

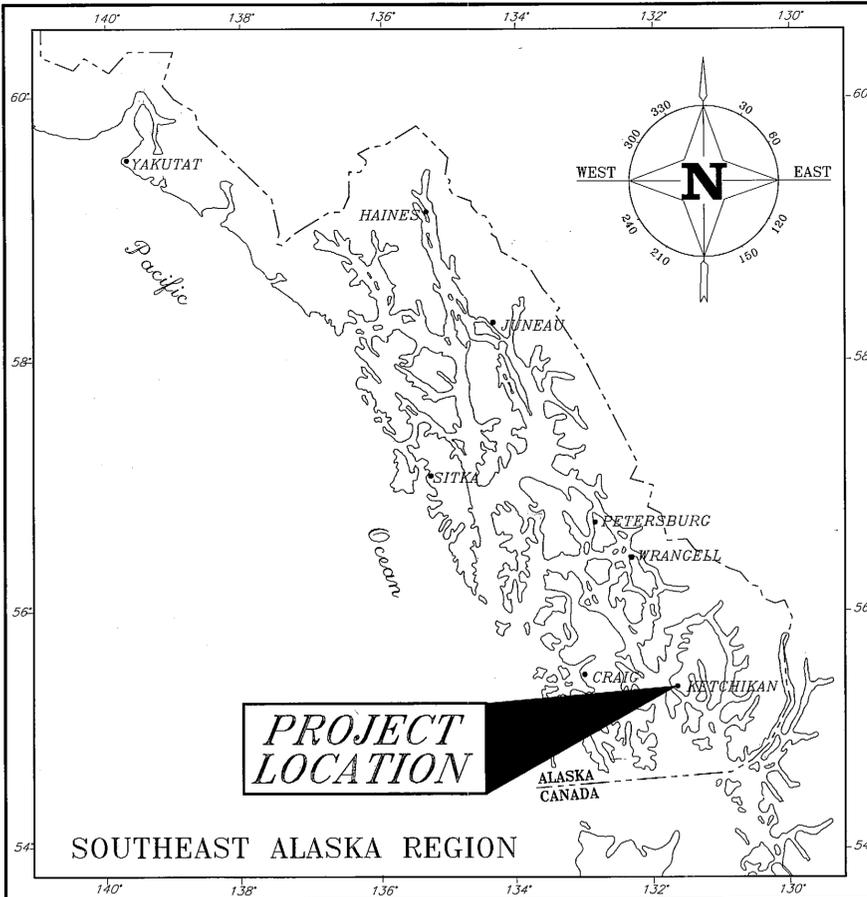
STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND
 PUBLIC FACILITIES
 SOUTHEAST REGION
 DESIGN AND CONSTRUCTION DIVISION

KETCHIKAN, ALASKA

**KETCHIKAN AIRPORT
 GRAVINA
 FERRY TERMINAL**

A.I.P. 3-02-0144-1097

PROJECT NO. 72030



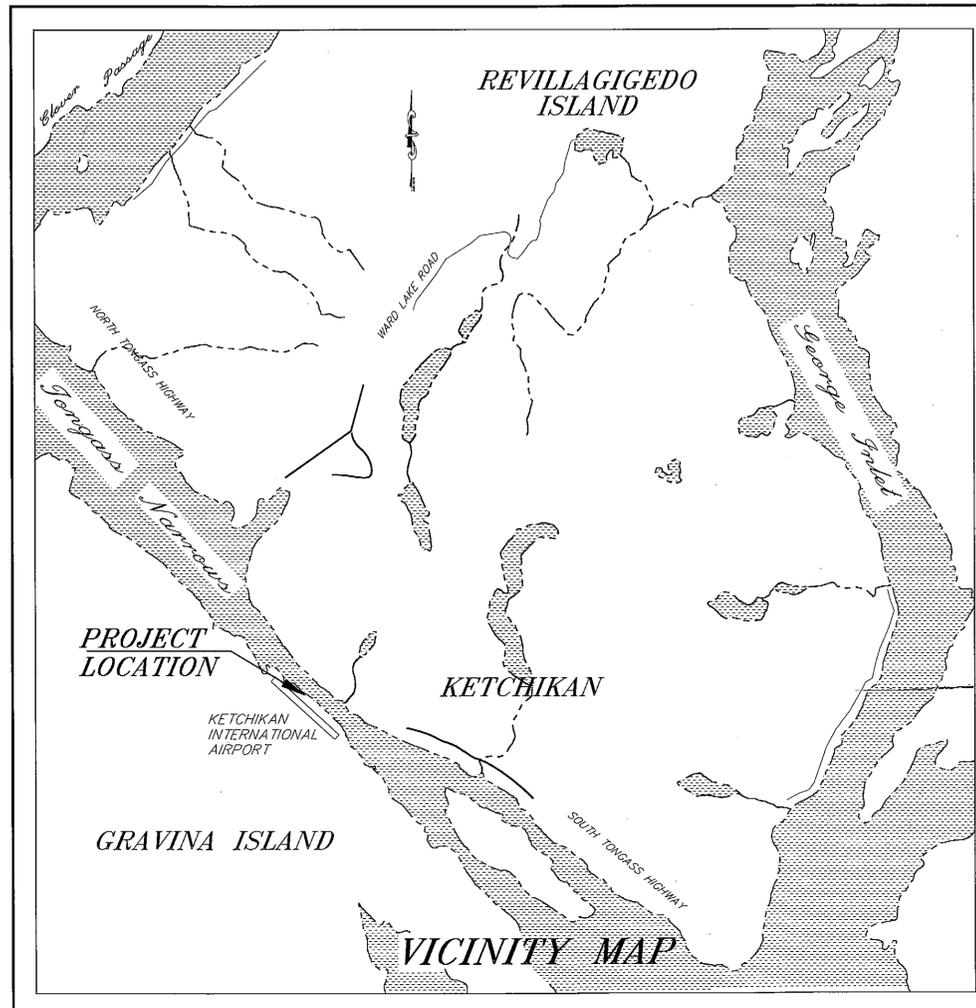
INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	QUANTITIES & GENERAL NOTES
3	EXISTING LAYOUT & TRAFFIC MAINTENANCE
4	EXISTING / DEMOLITION PLAN
5	PROPOSED IMPROVEMENTS
6	EXCAVATION PLAN
7	EXCAVATION - TYPICAL SECTIONS
8-10	NEW ABUTMENT & RAIL DETAILS
11-20	PEDESTRIAN / VEHICLE BRIDGE DETAILS
21-24	APRON LIFT TOWER DETAILS
25-28	BRIDGE SUPPORT FLOAT DETAILS
29	FLOAT RESTRAINT STRUCTURES
30-33	DOLPHIN FENDER RECONSTRUCTION DETAILS
34	MISC. FENDER & ANODE DETAILS
35	HYDRAULIC POWER UNIT
36-41	ELECTRICAL

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:

AS - BUILT PLAN SET

CONTRACTOR - DAWSON CONSTRUCTION
 BELLINGHAM, WA.

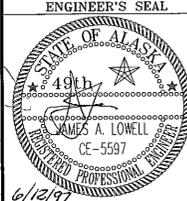
PROJECT ENGINEER - A.K. SHEPARD
 NOVEMBER 1997 THRU APRIL 1998



STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND
 PUBLIC FACILITIES
 SOUTHEAST REGION DESIGN SECTION

APPROVED  Date 6/13/97
 Regional Preconstruction Engineer

APPROVED  Date 6/13/97
 Director, S.E. Region Design & Construction

PROJECT NUMBER: 72030	ENGINEER'S SEAL 
DATE: JUNE, 1997	
SHEET 1 OF 41	

ESTIMATE OF QUANTITIES

GENERAL NOTES

NEW PILING DATA

ITEM NO.	ITEM	ESTIMATED QUANTITIES	UNIT	#
110	Mobilization & Demobilization	All Req'd	L.S.	79,364
111(1)	Erosion & Pollution Control Administration	All Req'd	L.S.	2,000
111(2)	Erosion & Pollution Control	All Req'd	C.S.	0
112	Construction Surveying by the Contractor	All Req'd	L.S.	15,000
114(1)	Traffic Maintenance and Control	All Req'd	L.S.	60,000
114(2)	PEDESTRIAN TRANSFER BUS C.O.#1	ALL REQ'D	L.S.	42,300
120(1)	DBE Adjustment	All Req'd	C.S.	122.25
114(3)	TEMPORARY TICKET BOOTH C.O.#1	ALL REQ'D	L.S.	8,095
114(4)	TRAFFIC CONTROL IMPROVEMENTS C.O.#2	ALL REQ'D	L.S.	7,421
201(1)	Removal of Structures and Obstructions	All Req'd	L.S.	216,438
202(1)	Dredging	2400	C.Y.	
202(2)	DREDGING C.O.#4	ALL REQ'D	L.S.	13,200
205(1)	Rip Rap, Class V	All Req'd	L.S.	31,000
205(2)	Rip Rap, Class II	225	C.Y.	
205(3)	RIP RAP, CLASS II	ALL REQ'D	L.S.	10,260
301(1)	18" dia. x 1/2" wall Pipe Pile, Furnished	120.5	L.F.	8,706.50
301(2)	18" dia. x 1/2" wall Pipe Pile, Driven	2	EA.	6,400
301(3)	20" dia. x 5/8" wall Pipe Pile, Furnished	454.8	L.F.	33,200.40
301(4)	20" dia. x 5/8" wall Pipe Pile, Driven	6	EA.	21,000
301(5)	36" dia. x 5/8" wall Pipe Pile, Furnished	201	L.F.	30,150
301(6)	36" dia. x 5/8" wall Pipe Pile, Driven	3	EA.	See Note 1 24,000
302(1)	New Barge Restraint Structure Caps, Furn., Fabr. & Erected	3	EA.	39,000
302(2)	New Pedestrian & Vehicle Bridge, Furn., Fabr. & Erected	All Req'd	L.S.	787,525
302(3)	Reconstruct Existing Dolphin Fender Systems	3	EA.	162,000
302(4)	Furnish & Install Dolphin Anodes	9	EA.	7,200
302(5)	Support Barge Fenders	All Req'd	L.S.	116,188
302(6)	Support Barge Restraint Collars	All Req'd	L.S.	42,000
302(7)	BARGE ACCESS LADDER C.O.#3	ALL REQ'D	L.S.	4,474
302(8)	STRUCTURAL STEEL MODIFICATIONS C.O.#5	ALL REQ'D	L.S.	23,725.07
311(1)	New 40' x 60' Concrete Bridge Support Barge (Alternate A)	All Req'd	L.S.	301,500
311(2)	New 40' x 60' Steel Bridge Support Barge (Alternate B)	All Req'd	L.S.	
312(1)	Construct New Transfer Bridge Abutment & Approach Slab	All Req'd	L.S.	See Note 2 29,615
501(1)	Electrical Power & Lighting	All Req'd	L.S.	62,000

Specifications: Per Contract Documents for Project No. A.I.P. 3-02-1044-1097/72030

Construction: Per Contract Documents for Project No. A.I.P. 3-02-1044-1097/72030

Design Standards: AKDOT/PF & SOUTHEAST REGION MARINE ENGINEERING DESIGN STANDARDS AASHTO

Design Loads: Support Barge: DL+LL Vehicle Bridge & Apron
4' x 4 sec wave
Vessel Berthing LL

Support Barge Fenders: 24 ft-kips Service
55 ft-kips Overload

Float Restraint Structures: Support Barge LL
Vessel Berthing LL

Vehicle Bridge: AASHTO HS20-44

Pedestrian Ramps: LL - 85 psf

Design Unit Stresses:

Steel: A36 $F_s = 20$ Ksi
A252 Gr. 2 $F_s = 19.25$ Ksi
A500 Gr. B $F_s = 25$ Ksi
A572 $F_s = 27$ Ksi
A108 $F_s = 29$ Ksi
A608 Gr. D $F_s = 30$ Ksi

Concrete: Min. 28 day strength F_c : Class A-A = 5 ksi. & Class A = 4 ksi.
Reinforcement: $F_y = 60$ ksi

Materials:

Steel: Tube Sections A500 Gr. B
Pile A252 Gr. 2, A501 or A53, Gr. B, type E or S, A572 Grade 50
Pipe A53, Gr. B, type E or S
Stainless Type 302, 304 or 316
All other shall be A36 or A572 as noted.
Charpy Group 2 impact requirements shall apply.

Concrete: Class A-A & Class A per Section 304

Protective Coatings:

Gangways & Bridges: Painted per Sec. 303 (System 5) after fabrication.

Pipe Piles and Structural Steel Restraint Caps, Weldments, Rails and Hardware: Galvanized after fabrication

Reinforcing Steel: Per Section 307

Piling: Size: 18" x 1/2", 20" x 5/8" & 36" x 5/8" wall steel piles

Tips: Reinforced tips w/ APF 0-14000 or APF 0-14001 Drive Shoes or Approved Equal. Drive Shoes Are Required On All Piling.

Driving Requirements: (See table this sheet)

As-Built Drawings: As-Built Drawings Of The Existing Gravina Ferry Terminal And Other Structures, Pile Driving Logs and As-Built Information From the 1970 Ketchikan Airport Construction Project ADAP 71-1(8-02-0144-01)71 Are Available For Inspection By Prospective Bidders At The Southeast Region D & C Offices, 6860 Glacier Highway, In Juneau, AK. Contact Jim Lowell or Bill Nelson At (907)465-8884.

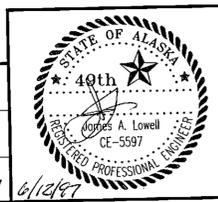
PILE LOCATION (Layout Shts. 4-7) STRUCTURE ORIENTATION & (pile tip)	# P I L E S	DIA. Inches	CAPACITY (TONS)		ELEVATIONS		TIP ELEVATIONS		TOTAL ESTIMATED LENGTH
			BEARING	UPLIFT	APPROX MUDLINE	CUT-OFF	MIN.	EST.	
BARGE RESTRAINT STRUCTURE "A"									
Vertical	1	36	100	55	-15	29.00	-40	-40	69
Batter	2	20	50	55	-7	35.00	-40	-40	168
BARGE RESTRAINT STRUCTURE "B"									
Vertical	1	36	100	55	-15	29.00	-40	-40	69
Batter	2	20	50	55	-7	35.00	-40	-40	168
BARGE RESTRAINT STRUCTURE "C"									
Vertical	1	36	100	N/A	-15	29.00	-40	-40	69
Batter	2	20	50	N/A	-7	35.00	-40	-40	168
ABUTMENT									
Vertical	2	18	60	N/A	N/A	17.97	-40	-40	116

RECORD OF REVISIONS		
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BY:	DATE:	DESCRIPTION OF CHANGE:

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN
KETCHIKAN AIRPORT GRAVINA FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-1044-1097/72030
QUANTITIES & GENERAL NOTES

ALASKA	DESIGNED BY: JAL	PROJECT NO. 72030
	DRAWN BY: JAL	DATE: JUNE, 1997
	CHECKED BY: JAL	SHEET 2 OF 41



NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

6/12/97

GENERAL NOTES - MAINTENANCE OF TRAFFIC:

To facilitate reconstruction of the Gravina Island shuttle ferry terminal, the contractor will be allowed to close the terminal for a period not to exceed five (5) weeks. During the closure period, the contractor shall be required to maintain commercial and emergency vehicle access to the Ketchikan airport. A vessel of suitable dimensions and configuration shall be provided. The vessel shall be capable of transporting a minimum payload of 40 tons. The vessel provided shall also be capable of accommodating vehicles with a overall length of 30 feet and a gross vehicle weight of 60,000 pounds. The vessel shall sail every 1/2 hour, on the hour & half hour between the hours of 7 am to 7 pm and shall be available for emergency call out for the period of 7 pm to 7 am. Service shall be provided 7 days a week throughout the terminal closure period. The contractor shall be responsible for acquiring and maintaining all necessary permits, certifications, insurance and other documentation required for the operation of the vessel.

The contractor shall be responsible for securing a suitable transfer facility on the Ketchikan side of Tongass Narrows. The contractor shall provide adequate signing and traffic control devices to delineate the route to the temporary transfer facility. 30 days prior to initiation of service the contractor shall notify the public regarding the period of closure, the location and route to the temporary facilities, and the vessel sailing schedule. Notification shall be published in the local newspapers, on local radio and posted at the Ketchikan airport.

The airport seaplane pullout ramp shall be made available to the contractor for transfer of traffic on the airport side of Tongass Narrows. Any damage to the pullout ramp facility due to the operations of the contractor shall be repaired to the satisfaction of the contracting agency and Ketchikan Gateway Borough. The contractor will not be allowed to close the existing shuttle ferry terminal prior to September 30, 1997. Sixty (60) days prior to the closure date for the terminal, the contractor shall submit for review and approval a traffic maintenance plan that delineates details for the proposed vessel, the Ketchikan side transfer facility, the schedule of service, required certifications and any other details necessary for the adequate determination of compliance.

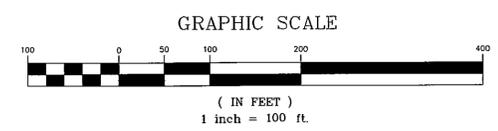
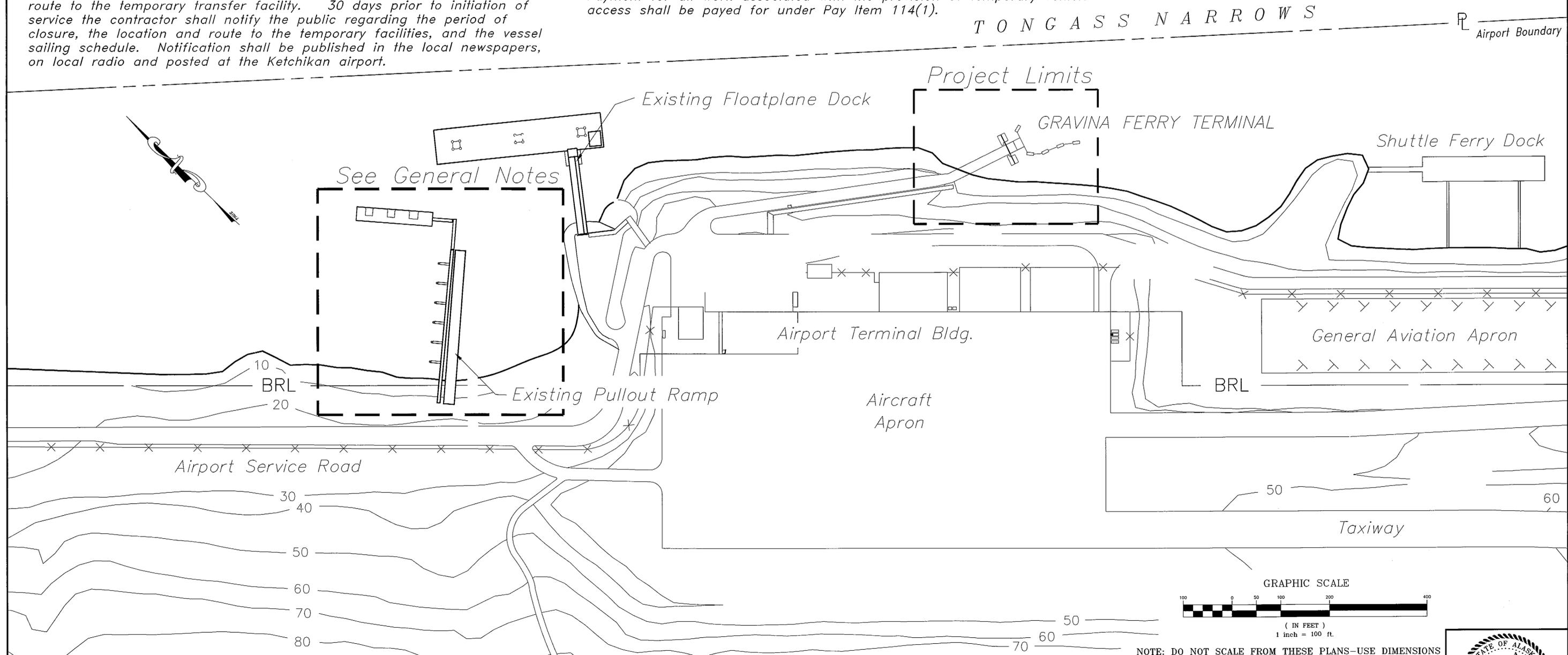
The contractor will also not be allowed to commence demolition of the existing terminal until all components required for the reconstruction are on site.

The contractor may propose alternate methods for maintenance of vehicular traffic to the airport for review and approval by the contracting agency.

Payment for all work associated with the provision of temporary vehicle access shall be paid for under Pay Item 114(1).

TIDAL DATA

Estimated Extreme High Water = 20.80 feet
 Mean Higher High Water = 15.40 feet
 Mean High Water = 14.50 feet
 Mean Tide Level = 8.00 feet
 Mean Low Water = 1.50 feet
 Mean Lower Low Water = 0.00 feet
 Estimated Extreme Low Water = -5.00 feet



NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

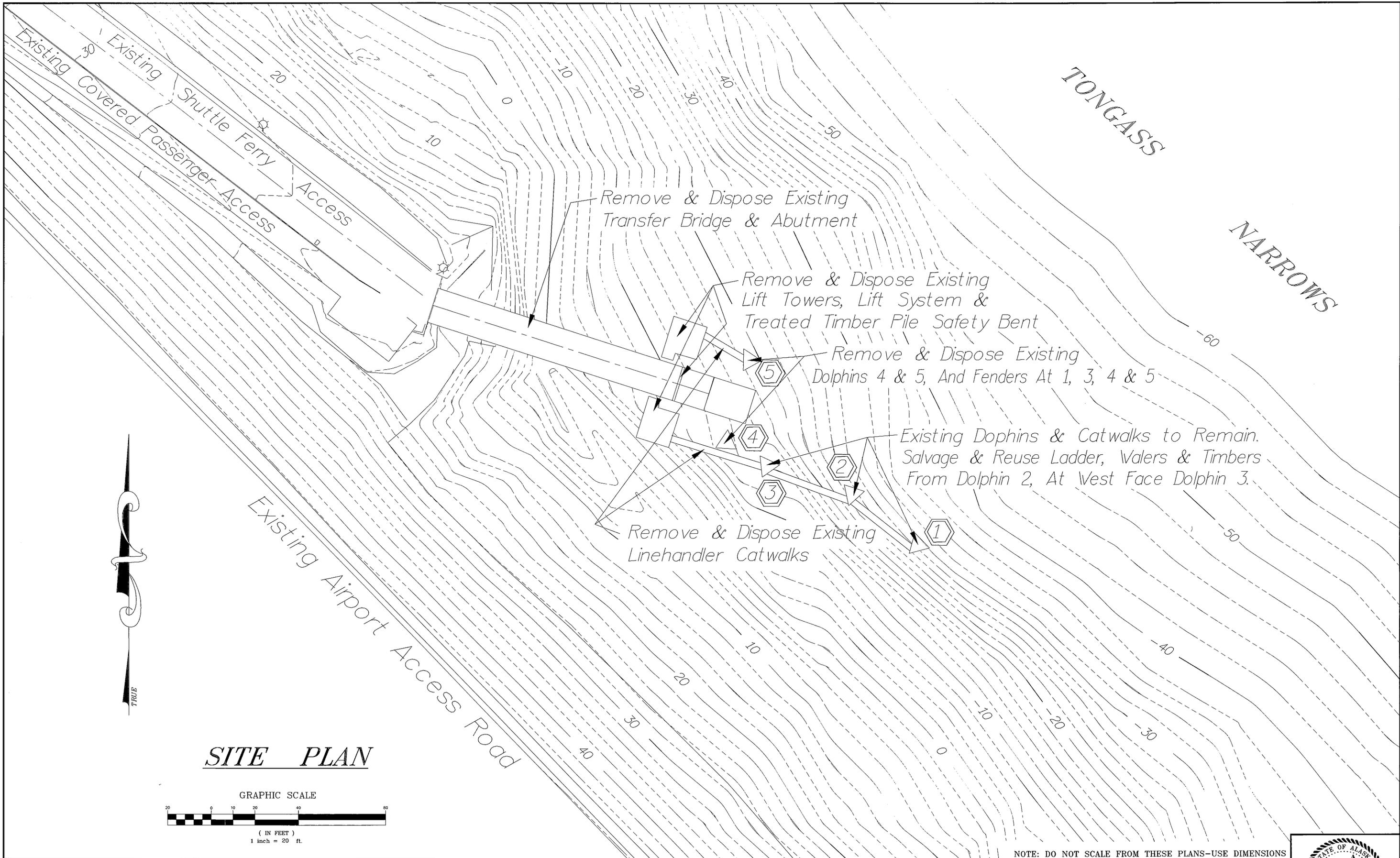
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STATE OF ALASKA
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 AND PUBLIC FACILITIES
 SOUTHEAST REGION DESIGN & CONSTRUCTION

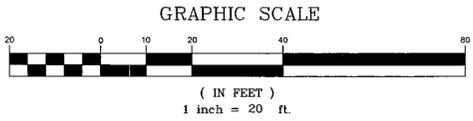
KETCHIKAN
 KETCHIKAN AIRPORT GRAVINA FERRY TERMINAL
 PROJECT NO. A.I.P. 3-02-1044-1097/72030
EXISTING LAYOUT & TRAFFIC MAINTENANCE

DESIGNED BY:	JAL	PROJECT NO.	72030
DRAWN BY:	JAL	DATE:	JUNE, 1997
CHECKED BY:	JAL	SHEET 3 OF 41	6/19/97





SITE PLAN



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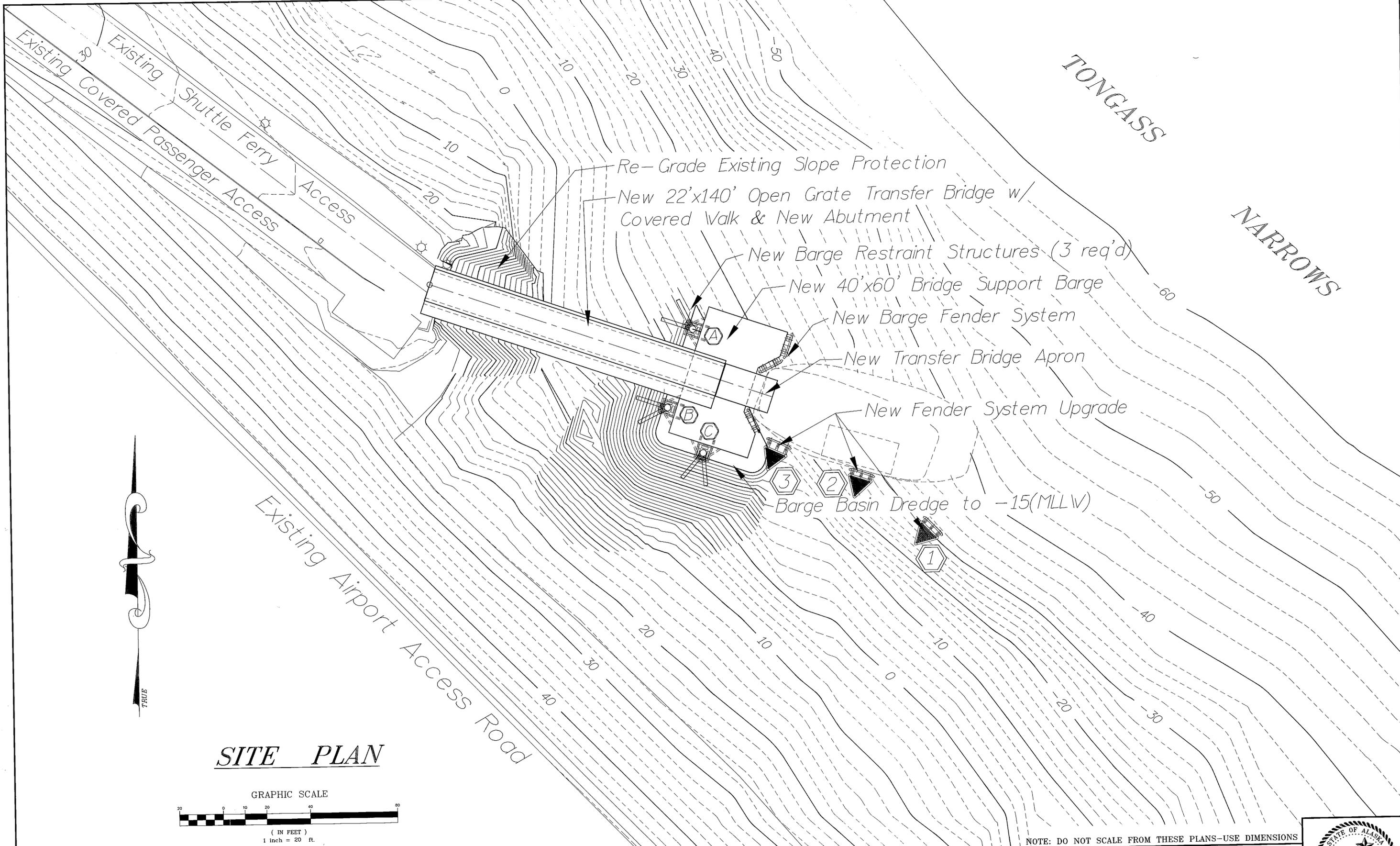
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STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
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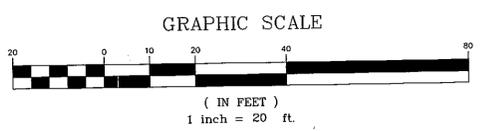
KETCHIKAN ALASKA
 KETCHIKAN AIRPORT GRAVINA FERRY TERMINAL
 PROJECT NO. A.I.P. 3-02-1044-1097/72030
EXISTING/DEMOLITION PLAN

DESIGNED BY:	JAL	PROJECT NO.	72030
DRAWN BY:	JAL	DATE:	MAY, 1997
CHECKED BY:	JAL	SHEET 4 OF 41	6/12/97





SITE PLAN



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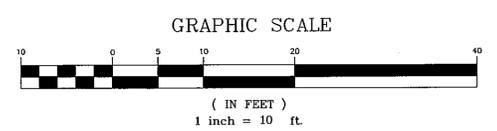
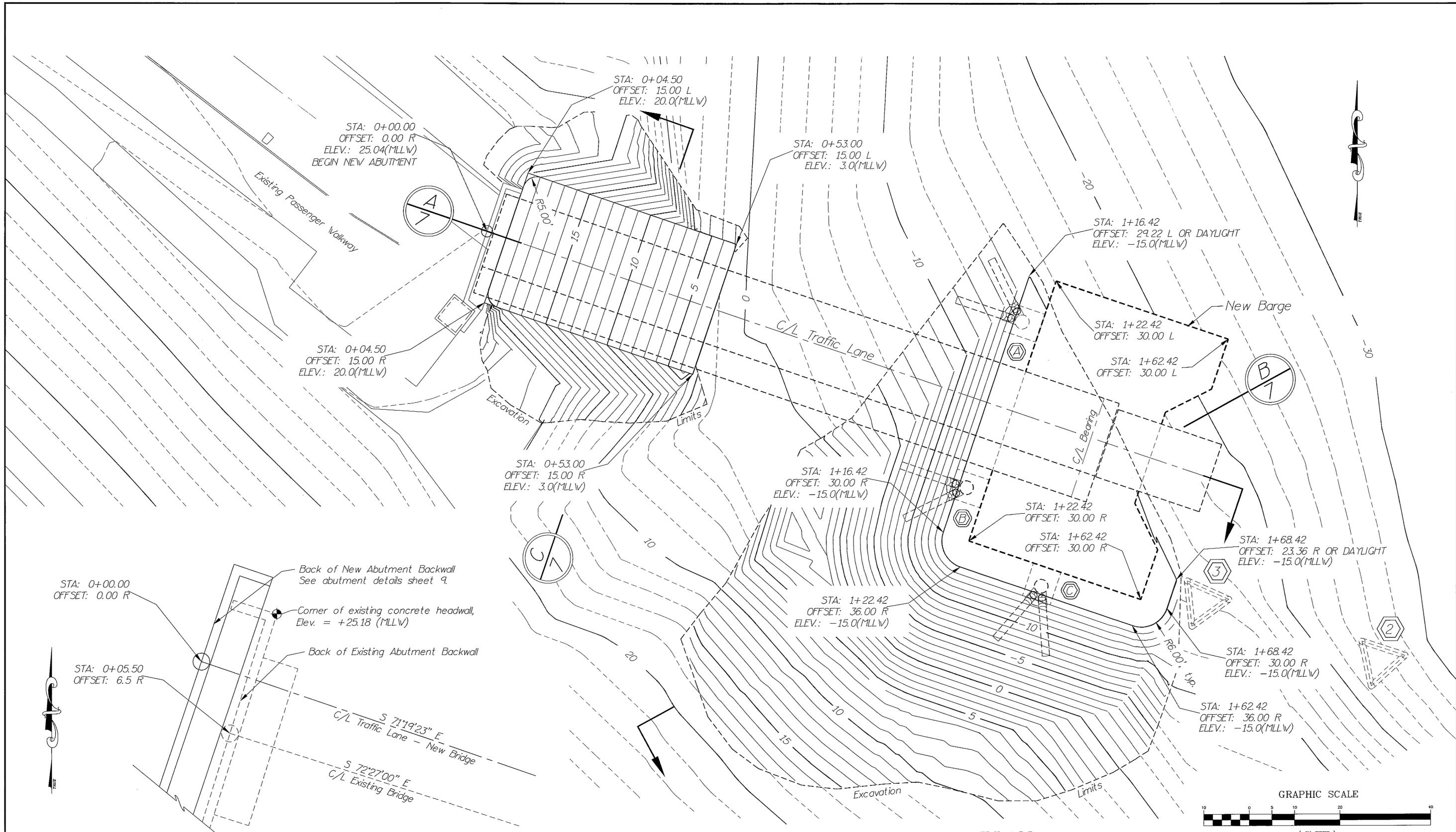
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STATE OF ALASKA
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KETCHIKAN
 KETCHIKAN AIRPORT GRAVINA FERRY TERMINAL
 PROJECT NO. A.I.P. 3-02-1044-1097/72030
 PROPOSED IMPROVEMENTS

DESIGNED BY:	JAL	PROJECT NO.	72030
DRAWN BY:	JAL	DATE:	MAY 1997
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PLAN

PROJECT HORIZONTAL & VERTICAL CONTROL

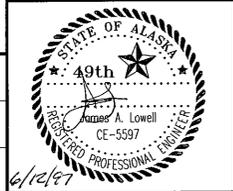
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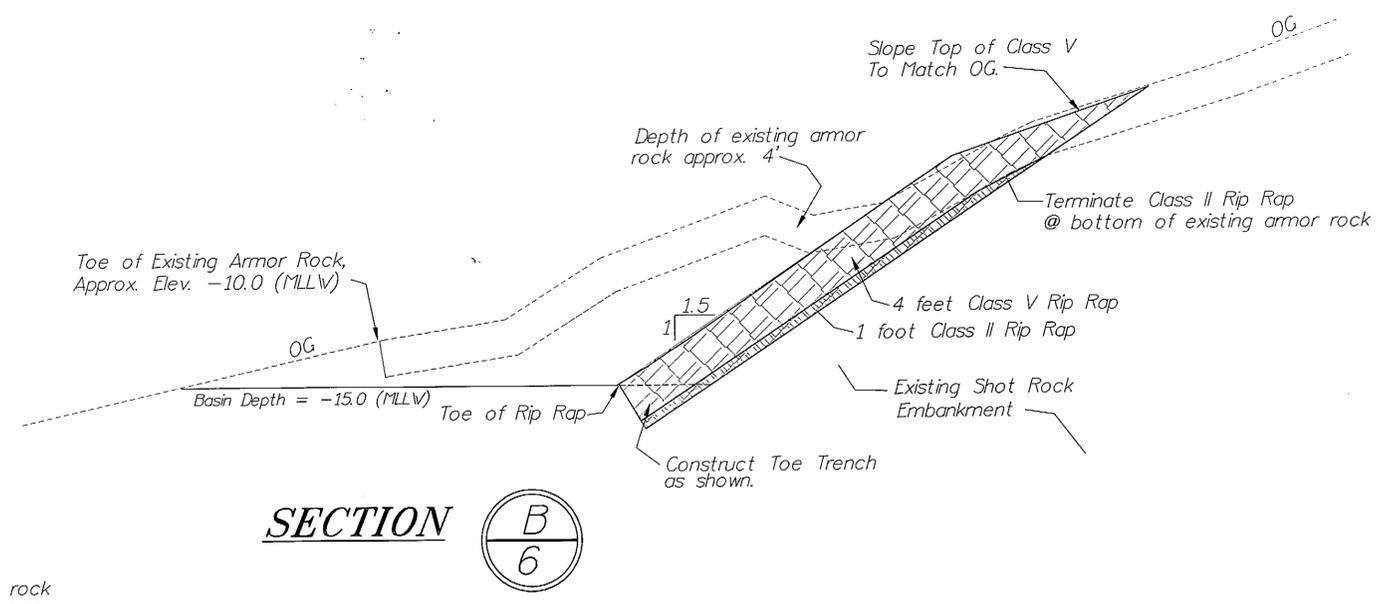
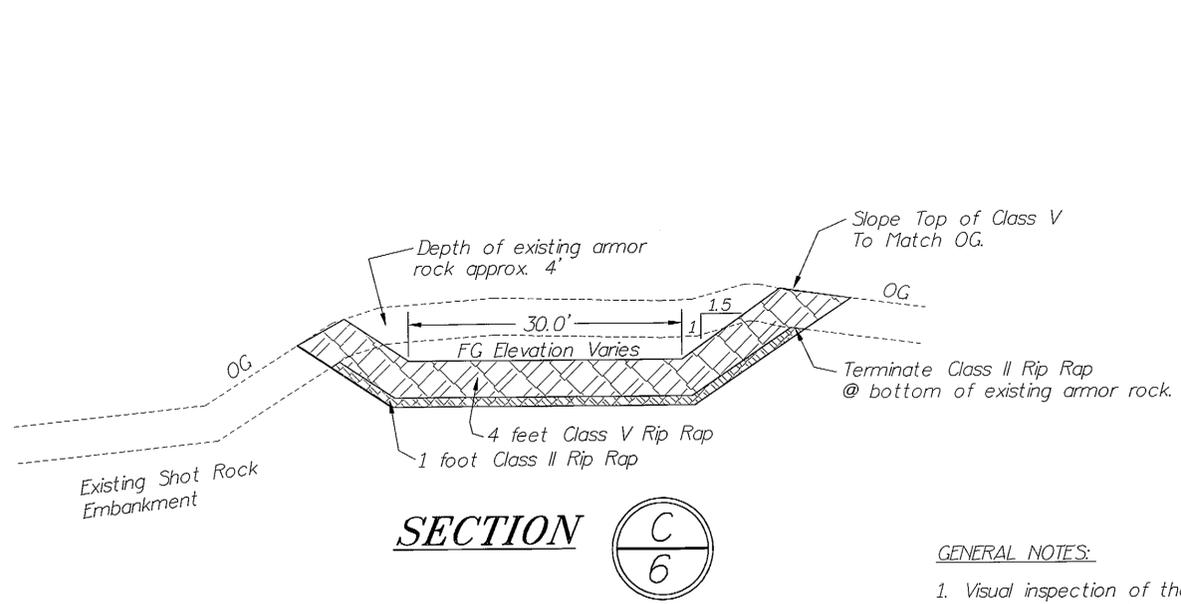
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KETCHIKAN
 KETCHIKAN AIRPORT GRAVINA FERRY TERMINAL
 PROJECT NO. A.I.P. 3-02-1044-1097/72030
EXCAVATION PLAN

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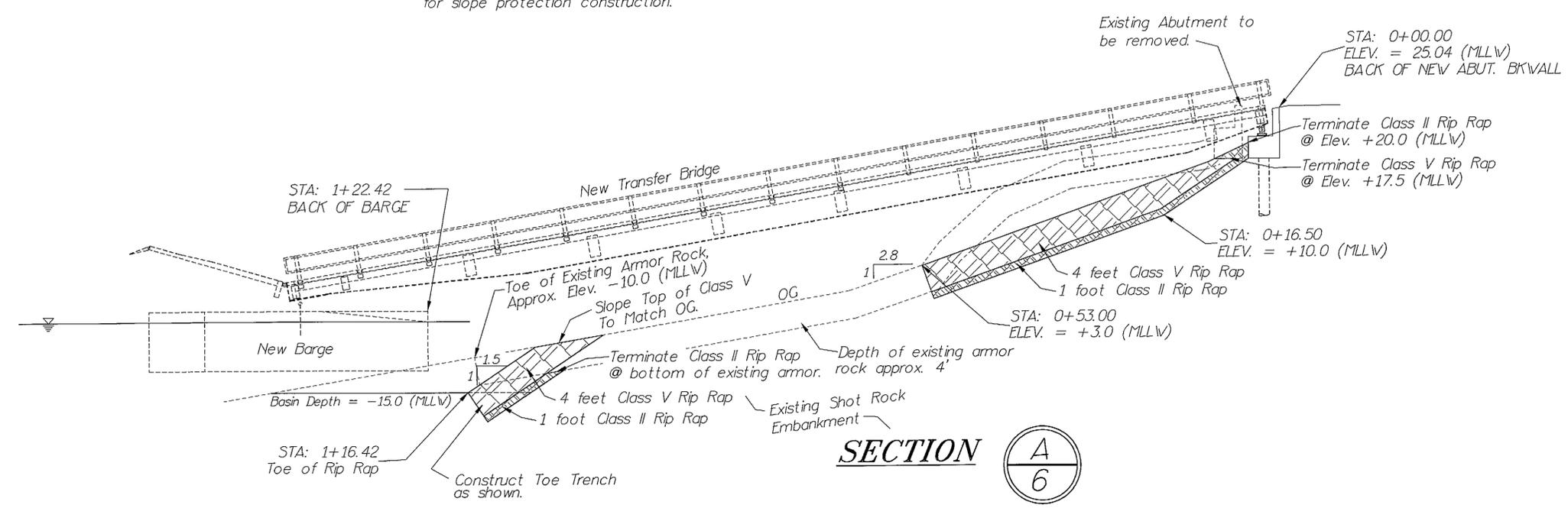
DESIGNED BY:	JAL	PROJECT NO.	72030
DRAWN BY:	JAL	DATE:	MAY, 1997
CHECKED BY:	JAL	SHEET 6 OF 41	6/1/97





GENERAL NOTES:

1. Visual inspection of the existing armor rock indicates that this material may exceed the requirements for Class V rip rap. The Contractor may at his option, reuse the existing armor rock which meets or exceeds the Class V requirements. Approximately 675 cubic yards of Class V rip rap and 225 cubic yards of Class II rip rap are required for slope protection construction.



