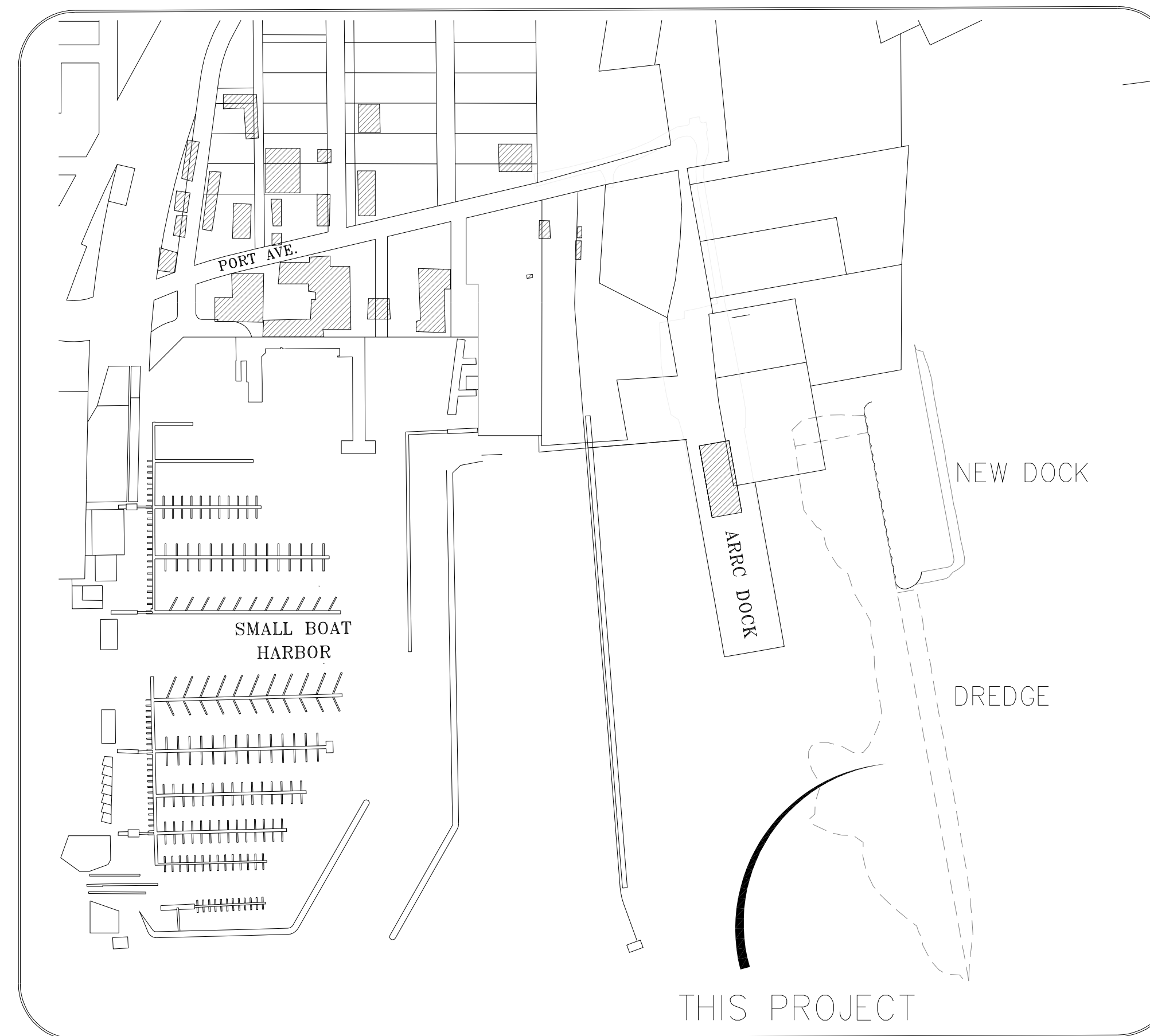
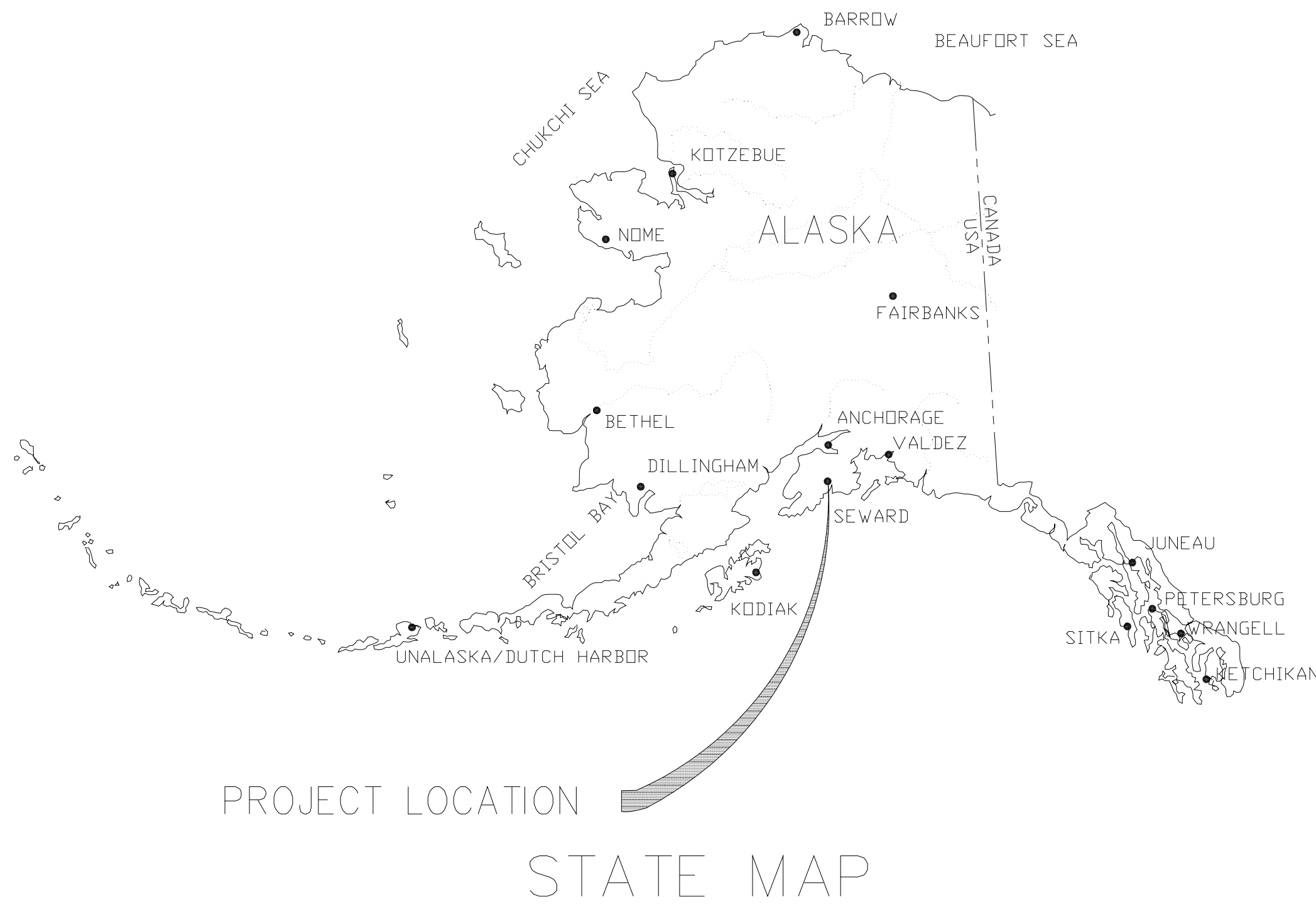


ALASKA RAILROAD CORPORATION NEW SEWARD RAILROAD DOCK 2000



VICINITY MAP

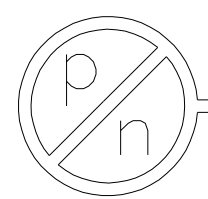
DRAWING INDEX

DWG. NO.	TITLE
1	COVER SHEET, VICINITY MAP AND DRAWING INDEX
2	EXISTING SITE PLAN AND PROJECT CONTROL
3	SITE DEMOLITION PLAN
4	SITE PLAN, DREDGING AND TEST HOLE LOCATIONS
5	DOCK SECTIONS AND TYPICAL SECTIONS
6	DOCK PLAN AND DETAILS
7	SHEET PILE AND VIBROCOMPACTION PLAN AND DETAILS
8	FENDER DETAILS - 1 OF 2
9	FENDER DETAILS - 2 OF 2
10	MOORING DOLPHIN DETAILS
11	CATWALK DETAILS
12	MISCELLANEOUS DETAILS - 1 OF 2
13	MISCELLANEOUS DETAILS - 2 OF 2
14	WATER LINE PLAN
15	UTILITY DETAILS
16	GENERAL NOTES - 1 of 2
17	GENERAL NOTES - 2 of 2
E1	ELECTRICAL DEMOLITION SITE PLAN
E2	ELECTRICAL REMODEL SITE PLAN
E3	ELECTRICAL DETAILS
E4	ELECTRICAL DETAILS
E5	ELECTRICAL DETAILS
E6	ELECTRICAL SPECIFICATIONS
E7	ELECTRICAL SPECIFICATIONS

WORK SUMMARY

MAJOR ITEMS OF WORK INCLUDE:

1. APPROXIMATELY 215,000 CY DREDGING (NEATLINE VARIES)
2. CONSTRUCT NEW ±627' OPEN CELL SHEET PILE BULKHEAD DOCK
3. CONSTRUCT STRUCTURAL STEEL, BOLLARDS AND FENDERS
4. CONSTRUCT NEW MOORING DOLPHIN AND CATWALK
5. REMOVE AND SALVAGE PORTIONS OF EXISTING ROCK GROIN
6. CONSTRUCT FILL ARMOR AND RIPRAP SLOPE PROTECTION
7. INSTALL NEW WATER LINES
8. INSTALL ELECTRICITY AND 4 NEW HI MAST LIGHTS



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Engineering Consultants

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Anchorage, Alaska 99503

(907) 561-1011

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TIDAL BENCH MARKS

POINT #	NORTHING	EASTING	ELEVATION	TIDAL BENCH MARK
115	2235939.966	1744780.417	24.78	5090D 1991
588	2236440.420	1744674.370	24.78	NO 22 1966
604	2236169.603	1744663.788	24.19	5090C 1978

TIDAL INFORMATION

LOCATION	MEAN HIGHER HIGH WATER	MEAN HIGH WATER	MEAN LOW WATER	EXTREME LOW WATER
SEWARD, ALASKA	10.6'	9.7'	1.4'	-4.0'

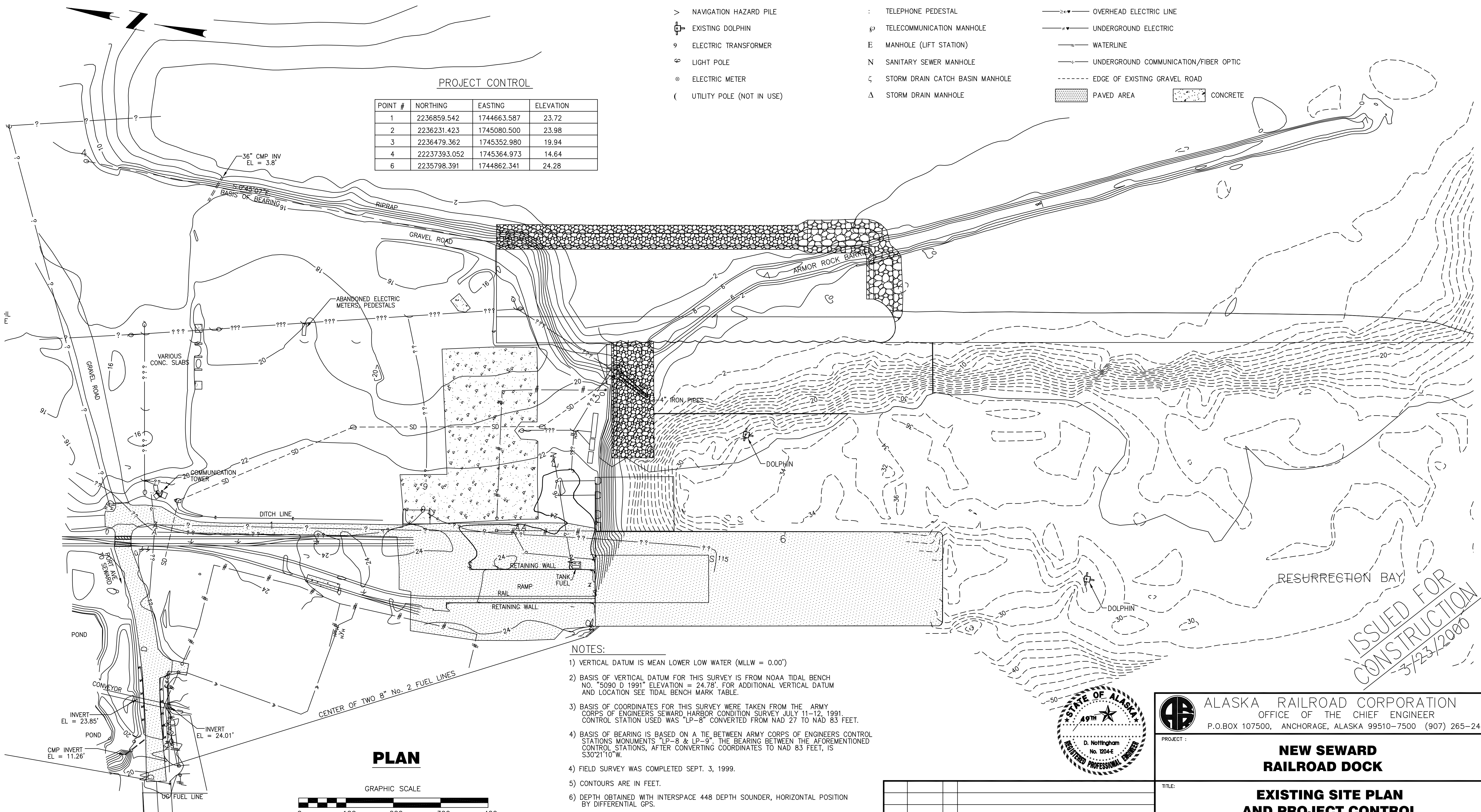
INFORMATION FROM NOAA CHART NO. 16682

LEGEND

- 0 SET PND YPC ON 5/8" X 30" REBAR
- 1 FOUND #5 REBAR
- SET MAGNETIC NAIL/SPIKE (TRAV. PT.)
- . FOUND CORP. MONUMENT AS DESCRIBED
- Σ FOUND NOAA BENCH MARK
- > NAVIGATION HAZARD PILE
- EXISTING DOLPHIN
- 9 ELECTRIC TRANSFORMER
- ∞ LIGHT POLE
- ⊙ ELECTRIC METER
- (UTILITY POLE (NOT IN USE)
- OHE — POWER POLE
- ⊕ GUY ANCHOR
- ⊗ ELECTRIC MANHOLE
- χ ELECTRIC PEDESTAL
- ┌ AT&T FIBER OPTIC MANHOLE
- ⋮ TELEPHONE PEDESTAL
- ⊕ TELECOMMUNICATION MANHOLE
- E MANHOLE (LIFT STATION)
- N SANITARY SEWER MANHOLE
- ζ STORM DRAIN CATCH BASIN MANHOLE
- Δ STORM DRAIN MANHOLE
- ψ FIRE HYDRANT
- WATER VALVE
- K RAILROAD SWITCH
- J RAILROAD SIGN
- H BOLLARDS
- OVERHEAD ELECTRIC LINE
- UNDERGROUND ELECTRIC
- WATERLINE
- UNDERGROUND COMMUNICATION/FIBER OPTIC
- - - - - EDGE OF EXISTING GRAVEL ROAD
- PAVED AREA
- CONCRETE

PROJECT CONTROL

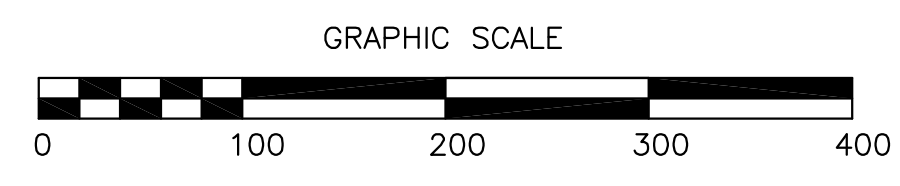
POINT #	NORTHING	EASTING	ELEVATION
1	2236859.542	1744663.587	23.72
2	2236231.423	1745080.500	23.98
3	2236479.362	1745352.980	19.94
4	22237393.052	1745364.973	14.64
6	2235798.391	1744862.341	24.28



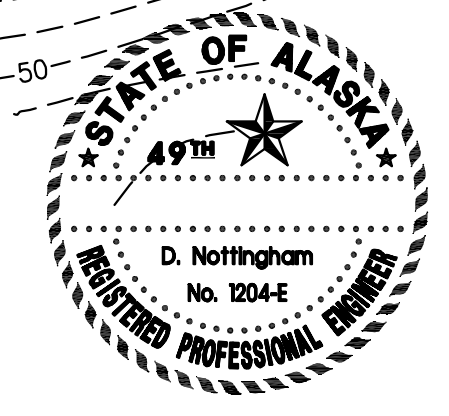
NOTES:

- 1) VERTICAL DATUM IS MEAN LOWER LOW WATER (MLLW = 0.00')
- 2) BASIS OF VERTICAL DATUM FOR THIS SURVEY IS FROM NOAA TIDAL BENCH NO. "5090 D 1991" ELEVATION = 24.78'. FOR ADDITIONAL VERTICAL DATUM AND LOCATION SEE TIDAL BENCH MARK TABLE.
- 3) BASIS OF COORDINATES FOR THIS SURVEY WERE TAKEN FROM THE ARMY CORPS OF ENGINEERS SEWARD HARBOR CONDITION SURVEY JULY 11-12, 1991. CONTROL STATION USED WAS "LP-8" CONVERTED FROM NAD 27 TO NAD 83 FEET.
- 4) BASIS OF BEARING IS BASED ON A TIE BETWEEN ARMY CORPS OF ENGINEERS CONTROL STATIONS MONUMENTS "LP-8 & LP-9". THE BEARING BETWEEN THE AFOREMENTIONED CONTROL STATIONS, AFTER CONVERTING COORDINATES TO NAD 83 FEET, IS S30°21'10"W.
- 4) FIELD SURVEY WAS COMPLETED SEPT. 3, 1999.
- 5) CONTOURS ARE IN FEET.
- 6) DEPTH OBTAINED WITH INTERSPACE 448 DEPTH SOUNDER, HORIZONTAL POSITION BY DIFFERENTIAL GPS.

PLAN



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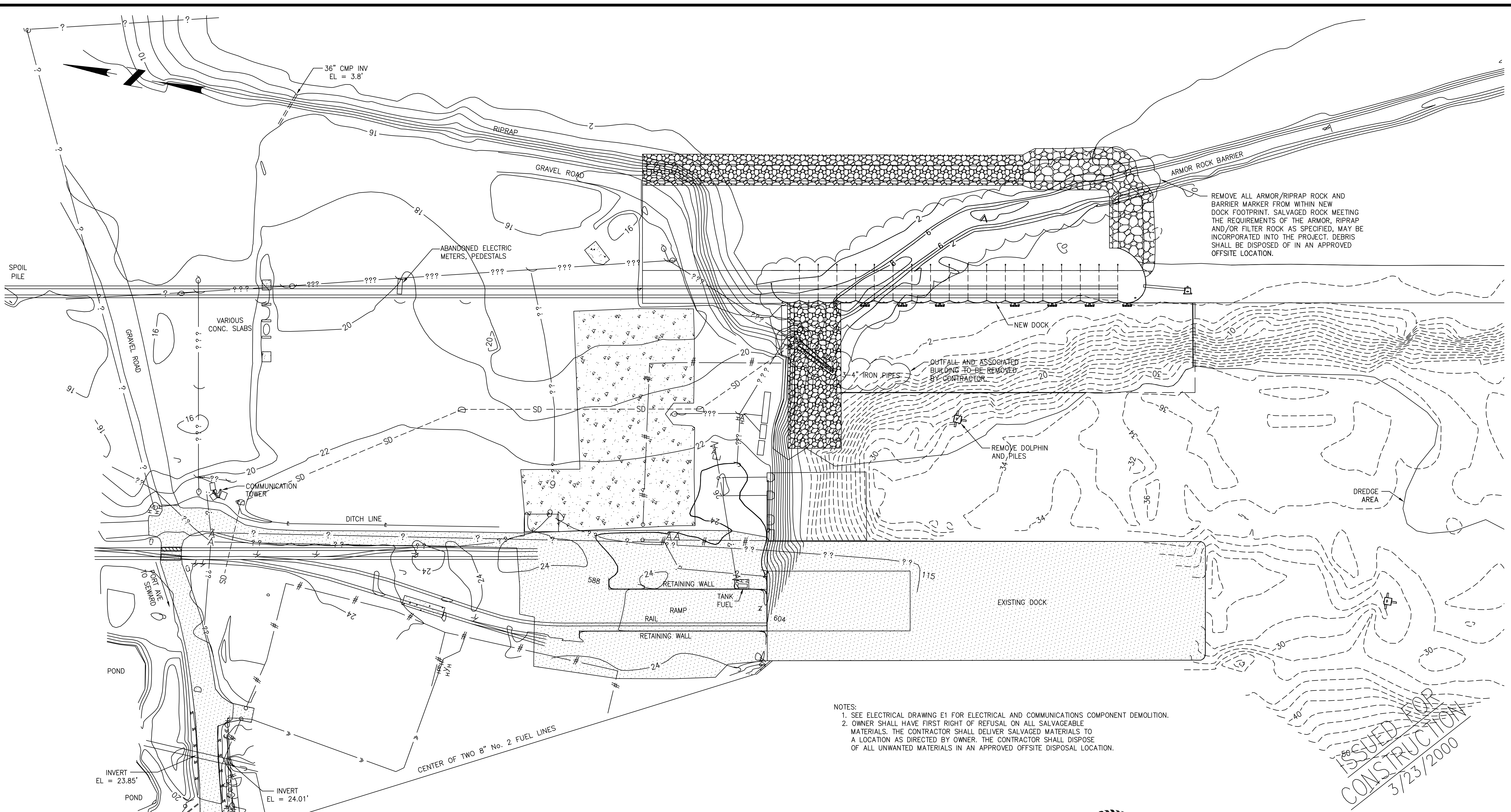
NEW SEWARD RAILROAD DOCK

EXISTING SITE PLAN AND PROJECT CONTROL

DESIGNED BY: DN	SCALE: AS NOTED	FILE: 99068-02.DWG
DRAWN BY: WAY	DATE: 3/23/2000	DWG NO. 2 OF 17
APPROVED BY: DN		

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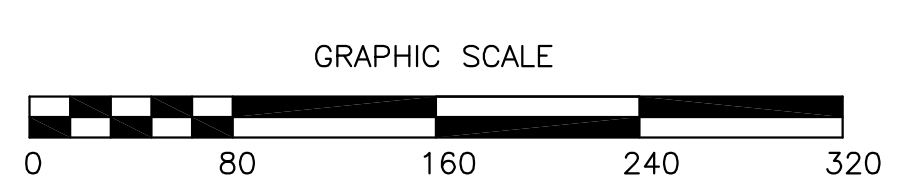


REMOVE ALL ARMOR/RIPRAP ROCK AND BARRIER MARKER FROM WITHIN NEW DOCK FOOTPRINT. SALVAGED ROCK MEETING THE REQUIREMENTS OF THE ARMOR, RIPRAP AND/OR FILTER ROCK AS SPECIFIED, MAY BE INCORPORATED INTO THE PROJECT. DEBRIS SHALL BE DISPOSED OF IN AN APPROVED OFFSITE LOCATION.

- NOTES:
1. SEE ELECTRICAL DRAWING E1 FOR ELECTRICAL AND COMMUNICATIONS COMPONENT DEMOLITION.
 2. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL SALVAGEABLE MATERIALS. THE CONTRACTOR SHALL DELIVER SALVAGED MATERIALS TO A LOCATION AS DIRECTED BY OWNER. THE CONTRACTOR SHALL DISPOSE OF ALL UNWANTED MATERIALS IN AN APPROVED OFFSITE DISPOSAL LOCATION.

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PLAN



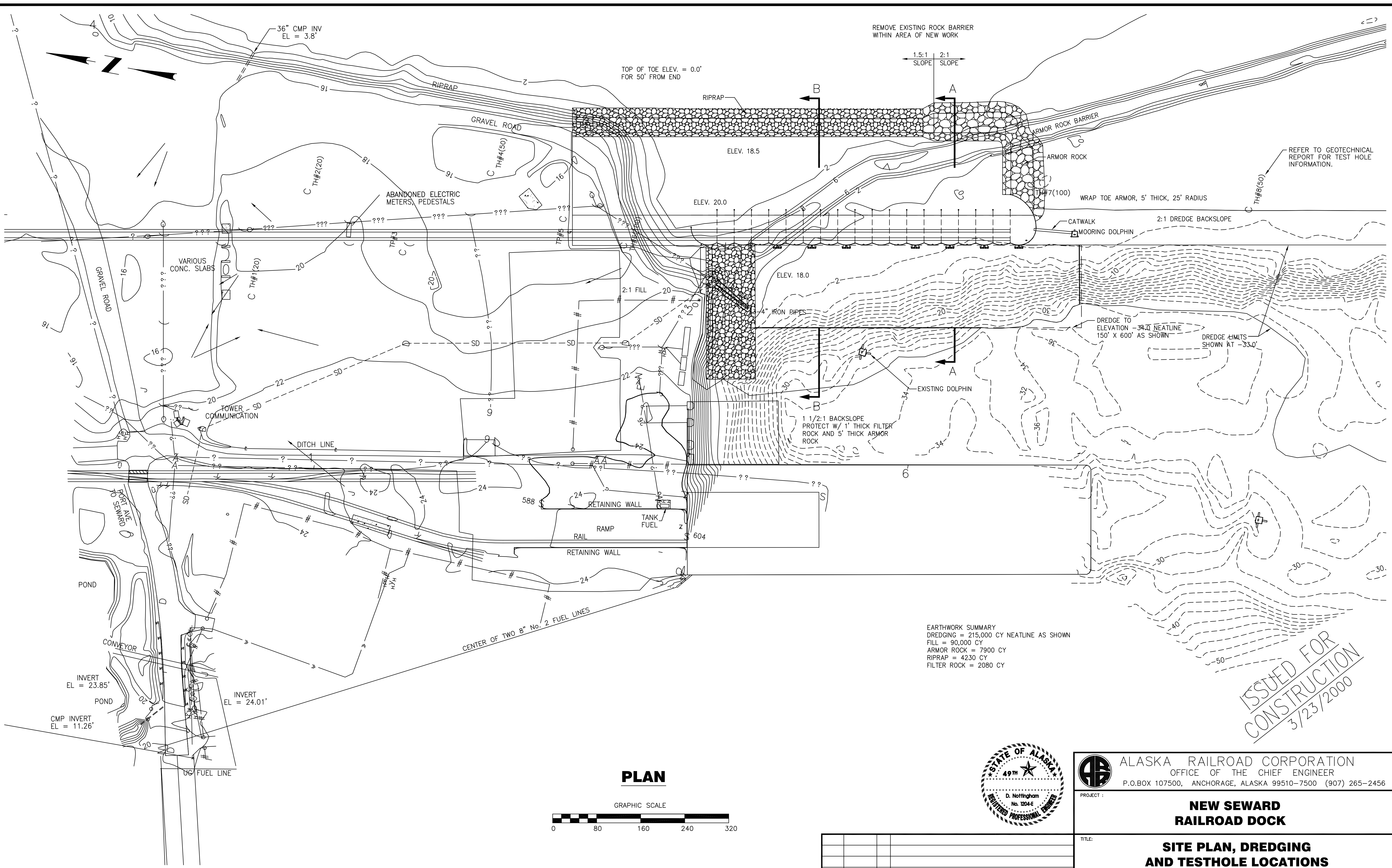
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OFFICE OF THE CHIEF ENGINEER
P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500 (907) 265-2456

PROJECT : **NEW SEWARD RAILROAD DOCK**
TITLE : **SITE DEMOLITION PLAN**

DESIGNED BY: DN	SCALE : AS NOTED	FILE: 99068-3.DWG
DRAWN BY: WAY	DATE : 3/23/2000	DWG NO. 3 OF 17
APPROVED BY: DN		

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REMOVE EXISTING ROCK BARRIER
WITHIN AREA OF NEW WORK

TOP OF TOE ELEV. = 0.0'
FOR 50' FROM END

1.5:1 SLOPE 2:1 SLOPE

REFER TO GEOTECHNICAL
REPORT FOR TEST HOLE
INFORMATION.

