

PORT OF TACOMA

AS-BUILT DRAWINGS

TOTE PIER FACILITY BLAIR WATERWAY - 1983

CONTRACT NO. 538

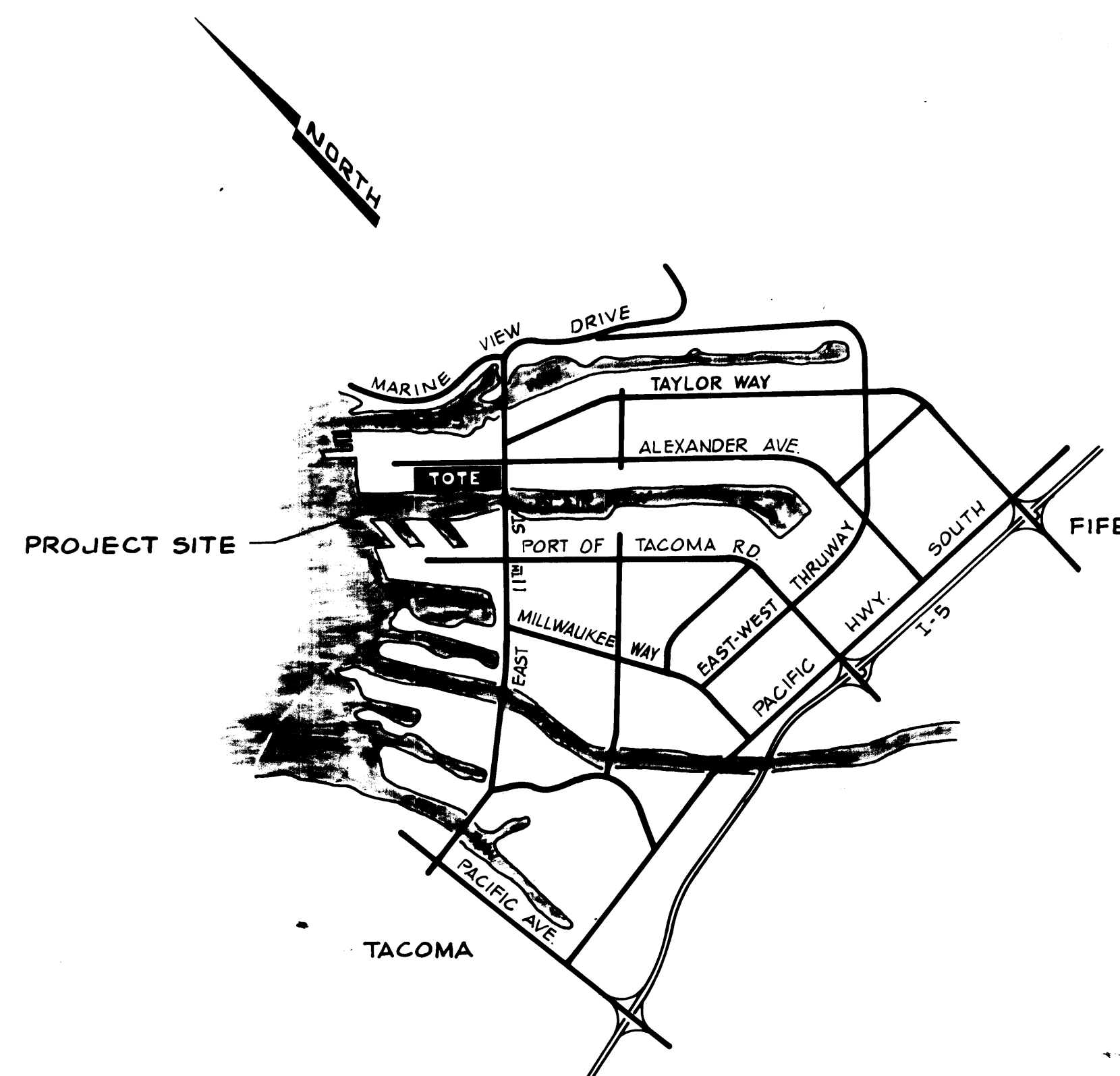
COMMISSIONERS: PATRICK O'MALLEY
PRESIDENT

JACK A. FABULICH
VICE PRESIDENT

ROBERT G. EARLEY
SECRETARY

EXECUTIVE DIRECTOR: RICHARD D. SMITH

CHIEF ENGINEER: ROBERT L. MacLEOD



VICINITY MAP N.T.S.

DRAWING INDEX

EP 3823-12	SHEET 1 OF 25	—	TITLES & VICINITY MAP
EP 3823-12	SHEET 2 OF 25	C-1	SITE PLAN
EP 3823-12	SHEET 3 OF 25	C-2	DREDGING PLAN
EP 3823-12	SHEET 4 OF 25	C-3	UTILITY PLAN & DETAILS
EP 3823-12	SHEET 5 OF 25	C-4	CROSS SECTIONS STA. 6+00-8+00
EP 3823-12	SHEET 6 OF 25	C-5	CROSS SECTIONS STA. 9+00-11+00
EP 3823-12	SHEET 7 OF 25	C-6	CROSS SECTIONS STA. 12+00-14+00
EP 3823-12	SHEET 8 OF 25	C-7	CROSS SECTIONS STA. 15+00-17+00
EP 3823-12	SHEET 9 OF 25	C-8	CROSS SECTIONS STA. 18+00-19+50
EP 3823-12	SHEET 10 OF 25	S-1	PIER LAYOUT, DESIGN CRITERIA & GENERAL NOTES
EP 3823-12	SHEET 11 OF 25	S-2	PILING PLAN
EP 3823-12	SHEET 12 OF 25	S-3	FRAMING PLAN - 85 FT. PIER
EP 3823-12	SHEET 13 OF 25	S-4	PIER FRAMING PLANS
EP 3823-12	SHEET 14 OF 25	S-5	PIER CROSS SECTION
EP 3823-12	SHEET 15 OF 25	S-6	PRESTRESSED CONCRETE PILE & A & A-1 PANEL DETAILS
EP 3823-12	SHEET 16 OF 25	S-7	B & B-1 PRECAST PANEL DETAILS & WHEEL BEARING PLATES
EP 3823-12	SHEET 17 OF 25	S-8	TYPICAL PILE CAP DETAILS
EP 3823-12	SHEET 18 OF 25	S-9	MISCELLANEOUS DETAILS
EP 3823-12	SHEET 19 OF 25	S-10	FENDER SYSTEM LAYOUT
EP 3823-12	SHEET 20 OF 25	S-11	FENDER SYSTEM DETAILS
EP 3823-12	SHEET 21 OF 25	S-12	BOLLARD DETAILS
EP 3823-12	SHEET 22 OF 25	S-13	WALKWAY PLAN & DETAILS
EP 3823-12	SHEET 23 OF 25	S-14	WALKWAY DETAILS
EP 3823-12	SHEET 24 OF 25	E-1	ELECTRICAL SITE PLAN
EP 3823-12	SHEET 25 OF 25	E-2	ELECTRICAL DETAILS
EP 3823-12	SHEET 26 OF 27	GC-1	DISPOSAL SITE
EP 3823-12	SHEET 27 OF 27	GC-2	MATERIAL TRANSFER AREA

SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2301 SO. 46TH TACOMA WA 98409

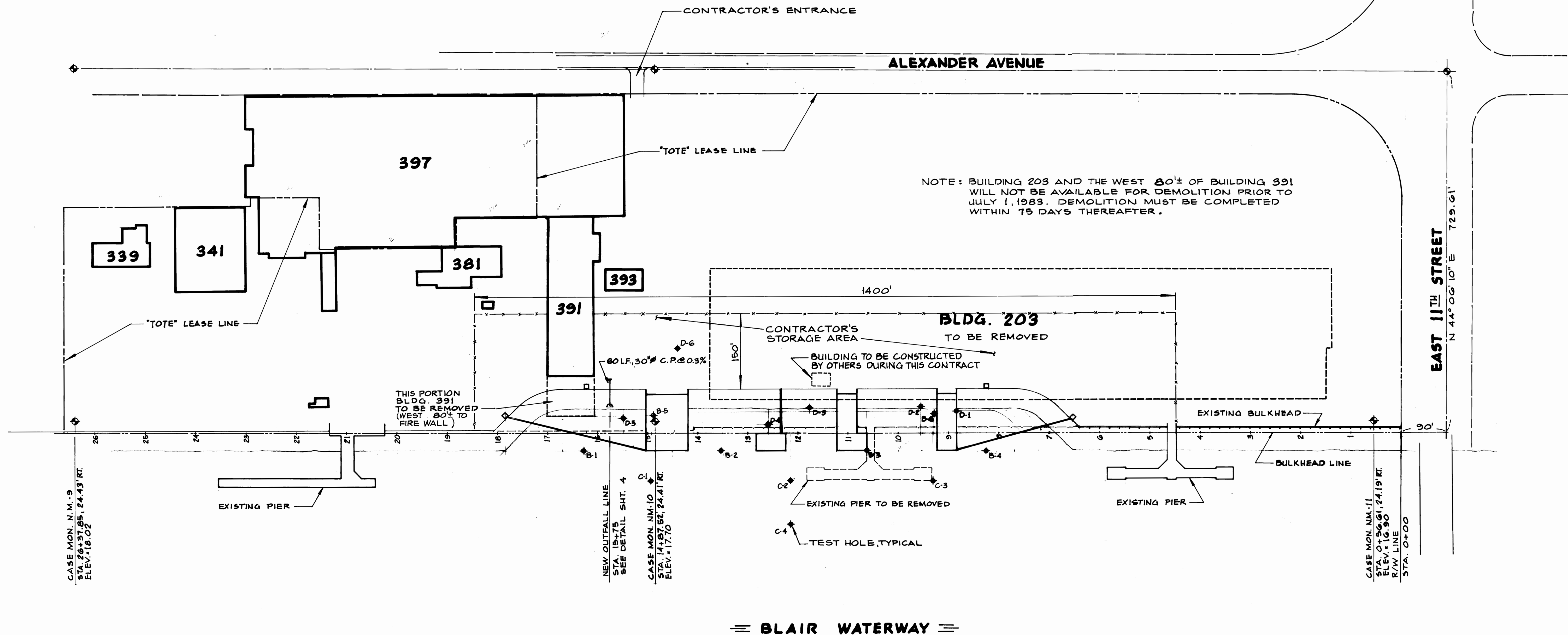
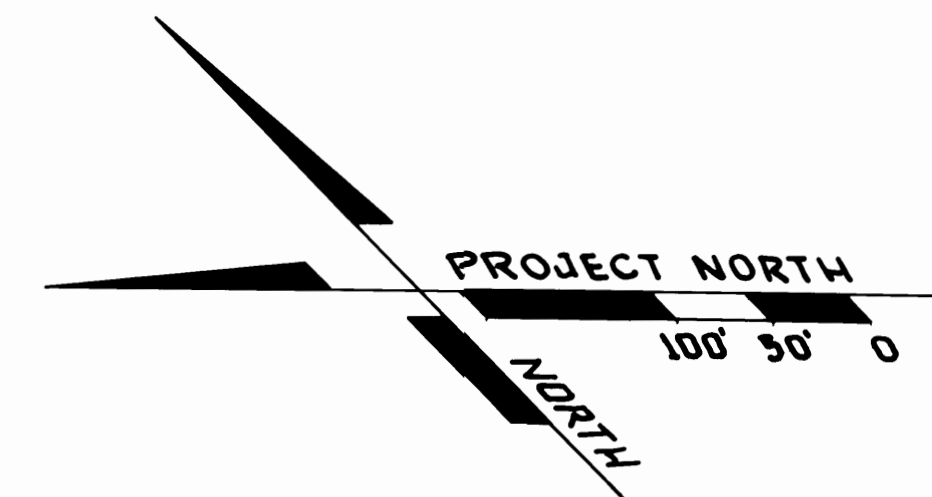
APPROVED

R.L. MacLeod
CHIEF ENGINEER

DRAWING NO.

EP 3823-12

SHEET 1 OF 25



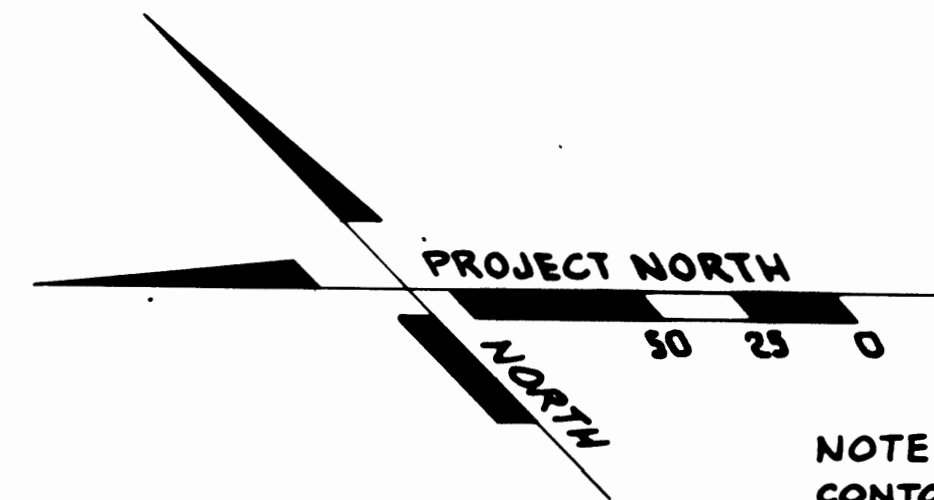
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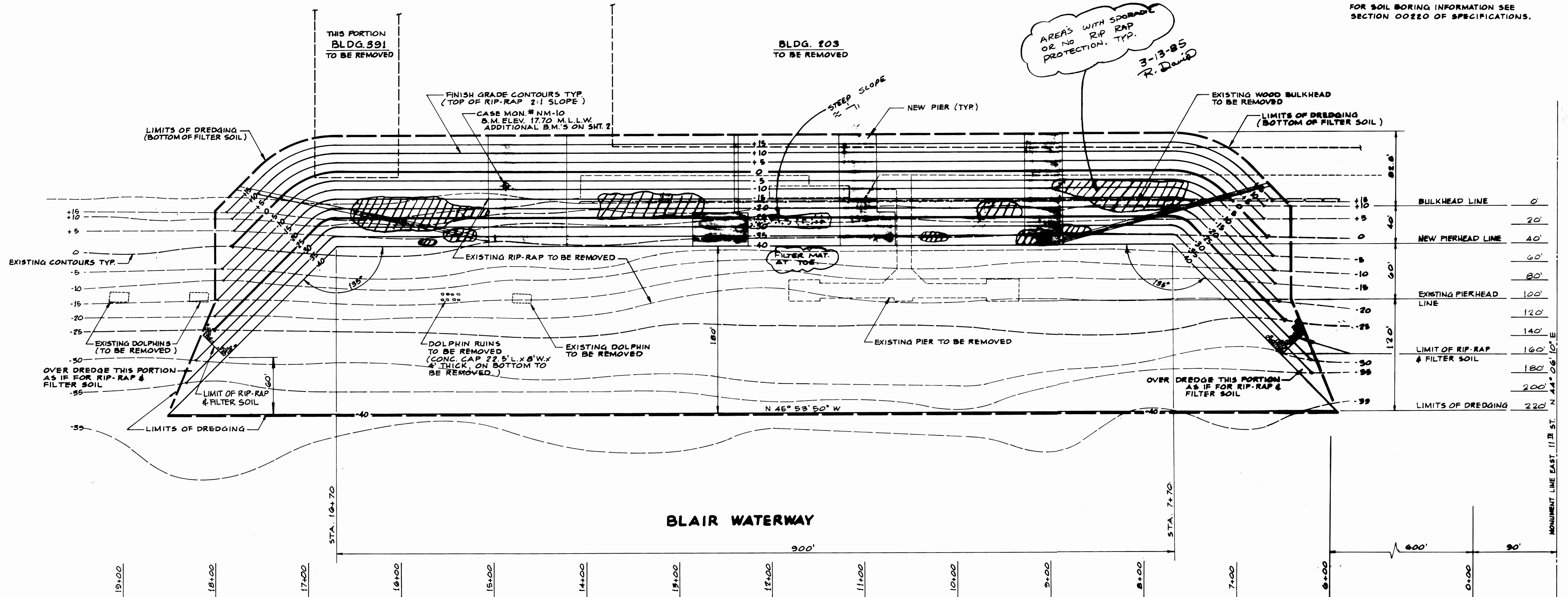
SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40th TACOMA WA 98409

MARK	REVISION	BY	APP.	DATE

DRAWN: D.A.T. DATE: APRIL, 1983	PORT OF TACOMA SITE PLAN TOTE PIER FACILITY BLAIR WATERWAY - 1983	SCALE: 1"=100'
CHECKED: T.H.S. DATE: 5-11-83		DRAWING NO. EP 3823-12
CHECKED: _____ DATE: _____		SHEET 2 OF 25
CONT. NO. _____ FIELD BOOK(S) _____		
APPROVED: <i>R.L. MacLeod</i> CHIEF ENGINEER	DATE: 5/20/83	

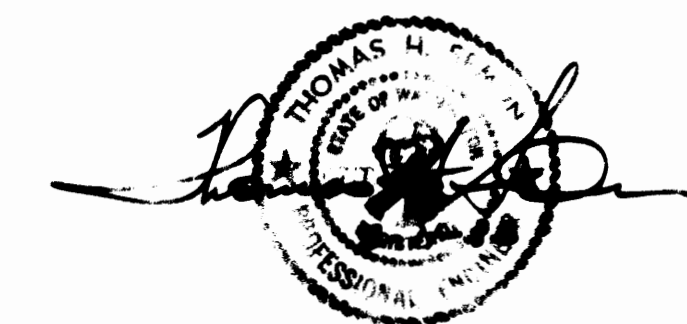


NOTE:
CONTOUR ELEVATIONS ARE IN FEET
AND REFER TO M.L.L.W.
FOR SOIL BORING INFORMATION SEE
SECTION 00220 OF SPECIFICATIONS.



