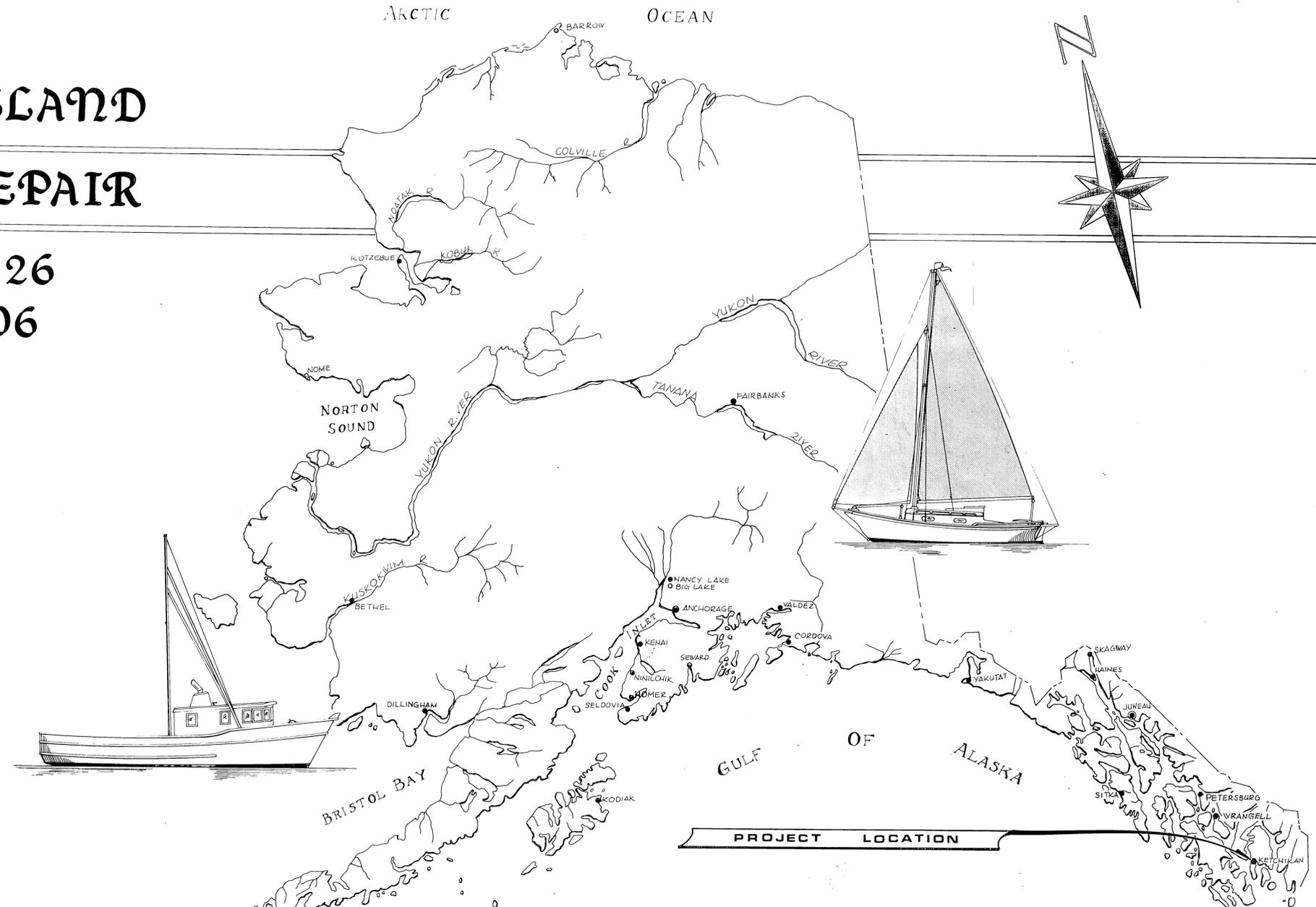


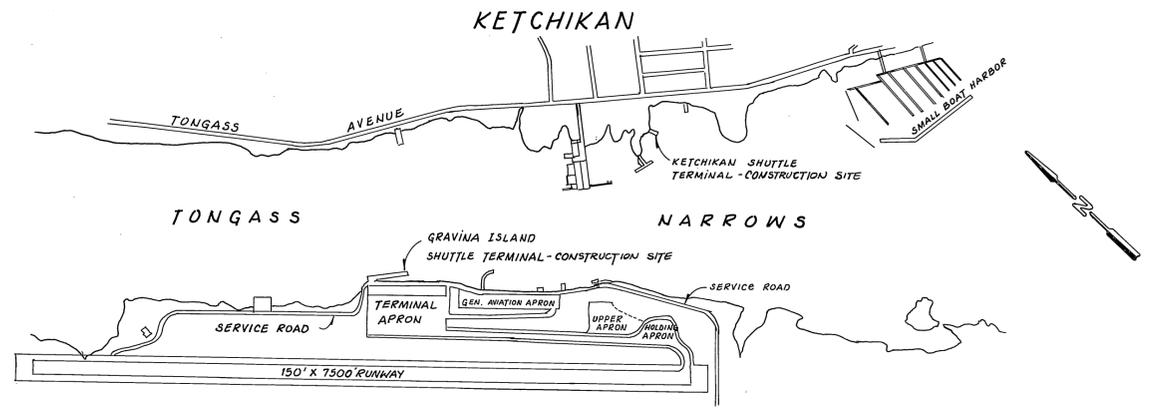
KETCHIKAN GRAVINA ISLAND SHUTTLE TERMINAL REPAIR

PROJECT NO. K-32126
ADAP NO. 6-02-0144-06



—WORK SUMMARY—

This project consists of replacing the existing fender systems on the Gravina Island and Ketchikan shuttle ferry dolphins with a timber pile fender system and anchoring dolphins #1 & #2 of the Gravina Island terminal with prestressed anchor piles.