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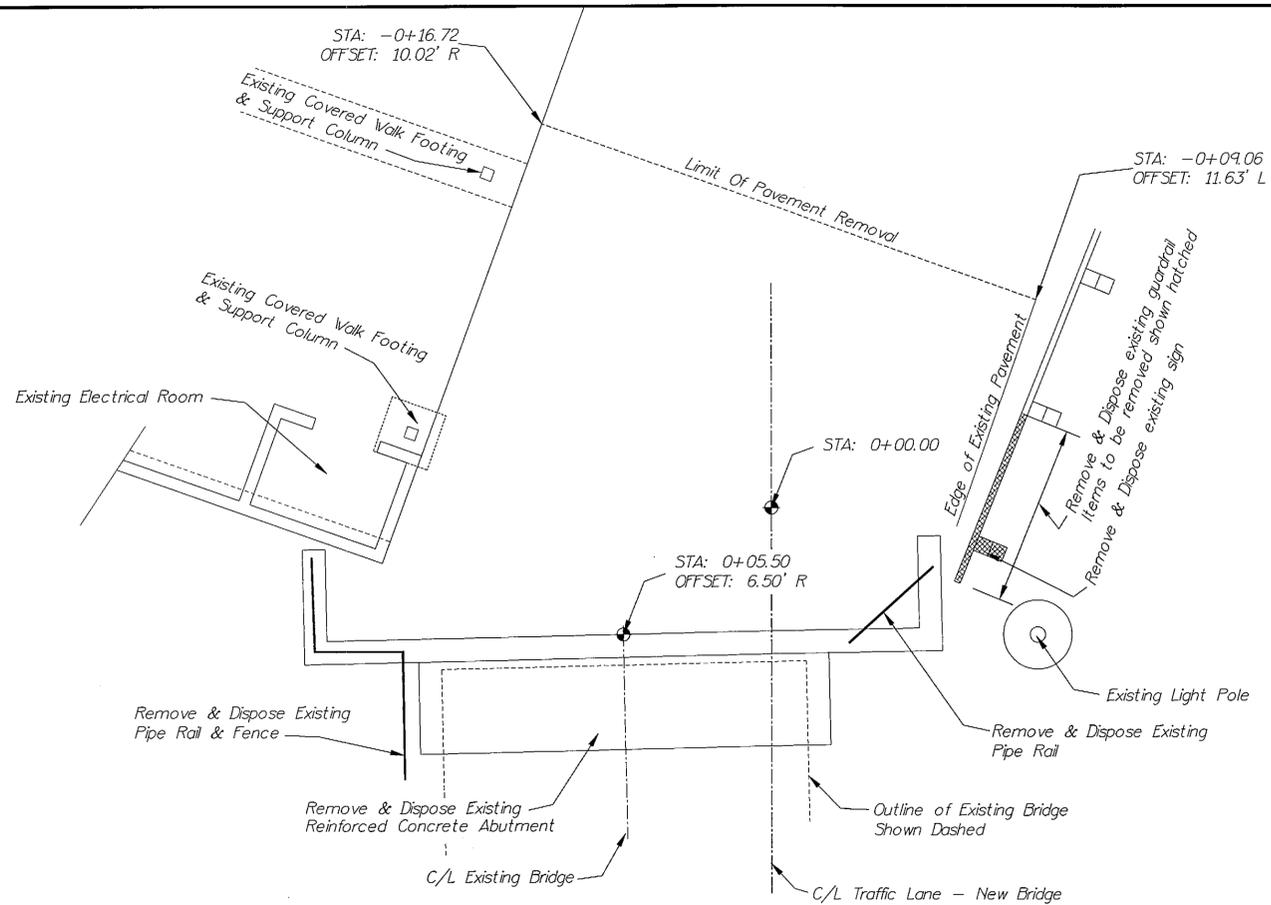
STATE OF ALASKA
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SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN
KETCHIKAN AIRPORT GRAVINA FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
EXCAVATION - TYPICAL SECTIONS

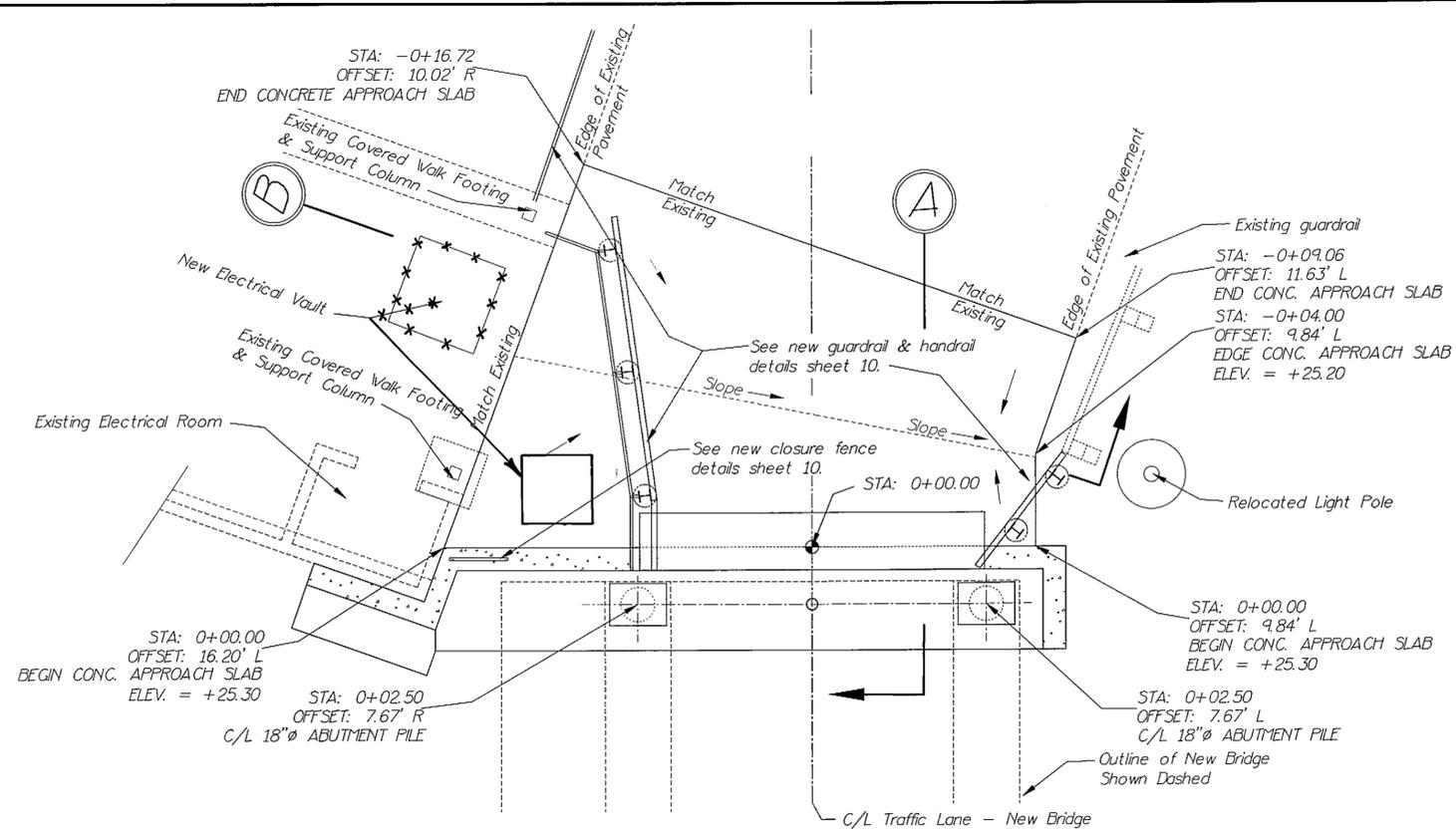
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DRAWN BY:	JAL	DATE:	JUNE 1997
CHECKED BY:	JAL	SHEET 7 OF 41	4/2/97

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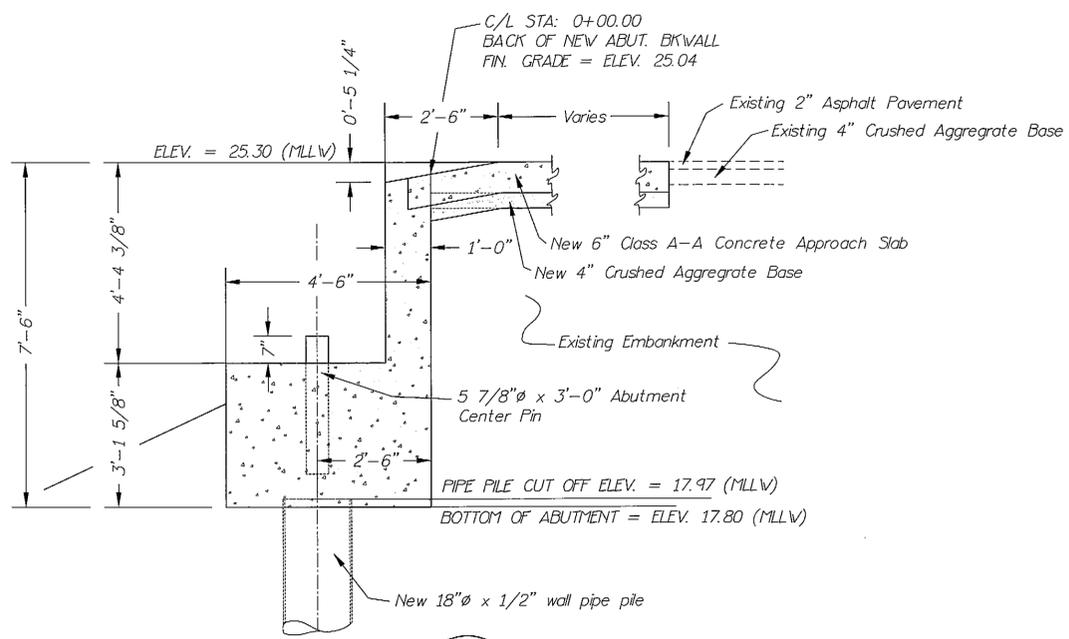




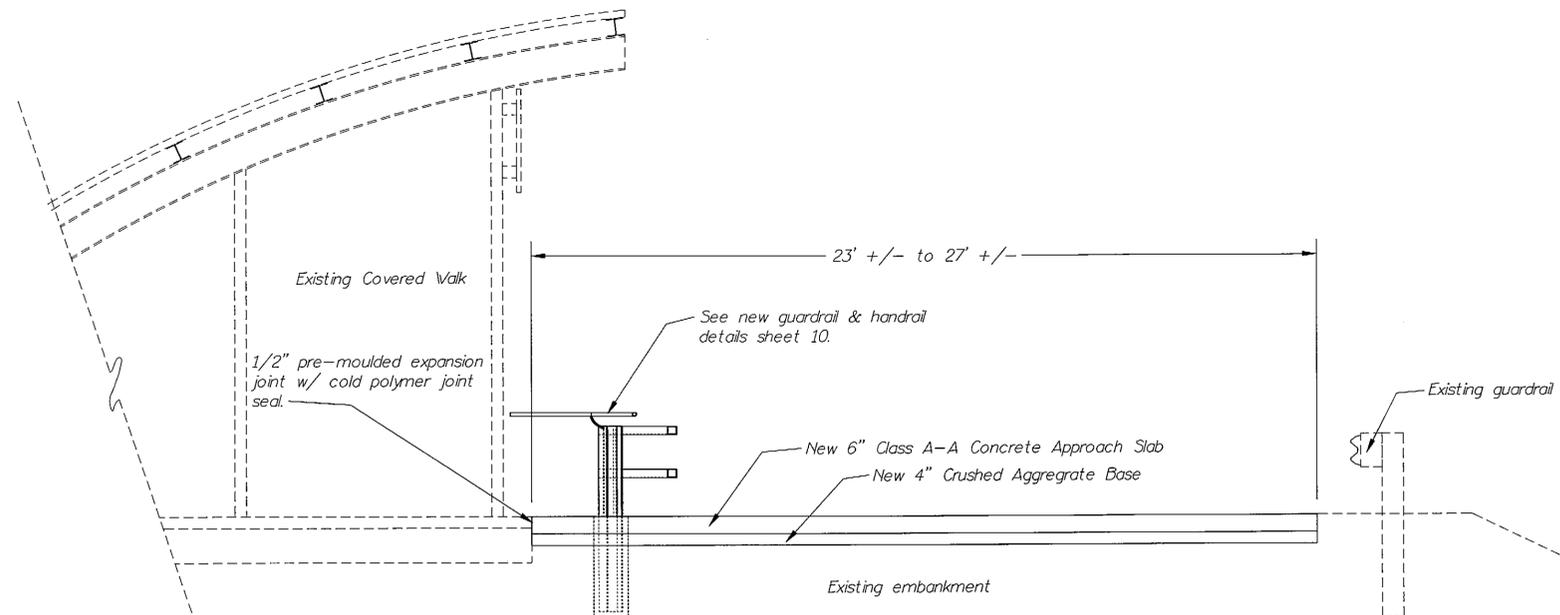
EXISTING ABUTMENT PLAN



NEW ABUTMENT PLAN



SECTION A



SECTION B

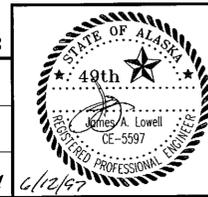
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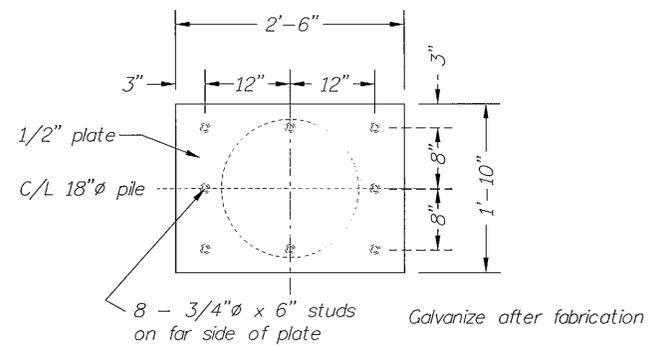
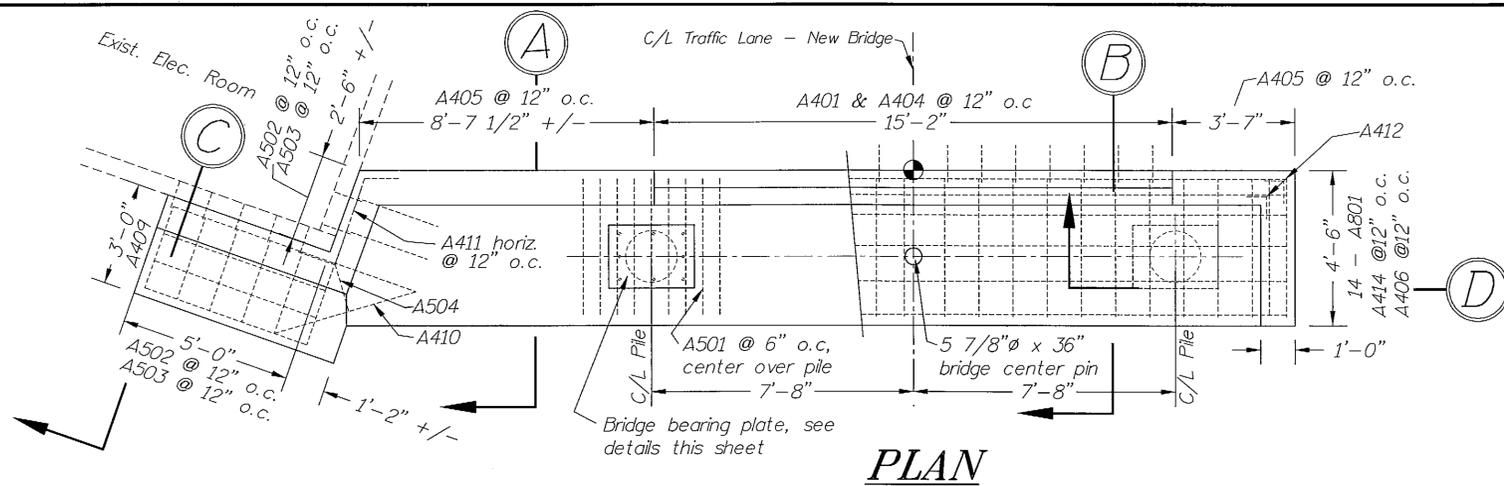
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN
KETCHIKAN AIRPORT GRAVINA FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
NEW ABUTMENT PLAN

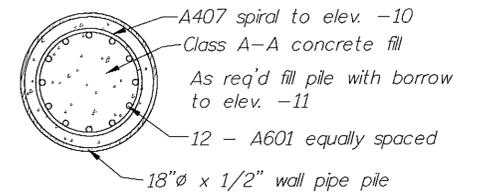
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DRAWN BY:	JAL	DATE:	MAY, 1997
CHECKED BY:	JAL	SHEET	8 OF 41



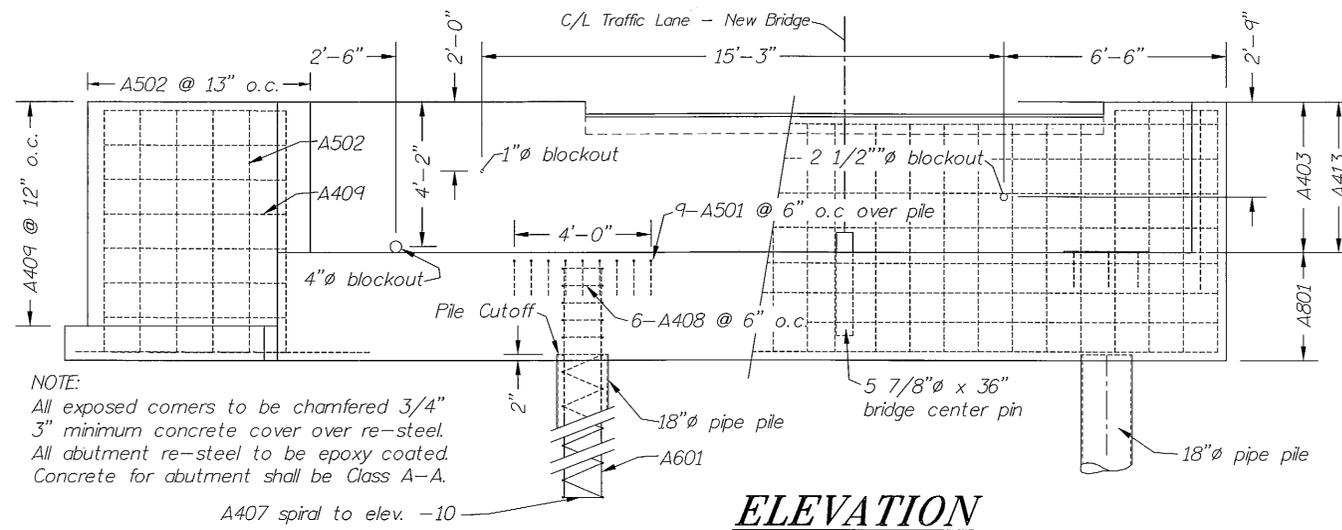
6/2/97



PILE SECTION

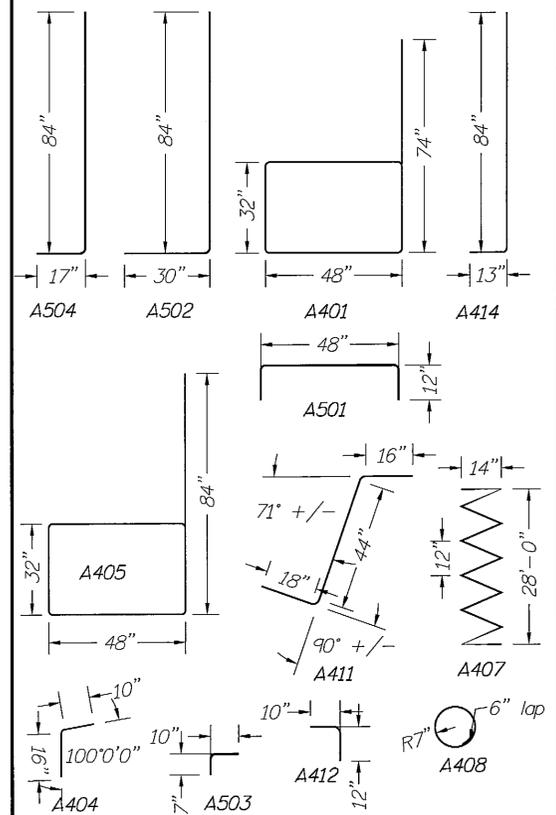
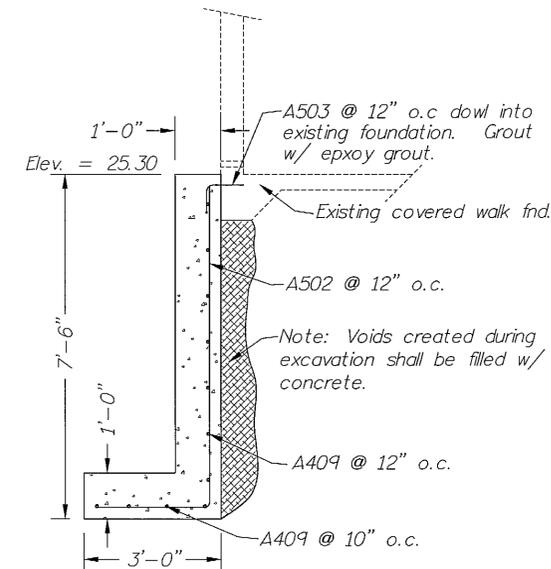
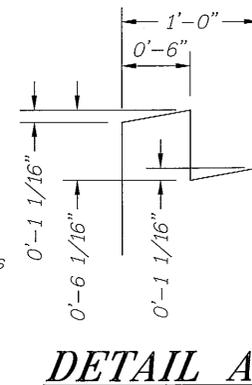
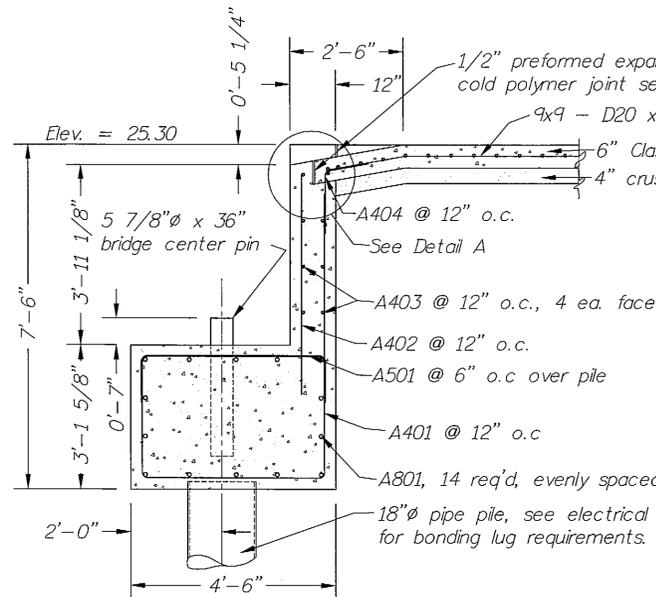
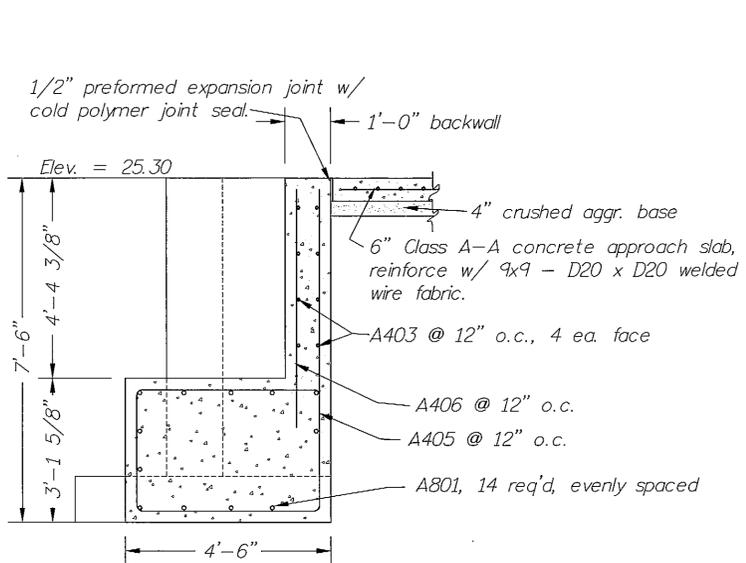
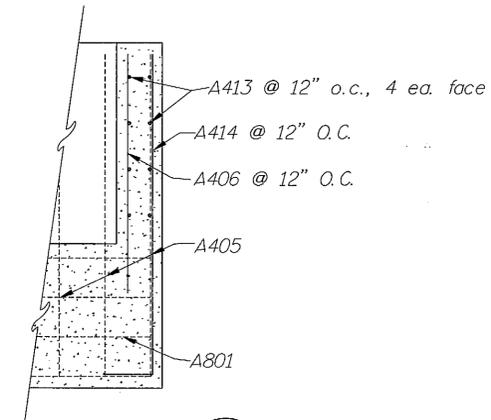


PLAN
Bridge Bearing Plate



NOTE:
All exposed corners to be chamfered 3/4" 3" minimum concrete cover over re-steel.
All abutment re-steel to be epoxy coated.
Concrete for abutment shall be Class A-A.

SECTION D



NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

NO.	DATE	DESCRIPTION OF CHANGE

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

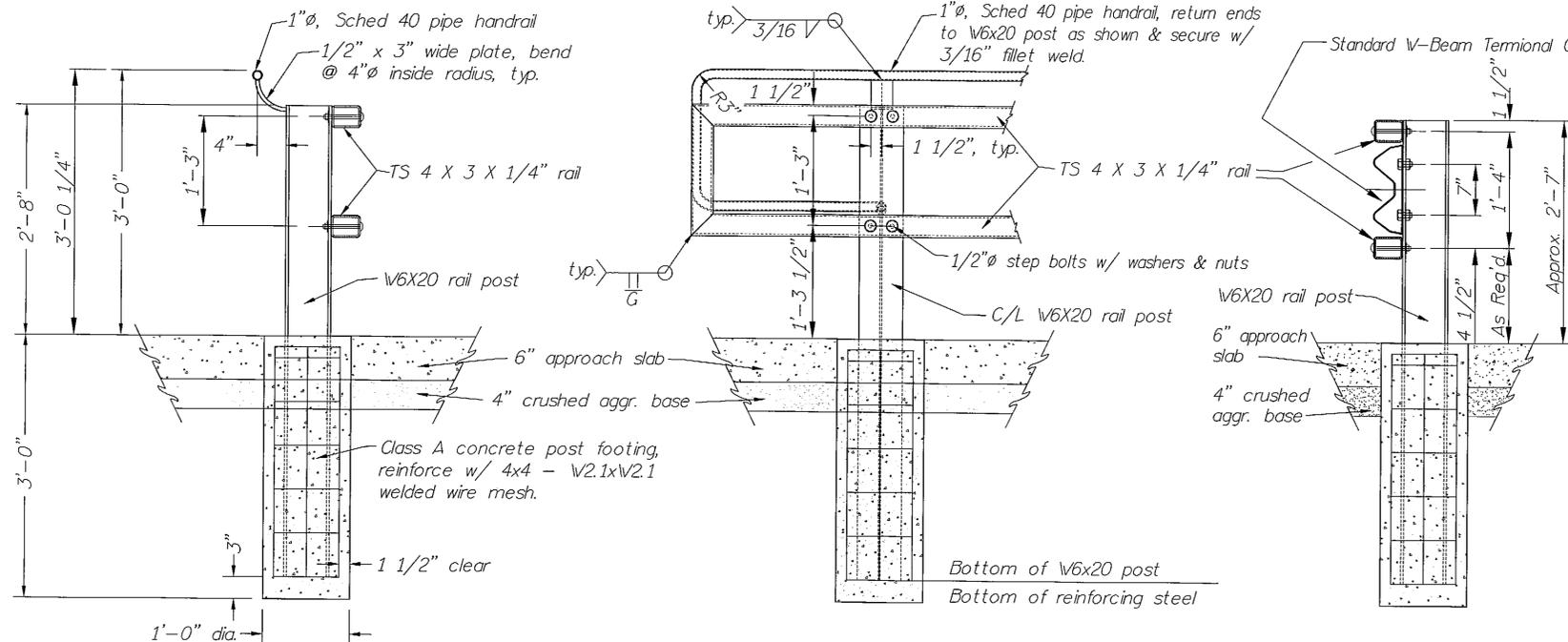
KETCHIKAN
KETCHIKAN AIRPORT GRAVINA FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
ABUTMENT DETAILS

ALASKA

DESIGNED BY: JAL
DRAWN BY: JAL
CHECKED BY: JAL

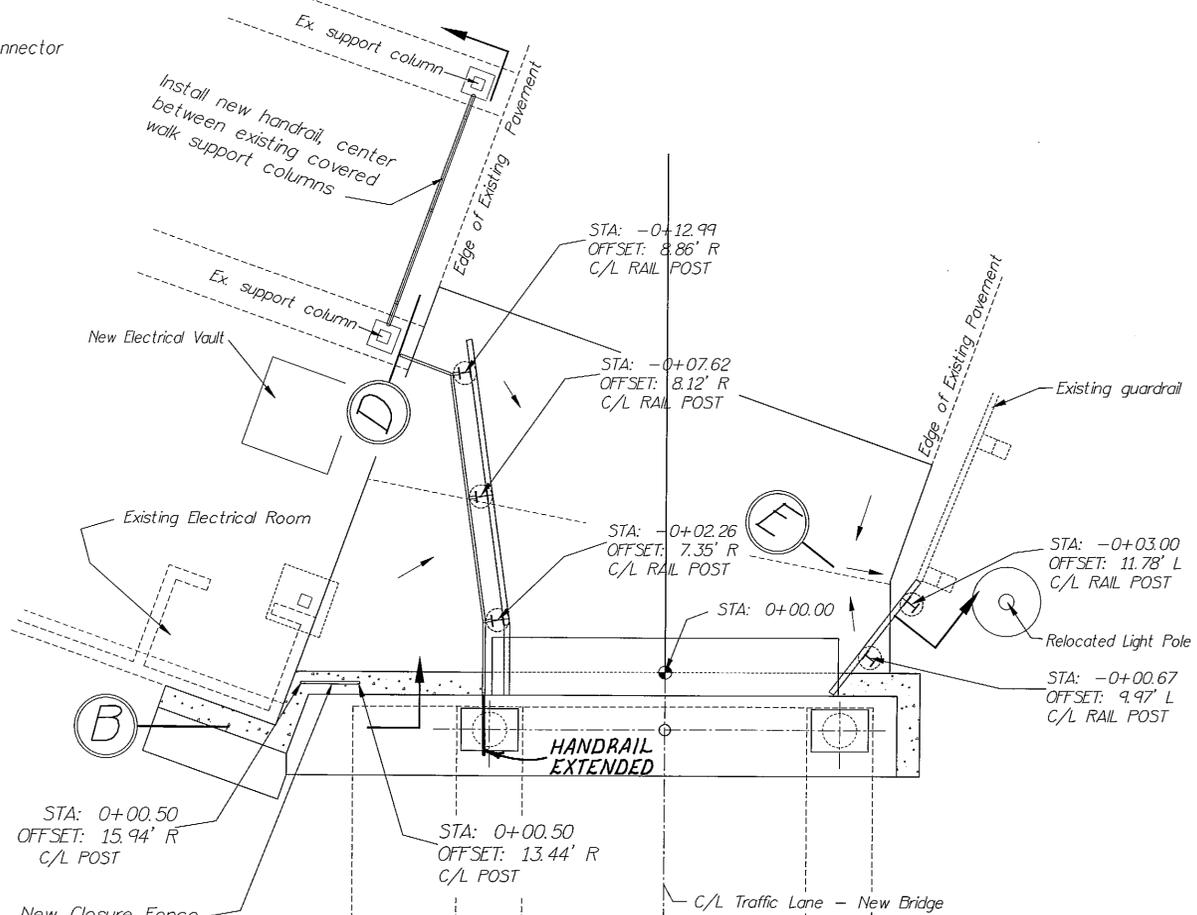
PROJECT NO. 72030
DATE: MAY, 1997
SHEET 9 OF 41





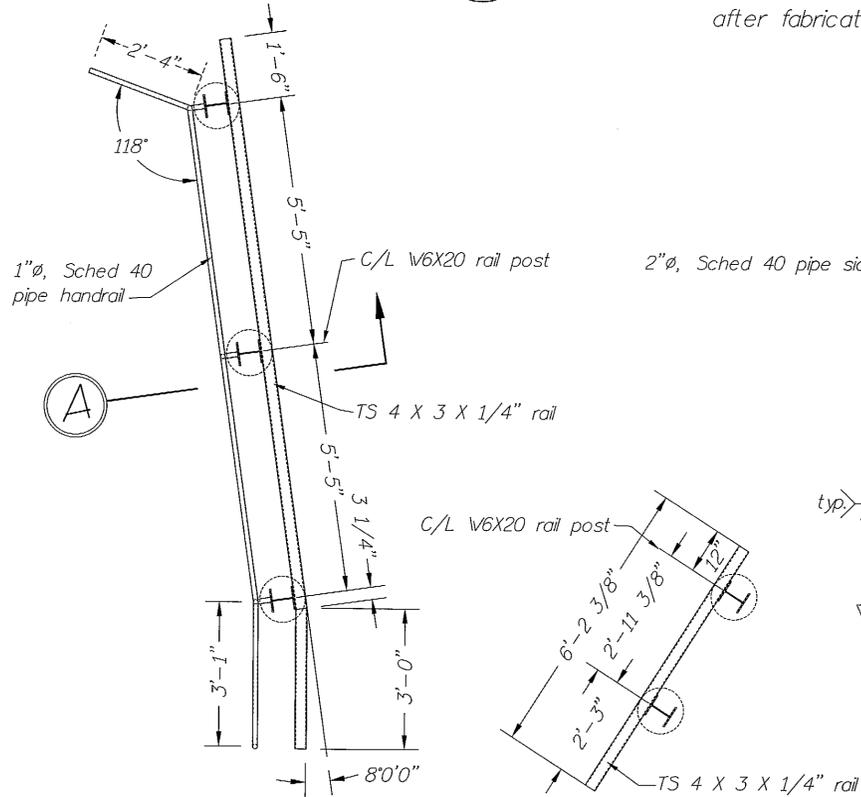
RAIL ELEVATION

SECTION E



ABUTMENT RAIL PLAN

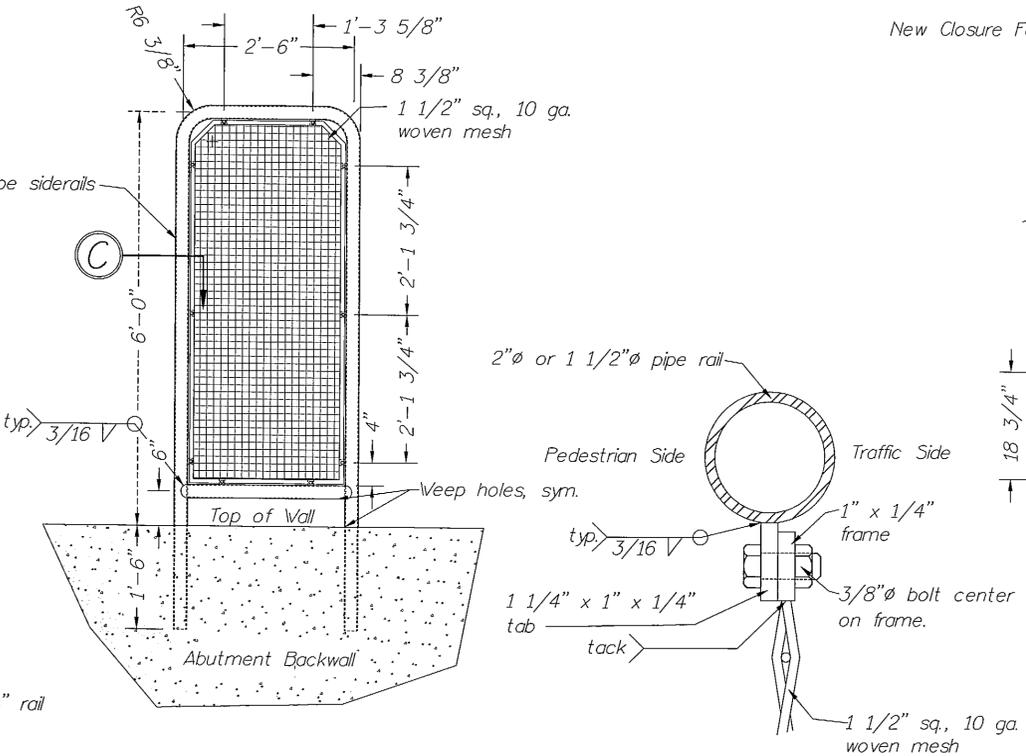
NOTE: All material hot dip galvanized after fabrication.



RIGHT RAIL

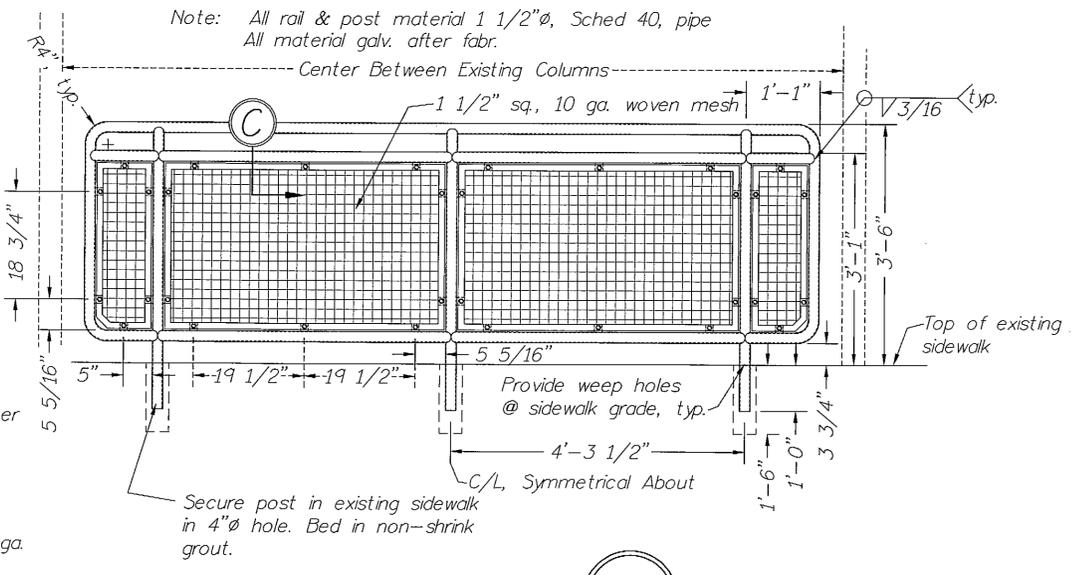
LEFT RAIL

RAIL PLAN



ELEVATION B

SECTION C



ELEVATION D

PATH: P:\KTN\72030\MF\JAL\SHEET10.dwg or ABUTRAIL.dwg 1=4'		
BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

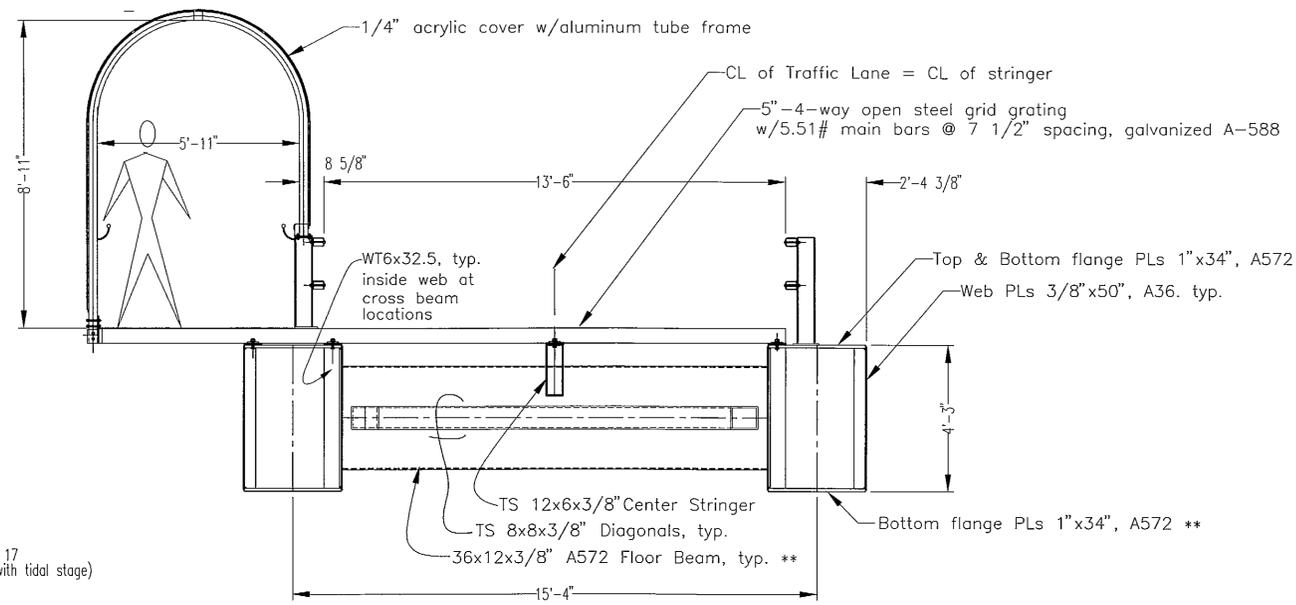
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN
ALASKA
KETCHIKAN AIRPORT GRAVINA FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
ABUTMENT RAIL & FENCE DETAILS

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

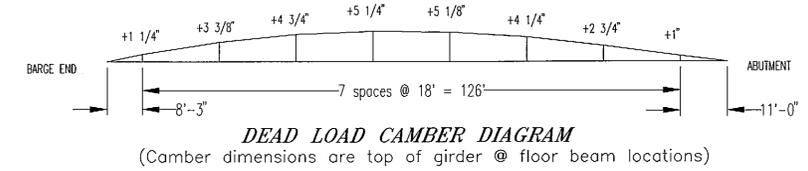
DESIGNED BY:	JAL	PROJECT NO.	72030
DRAWN BY:	JAL	DATE:	JUNE, 1997
CHECKED BY:	JAL	SHEET	100F 41





TYPICAL SECTION

- NOTES
1. Design live load = 85 psf pedestrian live load and HS20 vehicle load
 2. Design wind load = 40 psf transverse to the structure
 3. All seamless pipe shall conform to ASTM A-53, Grade B or ASTM A-500 and shall be painted, unless specified to be galvanized
 4. All shapes and plates shall conform to ASTM A36 (unless specified otherwise) and shall be galvanized.
 5. Ship assembled.
 6. No girder splices may be located in middle third of the bridge.
 7. Camber to compensate for dead load deflection (See camber diagram below).
 8. Approx. weight = 213,000 lbs.
 9. Paint entire structure after assembly and prior to installation of grating and walkway cover.
 10. All welds joining tubular members and cover or end plates to be seal weld.
 - ** 11. The following members are considered main members subject to tensile stress and require Charpy Impact Testing. See Section 302 of the specifications.
 - A. Lower girder flanges
 - B. Floor beams
 12. The lower girder flanges are also considered fracture critical and require a fracture control plan. See Section 302 of the specifications.

