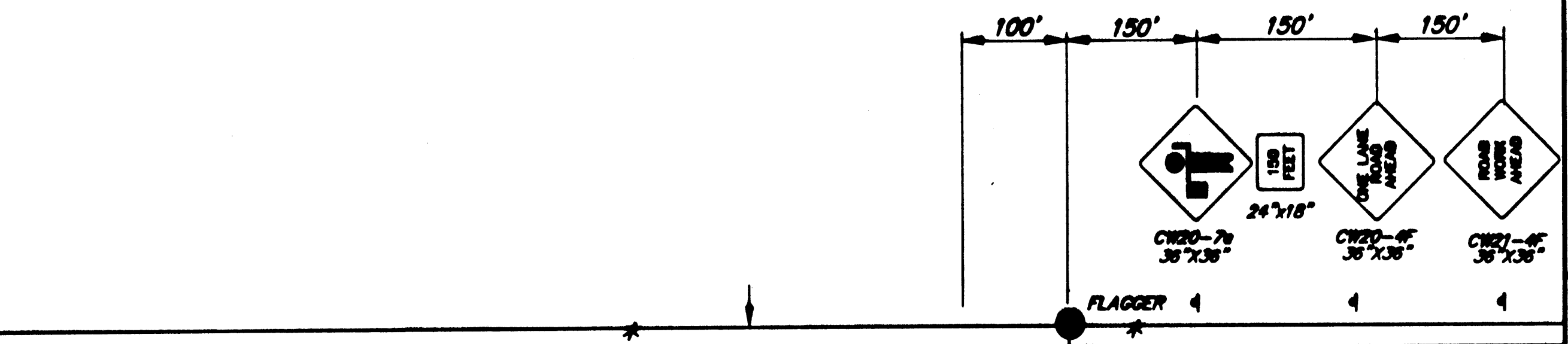
40 MPH OR LESS  $L = \frac{W \times S^2}{60}$

45 MPH OR GREATER  $L = W \times S$

WHERE W= WIDTH OF OFFSET  
 S= POSTED SPEED LIMIT

DRUM OR CONE SPACING = S ( IN FEET)

S	MIN. BUFFER LENGTH
20	35
25	55
30	85
35	120
40	170
45	220
50	280
55	335
60	415
65	485

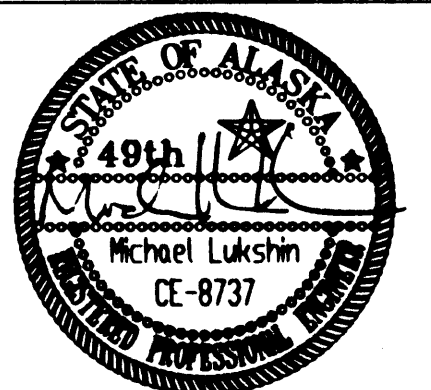


MAX. LENGTH OF WORK ZONE = 1000'

\* NO PARKING WITHIN 200' OF CONES

**SINGLE LANE  
 CLOSURE  
 TWO LANE ROAD**

DESIGNED BY: JOEL OSBURN



CHECKED BY: LARS GREGOVICH  
 DRAWN BY: BERT BENNETT

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. *[Signature]* Date: 1/14/04

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 & PUBLIC FACILITIES  
 STATEWIDE DESIGN & ENGINEERING  
 SERVICES DIVISION  
**SKAGWAY RIVER  
 PEDESTRIAN BRIDGE**