VICINITY MAP
1" = 1000'

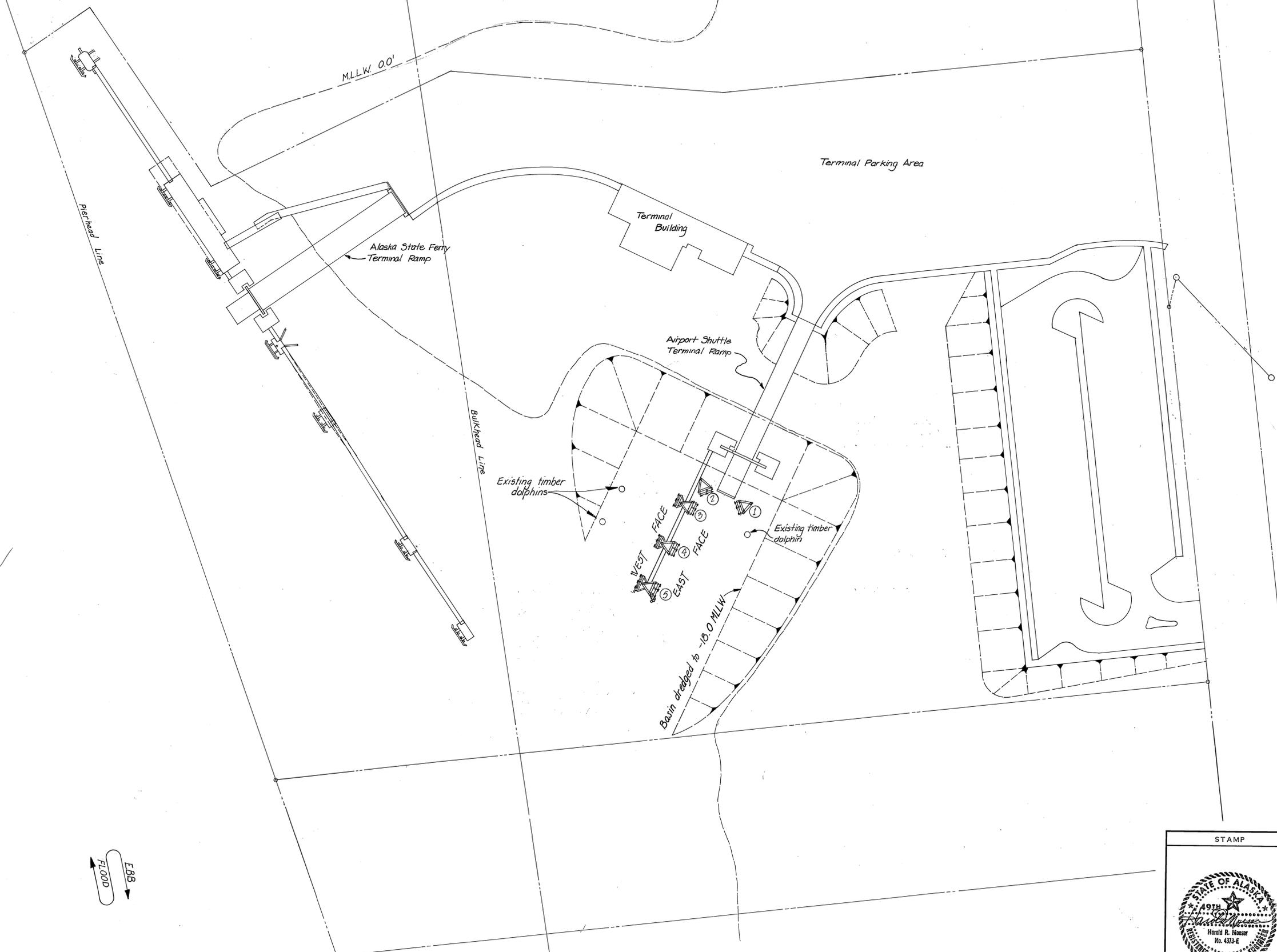
INDEX TO SHEETS

1. TITLE SHEET	
2. KETCHIKAN SITE PLAN	
3. GRAVINA ISLAND SITE PLAN	
4. DOLPHIN FENDER MODIFICATIONS	
5. WALKER & MOUNTING @ DETAILS	
6. DOLPHIN ANCHOR DETAILS & EXISTING DOLPHIN DETAILS	
7. NEW PILE FENDER SYSTEM & EXISTING FENDER GRID	

STATE
OF
ALASKA

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
S.E. REGION
HARBOR DESIGN & CONSTRUCTION

APPROVED
Charles E. Johnson 8/10/52
DIRECTOR S.E. D. & C. DATE
RECOMMEND FOR APPROVAL
CHIEF S.E. HARBOR D. & C. DATE
SHEET 1 OF 7