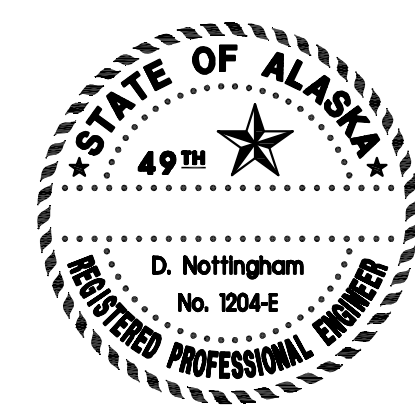
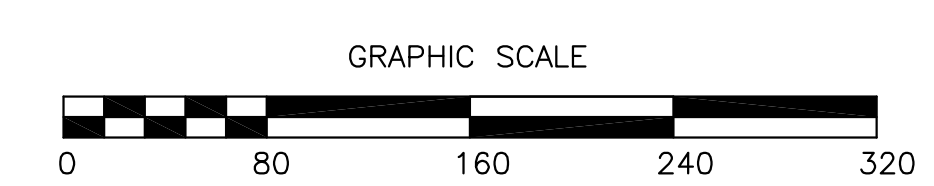
DREDGE TO
ELEVATION -34.0 NEATLINE
150' X 600' AS SHOWN

DREDGE LIMITS
SHOWN AT -33.0'

EARTHWORK SUMMARY
DREDGING = 215,000 CY NEATLINE AS SHOWN
FILL = 90,000 CY
ARMOR ROCK = 7900 CY
RIPRAP = 4230 CY
FILTER ROCK = 2080 CY

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PLAN



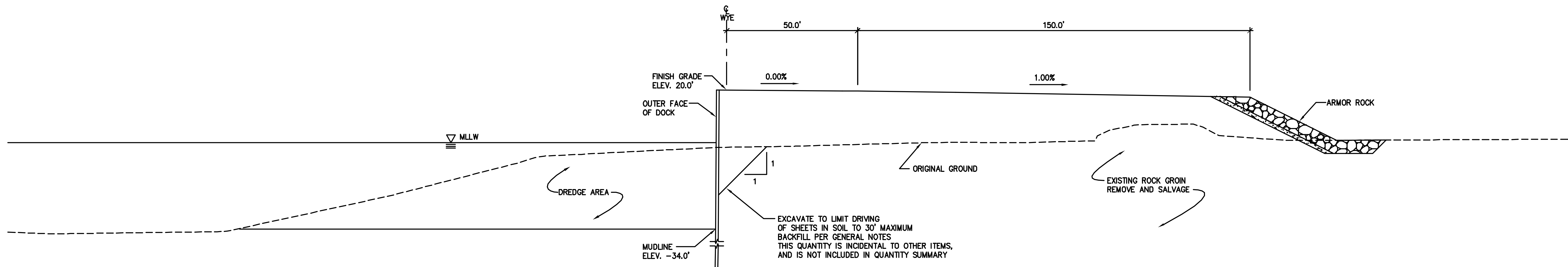
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PROJECT: **NEW SEWARD RAILROAD DOCK**
TITLE: **SITE PLAN, DREDGING AND TESTHOLE LOCATIONS**

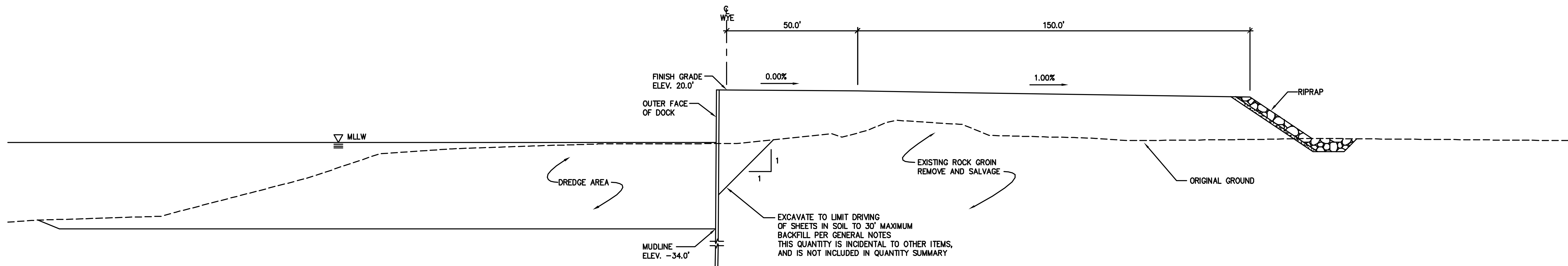
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REV.	DATE	BY	REVISION

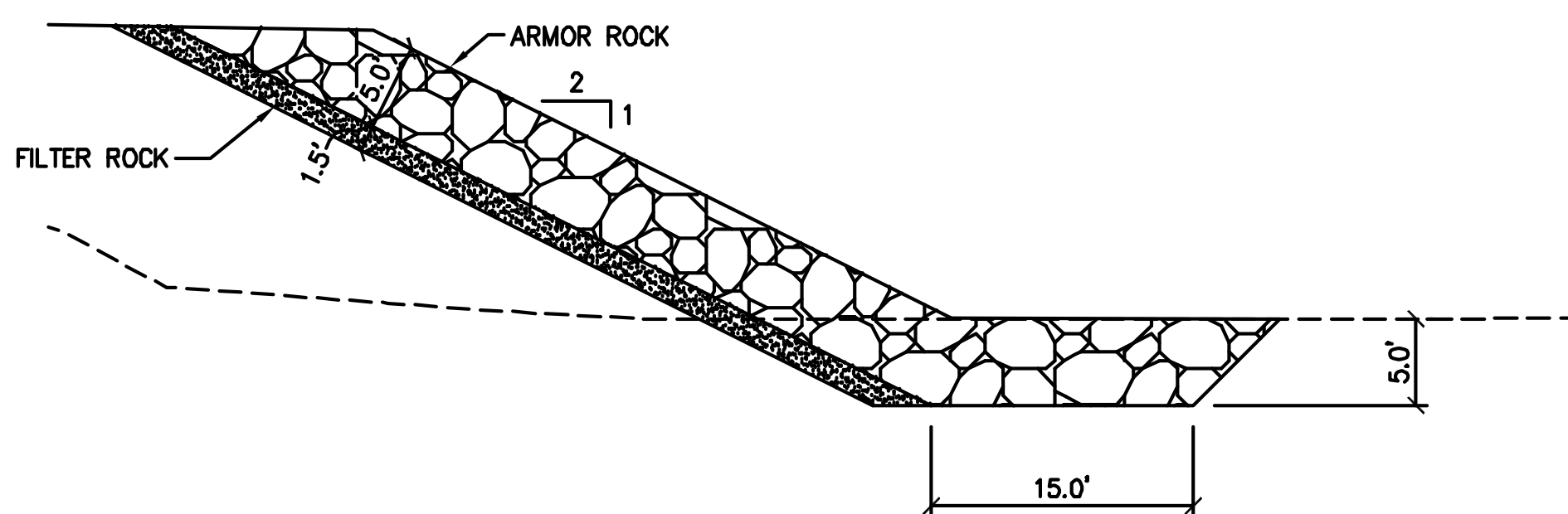
DESIGNED BY: DN
DRAWN BY: WAY
APPROVED BY: DN
SCALE: AS NOTED
DATE: 3/23/2000
FILE: 99068-04.DWG
DWG NO. **4** OF **17**



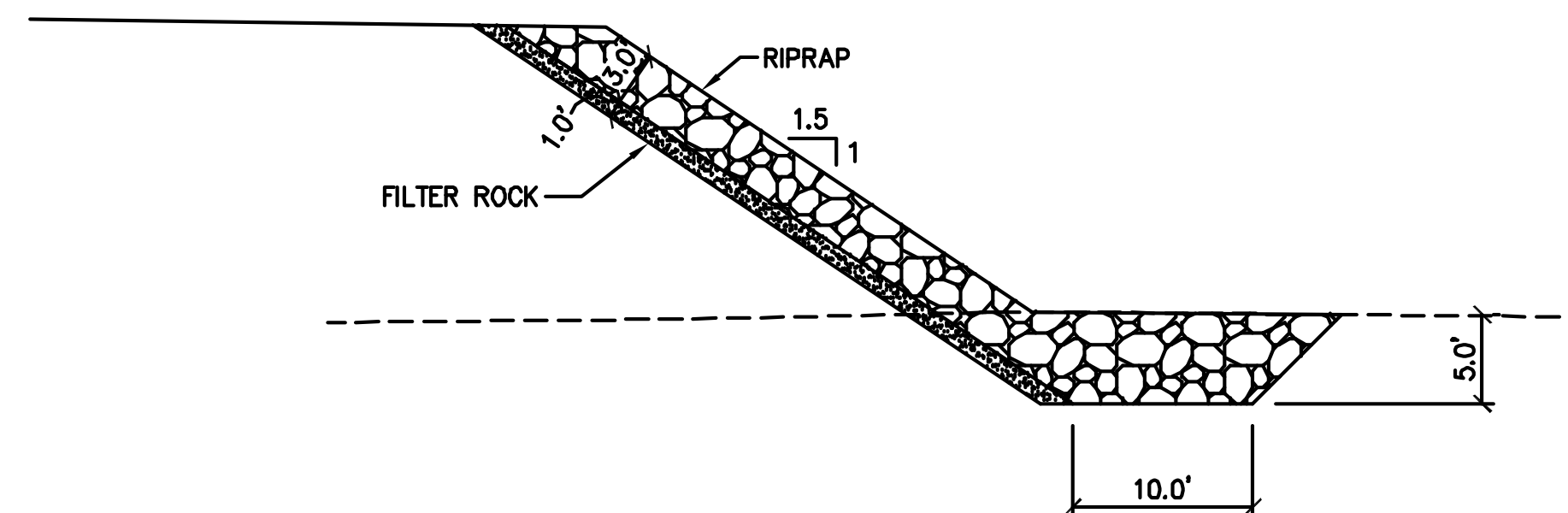
SECTION A



SECTION B

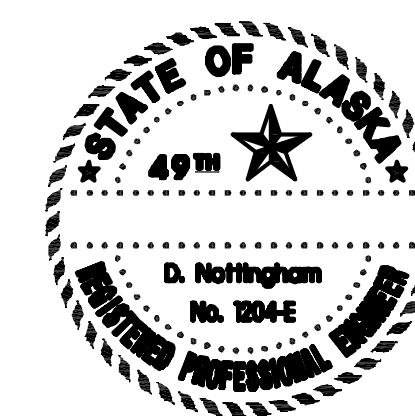


TYPICAL ARMOR ROCK SECTION



TYPICAL RIPRAP SECTION

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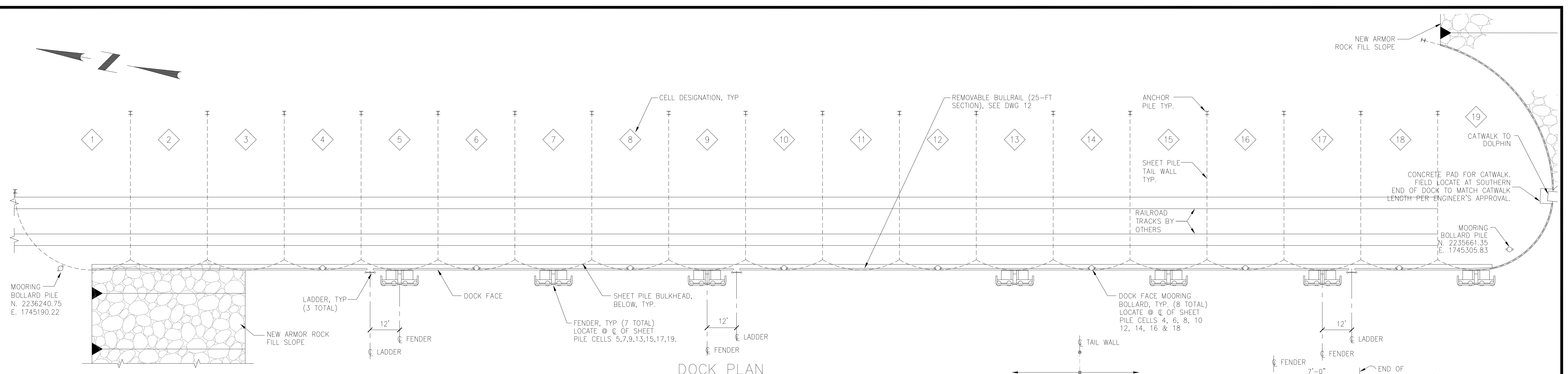
PROJECT : **NEW SEWARD RAILROAD DOCK**

TITLE : **DOCK SECTIONS AND TYPICAL SECTIONS**

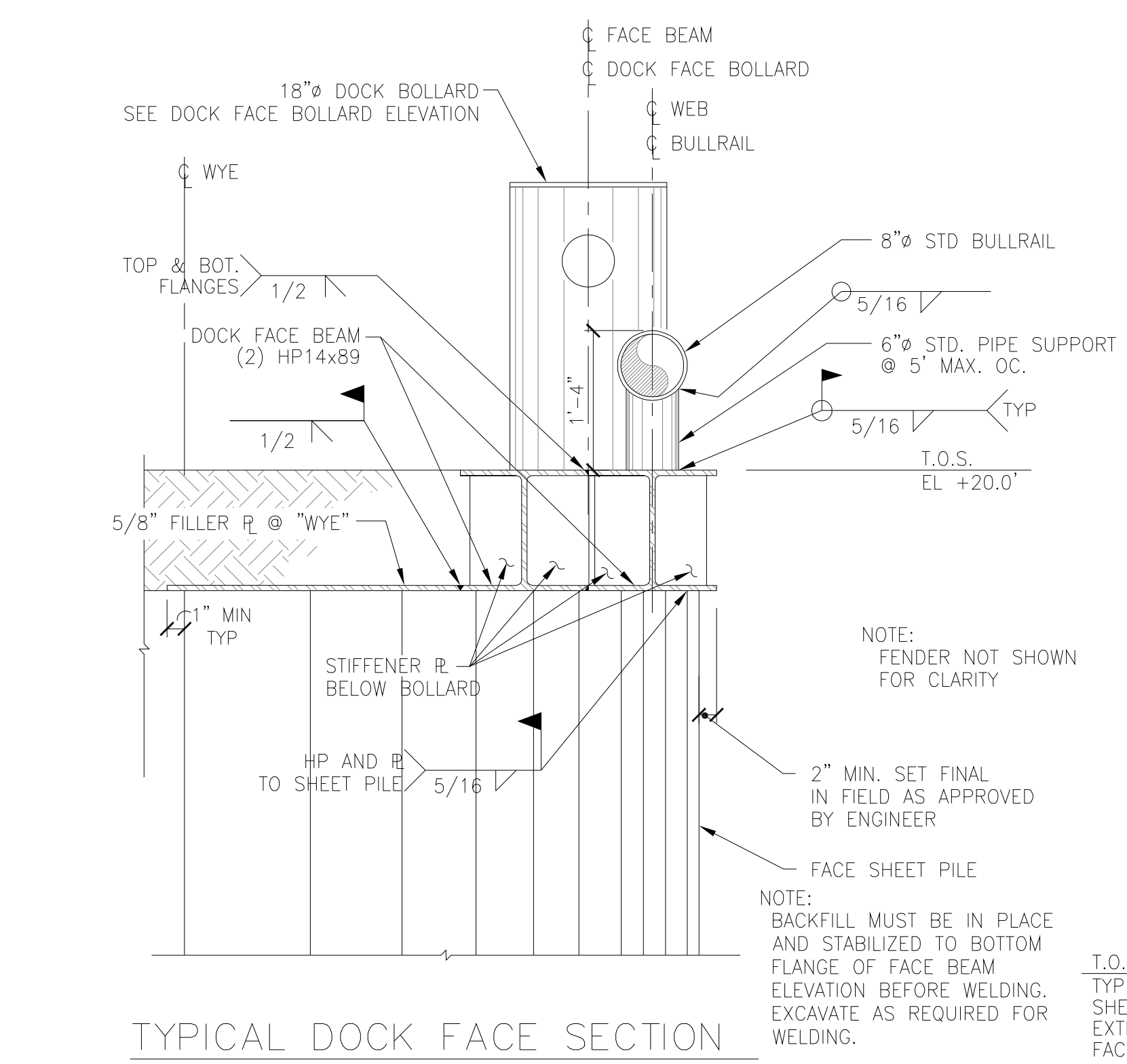
DESIGNED BY: SJ	SCALE : AS NOTED	FILE: 99086-05.DWG
DRAWN BY: WAY		DWG NO. 5 OF 17
APPROVED BY: DN	DATE : 3/23/2000	

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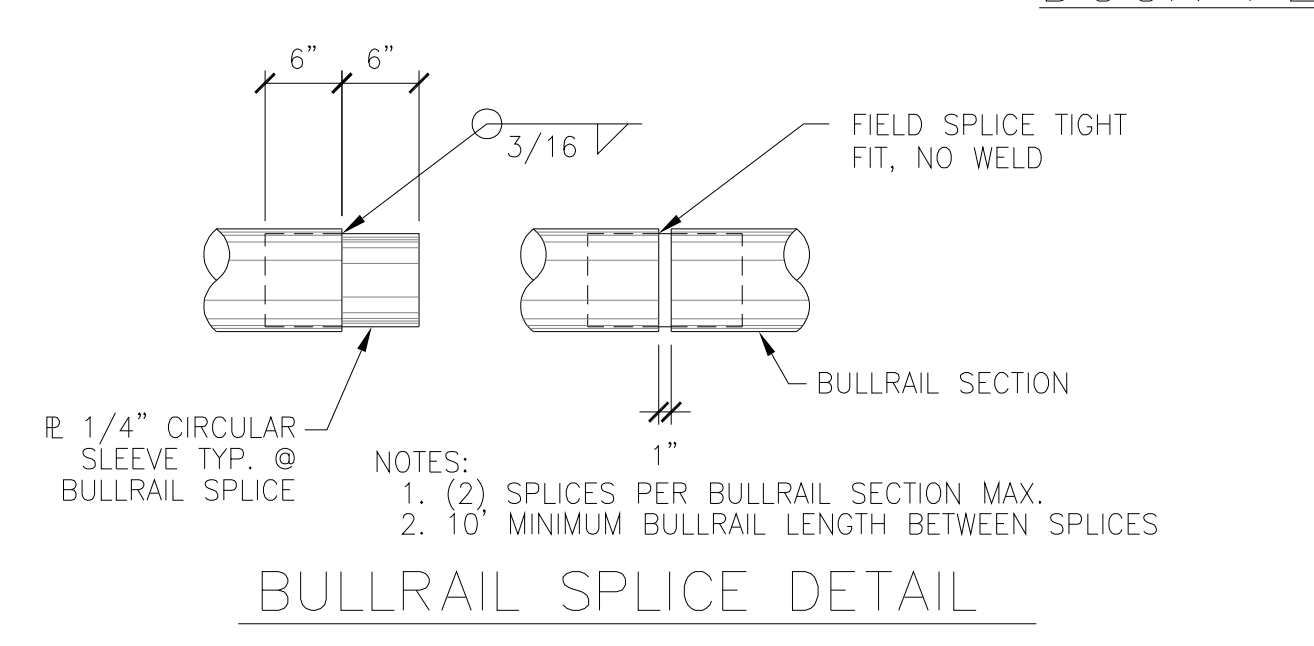
REV.	DATE	BY	REVISION



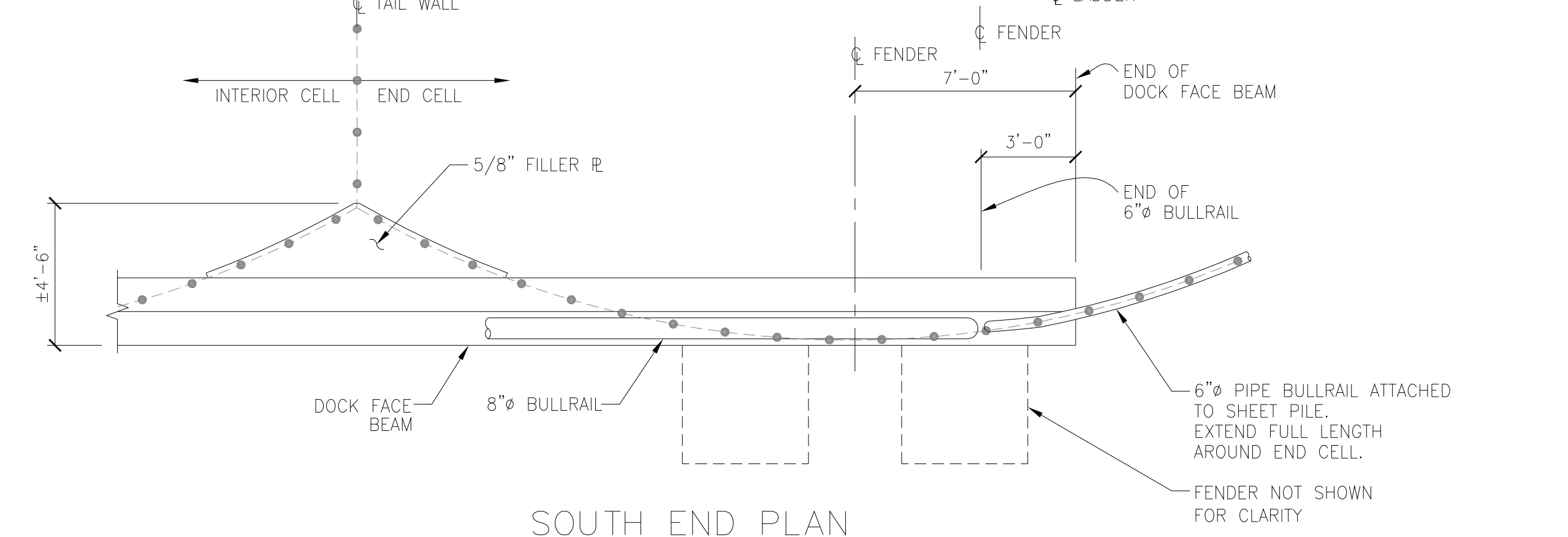
DOCK PLAN



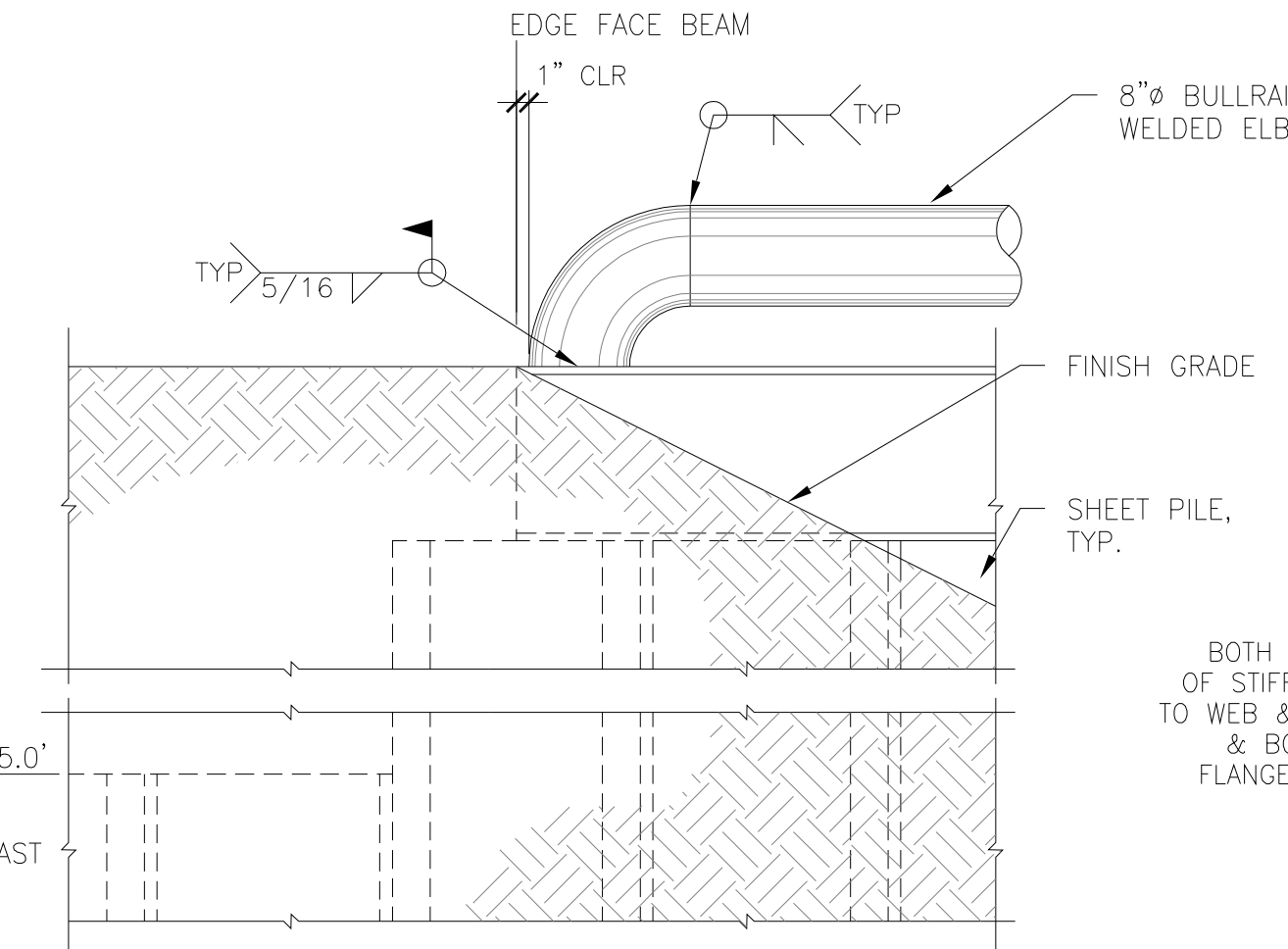
TYPICAL DOCK FACE SECTION



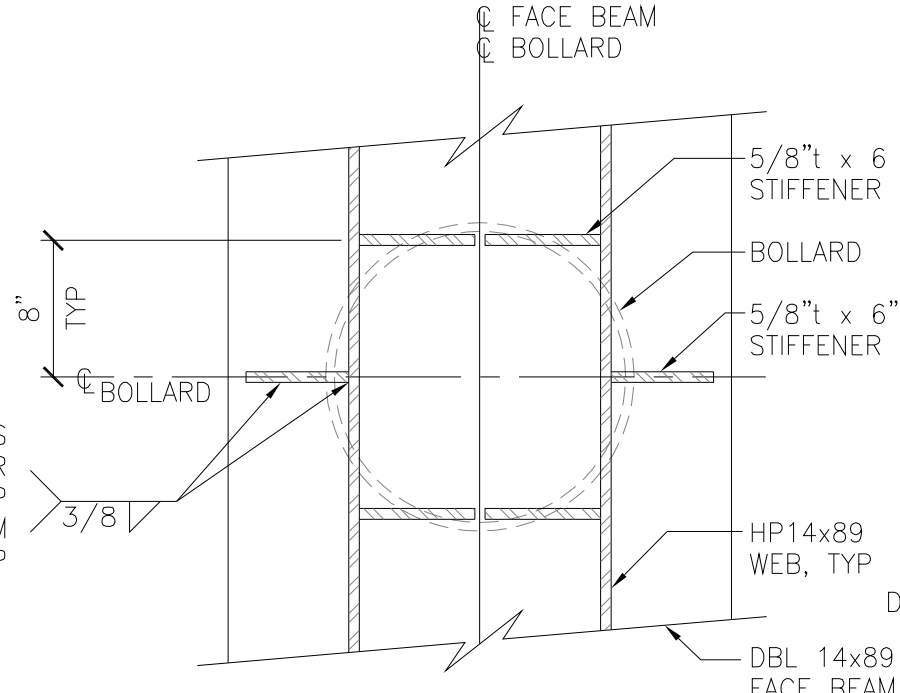
BULLRAIL SPLICE DETAIL



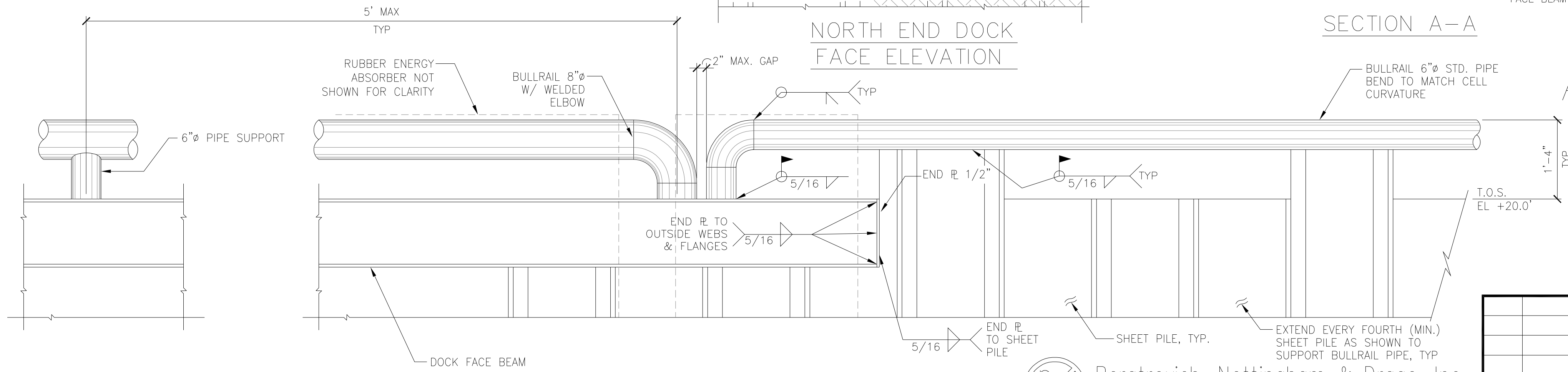
SOUTH END PLAN



NORTH END DOCK FACE ELEVATION



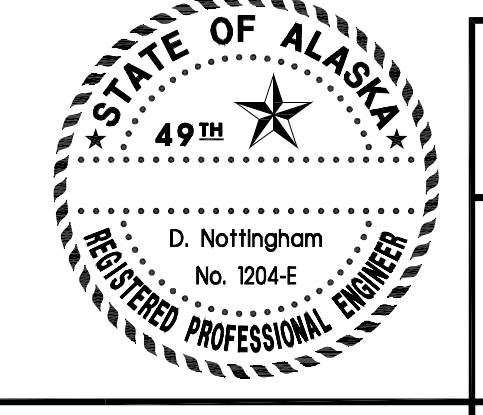
DOCK FACE BOLLARD ELEVATION



SOUTH END DOCK FACE ELEVATION

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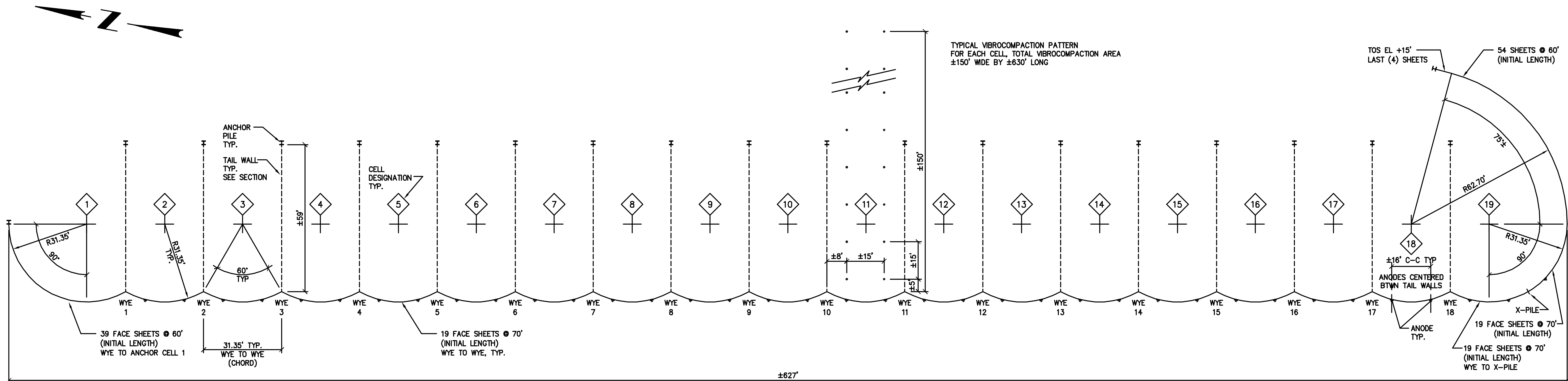