**Traffic Control Plan**

PROJECT DESIGNATION NUMBER

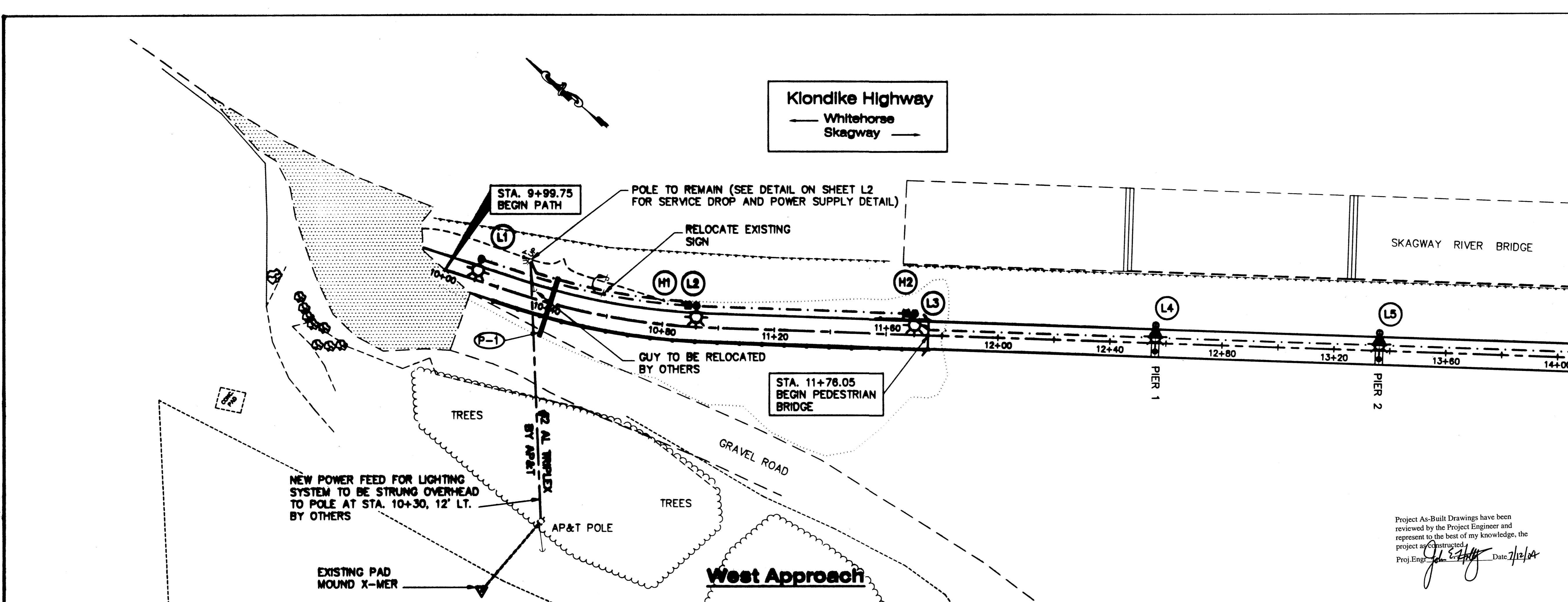
**68238 / NH-097-2(14)**

STATE	YEAR
<b>ALASKA</b>	<b>2003</b>

SHEET NUMBER	TOTAL SHEETS
<b>J1</b>	<b>21</b>

ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION

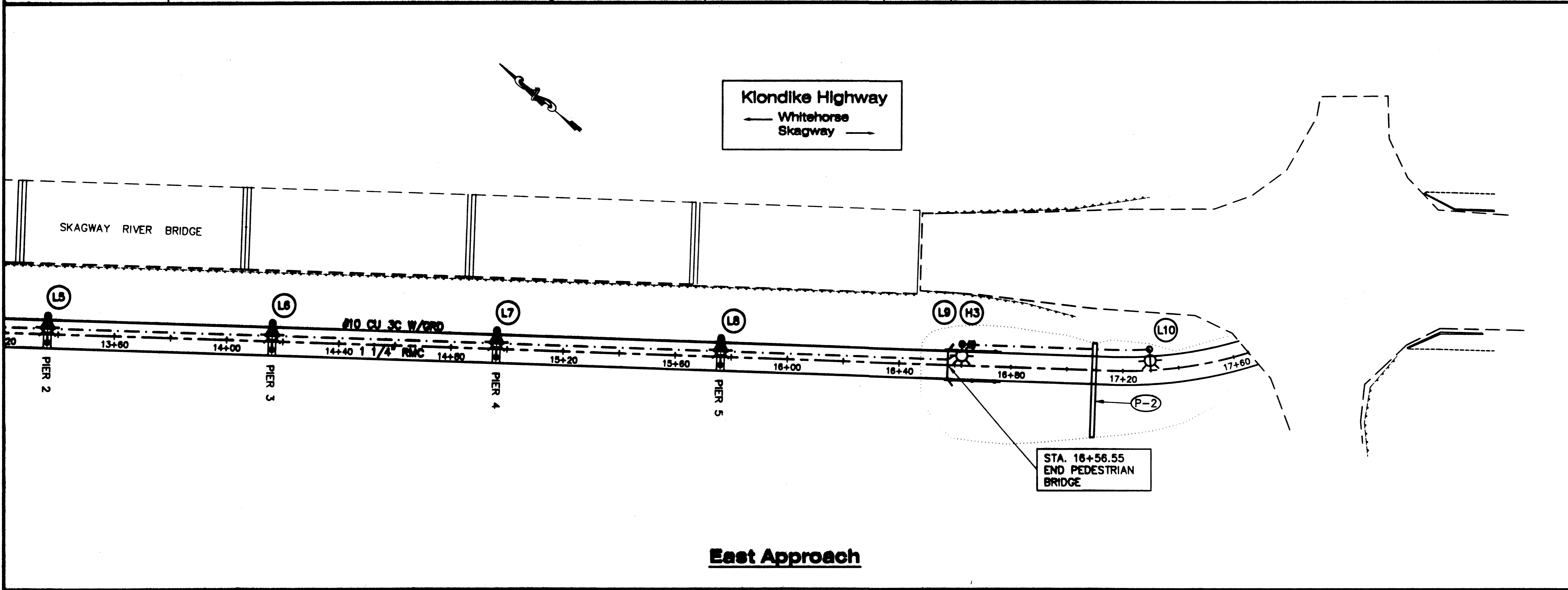
DESIGNED BY: MIKE CARSON



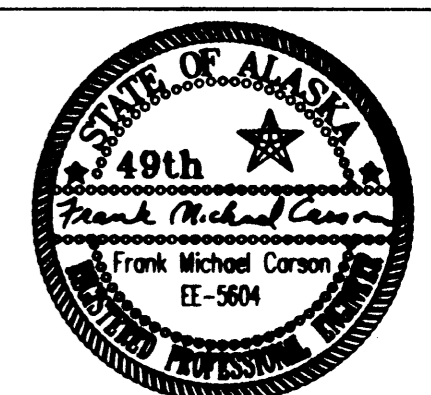
Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Eng. *[Signature]* Date 7/12/04

SKAGWAY RIVER  
 PEDESTRIAN BRIDGE  
 68238 ~ NH-097-2(14)