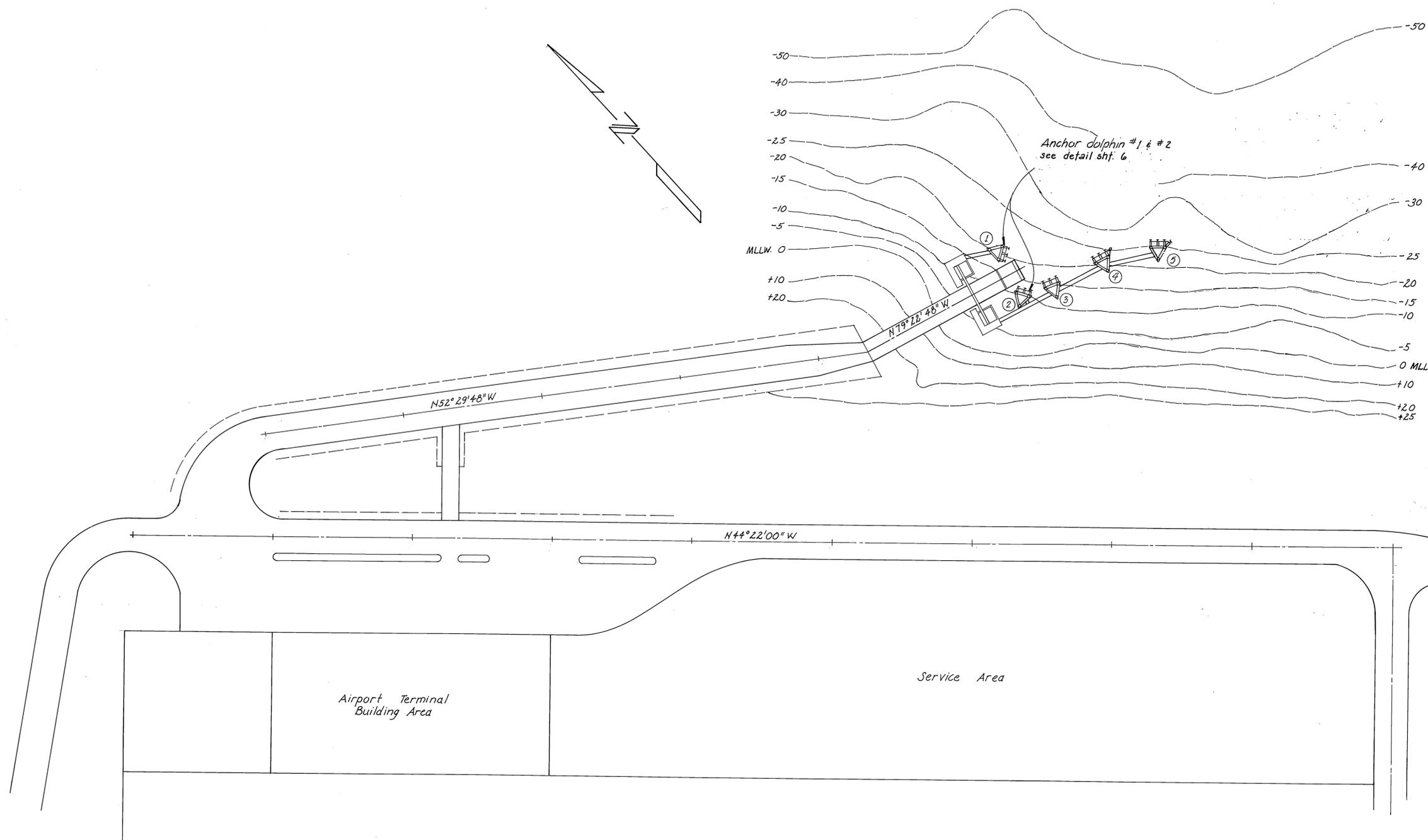


TIDAL DATA
 MHHW 15.4
 MHW 13.0
 MEAN 8.0
 ELW -5.0
 from NOAA Tide Tables, 1982

NOTE
 Dolphin position references are shown w/ encircled number.

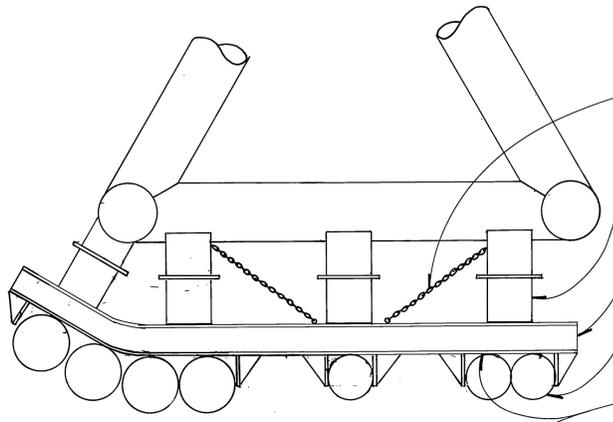
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES DIVISION OF HARBOR DESIGN AND CONSTRUCTION			
KETCHIKAN SITE PLAN			
SCALE 1"=40'	SURVEYED	APPROVED	
DESIGNED HM	DRAWN SJS	R.P. Beck Chief of Design	
CHECKED HM	DATE 6.1.79		
PROJECT NUMBER ADAP No. 6-02-0144-06		SHEET 2 OF 7	





NOTE
Dolphin position references are shown w/encircled number.