CLAIM # 4

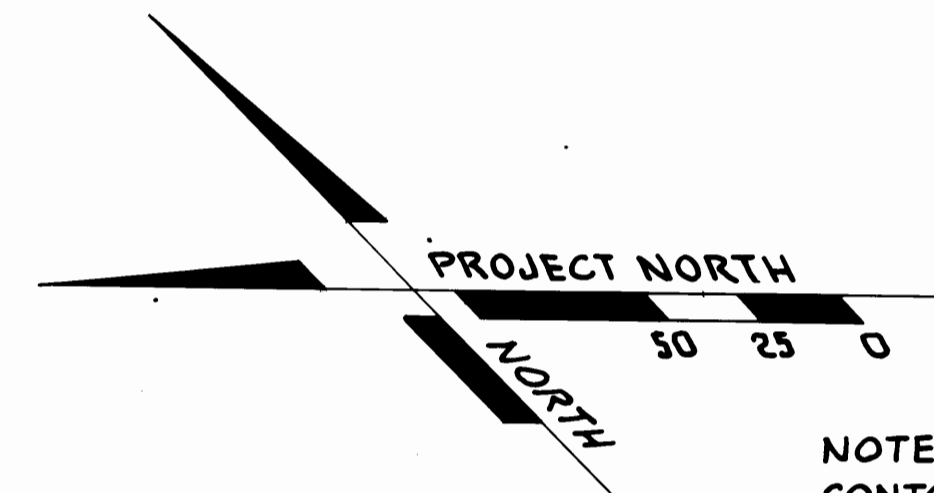
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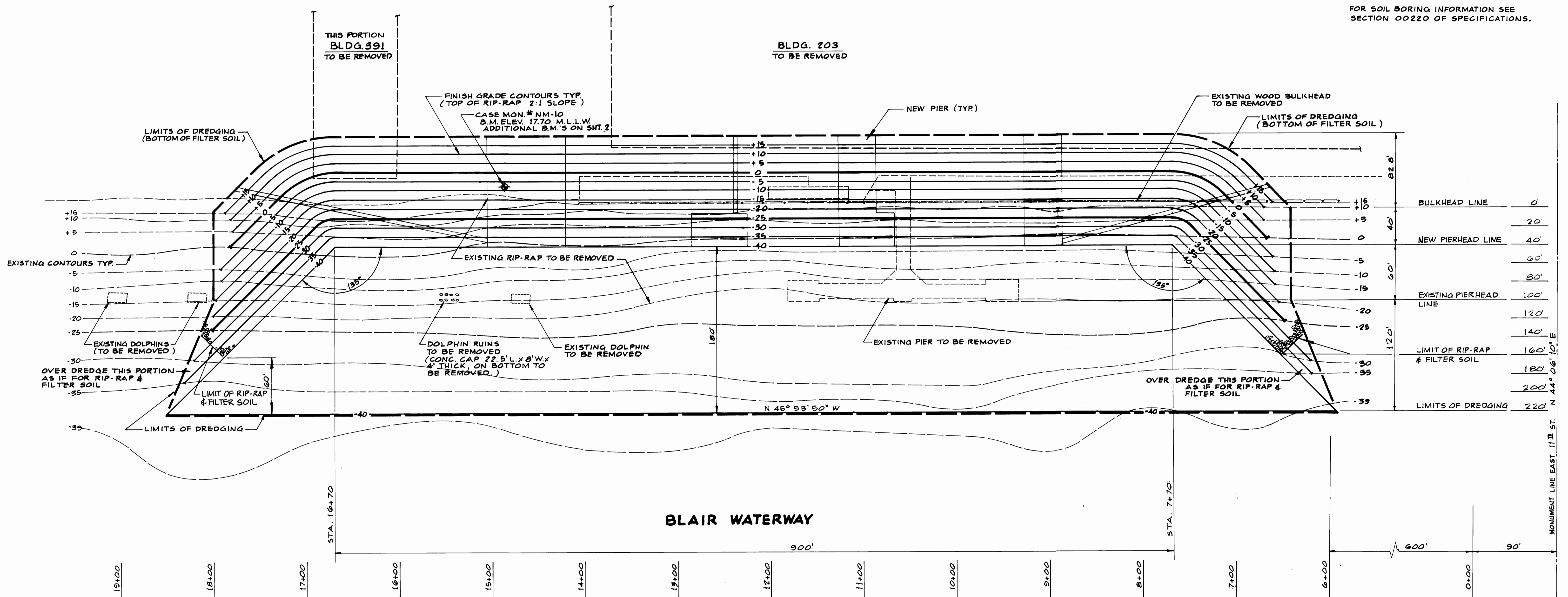
SITTS & HILL ENGINEERS
CIVIL STRUCTURAL & SURVEYING
2901 SO. 40th TACOMA WA 98409

MARK	REVISION	BY	APP.	DATE

DRAWN D.A.T. DATE APRIL 1983 CHECKED T.W.S. DATE 6-11-83 CHECKED DATE CONT. NO.	PORT OF TACOMA DREDGING PLAN TOTE PIER FACILITY BLAIR WATERWAY - 1983	SCALE 1" = 50' DRAWING NO. EP 3823-12 SHEET 3 OF 25
APPROVED B.L. Hill 5/20/83		



NOTE:
CONTOUR ELEVATIONS ARE IN FEET
AND REFER TO M.L.L.W.
FOR SOIL BORING INFORMATION SEE
SECTION 00220 OF SPECIFICATIONS.



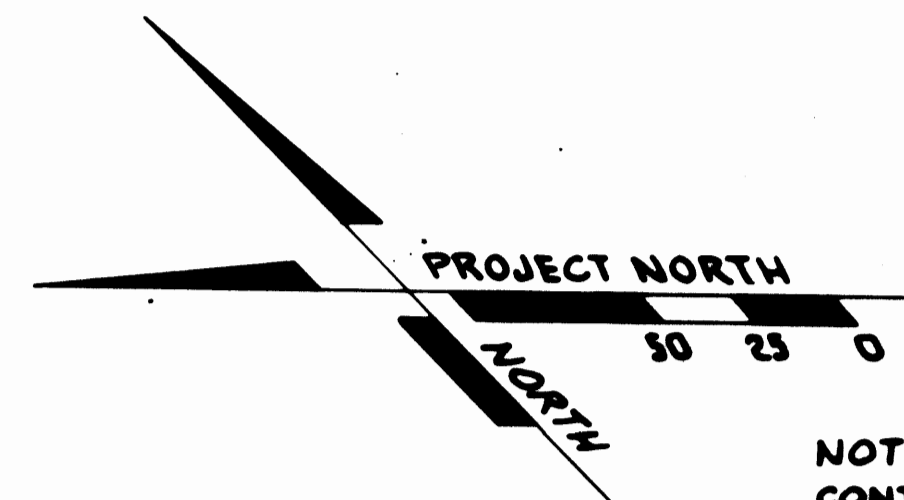
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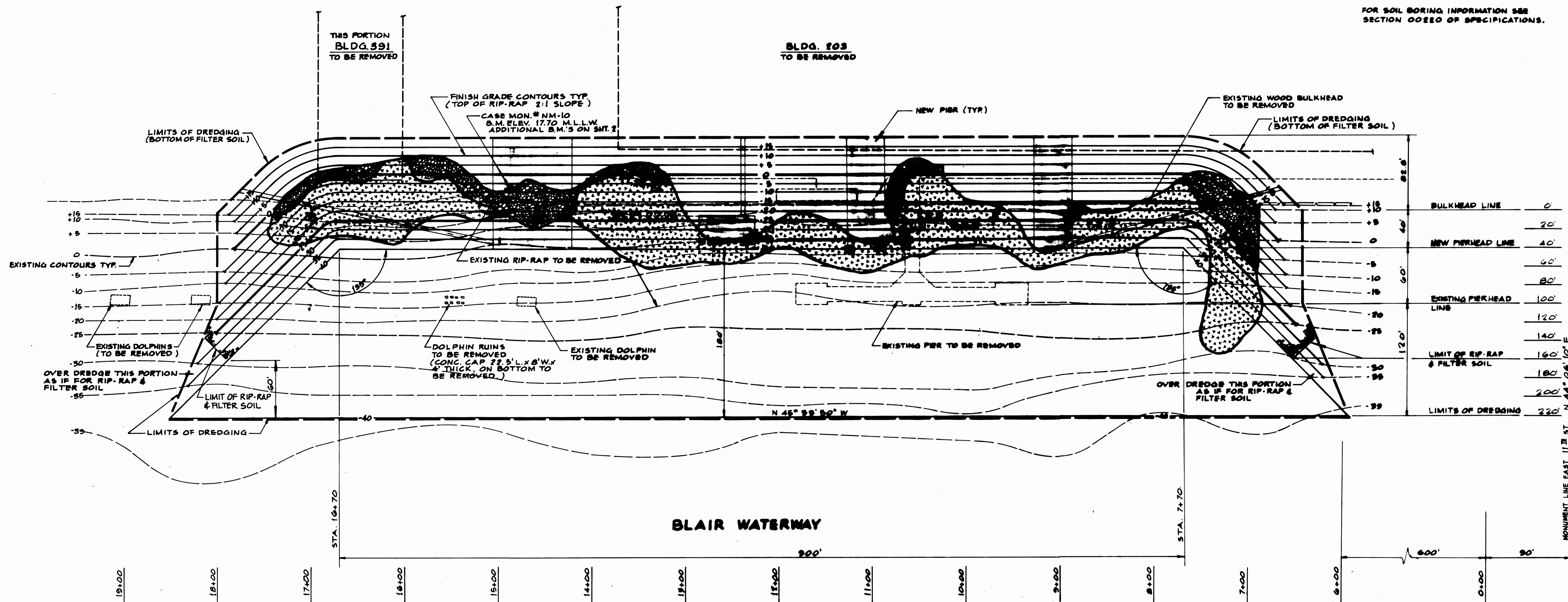
SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40th TACOMA, WA 98409

MARK	REVISION	BY	APP.	DATE

DRAWN <u>D.A.T.</u> DATE <u>APRIL 1983</u>	PORT OF TACOMA	
CHECKED <u>THS</u> DATE <u>5-11-83</u>	DREDGING PLAN	
CHECKED <u> </u> DATE <u> </u>	TOTE PIER FACILITY	
CHECKED <u> </u> DATE <u> </u>	BLAIR WATERWAY - 1983	
CONT. NO. <u> </u>	FIELD BOOK(S) <u> </u>	SCALE <u>1" = 50'</u>
APPROVED <u> </u>	DATE <u>5/20/83</u>	DRAWING NO. EP 3823-12
CHIEF ENGINEER <u> </u>		SHEET 3A OF 25



NOTE:
CONTOUR ELEVATIONS ARE IN FEET
AND REFER TO M.L.L.W.
FOR SOIL BORING INFORMATION SEE
SECTION 0020 OF SPECIFICATIONS.



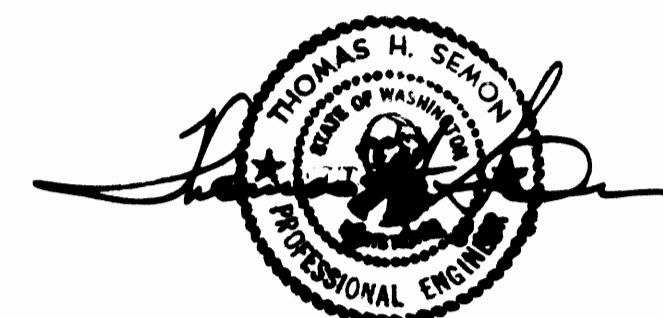
LEGEND:

- SPORADIC COVERAGE
- SATISFACTORY COVERAGE
- 1-23= PHOTOGRAPHS
- A = SOIL SAMPLE TAKEN 3/9/85
- B = SOIL SAMPLE TAKEN 2/16/86

TOTE CLAIM #4
DIVING INSPECTION 2/16/86



C-2

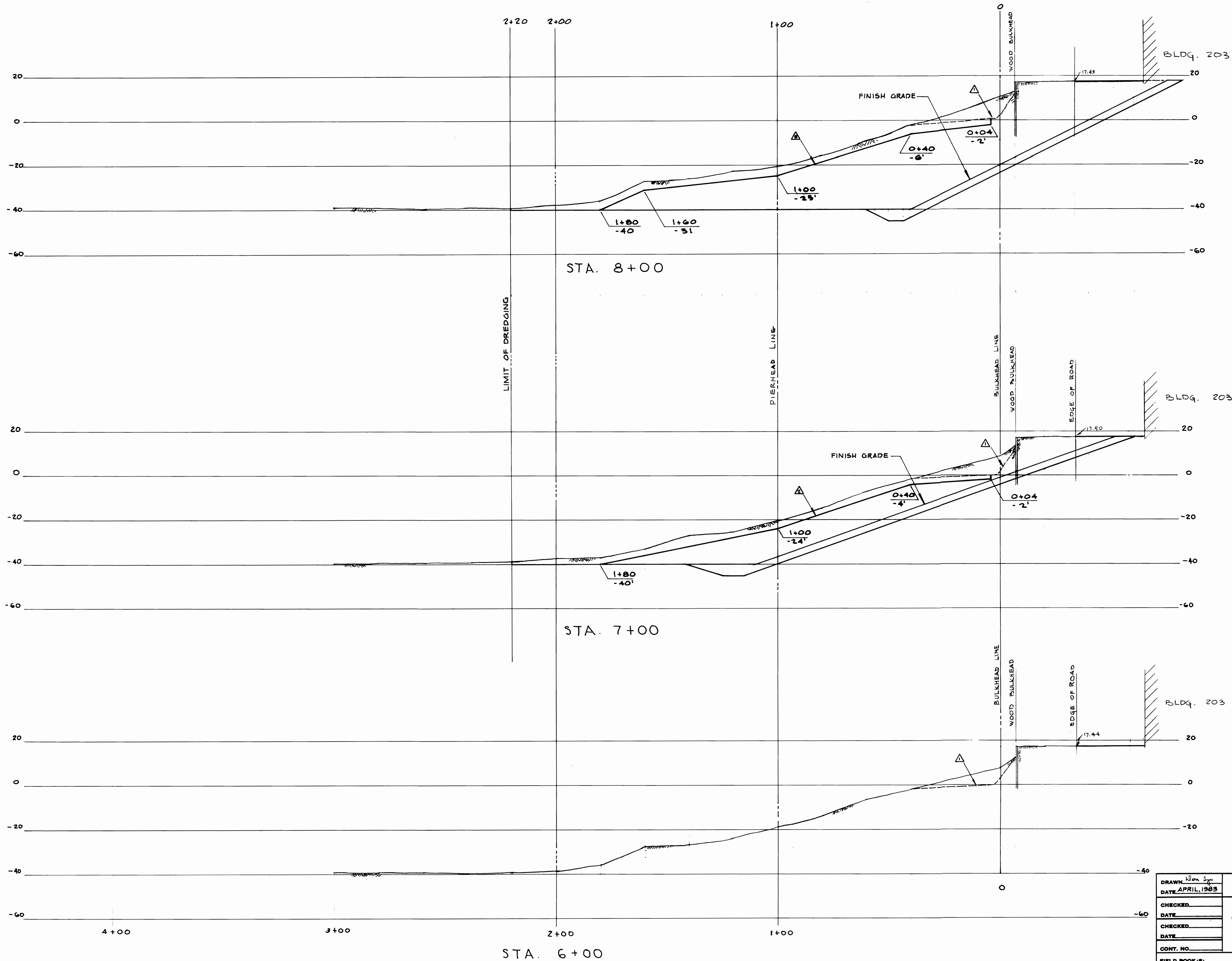


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CHECKED: T.V.S. DATE: 5-11-83	
CHECKED: [Signature] DATE: [Blank]	
CONT. NO. [Blank]	

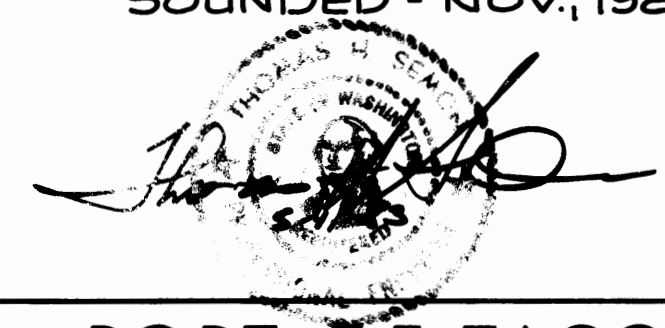
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APPROVED: [Signature] DATE: 5/20/83	DRAWING NO. EP 3823-12
BY: [Blank]	SHEET 38 OF 25

STITS & HILL
CIVIL, STRUCTURAL & SURVEYING
2201 SO. 40th TACOMA WA 98409

MARK	REVISION	BY	APP.	DATE



SOUNDED - NOV. 1982

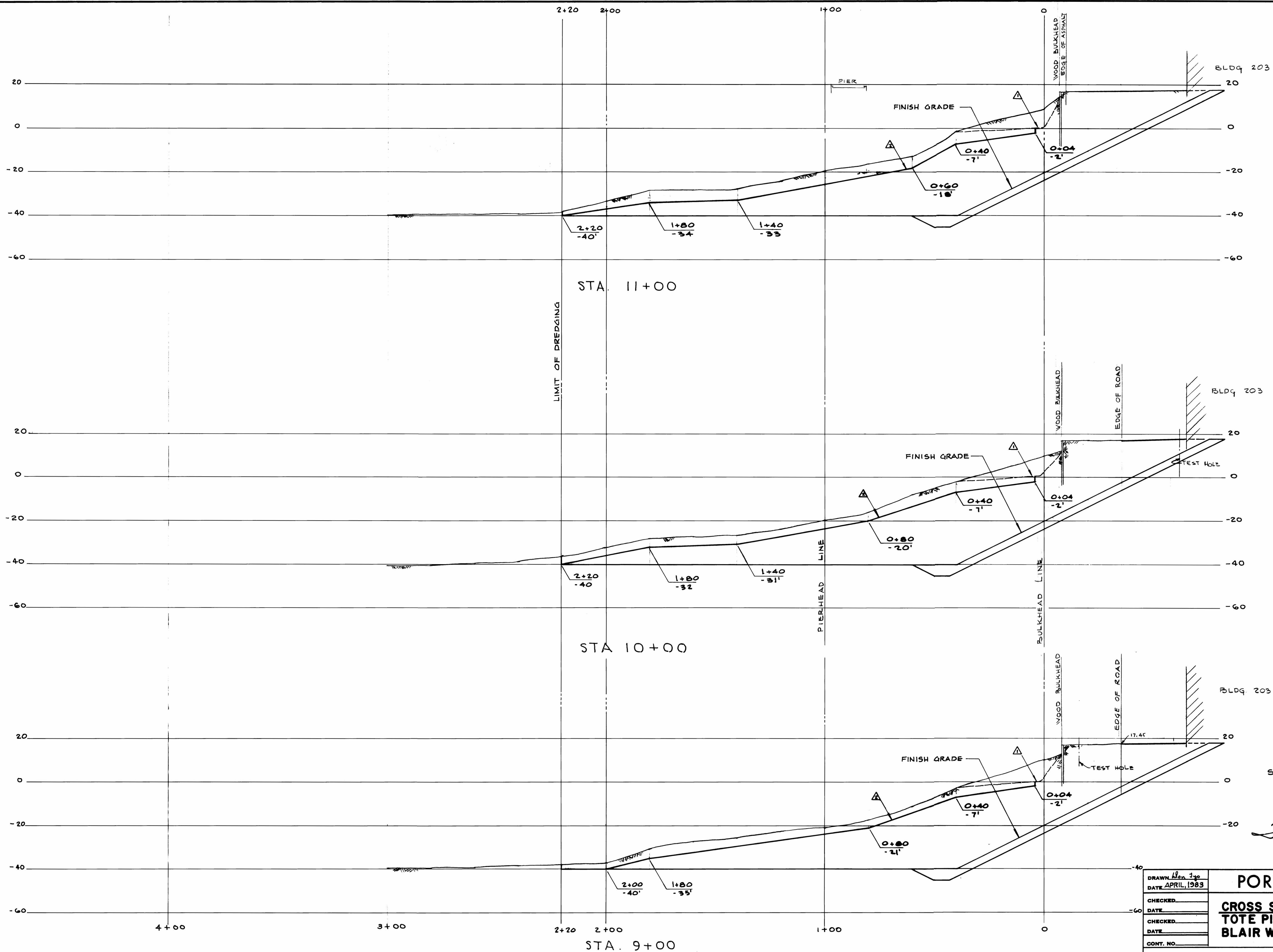


C-4

DRAWN: <i>Don Igo</i>		DATE: APRIL, 1983	
CHECKED:		CHECKED:	
DATE:		DATE:	
CHECKED:		CHECKED:	
DATE:		DATE:	
CONT. NO.		FIELD BOOK (S)	
APPROVED: <i>R. R. MacLeod</i>		DATE: 5/20/87	
MARK		REVISION	
1 UPLAND DISPOSAL BOUNDARY		2 SOUNDED - JULY 21, 1983	
BY		APP. DATE	
3-88		3-1-83	
CHIEF ENGINEER			

PORT OF TACOMA	
CROSS SECTIONS 6+00-8+00	
TOTE PIER FACILITY	
BLAIR WATERWAY - 1983	
SCALE: 1" = 20' H. & V.	DRAWING NO.
	EP 3823-12
SHEET	5 OF 25

SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40th TACOMA WA 98409



SOUNDED - NOV. 1982



C-5

DRAWN *Don Jyo*
DATE APRIL 1983
CHECKED
DATE
CHECKED
DATE
CONT. NO.