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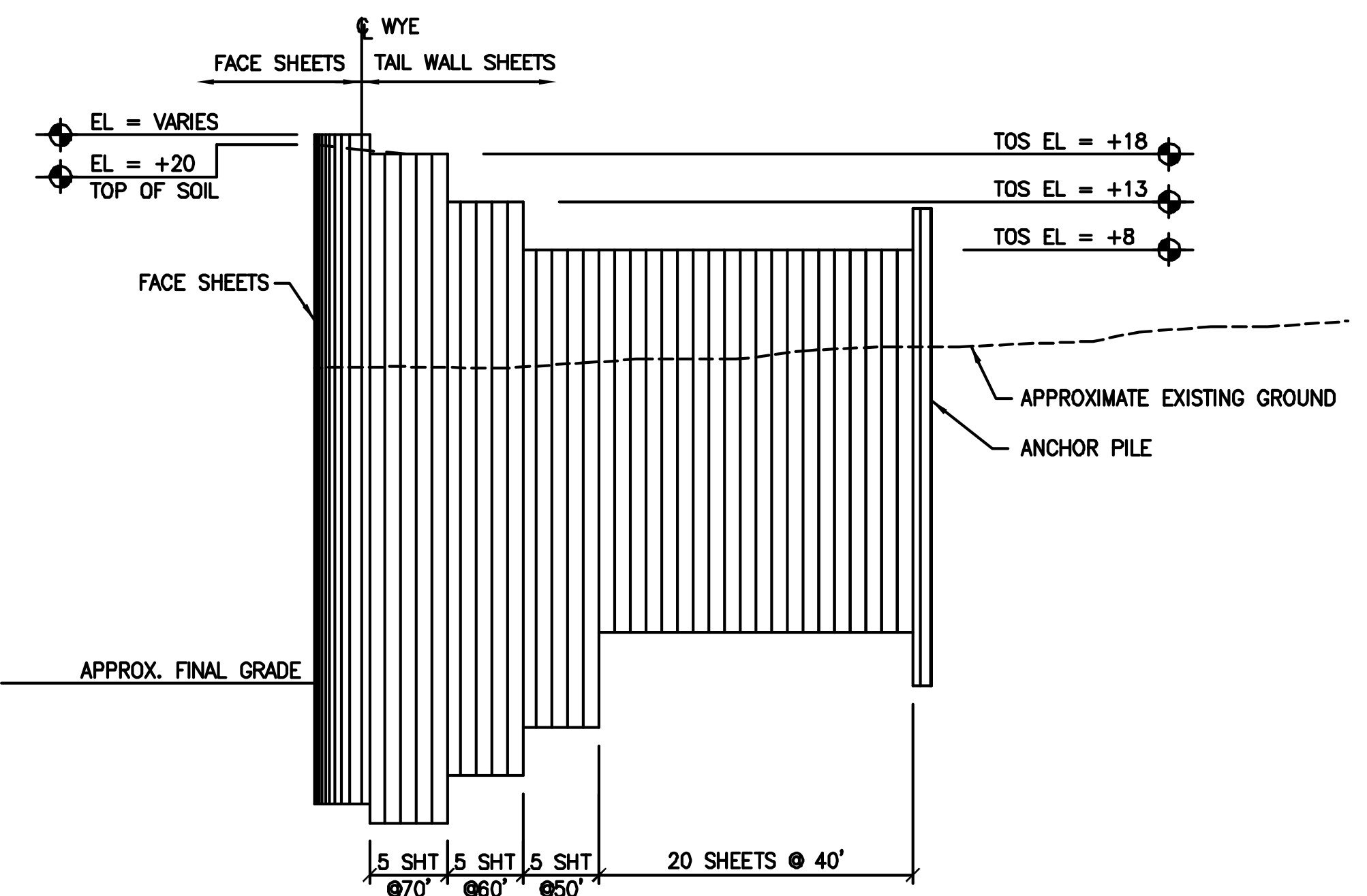
PROJECT :
NEW SEWARD RAILROAD DOCK
TITLE:
DOCK PLAN AND DETAILS

DESIGNED BY: KWB	SCALE : AS NOTED	FILE: 99068-06.DWG
DRAWN BY: WAY	DATE : 3/23/2000	DWG NO.
APPROVED BY: DN		6 OF 17

REV.	DATE	BY	REVISION



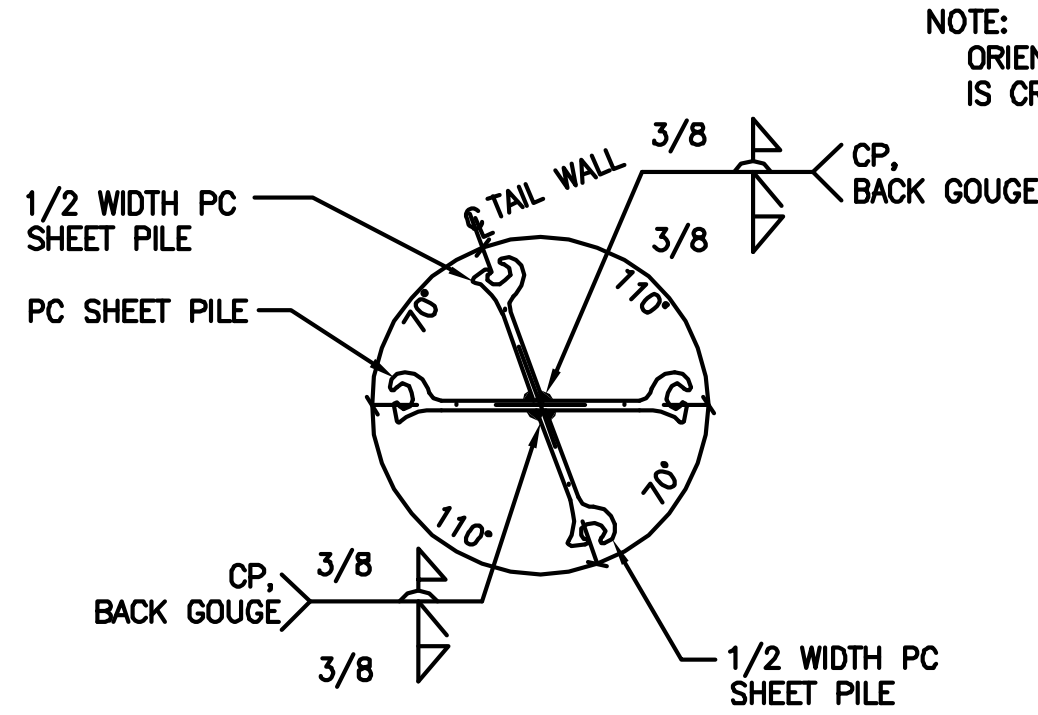
SHEET PILE LAYOUT



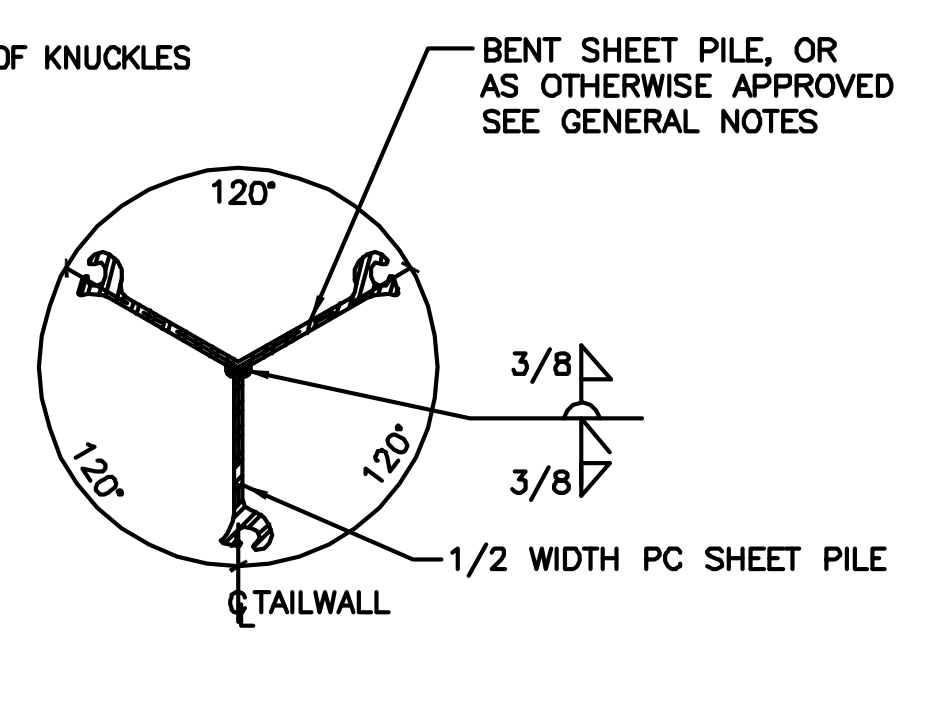
TYPICAL TAIL WALL SECTION

WYE LAYOUT TABLE		
WYE	POSITION (FT)	
	NORTHING	EASTING
1	2236213.35	1745198.91
2	2236182.53	1745204.64
3	2236151.71	1745210.36
4	2236120.89	1745216.09
5	2236090.06	1745221.82
6	2236059.24	1745227.55
7	2236028.42	1745233.28
8	2235997.60	1745239.01
9	2235966.78	1745244.73
10	2235935.95	1745250.46
11	2235905.13	1745256.19
12	2235874.31	1745261.92
13	2235843.49	1745267.65
14	2235812.66	1745273.37
15	2235781.84	1745279.10
16	2235751.02	1745284.83
17	2235720.20	1745290.56
18	2235689.38	1745296.29

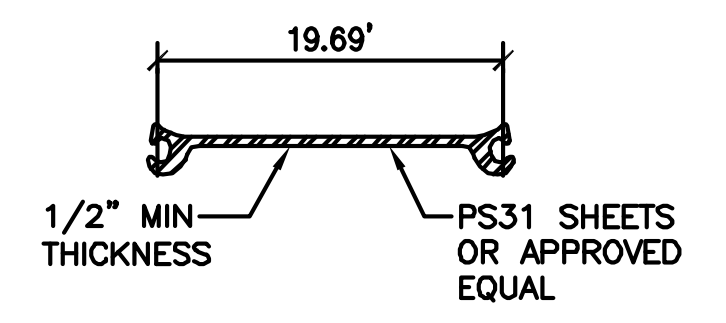
SHEET PILE INTERLOCK TYPICAL DETAIL



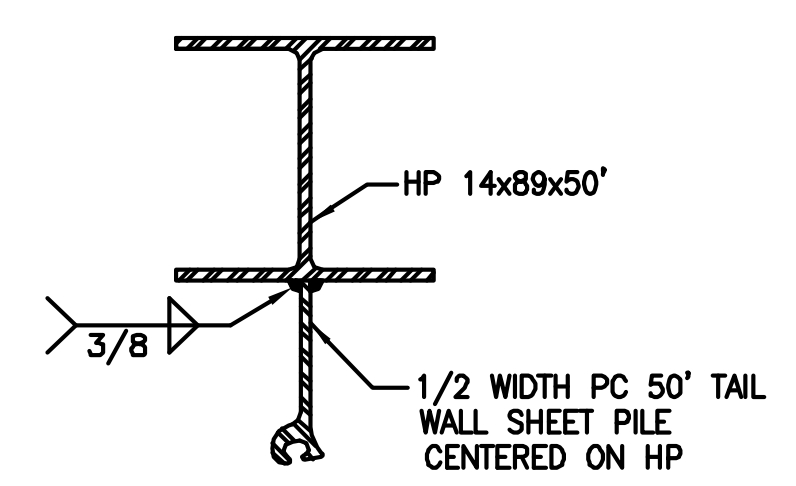
X-PILE SECTION (70' EA.)



WYE SECTION (70' EA.)

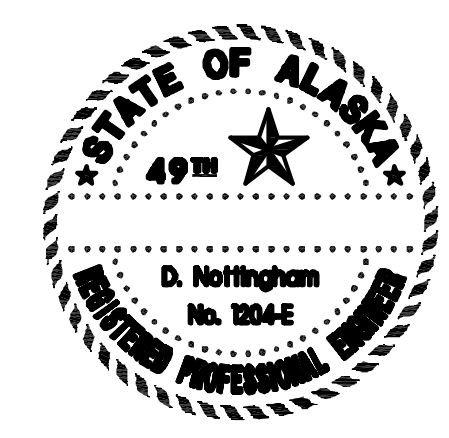


SHEET PILE SECTION



ANCHOR PILE SECTION

MATERIAL QUANTITIES	
DESCRIPTION	NUMBER
70' SHEETS	451
60' SHEETS	183
50' SHEETS	90
40' SHEETS	360
70' WYES	18
70' X-PILE	1
50' ANCHOR	20
70' SHEETS (EXTRA)	15



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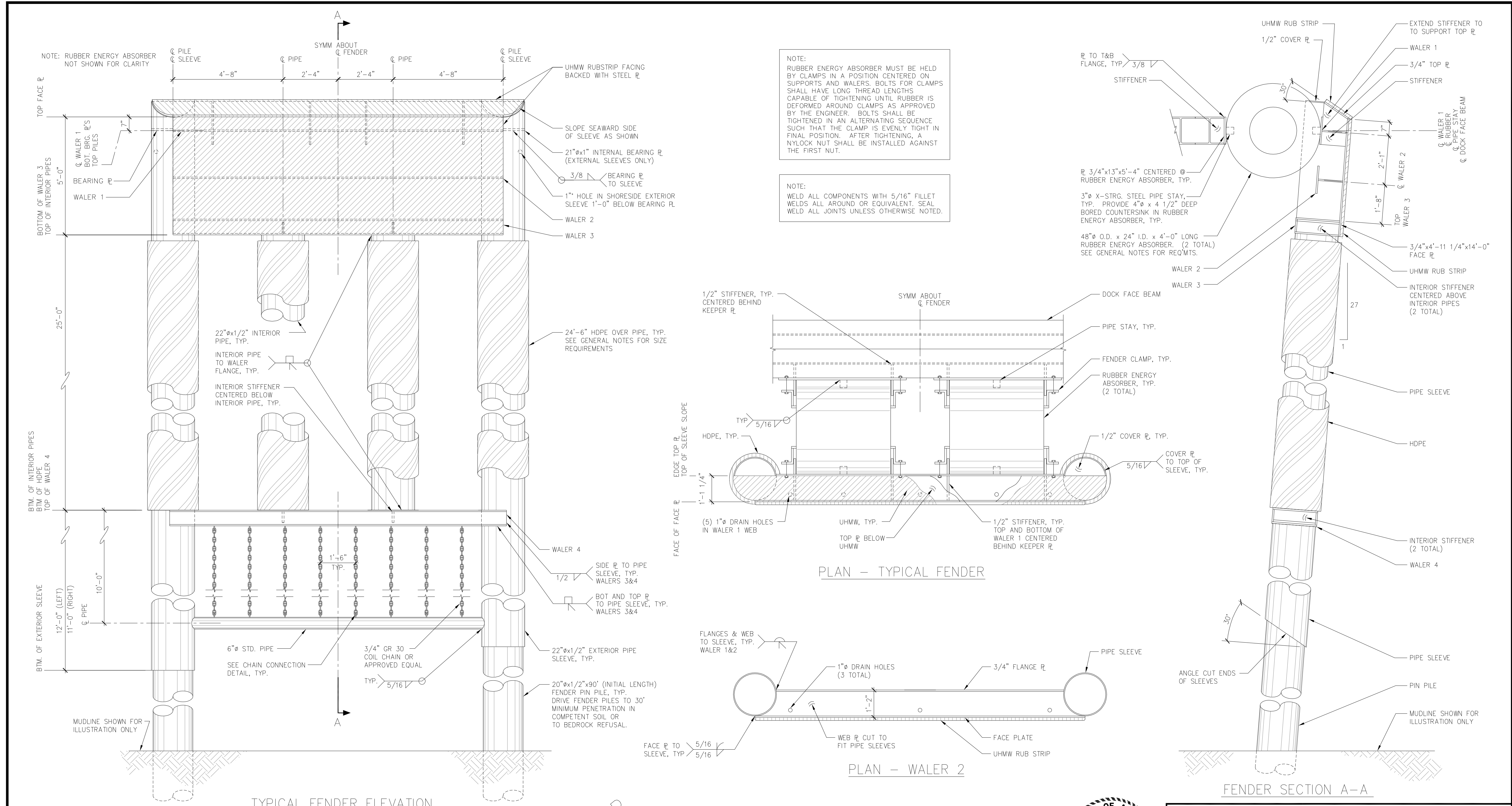
PROJECT: **NEW SEWARD RAILROAD DOCK**

TITLE: **SHEET PILE AND VIBROCOMPACTION PLAN AND DETAILS**

DESIGNED BY: KWB SCALE: NONE FILE: 99068-07.DWG
 DRAWN BY: WAY DWG NO. **7** OF **17**
 APPROVED BY: DN DATE: 3/23/2000

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NOTE:
ALL FENDER STEEL SHALL BE GALVANIZED. IF REQUIRED FOR GALVANIZING, HOLES IN WALER 3 OR WALER 4 SHALL BE REPAIRED. INSIDE AND OUTSIDE OF EXTERIOR SLEEVES SHALL BE GALVANIZED.



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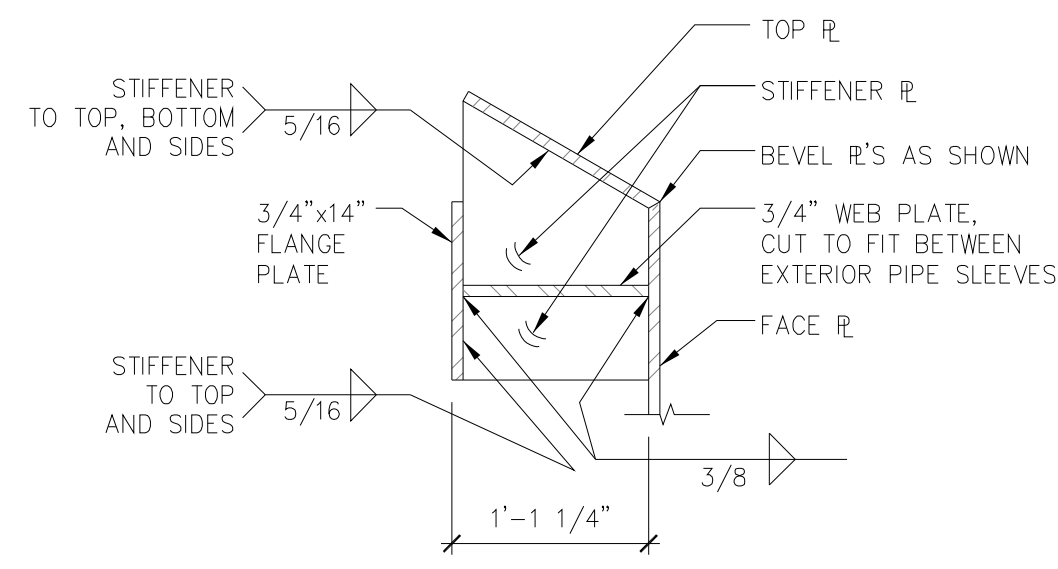
PROJECT: **NEW SEWARD RAILROAD DOCK**

TITLE: **FENDER DETAILS 1 OF 2**

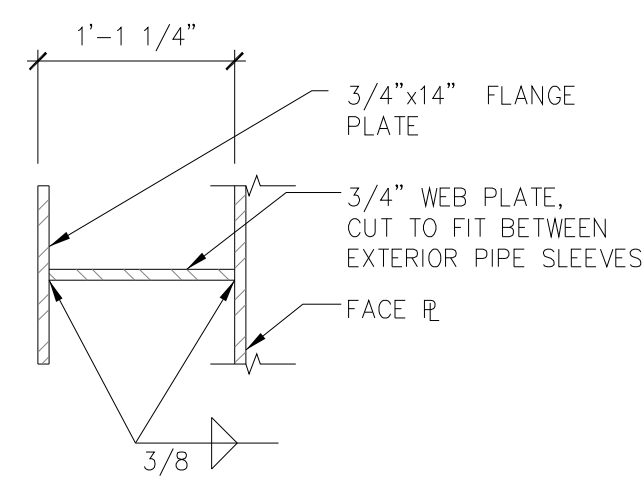
DESIGNED BY: KWB
DRAWN BY: WAY
APPROVED BY: DN

SCALE: AS NOTED
DATE: 3/23/2000

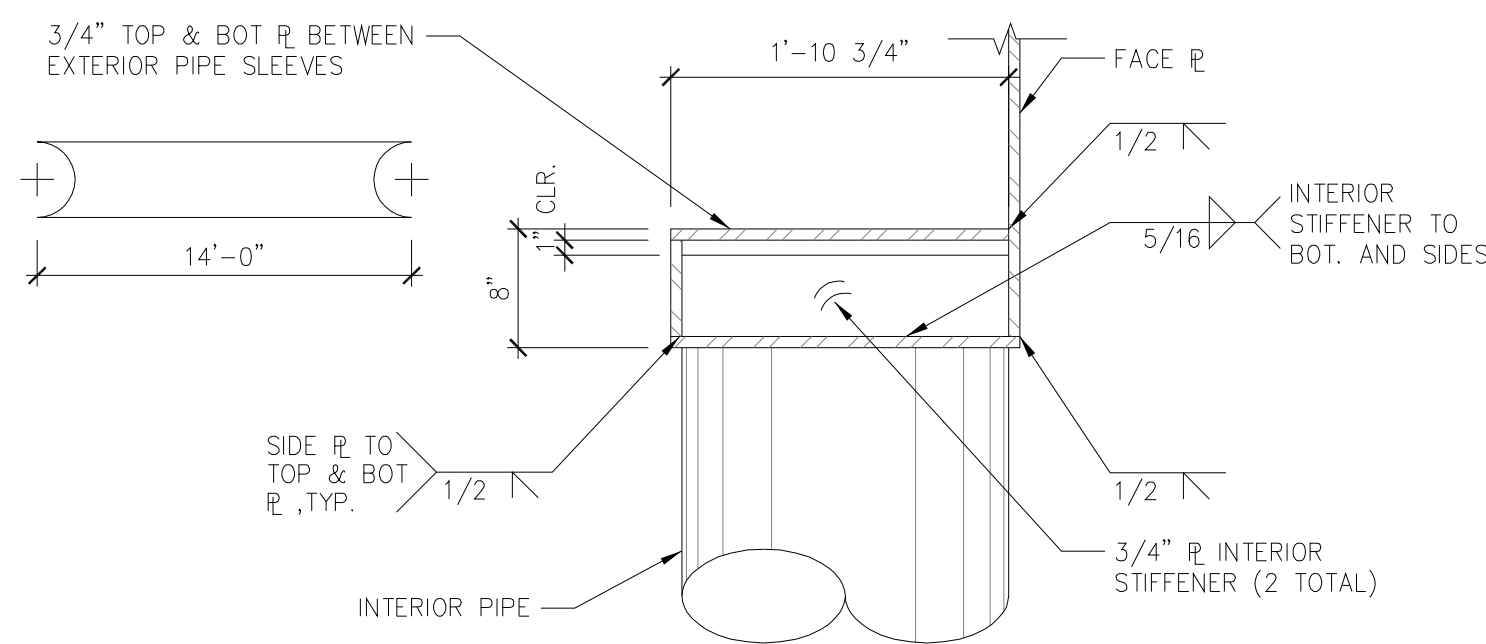
FILE: 99068-08.DWG
DWG NO. **8** OF **17**