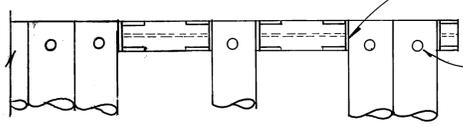
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		Ketchikan	Alaska
		<u>GRAVINA ISLAND</u>	
		<u>SITE PLAN</u>	
SCALE <u>1" = 40'</u>	SURVEYED _____	APPROVED _____	
DESIGNED <u>HM</u>	DRAWN <u>SJS</u>	<u>R.P. Beck</u> Chief of Design	
CHECKED <u>HM</u>	DATE <u>6.1.79</u>		
PROJECT NUMBER <u>ADAP No. 6-02-0144-06</u>	SHEET <u>3</u> OF <u>7</u>		



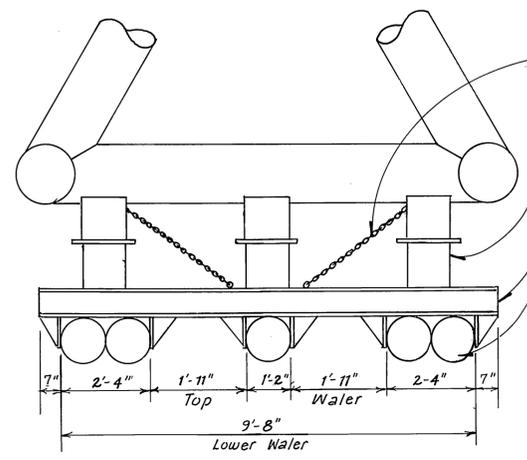
① DOLPHIN # 5, KETCHIKAN and DOLPHINS # 4 & 5 GRAVINA ISLAND, typical 3 dolphins

- Existing 1" Restraining Chain. Adjust & attach to new HP 8x36 Water. Eyebolts shop welded to top water.
- Replace existing Lord Type F Fenders w/ 12"x6" cylindrical Fenders (L=11")
- Remove & dispose of existing HP 8x36 fender grid. Fabricate & install two new HP 8x36 walers. See def. on shf. 5.
- Drive 7 new 56' x 16" ϕ buff treated timber piles tip down (Ketchikan)
- Drive 7 new 63' x 16" ϕ buff treated timber piles tip down (Gravina)

Trim pile butts to fit blocks and to form an even face typ., all dolphins.



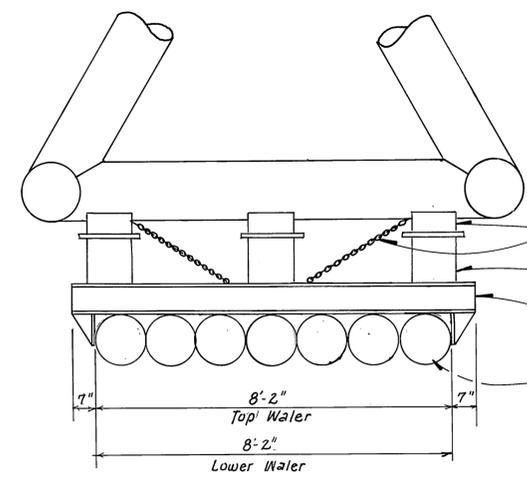
Secure piles to upper & lower walers with 1" ϕ economy head bolts & countersink heads 2", typical all dolphins.



② DOLPHINS #3 & 4, KETCHIKAN and DOLPHIN #3, GRAVINA ISLAND, typical 3 dolphins

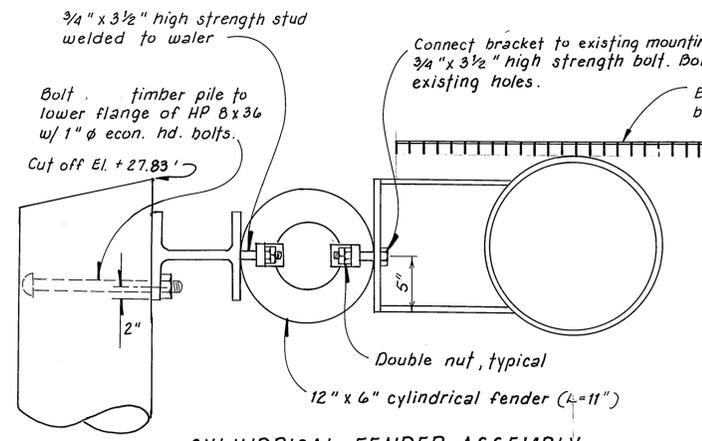
- Existing 1" restraining chain. Adjust & attach to new HP 8x36 water. Eyebolts shop welded to top water.
- Replace existing Lord Type F Fenders w/ 12"x6" cylindrical fenders (L=11")
- Remove & dispose of existing HP 8x36 fender grid. Fabricate & install two new HP 8x36 walers
- Drive 5 new 56' x 14" ϕ buff treated timber piles.

Note: For typical dolphin & mounting plate spacing, see water plan, shf. 5.