PORT OF TACOMA
CROSS SECTIONS 9+00-11+00
TOTE PIER FACILITY
BLAIR WATERWAY - 1983

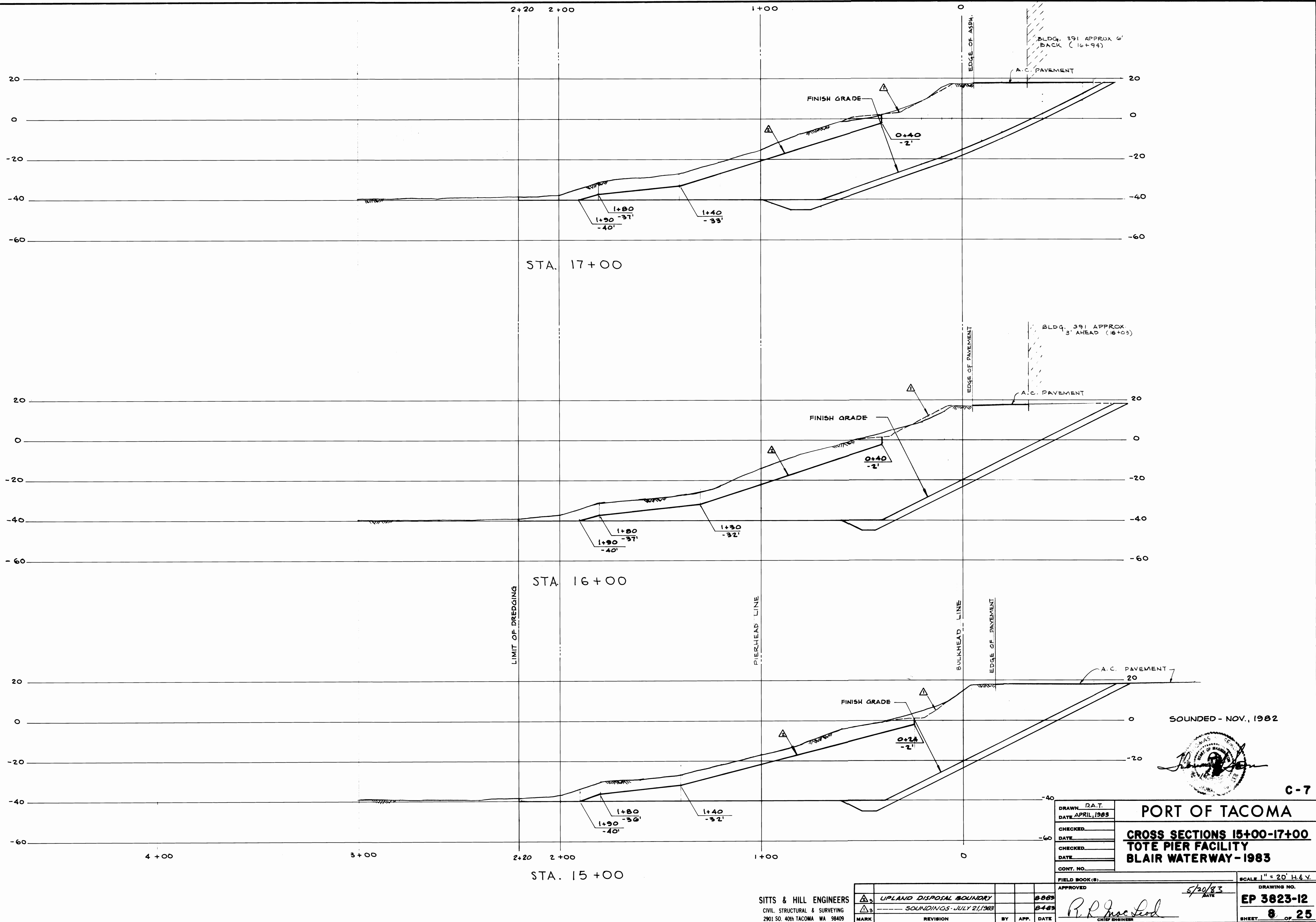
FIELD BOOK (S)
APPROVED
DATE *5/20/83*
DATE
DATE

SCALE 1" = 20' H & V.
DRAWING NO.
EP 3823-12
SHEET **6** OF **25**

SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40TH TACOMA WA 98409

MARK	REVISION	BY	APP.	DATE
△	UPLAND DISPOSAL BOUNDARY			8-83
△	SOUNDINGS - JULY 21, 1983			8-83

R.L. MacLeod
CHIEF ENGINEER



SITTS & HILL ENGINEERS
 CIVIL, STRUCTURAL & SURVEYING
 2901 SO. 40th TACOMA WA 98409

MARK	REVISION	BY	APP.	DATE
Δ ₂	UPLAND DISPOSAL BOUNDARY			8-88
Δ ₃	SOUNDINGS - JULY 21, 1983			8-88

DRAWN	R.A.T.
DATE	APRIL 1983
CHECKED	
DATE	
CHECKED	
DATE	
CONT. NO.	
FIELD BOOK(S)	
APPROVED	5/20/83
DATE	
R.L. MacLeod	
CHIEF ENGINEER	

PORT OF TACOMA

CROSS SECTIONS 15+00-17+00

TOTE PIER FACILITY

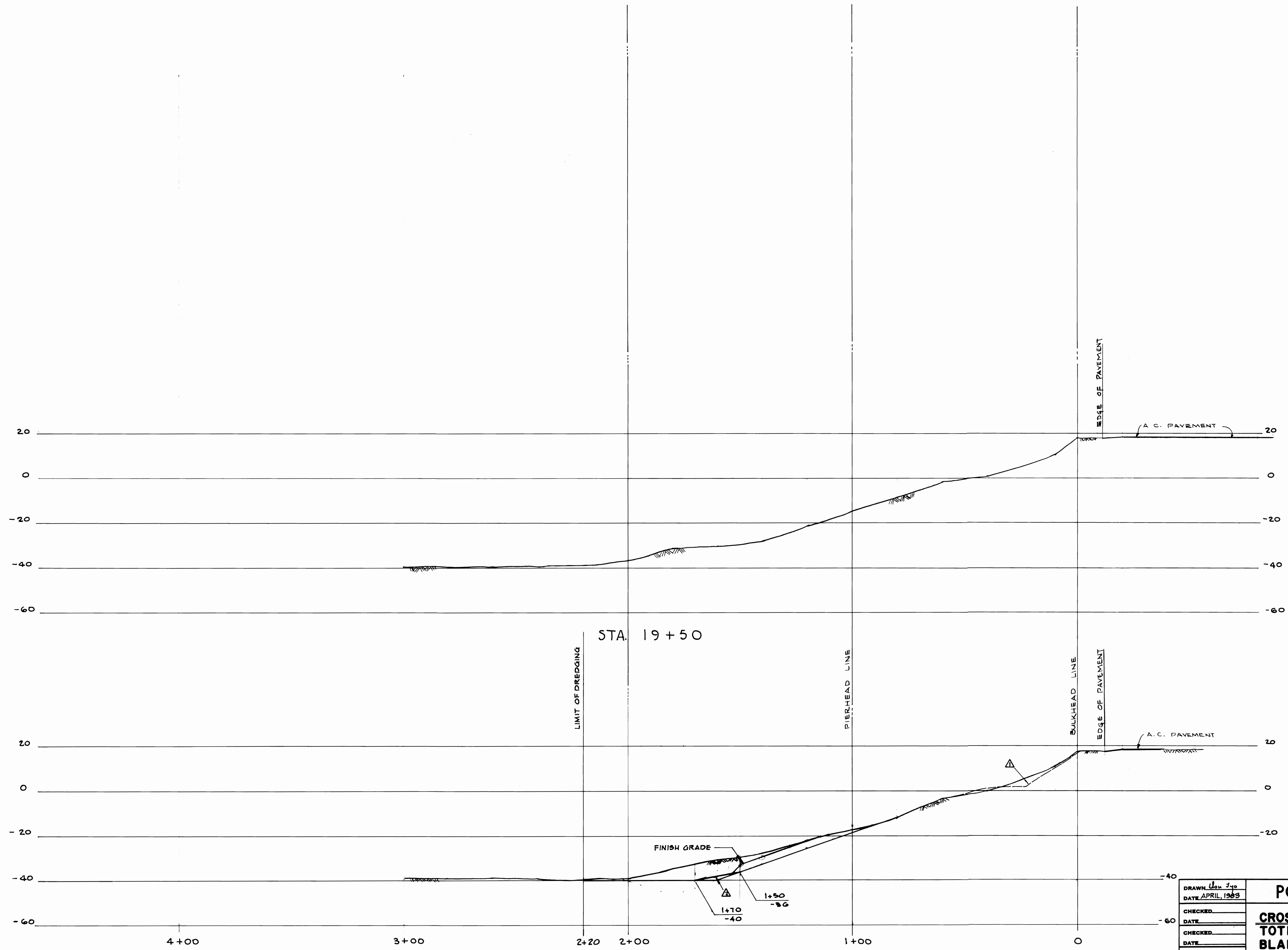
BLAIR WATERWAY - 1983

SCALE 1" = 20' H&V

DRAWING NO. **EP 3823-12**

SHEET **8** OF **25**

C-7



SOUNDED - NOV., 1982



C-8

PORT OF TACOMA
CROSS SECTIONS 18+00-19+50
TOTE PIER FACILITY
BLAIR WATERWAY - 1983

DRAWN	Don Jyo
DATE	APRIL 1983
CHECKED	
DATE	
CHECKED	
DATE	
CONT. NO.	

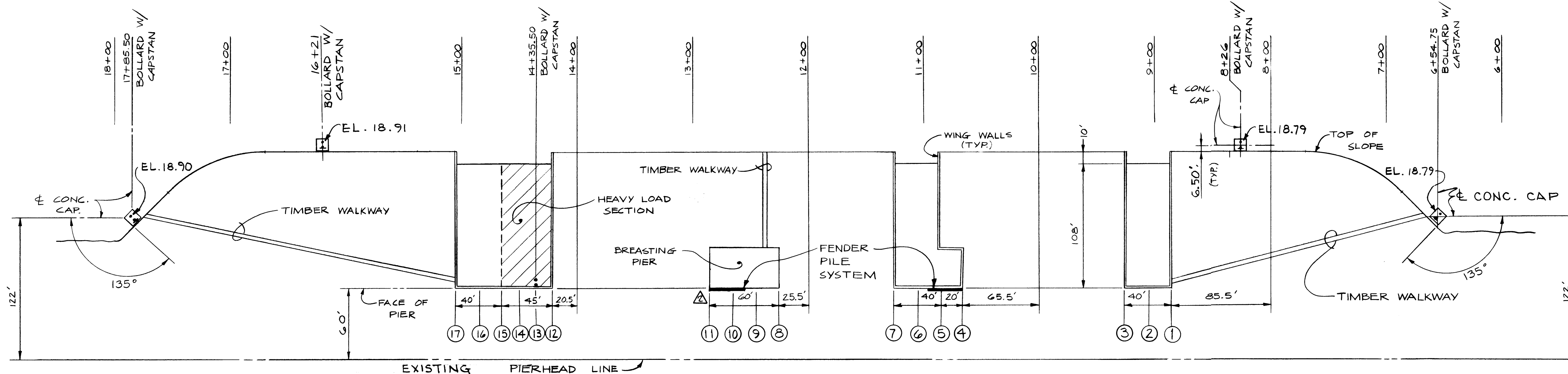
FIELD BOOK(S)	
APPROVED	

SCALE	1" = 20' H. & V.
DRAWING NO.	EP 3823-12
SHEET	9 OF 25

SITTS & HILL ENGINEERS
 CIVIL, STRUCTURAL & SURVEYING
 2901 SO. 40TH TACOMA, WA 98409

MARK	REVISION	BY	APP.	DATE
Δ1	UPLAND DISPOSAL BOUNDARY			5-8-83
Δ1	----- SOUNDINGS - JULY 21, 1983			5-4-83

R. L. MacLeod
 CHIEF ENGINEER



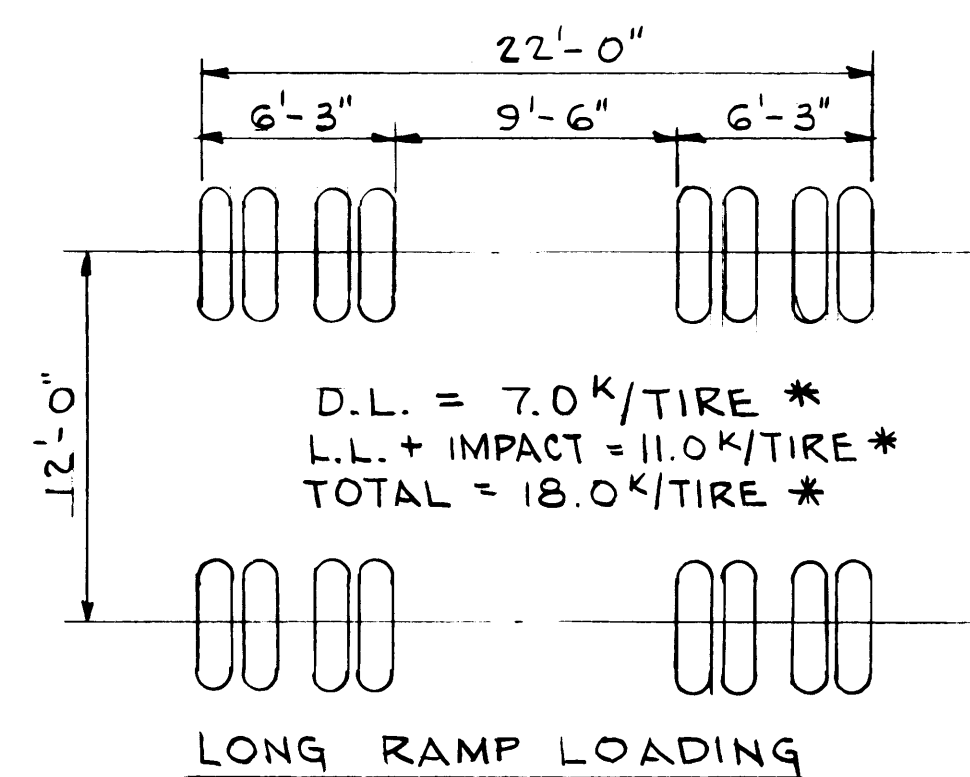
PIER LAYOUT
1" = 50'

DESIGN CRITERIA

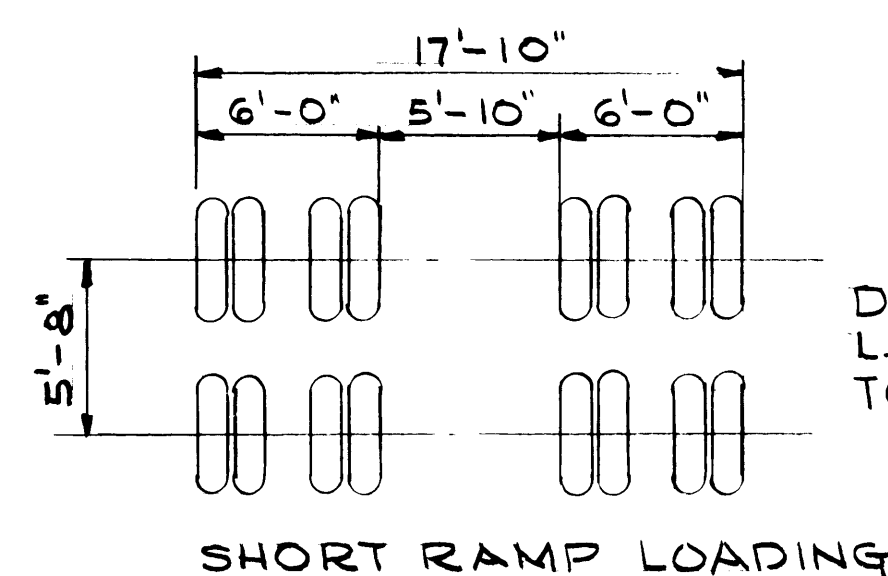
1. UNIFORM LIVE LOAD:

- A) ON ALL AREAS OTHER THAN THE HEAVY LOADED SECTION:
1000 PSF ON ALL SPANS OR ANY COMBINATIONS OF SPANS.
- B) ON HEAVY LOADED SECTION:
2000 PSF ON ALL SPANS OR ANY COMBINATIONS OF SPANS.
- C) ON WALKWAYS:
100 PSF

2. TOTE RAMP LOADINGS:



* DEAD & LIVE LOADS
NOTED ARE TAKEN FROM
MCKAY INTERNATIONAL
ENGINEERS, INC. DWG. NO.
7503-IP- REV. 2 DATED 5/27/75

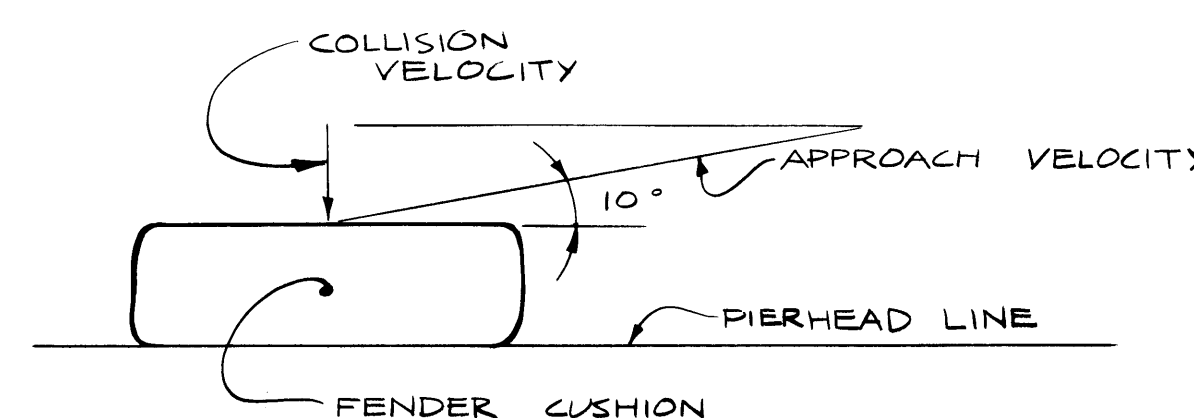


3. SEISMIC LOADING:

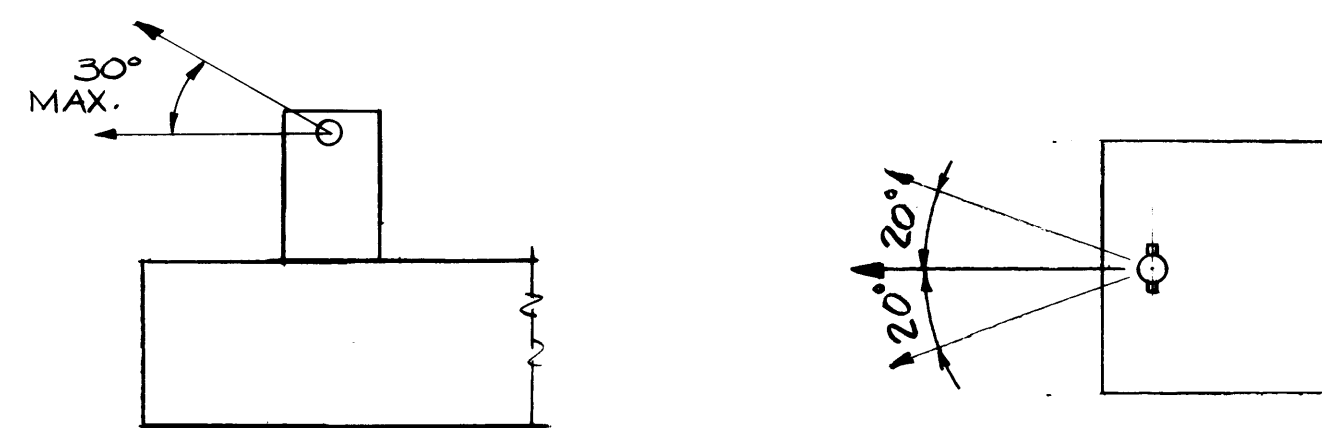
13 PERCENT OF TOTAL DEAD LOAD APPLIED IN ANY HORIZONTAL DIRECTION.