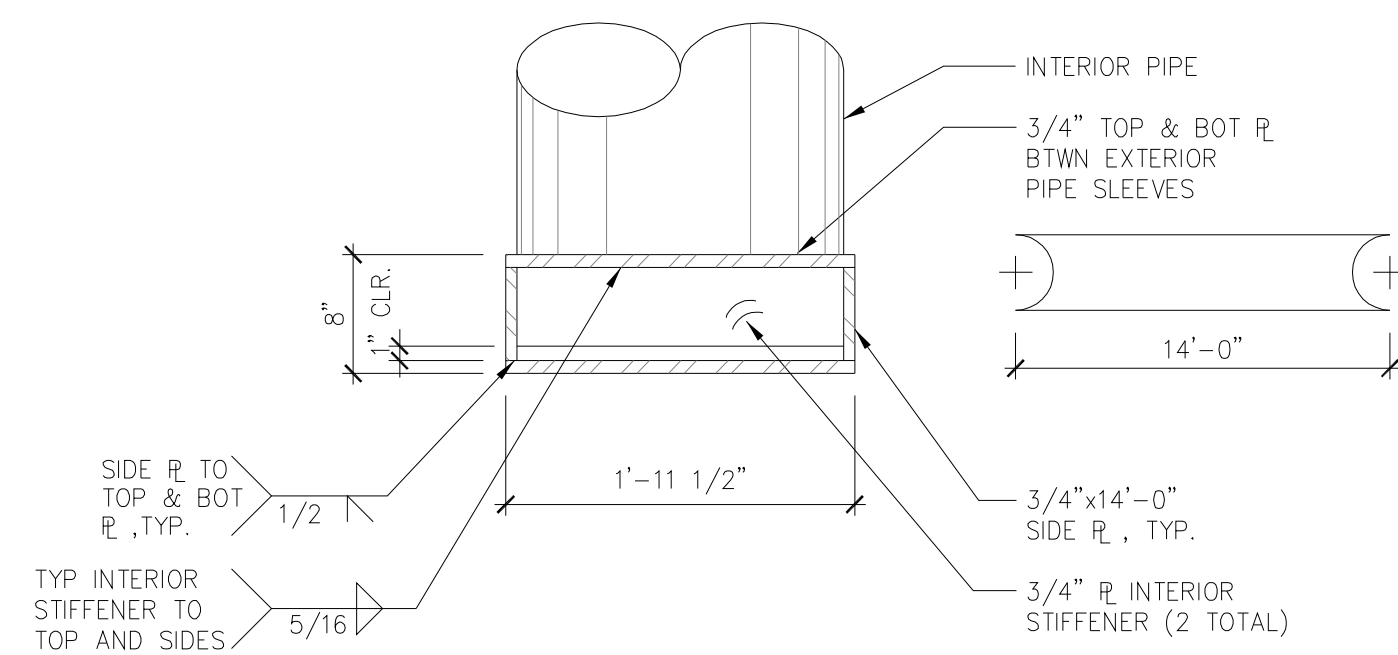
SECTION - WALER 1



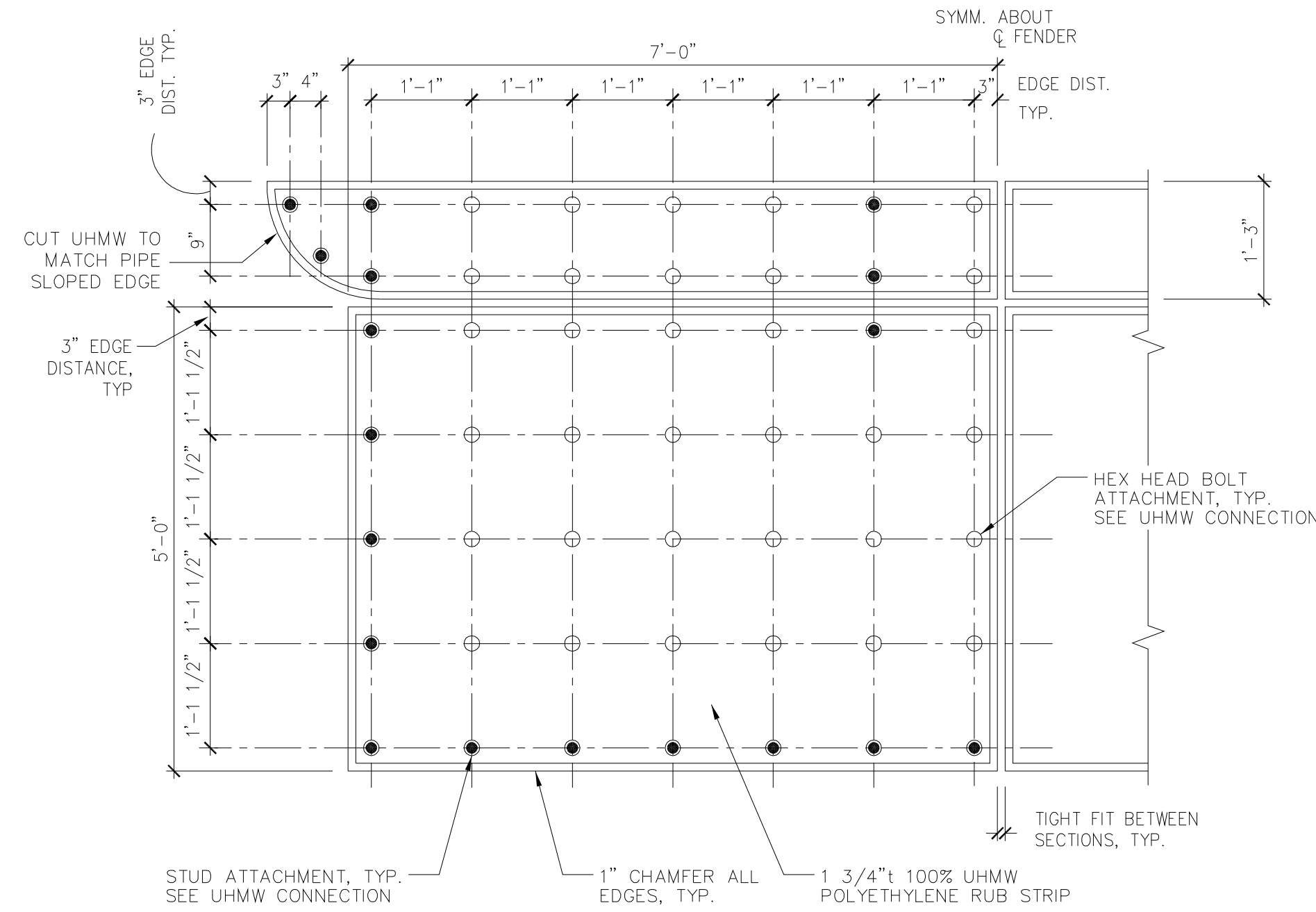
SECTION - WALER 2



SECTION - WALER 3

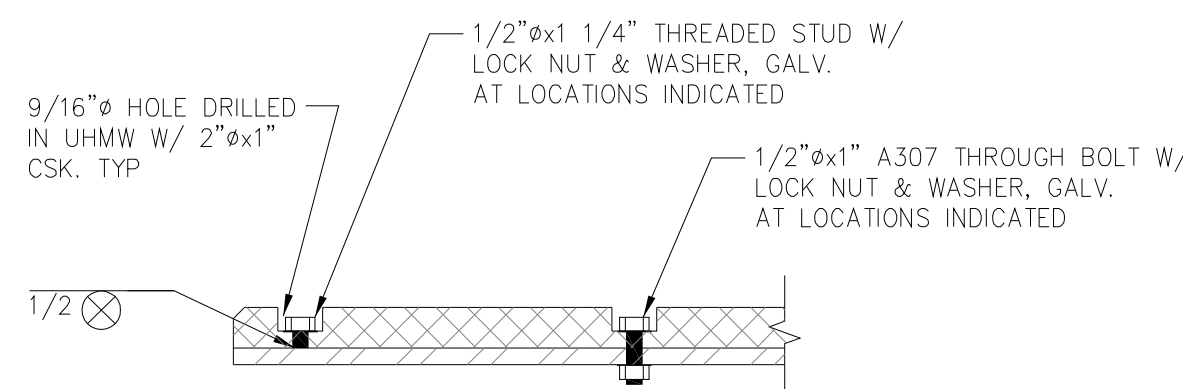


SECTION - WALER 4

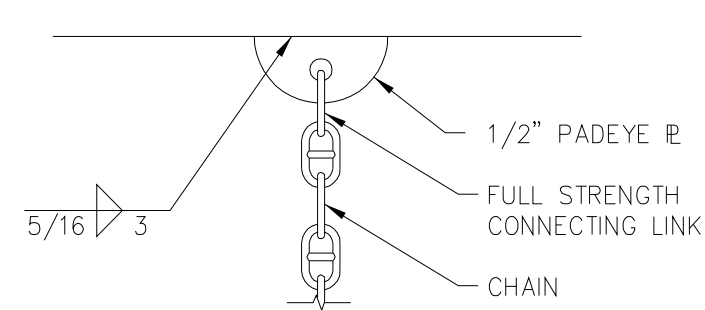


UHMW LAYOUT

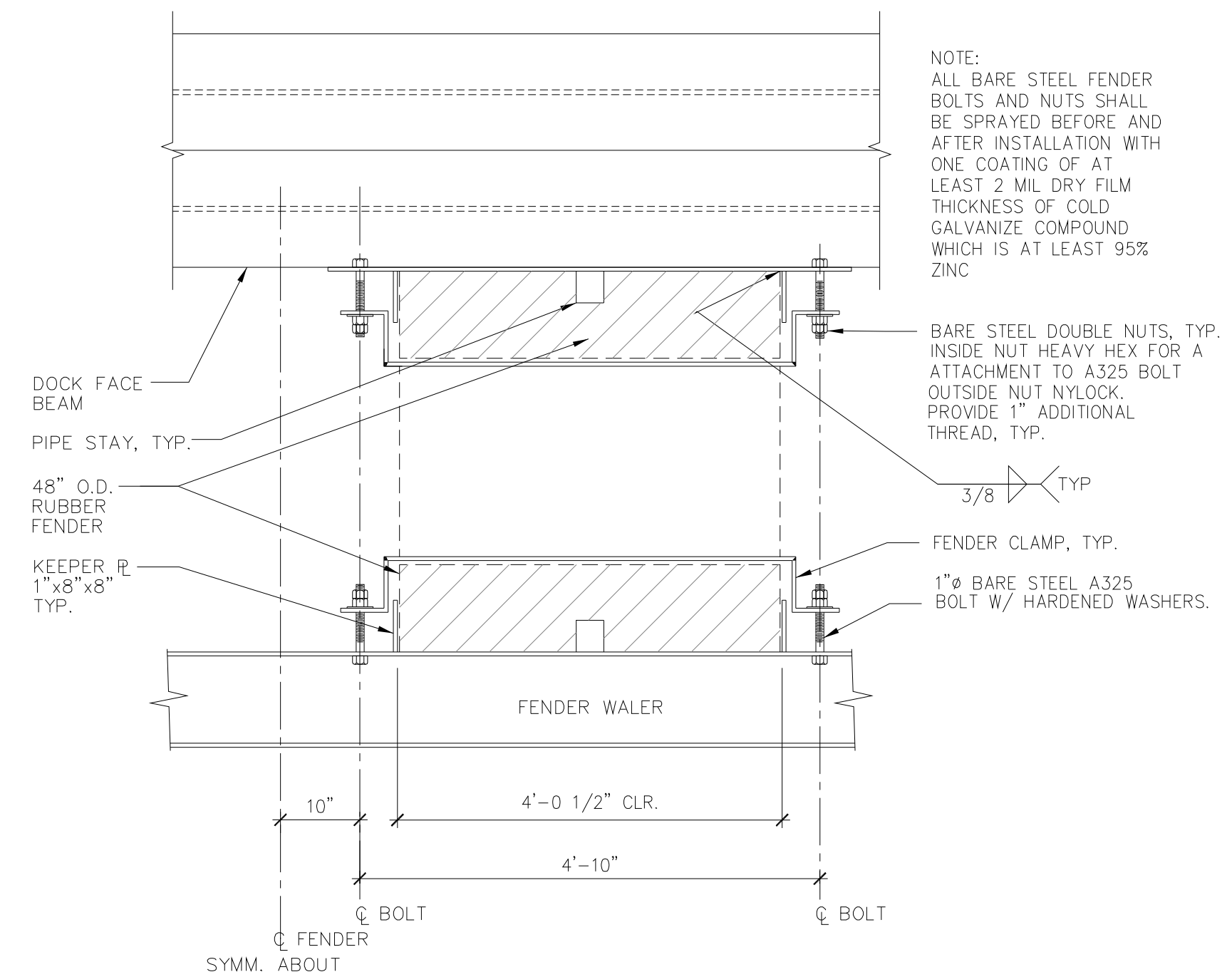
NOTE:
WELD ALL COMPONENTS WITH 5/16\"/>



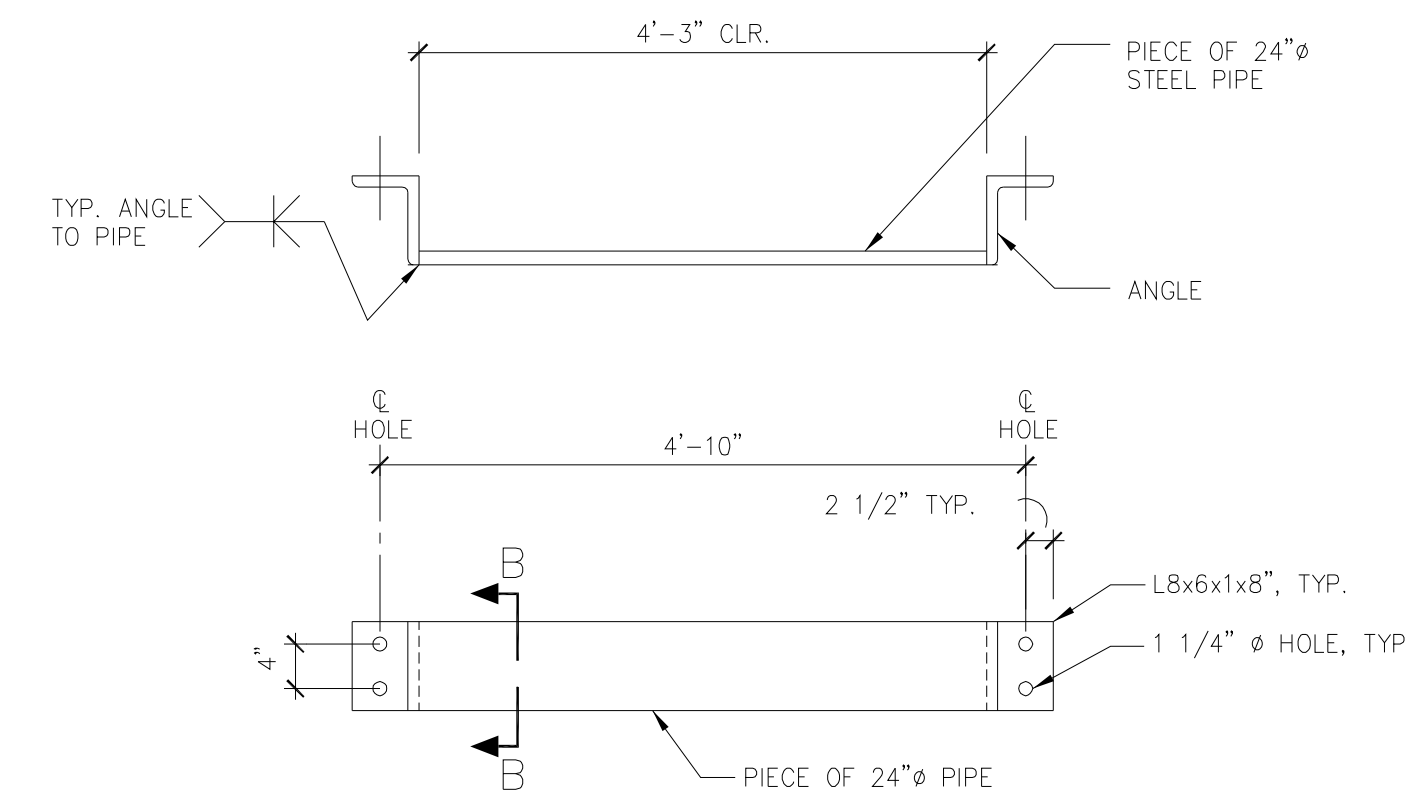
UHMW CONNECTION



CHAIN CONNECTION DETAIL



FENDER ATTACHMENT PLAN
NOTE: PROVIDE (16) 1\"/>



FENDER CLAMP

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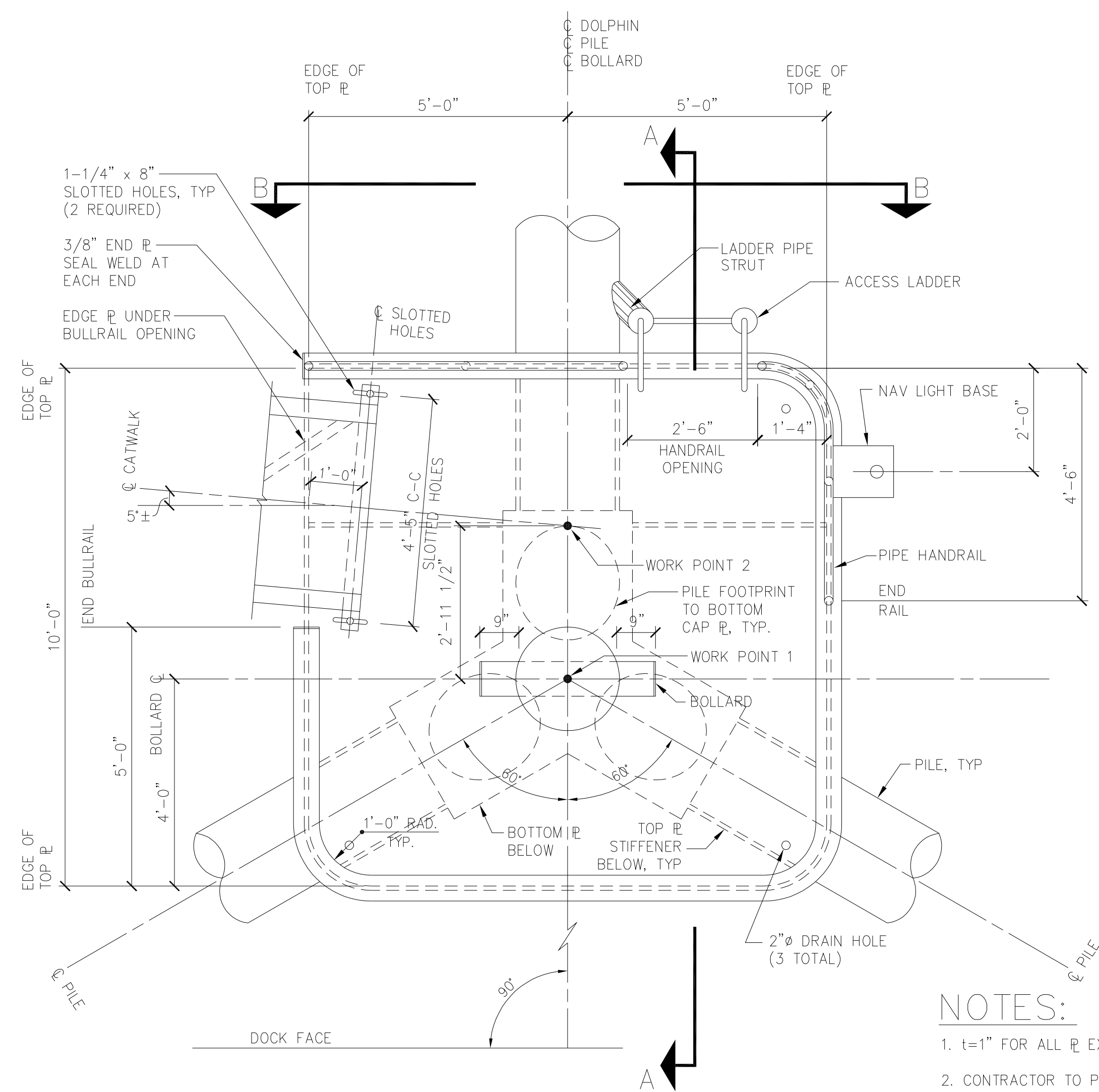
PROJECT: **NEW SEWARD RAILROAD DOCK**

TITLE: **FENDER DETAILS 2 OF 2**

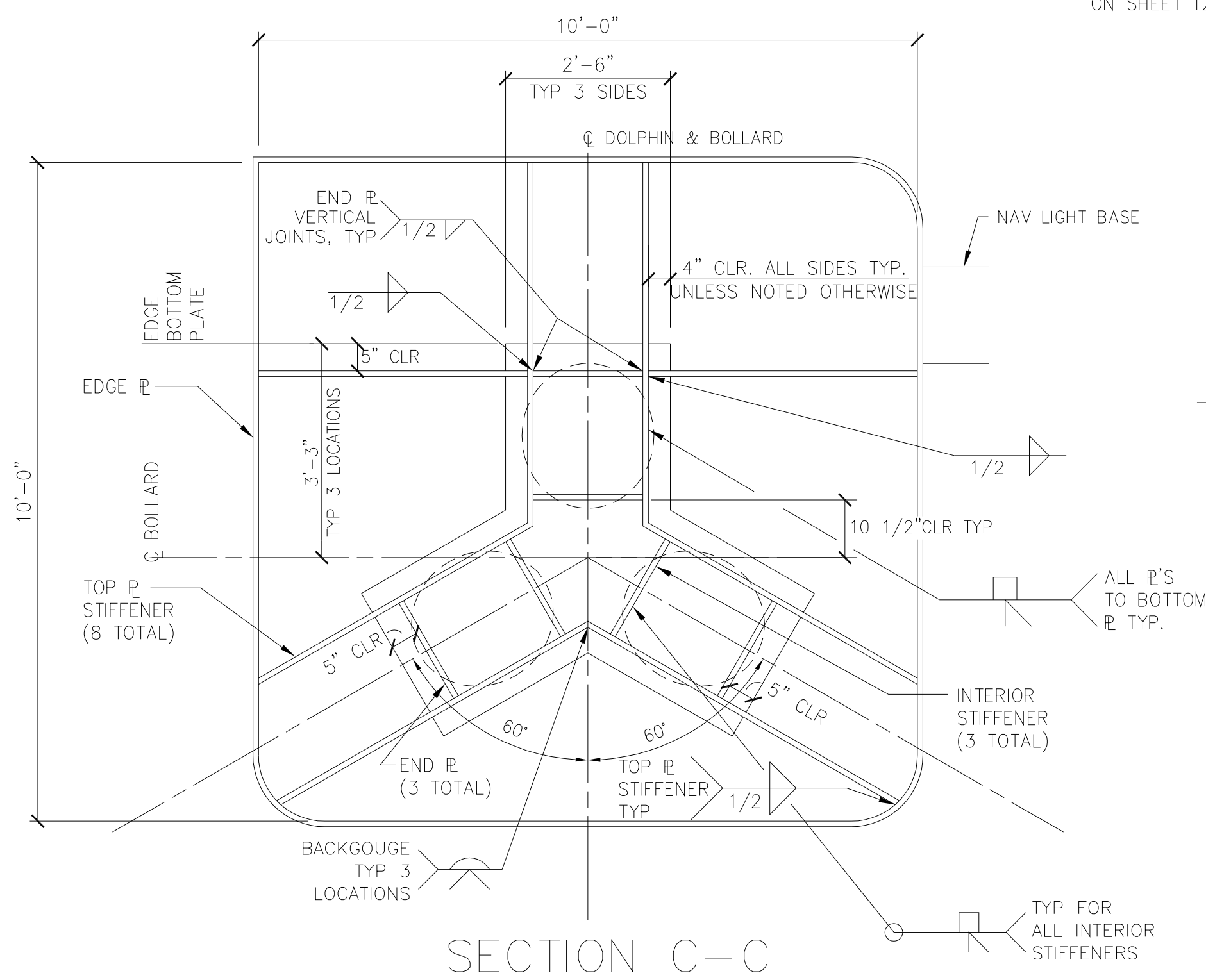
DESIGNED BY: KWB
DRAWN BY: WAY
APPROVED BY: DN

SCALE: AS NOTED
DATE: 3/23/2000

FILE: 99068-09.DWG
DWG NO. **9** OF **17**



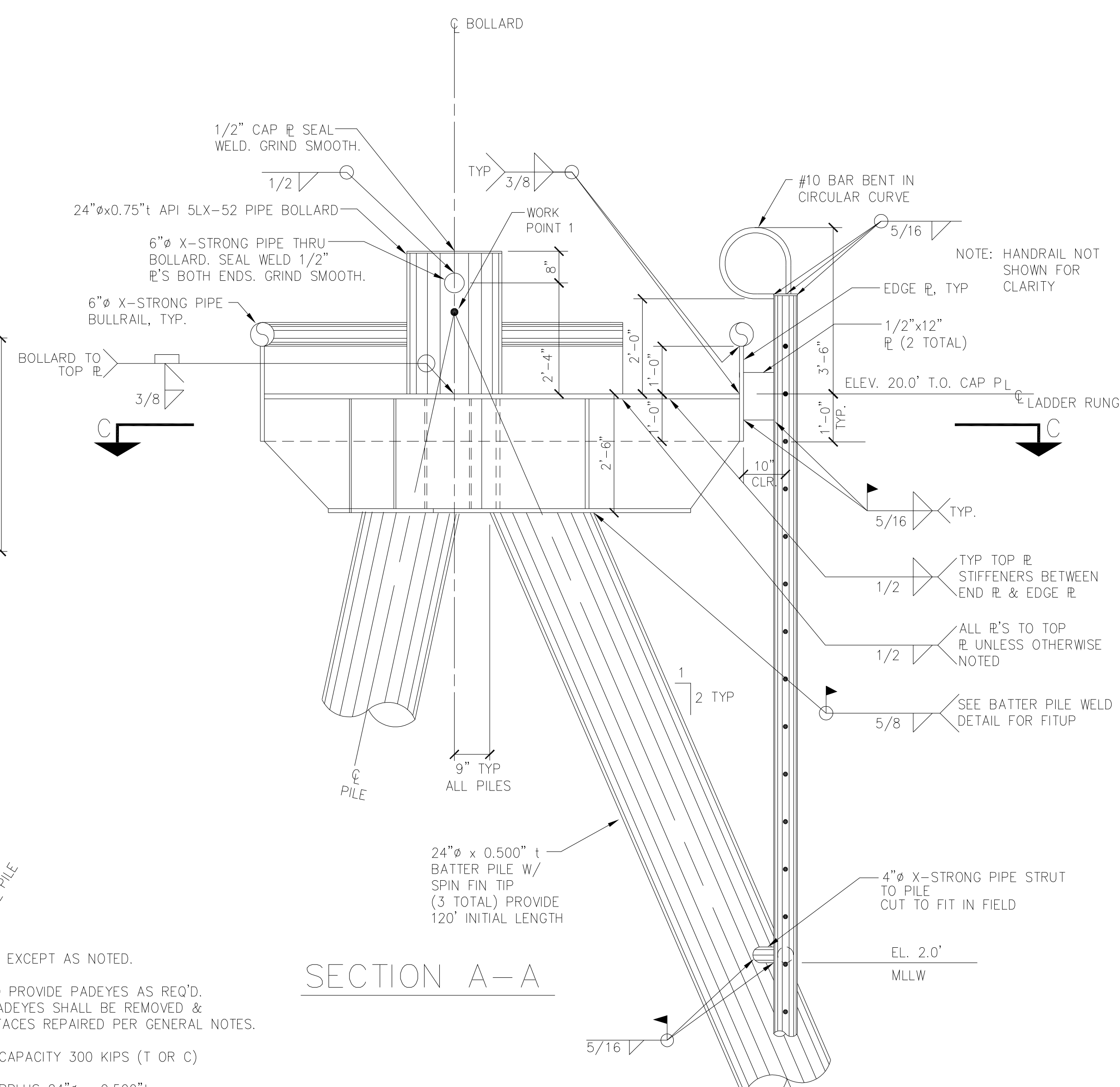
WEST DOLPHIN PLAN



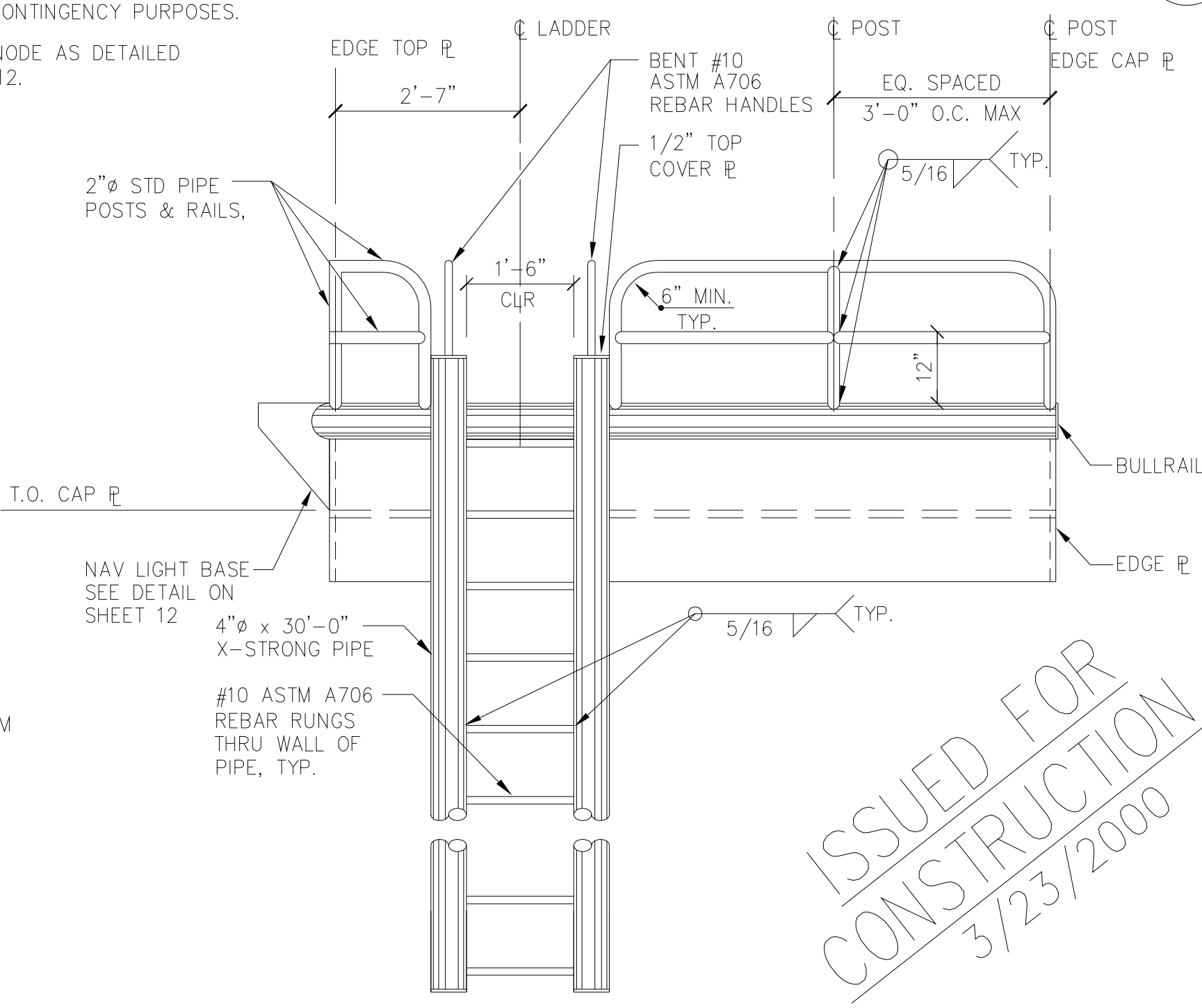
SECTION C-C

NOTES:

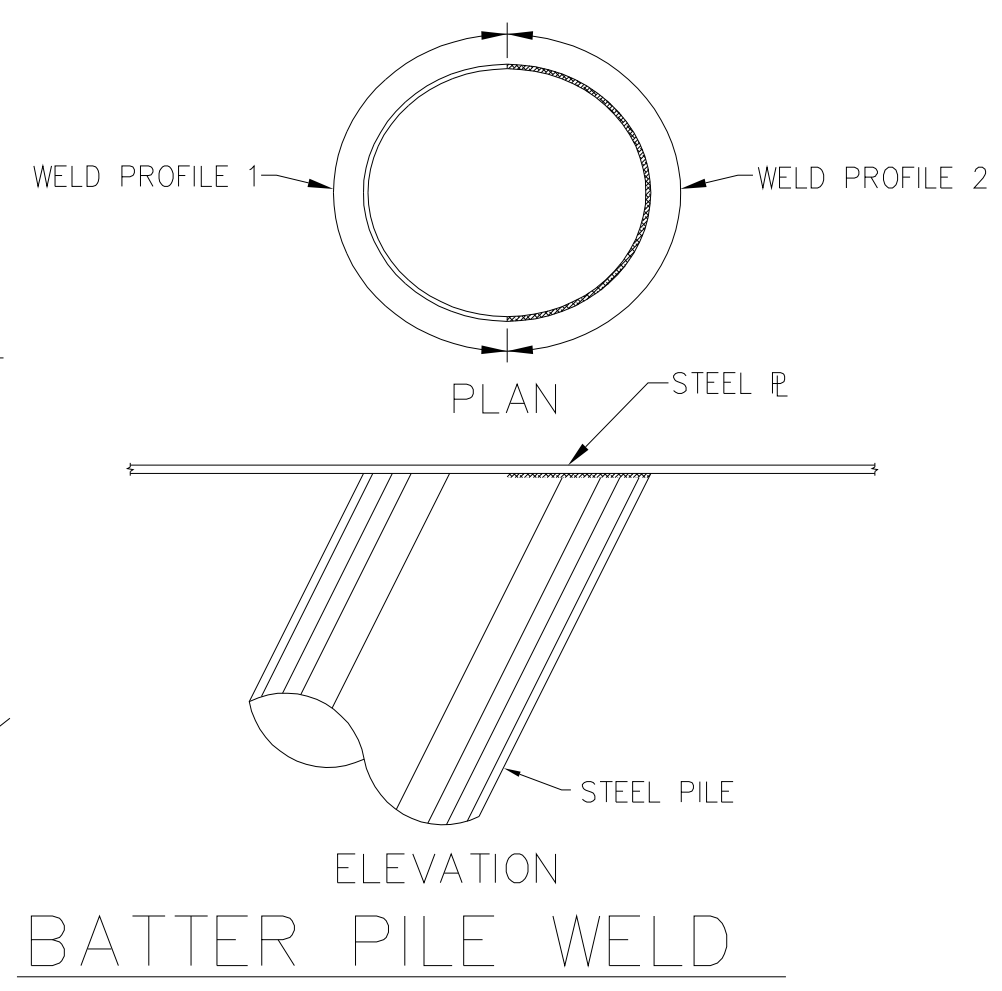
1. t=1" FOR ALL R EXCEPT AS NOTED.
2. CONTRACTOR TO PROVIDE PADEYES AS REQ'D. FOR PICKING. PADEYES SHALL BE REMOVED & METALIZED SURFACES REPAIRED PER GENERAL NOTES.
3. REQUIRED PIPE CAPACITY 300 KIPS (T OR C)
4. PROVIDE 40" SURPLUS 24"Ø x 0.500"t PIPE FOR CONTINGENCY PURPOSES.
5. PROVIDE ANODE AS DETAILED ON SHEET 12.