Power and Lighting Plan



NORTHSTAR POWER ENGINEERING  
 PO BOX 1337, CRAIG, AK 99921 (907)826-2893

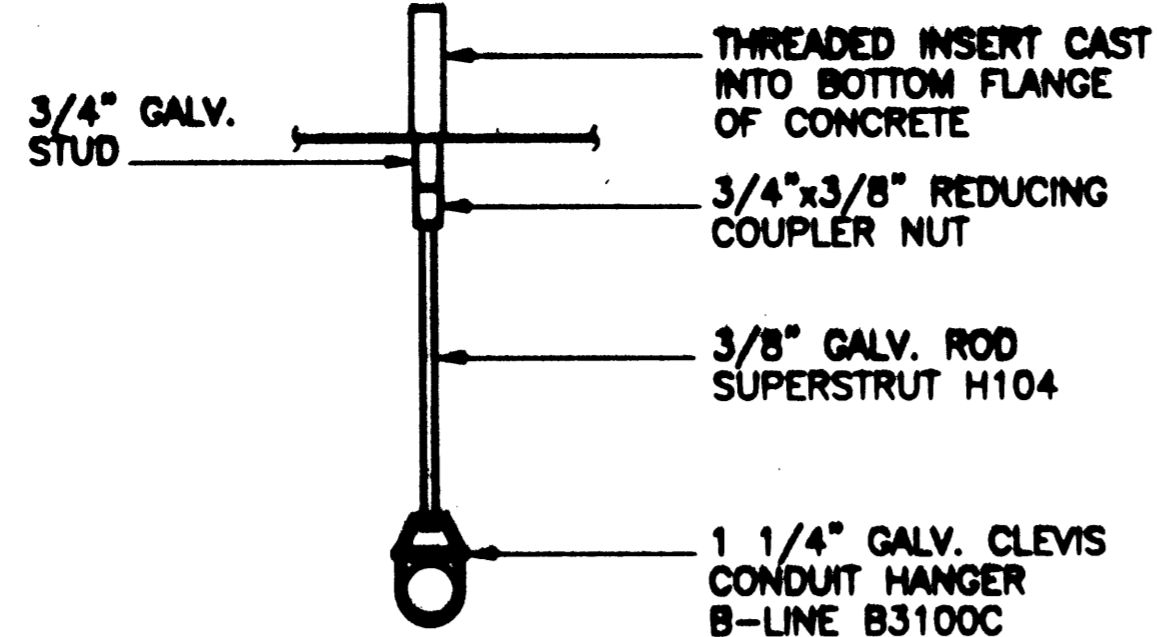


CHECKED BY: MIKE CARSON  
 DRAWN BY: MIKE CARSON

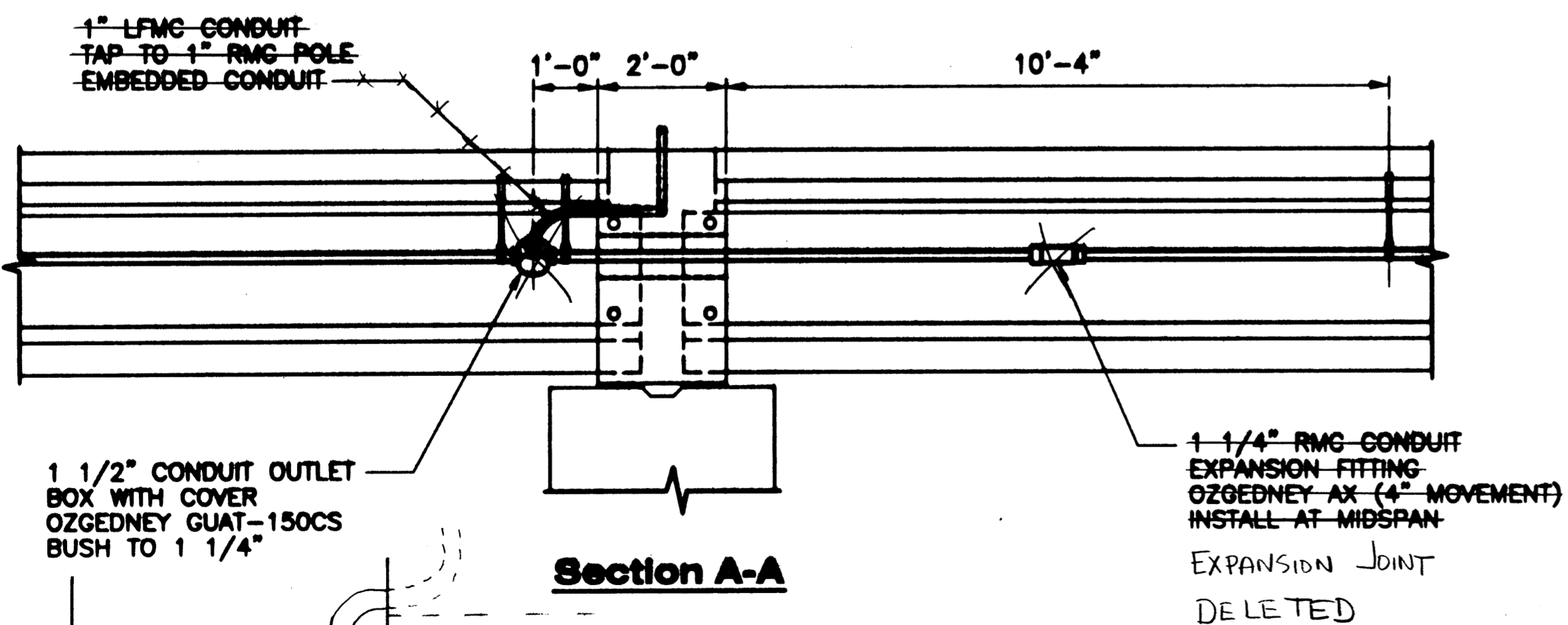
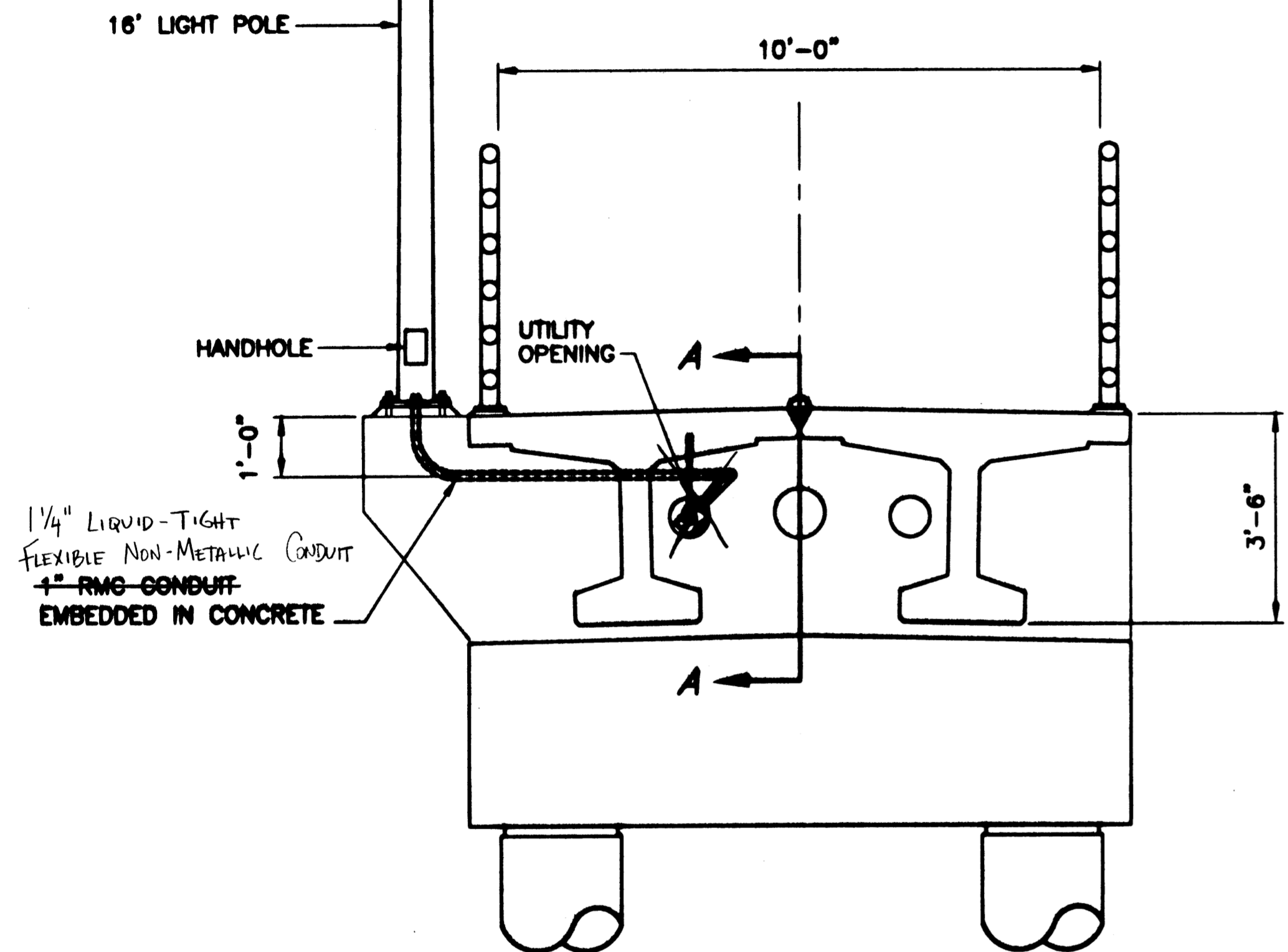
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
 STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION  
 SKAGWAY RIVER PEDESTRIAN BRIDGE

<b>Power and Lighting Plan</b>	
PROJECT DESIGNATION NUMBER	
<b>68238 / NH-097-2(14)</b>	
STATE	YEAR
<b>ALASKA</b>	<b>2003</b>
SHEET NUMBER	TOTAL SHEETS
<b>L1</b>	<b>21</b>