4. SHIP'S IMPACT AT FACE OF PIER:

SHIP LONG TONS	APPROACH VELOCITY KNOTS	COLLISION VELOCITY FEET PER SEC.
52,000	1.12	0.33

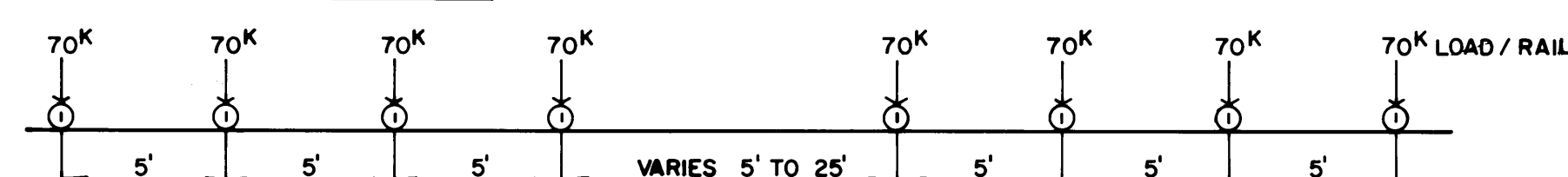


5. LOAD ON LAND BASED BOLLARDS 180K

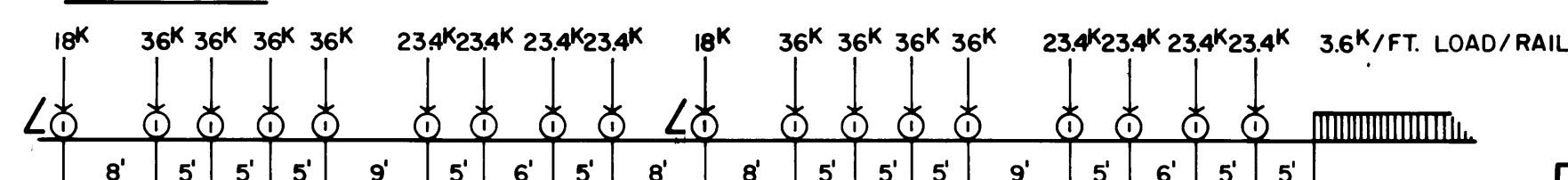


6. WIND LOAD: BASED ON 65 M.P.H. WIND ON VERTICAL PROJECTION OF SHIP.

7. CRANE WHEEL LOAD:



8. RAILROAD: COOPER E72 LOADING



GENERAL NOTES

- ALL METHODS AND MATERIALS SHALL CONFORM TO THE UNIFORM BUILDING CODE 1979 EDITION AS AMENDED BY THE CITY OF TACOMA.
- ALL DIMENSIONS AND DETAILS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION OR CONSTRUCTION. SHOP DRAWINGS SHALL BE SUBMITTED TO THE PORT FOR APPROVAL PRIOR TO FABRICATION AND CONSTRUCTION.
- CONCRETE PILES:**
DESIGN LOAD: 100 TON COMPRESSION; 40 TON TENSION
- TIMBER PILES:**
DESIGN LOAD: 30 TON AT BOLLARDS, 12 TON AT WALKWAYS
PILES SHALL BE DOUGLAS FIR, PRESSURE TREATED.
- STEEL PILES:**
FENDER PILES SHALL BE DRIVEN TO A MINIMUM TIP ELEVATION OF -70.00.
- CONCRETE**
28 DAY COMPRESSIVE STRENGTH
PRESTRESSED CONCRETE PILES 7,000 PSI
PRECAST DECK PANELS 6,000 PSI
CAST IN PLACE CONCRETE 4,000 PSI
- REINFORCING STEEL**
A.S.T.M. A 615 GRADE 60 THROUGHOUT
- PRESTRESSING STEEL**
A.S.T.M. 416 GRADE 270
- LUMBER AND TIMBER**
PILE CAPS, FENDER PILE CAPS AND BULLRAIL, DOUGLAS FIR-LARCH DENSE NO 1 OR BETTER. ALL OTHER SAWN MATERIAL DOUGLAS FIR-LARCH NO 1 OR BETTER.
- STEEL**
PLATES AND SHAPES: A.S.T.M. A36
BOLTS AND NUTS: A.S.T.M. A307
ALL STEEL AND HARDWARE SHALL BE GALVANIZED EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.

△ FUTURE CONSTRUCTION WHICH TIES THESE INDIVIDUAL PIERS INTO A SINGLE CONTINUOUS STRUCTURE MAKES PROVISION FOR THE CRANE AND RAILROAD LOADINGS SHOWN WITH CRANE RAIL GAGE OF 32'-0" OR 64'-0" AND RAILROAD RAIL OF STANDARD GAGE.

AS BUILT SEPT. 84

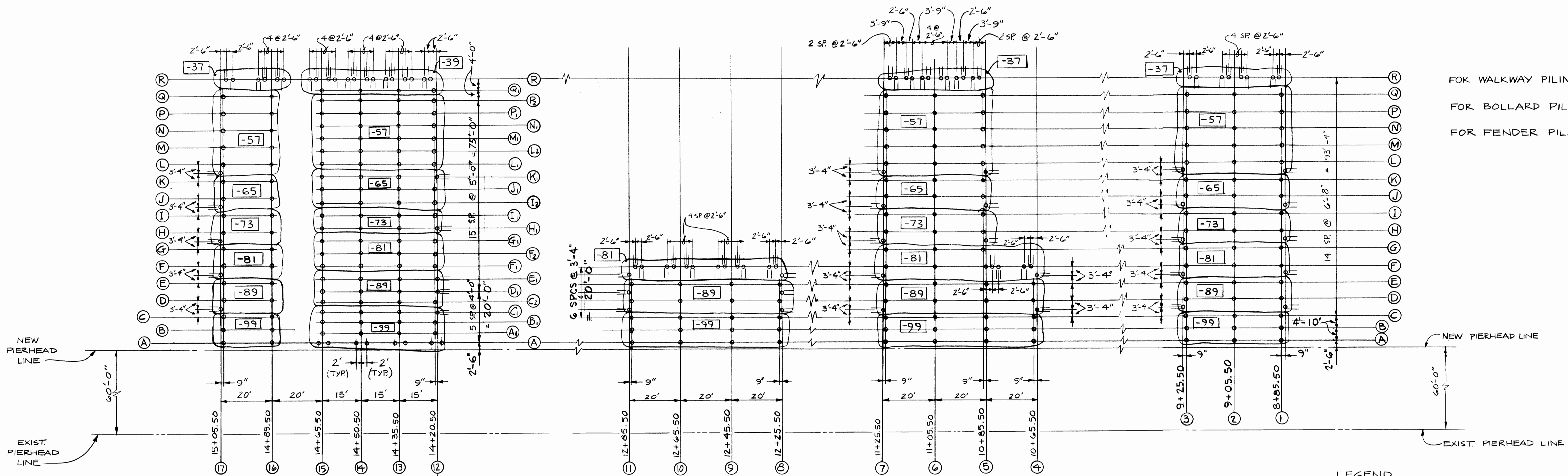
51



DRAWN: D.A. DT DATE: APRIL 1983		PORT OF TACOMA	
CHECKED: W.S. DATE: APRIL 1983		PIER LAYOUT, DESIGN CRITERIA AND GENERAL NOTES	
CHECKED: H.L.C. DATE: MAY 1983		TOTE PIER FACILITY	
CONT. NO.		BLAIR WATERWAY, 1983	
FIELD BOOK(S)		SCALE: NOTED	
APPROVED		DRAWING NO. EP 3823-12	
DATE: 5/20/83		SHEET 10 OF 25	
BY: R.L. MacLeod CHIEF ENGINEER			

SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40th TACOMA WA 98409

MARK	REVISION	BY	APP.	DATE
1	RELOCATE FDR. ON BREAST. PIER	HLC		7-1-83
2	ADD. CRANE AND R/R LOADING DATA	RAT		8-4-83

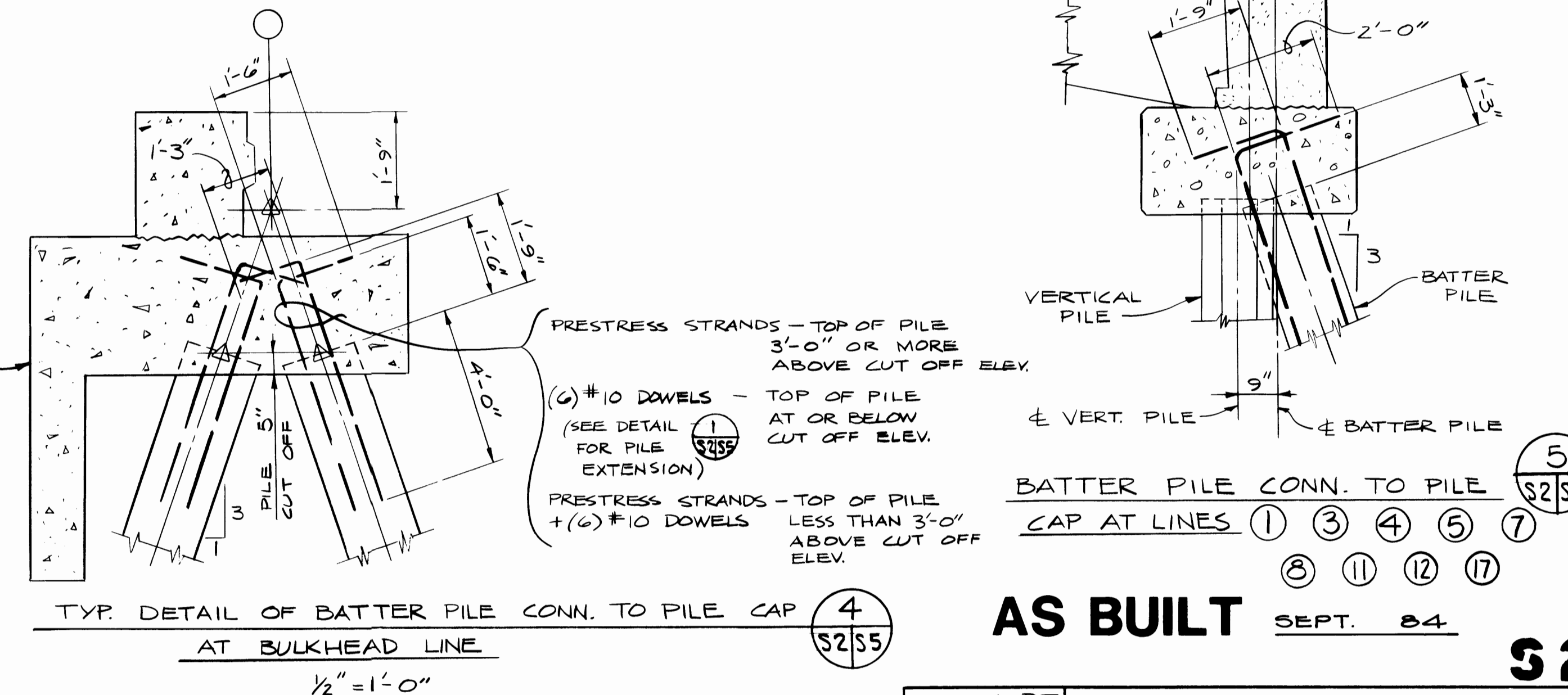
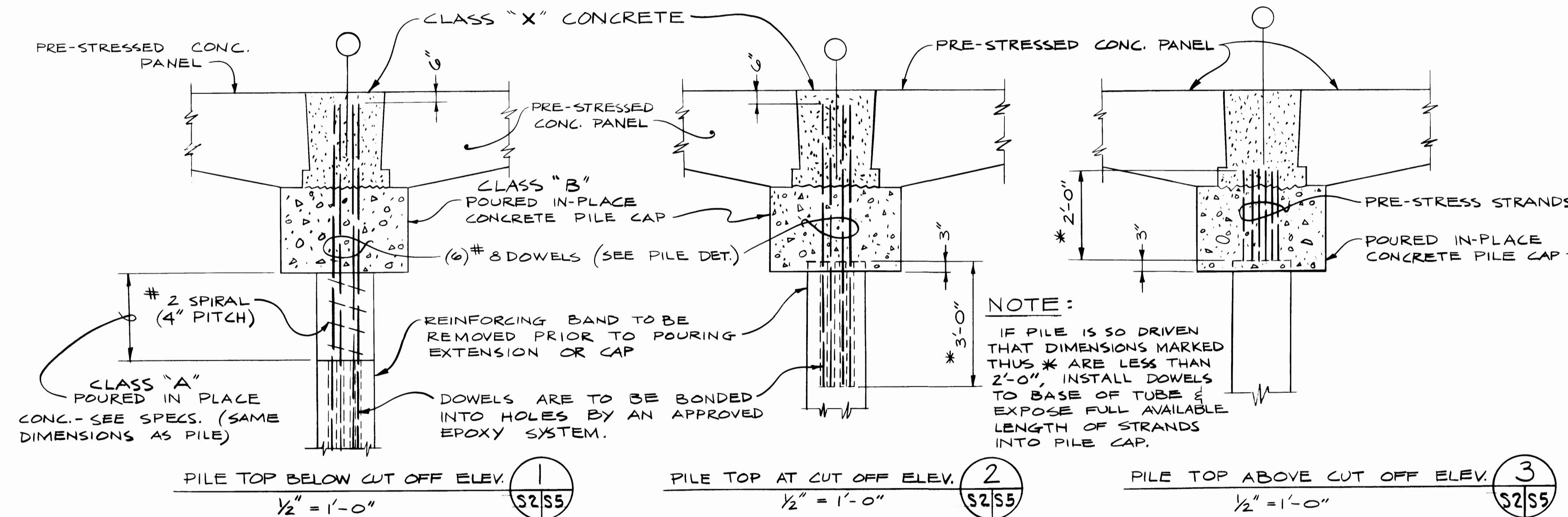


FOR WALKWAY PILING SEE SHEET S-13
FOR BOLLARD PILING SEE SHEET S-12
FOR FENDER PILING SEE SHEET S-10

NOTE :
1.) CONCRETE PILING SHALL BE DRIVEN TO THE DESIGN LOAD OF 100 TONS WITH A MINIMUM PENETRATION OF AT LEAST 25 FEET OR TO ELEVATION OF MINUS 35, WHICHEVER PROVIDES GREATER PENETRATION.
2.) CONCRETE PILING WHICH ATTAIN REQUIRED BEARING CAPACITY WITH A TIP ELEVATION BETWEEN -40.00 AND -55.00 SHALL BE DRIVEN TO A MINIMUM TIP ELEVATION OF AT LEAST -55.00.