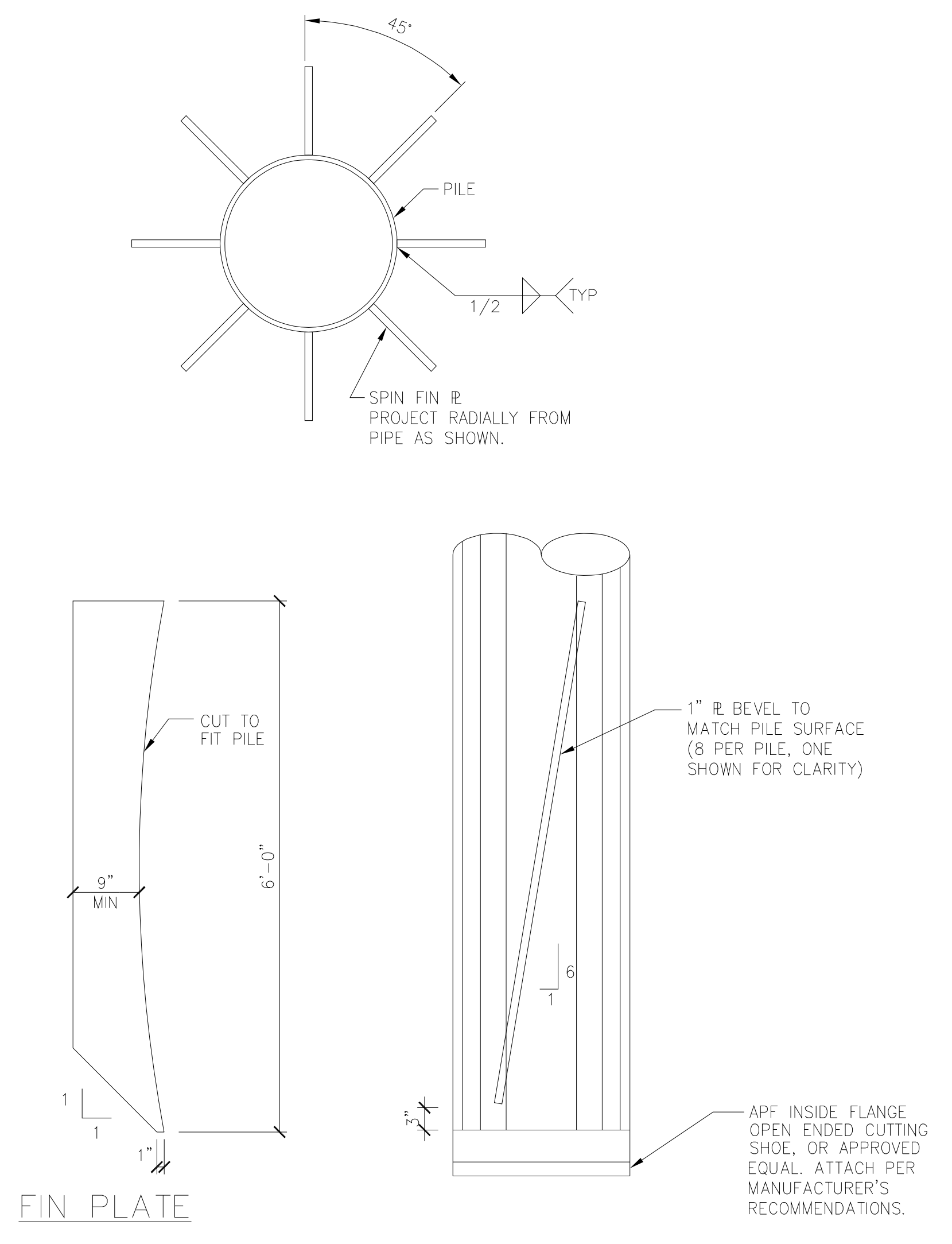
SECTION A-A



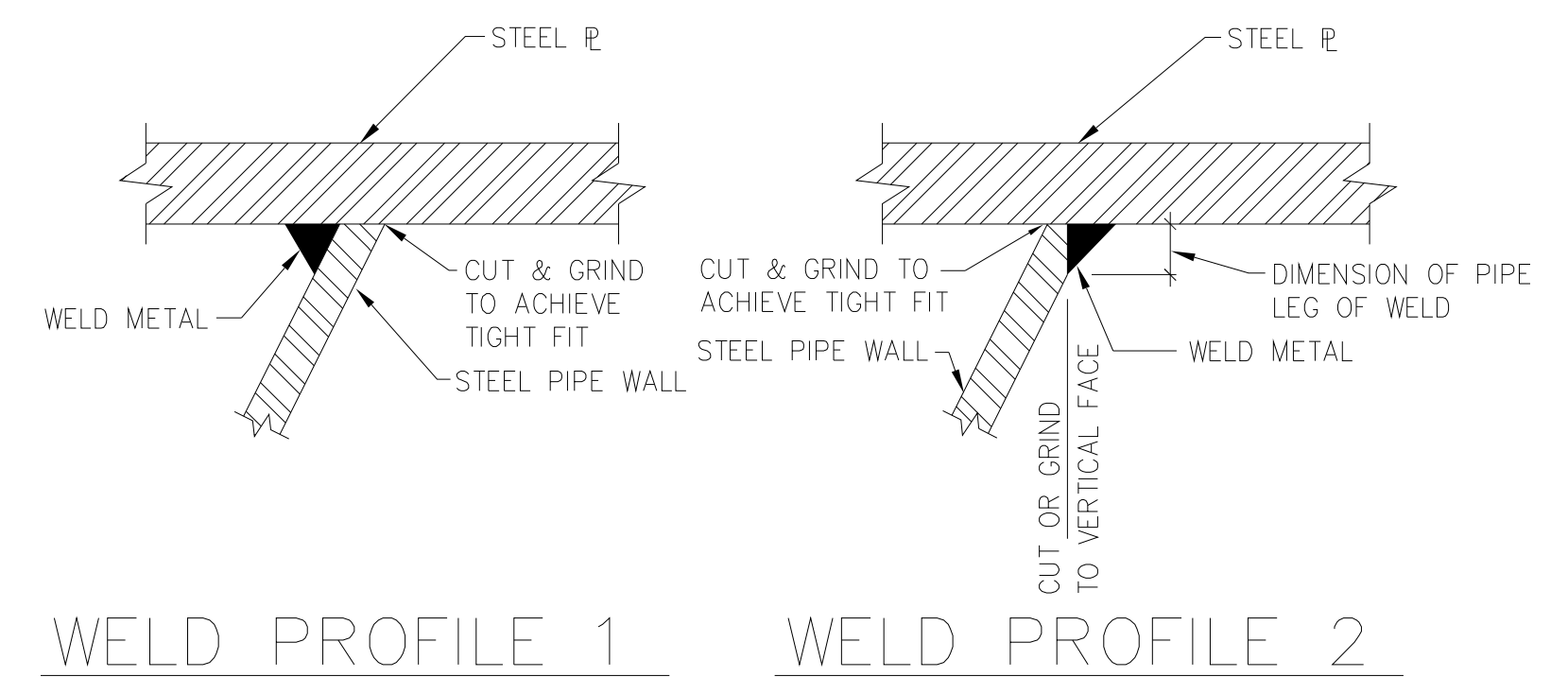
VIEW B-B HANDRAIL/ACCESS LADDER



BATTER PILE WELD



DOLPHIN PILE TIP DETAIL



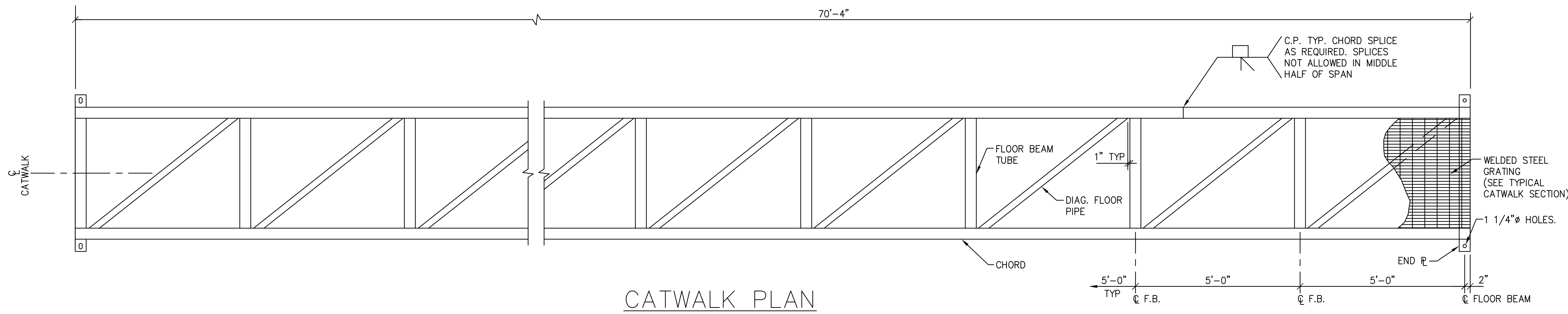
WELD PROFILE 1 WELD PROFILE 2

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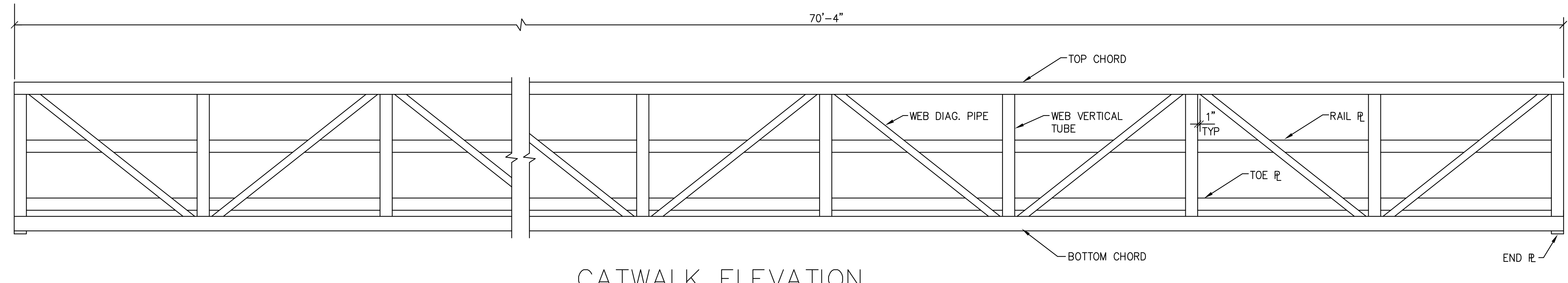
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Engineering Consultants
1506 W. 36th Avenue
Anchorage, Alaska 99503
(907) 561-1011

REV.	DATE	BY	REVISION

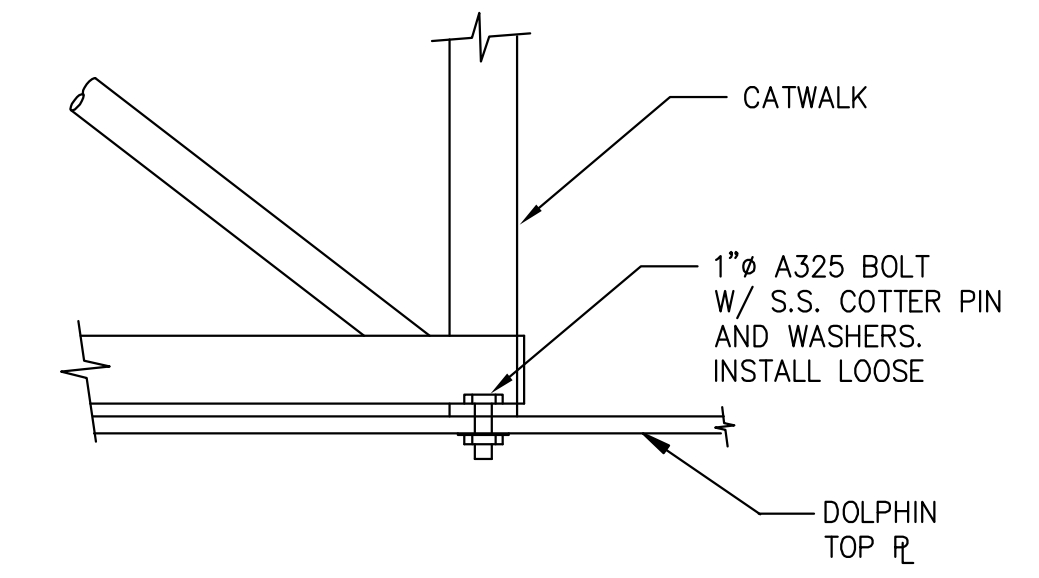
ALASKA RAILROAD CORPORATION OFFICE OF THE CHIEF ENGINEER P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500 (907) 265-2456		
PROJECT :		
NEW SEWARD RAILROAD DOCK		
TITLE:		
MOORING DOLPHIN DETAILS		
DESIGNED BY:	KWB	FILE: 99068-010.DWG
DRAWN BY:	WAY	DWG NO.
APPROVED BY:	DN	10 OF 17
SCALE : AS NOTED		DATE : 3/23/2000



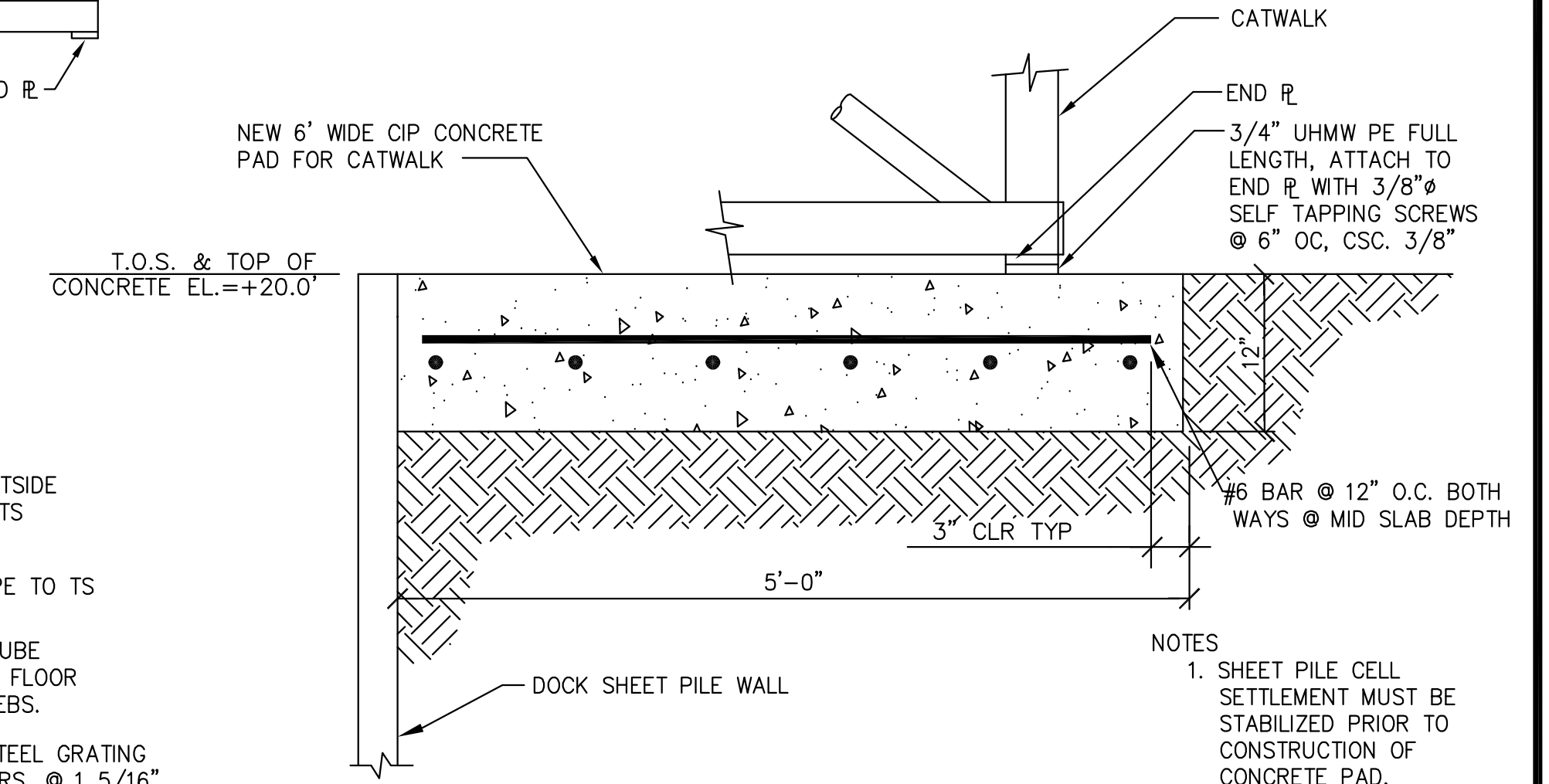
CATWALK PLAN



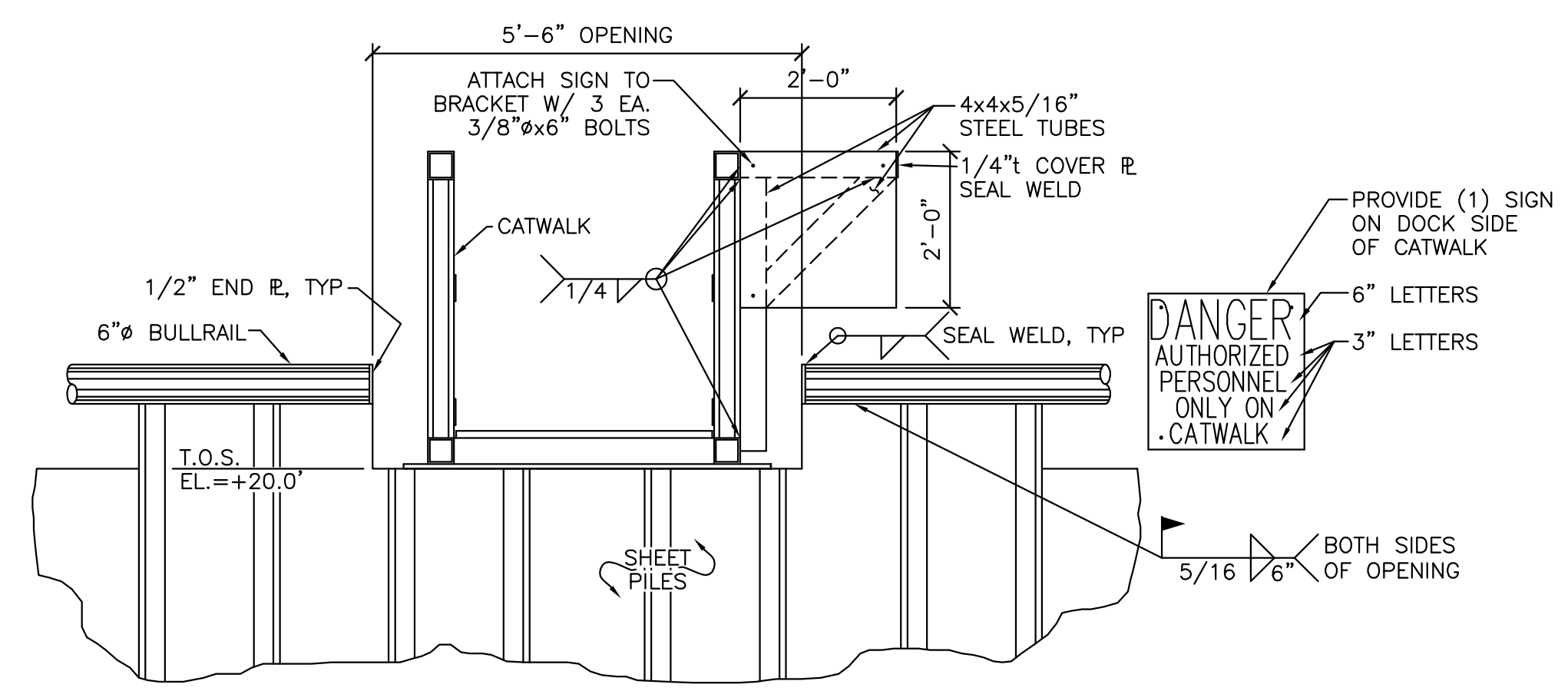
CATWALK ELEVATION



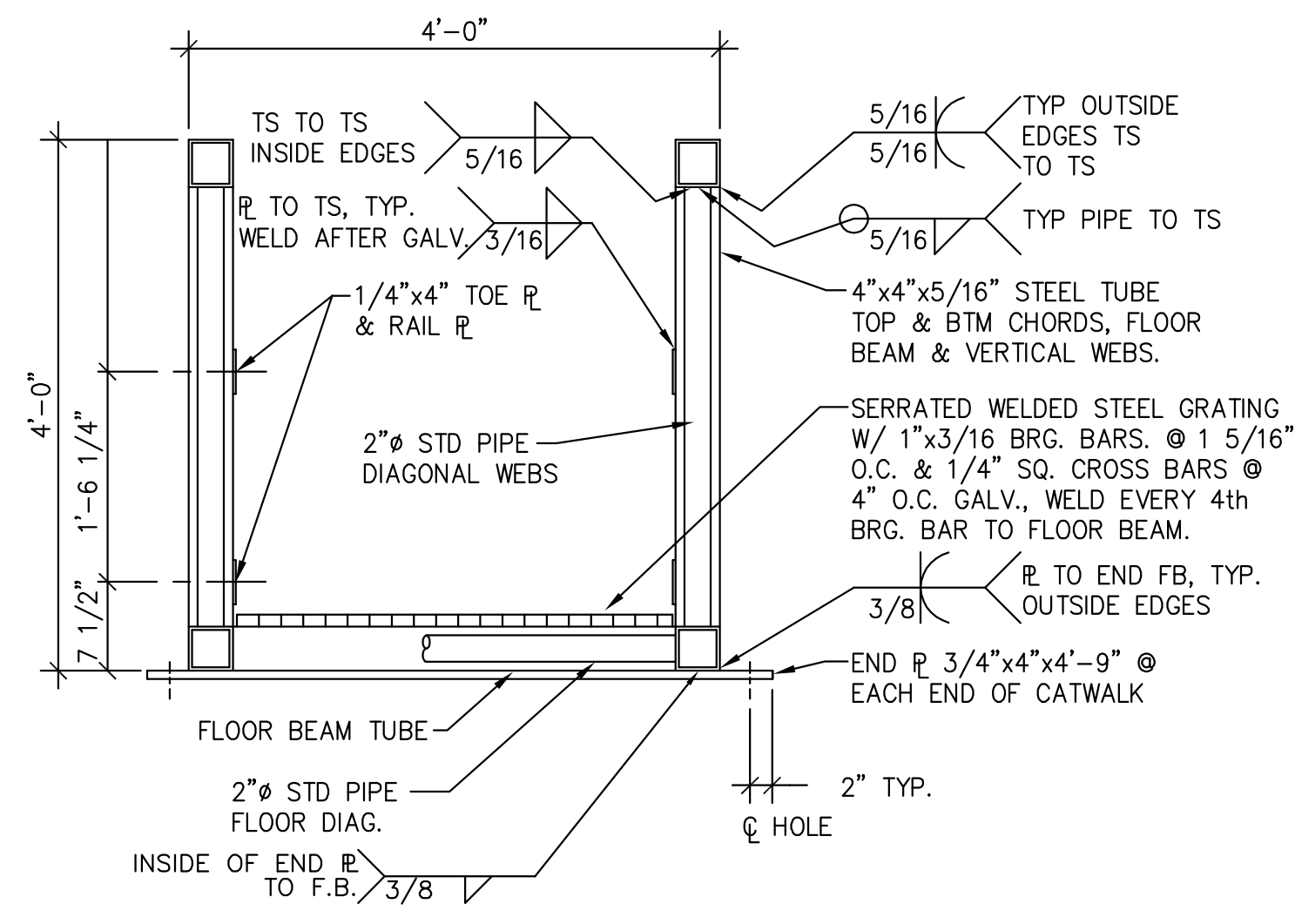
DOLPHIN CONNECTION



DOCK CONNECTION



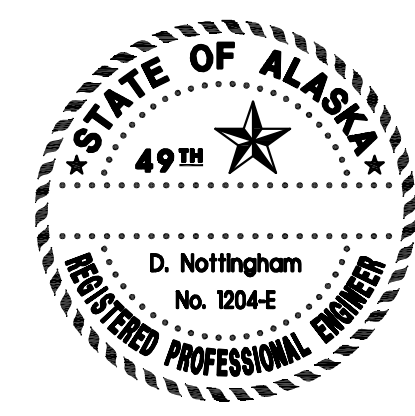
CATWALK/DOCK BREACH ELEVATION



TYPICAL CATWALK SECTION

- NOTES:**
- FOR CATWALK FABRICATION REPAIR HOLES IN EXCESS OF 1/4"Ø REQUIRED FOR GALVANIZING. 2 HOLES PER WEB OR F.B. PER MEMBER ALLOWED. 2 HOLES IN CHORD MEMBERS ALLOWED AT EACH WEB TO F.B. CONNECTION. HOLES ALLOWED IN BOTTOM OF MEMBERS ONLY.