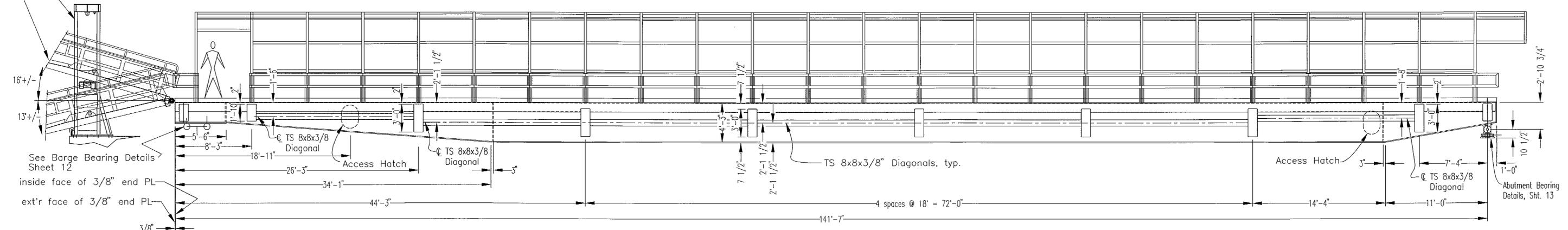


DEAD LOAD CAMBER DIAGRAM

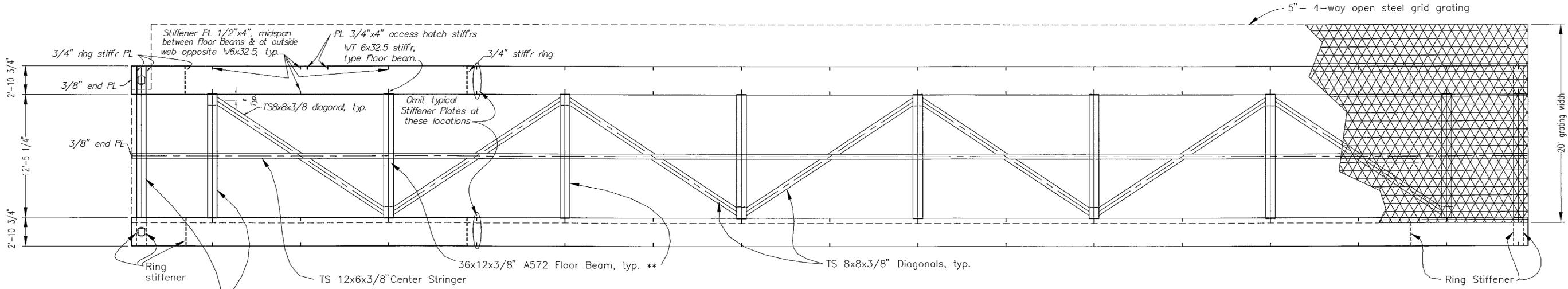
(Camber dimensions are top of girder @ floor beam locations)

For Apron Details See Sheet 17
(Note: Apron angle varies with tidal stage)

For Lift Details See Sheets 21 - 24.



SECTIONAL ELEVATION



PLAN

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

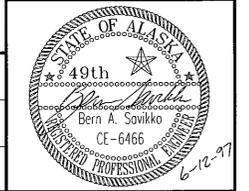
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RECORD OF REVISIONS		

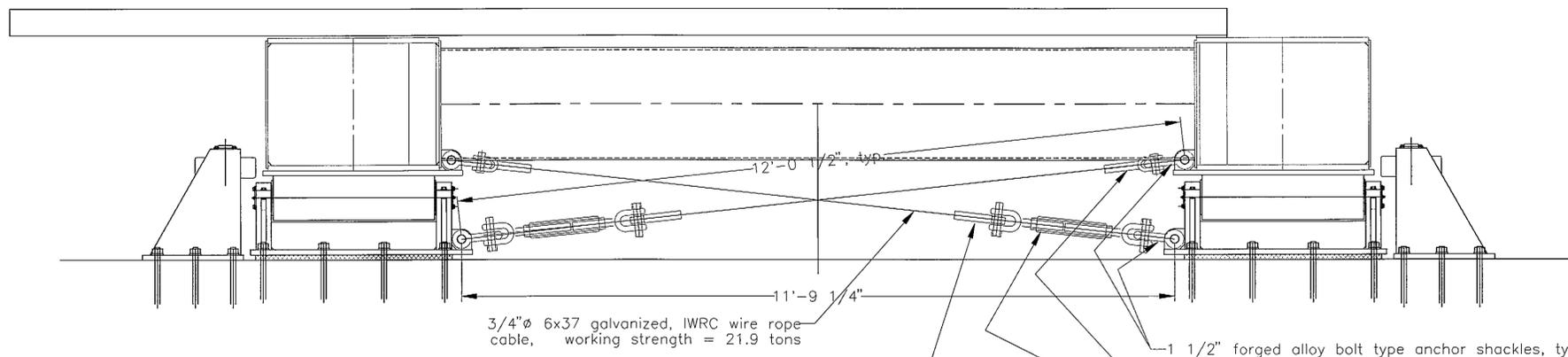
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
TRANSFER BRIDGE

ALASKA

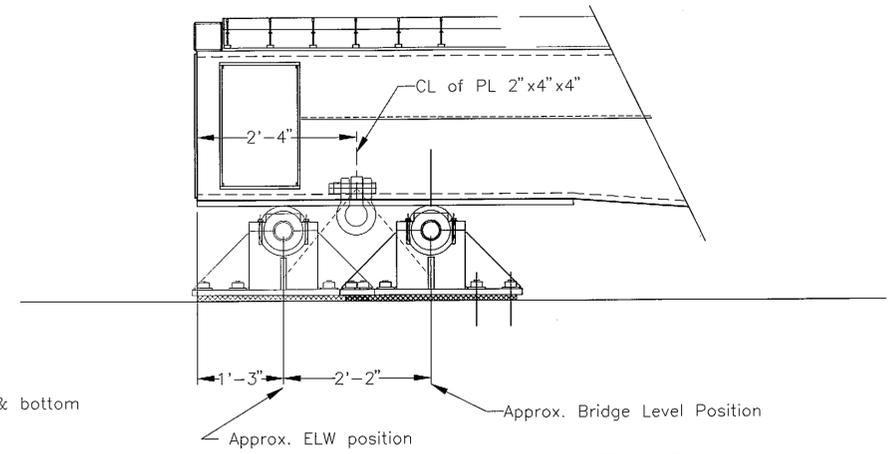
DESIGNED BY:	BAS	PROJECT NO.	72030
DRAWN BY:	BAS	DATE:	APRIL, 1997
CHECKED BY:	JAL	SHEET	11 OF 41



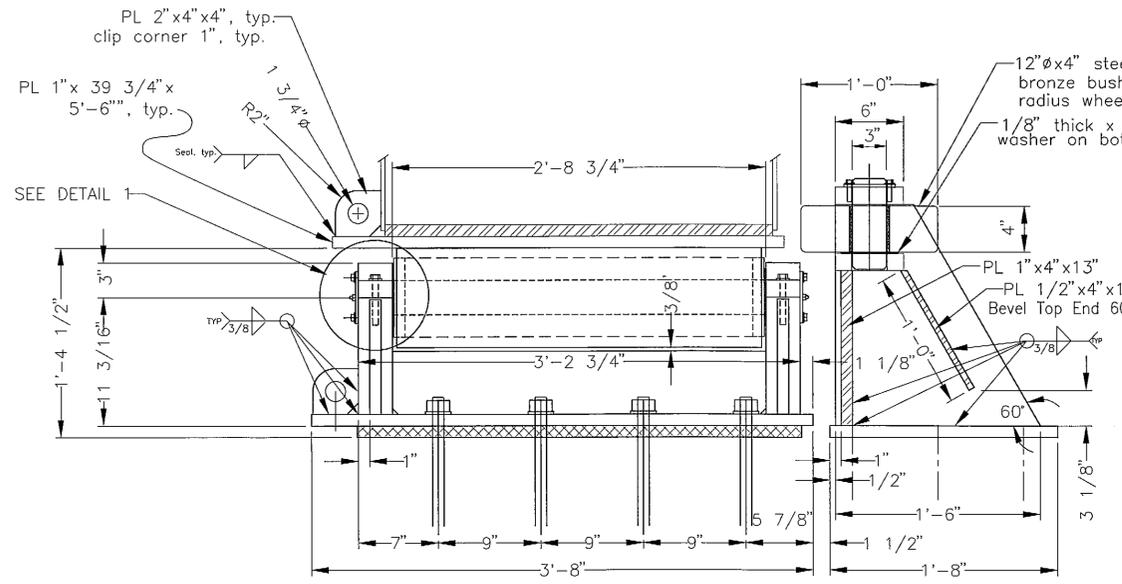


NOTE: Make up wire assembly w/turnbuckle at 4", (1/3) takeup so the overall length between the end shackle pins is 12'-0 1/2" Once rope is installed, adjust turnbuckles to allow 2" lateral movement of the bridge.

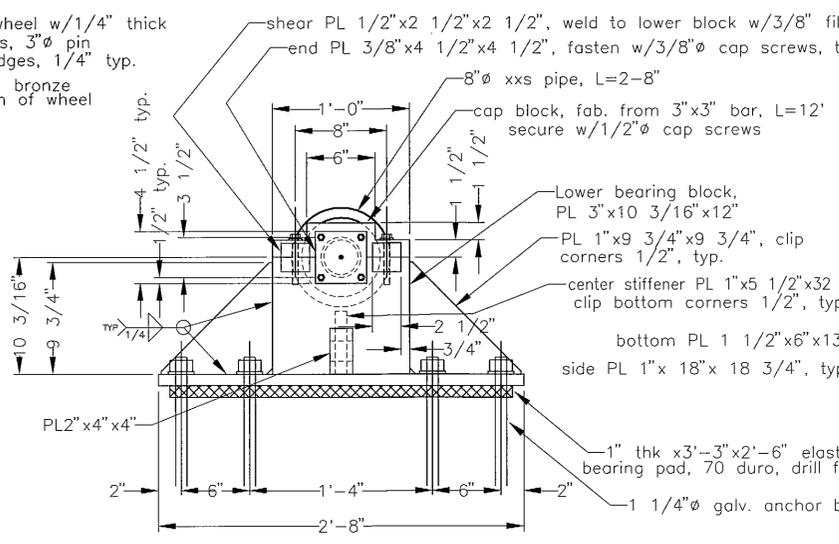
**ALIGNMENT CABLE DETAIL
FRONT ELEVATION**



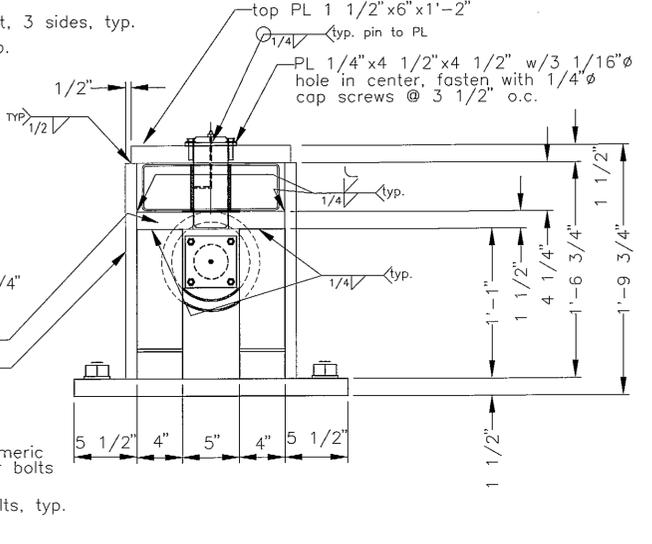
**SIDE ELEVATION
(Inside face of shoreward girder shown)**



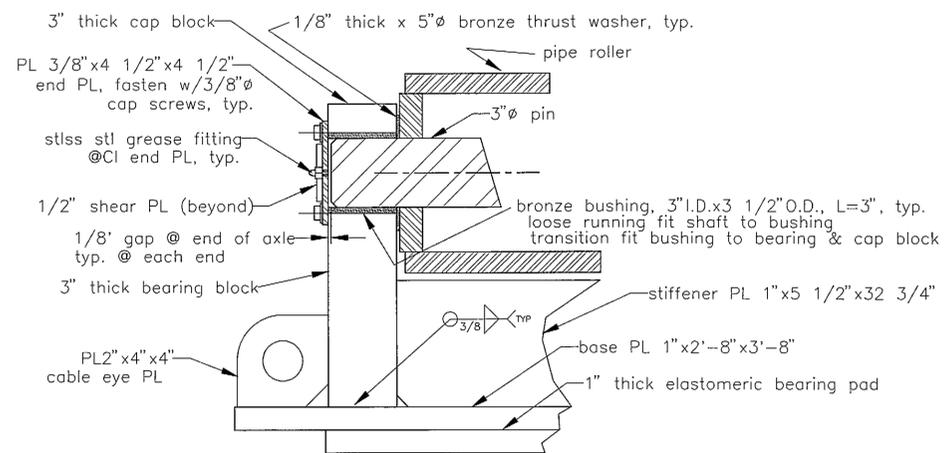
BEARING DETAILS



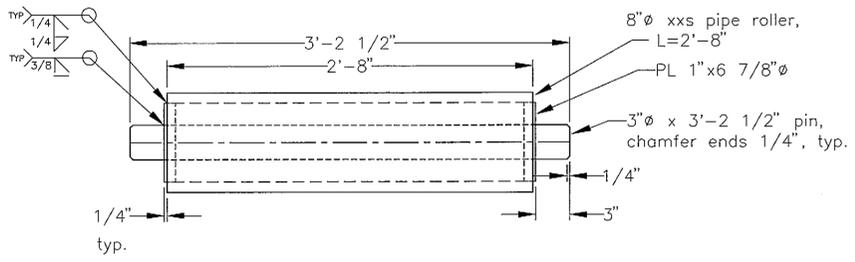
BEARING ROLLER - SIDE ELEVATION



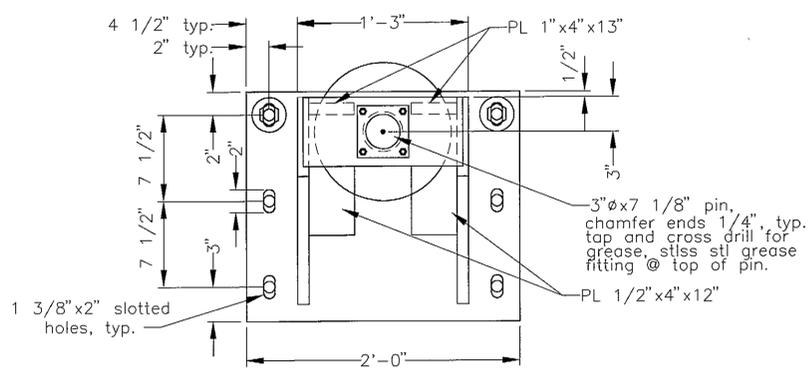
ALIGNMENT ROLLER - SIDE ELEVATION



DETAIL 1 (Section thru roller centerline)



ROLLER DETAIL



ALIGNMENT ROLLER - TOP VIEW

PATH: P:\KTN\72030\MF\BS\SHEET12.DWG OR ASHUT2B1.DWG I=8		
PLOT:		
BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

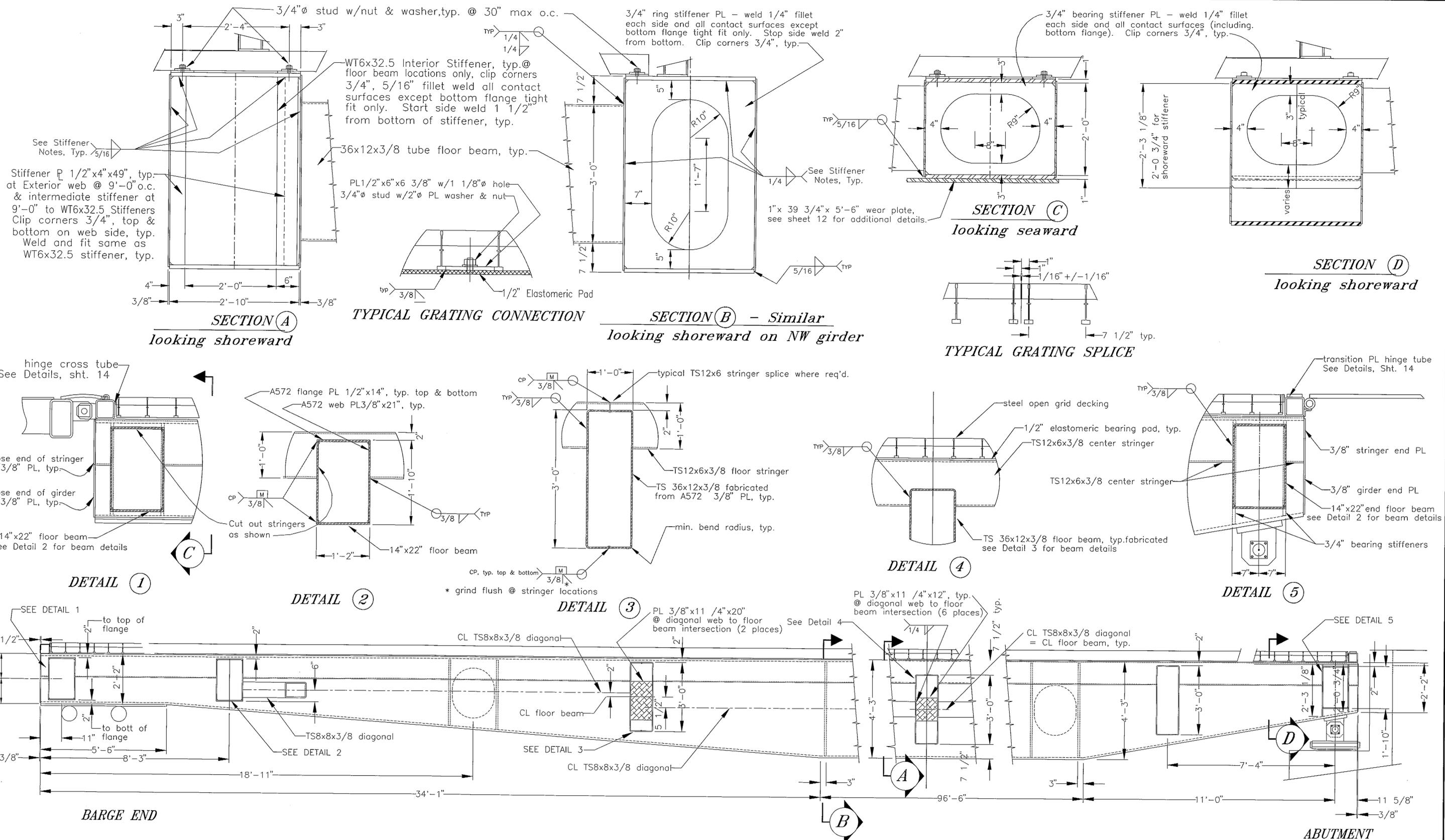
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
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KETCHIKAN
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
BARGE BEARING DETAILS

DESIGNED BY: BAS	PROJECT NO. 72030
DRAWN BY: BAS	DATE: MAY, 1997
CHECKED BY: JAL	SHEET 12 OF 41

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS





GIRDER/FLOOR BEAM CONNECTION DETAILS
 (SW Girder Shown - Elevation Similar Both Sides)

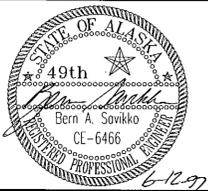
NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

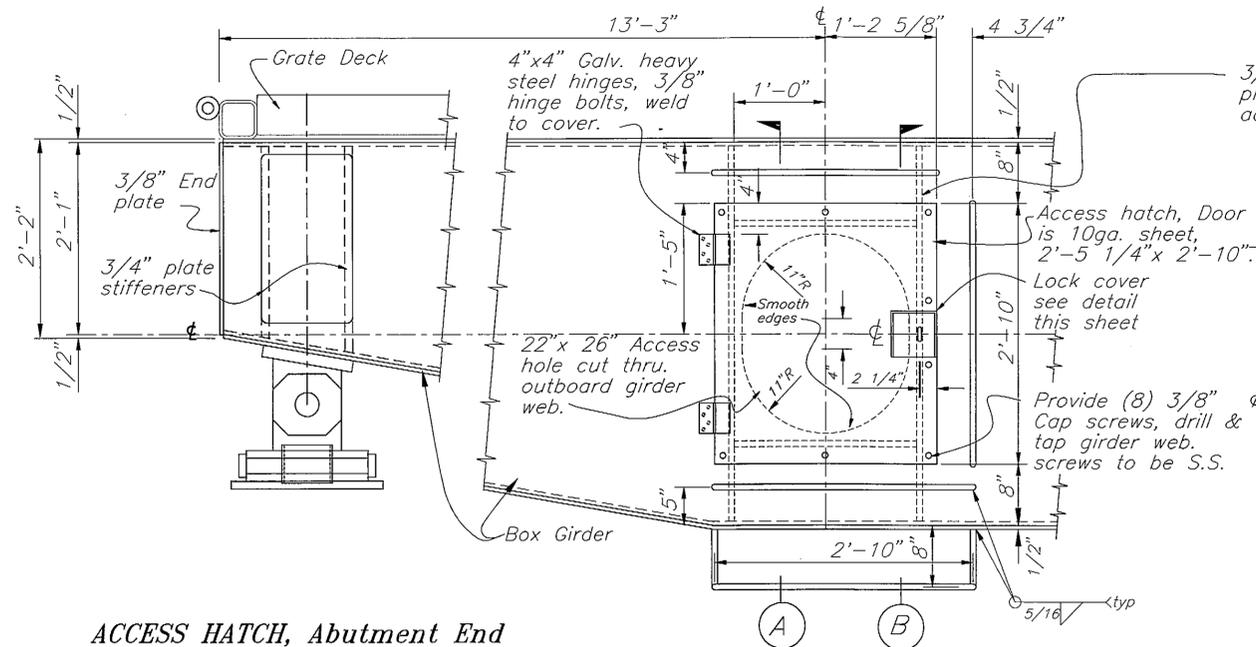
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PLOT:			
BY:	DATE:	DESCRIPTION OF CHANGE:	
RECORD OF REVISIONS			

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 SOUTHEAST REGION DESIGN & CONSTRUCTION

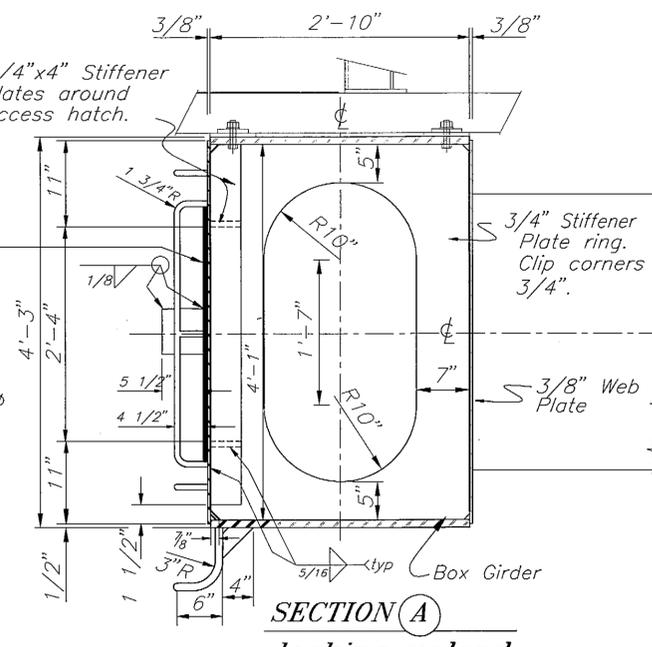
KETCHIKAN
 KETCHIKAN AIRPORT
 GRAVINA ISLAND FERRY TERMINAL
 PROJECT NO. A.I.P. 3-02-0144-1097/72030
BRIDGE GIRDER DETAILS

DESIGNED BY:	BAS	PROJECT NO.	72030
DRAWN BY:	BAS	DATE:	APRIL, 1997
CHECKED BY:	JAL	SHEET	15 OF 41

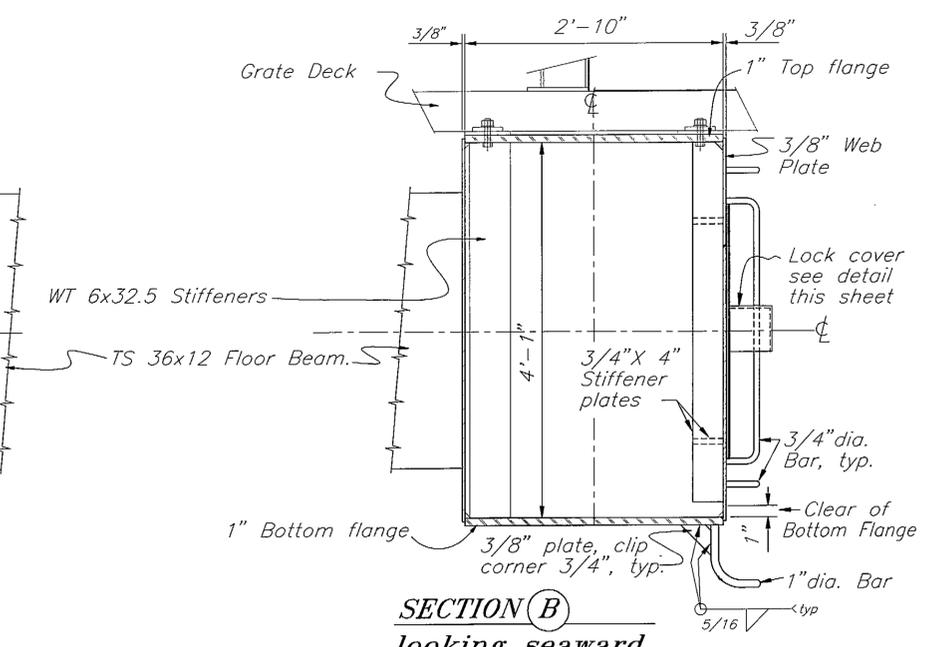




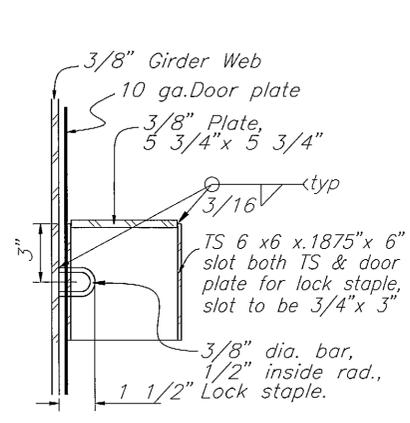
**ACCESS HATCH, Abutment End
(Elevation)**



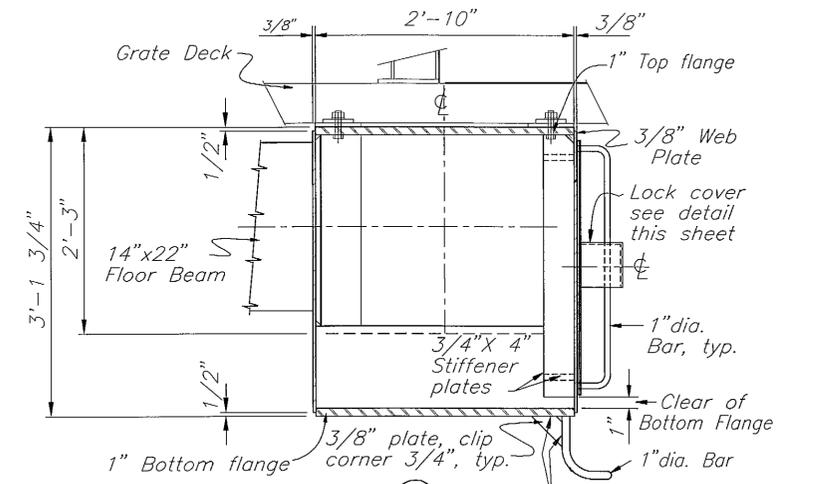
**SECTION A
looking upland**



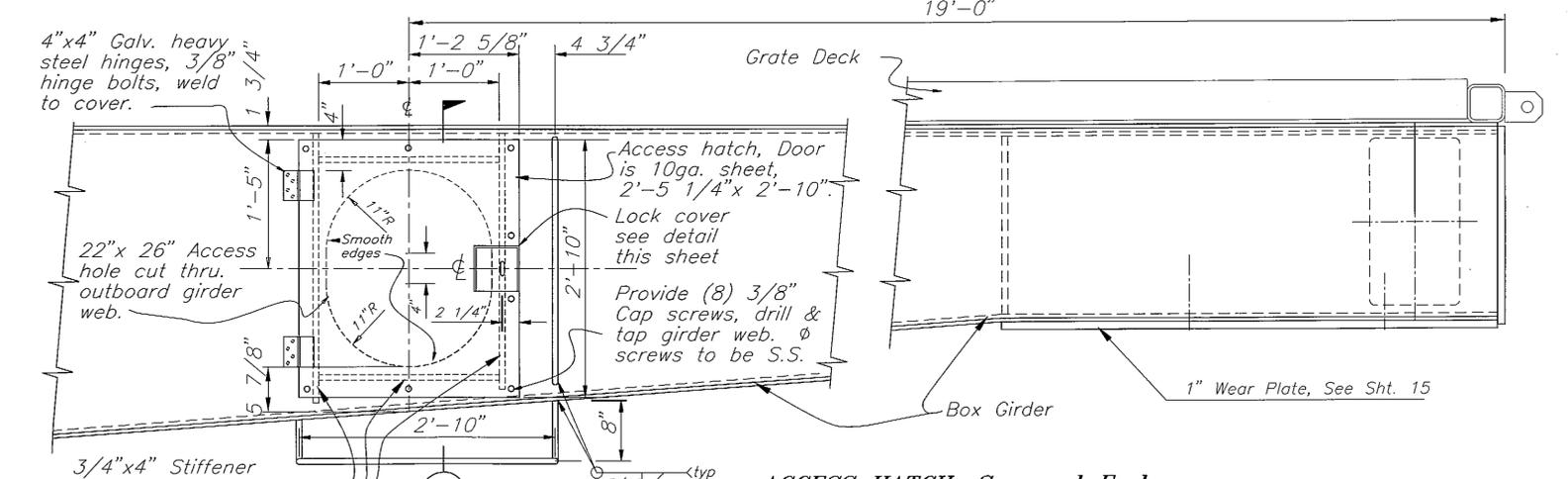
**SECTION B
looking seaward**



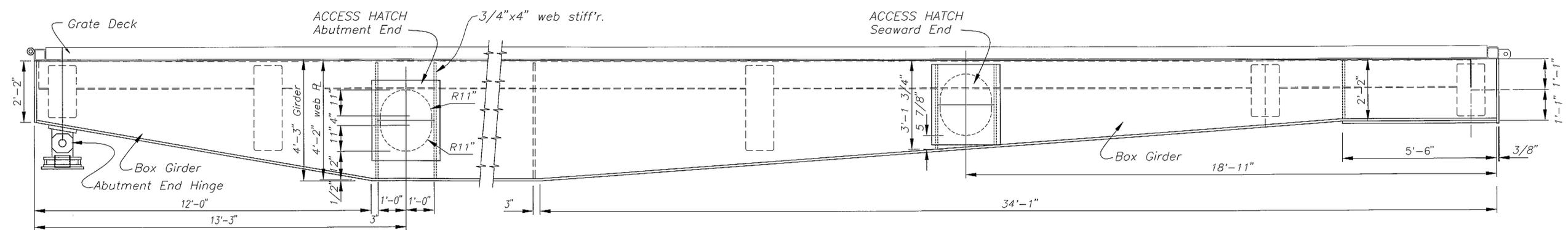
LOCK COVER DETAIL



**SECTION C
looking seaward**



**ACCESS HATCH, Seaward End
(Elevation)**



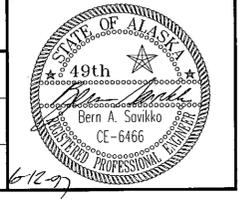
**ACCESS HATCH LOCATIONS
(Elevation Similar Both Sides)**

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BY:	DATE:	DESCRIPTION OF CHANGE:
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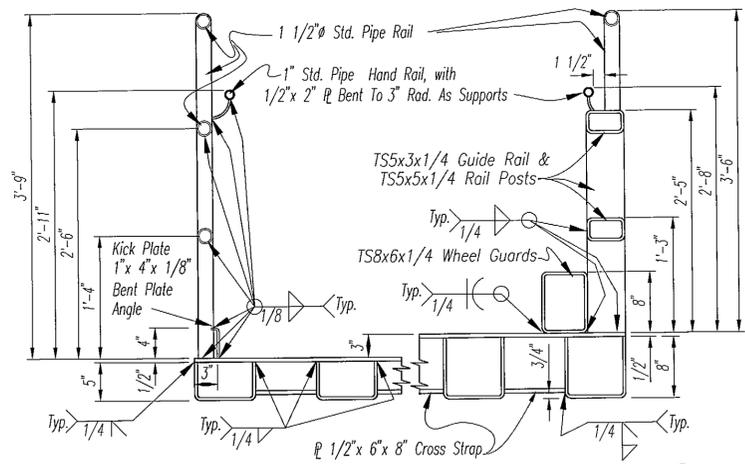
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144--1097/72030
ACCESS HATCH DETAILS

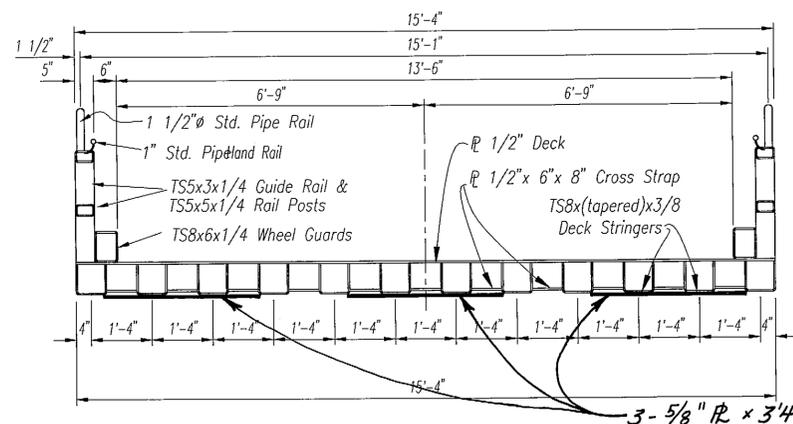
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DRAWN BY:	BN	DATE:	APRIL, 1997
CHECKED BY:	JAL	SHEET 16 OF 41	6-12-97



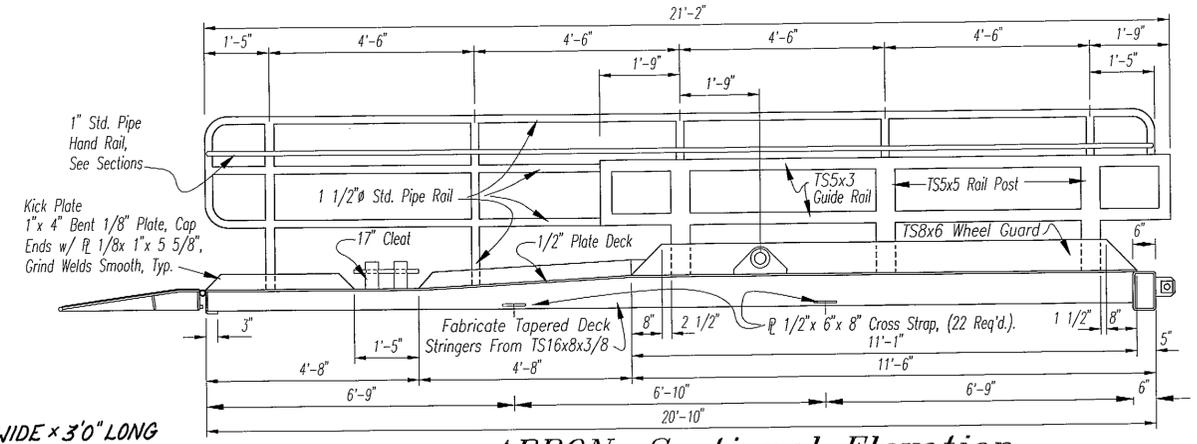
NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS



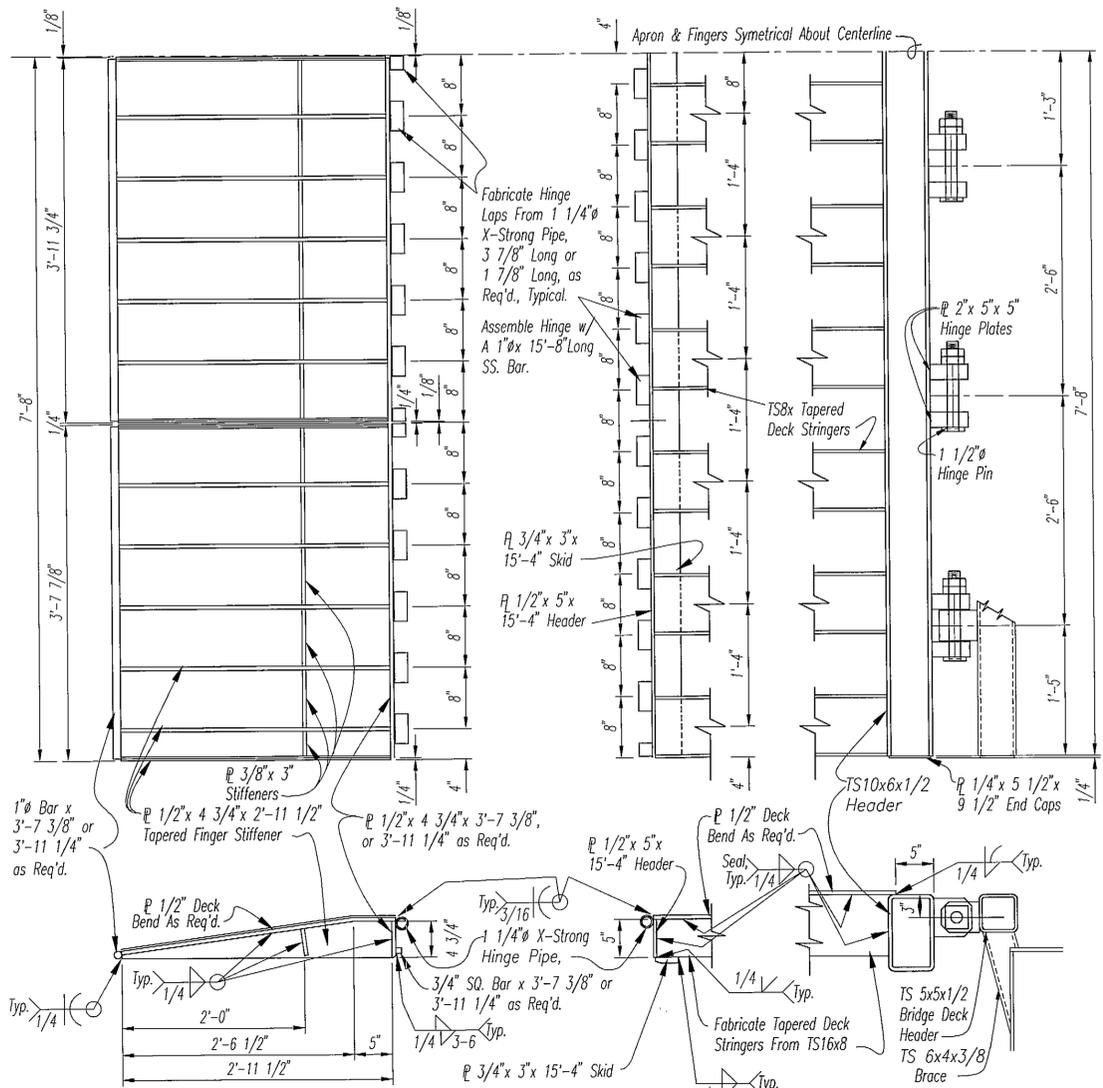
SECTION B



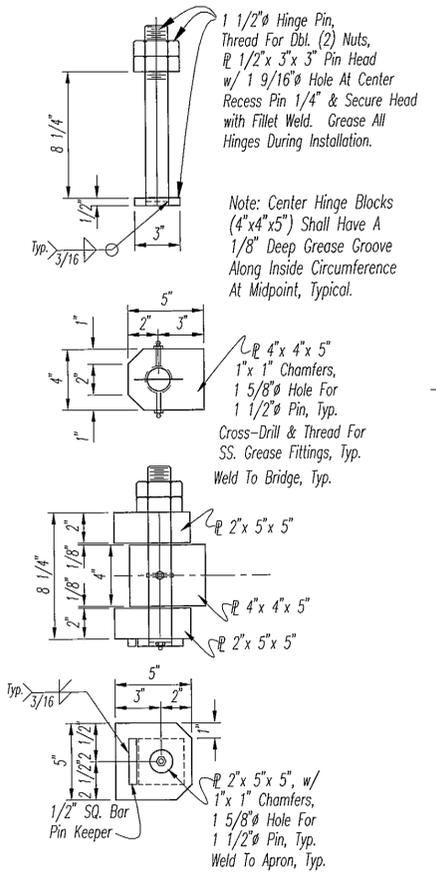
SECTION A



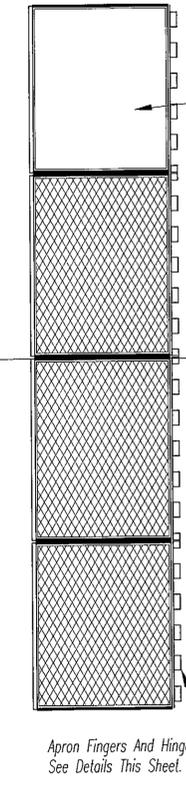
APRON, Sectional Elevation



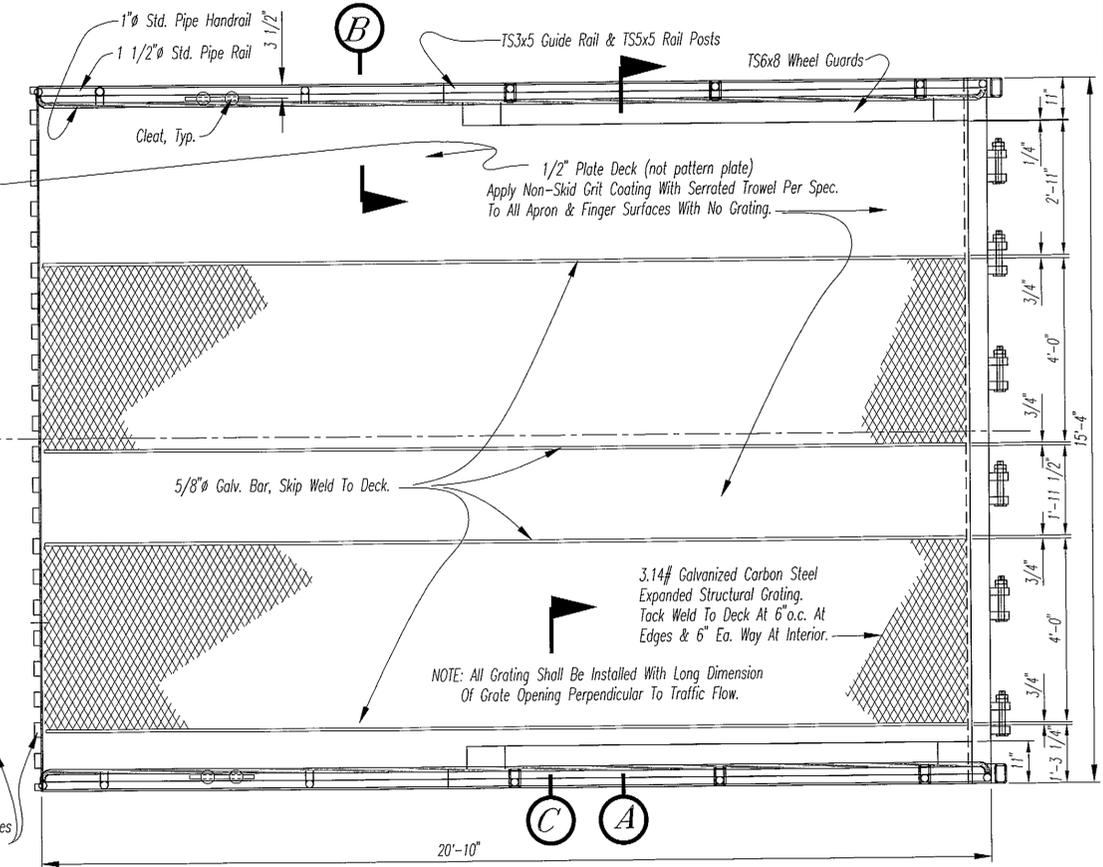
FINGER DETAILS



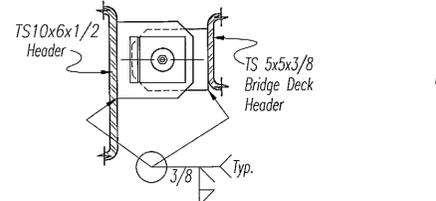
APRON HINGE DETAIL



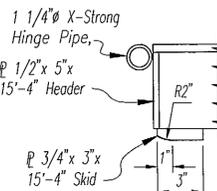
SKID DETAIL



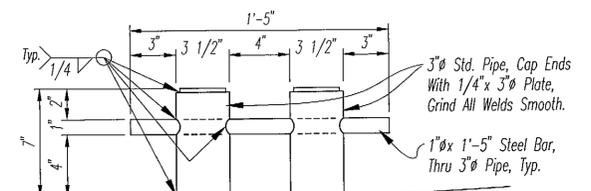
APRON, Plan View



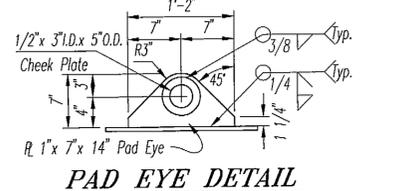
APRON HINGE DETAIL



SKID DETAIL



17" CLEAT DETAIL



PAD EYE DETAIL

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

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BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