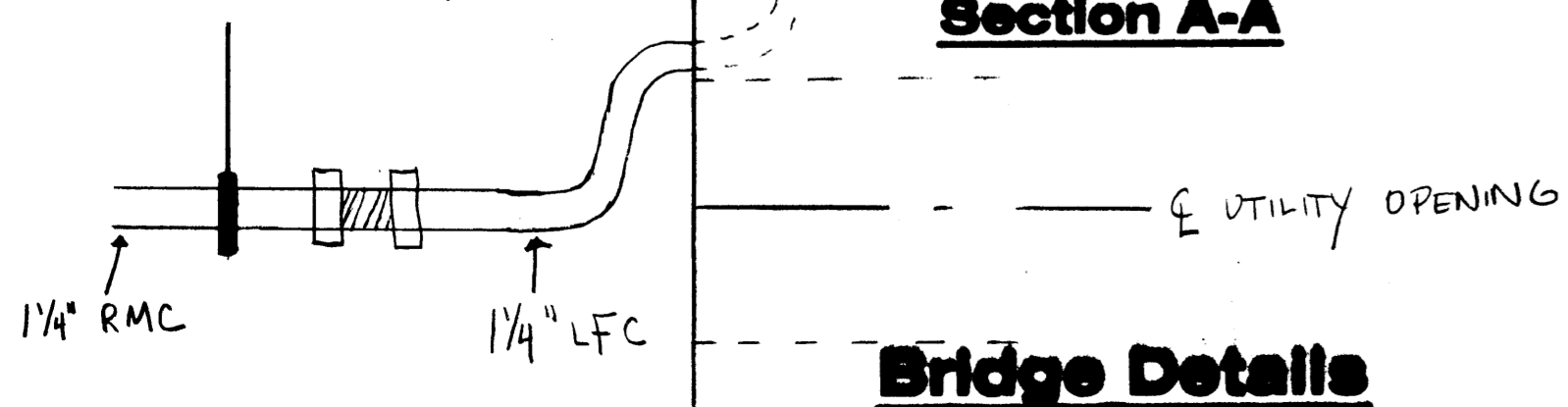
**Note:**  
WHENEVER A SPECIFIC PRODUCT IS SPECIFICATED, IT IS IMPLIED THAT AN "OR-EQUAL" PRODUCT MAY BE SUBSTITUTED.