PILE PLAN
1" = 20'

LEGEND
○ 16 1/2" OCTAGONAL PRESTRESSED CONCRETE PILE (VERTICAL)
— 16 1/2" OCTAGONAL PRESTRESSED CONCRETE PILE (BATTERED)
-73 ASSUMED PILE TIP ELEVATION (FOR BIDDING PURPOSES ONLY)



TYPICAL DETAILS OF PILE TO PILE CAP CONNECTIONS

SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40TH TACOMA WA 98409

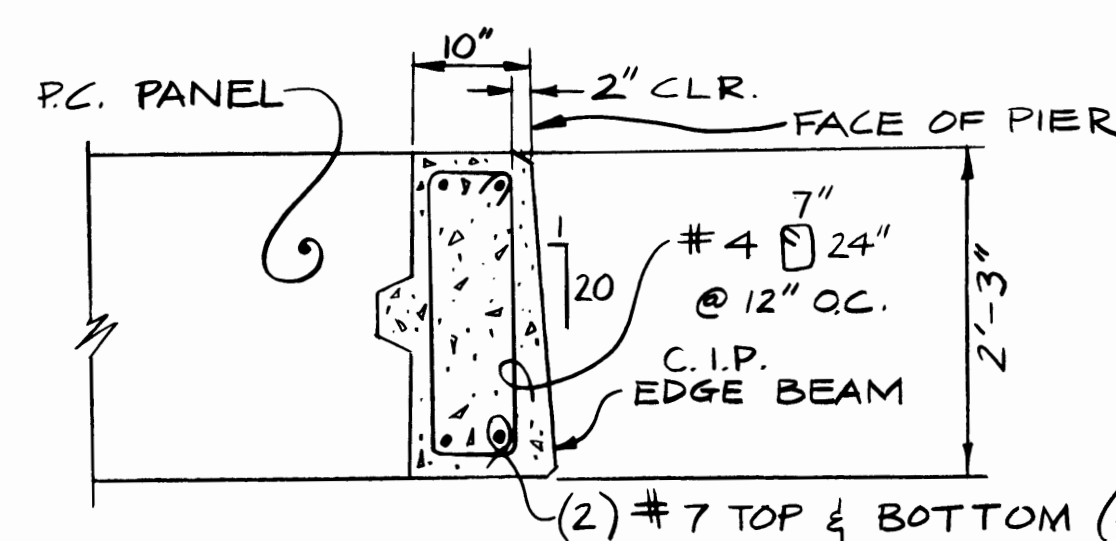
MARK	REVISION	BY	APP.	DATE



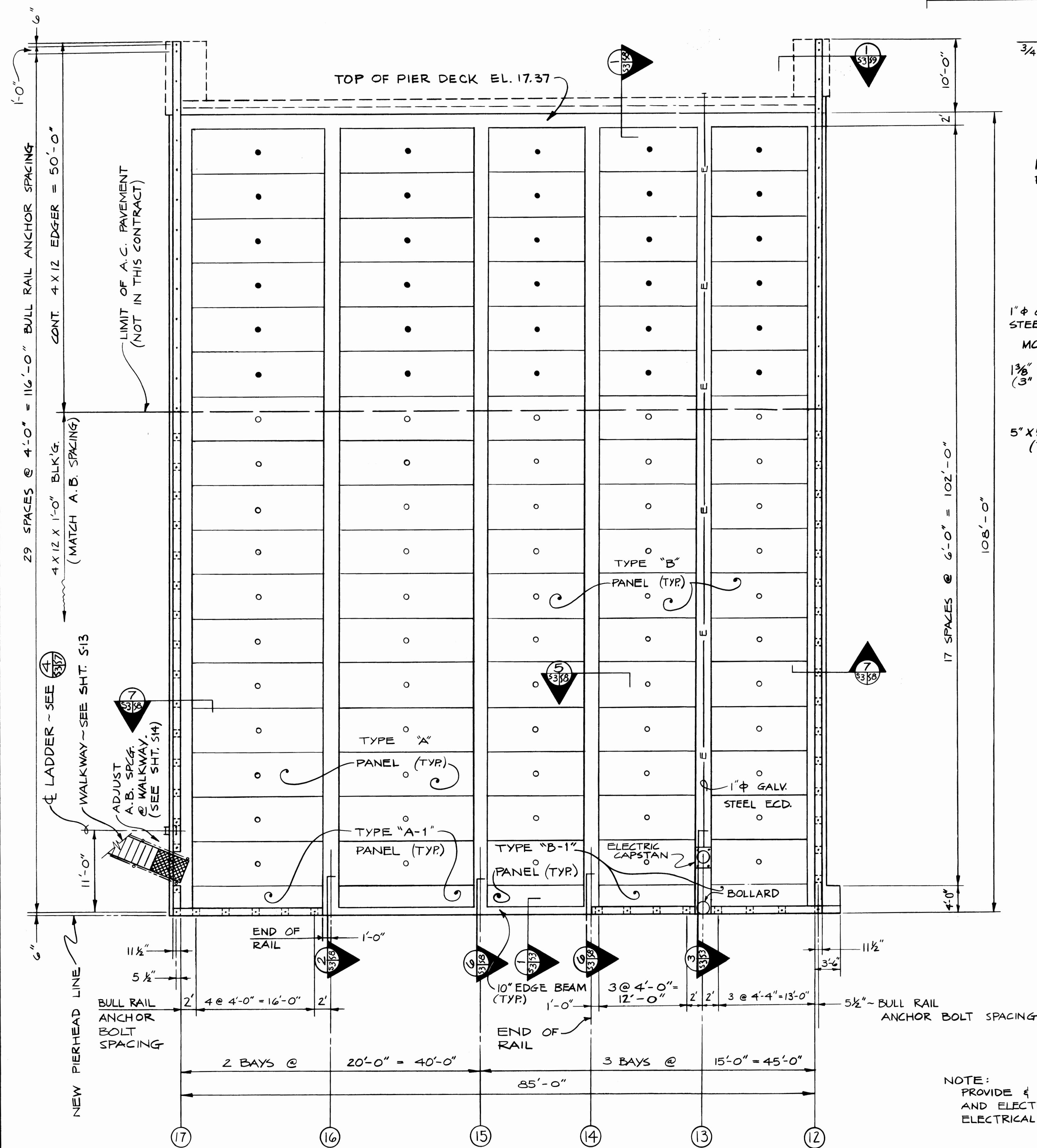
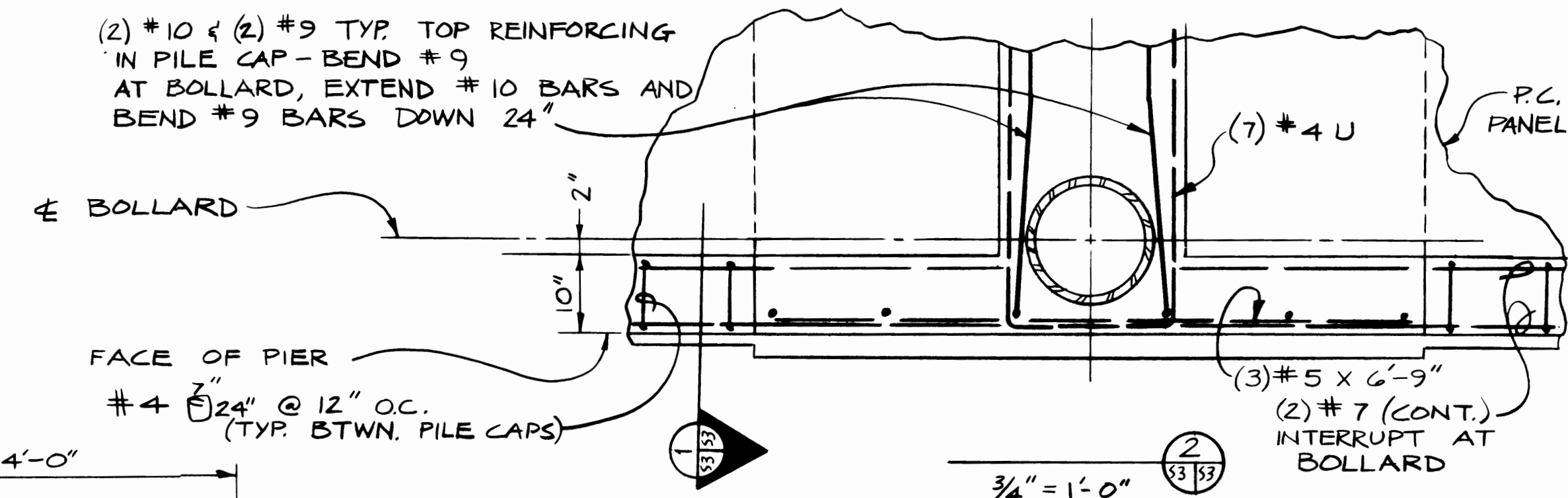
DRAWN: D.A.D.T. DATE: APRIL 1983		PORT OF TACOMA	
CHECKED: W.S. DATE: APRIL 1983		PILING PLAN	
CHECKED: H.L.C. DATE: MAY 1983		TOTE PIER FACILITY BLAIR WATERWAY 1983	
CONT. NO.		SCALE: NOTED	
FIELD BOOK(S)		DRAWING NO. EP 3823-12	
APPROVED R.L. MacLeod CHIEF ENGINEER		DATE 5/20/83	
SHEET 11 OF 25			

- SUBSURFACE DRAIN HOLE W/ COVER
(SEE DETAIL SHT. 54)
- SURFACE DRAIN HOLE IN P.C. PANEL

NOTE: ADJUST ANCHOR BOLT
SPACING AT BULL RAIL
SPICES. SEE DETAIL
SHEET 57.

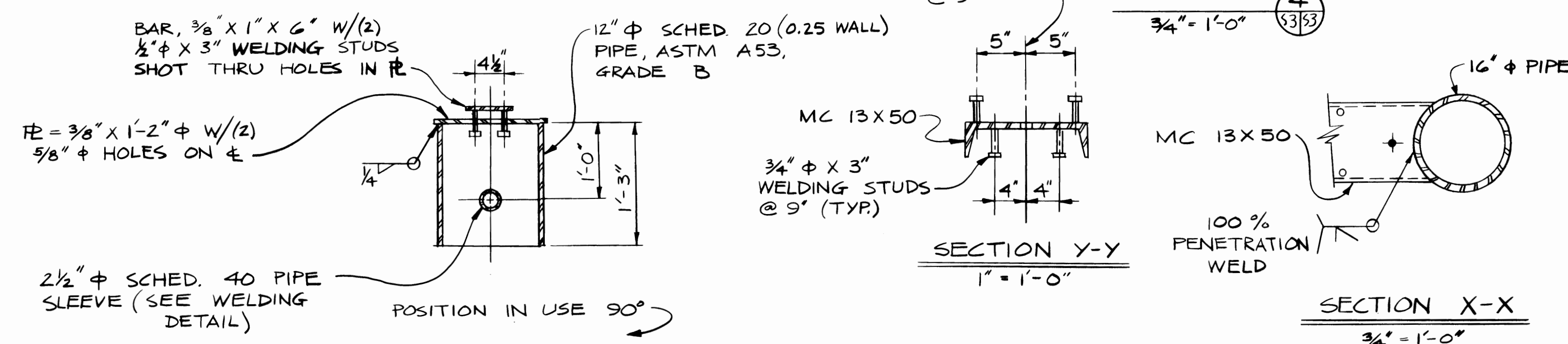
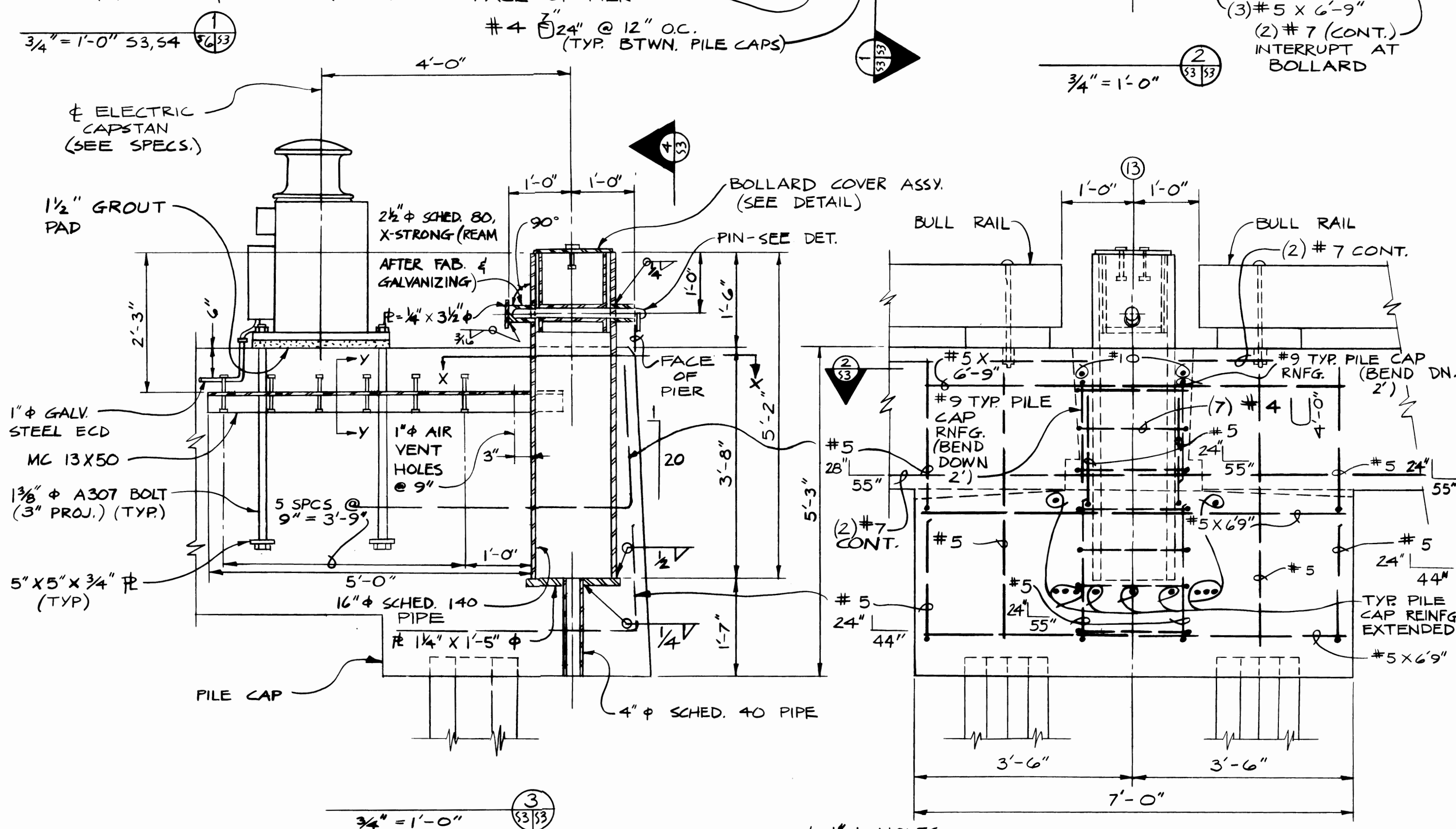


(2) #10 & (2) #9 TYP. TOP REINFORCING
IN PILE CAP - BEND #9
AT BOLLARD, EXTEND #10 BARS AND
BEND #9 BARS DOWN 24" ✓



PIER PLAN

$\frac{1}{8}'' = 1'-0''$



TEMP. BOLLARD COVER DET.
N.T.S.



BOLLARD PIN DETAIL
1 1/2" = 1'-0"

NOTE:
PROVIDE & INSTALL CAPSTAN
AND ELECTRICAL CONDUIT.
ELECTRICAL WIRING BY OTHERS.

PIPE SLEEVE WELDING
DETAIL
N.T.S.