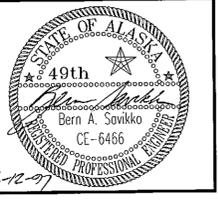
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

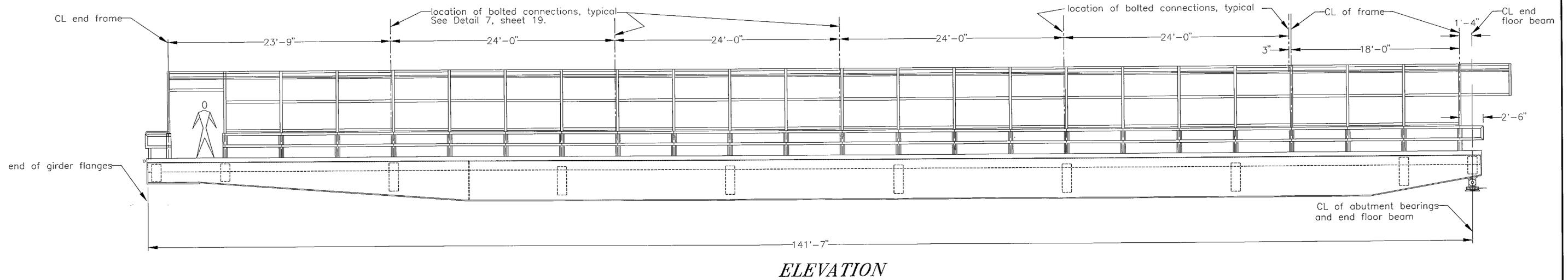
KETCHIKAN
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
24' APRON DETAILS

ALASKA

DESIGNED BY:
BN/BAS
DRAWN BY:
BN
CHECKED BY:
JAL

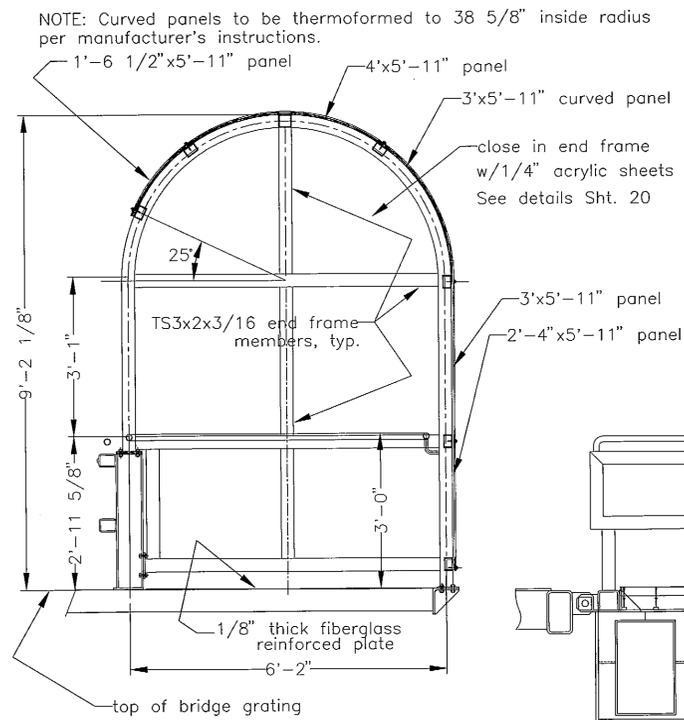
PROJECT NO.
72030
DATE:
APRIL, 1997
SHEET 17 OF 41



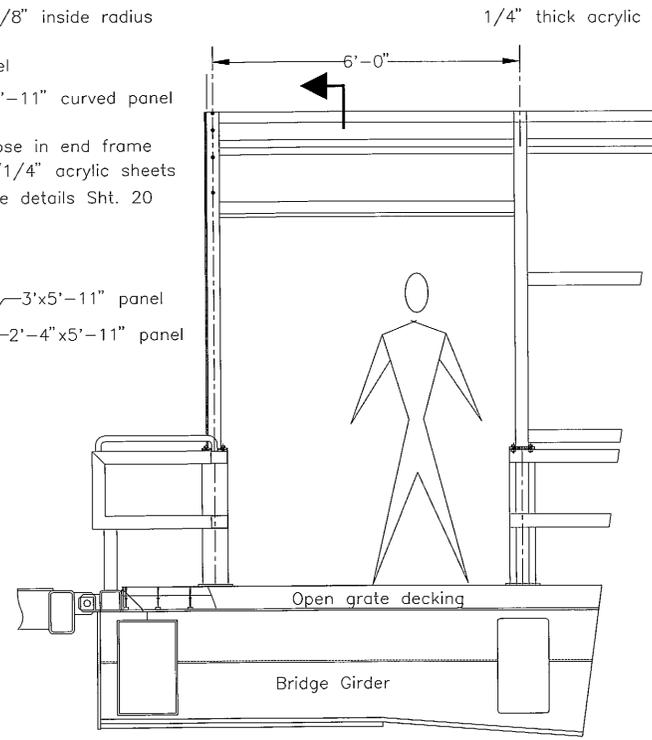


ELEVATION

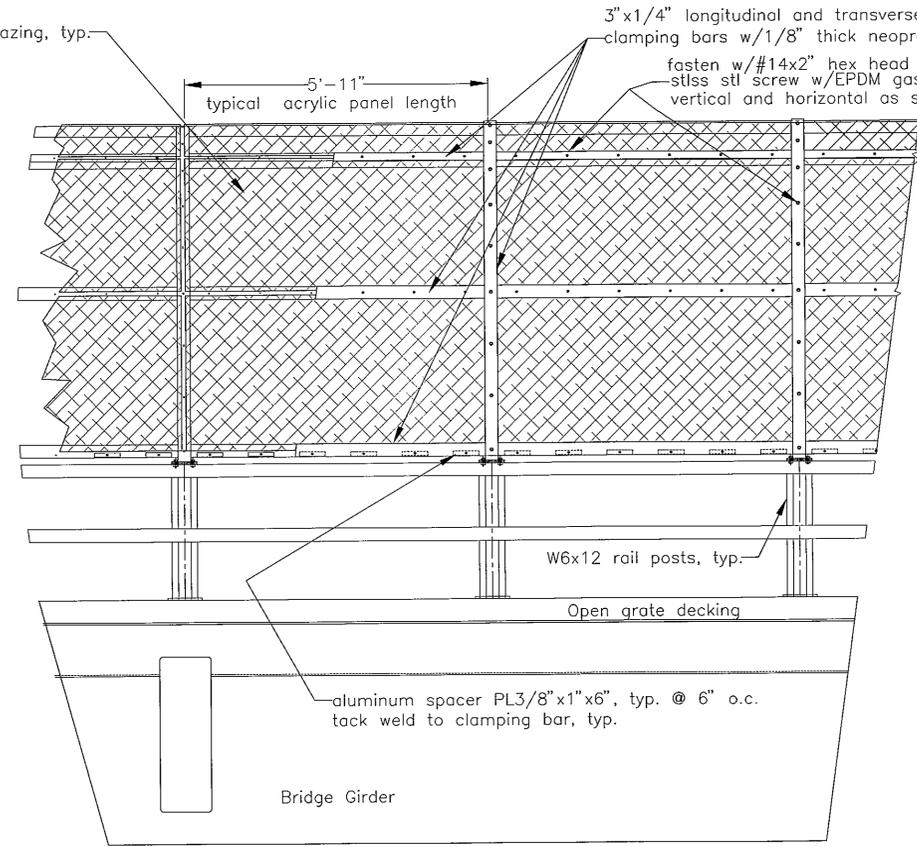
NOTE: Curved panels to be thermoformed to 38 5/8" inside radius per manufacturer's instructions.



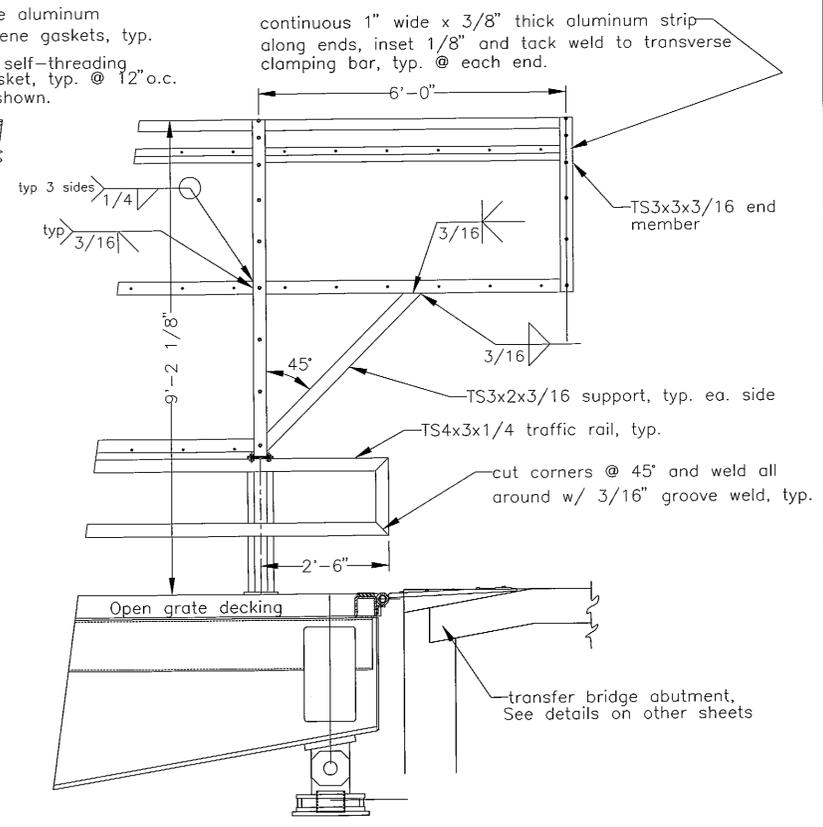
**Section A
(end frame detail)**



BARGE END ELEVATION



TYPICAL COVER ELEVATION



ABUTMENT END ELEVATION

NOTE: Cover frames to be fabricated from 3x3x3/16 bent aluminum tube or two 3 x 1 1/2 x 3/16 channels, bent and welded to form a tube. Alloy for bent tubes shall be 6061-T3. All straight members are the sizes shown and 6061-T6 aluminum.

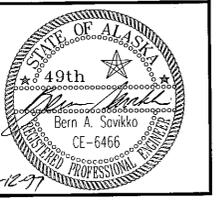
NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

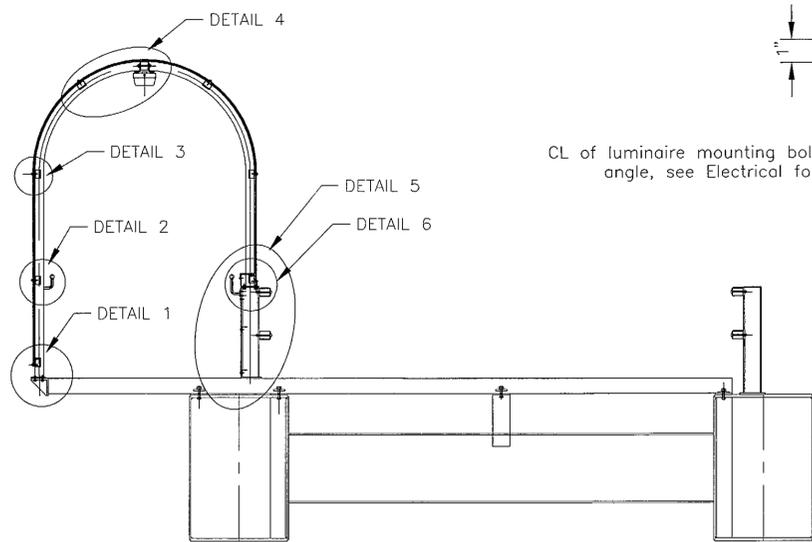
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
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SOUTHEAST REGION DESIGN & CONSTRUCTION

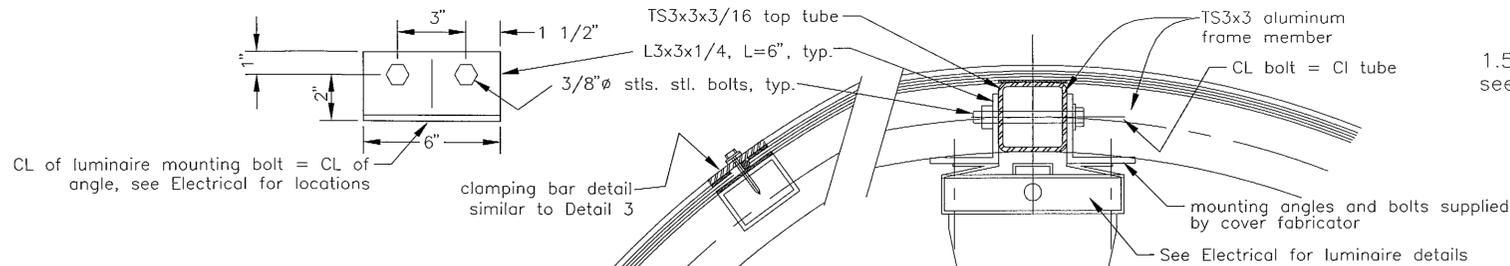
KETCHIKAN
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
TRANSFER BRIDGE WALKWAY COVER

DESIGNED BY: BAS	PROJECT NO. 72030
DRAWN BY: BAS	DATE: APRIL, 1997
CHECKED BY: JAL	SHEET 18 OF 41

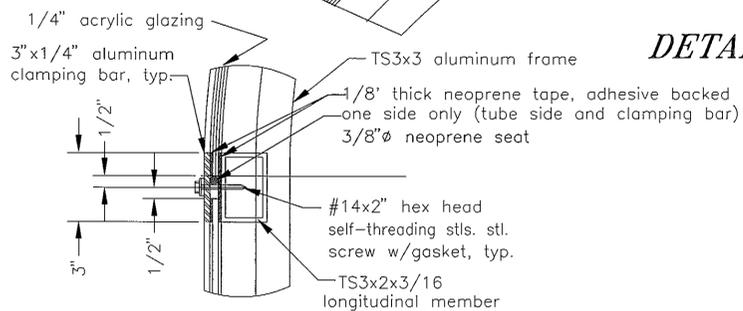




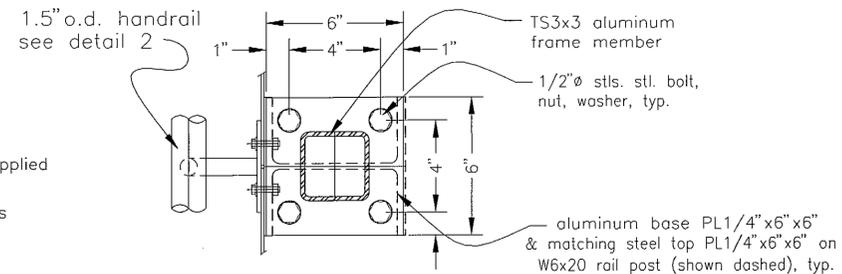
TYPICAL SECTION



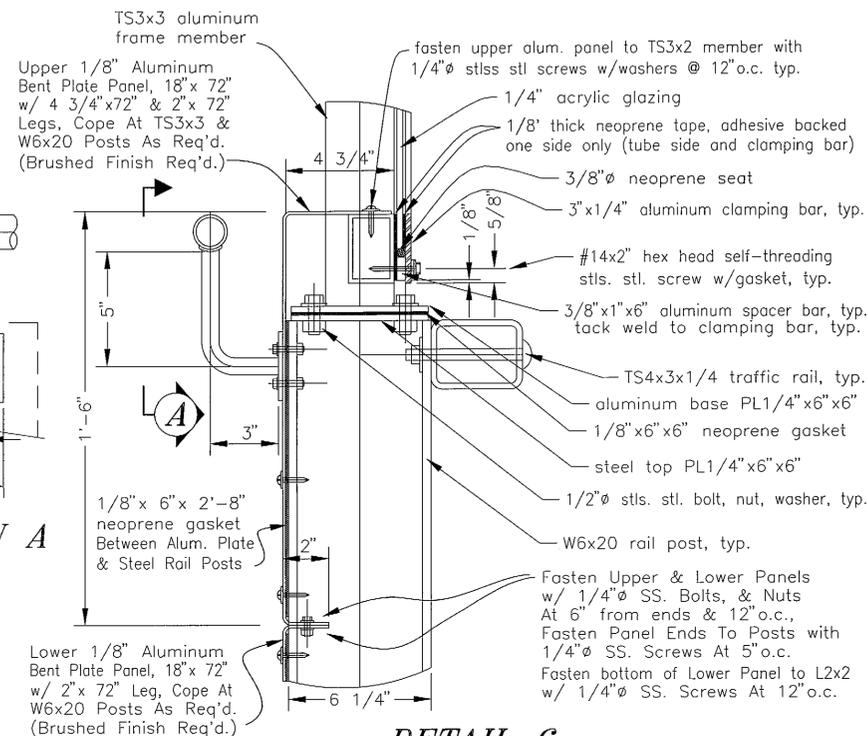
DETAIL 4



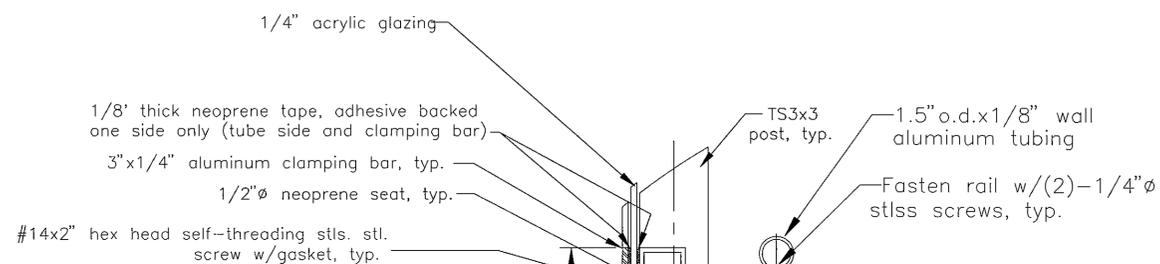
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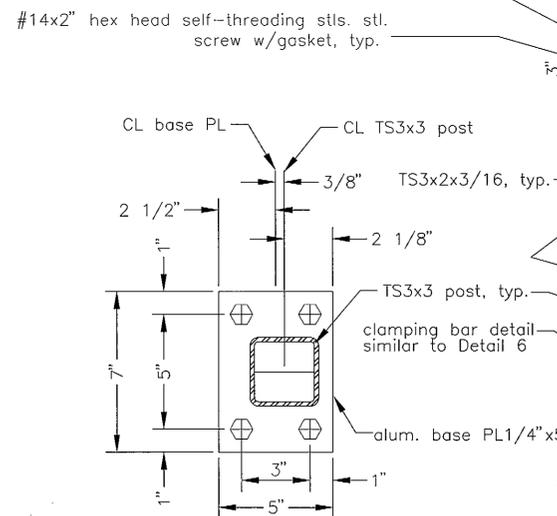
DETAIL 6 - PLAN



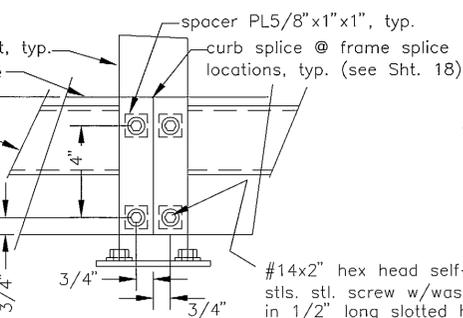
ELEVATION A



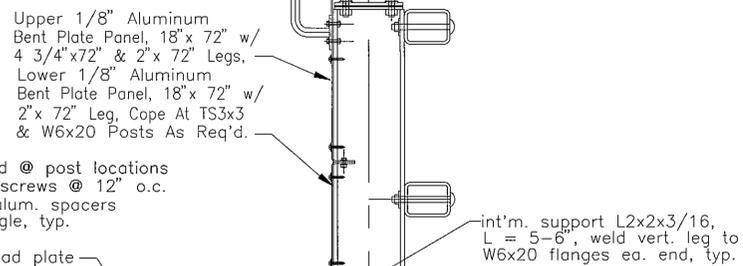
DETAIL 2



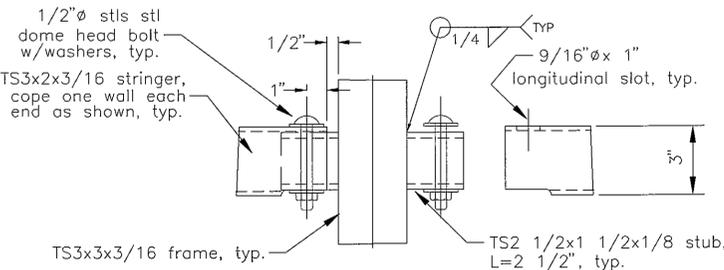
DETAIL 1 - PLAN



ELEVATION B



DETAIL 5



DETAIL 7

- NOTES:
1. Cutting, drilling, bending and installation of acrylic sheets shall be per manufacturer's recommendations.
 2. Adhesives, seals, and gaskets shall be compatible w/acrylic sheets.
 3. All aluminum mounting bars, plates, shapes, and spacers shall be 6061-T6.
 4. Clamping bar mounting screws shall be coated w/anti-corrosion grease prior to installation.
 5. All screws and bolts for aluminum and alum./steel connections shall be stainless steel Type 304 or 316.
 6. All steel shall be galvanized after fabrication.

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

PATH: P:\KTN\72030\MF\BS\SHEET19 OR ASHUTS.DWG 1=32		
PLOT:		
BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

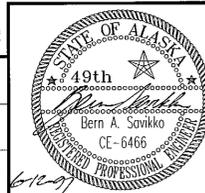
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

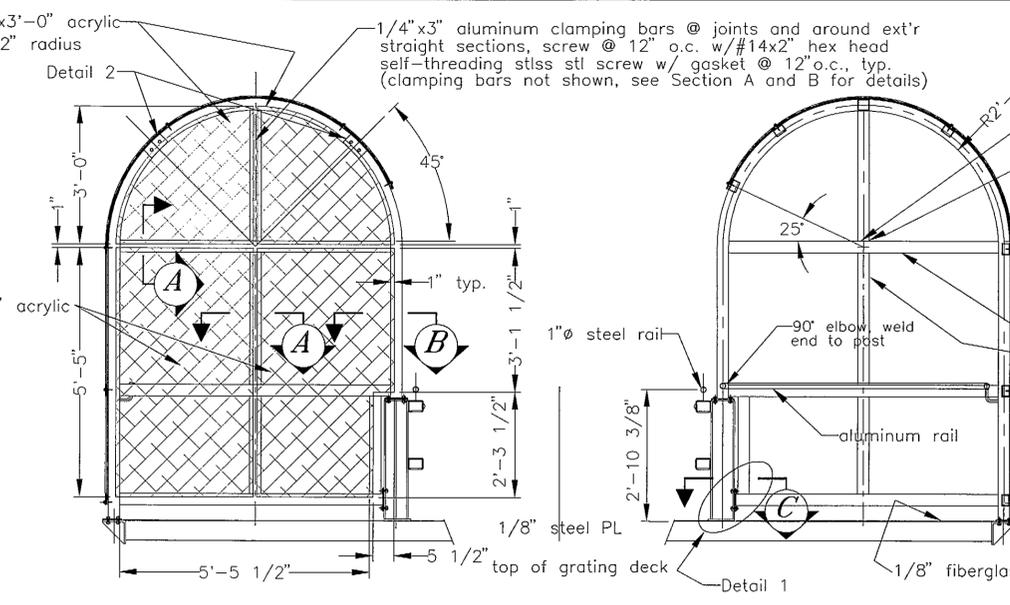
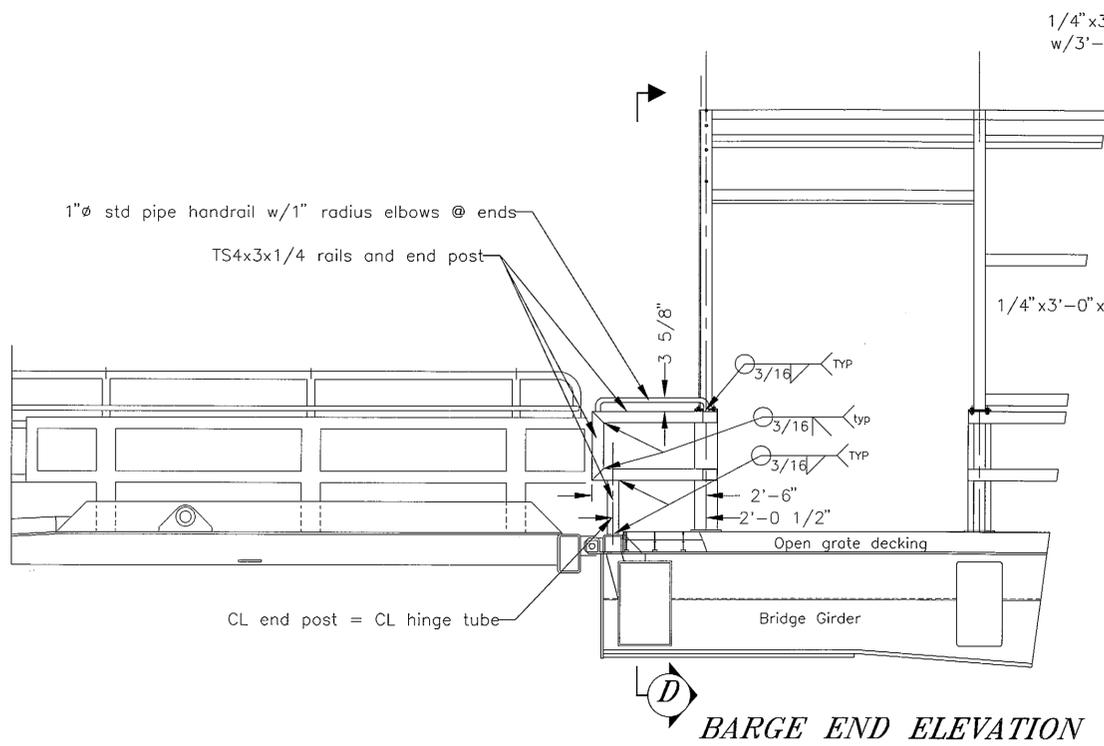
KETCHIKAN
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
BRIDGE WALKWAY COVER DETAILS

ALASKA

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BAS
DRAWN BY:
BAS
CHECKED BY:
JAL

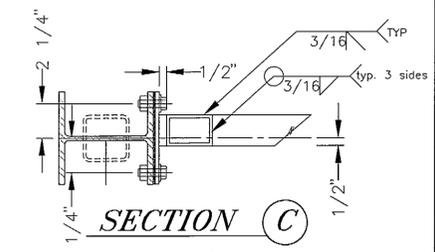
PROJECT NO.
72030
DATE:
APRIL, 1997
SHEET 19 OF 41



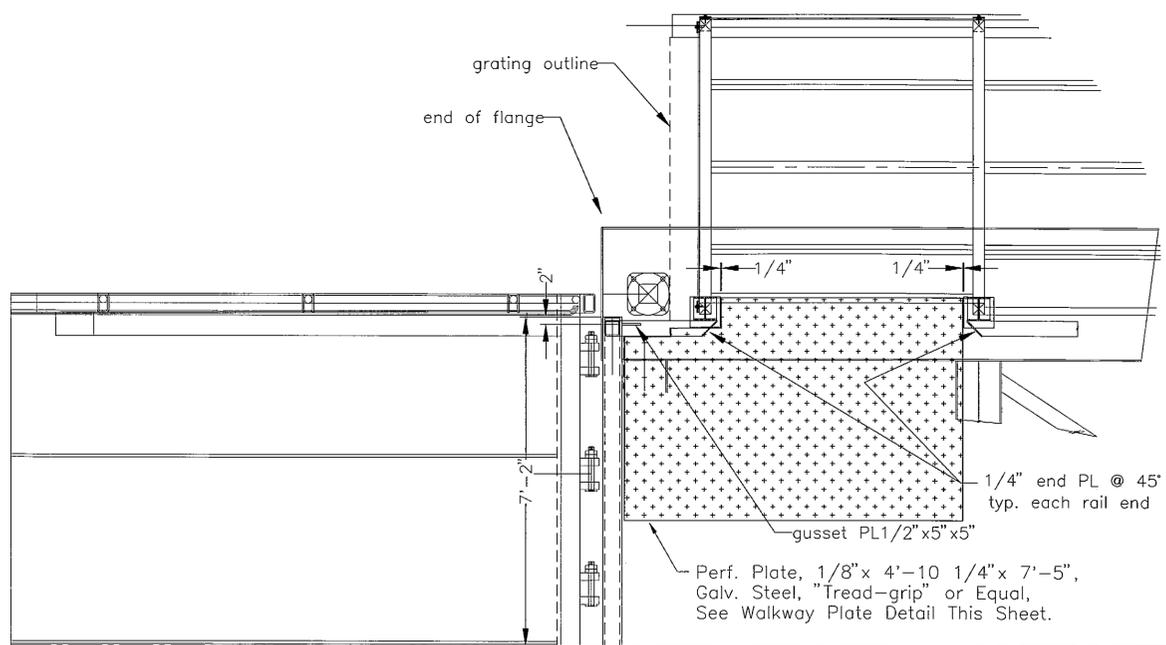


**END VIEW - ELEVATION D
(Looking Shoreward)**

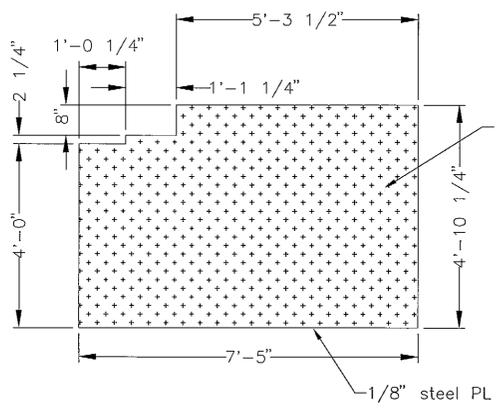
**END VIEW
(Looking Seaward)**



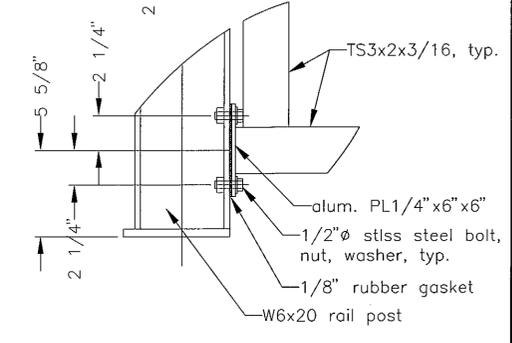
SECTION C



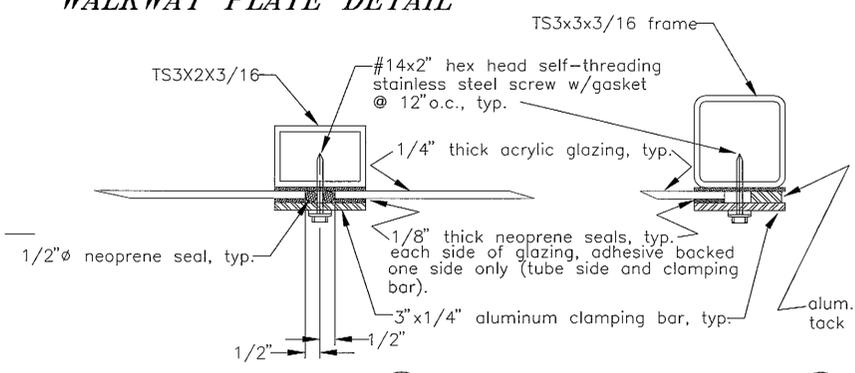
BARGE END PLAN



WALKWAY PLATE DETAIL

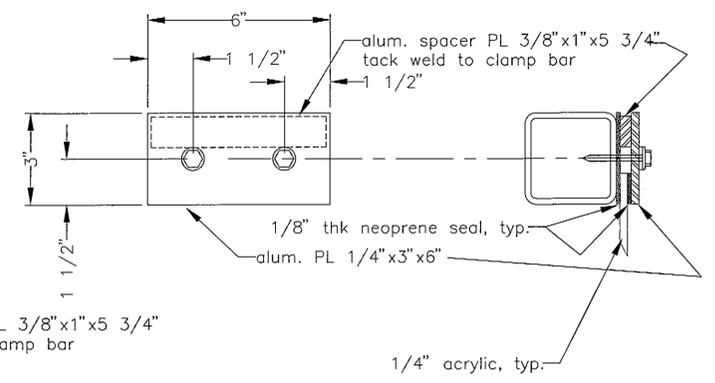


DETAIL 1



SECTION A

SECTION B



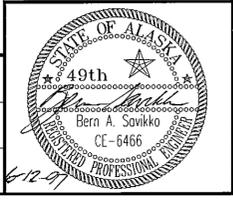
DETAIL 2

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BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

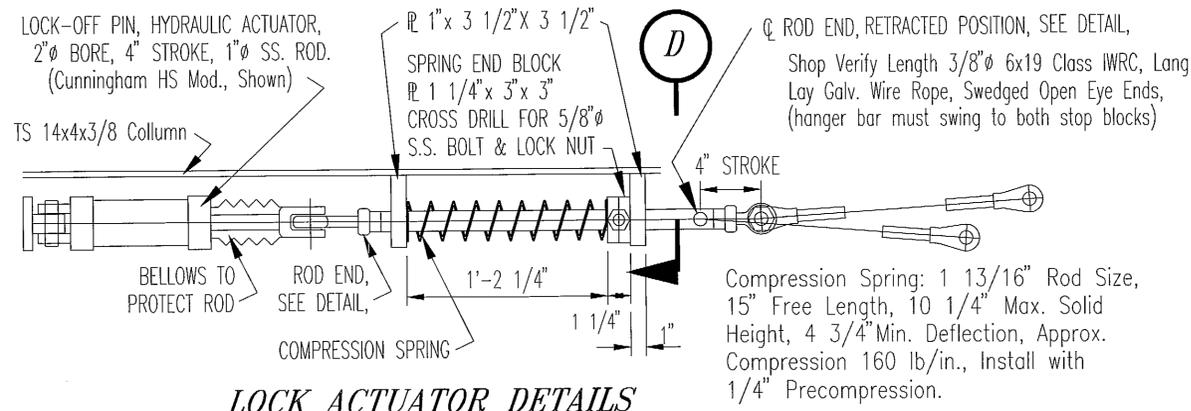
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
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SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
BRIDGE WALKWAY CORNER DETAILS

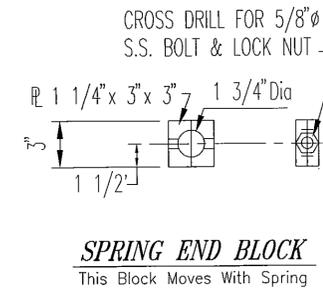
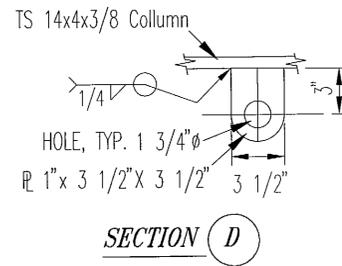
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DRAWN BY:	BAS	DATE:	APRIL, 1997
CHECKED BY:	JAL	SHEET 20 OF 41	6-12-97



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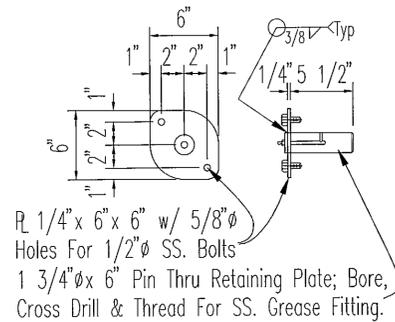


LOCK ACTUATOR DETAILS

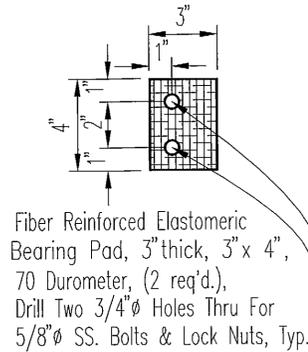


**ROD END
 DETAIL**

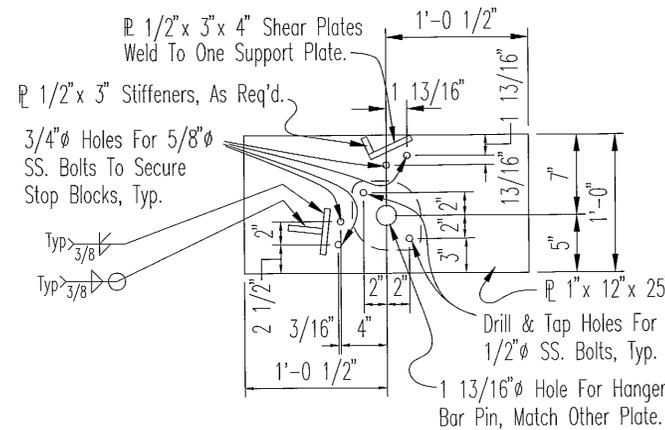
* NOTE: DIMENSIONS WILL CHANGE WITH THE BRAND (& EXACT DIMENSIONS) OF THE HYDRAULIC CYLINDER PROVIDED. THIS DRAWING SHOWS CUNNINGHAM 5" Ø Bore x 60" Stroke x 2" Ø Rod, w/ Manufacturer's Pivot Mount.