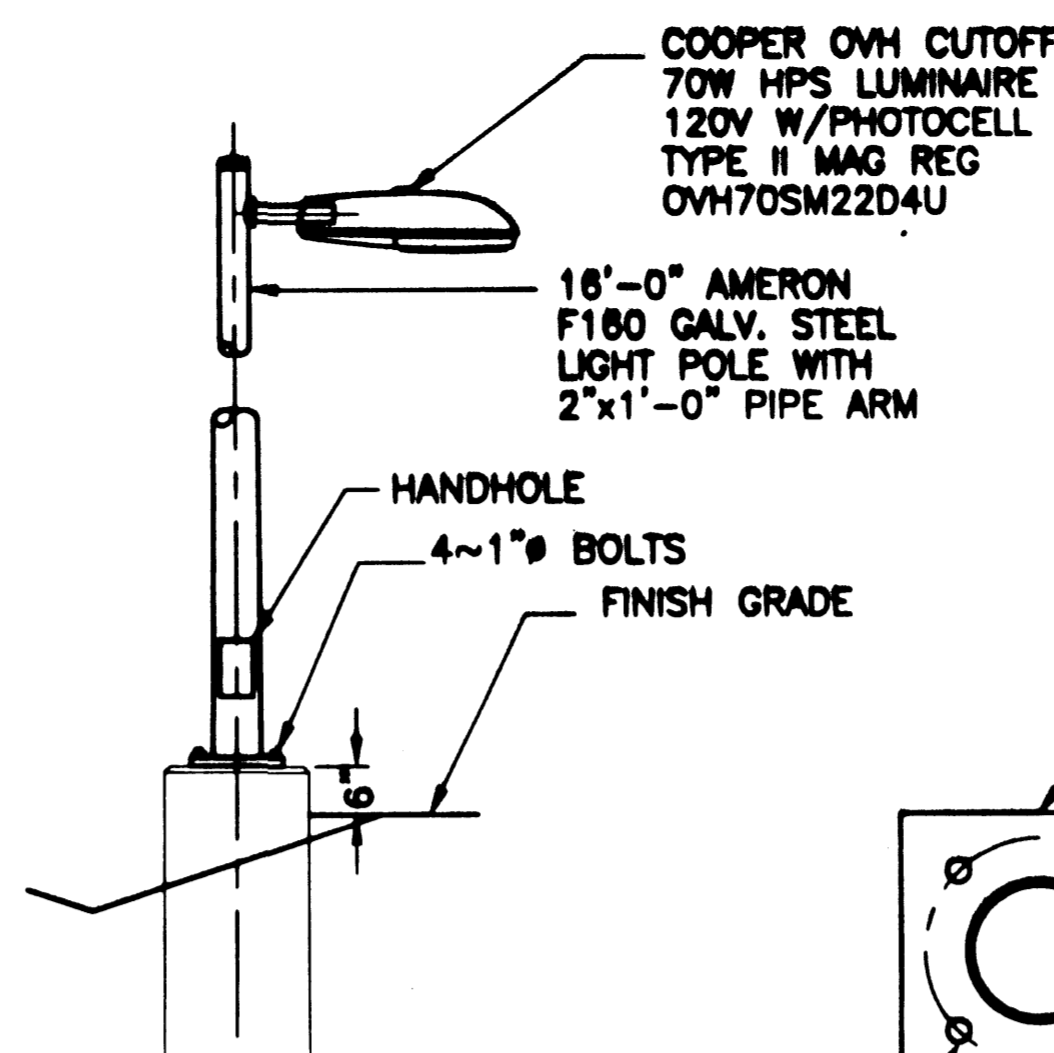
**Hanger Assembly**



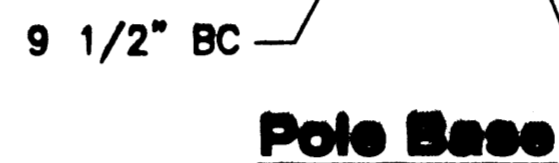
**Section A-A**



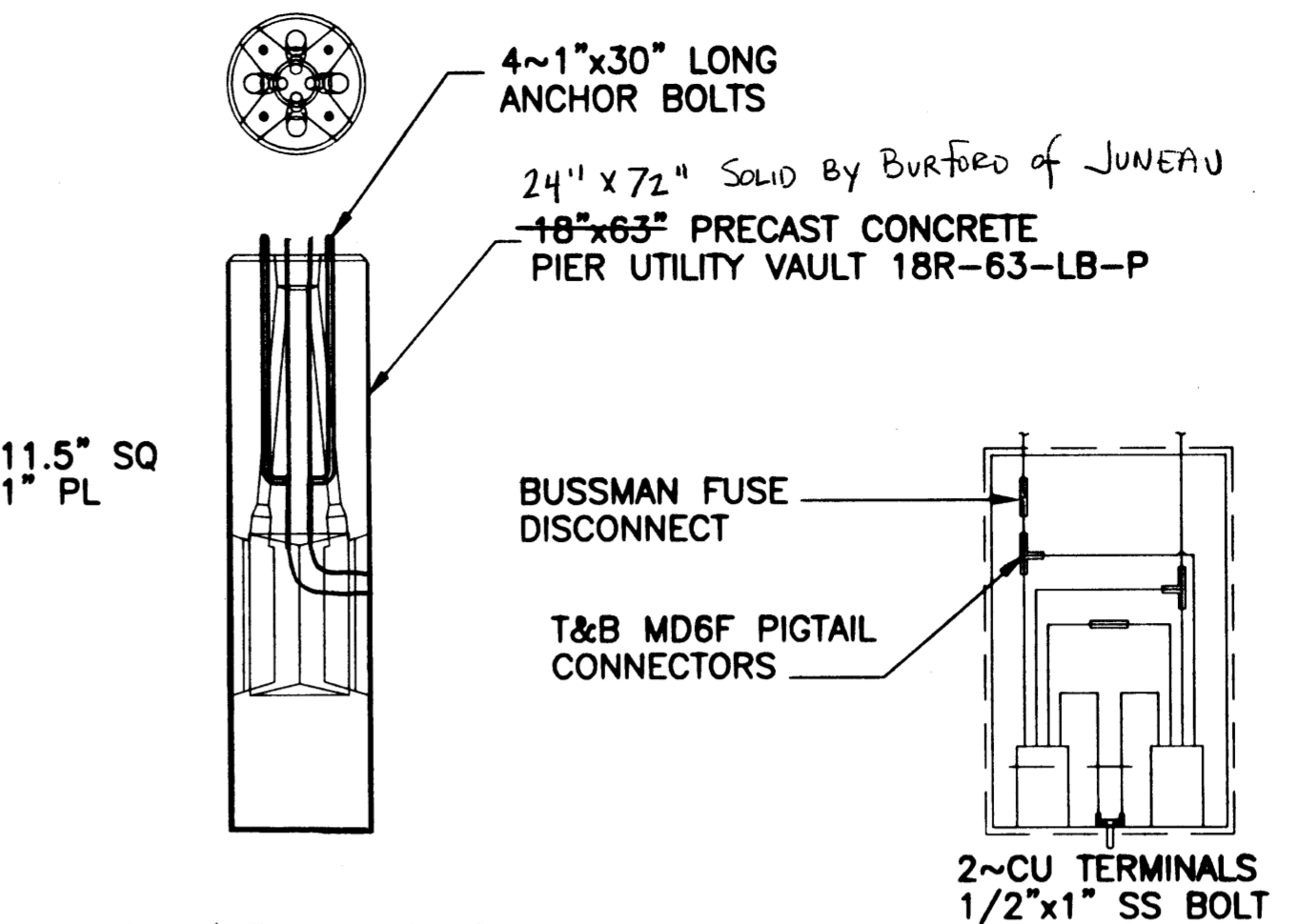
**Bridge Details**



**Typical Lightpole**

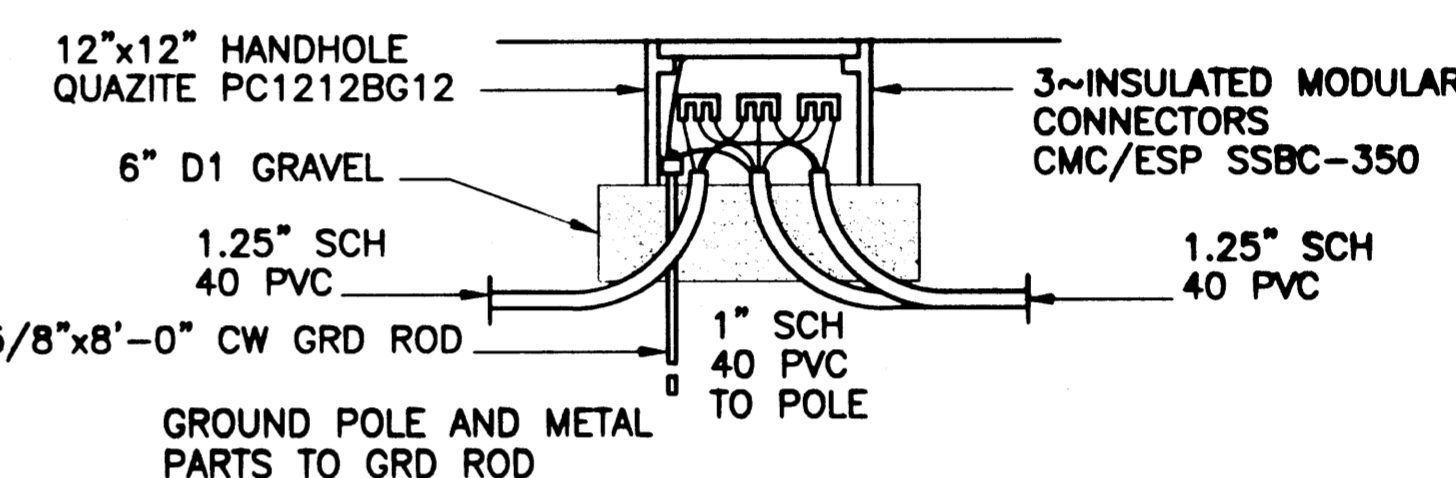


**Pole Base**



**Typical Foundation**

4~7/8" HOLES



**Pole Wiring**

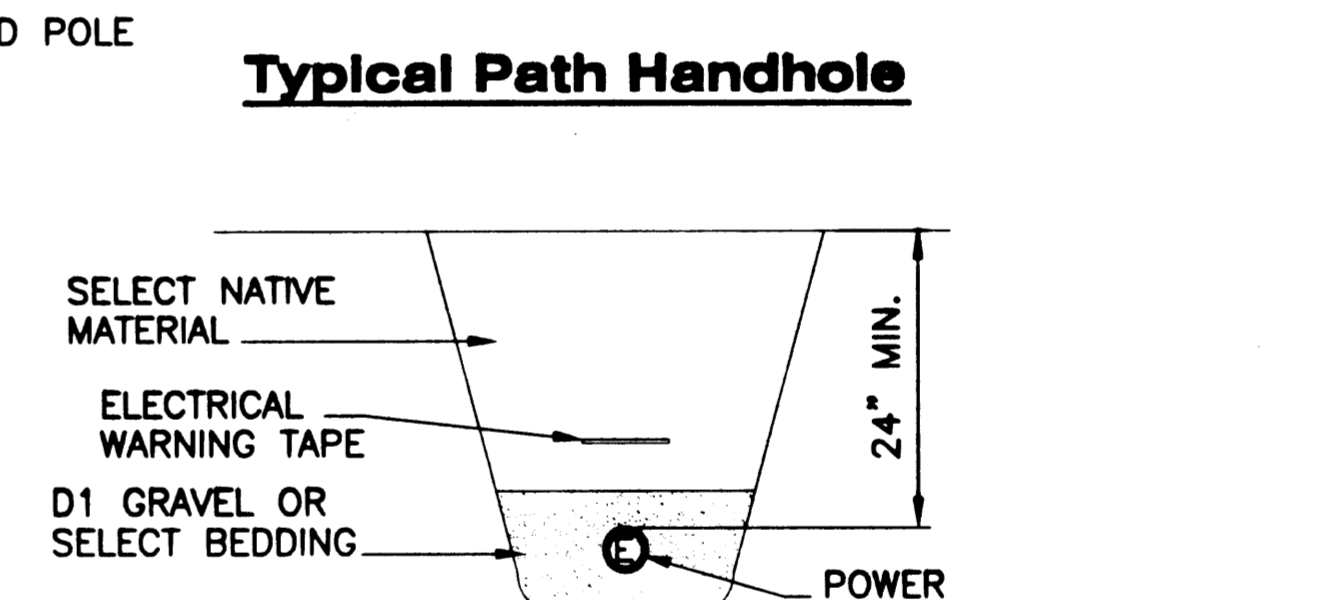
MOUNT BOX/CONDUITS WITH C CHANNEL POLE BRACKETS, WILCOR WA185B OR EQUAL

100A OVERHEAD TYPE METER/CIRCUIT BREAKER BOX WITH 30A 2P CB CIRCLE AW 1M1R. GROUND WITH 5/8"x8'-0" CW ROD

1.25" GALV STEEL CONDUIT

**120/240V Supply Detail**

**Path Details**



**Typical Path Handhole**

**Trench Detail**

NO	STATION	OFFSET	LOCATION
L1	10+11.70	7.5'	
L2	10+92.32	7.5'	
L3	10+70.00	7.5'	
L4			PIER 1
L5			PIER 2
L6			PIER 3
L7			PIER 4
L8			PIER 5
L9	16+62.37	7.5'	
L10	17+30.00	7.5'	
H1	10+89.32	7.0'	
H2	11+67.00	7.0'	
H3	16+65.37	7.0'	