AS BUILT SEPT. 84

SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40TH TACOMA WA 98409

DRAWN DJA.
DATE APRIL, '83
CHECKED W.S.
DATE APRIL, '83
CHECKED HLC
DATE MAY, 1983
CONT. NO. _____

PORT OF TACOMA

FRAMING PLAN
85 FT. PIER

TOTE PIER FACILITY
BLAIR WATERWAY, 1983

	FIELD BOOK(S)
	APPROVED

SCALE NOTED

	DRAWING NO
--	-------------------

FD 3023-

SHEET 12 OF

SHEET _____ OF _____

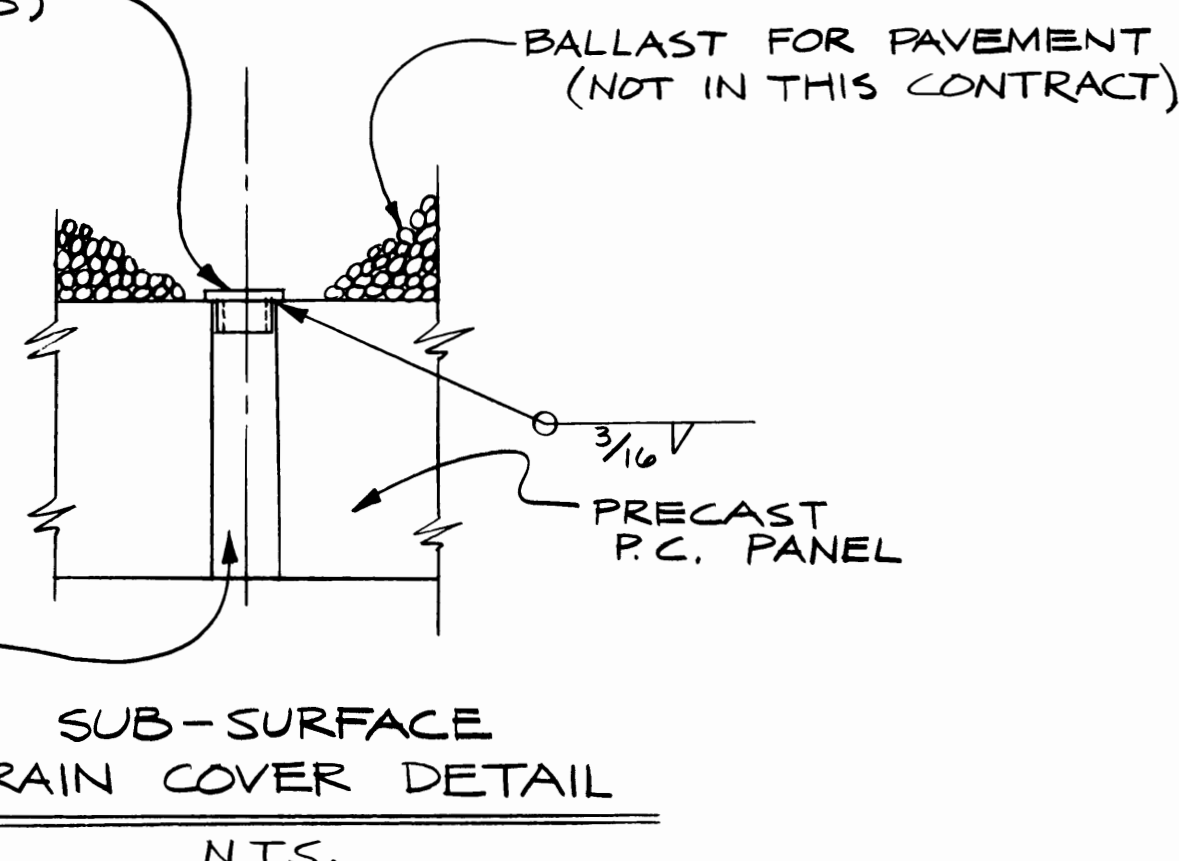
53

4689

LEGEND

- SUB-SURFACE DRAIN HOLE W/ COVER (SEE DETAIL)
- SUB-SURFACE DRAIN HOLE IN PANEL
- W— WATER LINE
- T— TELEPHONE LINE

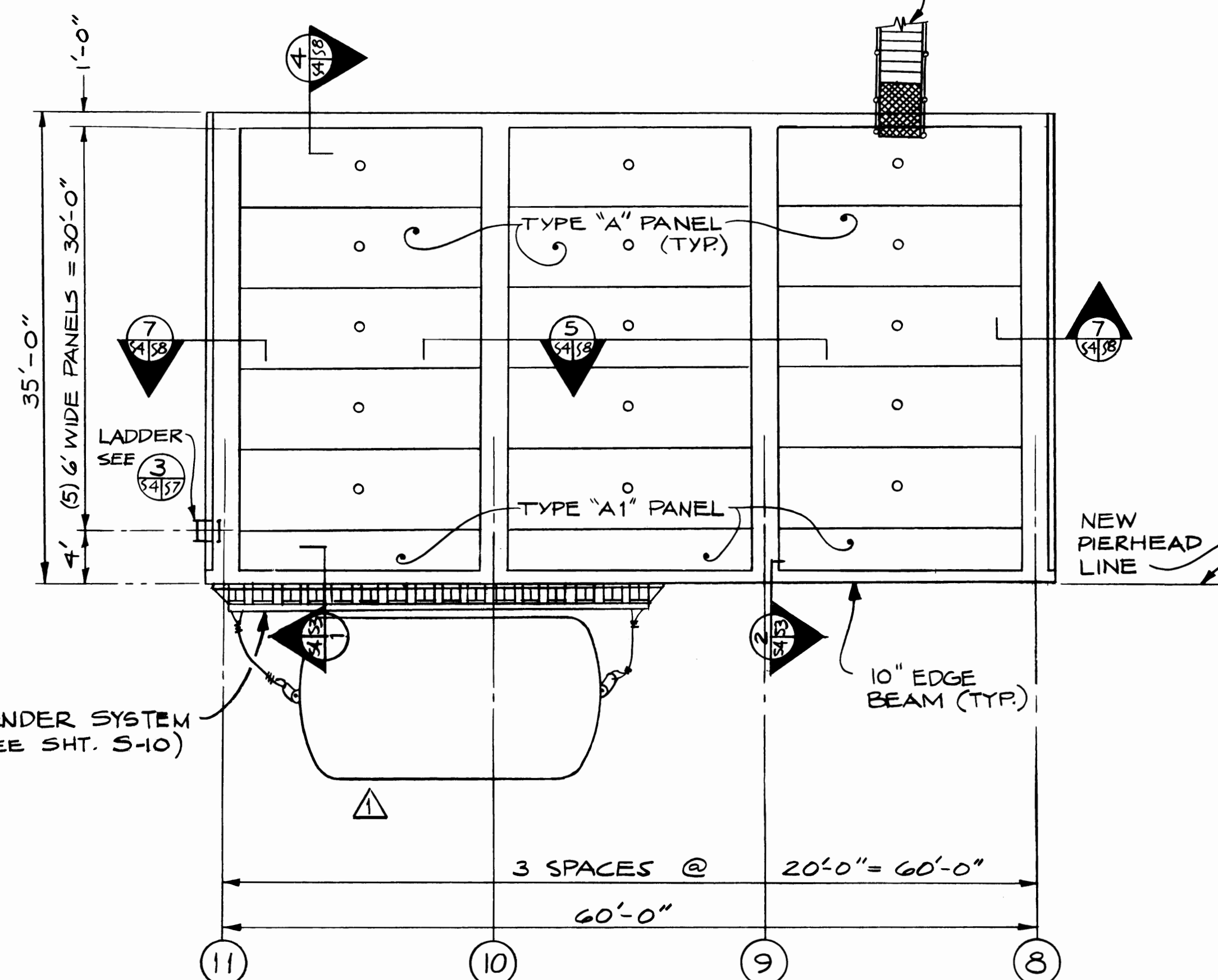
1/4" x 5" x 5" PERFORATED WITH 1/2" ϕ HOLES @ 1" ϕ WELDED TO 2 1/2" ϕ PIPE - PLACE DRAIN COVERS OVER ALL BLOCK OUTS NOT USED FOR DECK DRAINS (GALV. COVERS)



4" ϕ DRAIN HOLE IN P.C. PANEL

SUB-SURFACE DRAIN COVER DETAIL
N.T.S.

WALKWAY (SEE SHEET S-13)



PIER PLAN
1/8" = 1'-0"

CONNECTION OF TELEPHONE BY OTHERS

TOP OF WALL EL. = 17.50

TOP OF PIER DECK EL. 17.39

CONNECTION OF WATER LINE TO SUPPLY, BY OTHERS PROVIDE TEMPORARY CAP.

TOP OF WALL EL. = 17.50

TOP OF PIER DECK EL. 17.35

2 1/2" ϕ WATER LINE W/ANCHORS @ 10' O.C. (MAX) (SLOPE TO DRAIN AT PIERHEAD) SEE 2

LIMITS OF A.C. PAVEMENT (NOT IN THIS CONTRACT)

5 SPCS. @ 4'-0" = 20'-0" ANCHOR BLT. SPCG.

WHEEL BEARING PLATE (SEE SHEET S-7)

8 SPACES @ 4'-0" = 32'-0" BULL RAIL ANCHOR BOLT SPCG.

NEW PIERHEAD LINE

FENDER SYSTEM (SEE SHT. S-10)

ADJUST ANCHOR BOLT SPACING FOR WALKWAY (SEE SHT. S-14)

AS BUILT SEPT. 84 S 4

PORT OF TACOMA

PIER FRAMING PLANS

TOTE PIER FACILITY BLAIR WATERWAY, 1983

CONT. NO.

FIELD BOOK(S)

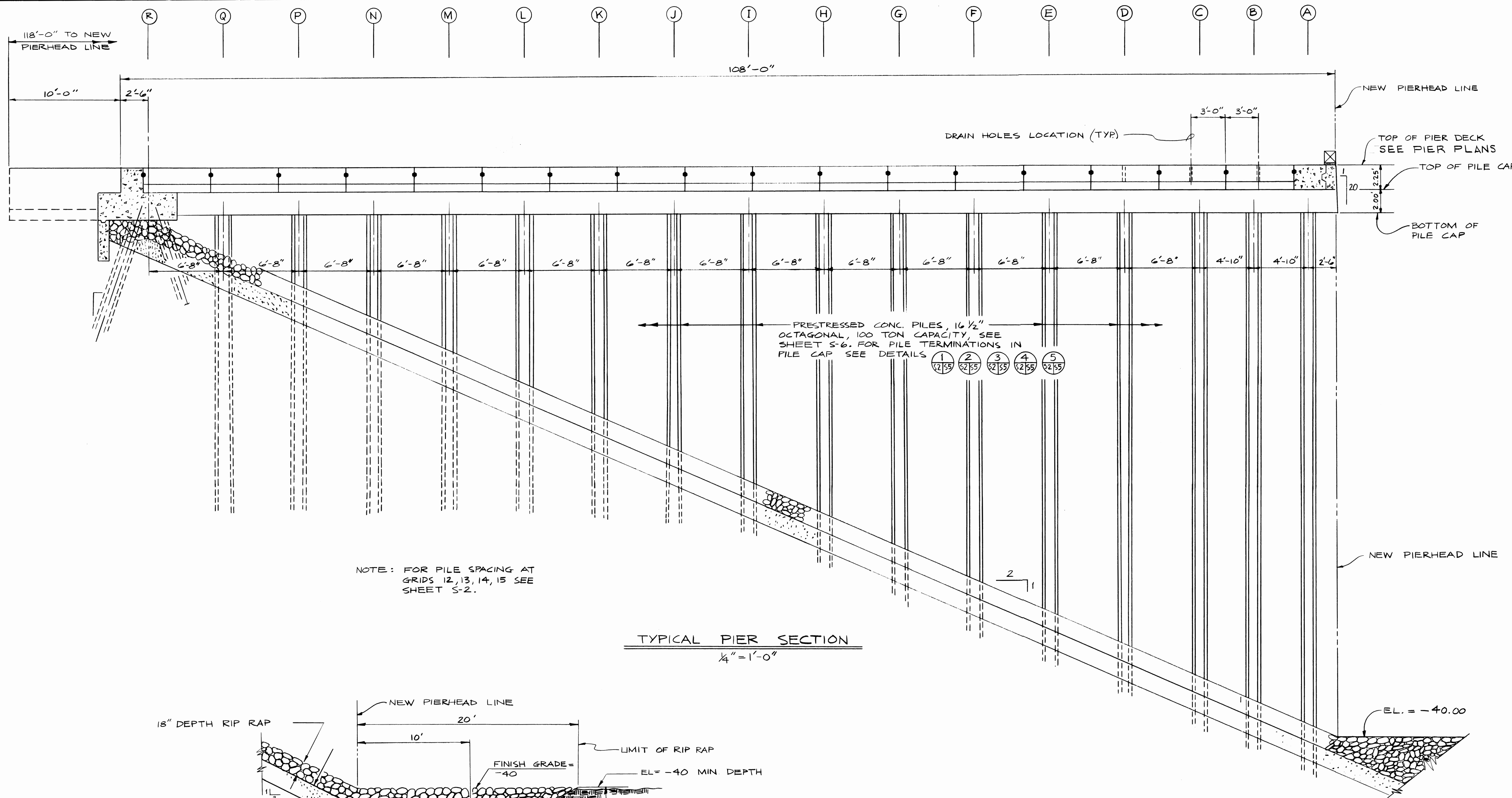
APPROVED

5/20/83

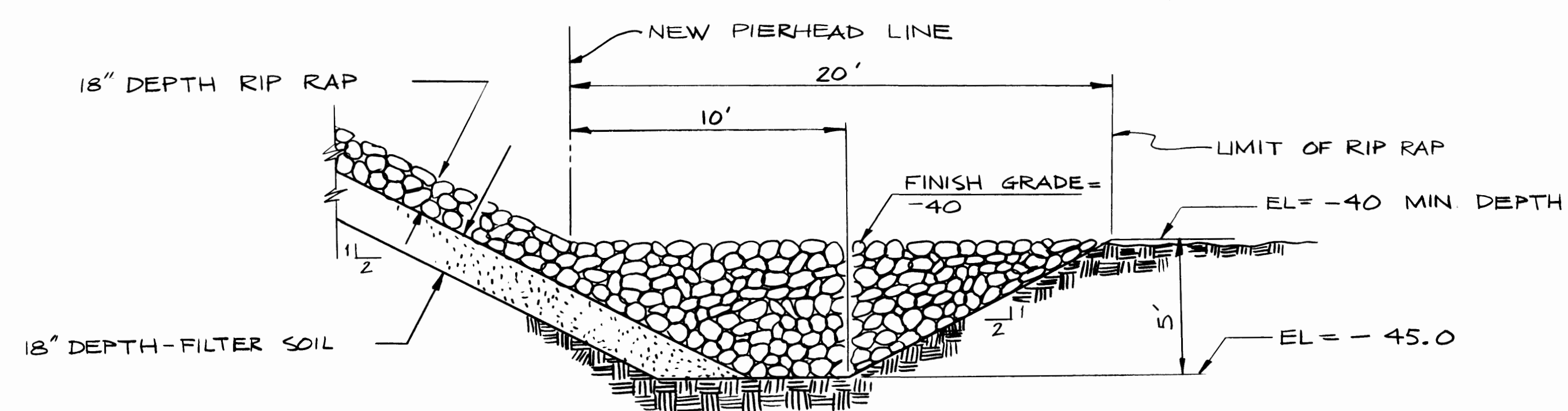
SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40TH TACOMA WA 98409

MARK	REVISION	BY	APP.	DATE
1	RELOCATE FOR ON BREAST PIER	HLC		9/7/83

DRAWN D.J.A.	DATE APRIL '83
CHECKED W.S.	DATE APRIL '83
CHECKED HLC	DATE MAY 1983
CONT. NO.	
FIELD BOOK(S)	
APPROVED	5/20/83
DRAWING NO.	EP 3823-12
SHEET	13 OF 25



TYPICAL PIER SECTION
1/4" = 1'-0"



RIP RAP KEY DETAIL
N.T.S.

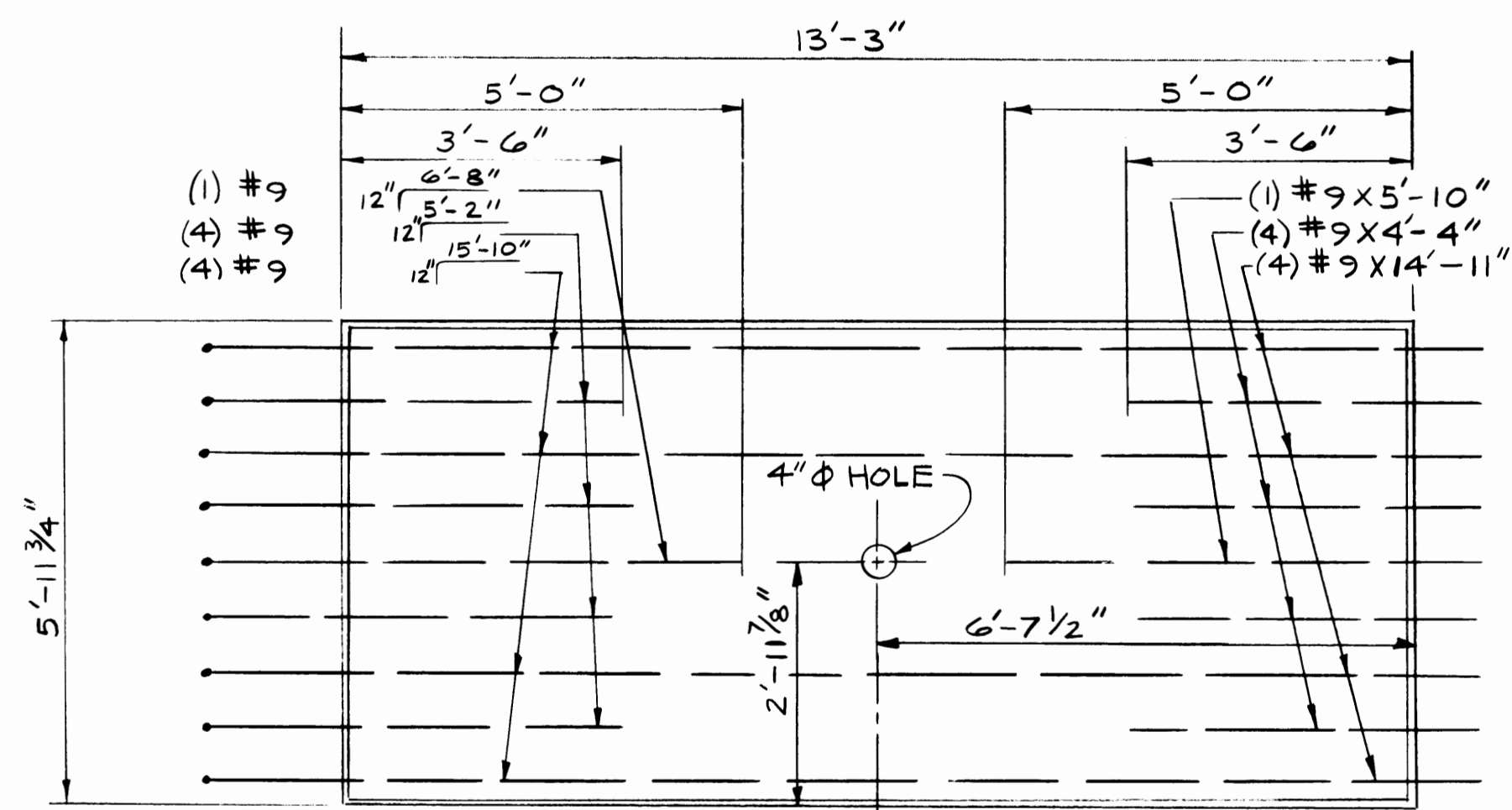
AS BUILT SEPT. 84 **35**



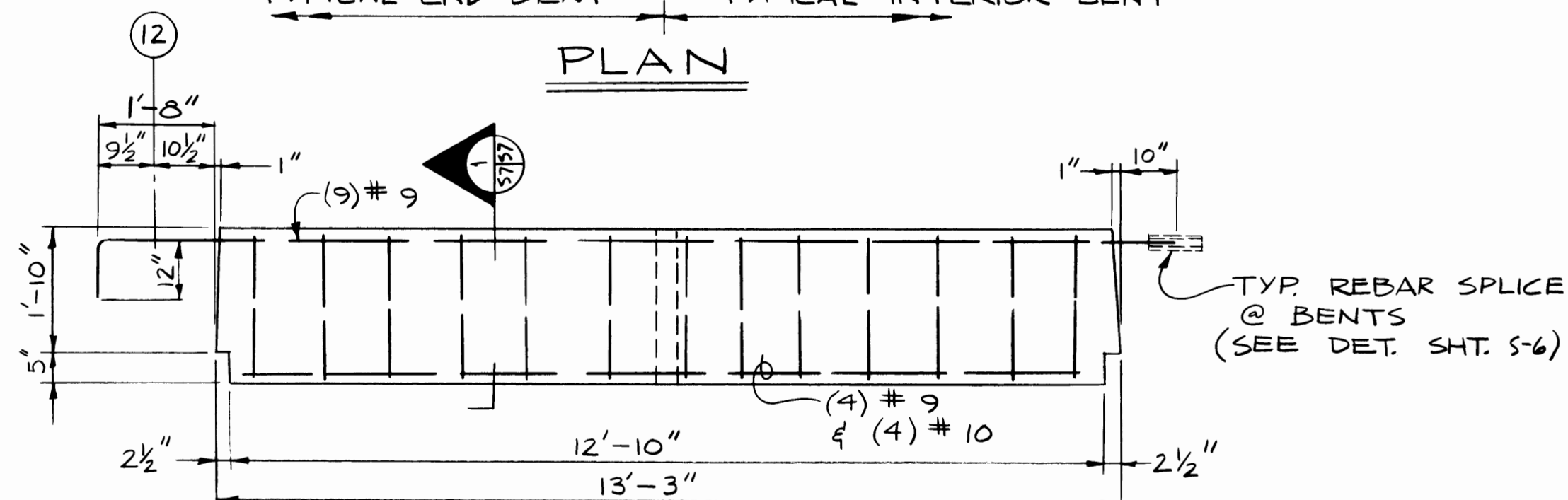
SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40TH TACOMA WA 98409