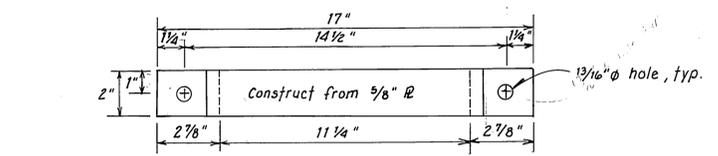


③ DOLPHINS #1 & #2, KETCHIKAN and GRAVINA ISLAND, typical 4 dolphins

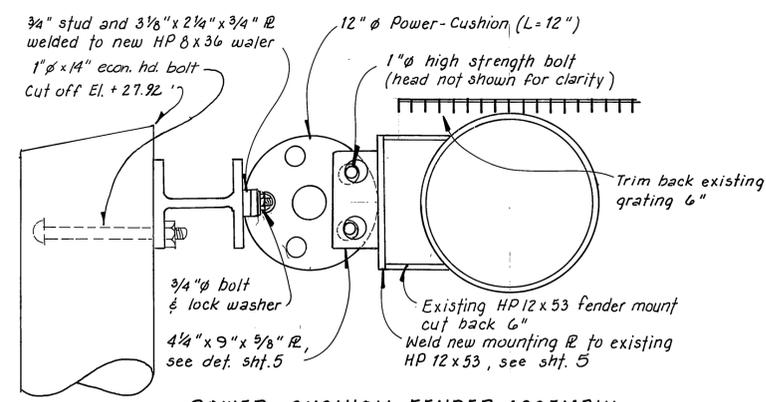
- Existing 1" restraining chain. Adjust & attach to new HP 8x36 water. Eyebolts shop welded to top water.
- Trim back existing HP 12x53 & weld new mounting plate. See def. shf. 5
- Replace existing Lord Type F Fenders w/ 12" ϕ Power Cushion (L=12") See def. this shf.
- Remove & dispose of existing HP 8x36 fender grid. Fabricate & install two new HP 8x36 walers
- Drive 7 new 56' treated timber piles 14" ϕ @ buff.
- Drive 7 new 50' treated timber piles 14" ϕ @ buff @ Dolphin # 2, Gravina.



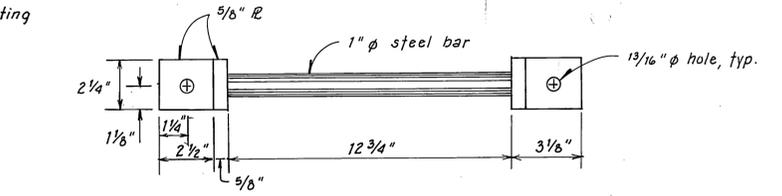
CYLINDRICAL FENDER ASSEMBLY
1 1/2" = 1'-0"



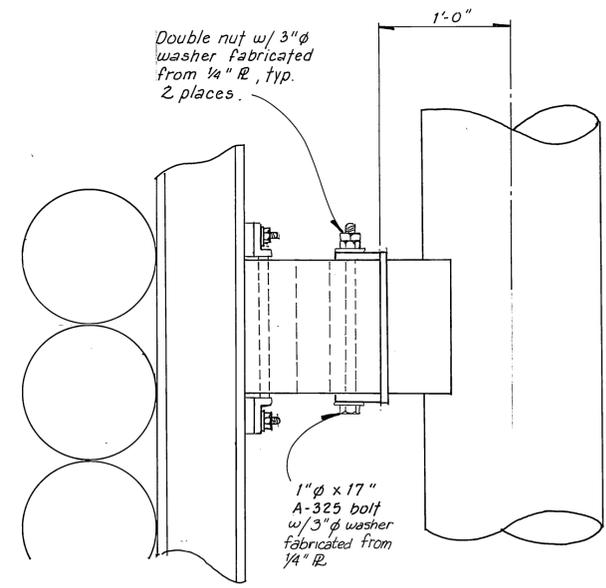
CYLINDRICAL FENDER BRACKET
3" = 1'-0"



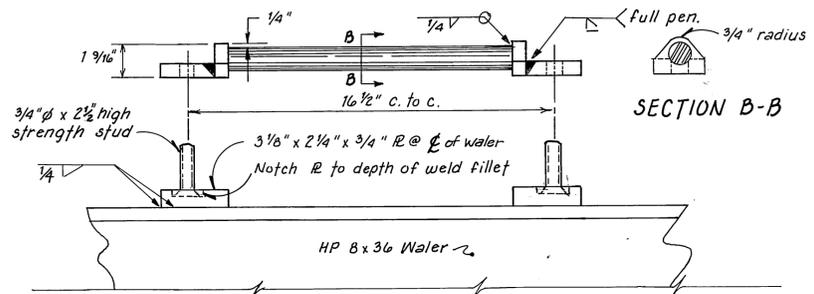
POWER-CUSHION FENDER ASSEMBLY
1 1/2" = 1'-0"



POWER CUSHION RETAINER BAR
3" = 1'-0"