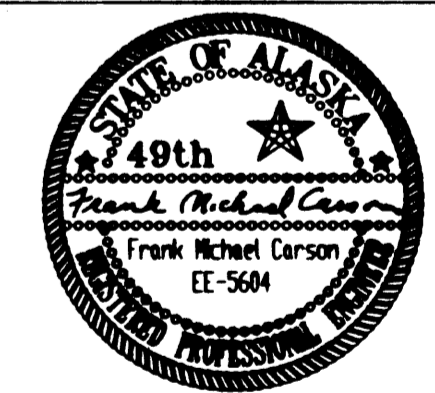
**Light & Handhole Schedule**

PATH: G:\Sgy\68238\Planse\68238ecdetails  
 PLDT: PSPACE 1=1(F) DR MSPACE 1=1(F)  
 ADDENDUM NUMBER  
 ATTACHMENT NUMBER  
 RECORD OF REVISIONS  
 No. DATE DESCRIPTION  
 DESIGNED BY: MIKE CARSON

SKAGWAY RIVER  
 BRIDGE WIDENING  
 68238 - NH-097-2(14)

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. *Mike Carson* Date 7/12/04

NORTHSTAR POWER ENGINEERING  
 PO BOX 1337, CRAIG, AK. 99921 (907)826-2893



CHECKED BY: MIKE CARSON  
 DRAWN BY: MIKE CARSON

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
 STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION  
 SKAGWAY RIVER PEDESTRIAN BRIDGE

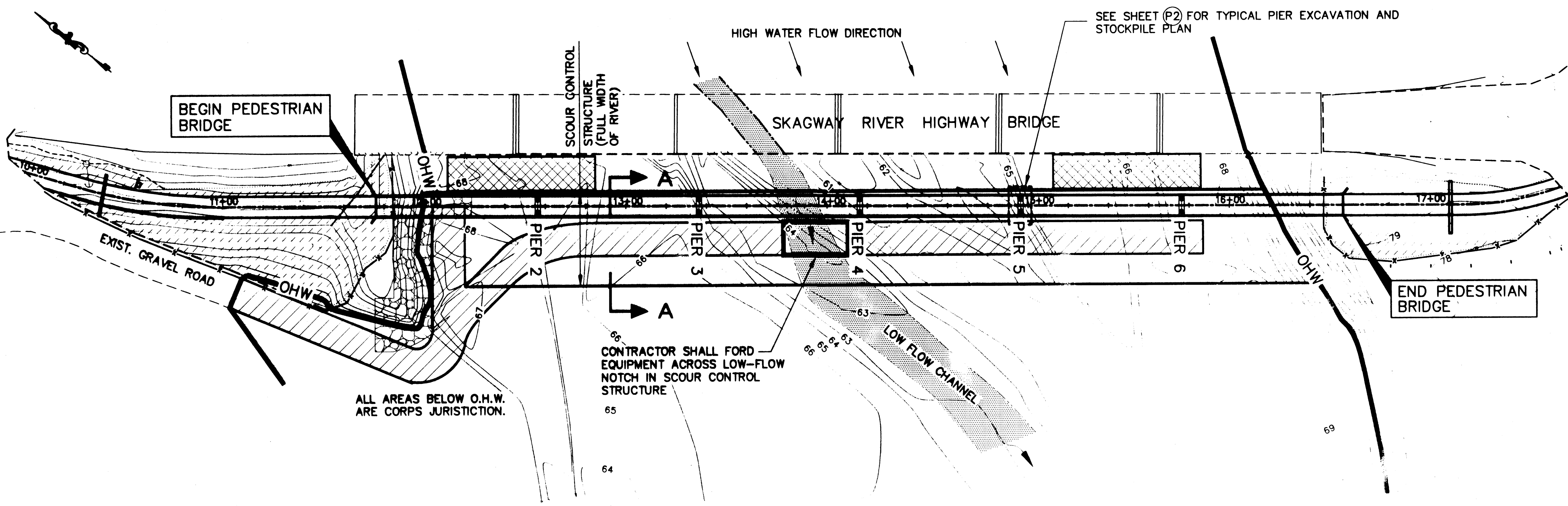
**Power and Lighting Details**

PROJECT DESIGNATION NUMBER  
**68238 / NH-097-2(14)**

STATE	YEAR
ALASKA	2003
SHEET NUMBER	TOTAL SHEETS
L2	21

**Power and Lighting Details**

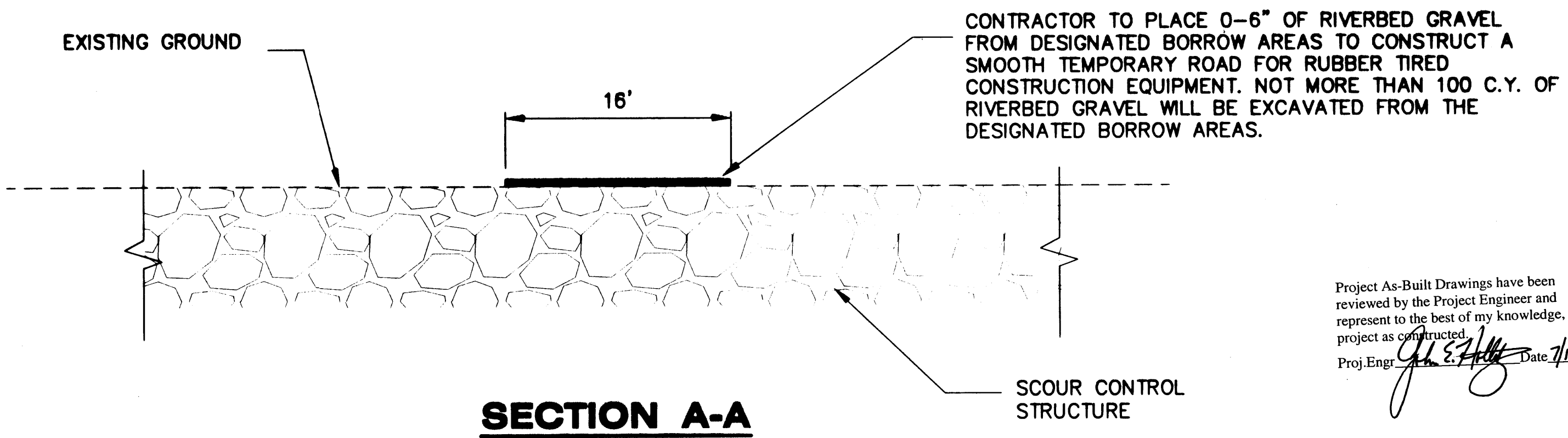
ADDENDUM NUMBER		
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RECORD OF REVISIONS		
No.	DATE	DESCRIPTION