MARK	REVISION	BY	APP.	DATE

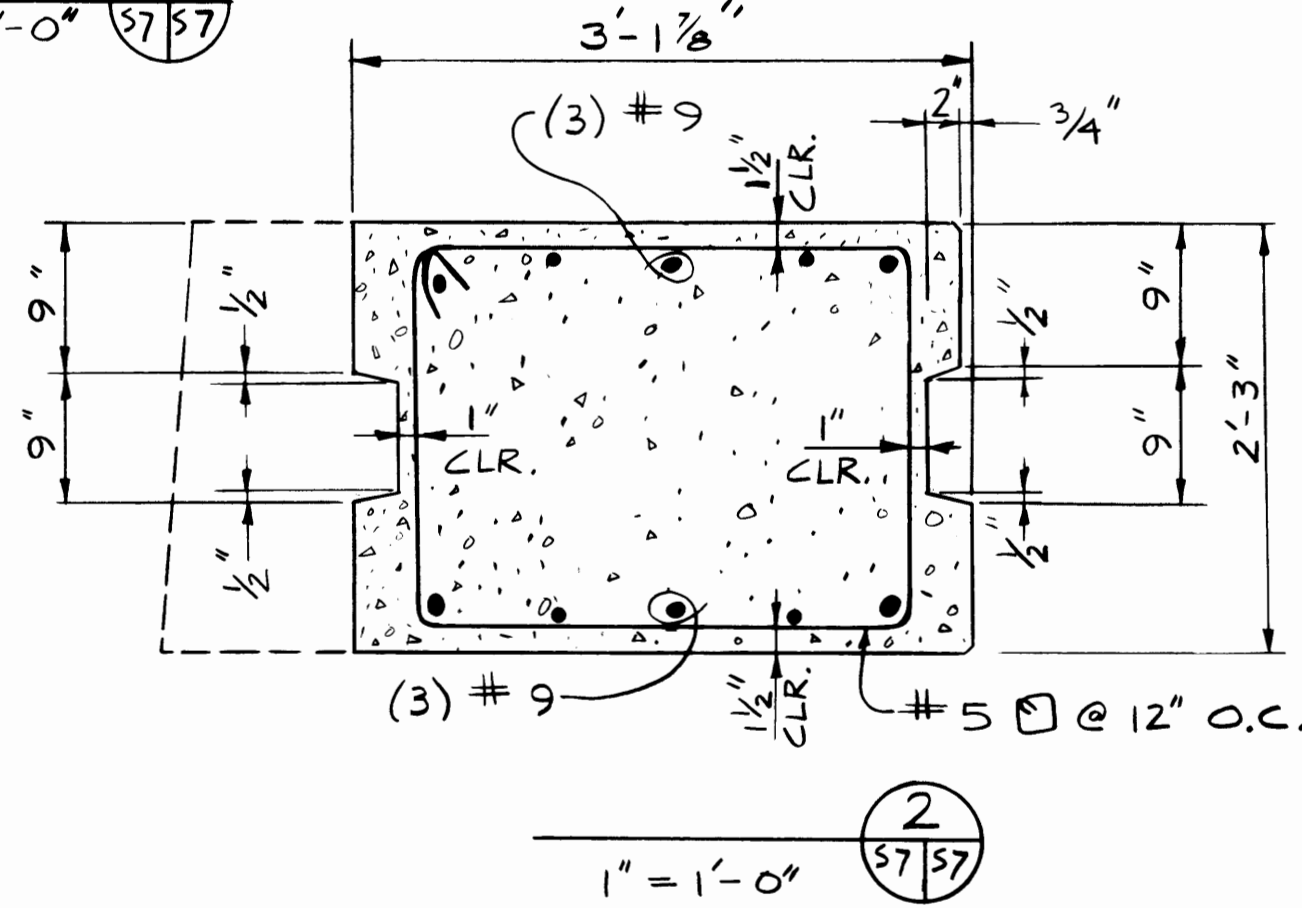
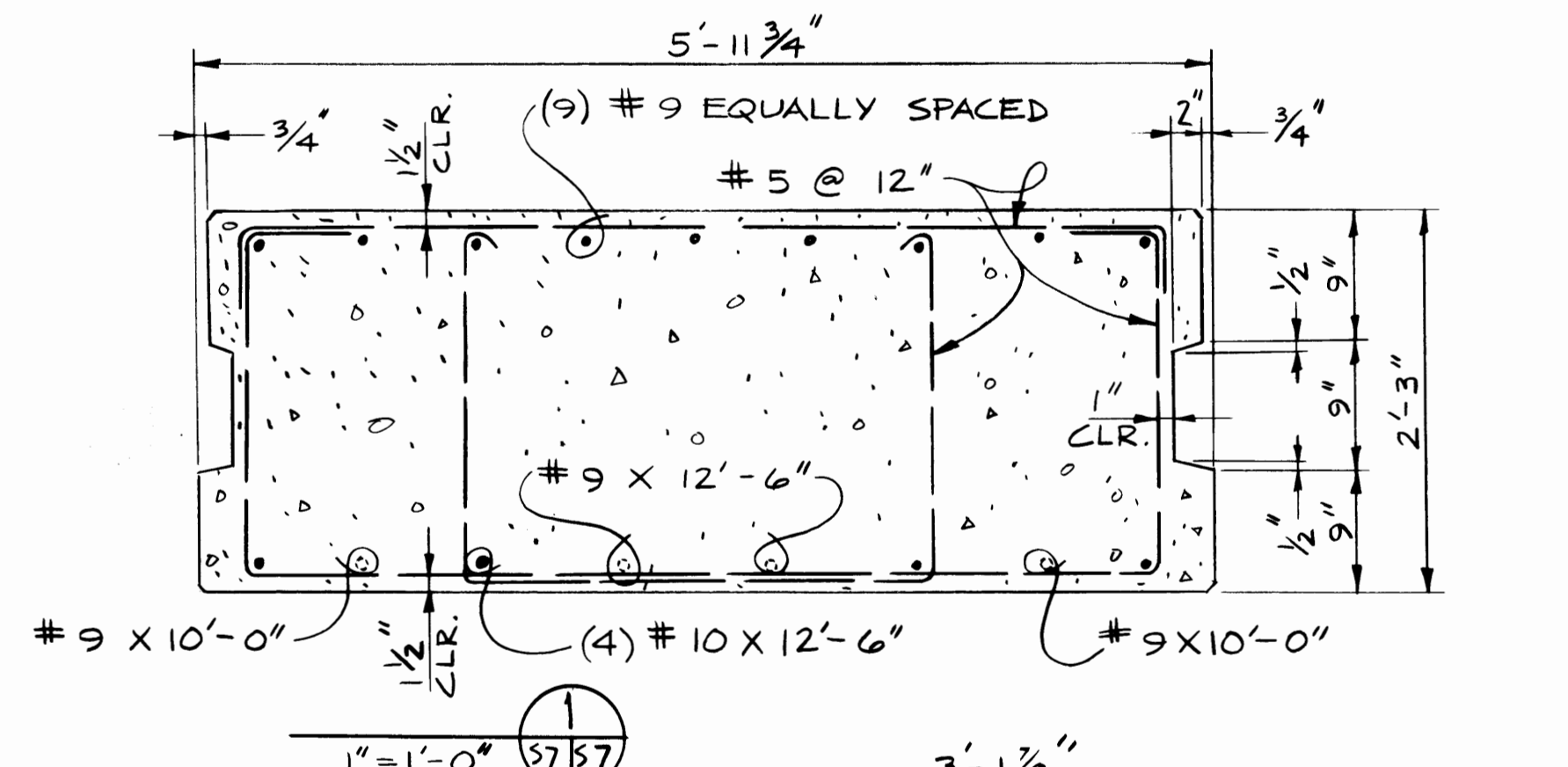
DRAWN: DJA DATE: APRIL 1983		PORT OF TACOMA	
CHECKED: WS DATE: APRIL 1983		PIER CROSS SECTION	
CHECKED: HLC DATE: MAY 1983		TOTE PIER FACILITY	
CONT. NO.		BLAIR WATERWAY, 1983	
FIELD BOOK (S)		SCALE: NOTED	
APPROVED: <i>R. L. MacLeod</i> CHIEF ENGINEER		DATE: 5/20/83 DRAWING NO. EP 3823-12	
		SHEET 14 OF 25	



PLAN

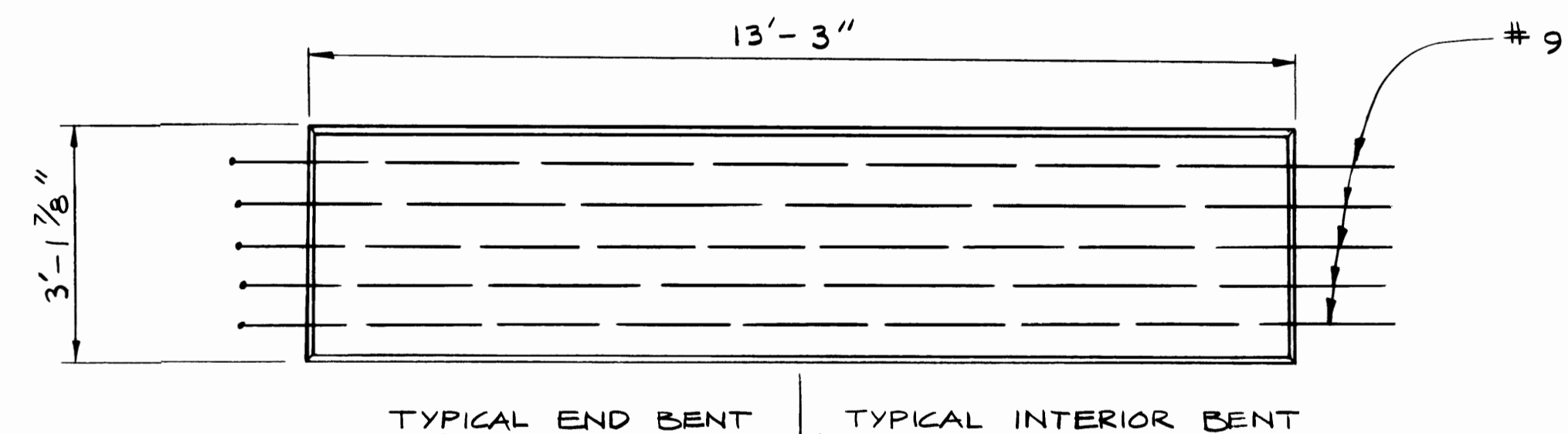


ELEVATION
(TYPE "B" PANEL)

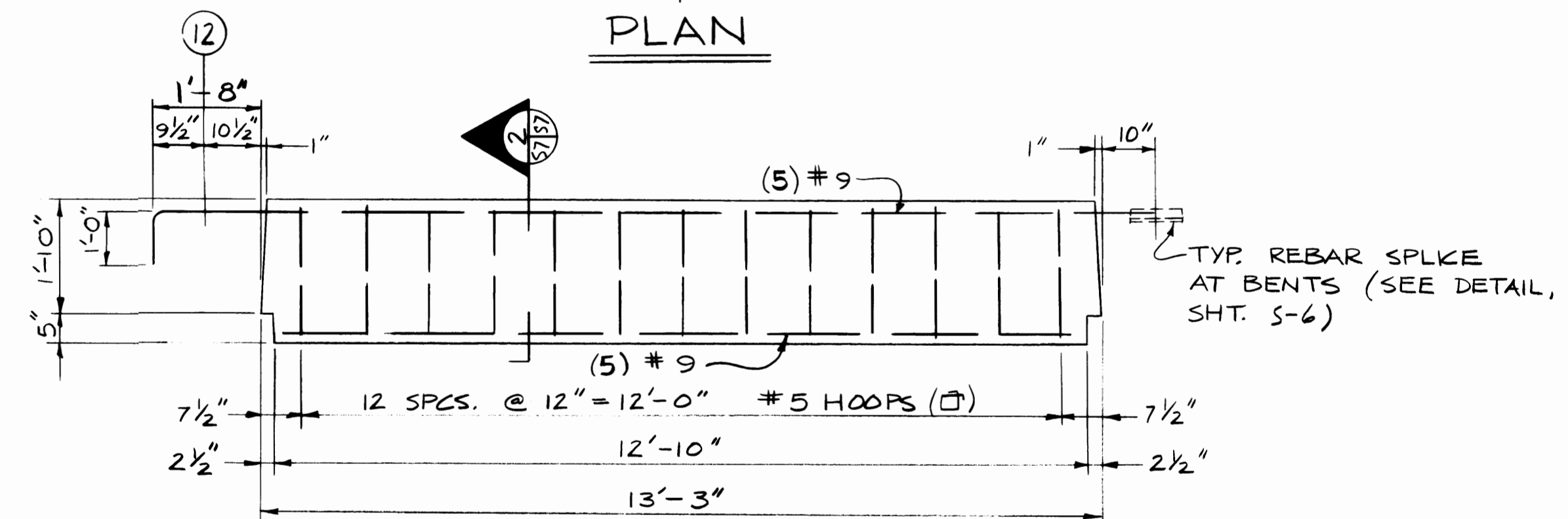


PRECAST PANEL DETAILS

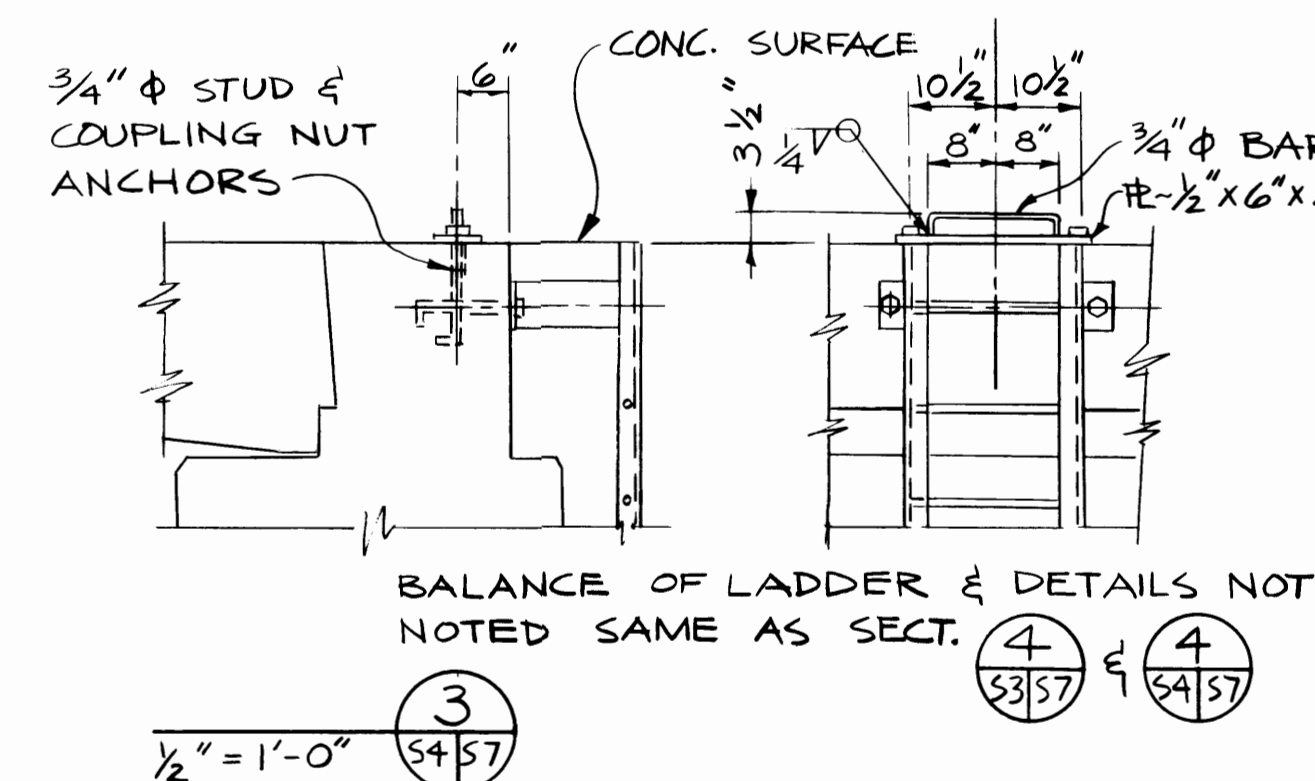
HEAVY LOAD SECTION ~ "B" & "B-1" PANELS
1/2" = 1'-0" (UNLESS NOTED)



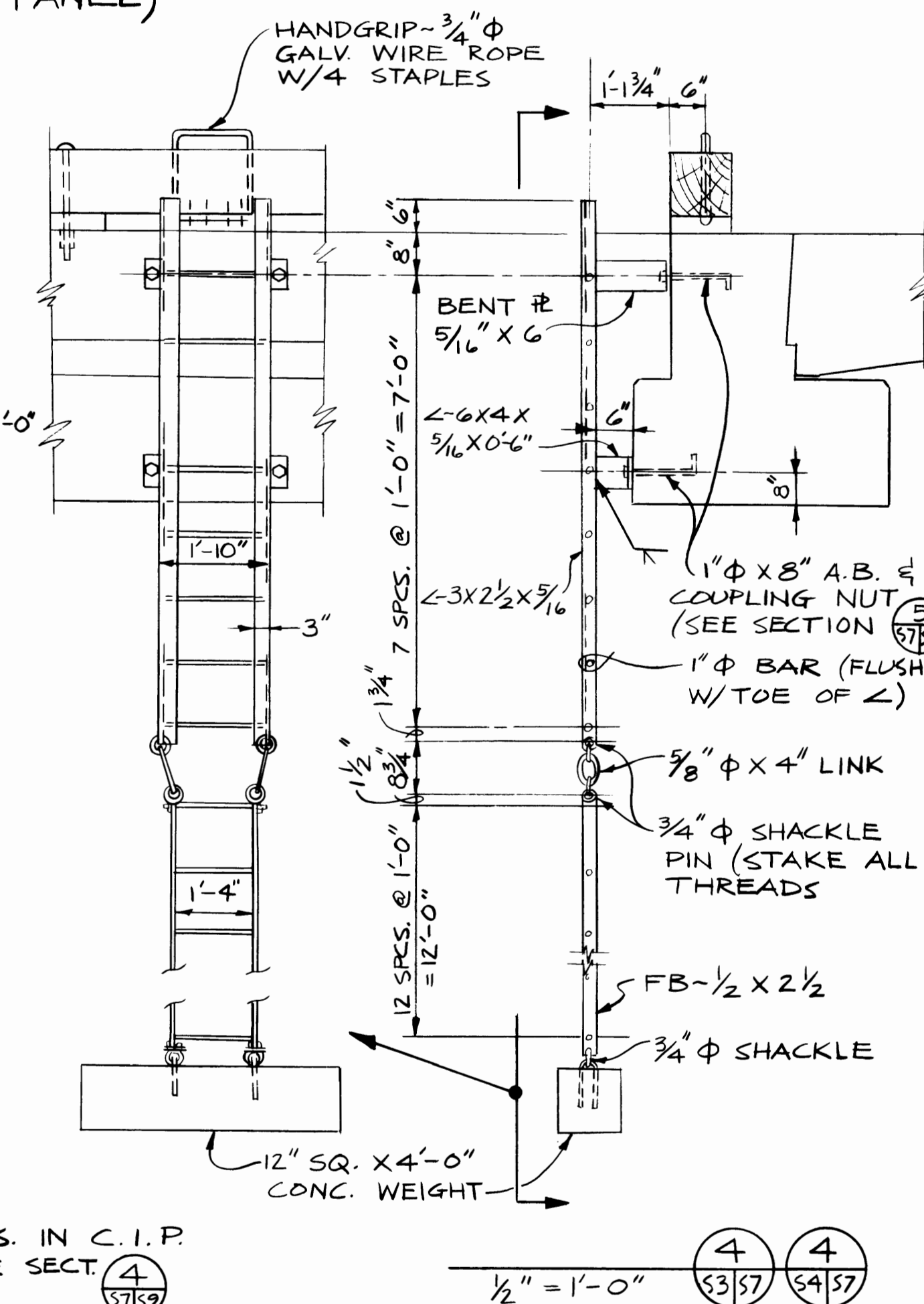
PLAN



ELEVATION
(TYPE "B-1" PANEL)



TYPICAL BULL RAIL SPLICE
1" = 1'-0"