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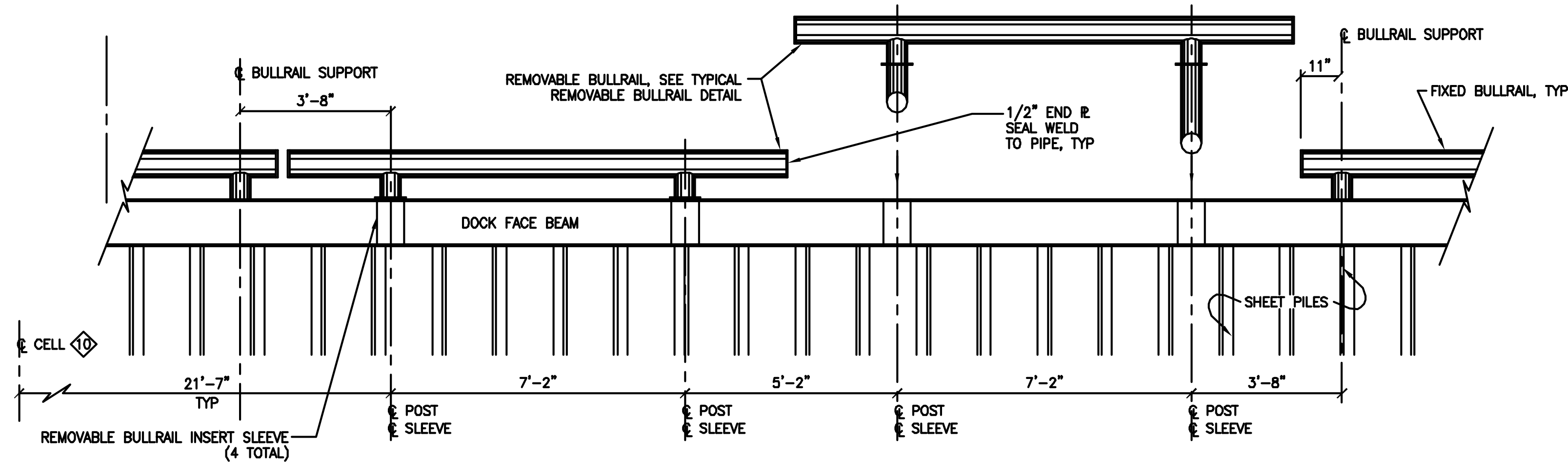


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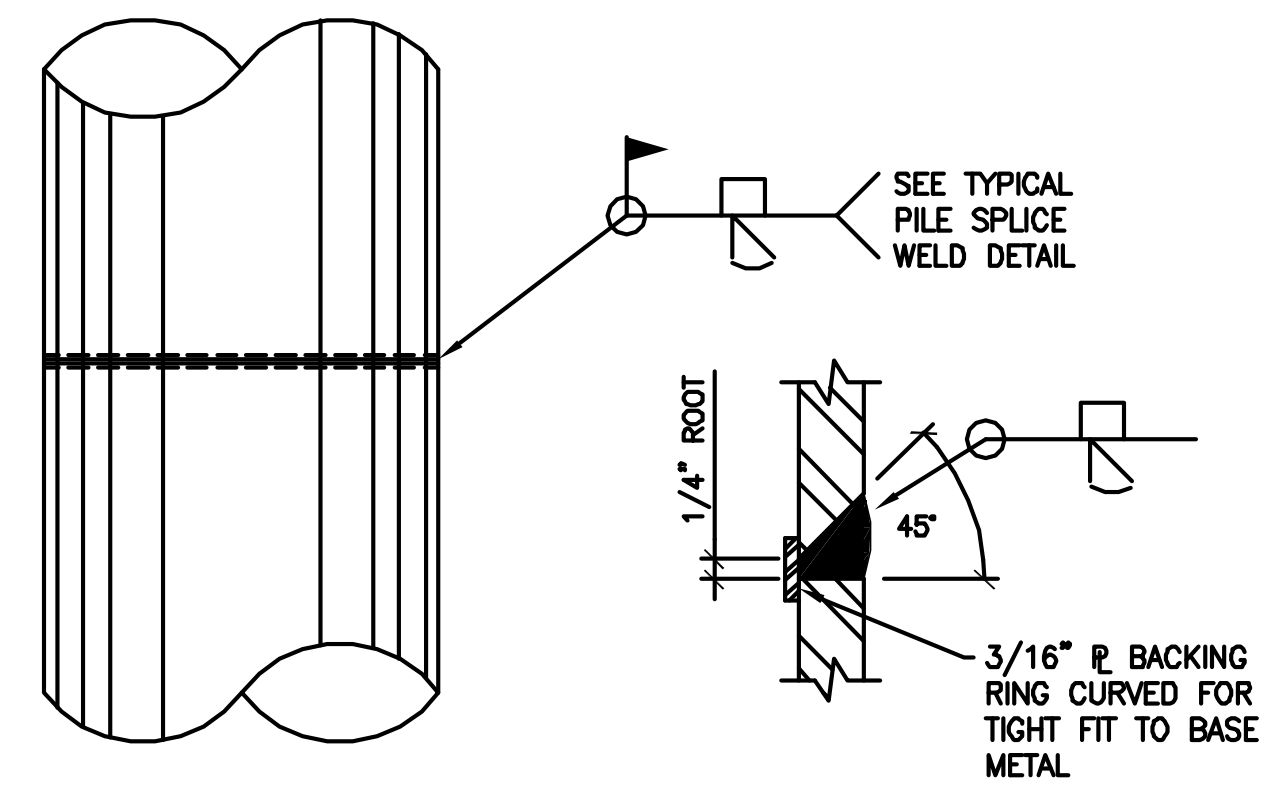
REV.	DATE	BY	REVISION

ALASKA RAILROAD CORPORATION OFFICE OF THE CHIEF ENGINEER P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500 (907) 265-2456		PROJECT :
		NEW SEWARD RAILROAD DOCK
TITLE:		CATWALK DETAILS
DESIGNED BY: <u>KWB</u>	SCALE : AS NOTED	FILE: 99068-11.DWG
DRAWN BY: <u>WAY</u>	DATE : 3/23/2000	DWG NO.
APPROVED BY: <u>DN</u>		11 OF 17

ISSUED FOR CONSTRUCTION
3/23/2000

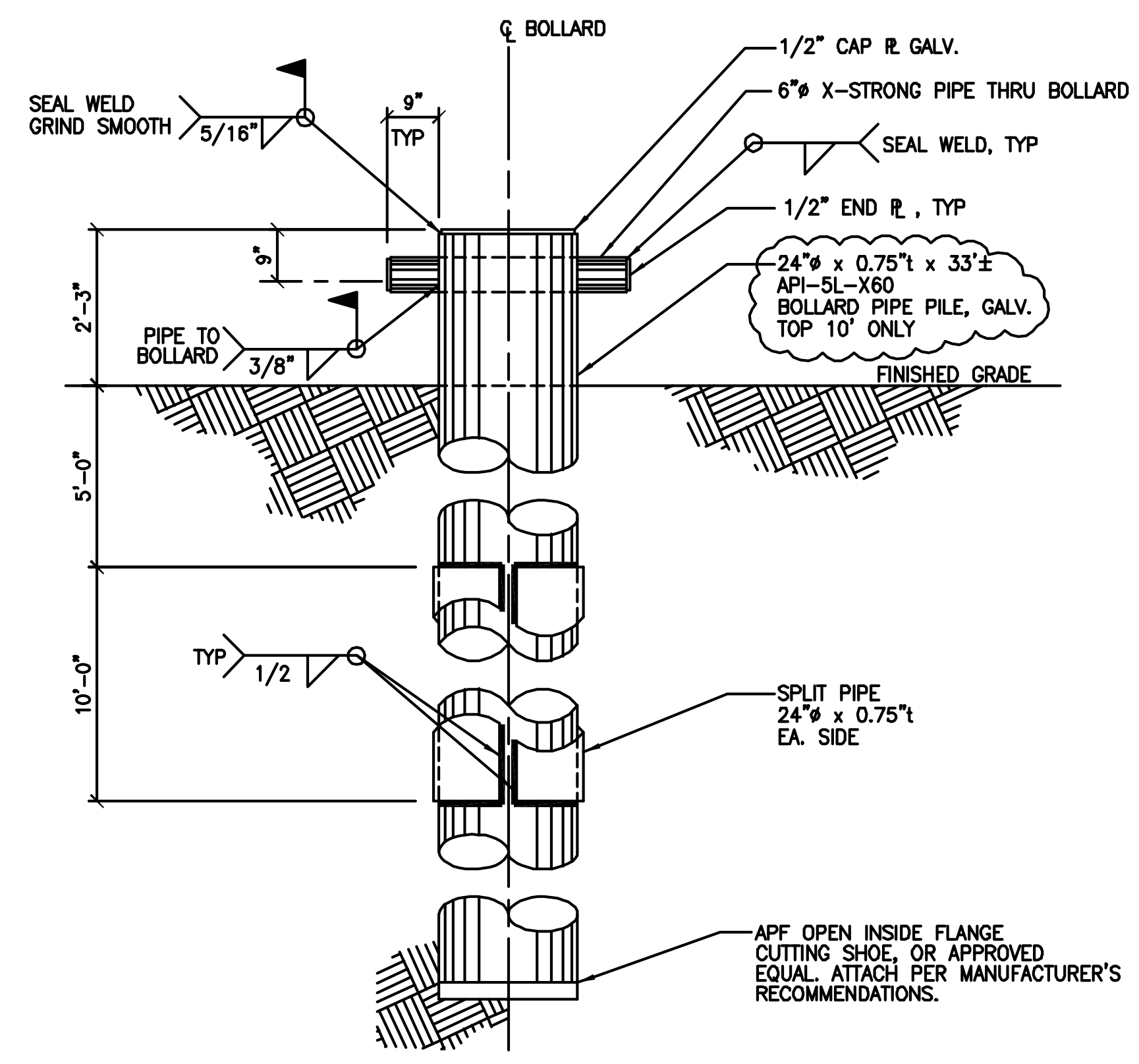


REMOVABLE BULLRAIL ELEVATION

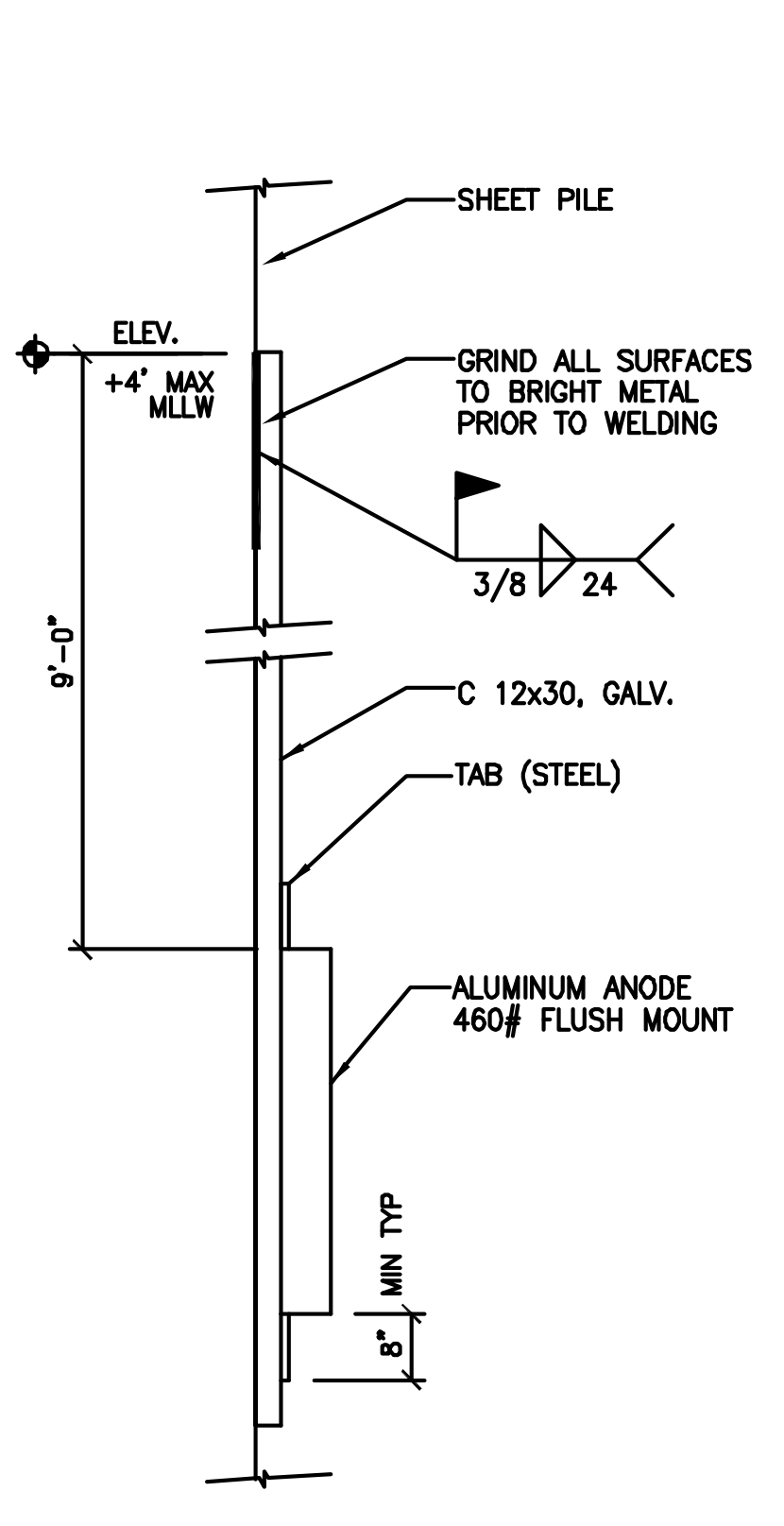


PILE SPlice DETAIL
TYPICAL FOR ALL FIELD PIPE PILE SPlices
(SHOP WELDS, IF REQ'D. SIMILAR)

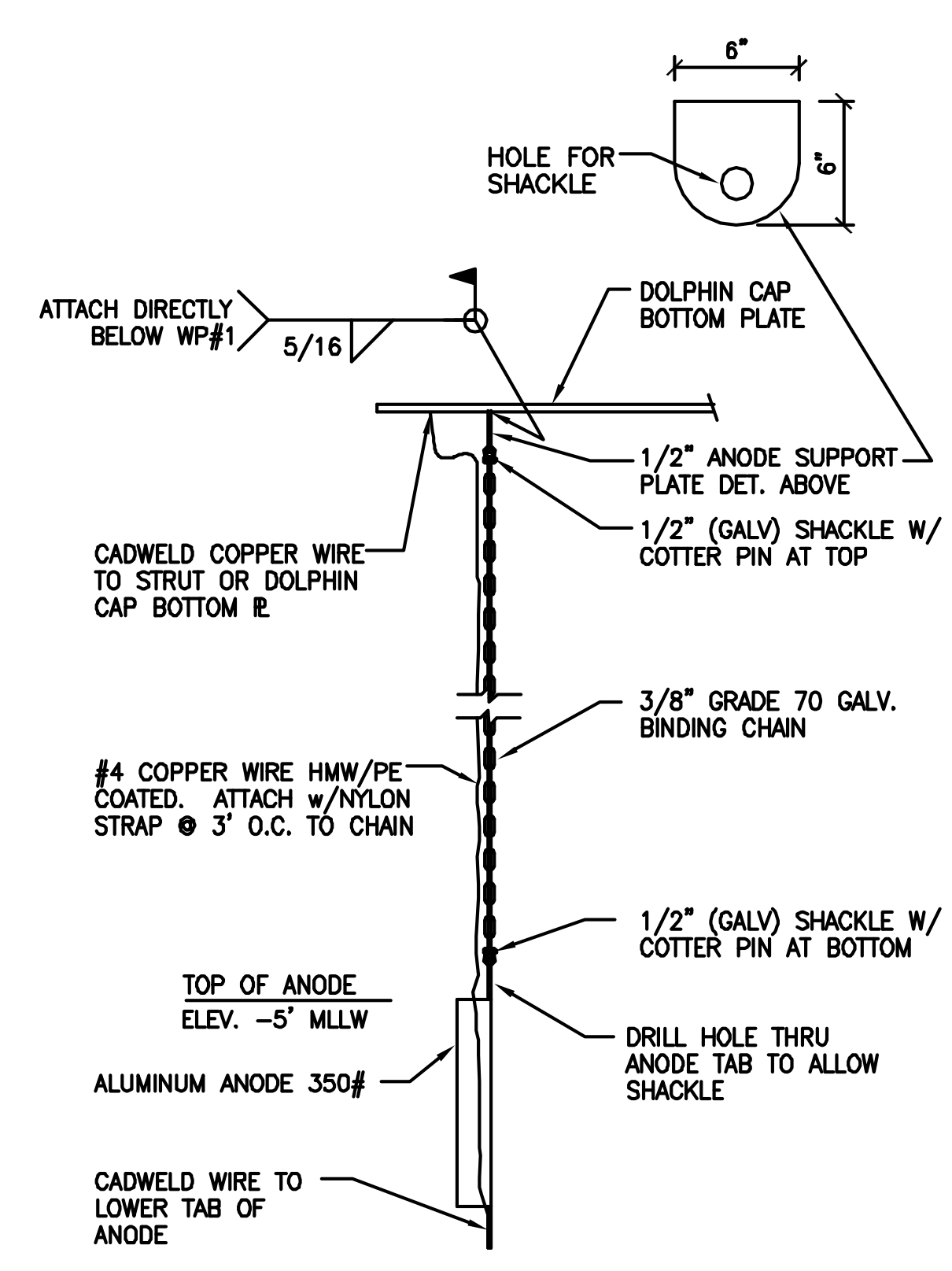
TYPICAL PILE SPlice WELD



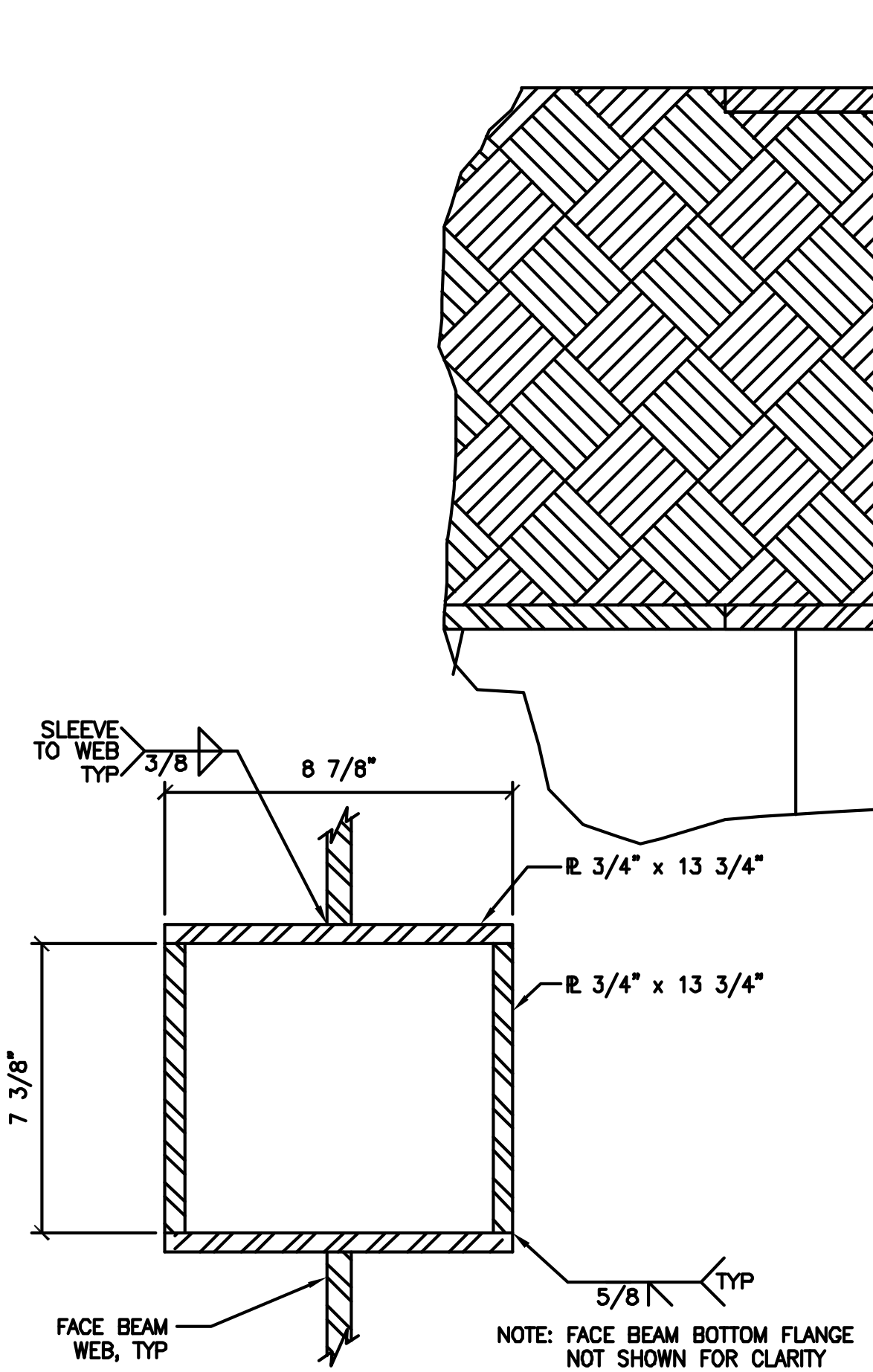
MOORING BOLLARD PILE



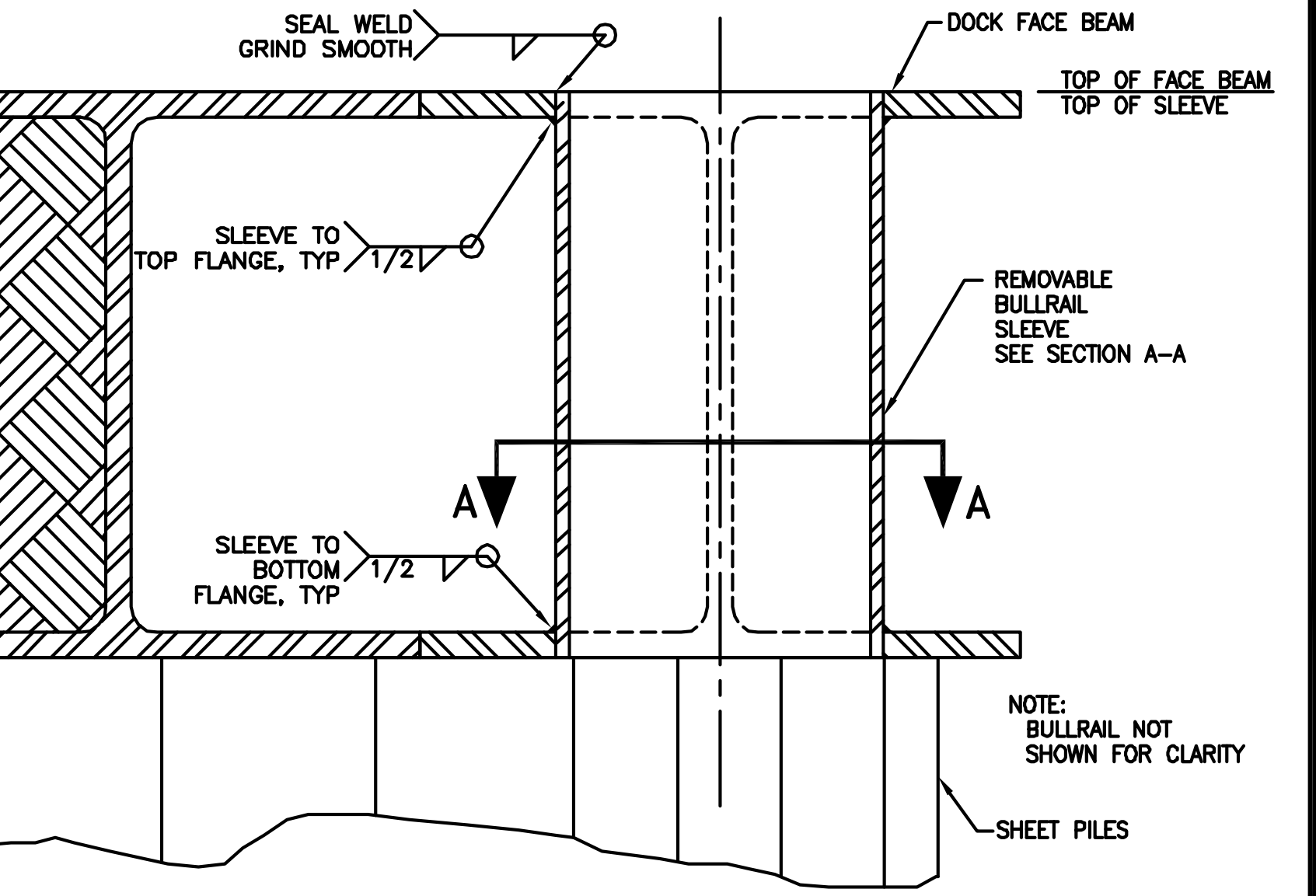
DOCK ANODE ELEVATION



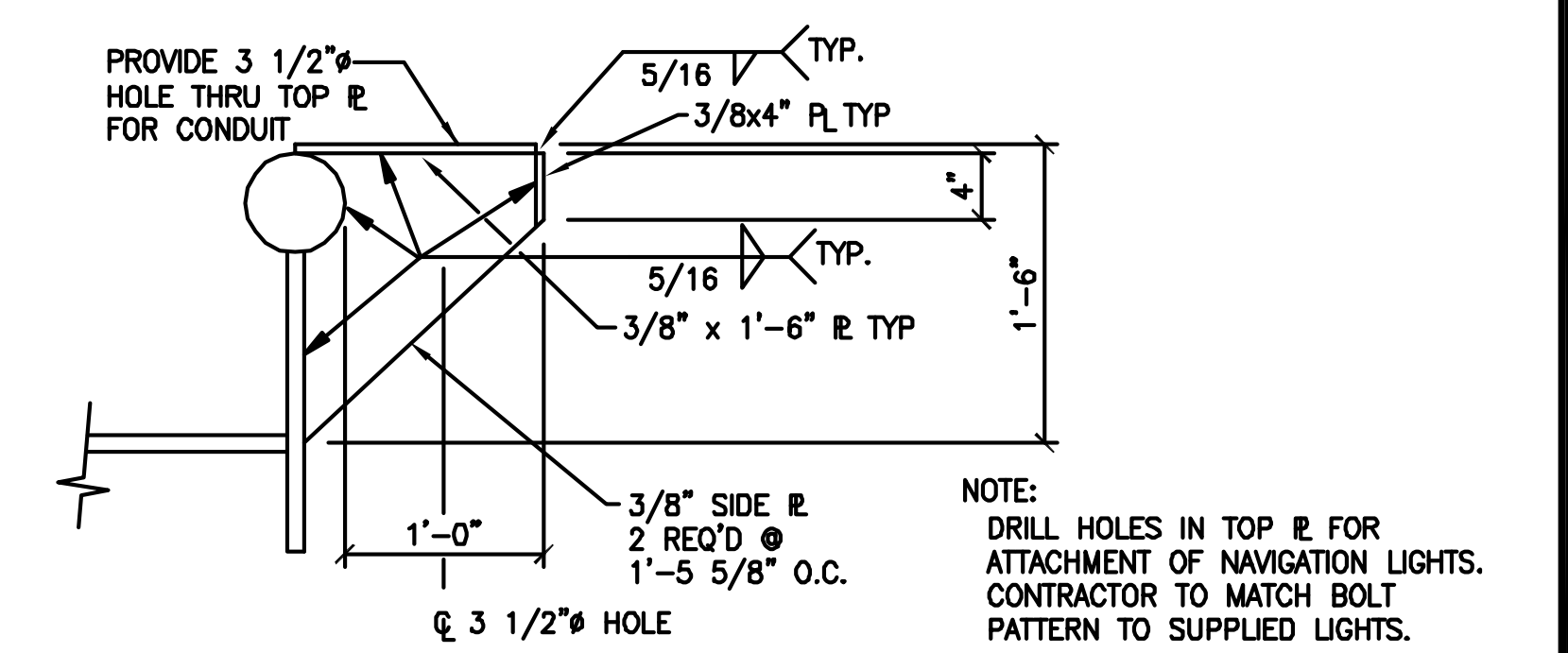
DOLPHIN ANODE DETAIL
(1 REQUIRED)