**Legend**

- GEOTEXTILE SEDIMENT CONTROL
- SLOPES STABILIZED WITH TOPSOIL, SEEDING AND MATTING
- DESIGNATED RIVERBED GRAVEL BORROW AREAS
- PROPOSED 4' THICK CLASS III RIPRAP
- ORDINARY HIGH WATER
- TEMPORARY ACCESS ROAD ROUTE

**PLAN**



**SECTION A-A**

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
 Proj. Engr. *[Signature]* Date: 1/14/04

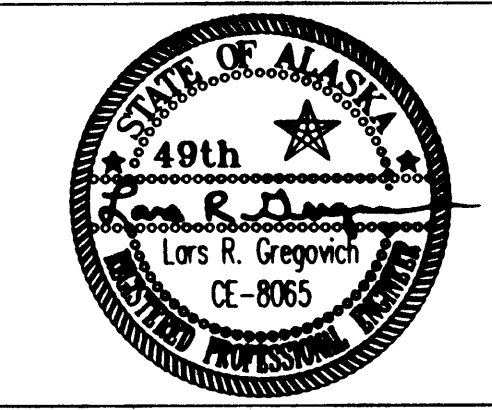
**ESCP Notes:**

- THIS ESCP WAS DEVELOPED IN ACCORDANCE WITH ADOT&PF'S "ALASKA STORM WATER POLLUTION PREVENTION PLAN GUIDE."
- THIS PROJECT WILL DISTURB, EXPOSE OR GRADE 0.8 ACRES OF SURFACE AREA.
- THE TOTAL AREA OF THE PROJECT (WITHIN THE R.O.W. LIMITS) IS 4.1 ACRES.
- THE CONTRACTOR'S SWPPP SHALL COMPLY WITH THE NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE CLASSIFIED AS "ASSOCIATED WITH INDUSTRIAL ACTIVITY."
- EROSION AND POLLUTION CONTROL MEASURES SHALL BE AS DETAILED ON THIS PLAN SHEET, THE CONTRACTOR'S APPROVED SWPPP, SPECIAL PROVISIONS AND APPENDIX B, OR AS DIRECTED BY THE ENGINEER.

SKAGWAY RIVER  
 PEDESTRIAN BRIDGE  
 68238 - NH-097-2(14)

**ESCP & In-Water Work Plan**

DESIGNED BY: JOEL OSBURN



CHECKED BY: LARS GREGOVICH  
 DRAWN BY: BERT BENNETT

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
 STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION  
**SKAGWAY RIVER PEDESTRIAN BRIDGE**

**ESCP & In-Water Work Plan**

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68238 / NH-097-2(14)	
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**Site Characteristics:**

**A. PHYSICAL LOCATION:**

SKAGWAY IS LOCATED AT THE NORTH END OF THE SOUTHEASTERN PANHANDLE AT THE NORTHERNMOST END OF LYNN CANAL.

59.45833 LATITUDE  
135.3189 W. LONGITUDE  
SECTION 11, TOWNSHIP 028 SOUTH, RANGE 059 EAST, COPPER RIVER MERIDIAN.

**B. PRECIPITATION AND HYDROLOGY INFORMATION:**

SKAGWAY AVERAGES 26 INCHES OF PRECIPITATION PER YEAR AND 39 INCHES OF SNOW.

ESTIMATED PRE-CONSTRUCTION RUNOFF COEFFICIENT: C=0.25

ESTIMATED POST-CONSTRUCTION RUNOFF COEFFICIENT: C=0.25

RECEIVING WATER IS THE SKAGWAY RIVER.

**Description of Construction Activity:**

**A. PEDESTRIAN BRIDGE CONSTRUCTION:**

THE PLANS CALL FOR CONSTRUCTION OF A NEW 480 FOOT LONG BY 10 FOOT WIDE PEDESTRIAN BRIDGE.

CONSTRUCTION OF THE NEW PEDESTRIAN BRIDGE WILL BEGIN WITH CONSTRUCTION OF THE PIERS, UNLESS THE STAGE OF THE RIVER IS TOO HIGH TO GAIN ACCESS FROM THE RIVERBED OR WORK BEGINS OUTSIDE OF THE PERMIT WINDOWS, IN WHICH CASE WORK WILL BEGIN ON THE BRIDGE ABUTMENTS AND WING WALLS.

CONSTRUCTION OF THE PIERS WILL BEGIN WITH GAINING ACCESS TO THE PIER LOCATIONS FOR VARIOUS CONSTRUCTION EQUIPMENT. THIS WILL BE DONE WITH A TEMPORARY ACCESS ROAD ON TOP OF THE EXISTING SCOUR CONTROL APRON. PRIOR TO DRIVING THE PILES AT EACH PIER LOCATION, THE EXISTING SCOUR CONTROL RIPRAP MAY BE EXCAVATED AND TEMPORARILY STOCKPILED TO FACILITATE DRIVING. THE 24" PIPE PILES (2 AT EACH PIER LOCATION - 5 PIERS TOTAL) WILL BE DRIVEN TO THE REQUIRED DEPTH. ONCE THE PILES ARE DRIVEN AT A GIVEN PIER LOCATION, THE SCOUR CONTROL RIPRAP WILL BE BACK FILLED AGAINST THE PILES.

AFTER THE PIERS ARE COMPLETED, THE REINFORCED CONCRETE PIER CAPS WILL BE FORMED AND POURED. ONCE SUFFICIENT STRENGTH HAS BEEN GAINED IN THE PIER CAPS, THE PRE STRESSED CONCRETE GIRDERS WILL BE SET. THIS WILL LIKELY REQUIRE TWO CRANES (ONE PICKING END OF THE GIRDER) TO SET EACH GIRDER. AFTER ALL THE GIRDERS ARE SET, THE DIAPHRAGMS, RAILING AND LIGHTING SYSTEM WILL BE INSTALLED. THE CONCRETE END AND WING WALLS WILL NEED TO BE FORMED AND POURED PRIOR TO SETTING THE GIRDERS AT EITHER END OF THE BRIDGE STRUCTURE.