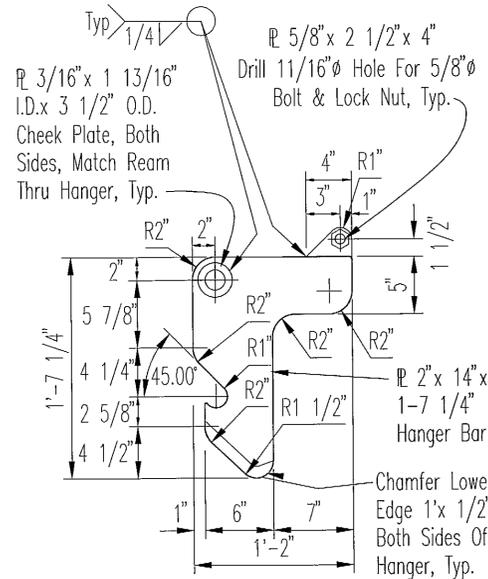
HANGER BAR PIN



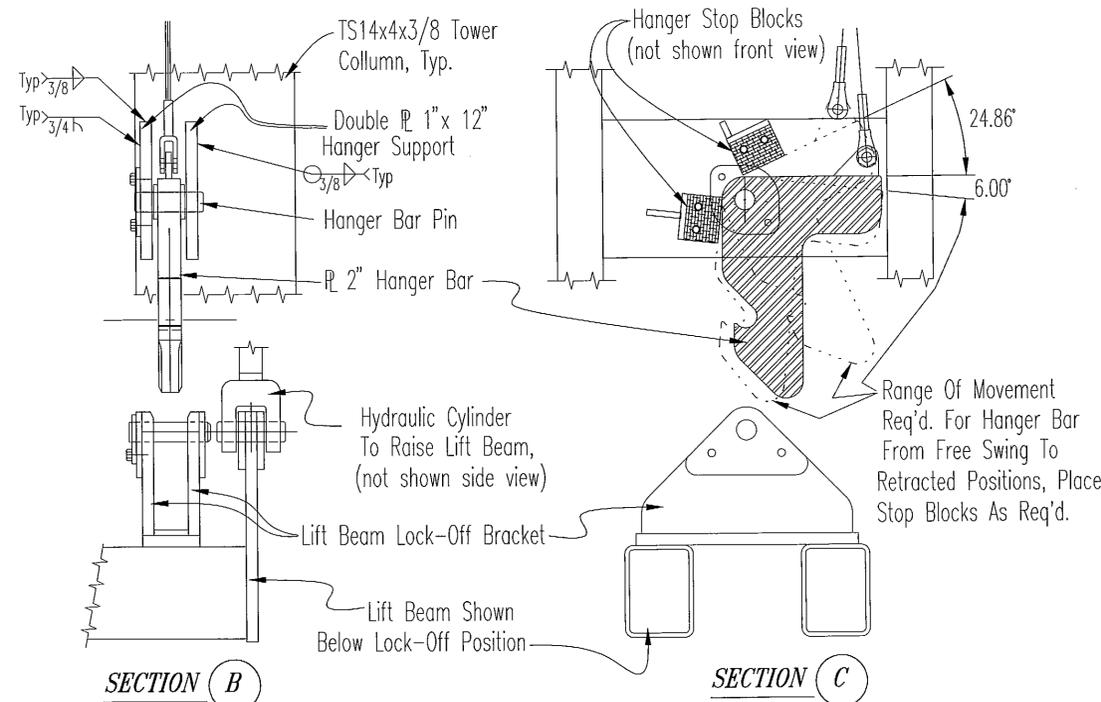
STOP BLOCK DETAIL



HANGER SUPPORT PLATE DETAIL

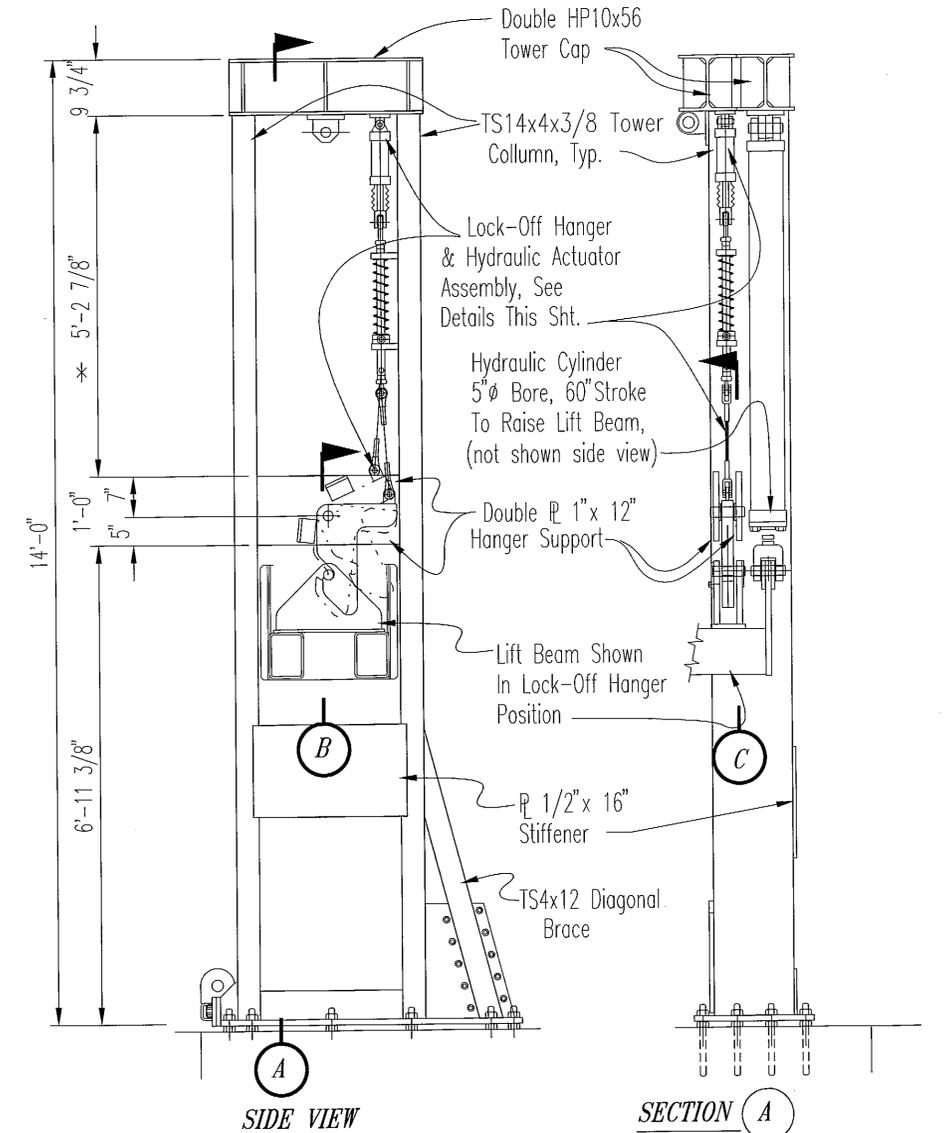


LOCK-OFF HANGER BAR



SECTION B

SECTION C



TOWER LOCK-OFF DETAILS

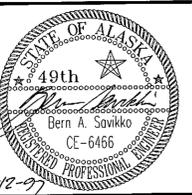
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BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

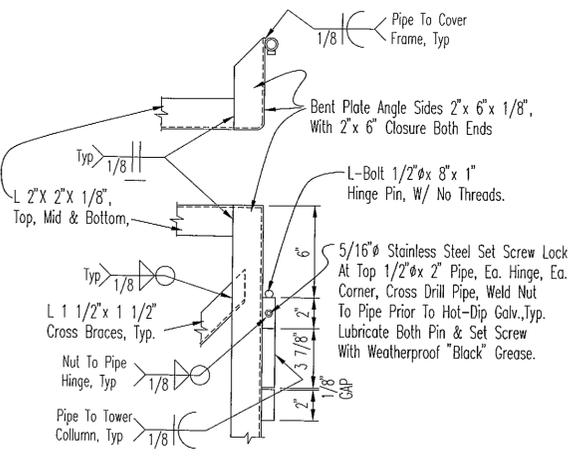
STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
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KETCHIKAN
 KETCHIKAN AIRPORT
 GRAVINA ISLAND FERRY TERMINAL
 PROJECT NO. A.I.P. 3-02-0144-1097/72030
 ALASKA
LOCK-OFF DETAILS

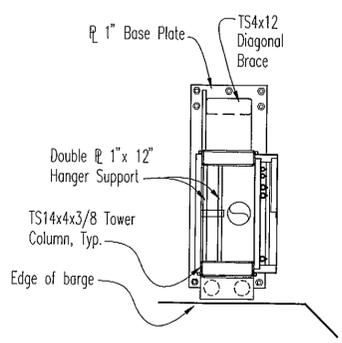
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DESIGNED BY: BAS/BN	PROJECT NO. 72030
DRAWN BY: BN	DATE: APRIL, 1997
CHECKED BY: JAL	SHEET 23 OF 41



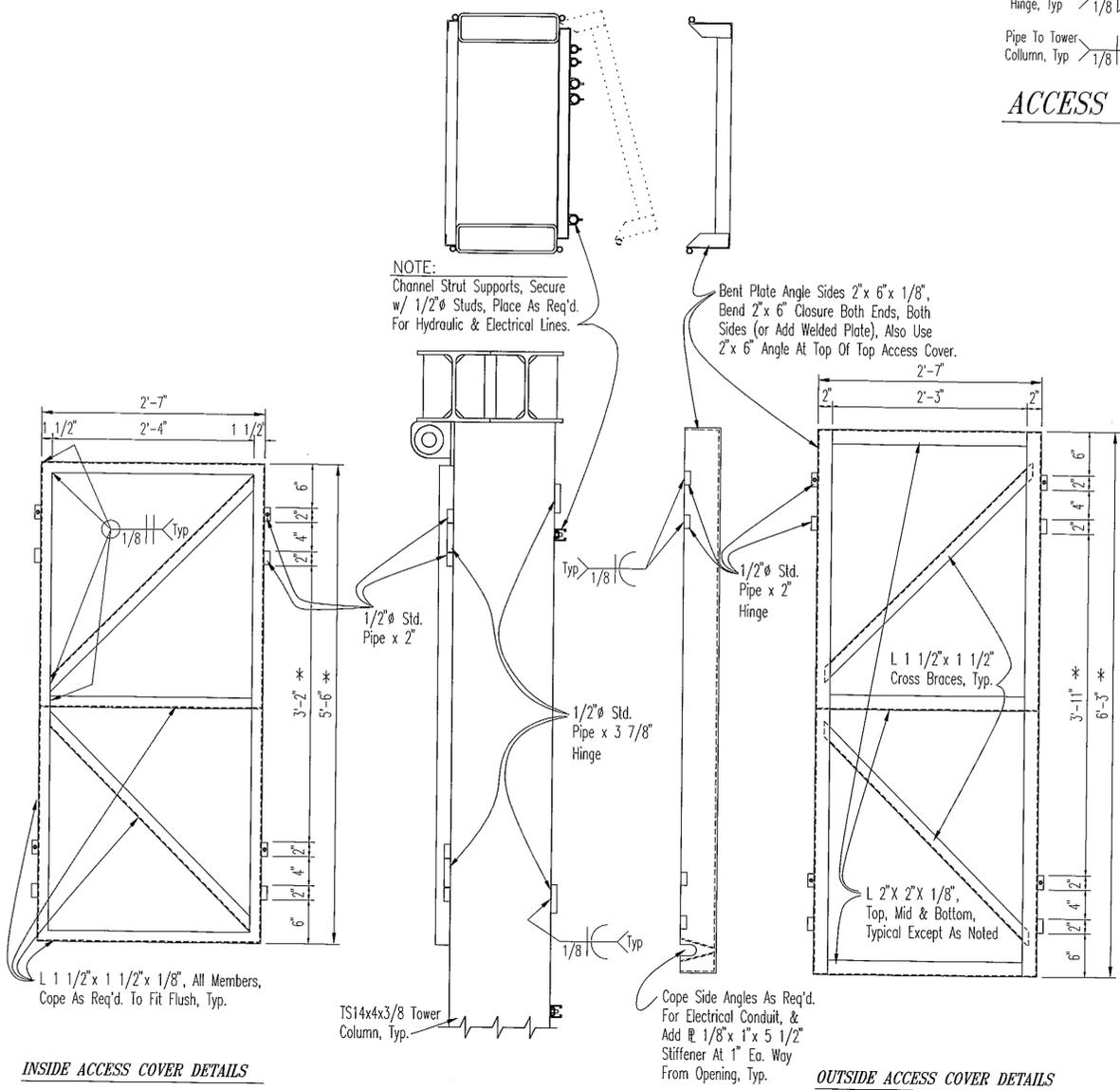


ACCESS COVER HINGE DETAILS

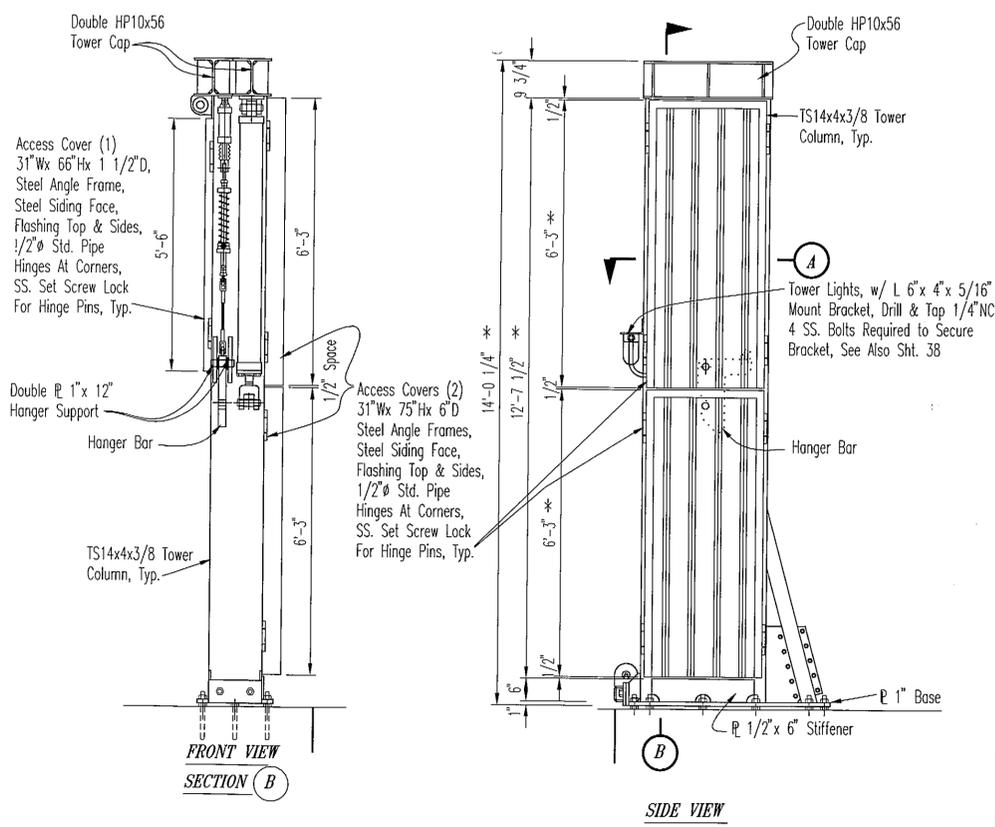


SECTION A

* NOTE: DIMENSIONS MAY CHANGE WITH THE MANUFACTURER (& EXACT DIMENSIONS) OF THE HYDRAULIC LIFT CYLINDER PROVIDED.



LIFT TOWER SIDING DETAILS



LIFT TOWER SIDING DETAILS

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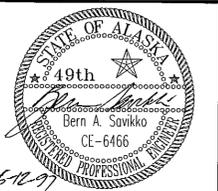
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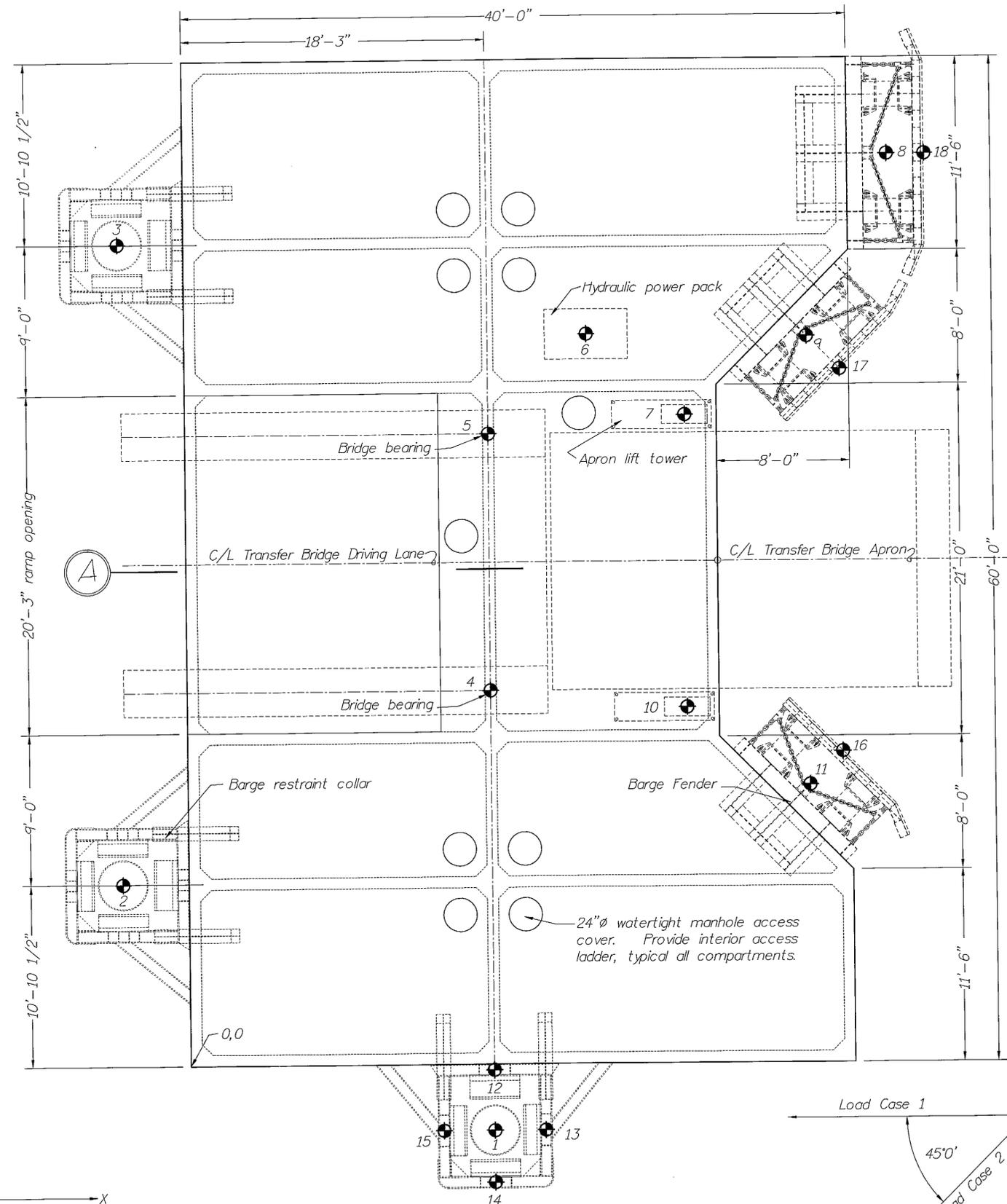
STATE OF ALASKA
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 AND PUBLIC FACILITIES
 SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN
 KETCHIKAN AIRPORT
 GRAVINA ISLAND FERRY TERMINAL
 PROJECT NO. A.I.P. 3-02-0144-1097/72030
 SIDING & MISC. DETAILS

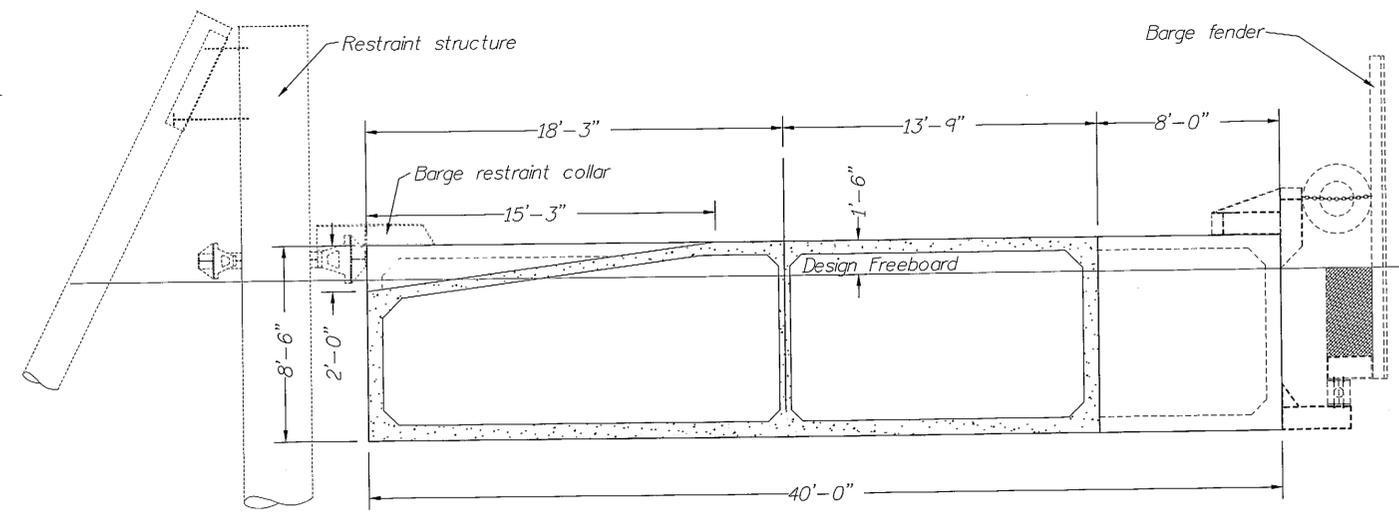
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DRAWN BY: BN	DATE: APRIL, 1997
CHECKED BY: JAL	SHEET 24 OF 41





SUPPORT BARGE PLAN



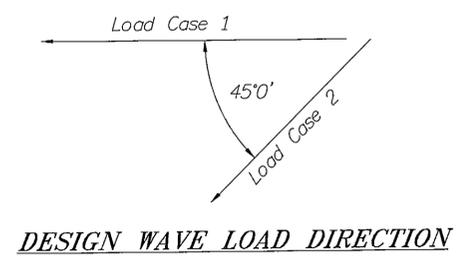
**SECTION A
ACTUAL BARGE**

GENERAL DESIGN CRITERIA:

Wave Load: Height = 4 feet ; Period = 4 sec
 Wave Load Direction: Perpendicular to long axis of barge
 Oblique at 45° to long axis of barge
 Uniform Load:
 600 psf sides & bottom
 250 psf deck
 Concentrated: 2000 lb over 1 sf ; sides & bottom
 Watertightness: Full hydrostatic head @ 64 pcf water density

BARGE ATTACHMENT DESIGN LOADS

Point	Coordinates (ft)		Dead Load (kips)			Live Load (kips)			Remarks
	X	Y	F _x	F _y	F _z	F _x	F _y	F _z	
1	18.25	-3.96			-3.2				Approx. Center of Gravity for DL & LL
2	-3.96	10.87			-3.2				" " " " " "
3	-3.96	49.13			-3.2				" " " " " "
4	18.25	22.33			-57.0	10.0	-40.0		DL Bridge + LL Vehicle
5	18.25	37.67			-49.0	10.0	-40.0		DL Bridge + LL Vehicle
6	24.20	43.58			-2.0				" " " " " "
7	30.08	38.73			-20.0				" " " " " "
8	42.37	54.25			-7.0				" " " " " "
9	37.45	43.40			-5.0				" " " " " "
10	30.08	21.27			-20.0				" " " " " "
11	37.45	16.60			-5.0				" " " " " "
12	NA	NA				100.0	-10.0		Load Case 1 (All restraint collars)
13	NA	NA				43.0			Load Case 1 (All restraint collars)
14	NA	NA				-100.0	-10.0		Load Case 2 (All restraint collars)
15	NA	NA				-43.0			Load Case 2 (All restraint collars)
16	NA	NA							" " " " " "
						-62.2	-62.2		Berthing Load
						21.2	21.2		Mooring Load
17	NA	NA				-62.2	-62.2		Berthing Load
						21.2	-21.2		Mooring Load
18	NA	NA				-88.0			Berthing Load



DESIGN WAVE LOAD DIRECTION

PATH: P:\KTN\72030\MF\JAL\SHEET25.DWG OR BARGE.DWG

BY:	DATE:	DESCRIPTION OF CHANGE:

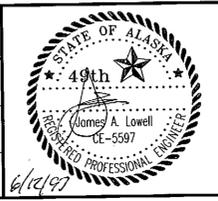
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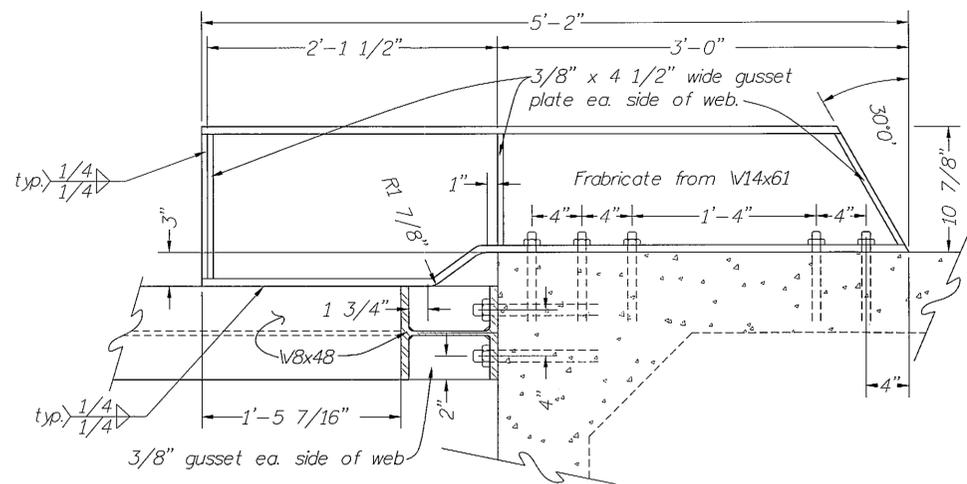
STATE OF ALASKA
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KETCHIKAN
 KETCHIKAN AIRPORT GRAVINA FERRY TERMINAL
 PROJECT NO. A.I.P. 3-02-0144-1097/72030
BRIDGE SUPPORT BARGE DETAILS

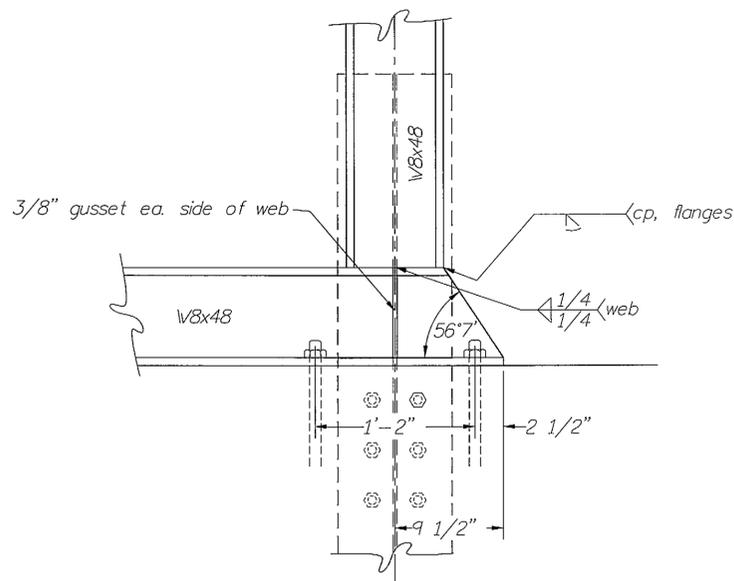
NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

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DRAWN BY:	JAL	DATE:	APRIL, 1997
CHECKED BY:	JAL	SHEET	25 OF 41



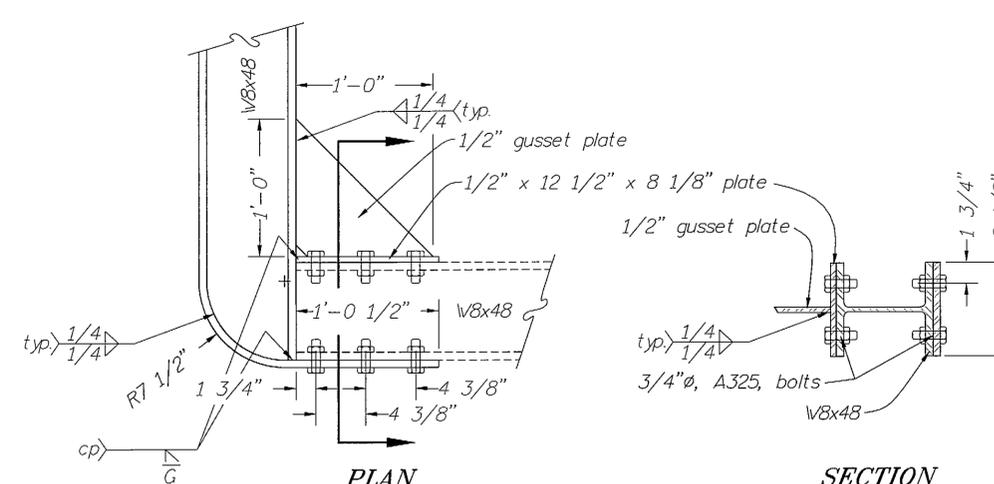


SECTION "A"



PLAN

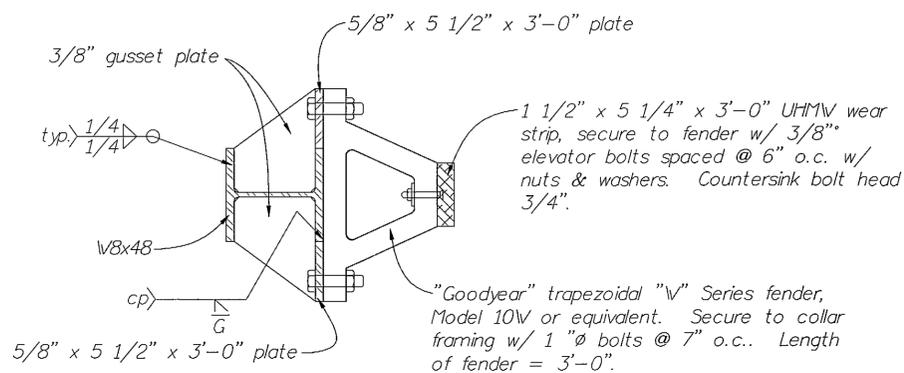
DETAIL "B"



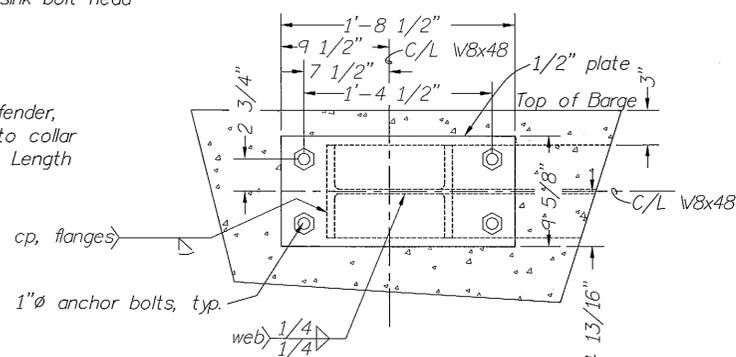
PLAN

DETAIL "A"

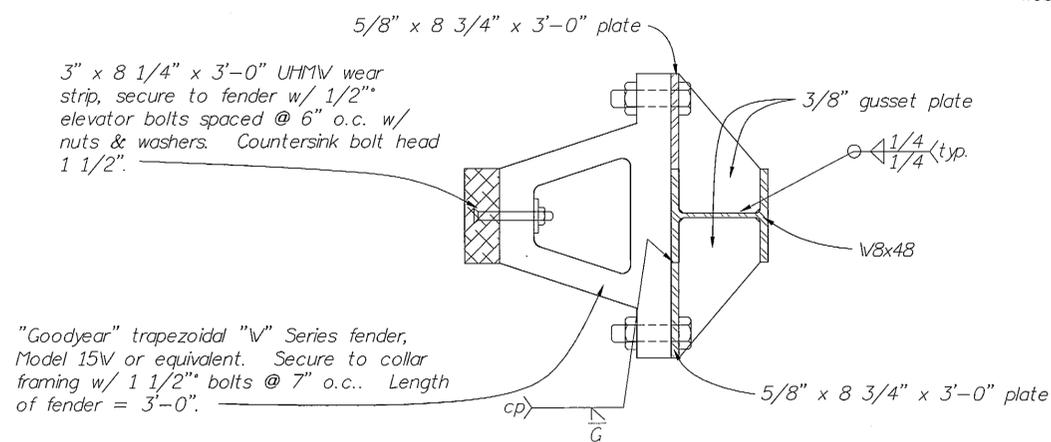
SECTION



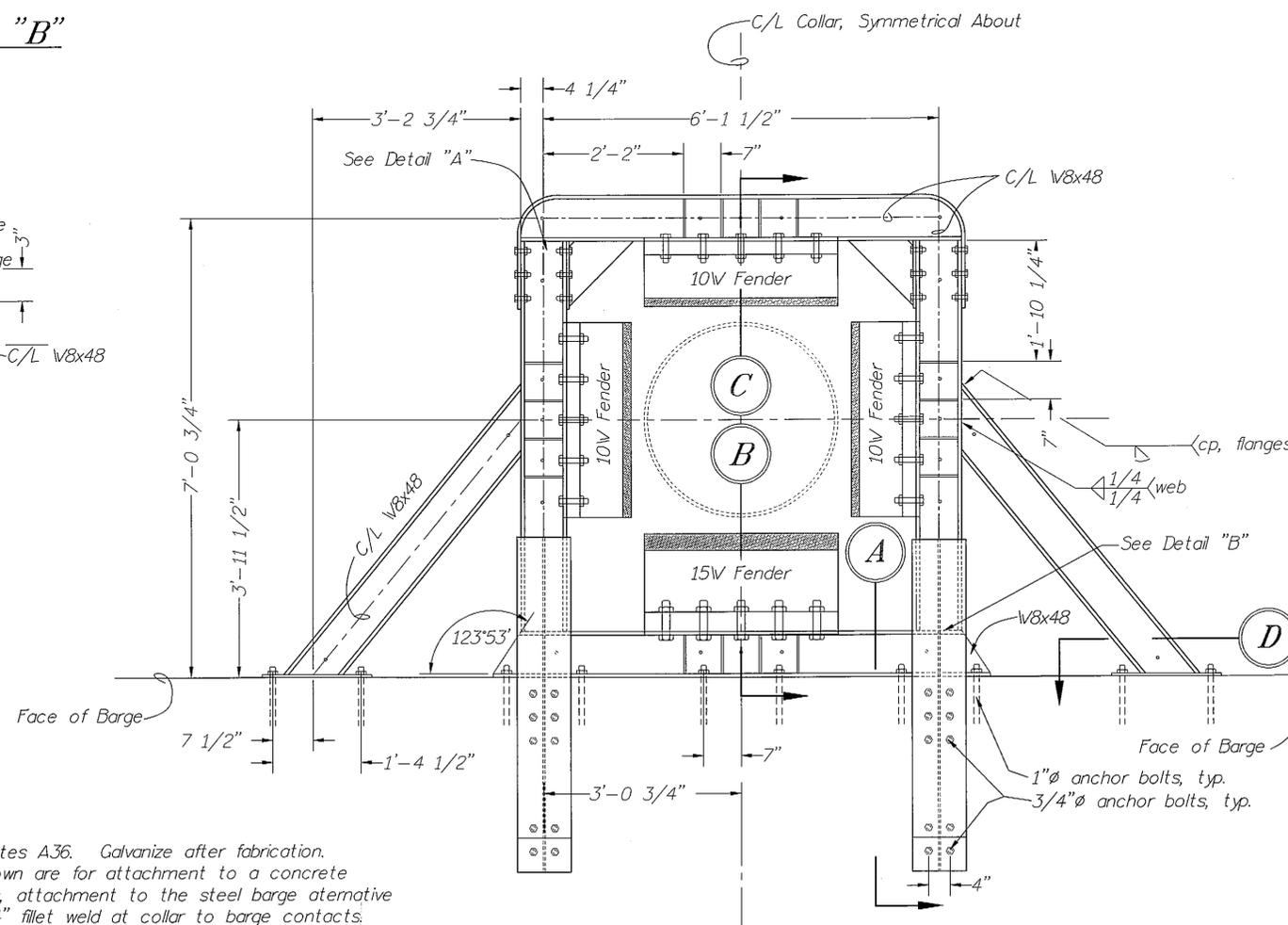
SECTION "C"



SECTION "D"



SECTION "B"



RESTRAINT COLLAR PLAN

General Notes:

1. All structural shapes and plates A36. Galvanize after fabrication.
2. Collar connection details shown are for attachment to a concrete barge. For bidding purposes, attachment to the steel barge alternative will require a continuous 1/4" fillet weld at collar to barge contacts.
3. 3/4" anchor bolts provided shall be capable of developing 8.5 kips in tension (working load) and 17 kips in shear per each anchor. 1" anchor bolts shall be capable of developing 12.5 kips in tension (working load) and 31 kips in shear per each anchor.

PATH: P:\KTN\72030\MF\JAL\SHEET26.DWG OR RESTCOLR.DWG
 BY: DATE: DESCRIPTION OF CHANGE:

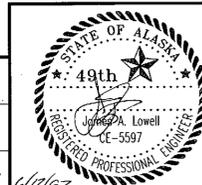
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STATE OF ALASKA
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KETCHIKAN
 ALASKA
 KETCHIKAN AIRPORT GRAVINA FERRY TERMINAL
 PROJECT NO. A.I.P. 3-02-0144-1097/72030
BARGE RESTRAINT COLLAR DETAILS

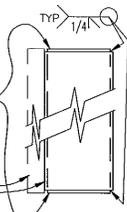
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 CHECKED BY: JAL SHEET 26 OF 41

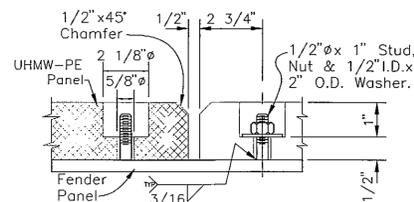


1/4" End Caps, Top and Bottom, Seal Weld To Panel, Supply Fitting In Top Cap, Pressure Test, & Install S.S. Plug.

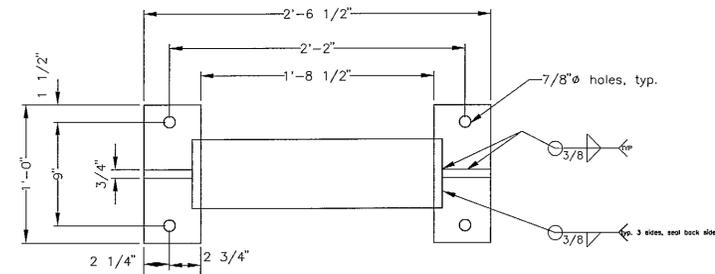
Fabricated 6" thick Steel Fender Panel with 1 1/2" thick UHMW-PE Facing, Typical, Color To Be Yellow On Corners & Black On Face, Typical.