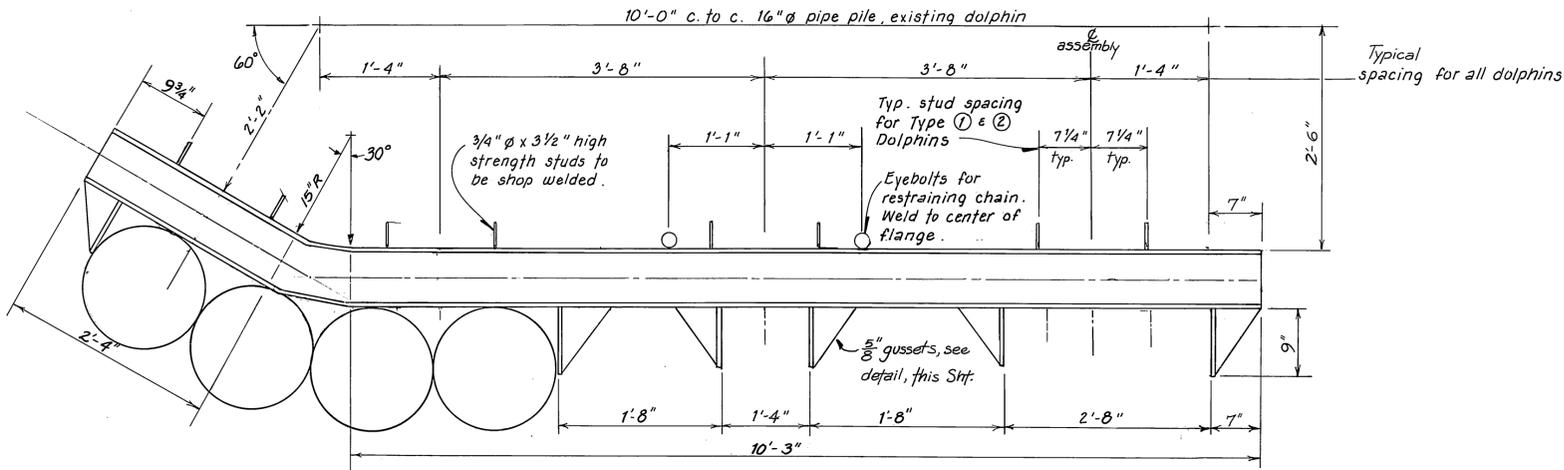


PLAN

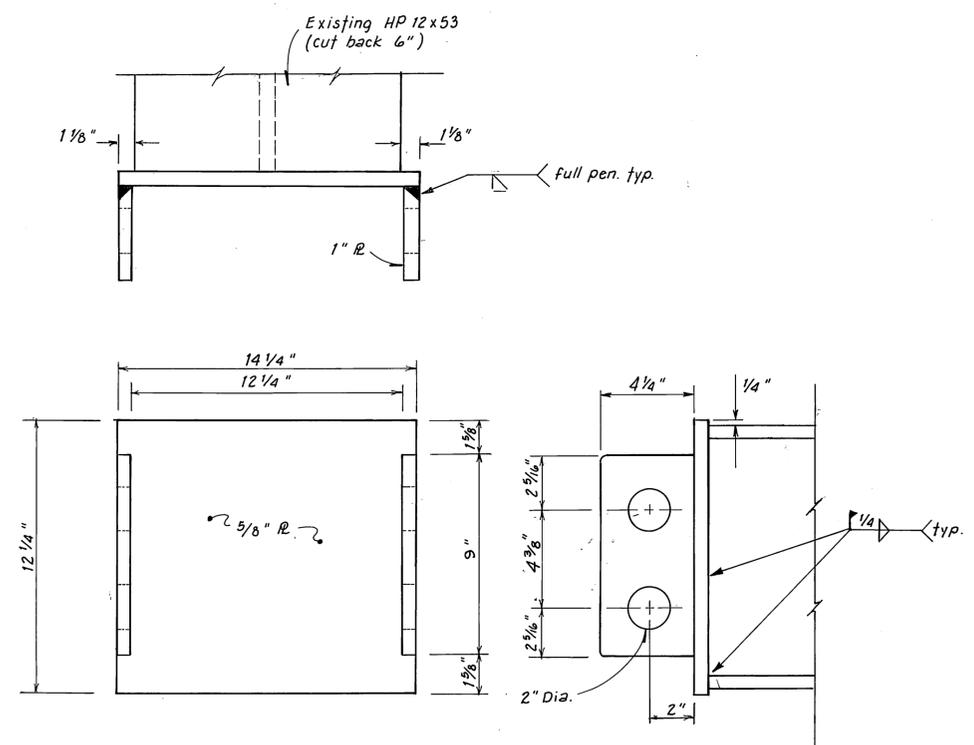


SECTION B-B

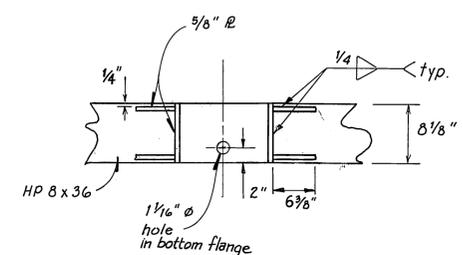
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		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES HARBOR DESIGN AND CONSTRUCTION	
		Ketchikan Alaska	
DOLPHIN FENDER MODIFICATIONS AND DETAILS			
SCALE <i>As Noted</i>	SURVEYED	APPROVED <i>Robert P. Beck</i>	
DESIGNED <i>BS</i>	DRAWN <i>BS/T.S.</i>	CHECKED <i>James A. Lowell</i>	
CHECKED	DATE	PROJECT NUMBER <i>ADAP no. 6-02-044-04</i> SHEET <i>4</i> OF <i>7</i>	



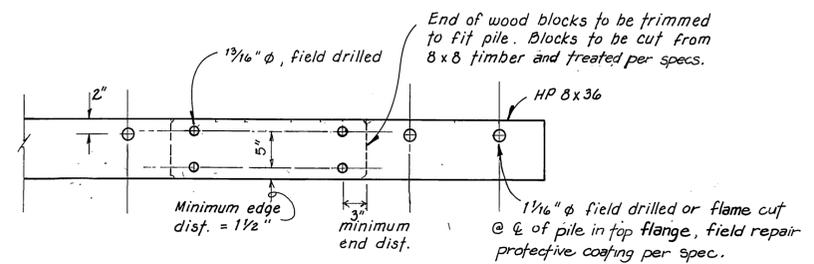
TOP HP 8x36 WALER DOLPHIN # 5 KETCHIKAN and DOLPHINS # 4 & # 5 GRAVINA ISLAND
1" = 1'-0"



FENDER MOUNTING PLATE
for DOLPHINS #1 & #2, KETCHIKAN & GRAVINA ISLAND
3" = 1'-0"