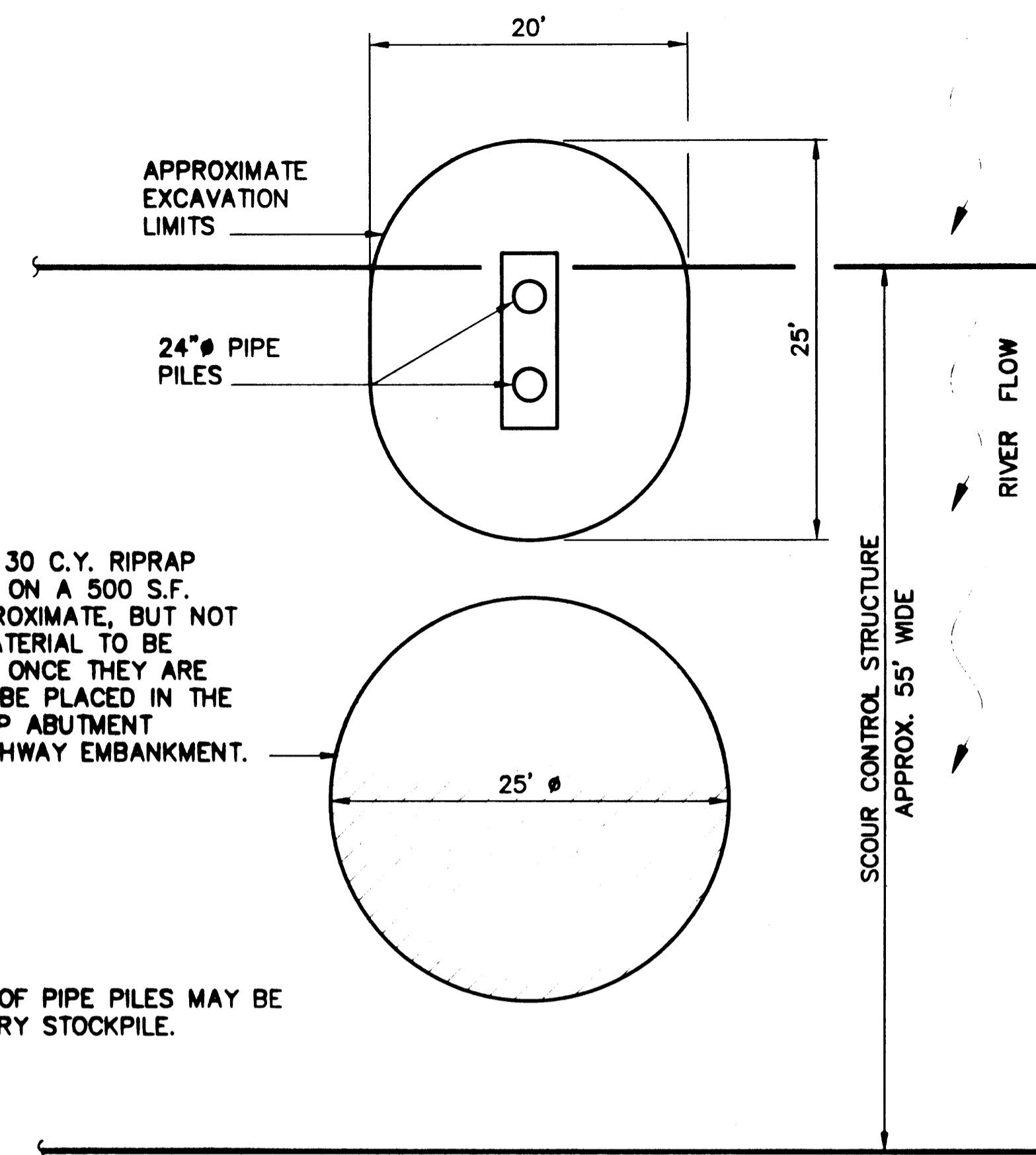
**B. PATH TRANSITIONS:**

THE PLANS CALL FOR CONSTRUCTION OF 150 TO 200 FOOT LONG PATH CONNECTIONS AT BOTH ENDS OF THE BRIDGE. THESE CONNECTIONS LINK THE BRIDGE WITH EXISTING PEDESTRIAN FACILITIES AND TRANSITION TO MEET THE GRADE OF THE NEW PEDESTRIAN BRIDGE.

ONCE THE CONCRETE END AND WING WALLS ARE COMPLETED, THE PATH CONNECTIONS AT BOTH ENDS CAN BE CONSTRUCTED. THIS WILL INVOLVE PLACEMENT OF BORROW MATERIAL TO THE LINE, GRADE AND SLOPES INDICATED ON THE PLANS. THE PATH WILL BE FINE GRADED WITH CRUSHED AGGREGATE BASE COURSE. TIMBER RAILING WILL BE INSTALLED BEFORE ASPHALT PAVEMENT IS PLACED ON THE PATH. SLOPES WILL BE TOP SOILED, SEEDED AND MATTED TO STABILIZE THE SOIL SLOPES FROM EROSION.

**In-Water Work Notes:**

1. ORDINARY HIGH WATER (O.H.W.) IS 71.4 FEET.
2. THE CONTRACTOR WILL BE WORKING UNDER PERMITS SECURED BY THE DEPARTMENT. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH THE PERMIT CONDITIONS AND ENVIRONMENTAL COMMITMENTS CONTAINED IN APPENDIX B.
3. THE CONTRACTOR SHALL READ SECTION 641 OF THE SPECIAL PROVISIONS REGARDING IN-WATER WORK, INCLUDING THE REQUIREMENT TO SUBMIT AND IN-RIVER WORK PLAN. IN-RIVER SHALL BE CONSIDERED ANY AND ALL WORK BELOW O.H.W.
4. THE CONTRACTOR IS ALERTED TO THE EXISTENCE OF A RIPRAP SCOUR APRON AS INDICATED ON THIS PLAN SHEET. REFER THE SECTION 505 REGARDING PILE DRIVING THROUGH THIS RIPRAP.
5. THE LOW FLOW CHANNEL DEPICTED IS THAT OBSERVED IN FEBRUARY AND MAY OF 2002.
6. ALL CONSTRUCTION ACTIVITY BELOW O.H.W. SHALL BE DONE DURING THE PERIOD FROM NOVEMBER 1 TO APRIL 15 OR JUNE 15 TO JULY 15.
7. THE CONTRACTOR MAY CONSTRUCT A TEMPORARY ACCESS ROAD ONTO THE RIVERBED IN ORDER FOR MEN AND EQUIPMENT TO CONSTRUCT THE BRIDGE. THE TEMPORARY ACCESS ROAD SHALL COMPLY WITH THE FOLLOWING:
  - a. SHALL CONFORM TO THE ALIGNMENT AND LOCATION SHOWN ON THIS PLAN SHEET.
  - b. UP TO 10,000 S.F. OF RIVERBED MAY BE FILLED USING UP TO 175 C.Y. OF RIVERBED MATERIAL FROM DESIGNATED AREAS TO CONSTRUCT A TEMPORARY ROAD.
  - c. THE RIVERBED SHALL BE RESTORED TO ITS ORIGINAL CONTOURS WHEN WORK IS COMPLETE.
  - d. ANY DEVIATION OR MODIFICATION TO THE INDICATED IN-WATER WORK PLAN SHALL BE SUBMITTED TO THE ENGINEER. THE CONTRACTOR WILL NEED TO ANTICIPATE A 30 DAY REVIEW TO ACCOUNT FOR ANY REQUIRED PERMIT MODIFICATIONS.



**Typical Pier Excavation and Stockpile Plan**

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.  
Proj. Engr. *[Signature]* Date 7/12/04

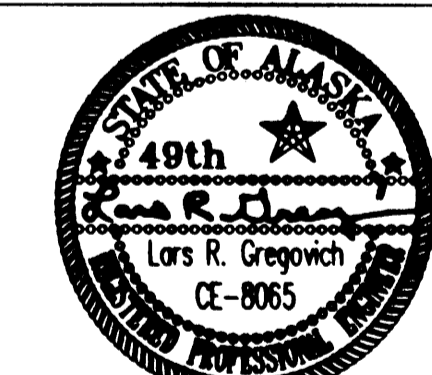
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ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION

SKAGWAY RIVER  
PEDESTRIAN BRIDGE  
68238 ~ NH-097-2(14)

**ESCP & In-Water Work Plan**

DESIGNED BY: JOEL OSBURN



CHECKED BY: LARS GREGOVICH

DRAWN BY: BERT BENNETT

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION  
**SKAGWAY RIVER PEDESTRIAN BRIDGE**

**ESCP & In-Water Work Plan**

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