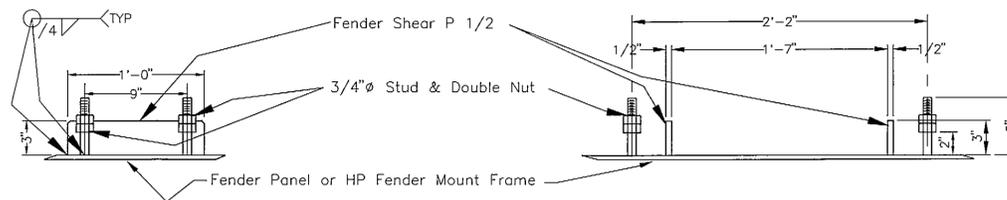
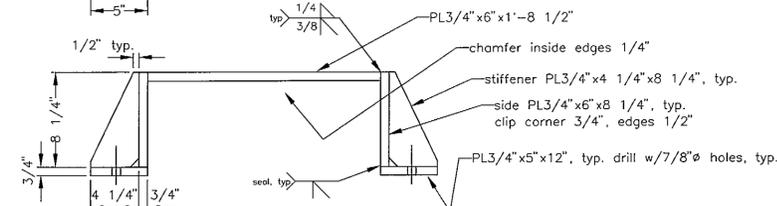
FENDER PANEL DETAIL 3



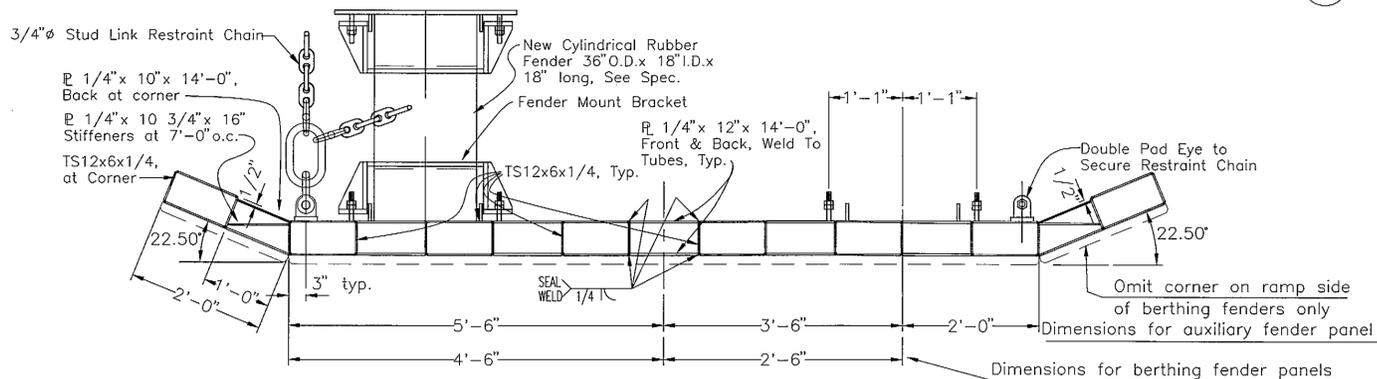
SECTION AT FENDER FACE
(See Dolphin Facing Panels for other facing details)



Fender Mount Bracket:

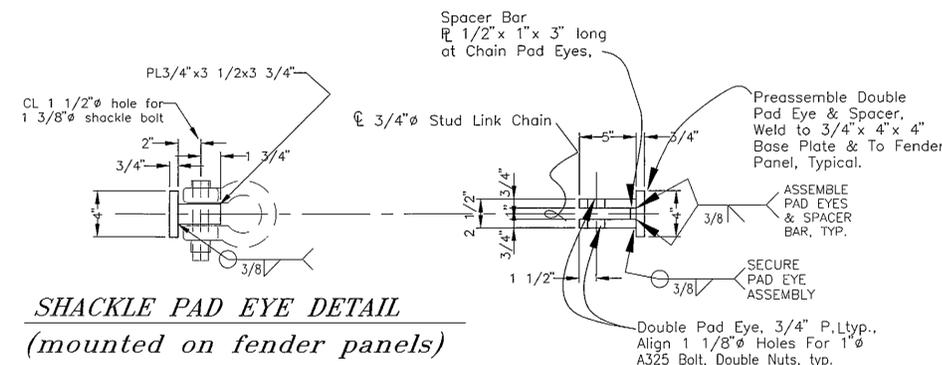


FENDER MOUNT BRACKET & MOUNTING DETAILS



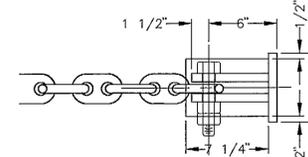
FENDER PANEL DETAIL 1

Auxiliary Fender Shown, Berthing Fenders Similar

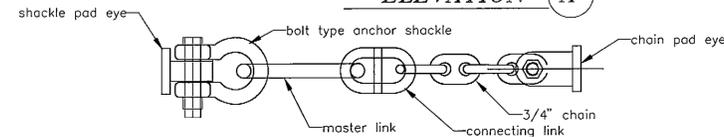


SHACKLE PAD EYE DETAIL
(mounted on fender panels)

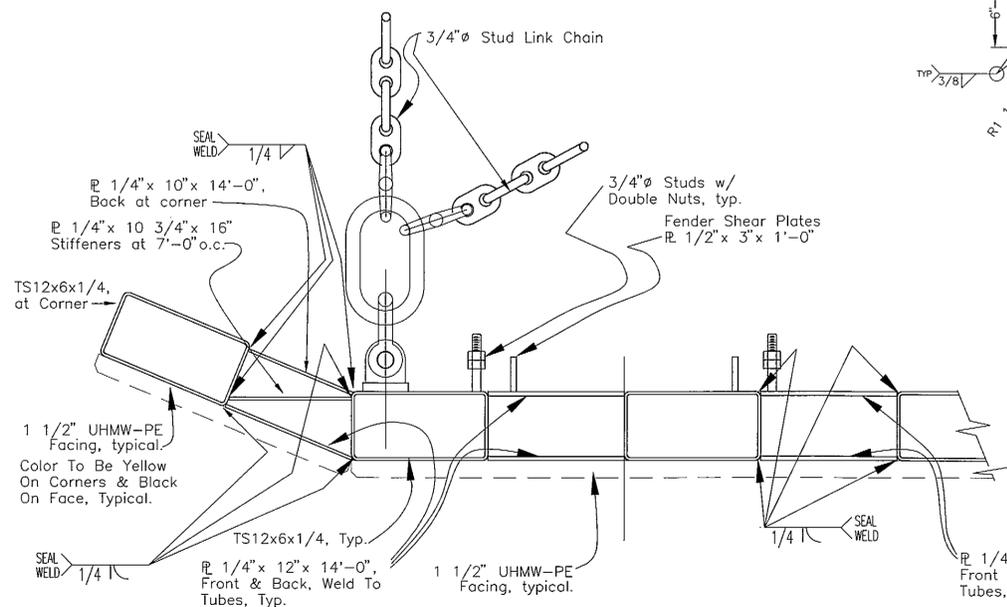
CHAIN PAD EYE DETAIL - ELEVATION



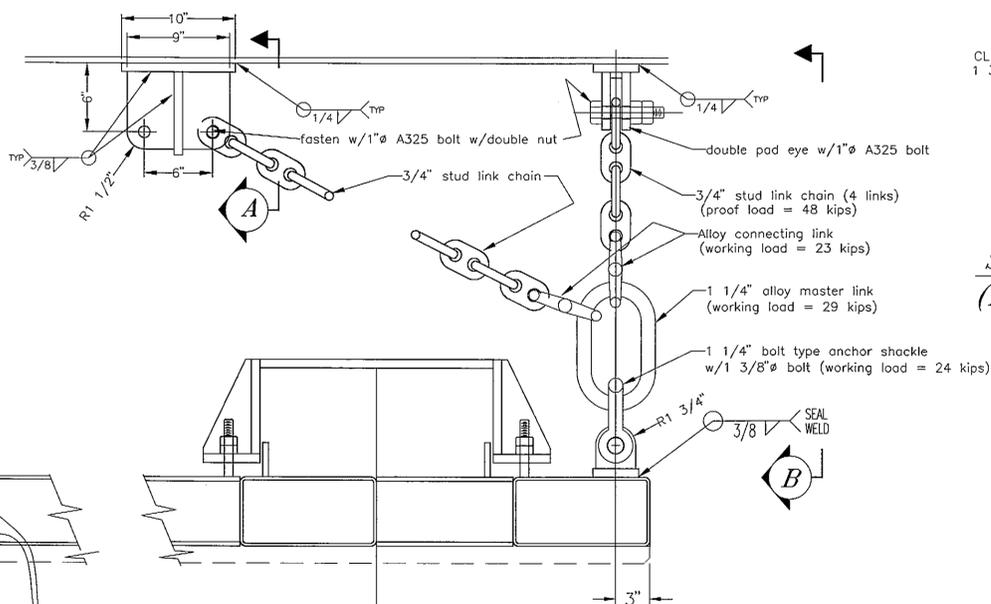
ELEVATION A



ELEVATION B



AUXILIARY PANEL DETAIL
(symmetrical about centerline)



BERTHING FENDER PANEL DETAIL
(corner on ramp side shown)

FENDER PANEL DETAIL 2

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

PATH:	p:\ktn\72030\mf\bs\SHEET28.DWG or ashut6a.dwg	1=32
PLOT:		
BY:	DATE:	DESCRIPTION OF CHANGE:
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
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SOUTHEAST REGION DESIGN & CONSTRUCTION

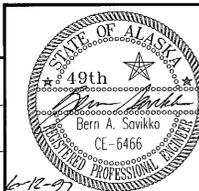
KETCHIKAN

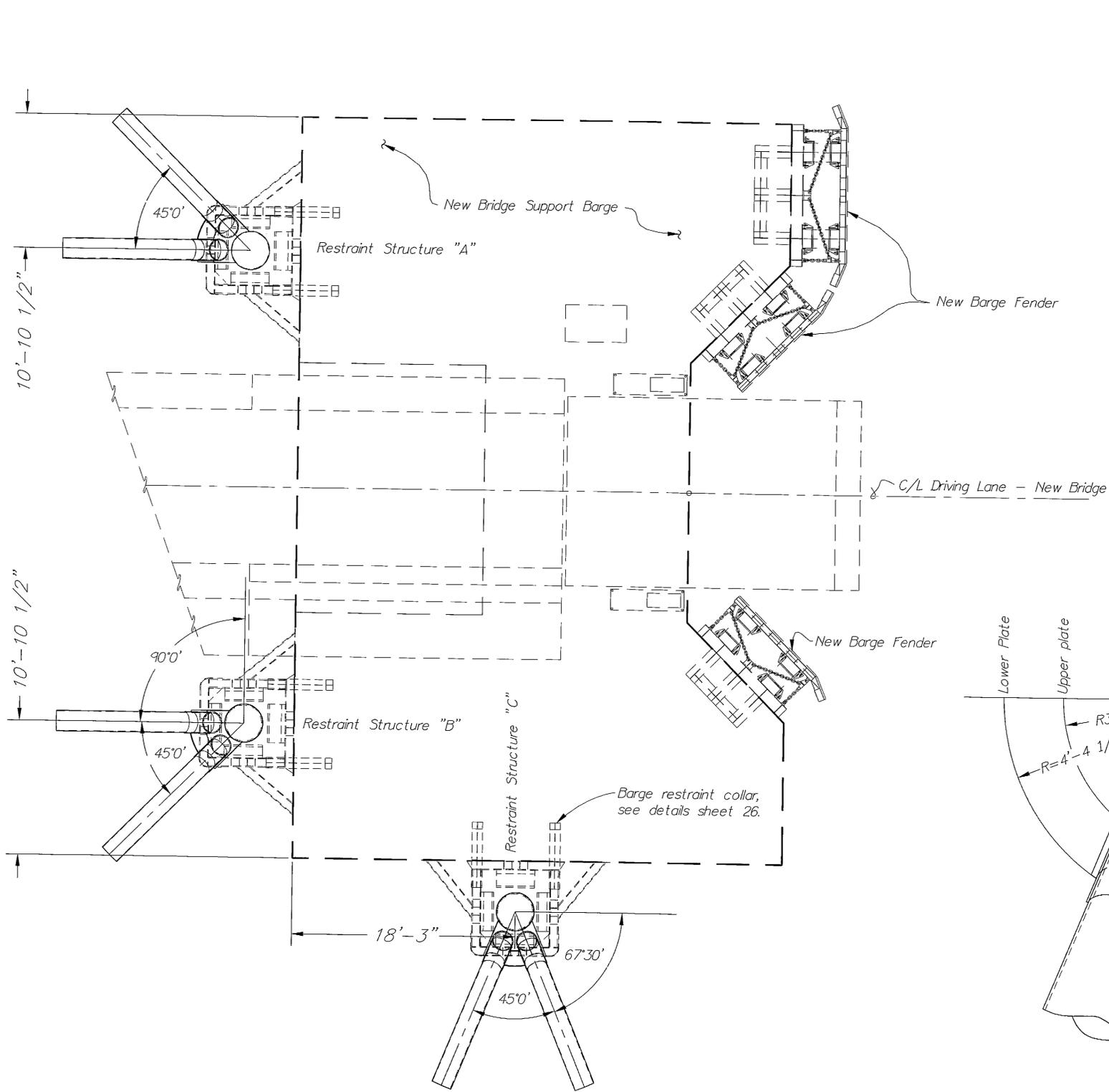
KETCHIKAN AIRPORT
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PROJECT NO. A.I.P. 3-02-0144-1097/72030
BARGE FENDER PANEL DETAILS

ALASKA

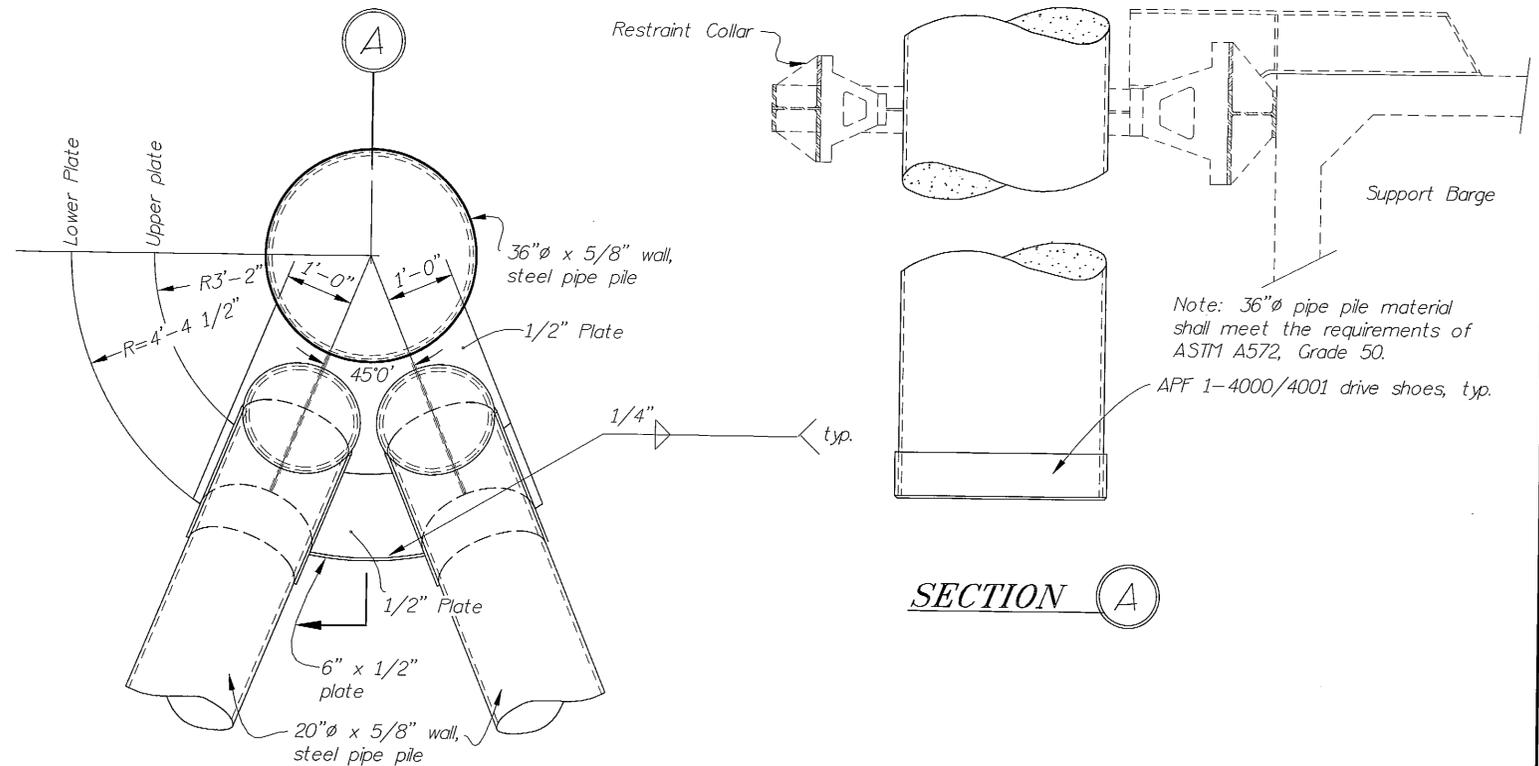
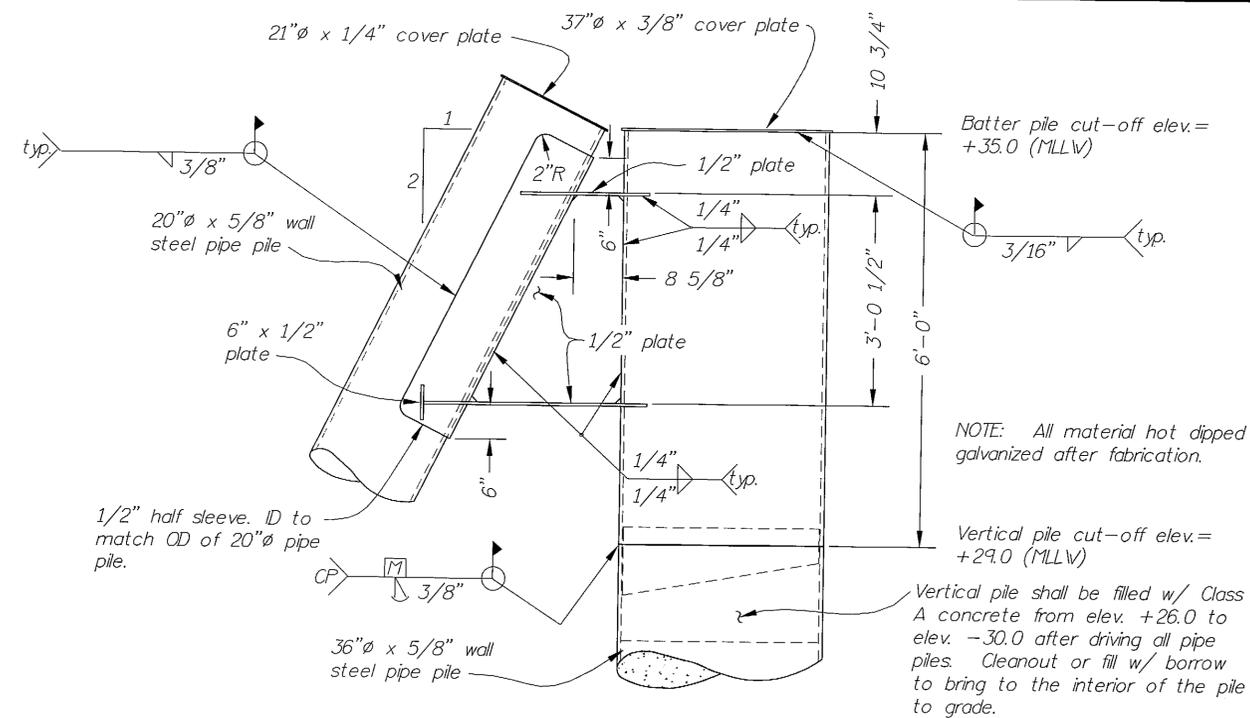
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72030
DATE:
MAY, 1997
SHEET 28 OF 41





RESTRAINT STRUCTURE LAYOUT



RESTRAINT STRUCTURE PLAN

RECORD OF REVISIONS		
NO.	DATE	DESCRIPTION OF CHANGE

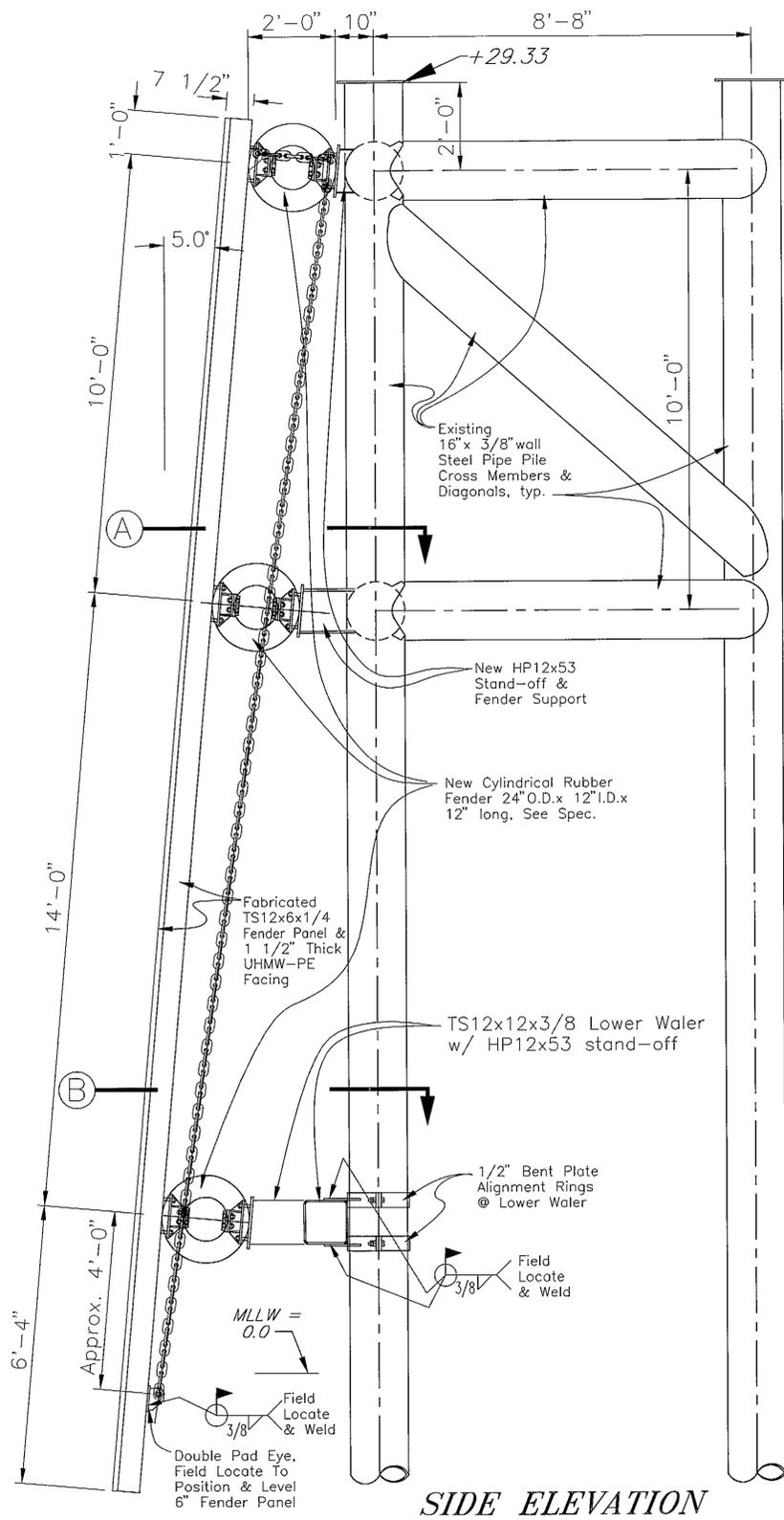
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 PROJECT NO. A.I.P. 3-02-0144-1097/72030
BARGE RESTRAINT STRUCTURE DETAILS

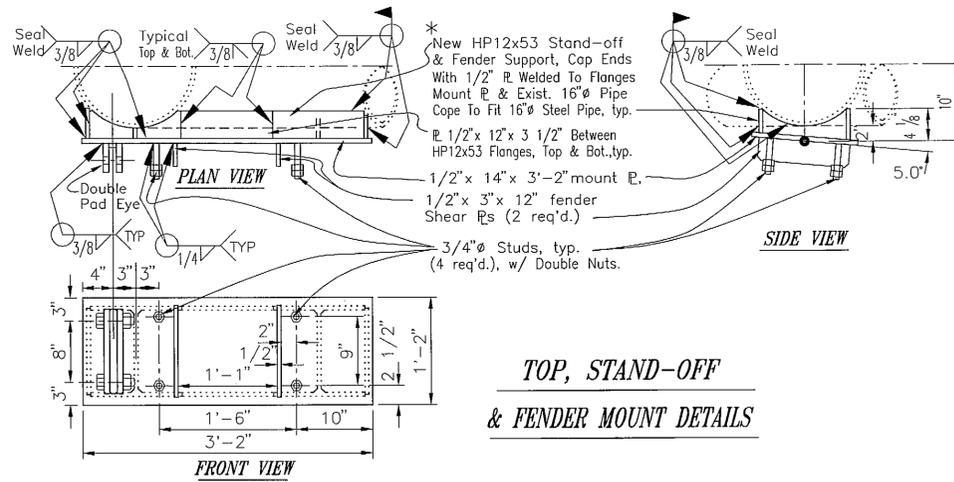
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DRAWN BY:	JAL	DATE:	APRIL, 1997
CHECKED BY:	LPL	SHEET 29 OF 41	6/12/97

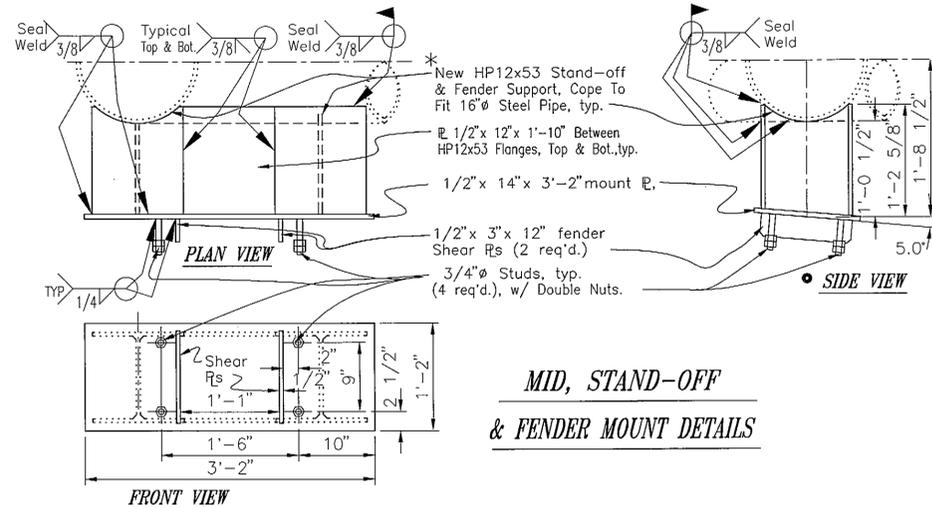




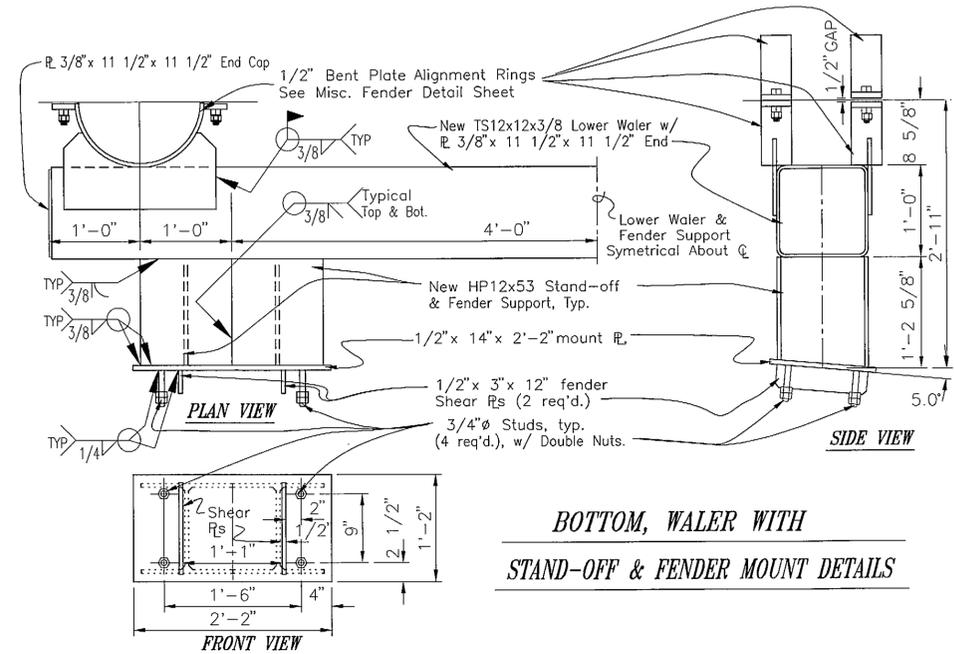
SIDE ELEVATION



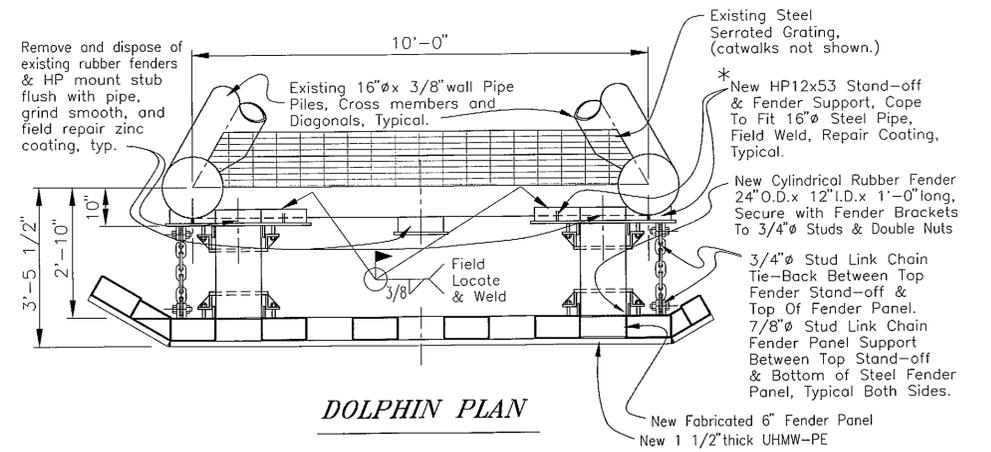
TOP, STAND-OFF & FENDER MOUNT DETAILS



MID, STAND-OFF & FENDER MOUNT DETAILS

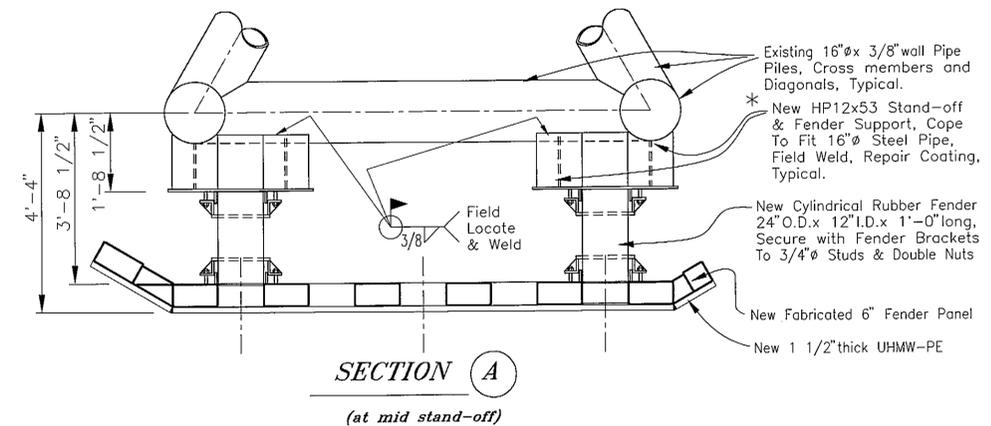


BOTTOM, WALER WITH STAND-OFF & FENDER MOUNT DETAILS

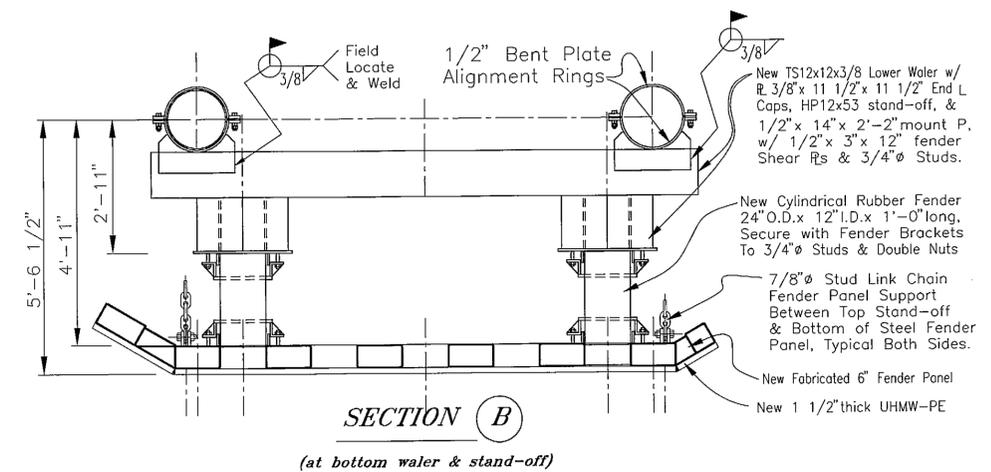


DOLPHIN PLAN

* NOTE: DUE TO VARIANCES IN FIELD CONSTRUCTION OF EXISTING DOLPHINS, NEW WELDMENTS WILL NEED FIELD MODIFICATION & FIT-UP TO BE INSTALLED PROPERLY.



SECTION A (at mid stand-off)



SECTION B (at bottom waler & stand-off)

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

PATH: P:\KTN\72030\MF\BN\SHEET31.DWG OR GRAV-D2 1=24		
PLOT:		
BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN

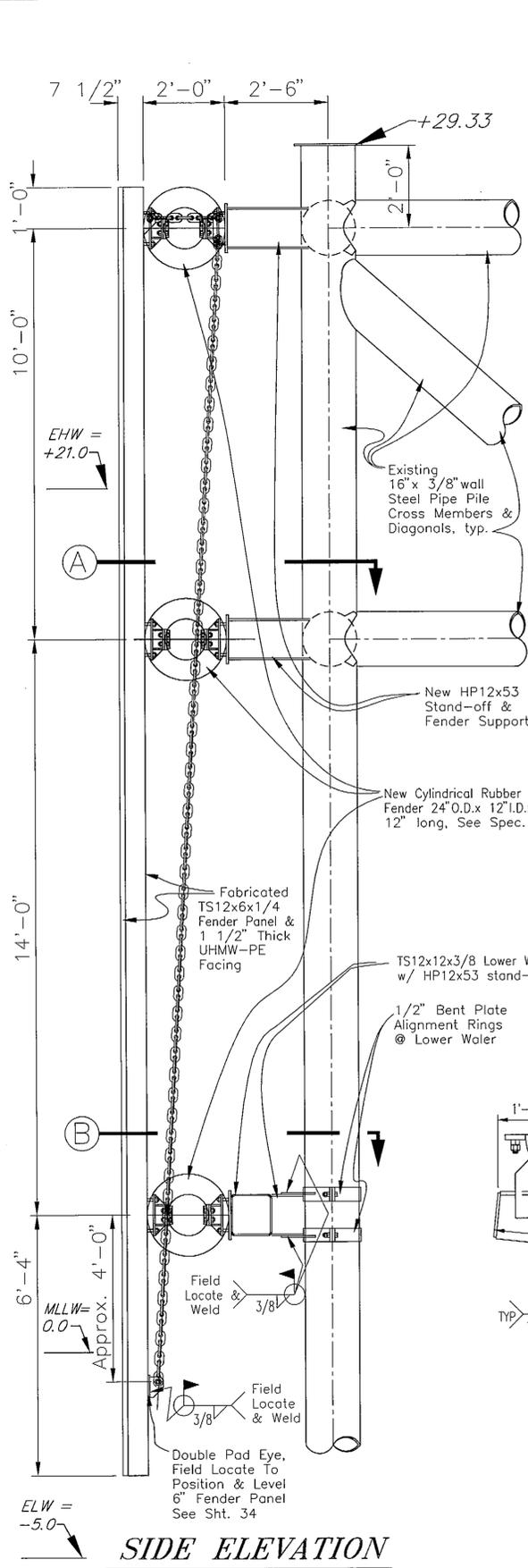
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
DOLPHIN 2 DETAILS

ALASKA

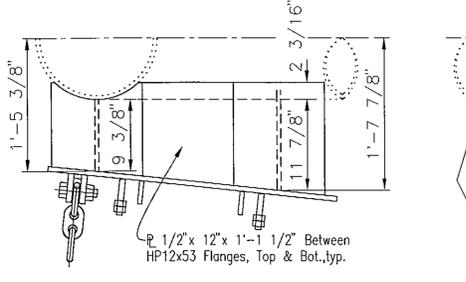
DESIGNED BY:
BAS/BN
DRAWN BY:
BN
CHECKED BY:
JAL

PROJECT NO.
72030
DATE:
APRIL, 1997
SHEET 31 OF 41

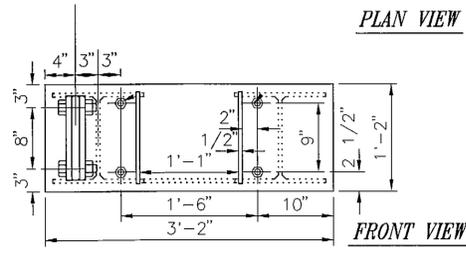




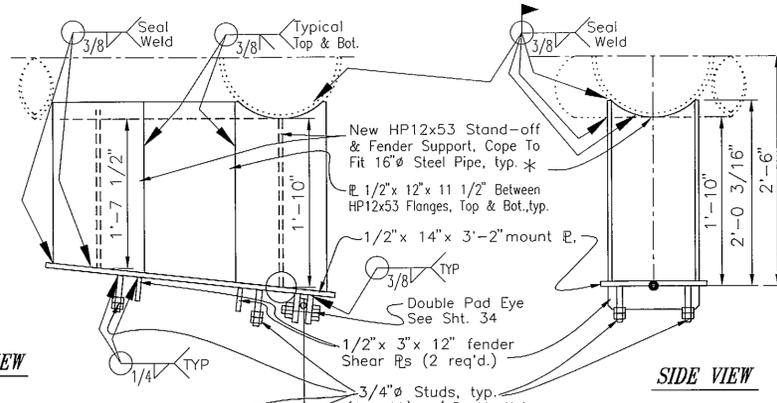
SIDE ELEVATION



PLAN VIEW

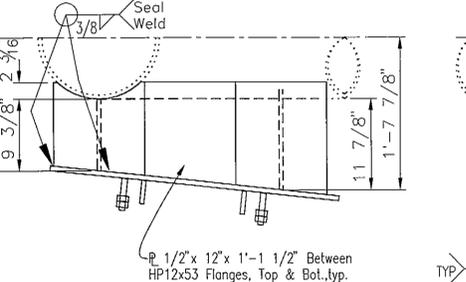


FRONT VIEW

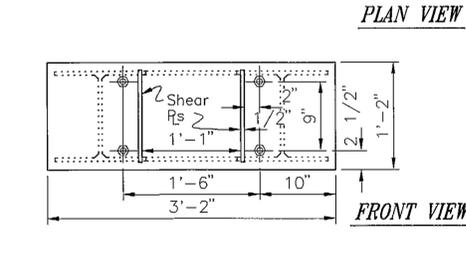


SIDE VIEW

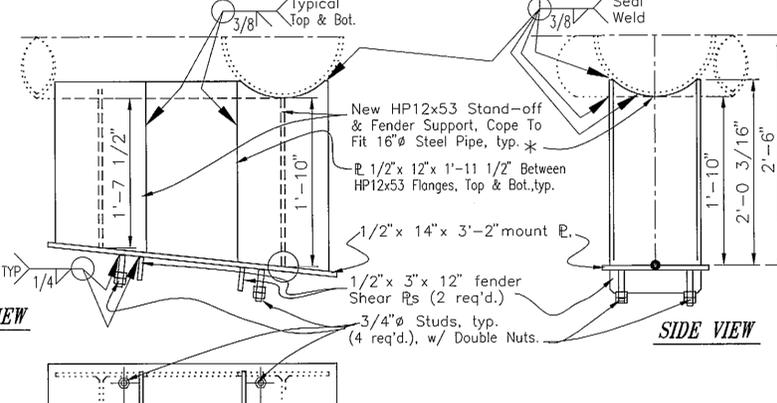
TOP, STAND-OFF & FENDER MOUNT DETAILS



PLAN VIEW

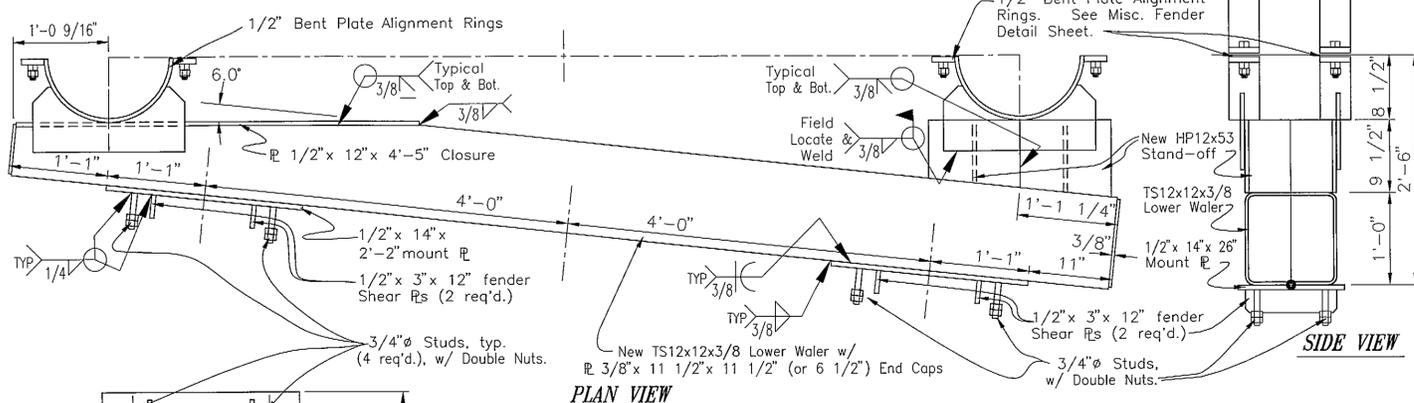


FRONT VIEW

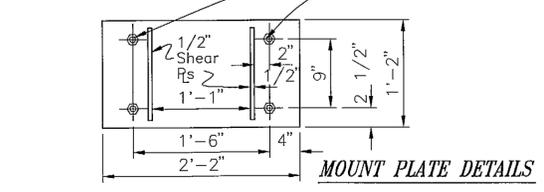


SIDE VIEW

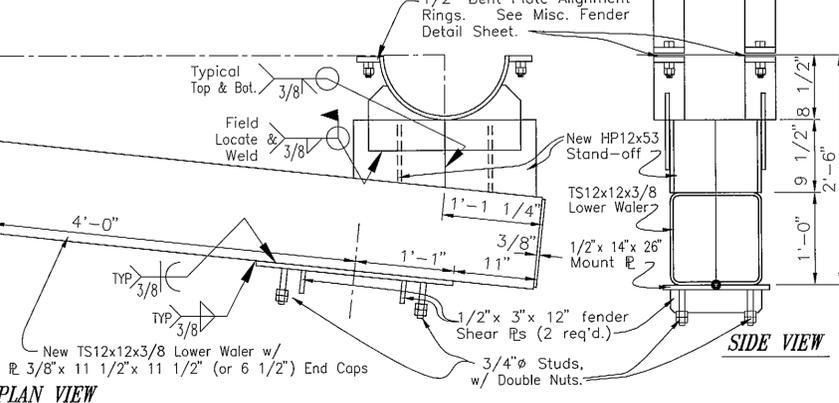
MID, STAND-OFF & FENDER MOUNT DETAILS



PLAN VIEW

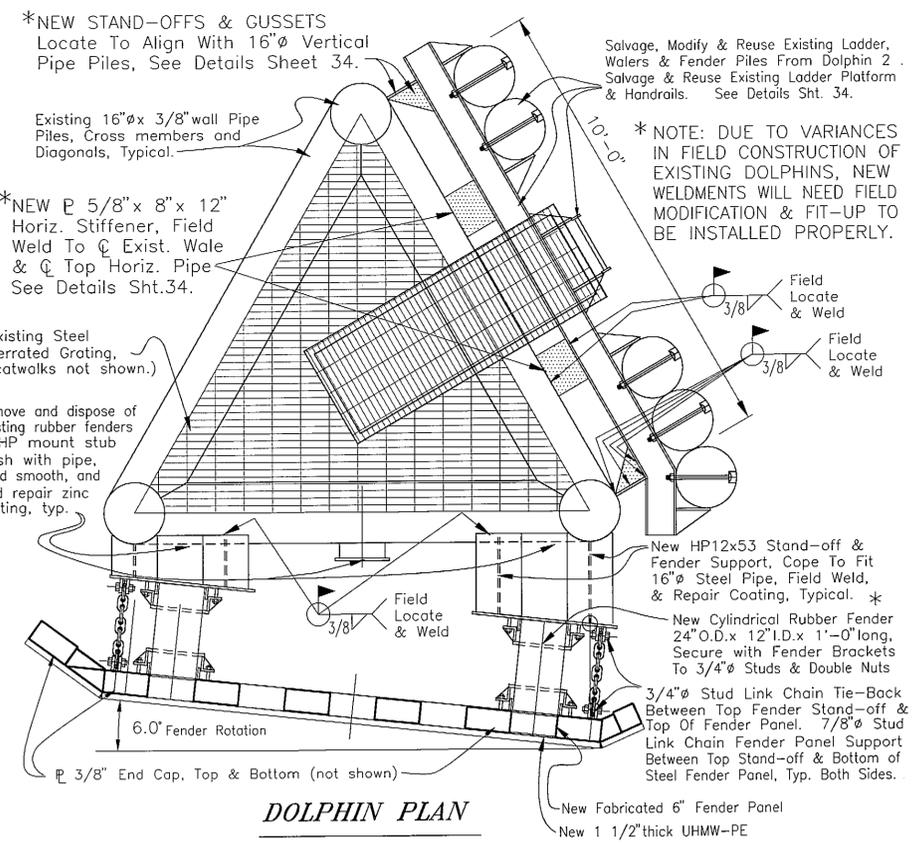


MOUNT PLATE DETAILS

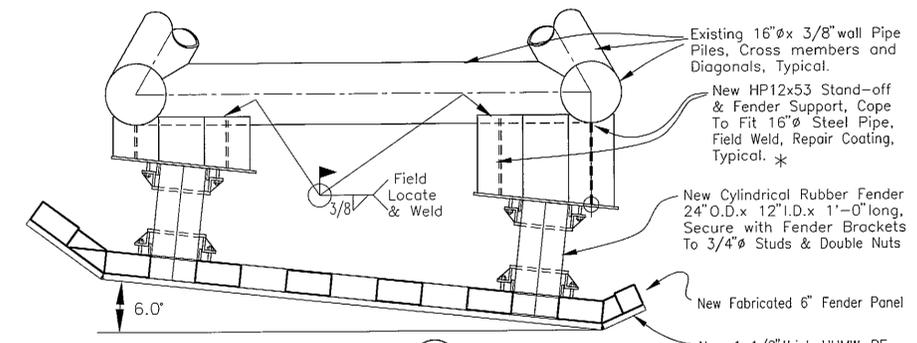


SIDE VIEW

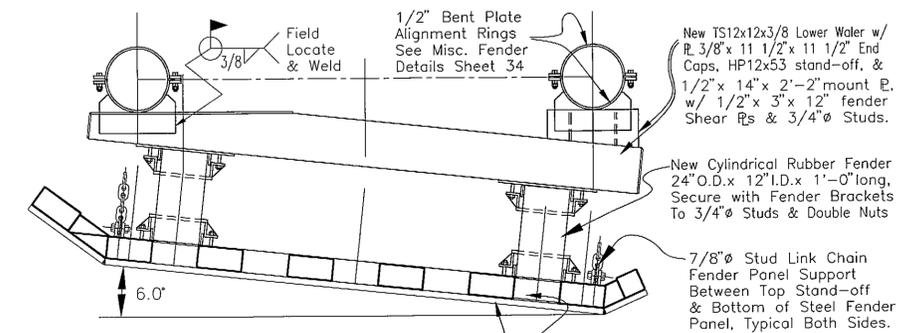
BOTTOM, WALER WITH STAND-OFF & FENDER MOUNT DETAILS