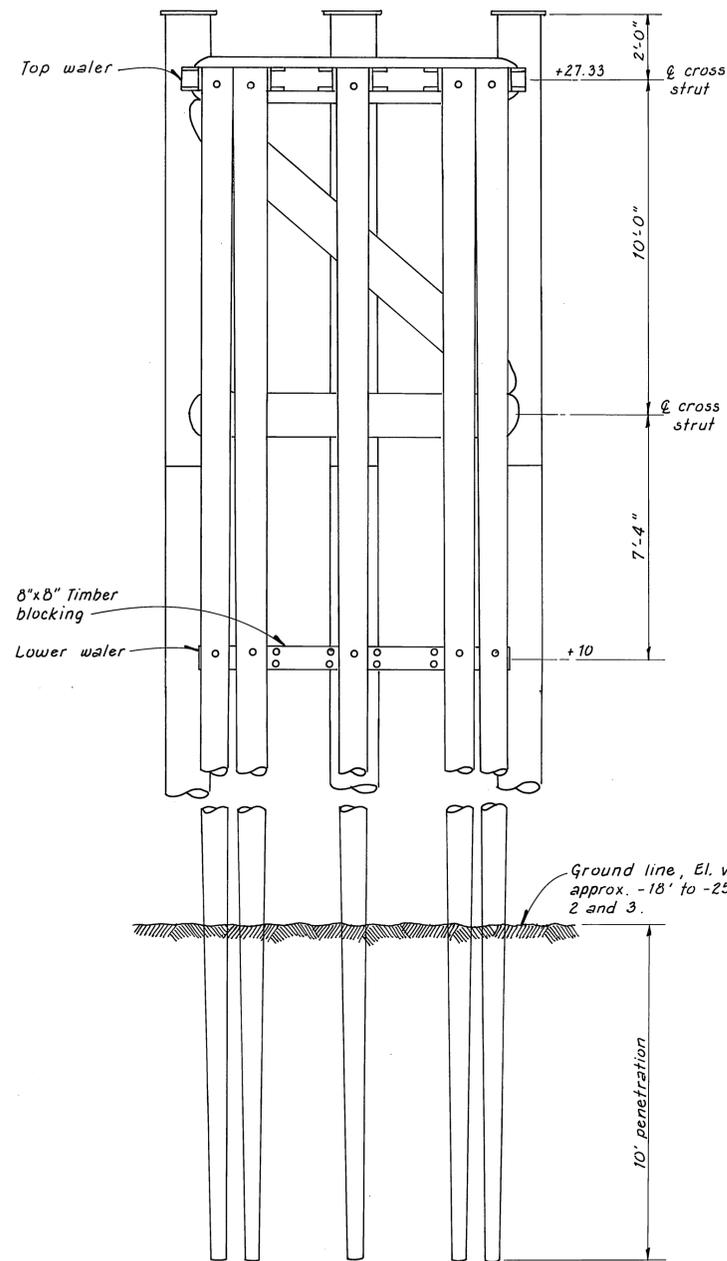


TYPICAL WELDED BLOCKS
TOP WALER, ALL DOLPHINS

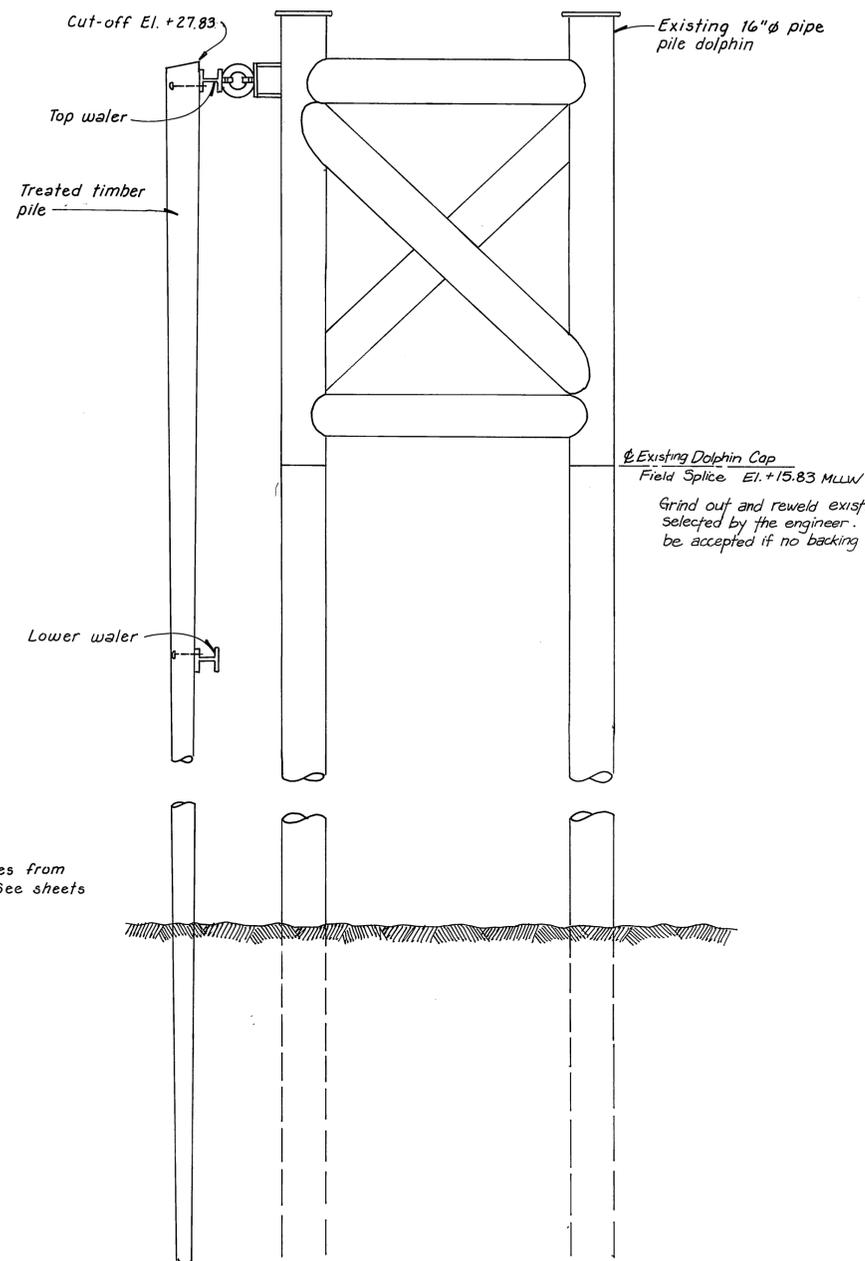


TYPICAL LOWER WALER (@ elev. +10[±])
1" = 1'-0"

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES HARBOR DESIGN AND CONSTRUCTION	
		Ketchikan	Alaska
WALER & MOUNTING PLATE DETAILS			
SCALE <i>As Noted</i>	SURVEYED	APPROVED <i>Robert P. Beck</i>	
DESIGNED <i>BS</i>	DRAWN <i>BS/TJS</i>	CHECKED <i>James A. Lowell</i>	
CHECKED	DATE <i>5-82</i>		
PROJECT NUMBER <i>ADAP no. 6-02-0144-06</i>	SHEET <i>5</i> OF <i>7</i>		

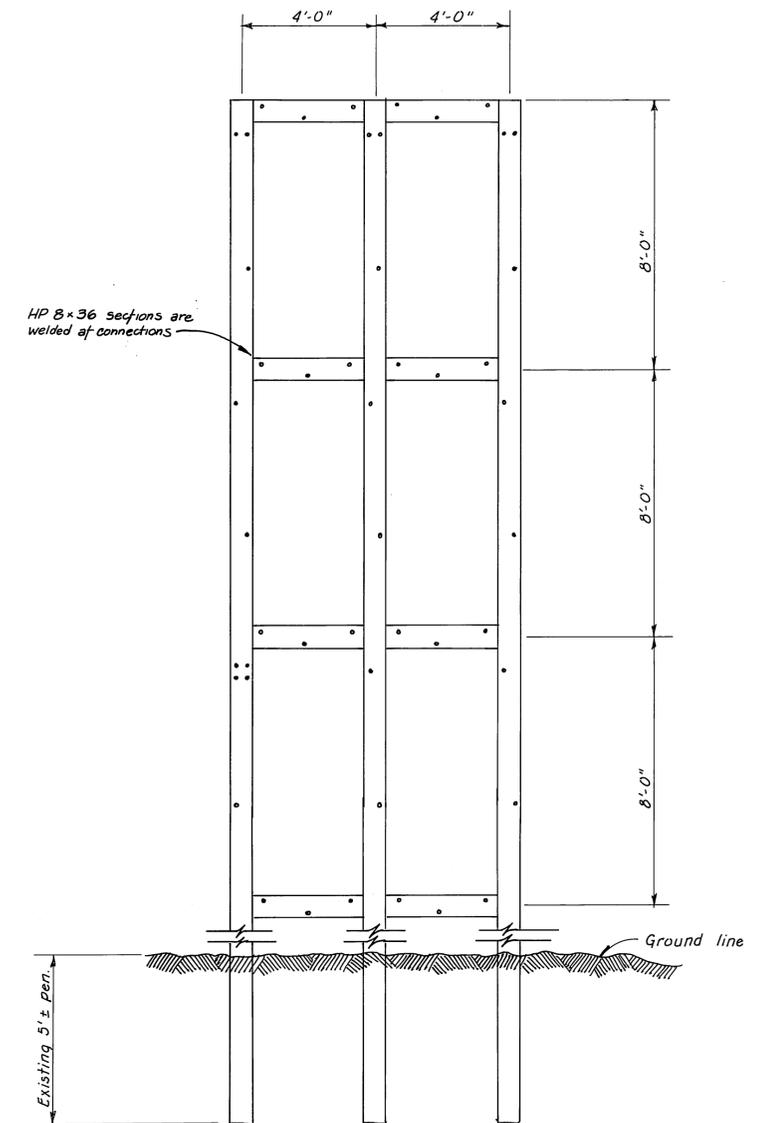


FRONT VIEW



SIDE VIEW

NEW TIMBER PILE FENDER SYSTEM
 (Typical : Dolphins #3 & #4, Ketchikan, #3, Gravina)
 (Similar : Dolphin #5, Ketchikan, #4 & #5, Gravina)
 3/8" = 1'-0"



EXISTING HP 8x36 FENDER GRID - To Be Removed
 (typical) 3/8" = 1'-0"

	DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES HARBOR DESIGN AND CONSTRUCTION	
NEW PILE FENDER SYSTEM & EXISTING FENDER GRID		
SCALE <i>As noted</i>	SURVEYED <i>B.S</i>	APPROVED <i>Robert P. Beck</i>
DESIGNED <i>B.S</i>	DRAWN <i>B.S / T.S</i>	<i>James A. Lowell</i>
CHECKED _____	DATE <i>6-82</i>	
PROJECT NUMBER <i>ADAP no. 6-02-0144-06</i>	SHEET <i>7</i> OF <i>7</i>	