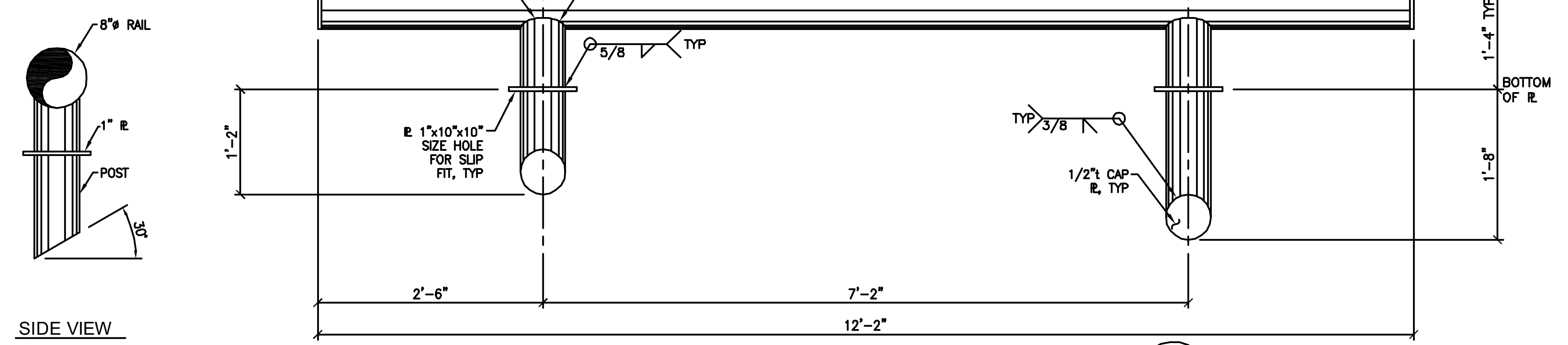
SECTION A-A



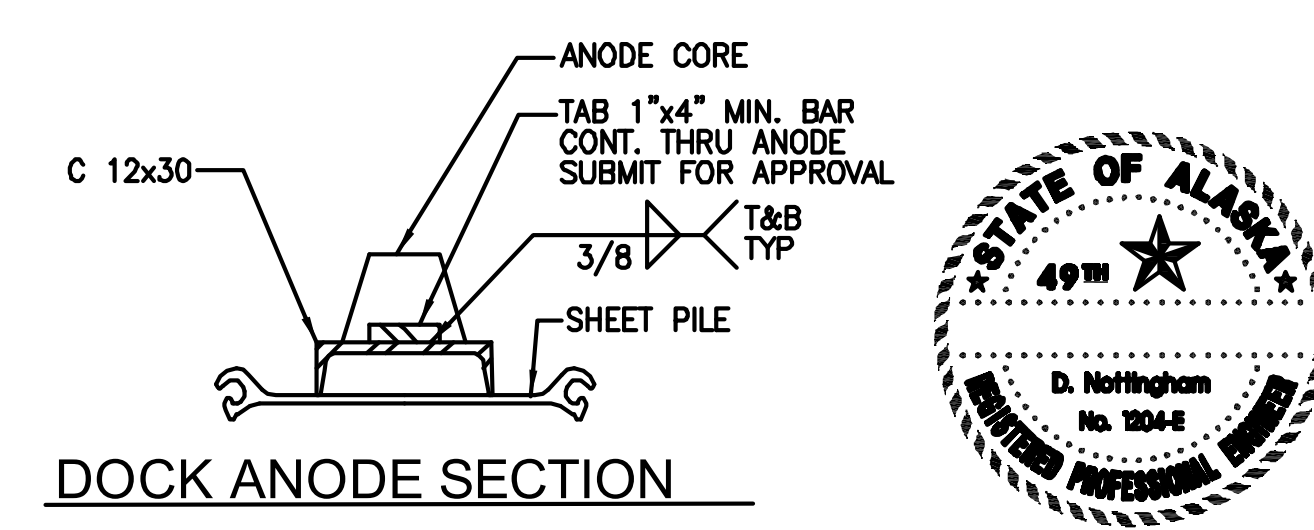
TYPICAL REMOVABLE BULLRAIL FACE SECTION



TYP. DOLPHIN NAV. LIGHT BRACKET



TYPICAL REMOVABLE BULLRAIL DETAIL



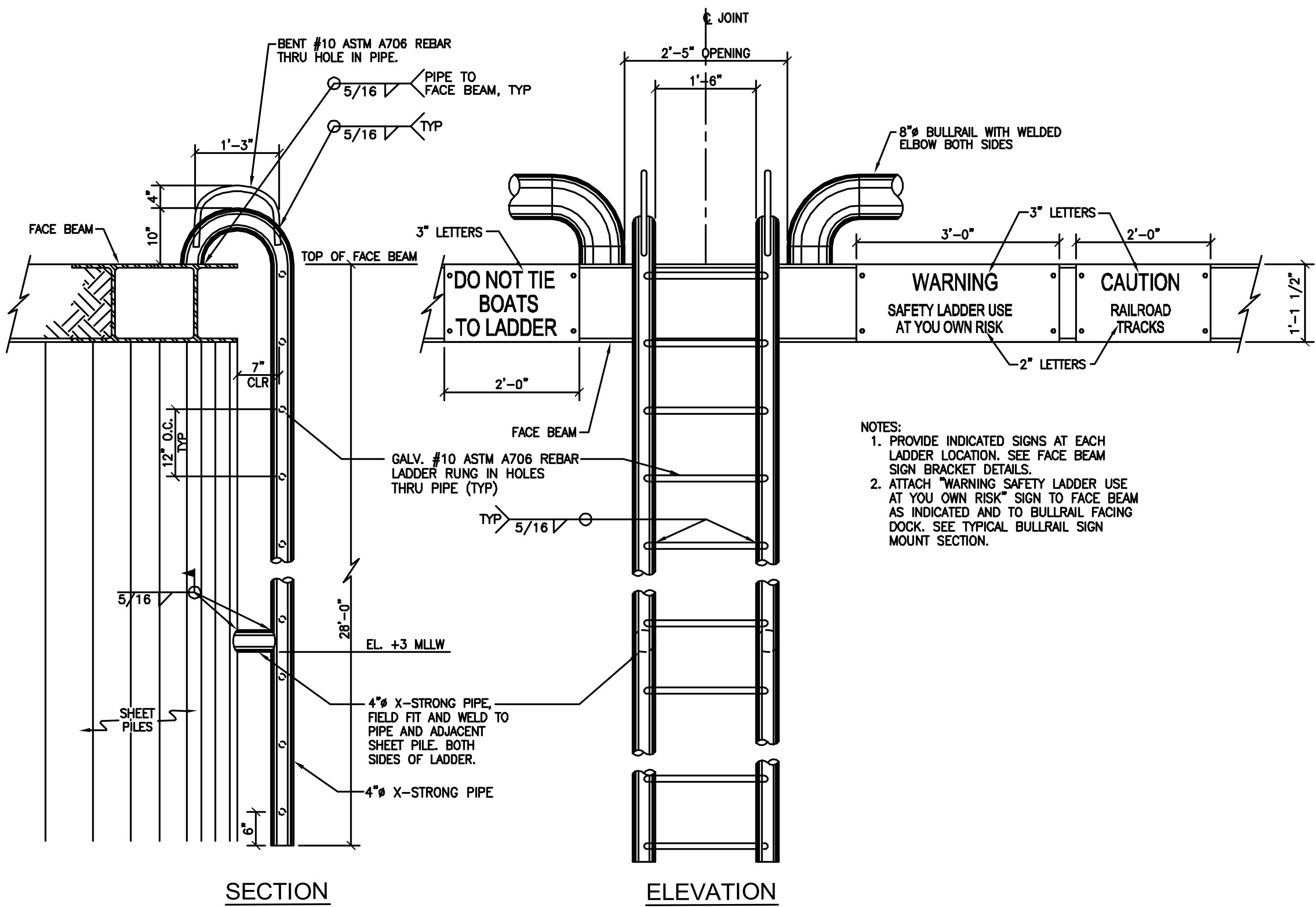
DOCK ANODE SECTION



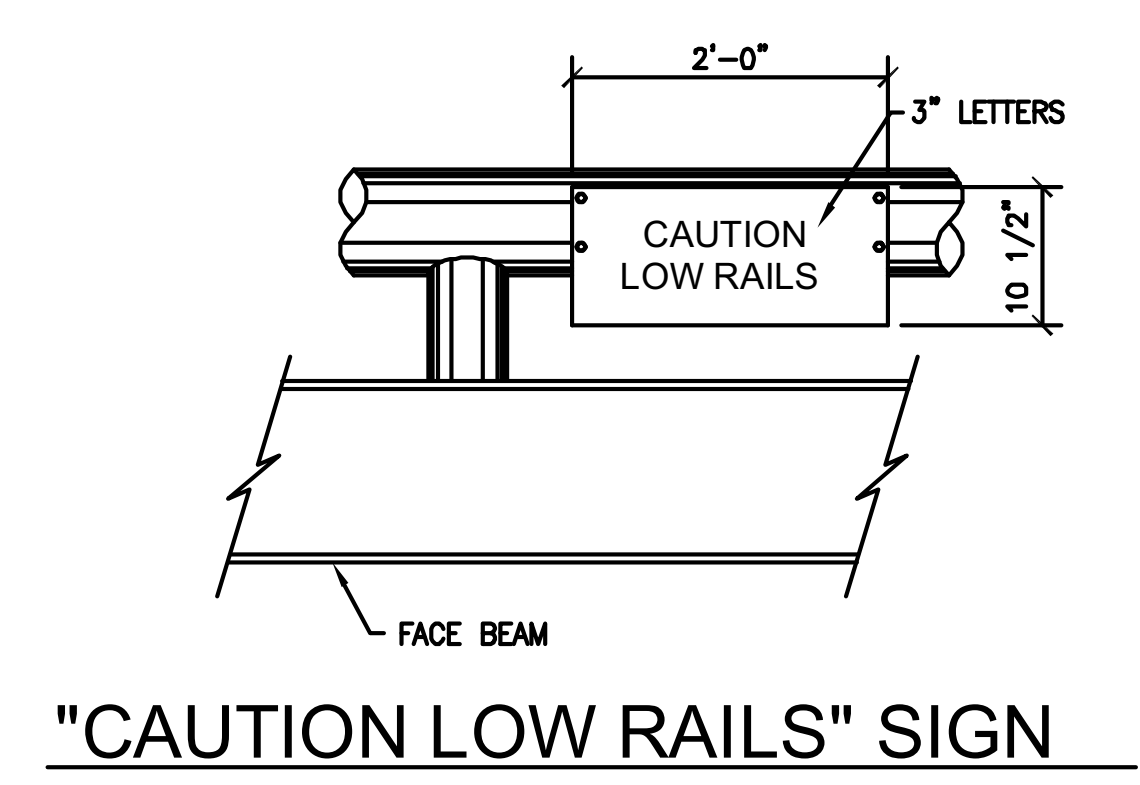
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REV.	DATE	BY	REVISION

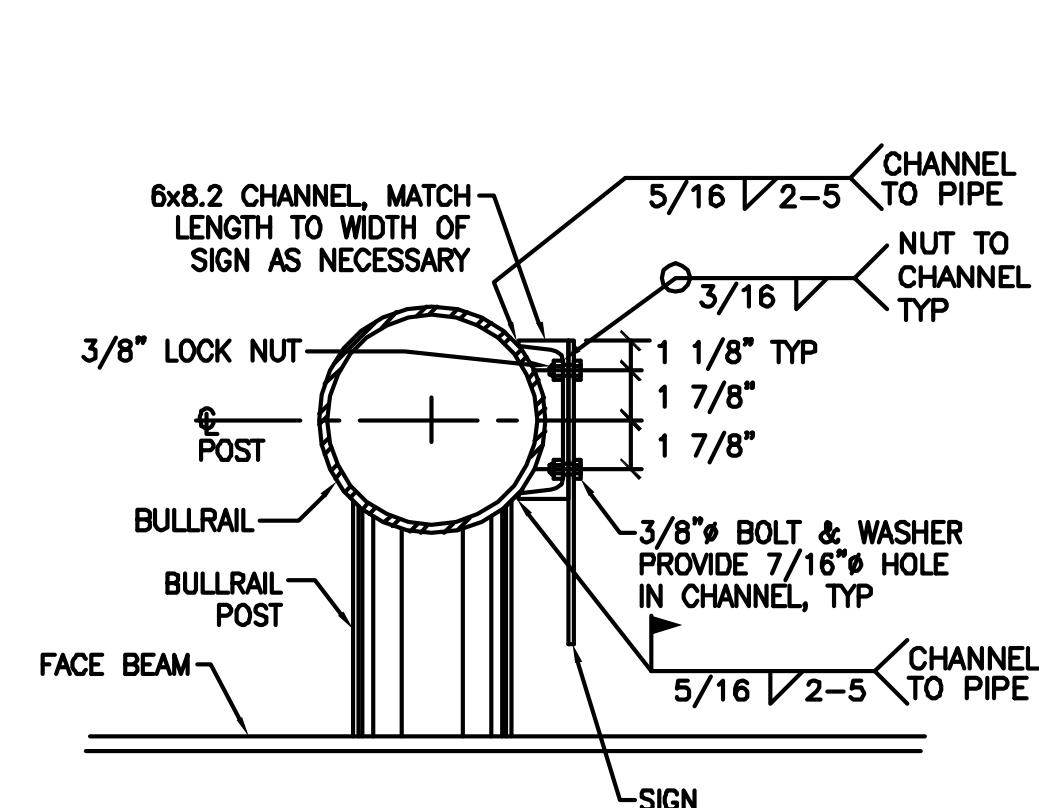
<p>ALASKA RAILROAD CORPORATION OFFICE OF THE CHIEF ENGINEER P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500 (907) 265-2456</p>		
<p>PROJECT: NEW SEWARD RAILROAD DOCK</p>		
<p>TITLE: MISCELLANEOUS DETAILS 1 OF 2</p>		
DESIGNED BY: EF	SCALE: AS NOTED	FILE: 99068-12.DWG
DRAWN BY: WAY	DATE: 3/23/2000	DWG NO. 12 OF 17
APPROVED BY: DN		



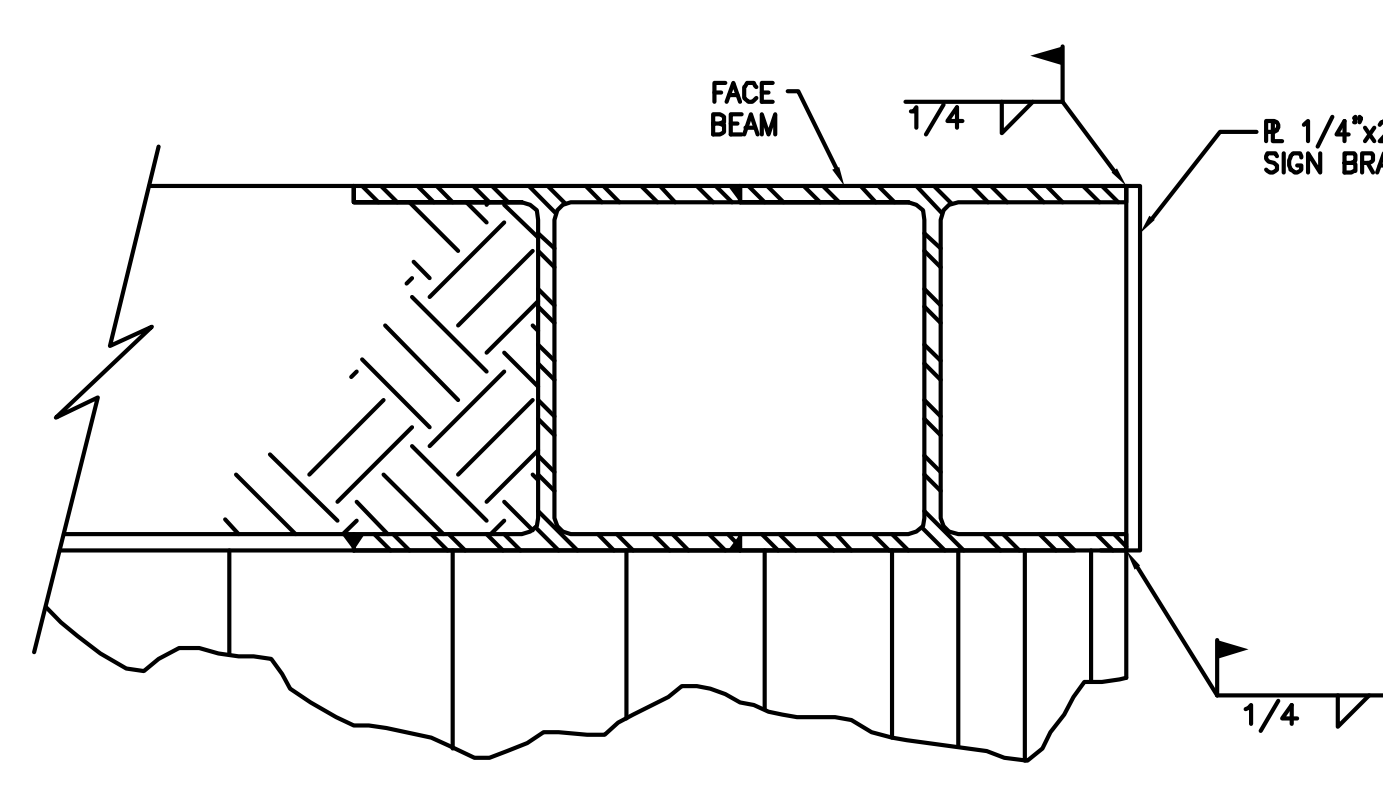
TYPICAL ACCESS LADDER DETAILS



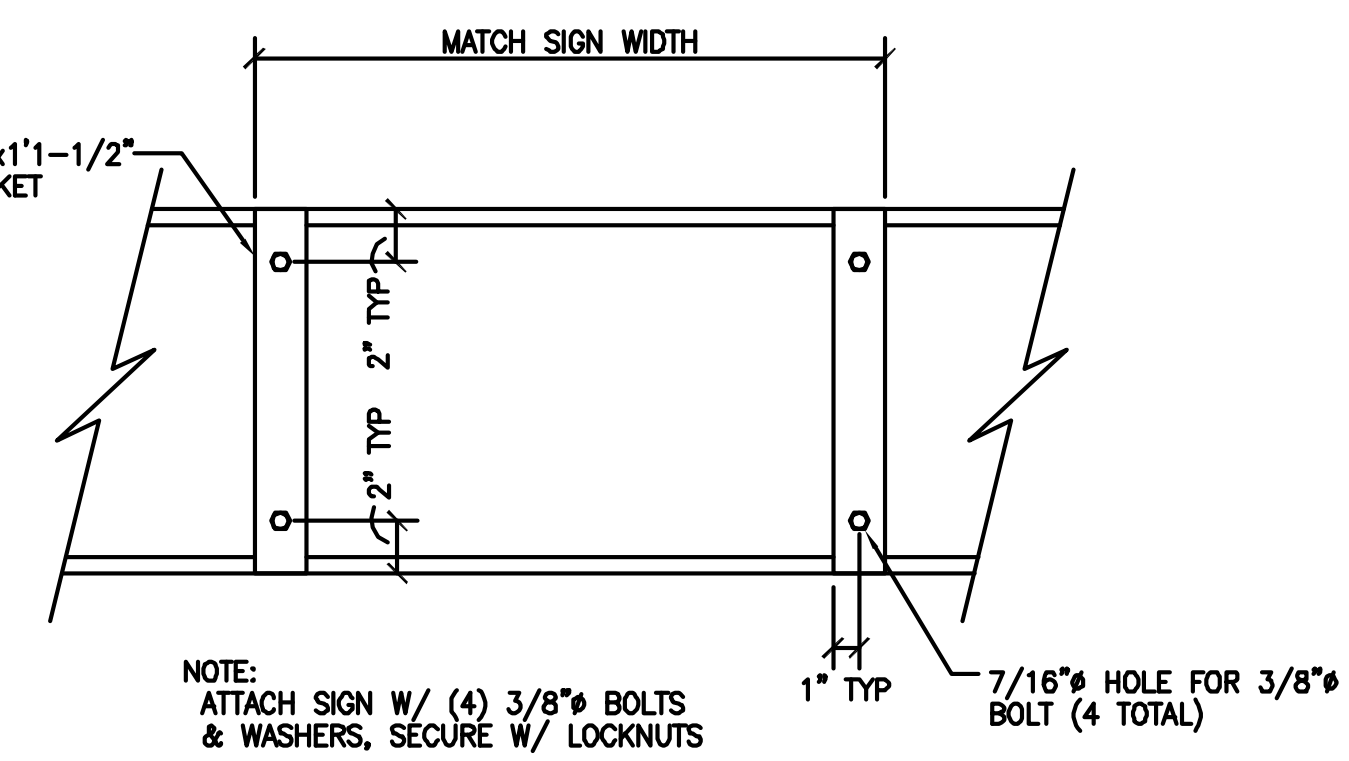
NOTES:
 1. PROVIDE @ OWNER SPECIFIED LOCATIONS. (10 TOTAL)
 2. SEE TYPICAL BULLRAIL SIGN MOUNT SECTION



TYPICAL BULLRAIL SIGN MOUNT SECTION



TYPICAL FACE BEAM SIGN BRACKET SECTION



TYPICAL FACE BEAM SIGN BRACKET ELEVATION

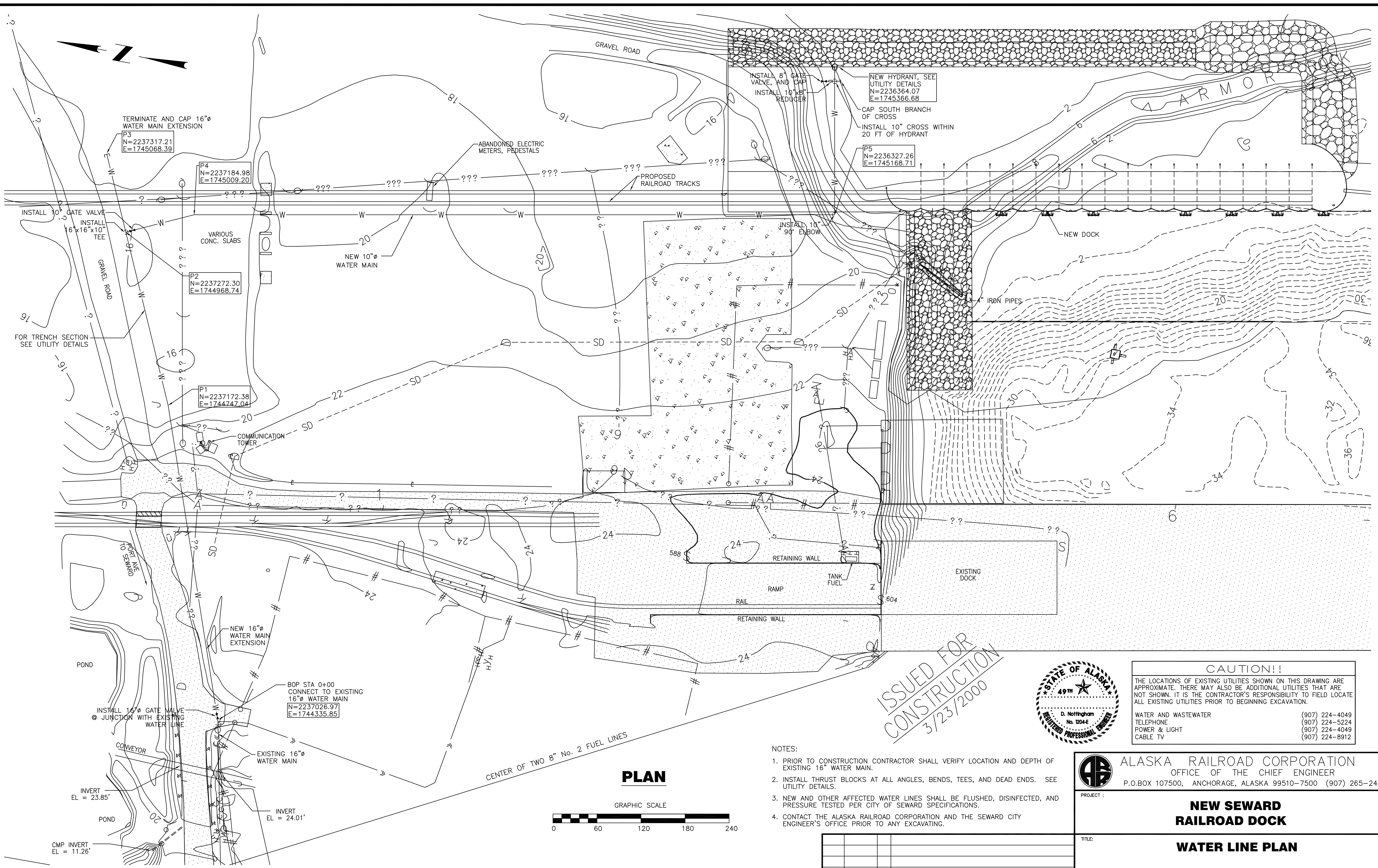
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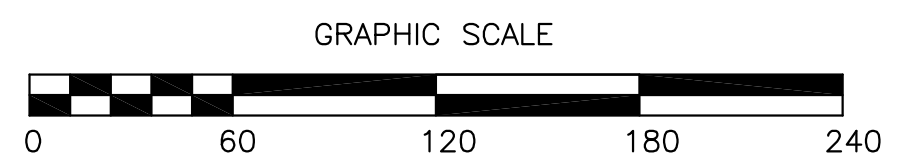
ALASKA RAILROAD CORPORATION OFFICE OF THE CHIEF ENGINEER P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500 (907) 265-2456		
PROJECT :		
NEW SEWARD RAILROAD DOCK		
TITLE:		
MISCELLANEOUS DETAILS 2 OF 2		
DESIGNED BY: EF	SCALE : AS NOTED	FILE: 99068-13.DWG
DRAWN BY: WAY		DWG NO.
APPROVED BY: DN	DATE : 3/23/2000	13 OF 17

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PLAN



- NOTES:
1. PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF EXISTING 16" WATER MAIN.
 2. INSTALL THRUST BLOCKS AT ALL ANGLES, BENDS, TEES, AND DEAD ENDS. SEE UTILITY DETAILS.
 3. NEW AND OTHER AFFECTED WATER LINES SHALL BE FLUSHED, DISINFECTED, AND PRESSURE TESTED PER CITY OF SEWARD SPECIFICATIONS.
 4. CONTACT THE ALASKA RAILROAD CORPORATION AND THE SEWARD CITY ENGINEER'S OFFICE PRIOR TO ANY EXCAVATING.

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3/23/2000



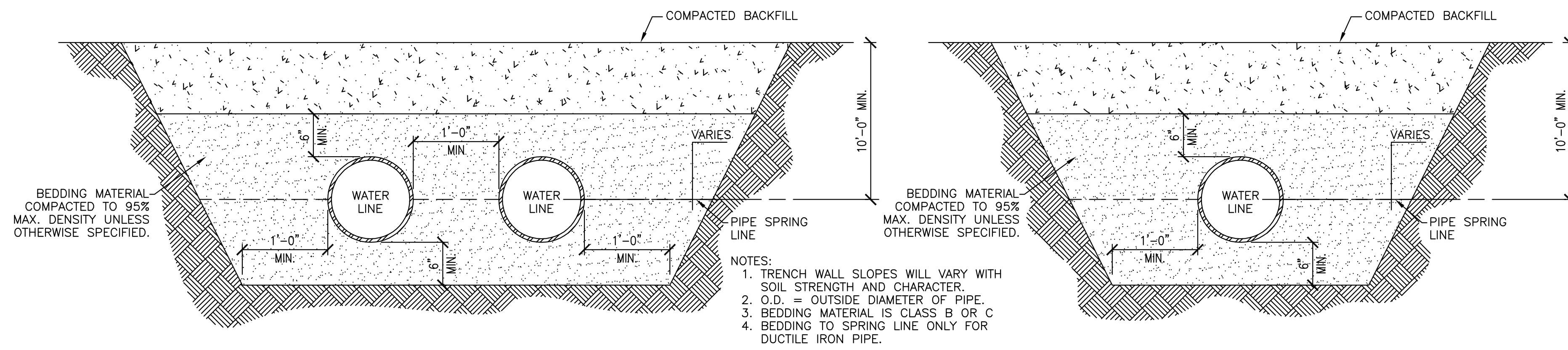
CAUTION!!
THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS DRAWING ARE APPROXIMATE. THERE MAY ALSO BE ADDITIONAL UTILITIES THAT ARE NOT SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING EXCAVATION.

WATER AND WASTEWATER (907) 224-4049
TELEPHONE (907) 224-5224
POWER & LIGHT (907) 224-4049
CABLE TV (907) 224-8912

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PROJECT :	
NEW SEWARD RAILROAD DOCK	
TITLE:	
WATER LINE PLAN	
DESIGNED BY: EF	SCALE : AS NOTED
DRAWN BY: WAY	DATE : 3/23/2000
APPROVED BY: DN	FILE: 99068-14.DWG
	DWG NO. 14 OF 17

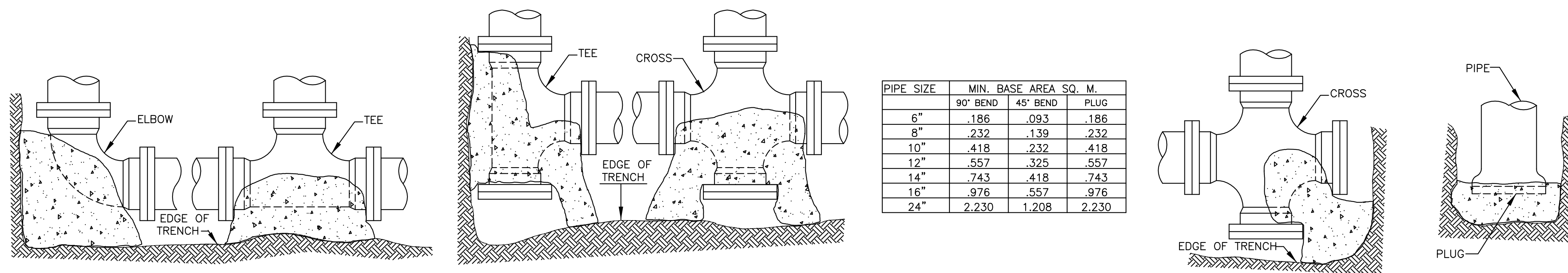
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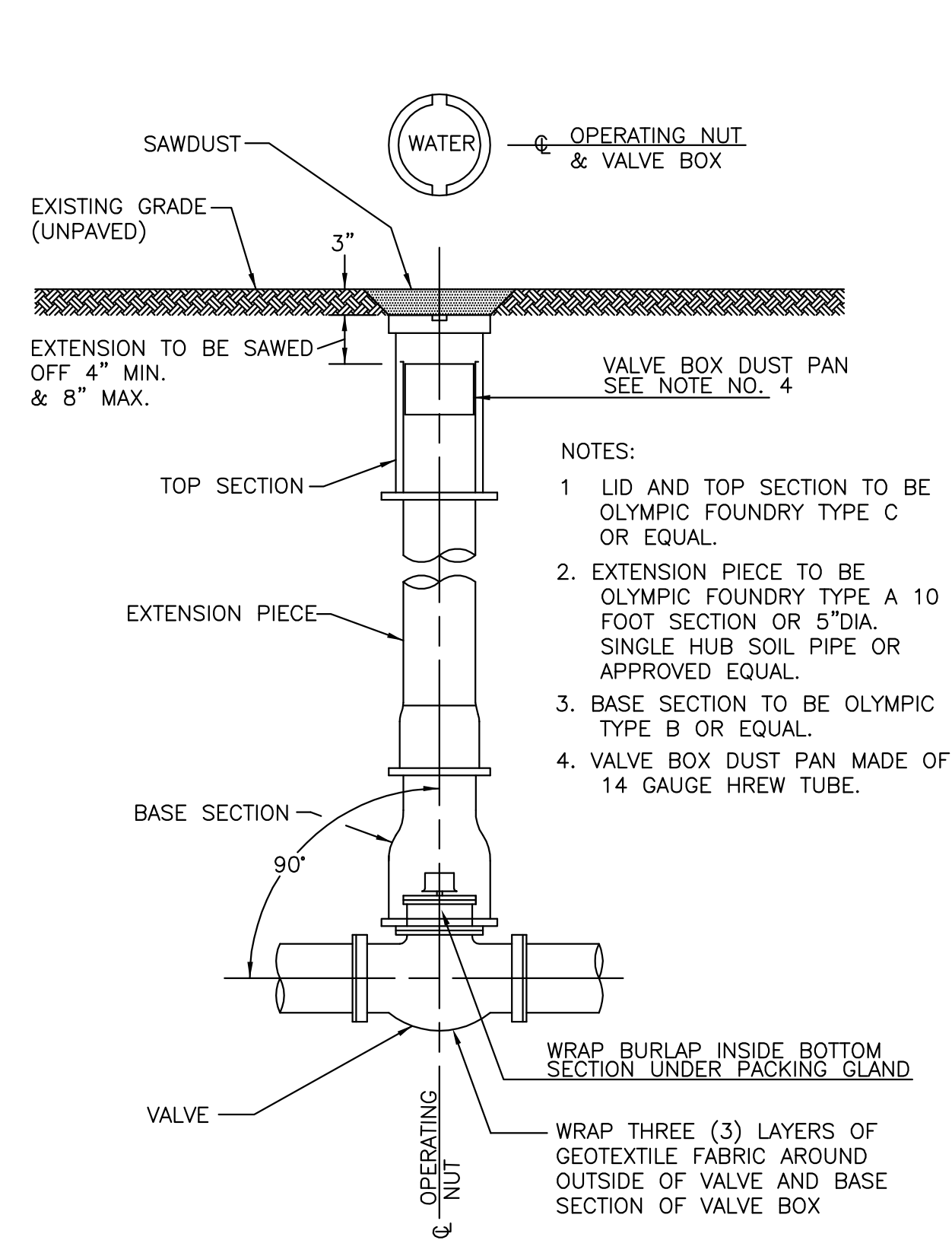
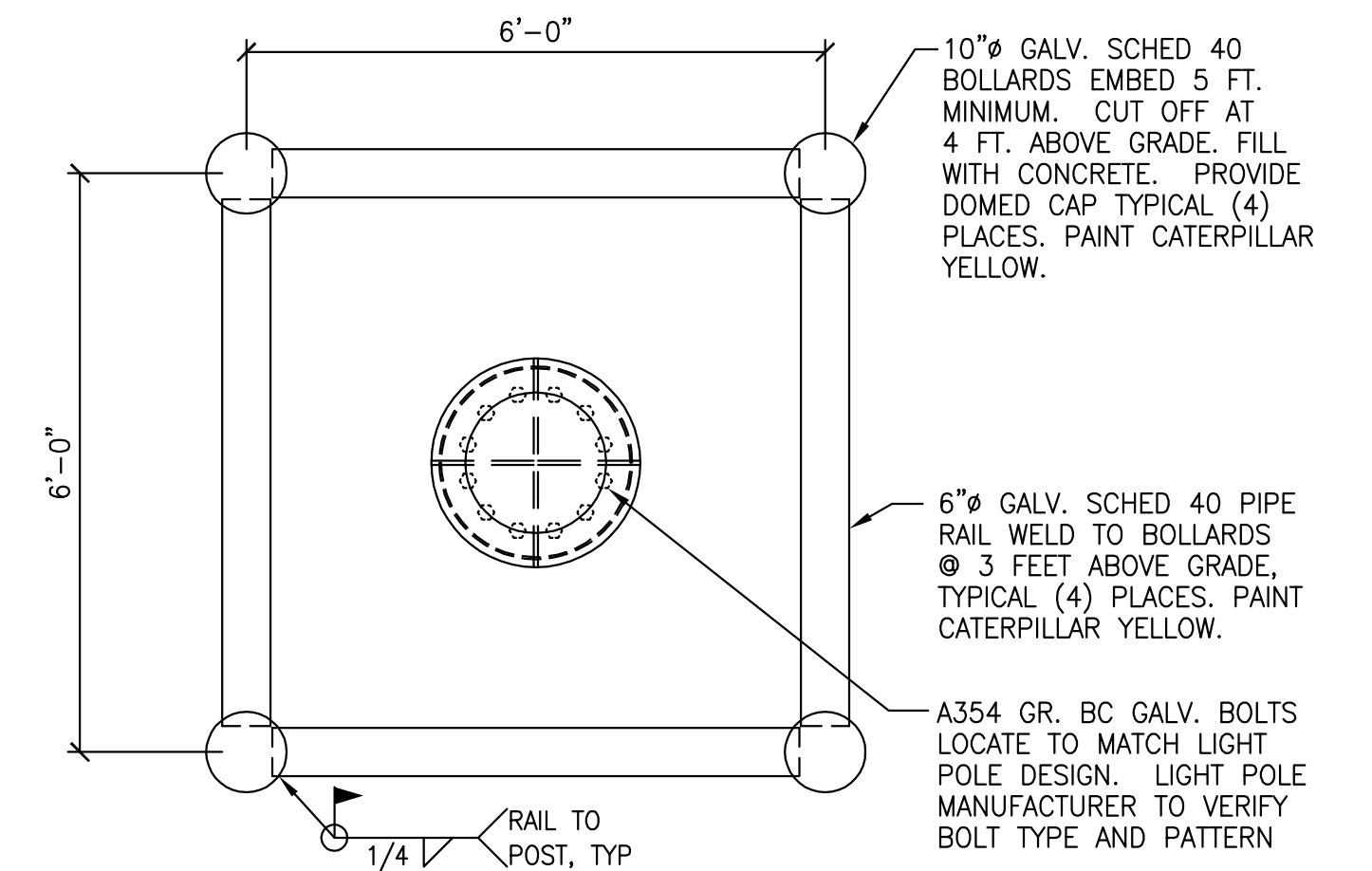