DOLPHIN PLAN



SECTION A (at mid stand-off)



SECTION B (at bottom waler & stand-off)

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

PATH: P:\KTN\72030\MF\BN\SHEET32.DWG OR GRAV-D3.DWG 1=2'		
PLOT:		
BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

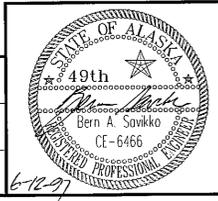
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

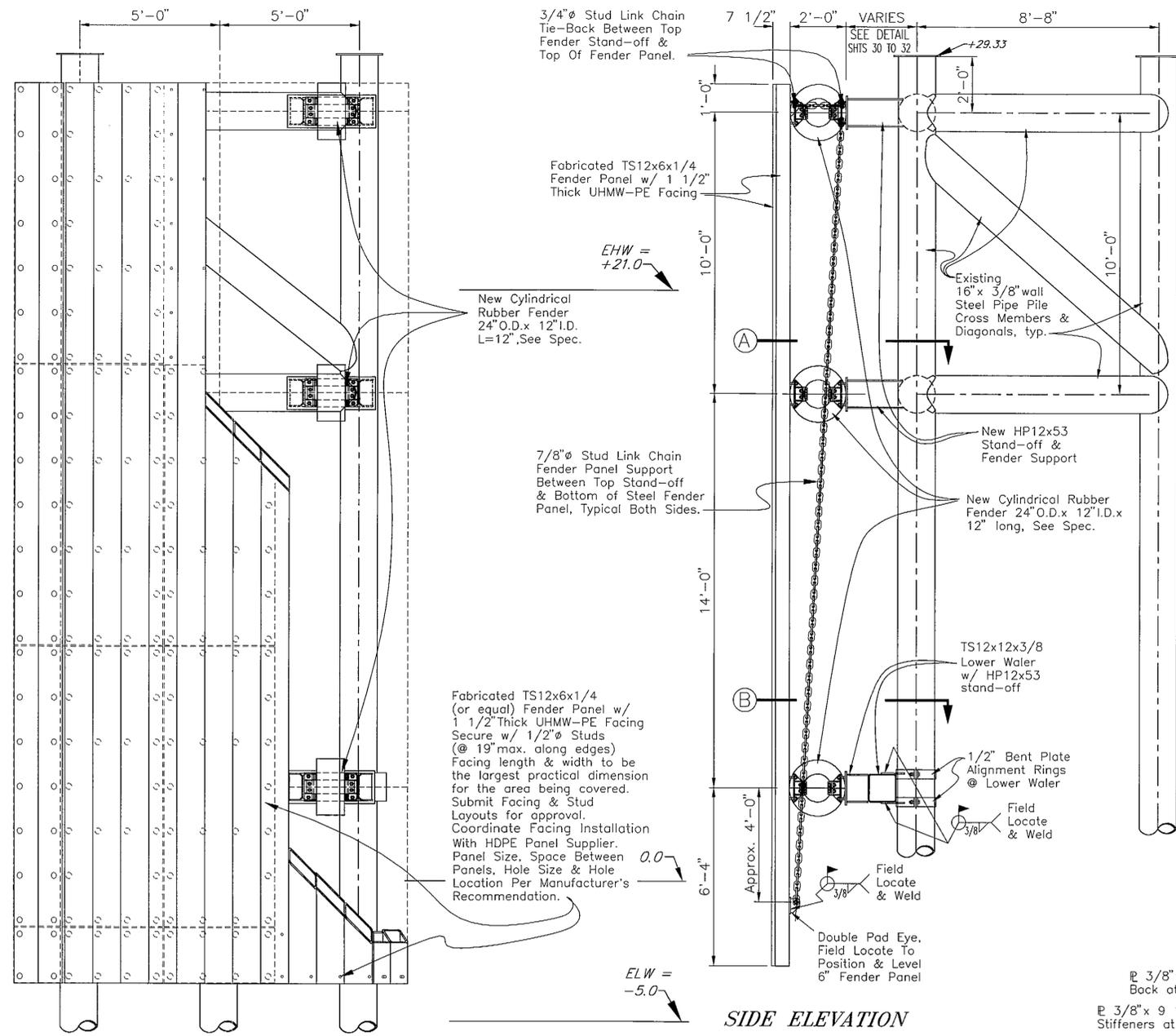
KETCHIKAN
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
DOLPHIN 3 DETAILS

ALASKA

DESIGNED BY:
BAS/BN
DRAWN BY:
BN
CHECKED BY:
JAL

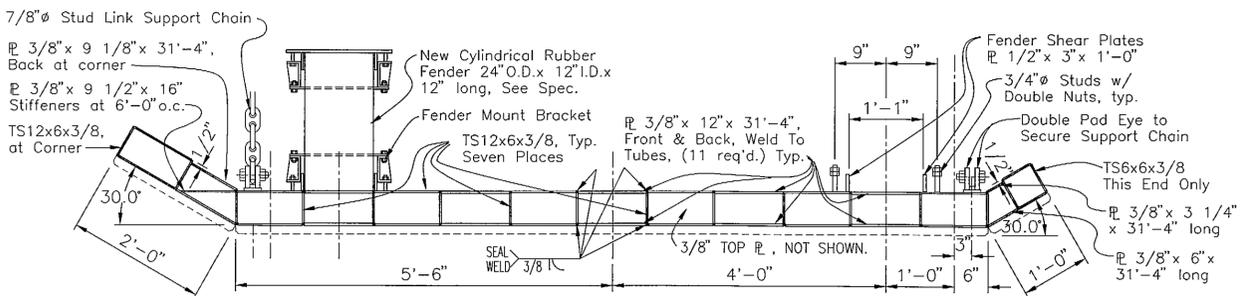
PROJECT NO.
72030
DATE:
APRIL, 1997
SHEET 32 OF 41



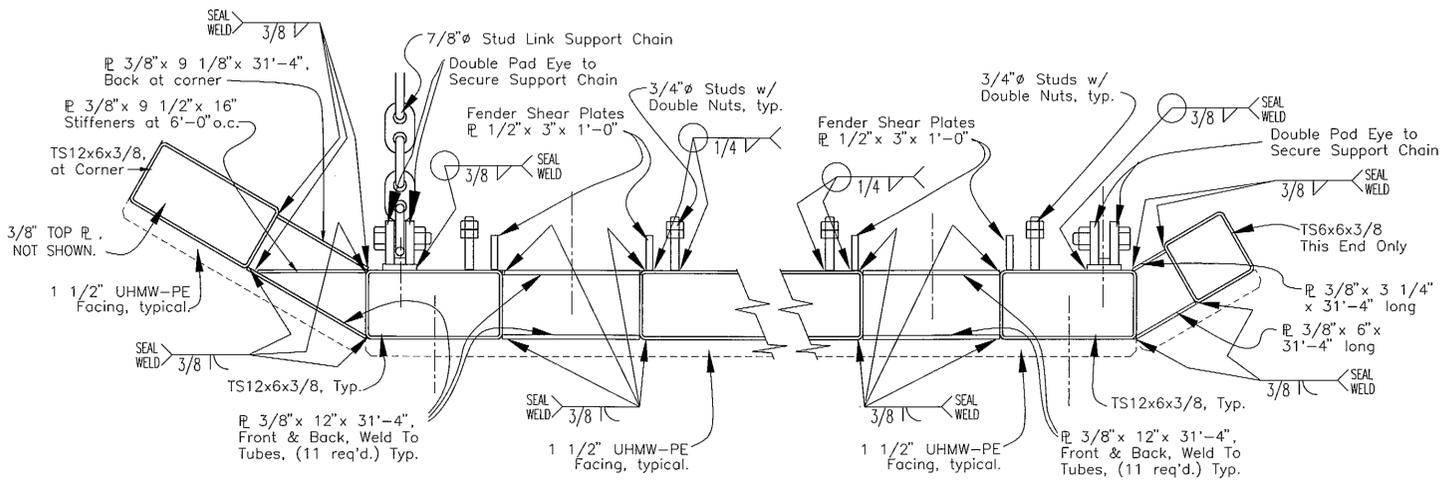


FRONT ELEVATION

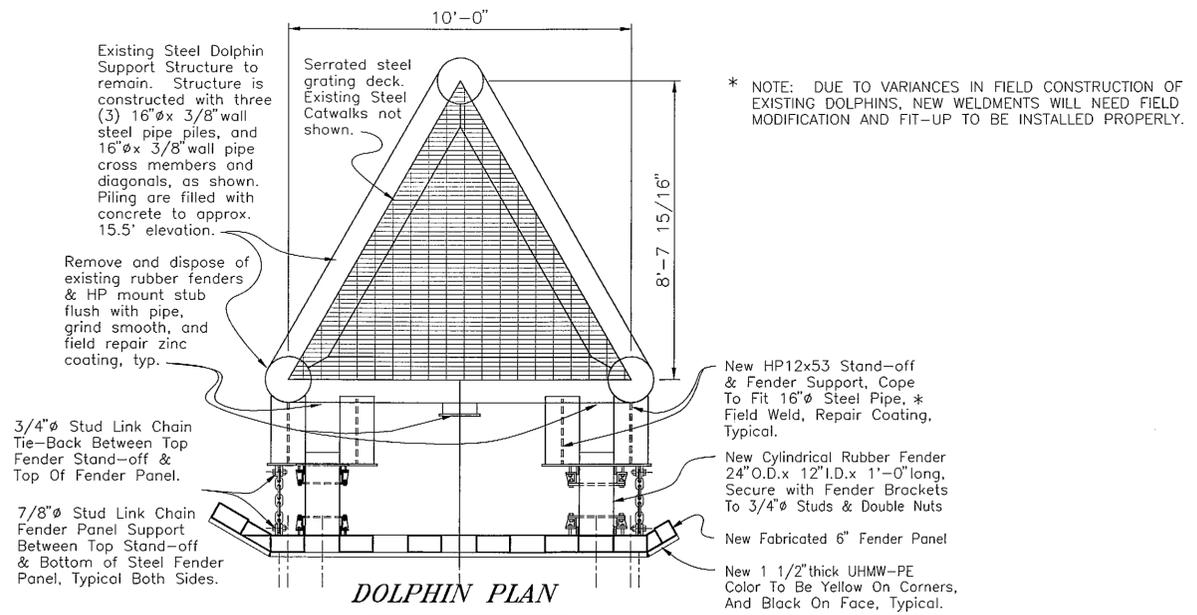
SIDE ELEVATION



FENDER PANEL DETAIL 1

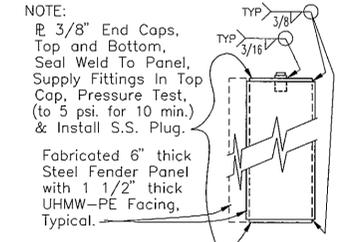


FENDER PANEL DETAIL 2

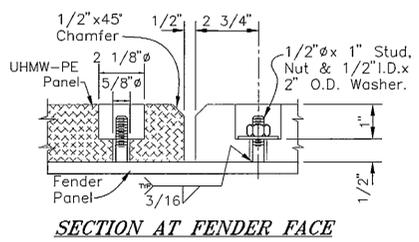


DOLPHIN PLAN

* NOTE: DUE TO VARIANCES IN FIELD CONSTRUCTION OF EXISTING DOLPHINS, NEW WELDMENTS WILL NEED FIELD MODIFICATION AND FIT-UP TO BE INSTALLED PROPERLY.



FENDER PANEL DETAIL 3



SECTION AT FENDER FACE

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

PATH: P:\KTN\72030\MF\BN\SHEET33.DWG OR GRAV-DO.DWG 1-32		
PLOT:		
BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

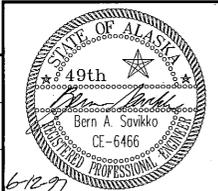
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

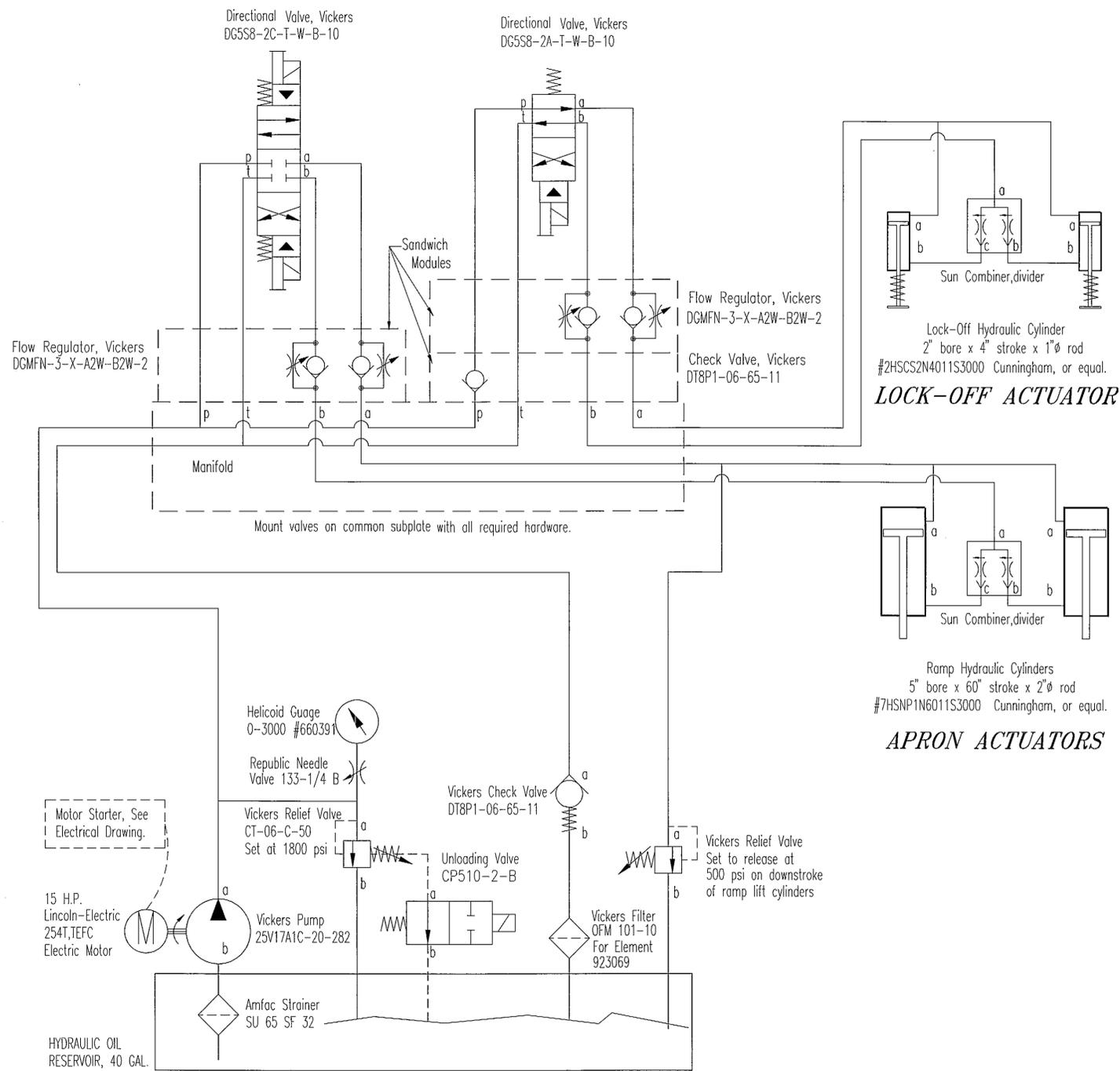
KETCHIKAN
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
FENDER PANEL DETAILS

ALASKA

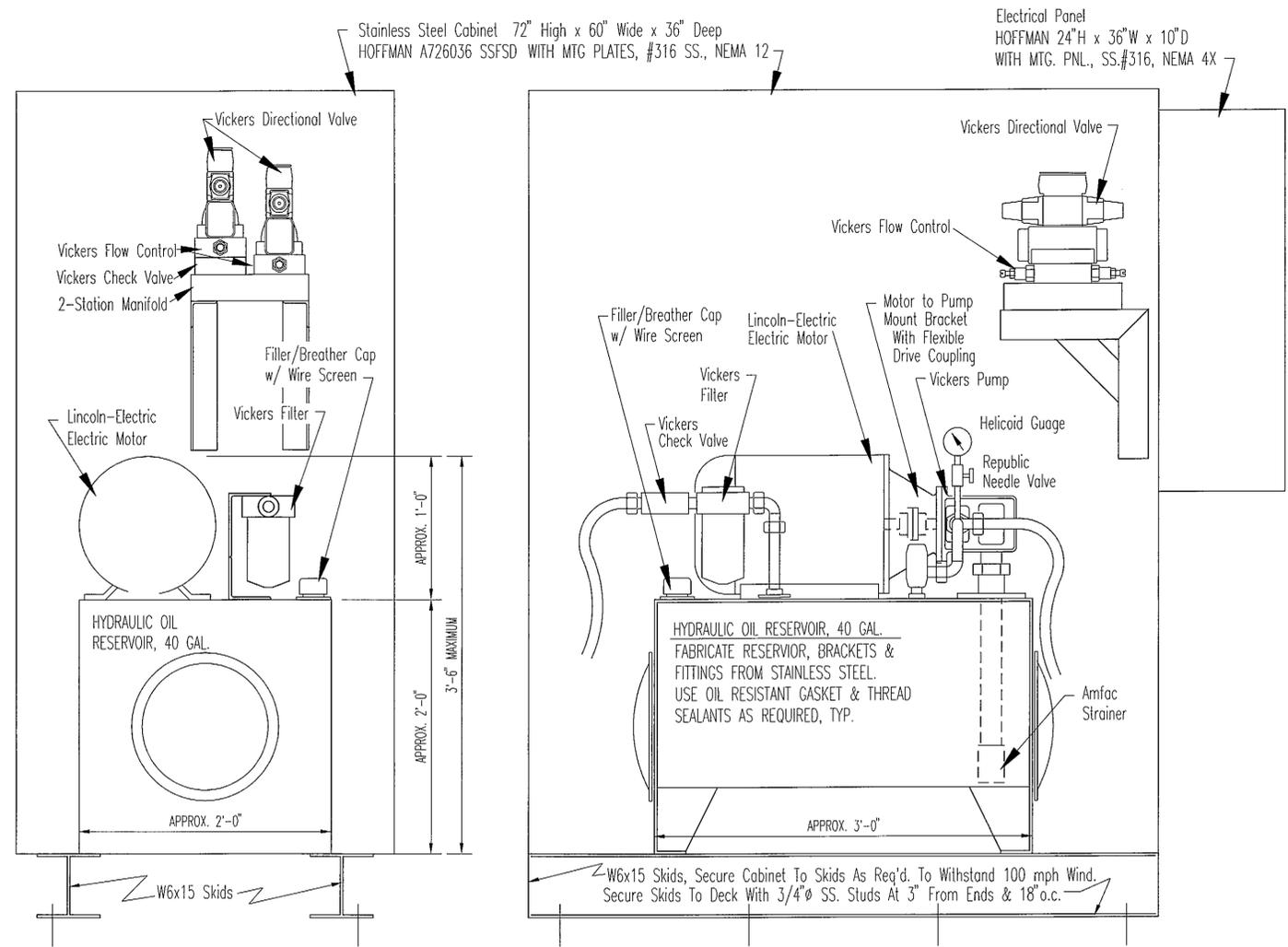
DESIGNED BY: BAS/BN
DRAWN BY: BN
CHECKED BY: JAL

PROJECT NO. 72030
DATE: APRIL, 1997
SHEET 33 OF 41





HYDRAULIC SCHEMATIC



HYDRAULIC POWER UNIT

THIS SKETCH IS TO SHOW THAT THE RESERVOIR, MOTOR, PUMP, VALVES & FILTERS WILL COMBINE INTO A COMPACT UNIT

PATH: P:\KTN\72030\MF\BN\SHEET35.DWG OR GRAV-HYD.DWG 1=16		
PLOT:		
BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

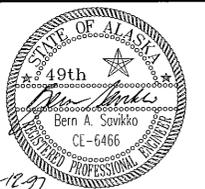
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN

KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
HYDRAULIC POWER UNIT

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

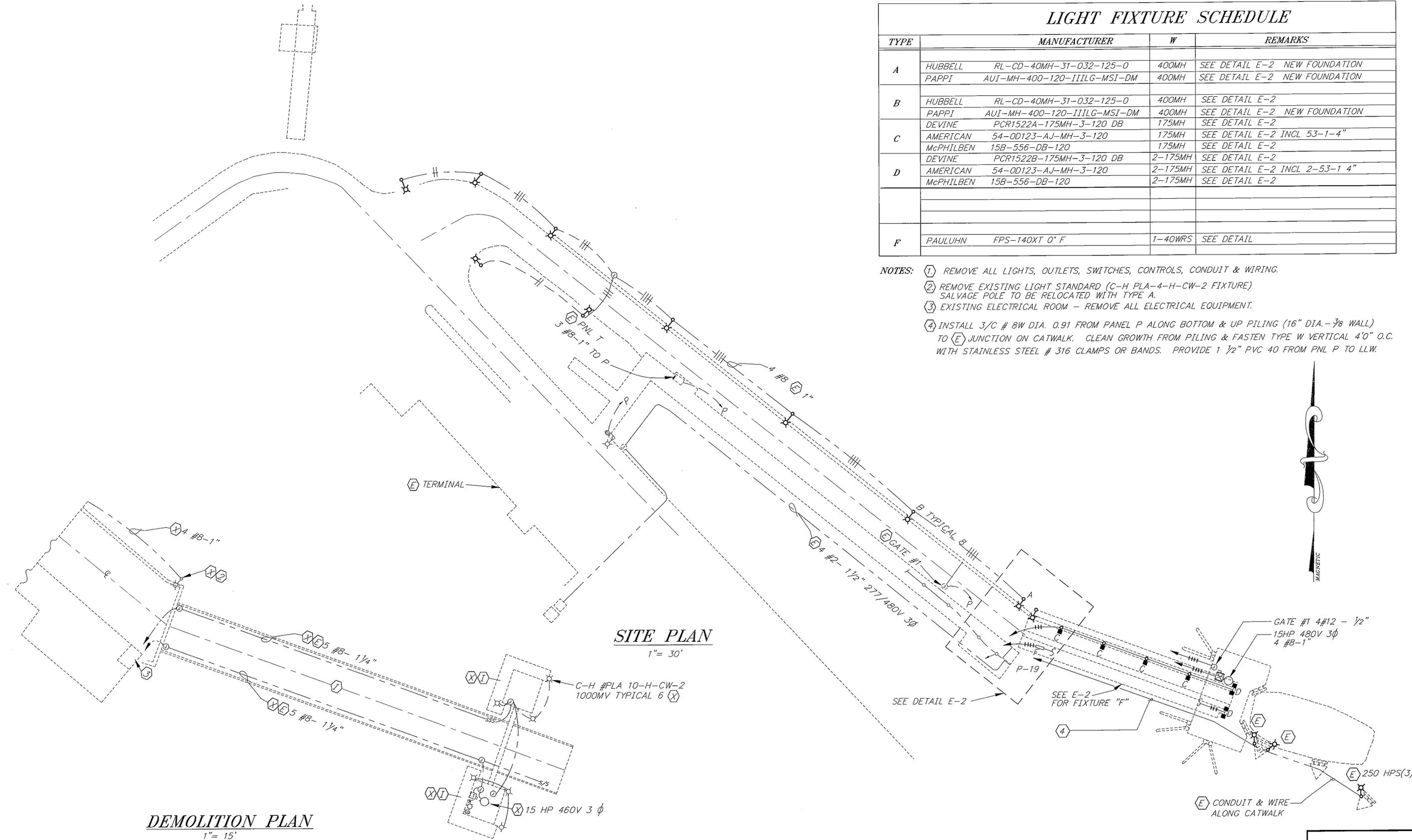
DESIGNED BY: BAS/BN	PROJECT NO. 72030
DRAWN BY: BN	DATE: MAY, 1997
CHECKED BY: JAL	SHEET 35 OF 41



LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	W	REMARKS
A	HUBBELL RL-CD-40MH-31-032-125-0	400MH	SEE DETAIL E-2 NEW FOUNDATION
	PAPPI AUI-MH-400-120-IIIIG-MSI-DM	400MH	SEE DETAIL E-2 NEW FOUNDATION
B	HUBBELL RL-CD-40MH-31-032-125-0	400MH	SEE DETAIL E-2
	PAPPI AUI-MH-400-120-IIIIG-MSI-DM	400MH	SEE DETAIL E-2 NEW FOUNDATION
	DEVINE PCR1522A-175MH-3-120 DB	175MH	SEE DETAIL E-2
C	AMERICAN 54-OD123-AJ-MH-3-120	175MH	SEE DETAIL E-2 INCL 53-1-4"
	McPHILBEN 15B-556-DB-120	175MH	SEE DETAIL E-2
D	DEVINE PCR1522B-175MH-3-120 DB	2-175MH	SEE DETAIL E-2
	AMERICAN 54-OD123-AJ-MH-3-120	2-175MH	SEE DETAIL E-2 INCL 2-53-1 4"
	McPHILBEN 15B-556-DB-120	2-175MH	SEE DETAIL E-2
F	PAULUHN FPS-140XT 0" F	1-40WRS	SEE DETAIL

- NOTES:**
- REMOVE ALL LIGHTS, OUTLETS, SWITCHES, CONTROLS, CONDUIT & WIRING.
 - REMOVE EXISTING LIGHT STANDARD (C-H PLA-4-H-CW-2 FIXTURE)
SALVAGE POLE TO BE RELOCATED WITH TYPE A.
 - EXISTING ELECTRICAL ROOM - REMOVE ALL ELECTRICAL EQUIPMENT.
 - INSTALL 3/C # 8W DIA. 0.91 FROM PANEL P ALONG BOTTOM & UP PILING (16" DIA. - 3/8 WALL) TO (E) JUNCTION ON CATWALK. CLEAN GROWTH FROM PILING & FASTEN TYPE W VERTICAL 4'0" O.C. WITH STAINLESS STEEL # 316 CLAMPS OR BANDS. PROVIDE 1 1/2" PVC 40 FROM PNL P TO LLW.



SITE PLAN
1" = 30'

DEMOLITION PLAN
1" = 15'

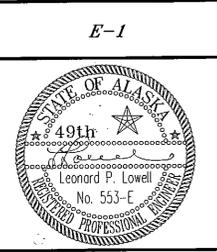
NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

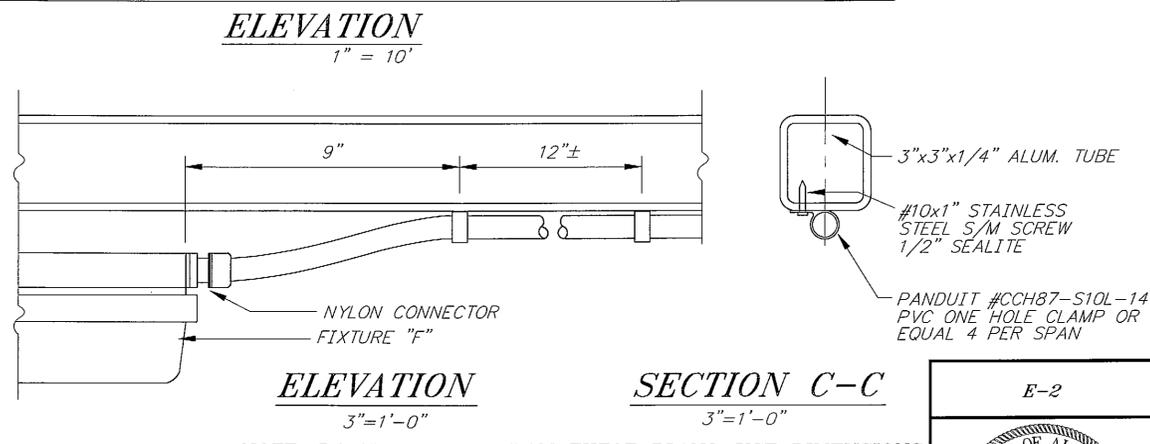
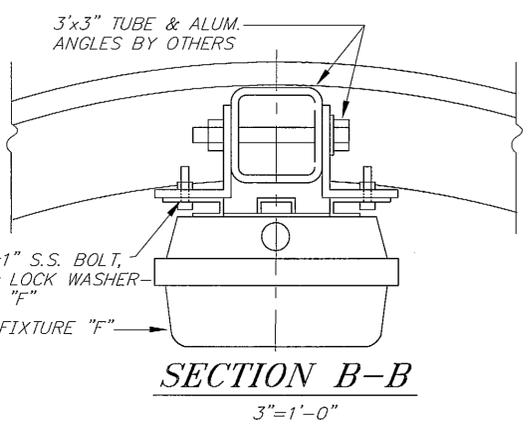
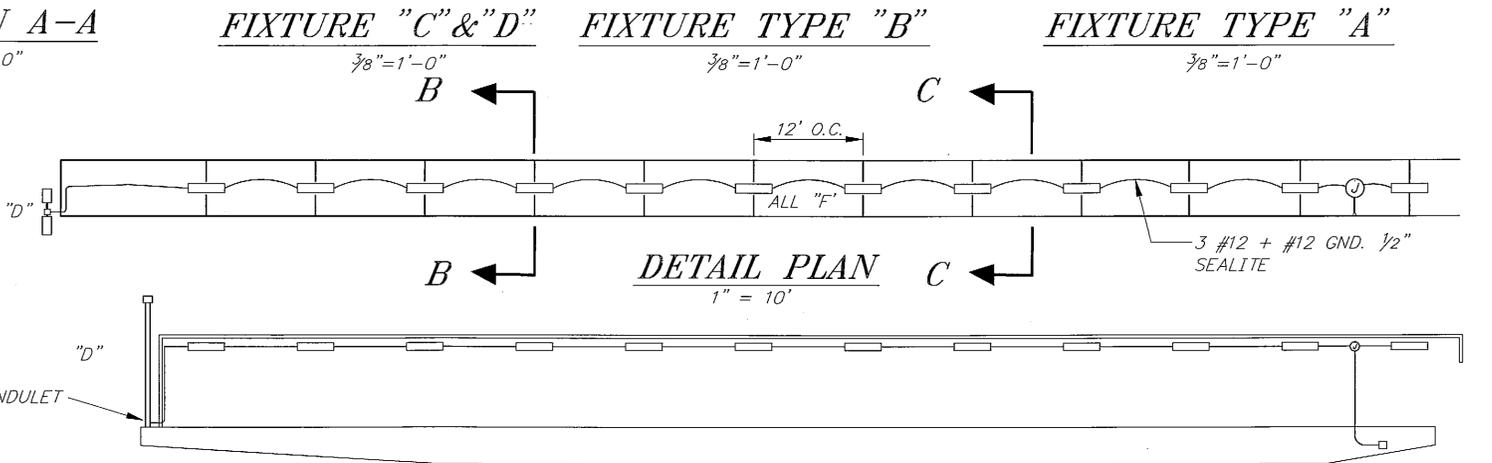
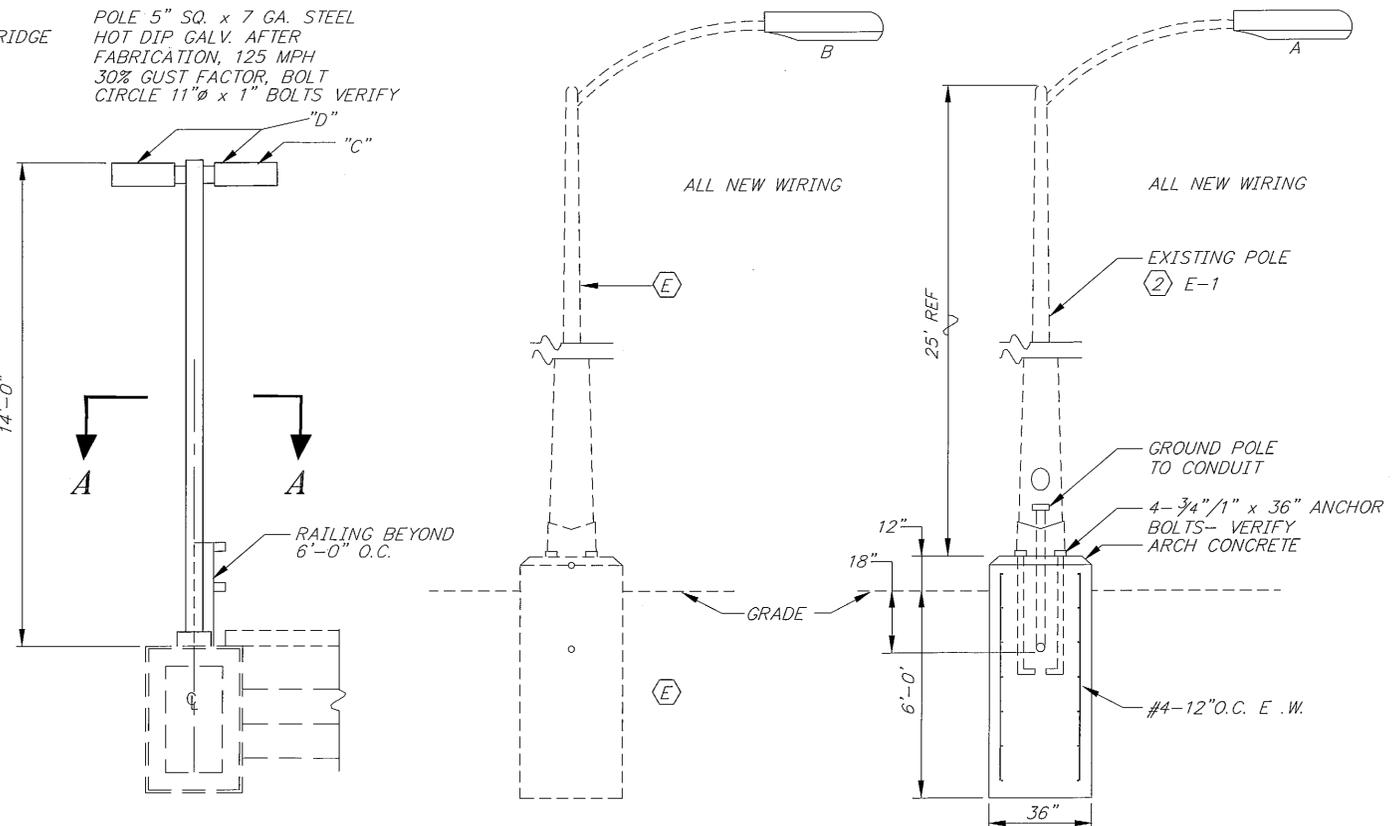
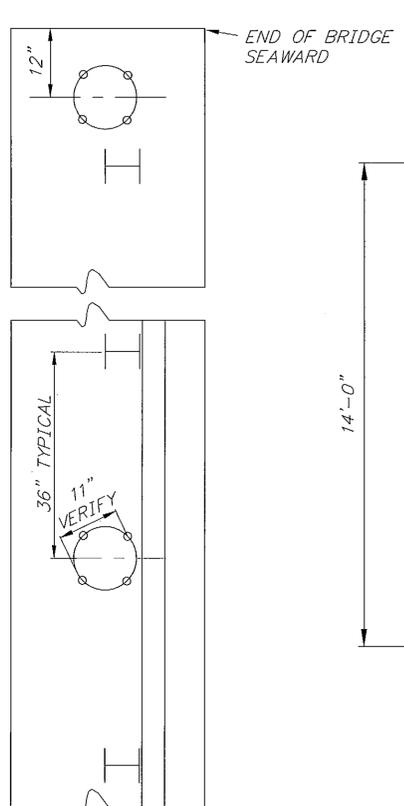
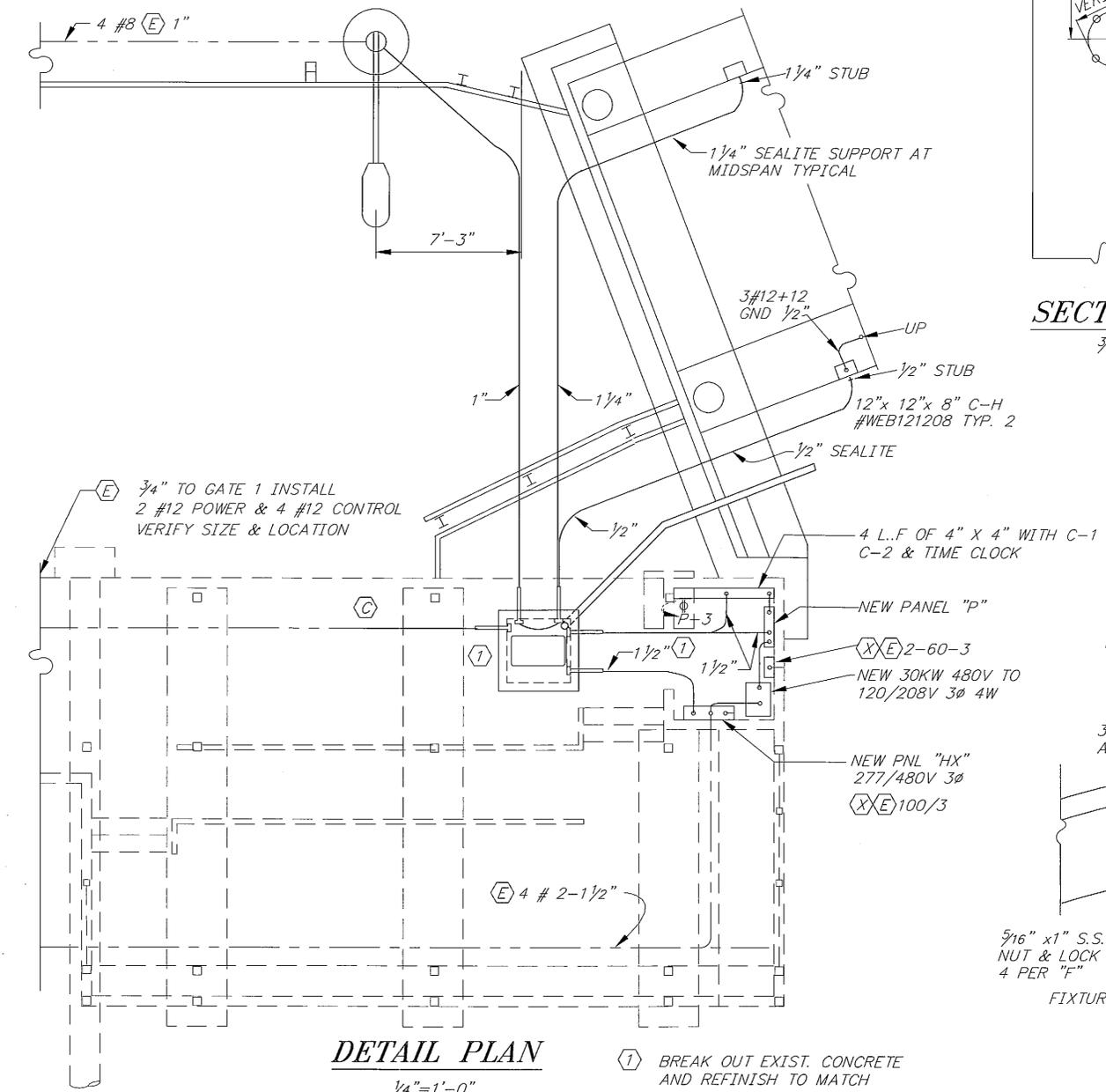
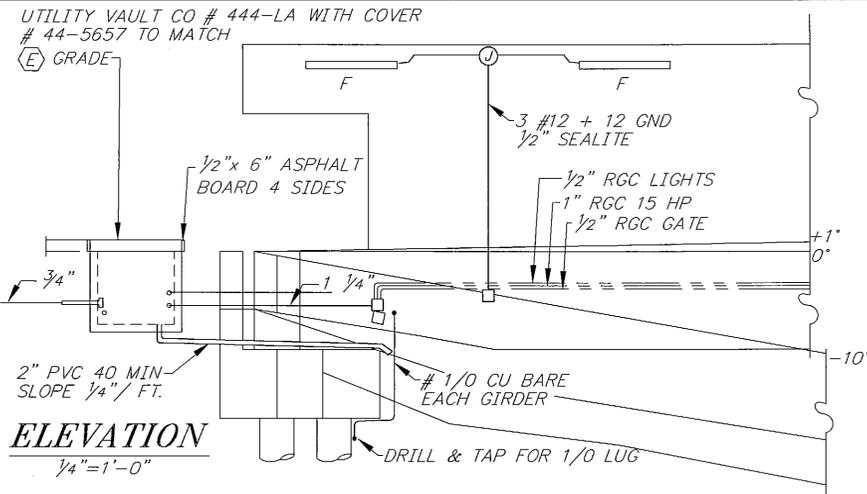
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PLOT: P:\-LIB\-PLOT\PLTF.PCP(30) OR PLOTH.PCP(60)		
BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
ALASKA
PROJECT NO. A.I.P. 3-02-0144-1097/72030
PLAN