TYPICAL TRENCH SECTION/DUAL PIPE

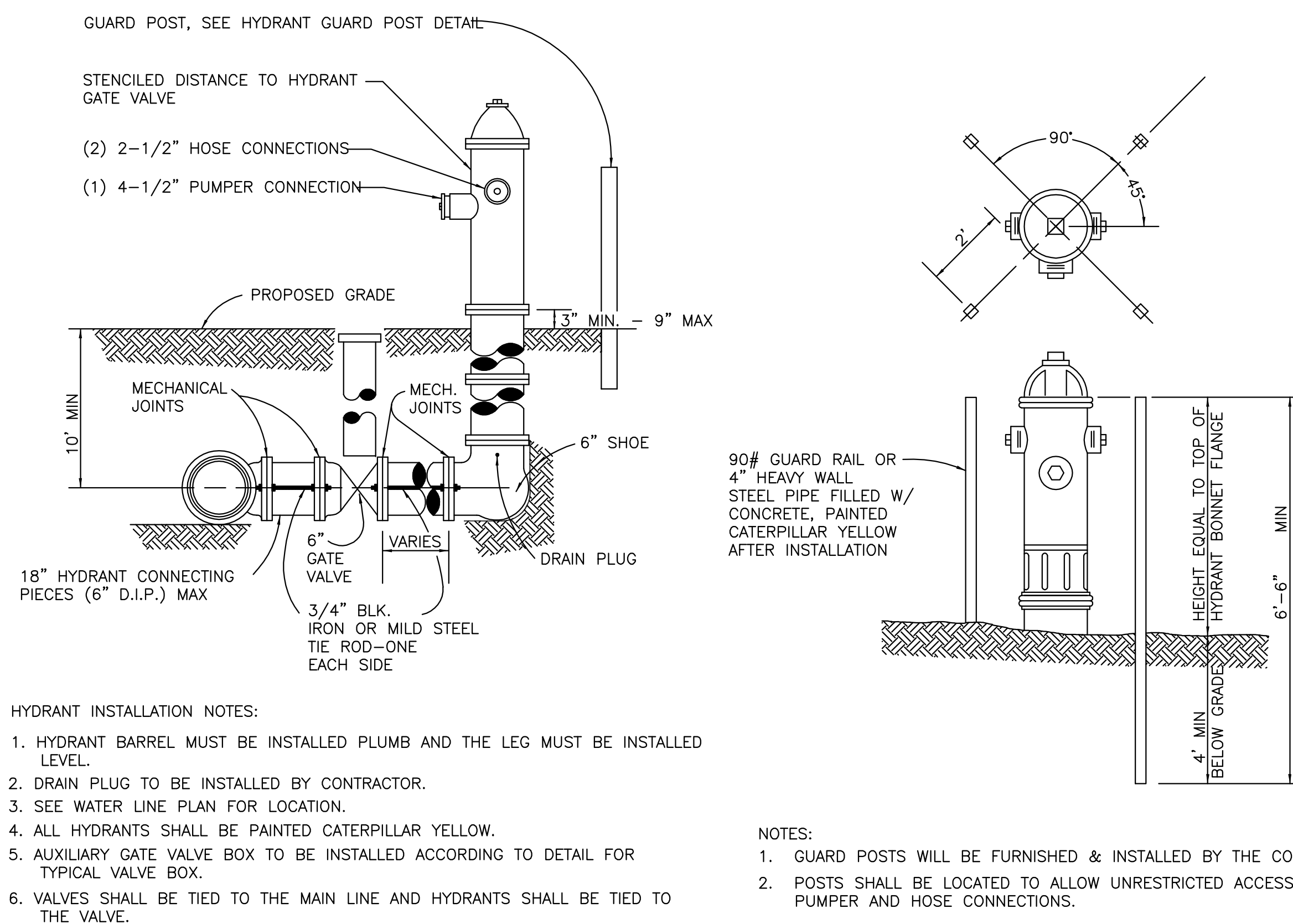
TYPICAL TRENCH SECTION/SINGLE PIPE



THRUST BLOCKS



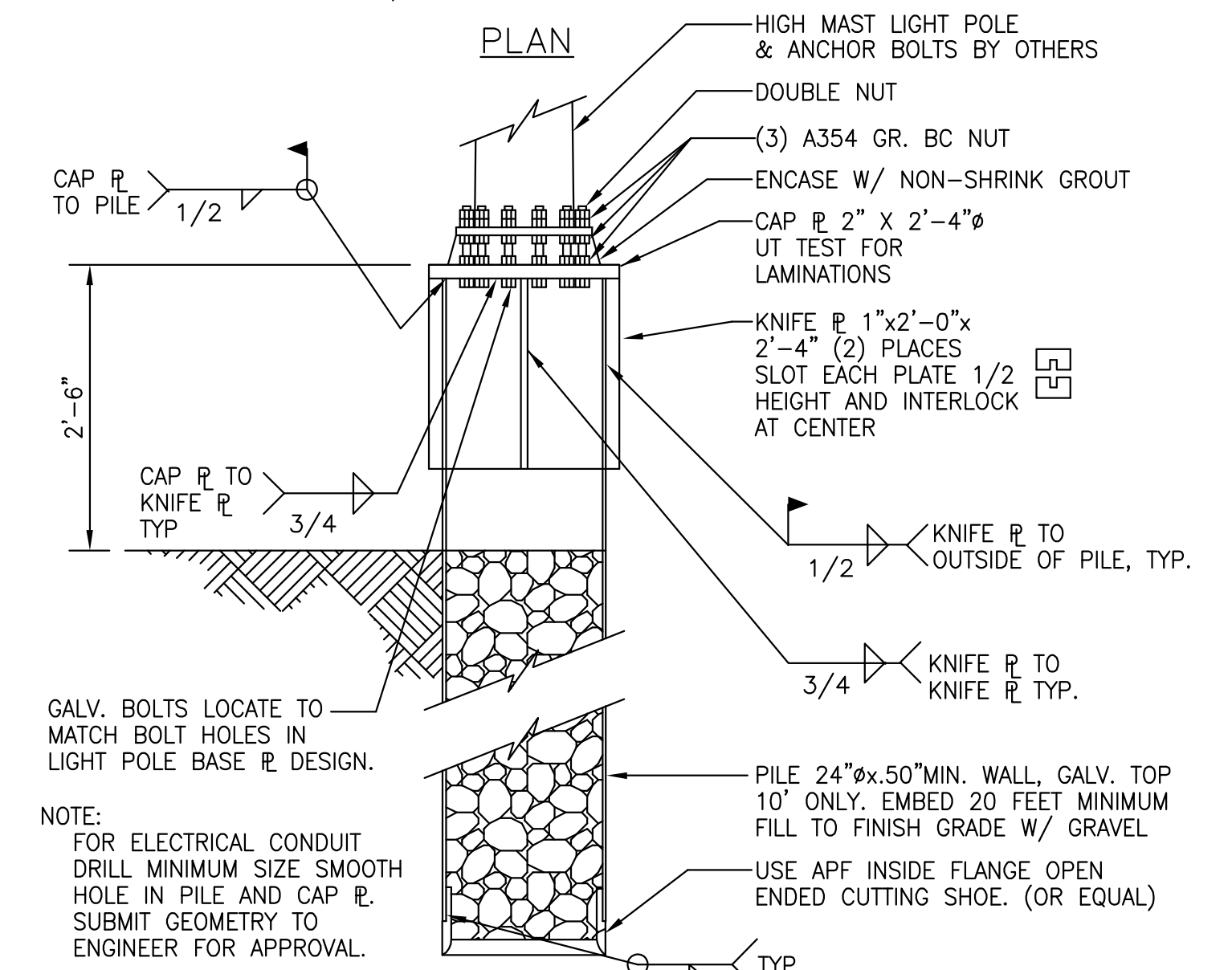
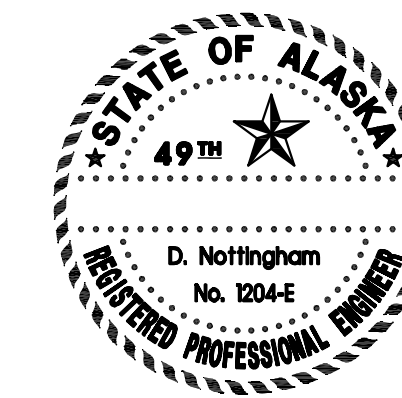
TYPICAL VALVE BOX



SINGLE PUMPER "L" BASE HYDRANT ASSEMBLY

HYDRANT GUARD POSTS

ISSUED FOR CONSTRUCTION 3/23/2000



TYPICAL HIGH MAST LIGHT FOUNDATION

ALASKA RAILROAD CORPORATION
OFFICE OF THE CHIEF ENGINEER
P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500 (907) 265-2456

PROJECT :			NEW SEWARD RAILROAD DOCK		
TITLE:			UTILITY DETAILS		
DESIGNED BY:	EF	SCALE :	AS NOTED	FILE:	98068-15.DWG
DRAWN BY:	WAY	DATE :	3/23/2000	DWG NO.	15 OF 17
APPROVED BY:	DN				

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VIBROCOMPACTION – VIBROCOMPACTION SHALL BE USED THROUGHOUT THE SHEETPILE CELL AREA TO COMPACT THE NEW FILL MATERIAL AND THE UNDERLYING SOIL. VIBROCOMPACTION SHALL BE PERFORMED AROUND THE ENTIRETY OF THE SHEETPILE WALL STRUCTURES IN THE AREAS DESIGNATED ON THE PLANS.

VIBROCOMPACTION SHALL CONSIST OF DRIVING A STEEL PILE PROBE WITH A VIBRATORY HAMMER ON A 15 FOOT X 15 FOOT GRID THROUGHOUT THE DESIGNATED AREA. THE PILE PROBE SHALL CONSIST OF A STEEL HP14X89 PILE WITH A TIP MODIFICATION CONSISTING OF TIP REINFORCEMENT AND EIGHT 8-INCH X 8-INCH ANGLES WELDED AS OPPOSING PAIRS TO THE HP14X89 WEB AND FLANGES SPACED 5 FEET APART AS APPROVED BY THE ENGINEER. THE PROBE SHALL BE DRIVEN TO -60 FEET MLLW AND RAISED TO THE SURFACE FOUR TIMES AT EACH GRID LOCATION FOR EACH COVERAGE OF THE AREA AS APPROVED BY THE ENGINEER. FILL MATERIAL SHALL BE PUSHED INTO ANY VOID CREATED BY THE OPERATION AS THE VIBRATION IS BEING CONDUCTED.

VIBROCOMPACTION SHALL BE PERFORMED ONCE FILL HAS REACHED THE +8 ELEVATION.

THE VIBRATORY HAMMER UTILIZED FOR VIBROCOMPACTION SHALL HAVE A MINIMUM HORSEPOWER OF 300 H.P. AND MINIMUM ECCENTRIC MOMENT OF 2,000 IN.-LBS. OR AS OTHERWISE APPROVED BY ENGINEER.

DOCK FACE BEAM INSTALLATION – DOCK FACE BEAM SHALL BE INSTALLED AFTER SHEET PILE STRUCTURES HAVE BEEN BACKFILLED, VIBROCOMPACTED AND HAVE STABILIZED. THE SHEET PILE CELLS SHALL BE SURVEYED AND THE LOCATION OF THE DOCK FACE BEAM SHALL BE ADJUSTED AND APPROVED BY THE ENGINEER.

SUPPORT PIPE PILE DRIVING – ALL PILES SHALL BE DRIVEN. THE CONTRACTOR SHALL SUBMIT A PLAN FOR PILE DRIVING. THE PLAN SHALL CONTAIN HAMMER TYPE AND DRIVING METHOD FOR ALL PILE TYPES. THE CONTRACTOR SHALL NOT MOBILIZE HAMMERS AND RELATED EQUIPMENT PRIOR TO RECEIVING WRITTEN APPROVAL OF THE PLAN. THE CONTRACTOR SHOULD ALLOW ONE WEEK FOR REVIEW OF THE PLAN BY THE ENGINEER. ALL PILE DRIVING METHODS SHALL MEET THE REQUIREMENTS OF THE PERMITS ISSUED FOR THIS PROJECT.

STEEL PIPE SUPPORT PILES SHALL BE DRIVEN WITH AN IMPACT HAMMER WITH A MINIMUM RATED ENERGY OF 50,000 FT.-LBS. OR AS OTHERWISE APPROVED BY ENGINEER. ANY HAMMER THAT CAUSES DAMAGE TO THE PILES DURING DRIVING OPERATIONS SHALL BE SUBSTITUTED WITH AN ACCEPTABLE ALTERNATE HAMMER AT NO ADDITIONAL EXPENSE TO THE OWNER. IMPACT HAMMERS SHALL BE SUPPLIED WITH NEW CAPBLOCK CUSHIONS, WHICH SHALL BE CHANGED AT THE MANUFACTURER'S RECOMMENDED CYCLE. THE CONTRACTOR'S DRIVING PLAN SHALL INCLUDE MANUFACTURER'S RECOMMENDATIONS AND INFORMATION ON HAMMER CUSHION.

DRIVING METHODS FOR ALL PILES SHALL UTILIZE A DRIVING TEMPLATE.

PILES SHALL BE PLACED WITHIN 1% OF SPECIFIED VERTICAL ALIGNMENT AND WITHIN 2 INCHES OF SPECIFIED LOCATION AT CUTOFF. BATTER PILES WITH A 2V:1H SLOPE SHALL BE PLACED SO THEIR SLOPE VARIES BETWEEN 5-3/4" AND 6-1/4" HORIZONTAL TO ONE-FOOT VERTICAL AND WITHIN 2 INCHES OF LOCATION AT CUTOFF. PILES HITTING OBSTACLES, MISALIGNED PILES AND PILES THAT HAVE NOT ACHIEVED MINIMUM PENETRATION PRIOR TO REFUSAL SHALL BE PULLED BY THE CONTRACTOR WITH A VIBRATORY HAMMER AND REDRIVEN AT NO ADDITIONAL COST TO THE OWNER. A VIBRATORY HAMMER WITH A MINIMUM HORSEPOWER OF 300 H.P. AND MINIMUM ECCENTRIC MOMENT OF 2,000 IN.-LBS. OR AS OTHERWISE APPROVED BY ENGINEER MUST BE AVAILABLE AND ON SITE DURING ALL PIPE PILE DRIVING OPERATIONS.

PILES LENGTHS SHALL BE SUPPLIED AS SPECIFIED. SUPPORT PILES SHALL BE DRIVEN UNTIL REQUIRED PILE CAPACITY AS SHOWN ON THE PILE IS OBTAINED. PILE CAPACITY WILL BE DETERMINED SOLELY BY THE ENGINEER.

ALL PILE INSTALLATION SHALL BE CONDUCTED WITH ENGINEER PRESENT. THE CONTRACTOR SHALL ASSIST ENGINEER IN MONITORING THE PILE DRIVING. THE CONTRACTOR SHALL MARK EACH PILE WITH ONE-FOOT INCREMENTS WITH EVERY FIVE-FOOT INCREMENT NUMBERED. FOR DETERMINATION OF PILE REFUSAL OR CAPACITY, THE CONTRACTOR SHALL MARK THE PILES WITH ONE-INCH INCREMENTS DURING THE FINAL DRIVE. THE MARKS SHALL BE VISIBLE/READABLE FROM ALL SIDES OF THE PILE.

ALL STEEL PIPE PILE CUTOFFS ON THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE PIPE FROM THE PROJECT SITE.

DOLPHIN PILES SHALL BE DRIVEN AFTER SHEET PILE STRUCTURES HAVE BEEN BACKFILLED, VIBROCOMPACTED AND HAVE STABILIZED. THE SHEET PILE CELLS SHALL BE SURVEYED, FINAL LOCATION OF DOCK FACE BEAM SHALL BE DETERMINED AND THE LOCATION OF THE DOLPHIN PILES SHALL BE ADJUSTED AND APPROVED BY THE ENGINEER.

PILES SHALL BE DRIVEN TO REQUIRED PILE CAPACITY AND EMBEDMENT AS SHOWN ON THE DRAWINGS. PILE CAPACITY AND EMBEDMENT WILL BE DETERMINED SOLELY BY THE ENGINEER.

FENDER PILE DRIVING – ALL PILES SHALL BE DRIVEN. THE CONTRACTOR SHALL SUBMIT A PLAN FOR PILE DRIVING. THE PLAN SHALL CONTAIN HAMMER TYPE AND DRIVING METHOD. THE CONTRACTOR SHALL NOT MOBILIZE HAMMERS AND RELATED EQUIPMENT PRIOR TO RECEIVING WRITTEN APPROVAL OF THE PLAN. THE CONTRACTOR SHOULD ALLOW ONE WEEK FOR REVIEW OF THE PLAN BY THE ENGINEER. ALL PILE DRIVING METHODS SHALL MEET THE REQUIREMENTS OF THE PERMITS ISSUED FOR THIS PROJECT.

FENDER PILES SHALL BE DRIVEN AFTER SHEET PILE STRUCTURES HAVE BEEN BACKFILLED, VIBROCOMPACTED AND HAVE STABILIZED. THE SHEET PILE CELLS SHALL BE SURVEYED, DOCK FACE BEAM INSTALLED AND THE LOCATION OF THE FENDER PILES SHALL BE ADJUSTED AND APPROVED BY THE ENGINEER.

STEEL PIPE FENDER PILES SHALL BE DRIVEN WITH A VIBRATORY HAMMER WITH A MINIMUM HORSEPOWER OF 300 H.P. AND MINIMUM ECCENTRIC MOMENT OF 2,000 IN.-LBS. OR AN IMPACT HAMMER WITH A MINIMUM RATED ENERGY OF 50,000 FT.-LBS. OR AS OTHERWISE APPROVED BY ENGINEER. ANY HAMMER THAT CAUSES DAMAGE TO THE PILES DURING DRIVING OPERATIONS SHALL BE SUBSTITUTED WITH AN ACCEPTABLE ALTERNATE HAMMER AT NO ADDITIONAL EXPENSE TO THE OWNER. IMPACT HAMMERS SHALL BE SUPPLIED WITH NEW CAPBLOCK CUSHIONS, WHICH SHALL BE CHANGED AT THE MANUFACTURER'S RECOMMENDED CYCLE. THE CONTRACTOR'S DRIVING PLAN SHALL INCLUDE MANUFACTURER'S RECOMMENDATIONS AND INFORMATION ON HAMMER CUSHION.

DRIVING METHODS FOR ALL PILES SHALL UTILIZE A DRIVING TEMPLATE.

FENDER PILES SHALL BE PLACED WITHIN 1% OF SPECIFIED VERTICAL ALIGNMENT AND WITHIN 1 INCH OF SPECIFIED LOCATION AT CUTOFF. PILES HITTING OBSTACLES, OR MISALIGNED PILES SHALL BE PULLED BY THE CONTRACTOR WITH A VIBRATORY HAMMER AND REDRIVEN AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL ENSURE THAT FENDER PILES DO NOT CONTACT SHEET PILES DURING DRIVING OPERATIONS.

PILES SHALL BE SUPPLIED IN THE LENGTH SPECIFIED. FENDER PIN PILES SHALL BE DRIVEN WITH EITHER AN IMPACT HAMMER OR VIBRATORY HAMMER AS REQUIRED TO OBTAIN THE REQUIRED PENETRATION OR PILE REFUSAL. PILE REFUSAL AND PENETRATION WILL BE DETERMINED SOLELY BY THE ENGINEER.

FENDER PILES SHALL BE PLACED AT THE LOCATION AND ALIGNMENT NOTED ON THE PLANS. FORCING OF FENDER SYSTEM OVER THE PIN PILES WILL NOT BE ALLOWED.

ALL PILE INSTALLATION SHALL BE CONDUCTED WITH THE ENGINEER PRESENT. THE CONTRACTOR SHALL ASSIST THE ENGINEER IN MONITORING THE PILE DRIVING. THE CONTRACTOR SHALL MARK EACH PILE WITH ONE-FOOT INCREMENTS WITH EVERY FIVE-FOOT INCREMENT NUMBERED. FOR DETERMINATION OF PILE REFUSAL, THE CONTRACTOR SHALL MARK THE PILES WITH ONE-INCH INCREMENTS DURING THE FINAL DRIVE. THE MARKS SHALL BE VISIBLE/READABLE FROM ALL SIDES OF THE PILE.

ALL STEEL PIPE PILE CUTOFFS ON THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE PIPE FROM THE PROJECT SITE.

CONCRETE PLACEMENT – CONCRETE SHALL BE FORMED, BATCHED, PLACED AND CURED PER ASTM C-94.

REINFORCING BAR WELDING – ALL REINFORCING BAR WELDING SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.4. THE CONTRACTOR SHALL PROVIDE AN INDEPENDENT WELDING INSPECTOR FOR ALL WELDS. WELDS SHALL BE 100% VISUALLY TESTED BY THE WELDING INSPECTOR. WELDS MAY ALSO BE TESTED BY MAGNETIC PARTICLE, ULTRASONIC, OR RADIOGRAPHIC TESTING METHODS. ANY REJECTED WELD SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, WHICH WILL INCLUDE ALL COST FOR RETESTING.

DREDGING – THE CONTRACTOR SHALL DREDGE THE INDICATED AREAS AS ALLOWED BY AND UNDER THE CONDITIONS STIPULATED IN THE COE PERMIT AND DGC FINAL CONSISTENCY DETERMINATION FOR THIS PROJECT. THE CONTRACTOR SHALL DREDGE THE INDICATED AREAS WITH A CRANE EQUIPPED WITH A HEAVY DREDGING BUCKET OR BACKHOE. THE CONTRACTOR SHALL DREDGE THE MATERIAL TO THE NOTED EXTENT AND DEPTH ON THE PLANS AND SPECIFICATIONS.

USABLE DREDGED MATERIAL MAY BE INCORPORATED INTO THE CELL FILL AS APPROVED BY THE ENGINEER. UNUSABLE DREDGE MATERIAL SHALL BE DISPOSED OF AS SPECIFIED IN THE COE PERMIT.

WATER LINE – WATER LINE CONSTRUCTION SHALL CONFORM TO CITY OF SEWARD INSTALLATION GUIDELINES AND IN ACCORDANCE WITH THE LATEST ADOPTED CODES, RULES, AND REGULATIONS.

SITWORK

DEMOLITION – THE CONTRACTOR SHALL REMOVE THE STRUCTURES INDICATED ON THE PLANS. THE CONTRACTOR IS ADVISED TO INSPECT THE SITE TO DETERMINE THE SCOPE OF DEMOLITION WORK PRIOR TO BIDDING.

ALL SALVAGEABLE MATERIAL, AS DETERMINED BY THE OWNER, SHALL BE STORED AS DIRECTED BY THE OWNER. FOR ALL OTHER MATERIAL, THE CONTRACTOR SHALL REMOVE THE MATERIAL FROM THE PROJECT SITE AND TRANSPORT IT TO A LEGAL DISPOSAL AREA.

PLACEMENT OF ARMOR, RIPRAP AND FILTER ROCK – THE STABILITY OF THE ARMORED SLOPES, AND THEIR ABILITY TO WITHSTAND WAVE ATTACK, IS DEPENDENT ON THE EFFECTIVE INTERLOCKING OF ONE STONE WITH ANOTHER. ARMOR SHALL BE PLACED IN A MANNER SO THAT THE FILTER ROCK LAYER IS NOT RUPTURED. THE ARMOR ROCK SHALL BE HANDLED OR MANIPULATED INTO PLACE SO AS TO SECURE A STONE MASS OF THE DIMENSIONS SHOWN ON THE PLANS, WITH A MINIMUM OF VOIDS. THE STONES SHALL BE MANIPULATED SUFFICIENTLY BY MEANS OF A BACKHOE, ROCK TONGS, OR OTHER SUITABLE EQUIPMENT TO SECURE A REASONABLY REGULAR SURFACE AND MASS STABILITY. PLACEMENT SHALL BEGIN AT THE TOE AND PROCEED UP THE SLOPE. THE STONES SHALL NOT BE DUMPED FROM A HEIGHT GREATER THAN 4 FEET.

OTHER

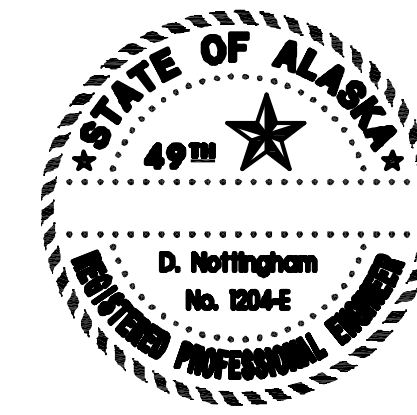
SUBMITTALS – SHOP DRAWINGS FOR ALL FABRICATED MATERIALS SHALL BE SUBMITTED TO THE ENGINEER FOR WRITTEN APPROVAL PRIOR TO FABRICATION OR SHIPPING OF ANY ITEM. CERTIFICATIONS, MANUFACTURER'S DATA, AND OTHER INFORMATION FOR ALL MATERIALS, INCLUDING THOSE NOT SPECIFICALLY NOTED IN THE GENERAL NOTES OR SHOWN ON INDIVIDUAL DRAWINGS, SHALL BE SUBMITTED TO THE ENGINEER FOR WRITTEN APPROVAL. ALL METHODS AND MATERIALS SHALL CONFORM TO THE CONTRACT DOCUMENTS, GENERAL NOTES, THE PLANS, GOOD WORKMANSHIP, GENERALLY ACCEPTED INDUSTRY STANDARDS, AND MANUFACTURER'S RECOMMENDATIONS. A MINIMUM OF THREE SETS SHALL BE PROVIDED WITH EACH SUBMITTAL. THE REVIEWED COPY WILL BE RETURNED AND MARKED AS REQUIRED FOR ACCEPTANCE AND NON-ACCEPTANCE.


THE FOLLOWING IS A LIST OF REQUIRED SUBMITTALS FOR THIS PROJECT. THE ENGINEER MAY REQUIRE ADDITIONAL SUBMITTALS.

- CIVIL/STRUCTURAL SUBMITTALS:
1. BULLRAIL LAYOUT PLAN WITH DETAILED LENGTHS AND SUPPORTS.
 2. STEEL CERTIFICATION FOR ALL STEEL USED INCLUDING CHEMISTRY, YIELD, AND MILL NUMBERS.
 3. GALVANIZING CERTIFICATION AND/OR METALLIZING CERTIFICATION.
 4. METALLIZING REPAIR METHOD AND MATERIALS.
 5. AWS WELDING CERTIFICATION FOR ALL WELDERS UTILIZED ON THE PROJECT.
 6. WELDING PROCEDURES FOR ALL SHOP AND FIELD WELDS.
 7. STEEL FABRICATION DRAWINGS.
 8. SIGN SHOP DRAWINGS.
 9. PILE DRIVING HAMMERS AND PILE DRIVING METHODS/PLAN.
 10. TEMPLATE FABRICATION DRAWINGS.
 11. REINFORCING STEEL CERTIFICATION.
 12. C.I.P. CONCRETE MIX DESIGN.
 13. VIBRO COMPACTION PROBE SHOP DRAWINGS.
 14. VIBRO COMPACTION PROCEDURE/PLAN.
 15. UHMW SHOP DRAWINGS.
 16. RED-LINED AS-BUILT DRAWINGS.
 17. DOCK AND DOLPHIN LAYOUT DIAGRAM.

ELECTRICAL SUBMITTALS:
SEE ELECTRICAL GENERAL NOTES

ISSUED FOR CONSTRUCTION
3/23/2000



 ALASKA RAILROAD CORPORATION OFFICE OF THE CHIEF ENGINEER P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500 (907) 265-2456		
PROJECT :		
NEW SEWARD RAILROAD DOCK		
TITLE:		
GENERAL NOTES 2 of 2		
DESIGNED BY:	<u> KWB </u>	FILE: 99068-17.DWG
DRAWN BY:	<u> RLC </u>	DWG NO.
APPROVED BY:	<u> DN </u>	17 OF 17
SCALE : NONE		
DATE : 3/23/2000		


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REV.	DATE	BY	REVISION