DESIGNED BY: LPL	PROJECT NO. 72030
DRAWN BY: K.KLEMMETSON	DATE: 1997
CHECKED BY: LPL	SHEET 36 OF 41





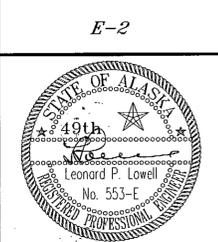
NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

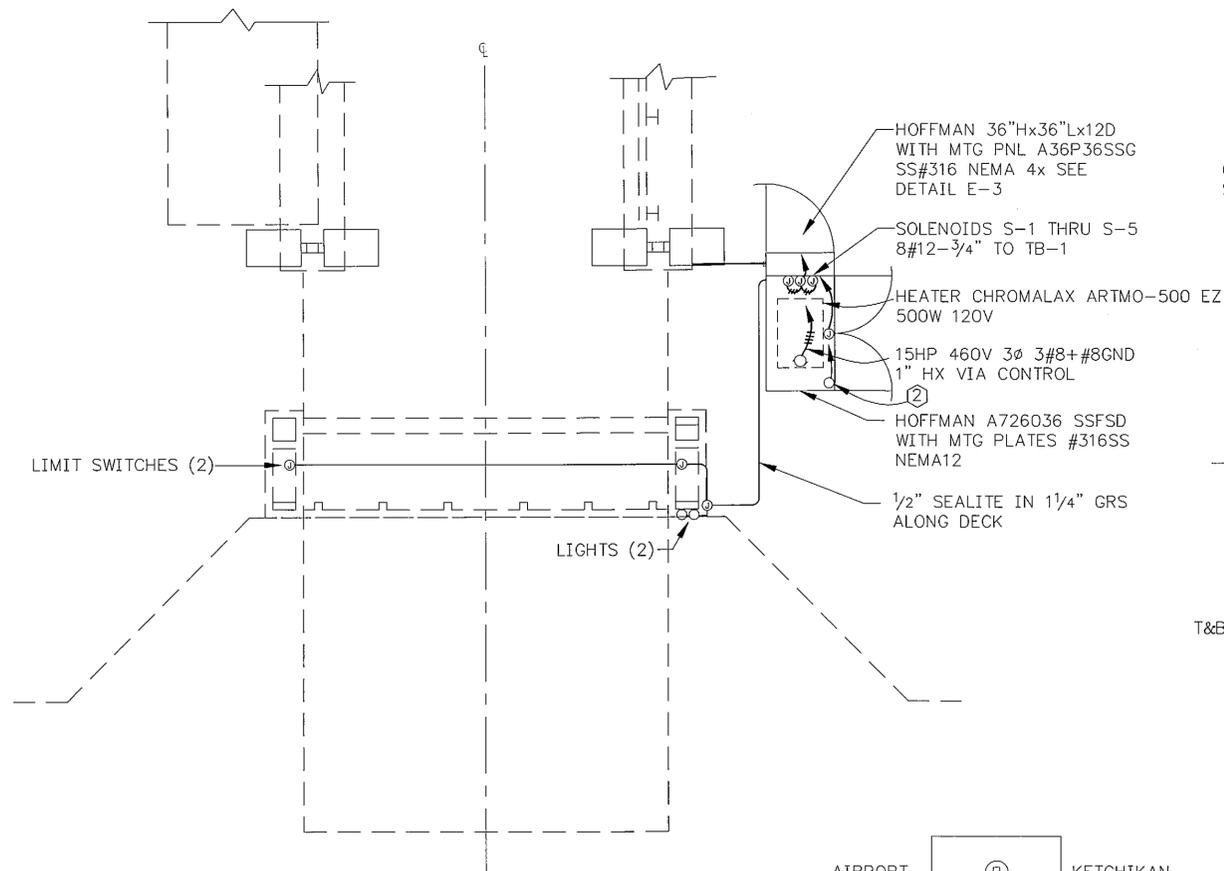
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PLOT: P: \-LIB\-PLOT\PLOT.F.PCP(1) OR PLOT.H.PCP(2)		
BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

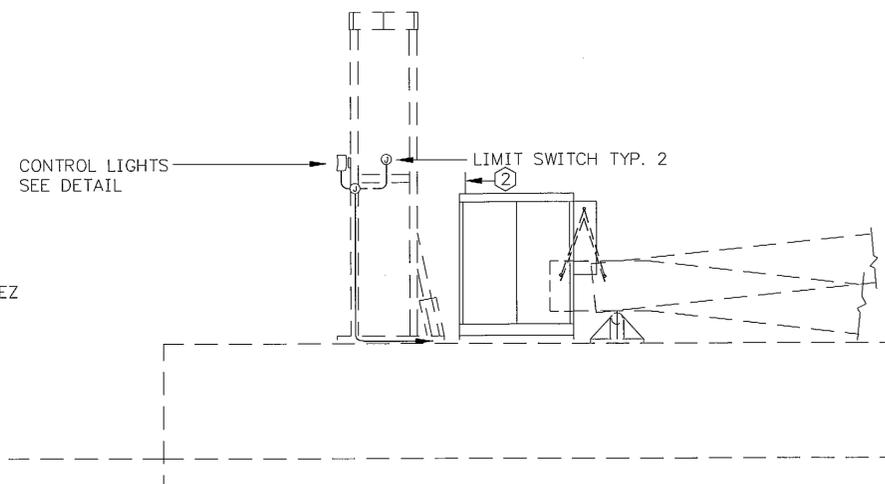
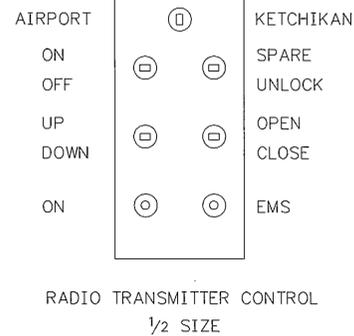
KETCHIKAN
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
ALASKA
DETAILS & SECTIONS

DESIGNED BY: LPL	PROJECT NO. 72030
DRAWN BY: K.KLEMMETSON	DATE: 1997
CHECKED BY: LPL	SHEET 37 OF 41

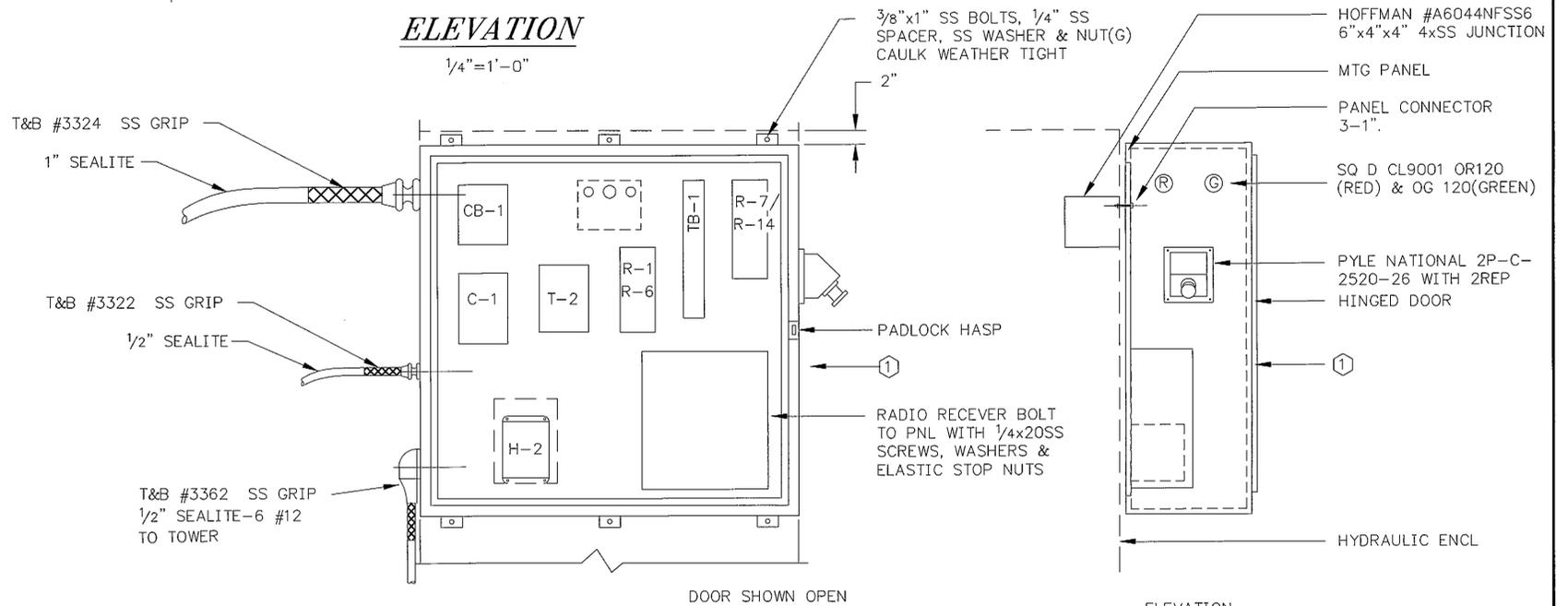




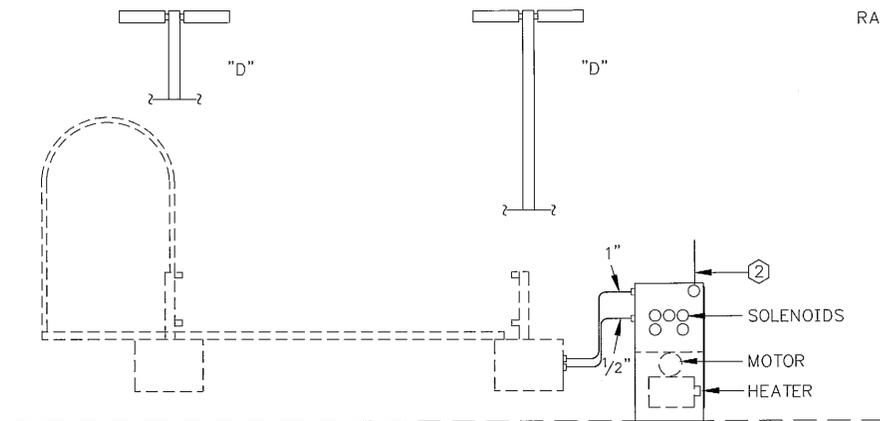
PLAN
1/4"=1'-0"



ELEVATION
1/4"=1'-0"

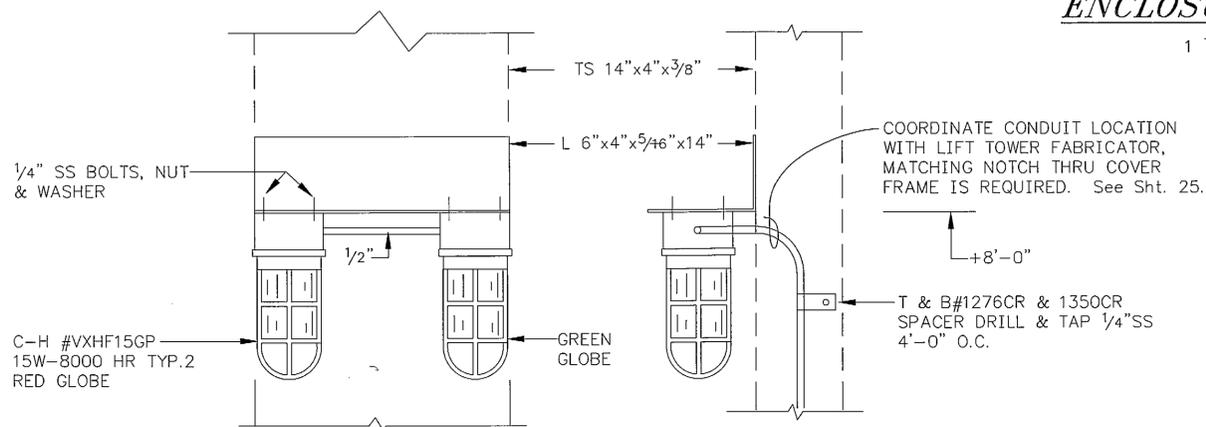


ENCLOSURE DETAIL
1 1/2"=1'-0"



ELEVATION
1/4"=1'-0"

APRON TOWER NOT SHOWN FOR CLARITY



TOWER LIGHTS
NO SCALE

- ① INSTALL 1/2" RIGID FIBER GLASS FOIL BACKED INSULATION ON ALL INTERIOR SURFACES WITH LIQUID NAILS.
- ② INSTALL UHF ANTENNA ON TOP OF HYDRAULIC ENCLOSURE CONNECT TO RADIO RECEIVER WITH RG58U COAXIAL CABLE & BNC CONNECTOR TELEMOTIVE ASSY. PART # E-2028-2 (40LF) USE BULKHEAD FITTING THRU ENCLOSURE WATERTIGHT.

RECORD OF REVISIONS		
BY:	DATE:	DESCRIPTION OF CHANGE:

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

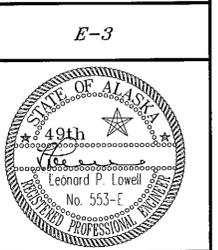
KETCHIKAN

KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
DETAILS & SECTIONS

ALASKA

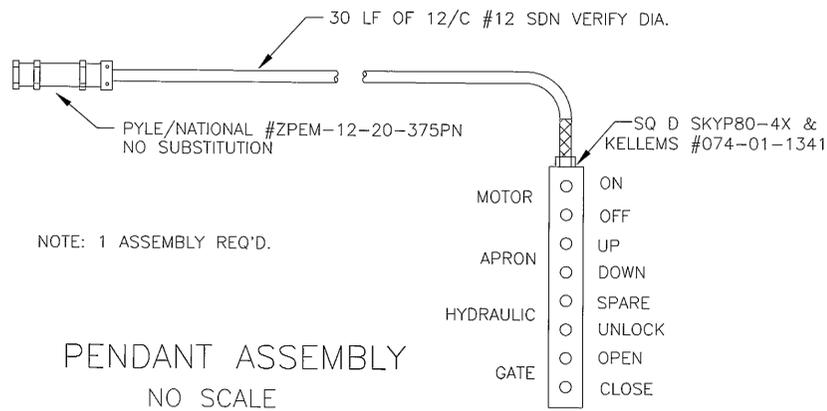
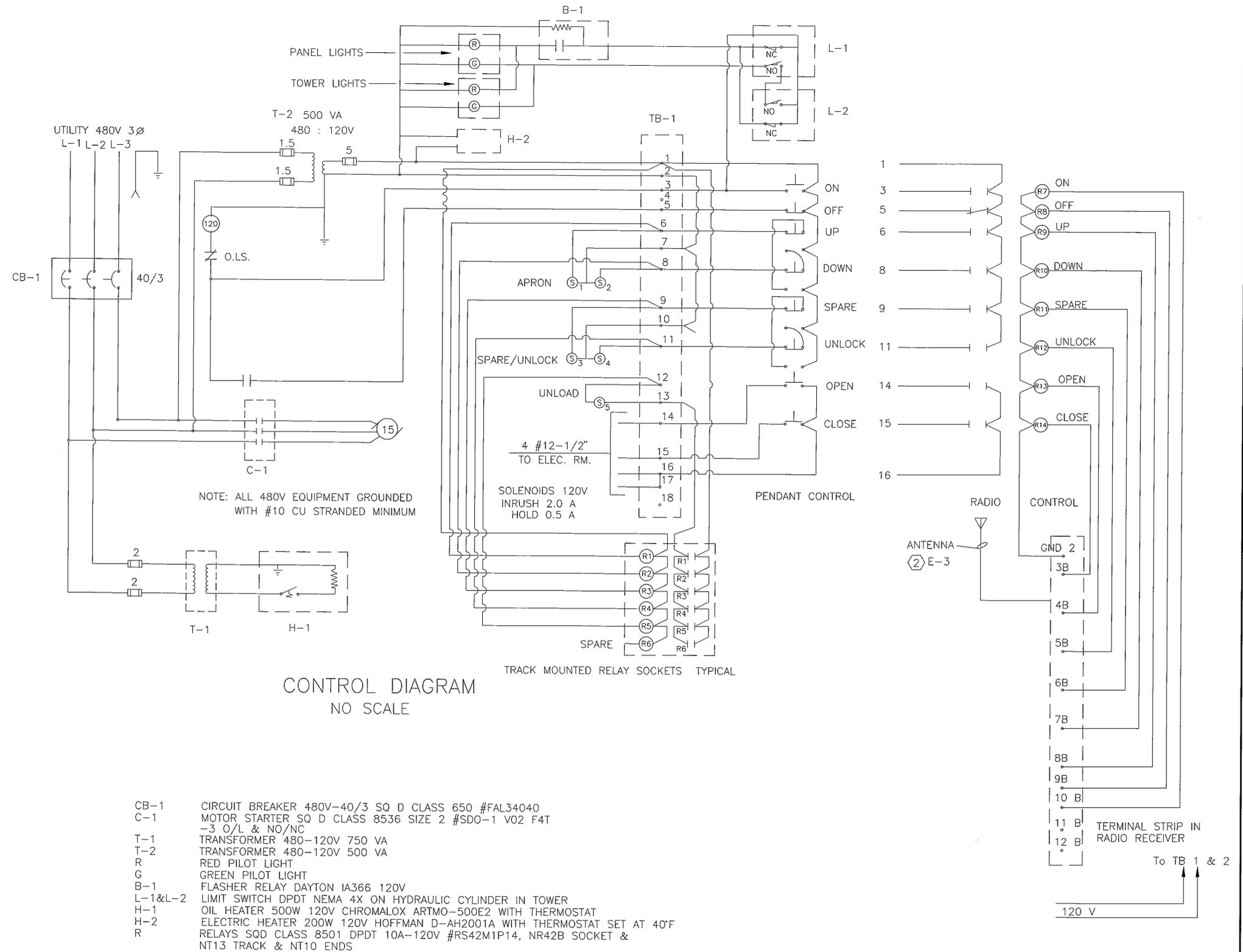
NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

DESIGNED BY: LPL	PROJECT NO. 72030
DRAWN BY: B.ADAMS	DATE: 1997
CHECKED BY: LPL	SHEET 38 OF 41



LEGEND

- ELECTRIC MOTOR
- JUNCTION
- EXISTING
- REMOVE
- CONNECT
- NOTE 2
- MAGNETIC STARTER
- DISCONNECT
- EQUIPMENT NUMBER
- HYDRAULIC SOLENOID #3
- RELAY CONTACT NORMALLY OPEN
- RELAY CONTACT NORMALLY CLOSED
- NEW CONDUIT & WIRE 3/C
- EXISTING CONDUIT & WIRE
- EXISTING CONDUIT & NEW WIRE 3/C
- OL OVERLOAD PROTECTION
- GRS GALVANIZED RIGID STEEL
- RECEPTACLE



PENDANT CONTROL SWITCHES ARE MAINTAINED CONTACTS SPRING RETURN. RADIO CONTACTS ARE MOMENTARY DOUBLE THROW SPRING RETURN CENTER OFF

PATH: P:\KTN\72030\MF\JAL\SHEET39.DWG OR E-4.DWG 1=1		
BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN

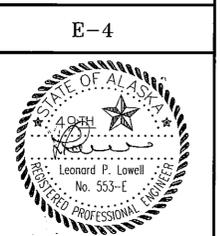
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GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
ELECTRICAL

ALASKA

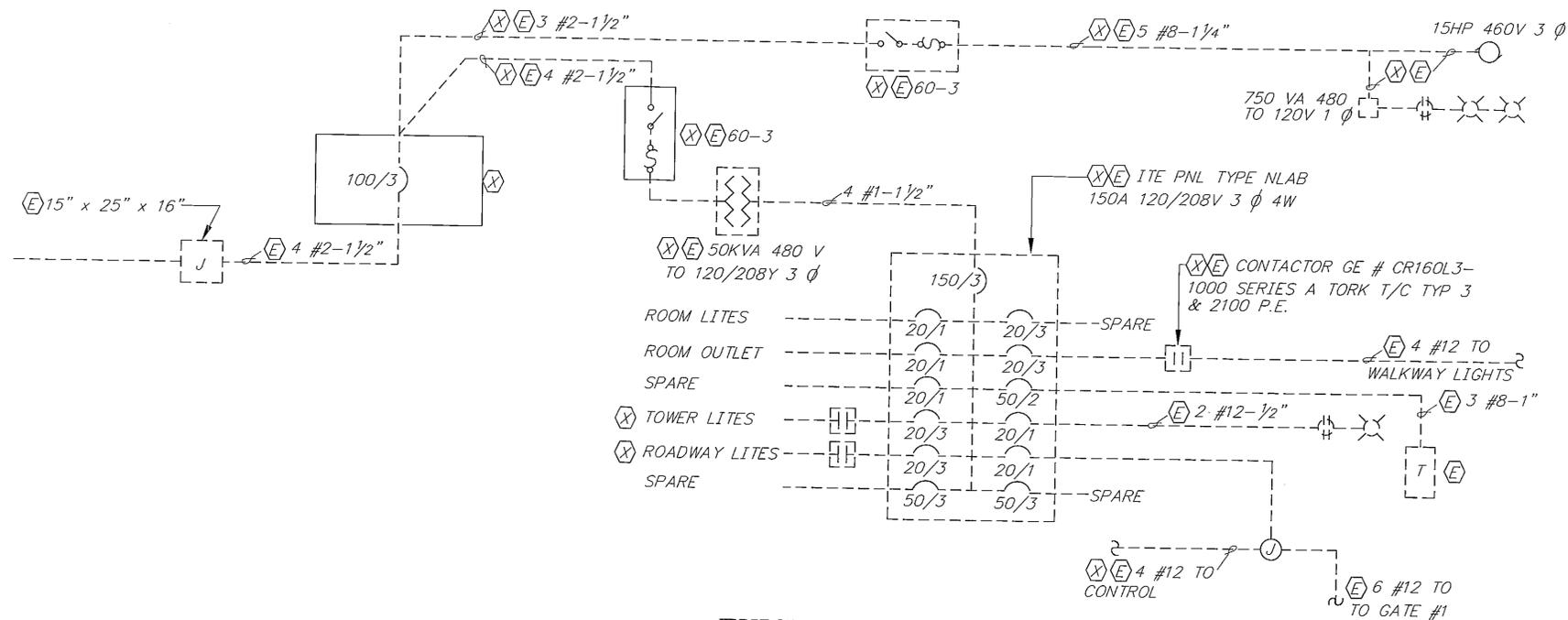
NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

DESIGNED BY: LPL
DRAWN BY: LPL/BAS
CHECKED BY: LPL

PROJECT NO. 72030
DATE: FEB, 1997
SHEET 39 OF 41

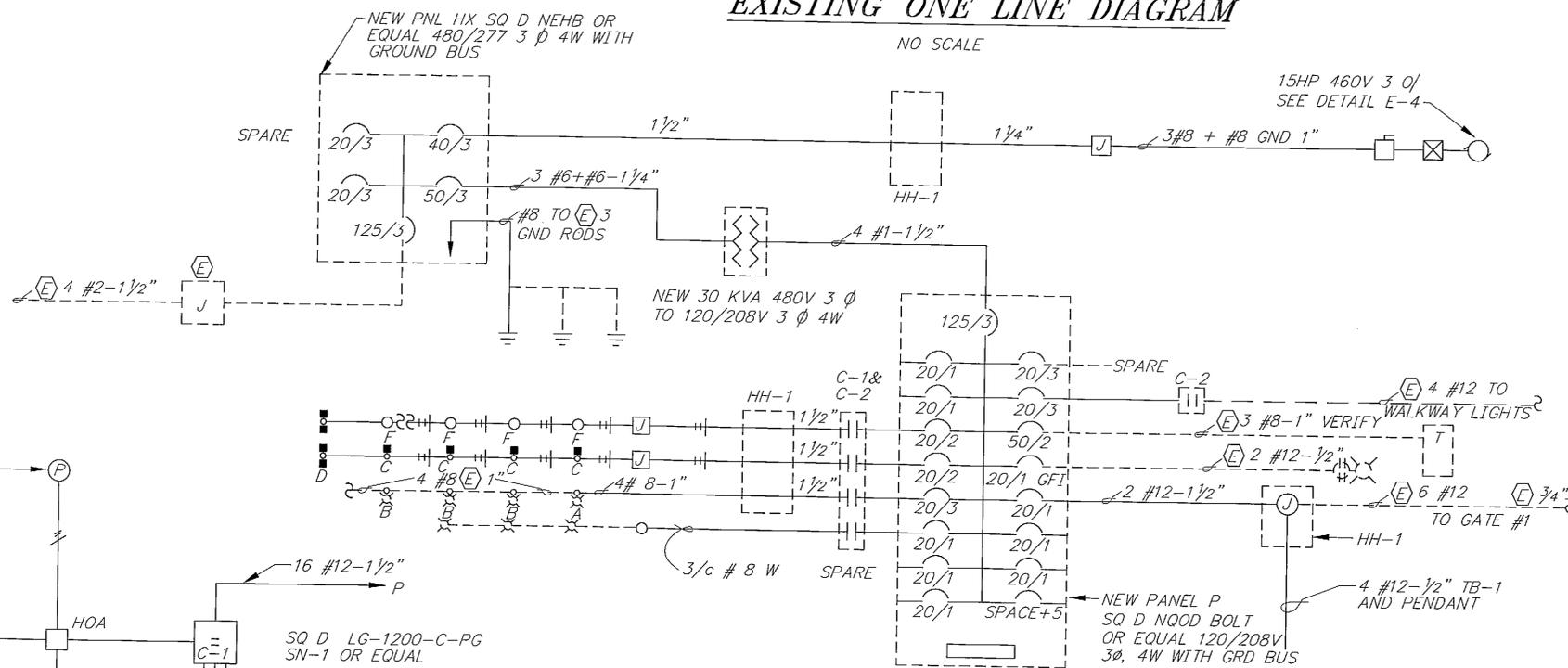


E-4



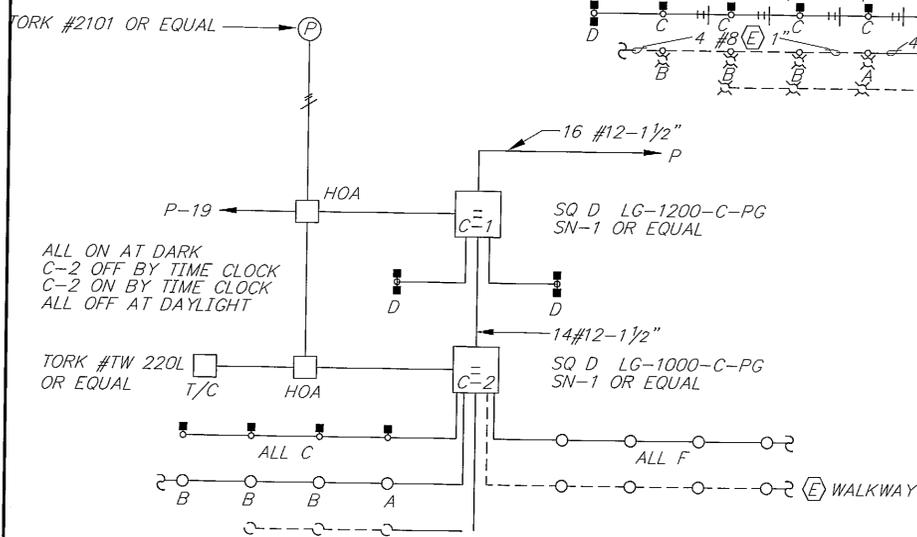
EXISTING ONE LINE DIAGRAM

NO SCALE



REVISED ONE LINE DIAGRAM

NO SCALE



LIGHT CONTROL DIAGRAM

TYPE		NEHB		PANEL "HX"		SECTION 1 of 1			18,000 A/C	
BUS	VOLTS	277/480	PHASE	3	MAIN CB	125	ISO GND	SURF MTD	TOP FEED	
	AMPS	225	WIRES	4	MAIN LUGS		FEED THRU	FLUSH MTD	STM FEED	
CRT. NO.	DESCRIPTION	LOAD VA			CB A/P	A	B	C	DESCRIPTION	CRT. NO.
1		6000			40	J				2
3	15 HP PUMP	6000			50	J			10,000	4
5									10,000	6
7		3000			20	J				8
9	SPARE				20	J			3000	10
11									3000	12
13					50		2			14
15					20		1			16
17					20		1			18
19					20		1			20
21					20		1			22
23					20		1			24
25										26
27										28
29										30
31										32
33										34
35										36
37										38
39										40
41										42

TYPE		NQD BOLT		PANEL "P" NEW		SECTION 1 of 1			10,000 A/C	
BUS	VOLTS	120/208	PHASE	3	MAIN CB	125	ISO GND	SURF MTD	TOP FEED	
	AMPS	225	WIRES	4	MAIN LUGS		FEED THRU	FLUSH MTD	STM FEED	
CRT. NO.	DESCRIPTION	LOAD VA			CB A/P	A	B	C	DESCRIPTION	CRT. NO.
1	ELECTRIC ROOM LITES	100			20	1				2
3	ELECTRIC ROOM OUTLETS	400			20	1				4
5	BRIDGE LITES RH				600	2			700	6
7	BRIDGE LITES RH	400							850	8
9	BRIDGE LITES LH	800			20	2				10
11	BRIDGE LITES LH				400				850	12
13	ROADWAY LITES	1350			50	2			4000	14
15	ROADWAY LITES	1350			20	3				16
17	ROADWAY LITES				1350				600	18
19	CONTROL	700			20	1			800	20
21	PIER FLOODLITES	1000			20	1			1000	22
23	SPARE				1000	20	1			24
25	SPACE								1000	26
27	SPACE									28
29	SPACE									30
31										32
33										34
35										36
37										38
39										40
41										42

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

PATH: P:\K7N\72030\MF\JAL\SHEET40.DWG OR E-5.DWG		
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BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

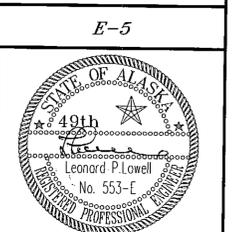
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

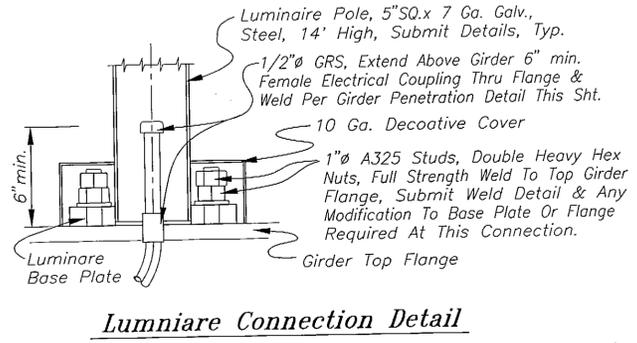
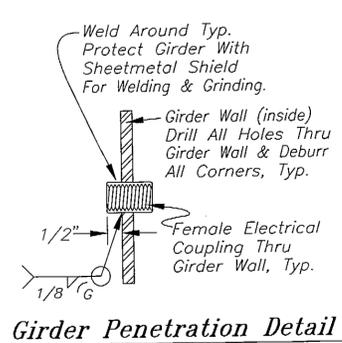
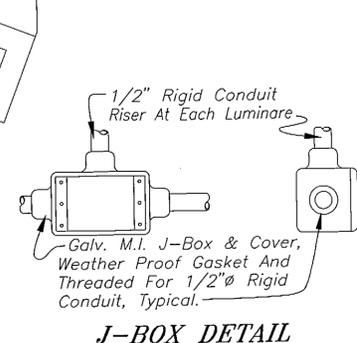
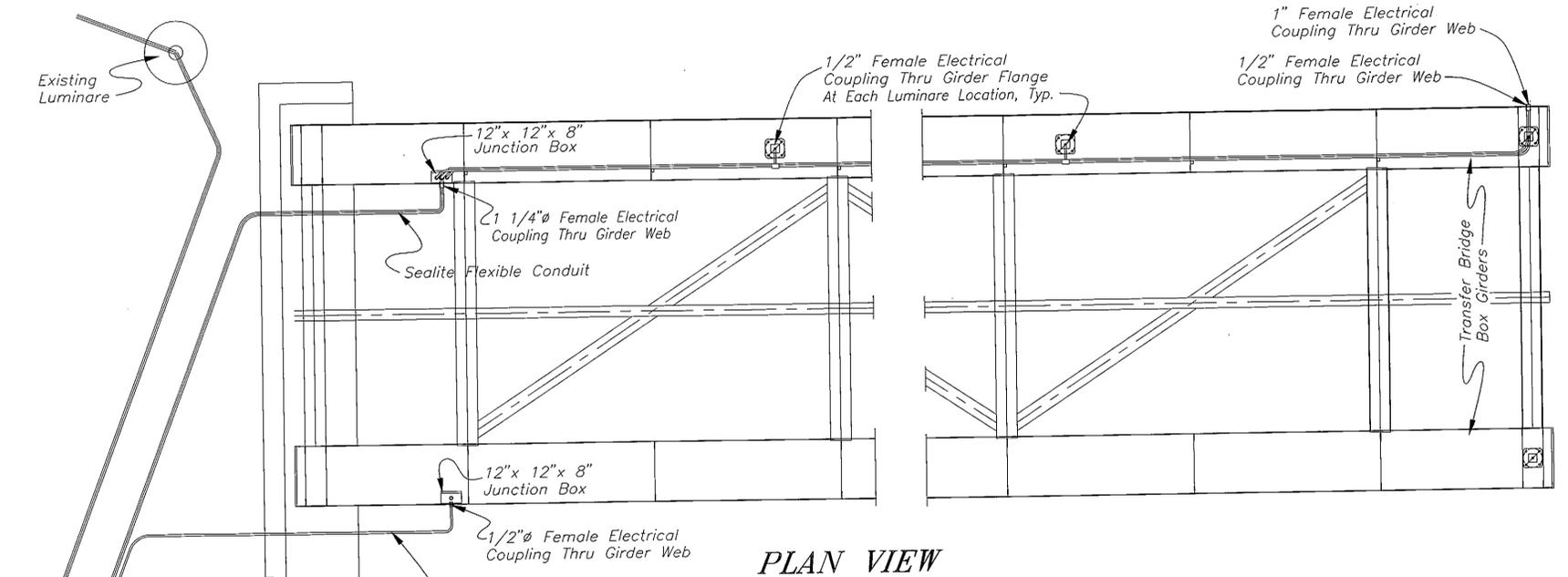
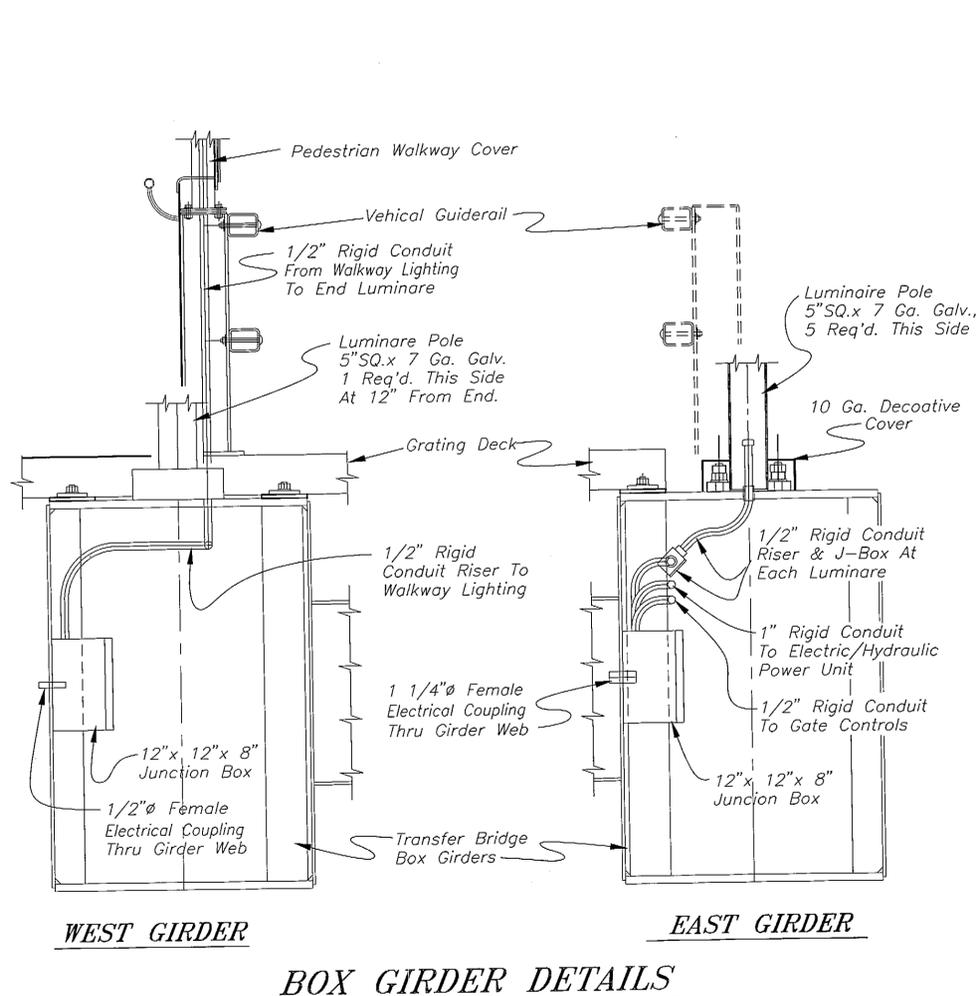
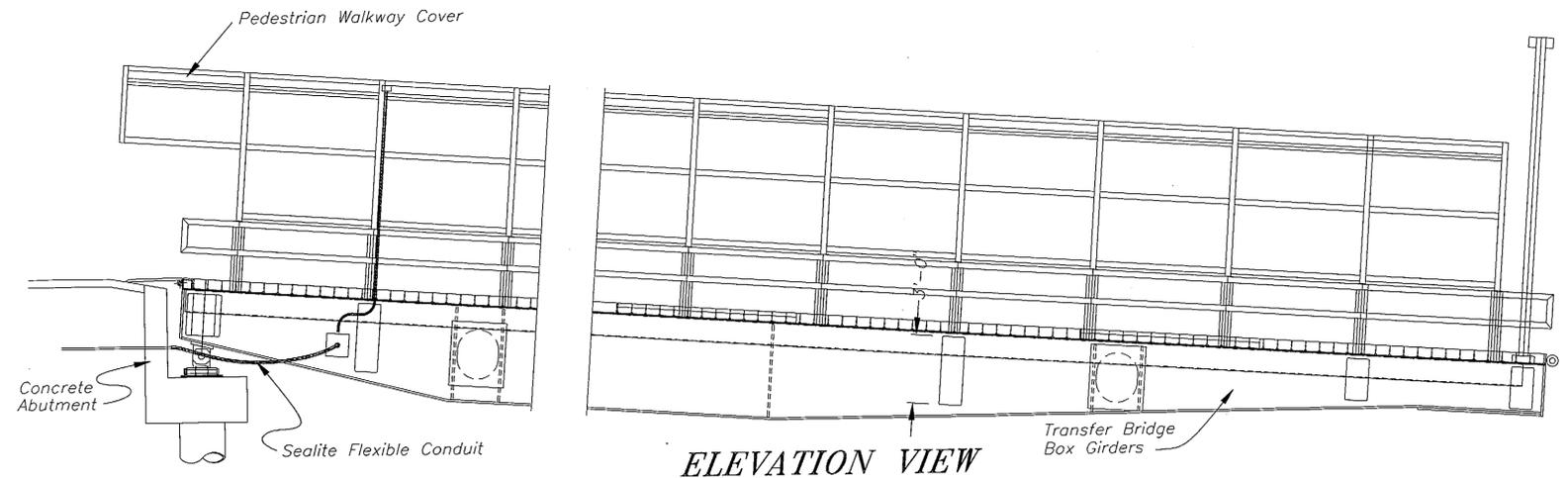
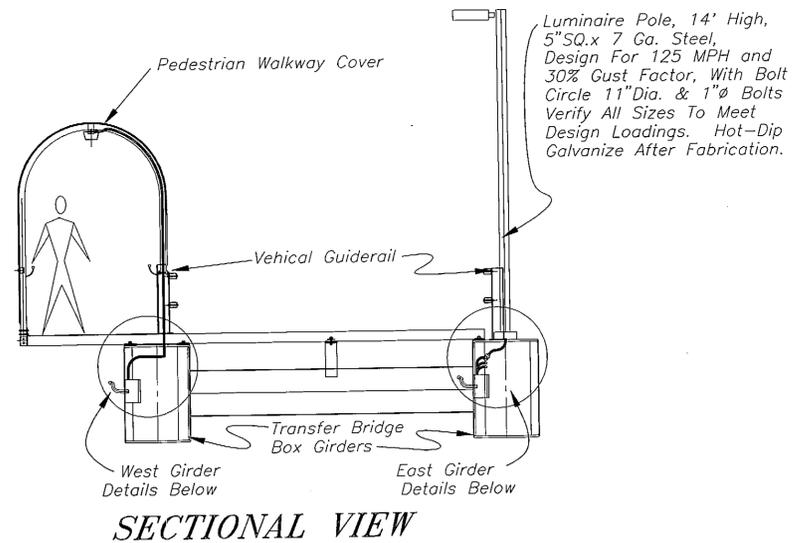
KETCHIKAN
KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030

ALASKA
DIAGRAMS AND PANEL SCHEDULES

L.LOWELL
DRAWN BY: LPL
CHECKED BY: K.KLEMMETSON
LPL

PROJECT NO. 72030
DATE: 1997
SHEET 40 OF 41





NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

PATH: P:\KTN\72030\MF\BN\SHEET41.DWG OR GRAV-E6 1=4'		
PLOT:		
BY:	DATE:	DESCRIPTION OF CHANGE:
RECORD OF REVISIONS		

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN

KETCHIKAN AIRPORT
GRAVINA ISLAND FERRY TERMINAL
PROJECT NO. A.I.P. 3-02-0144-1097/72030
MISC. ELECTRICAL DETAILS

ALASKA

DESIGNED BY:	BAS
DRAWN BY:	BAS
CHECKED BY:	JAL

PROJECT NO.	72030
DATE:	MAY, 1997
SHEET	41 OF 41