AS BUILT SEPT. 84

57

DRAWN: D.J.A.	DATE: APRIL '83	CHECKED: W.S.	DATE: APRIL '83	CHECKED: H.L.C.	DATE: MAY 1983	CONT. NO.
PORT OF TACOMA						
B & B1 PRECAST PANEL DETAILS AND WHEEL BEARING PLATES						
TOTE PIER FACILITY						
BLAIR WATERWAY, 1983						

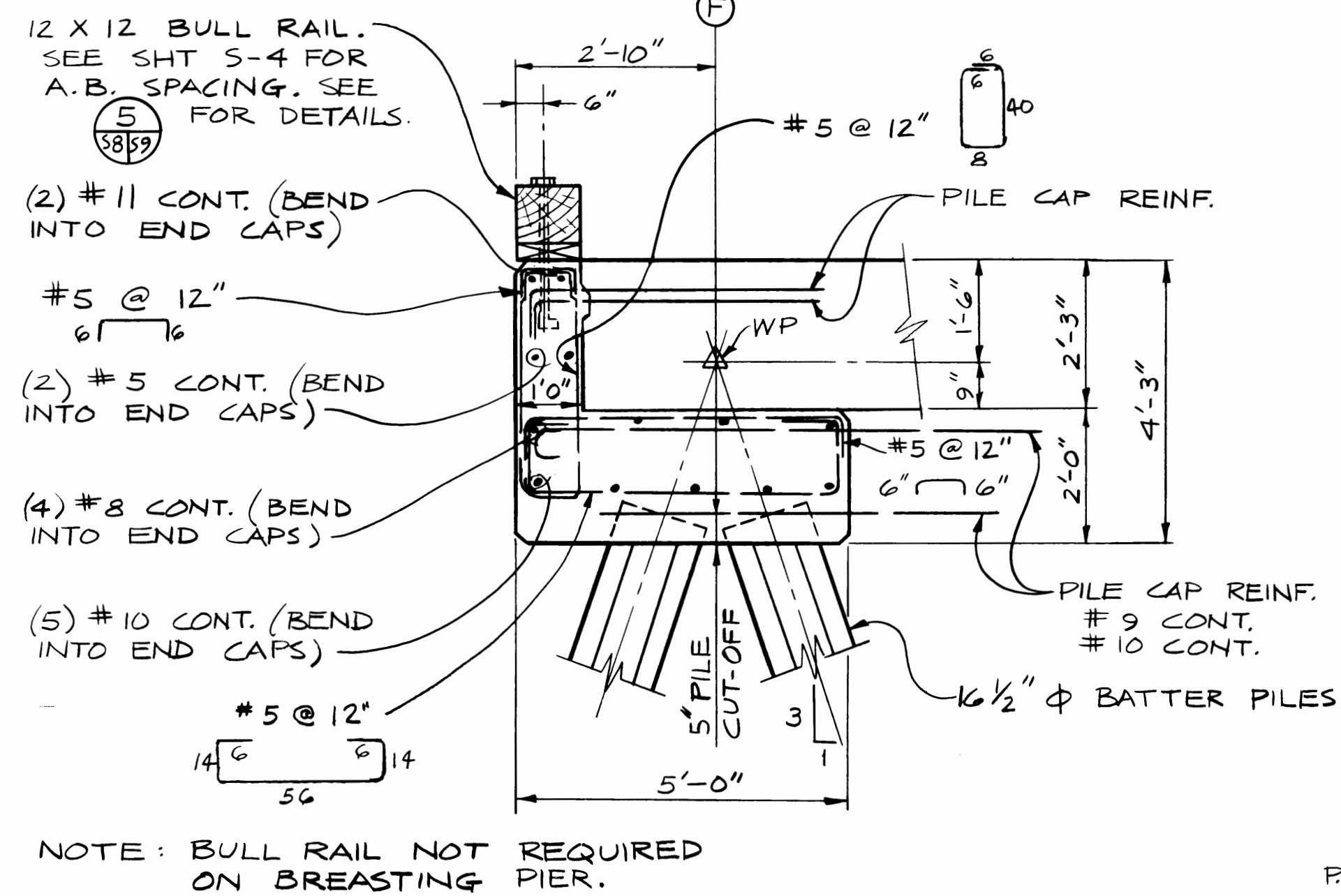
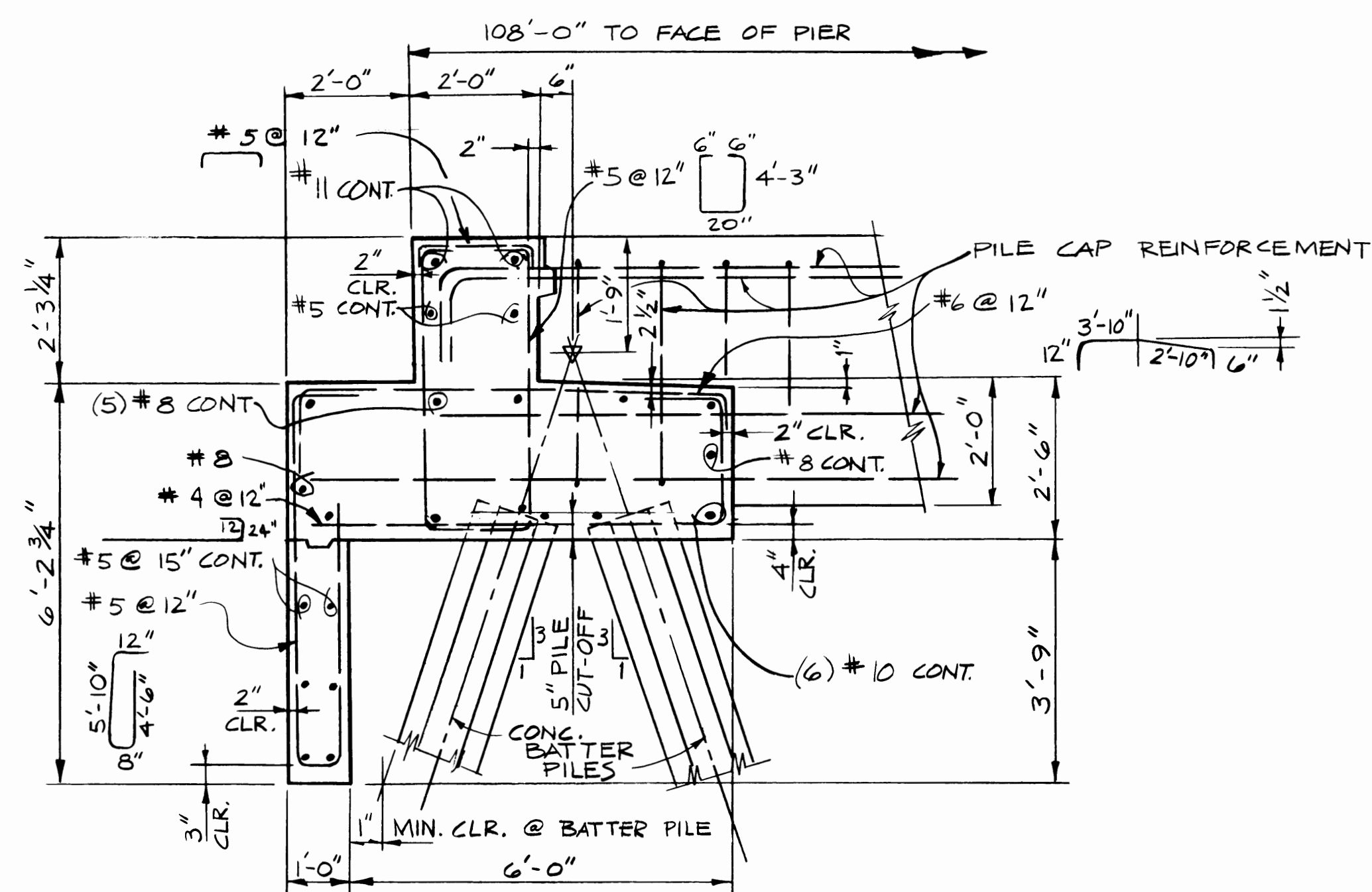
FIELD BOOK(S)	APPROVED	SCALE: NOTED
5/20/83	DATE	DRAWING NO.
		EP 3823-12
		SHEET 16 OF 25

SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40th TACOMA WA 98409

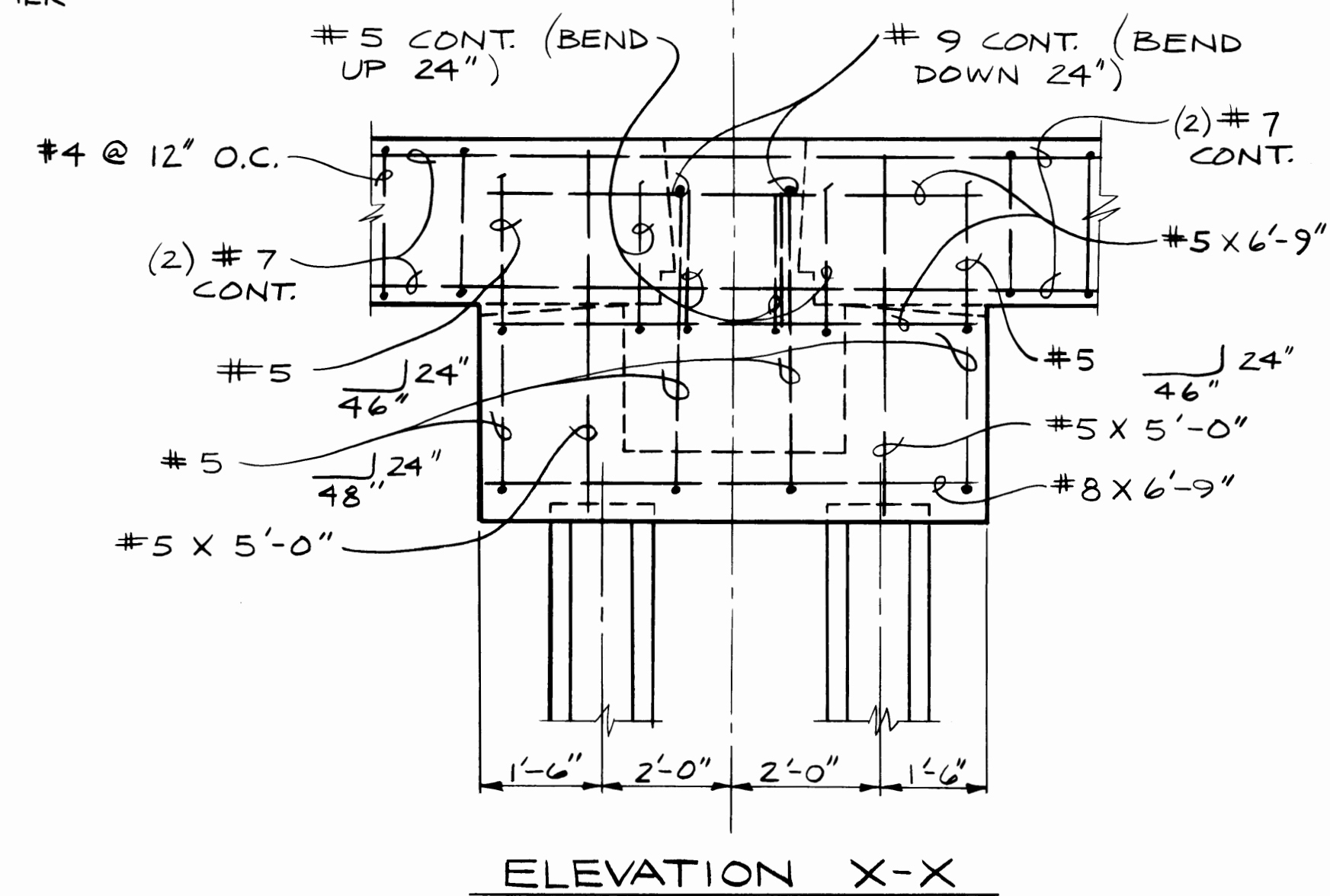
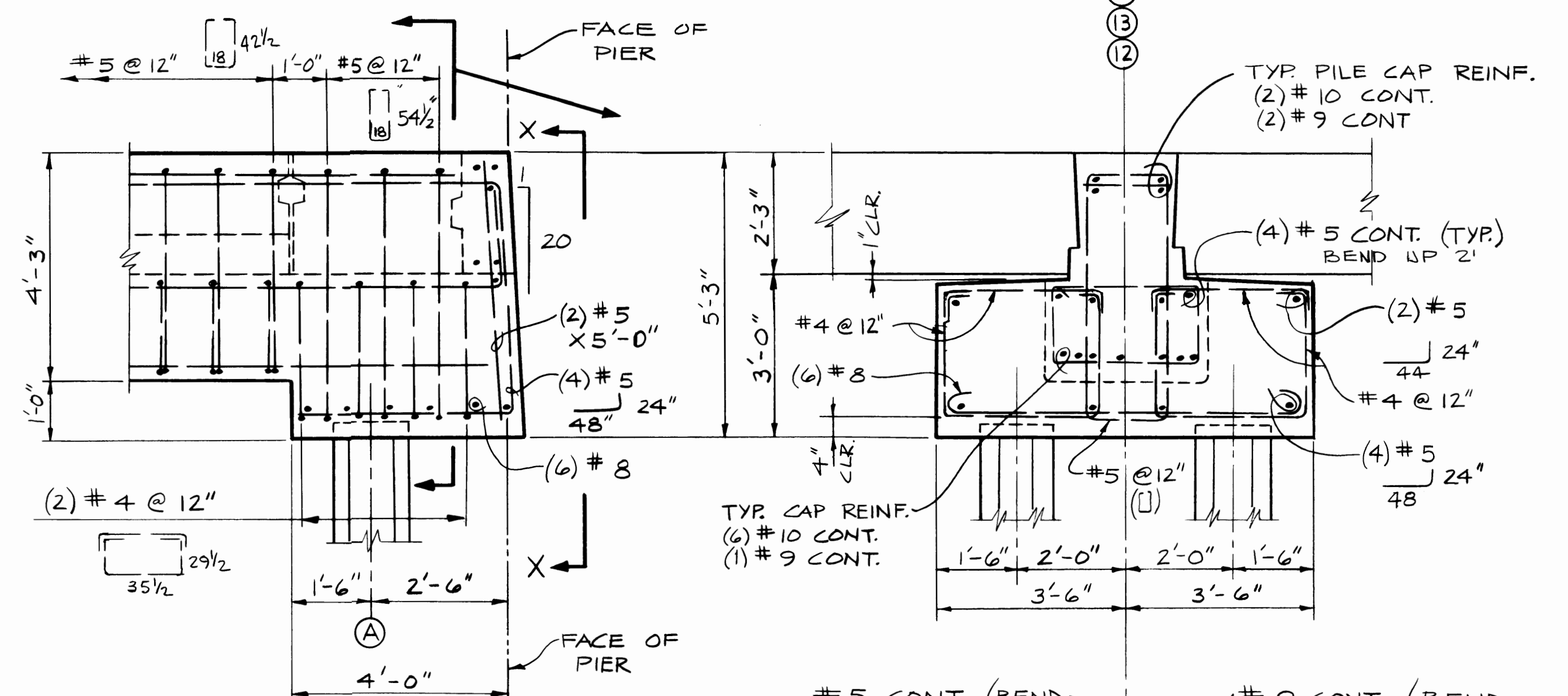
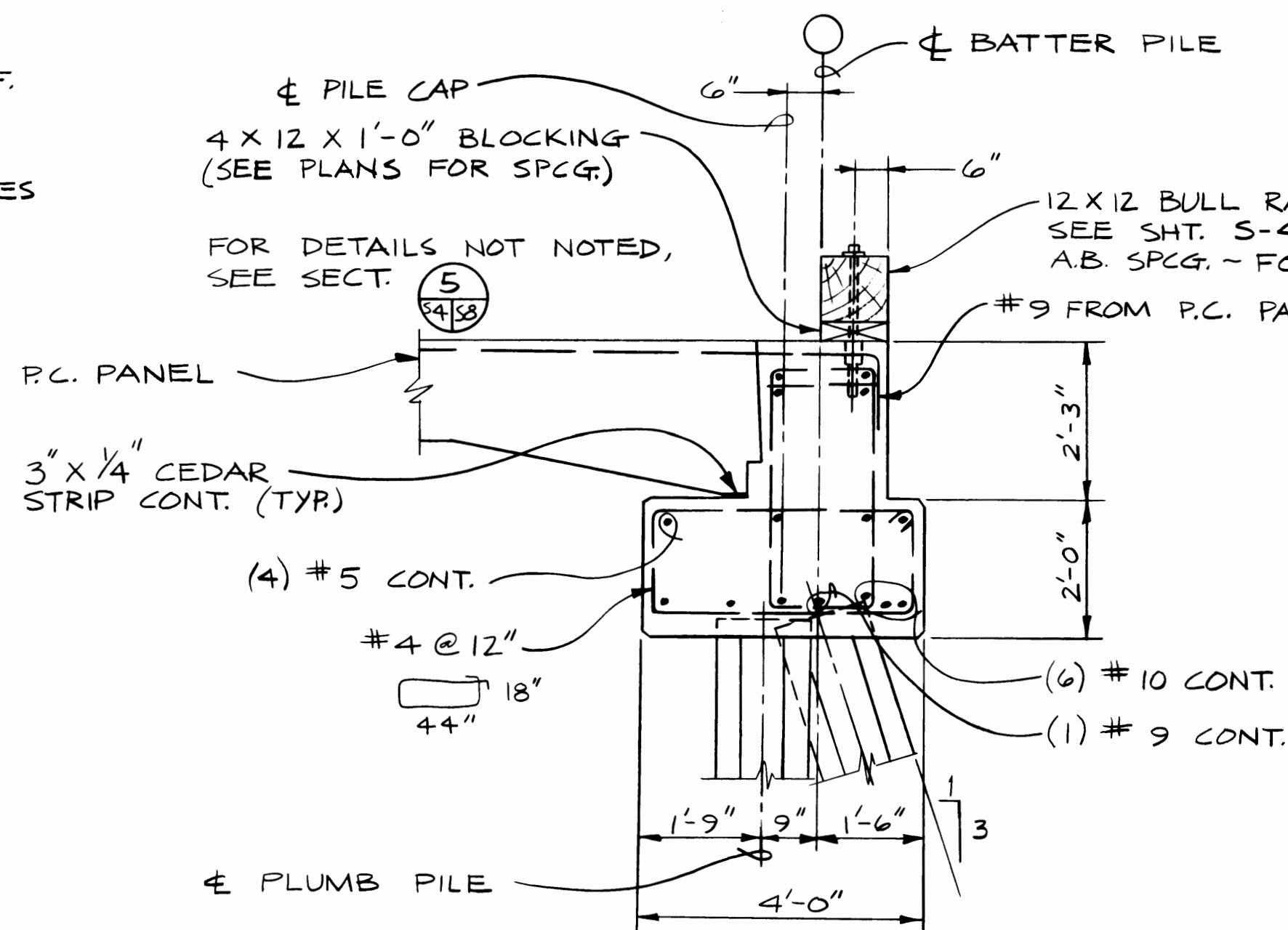
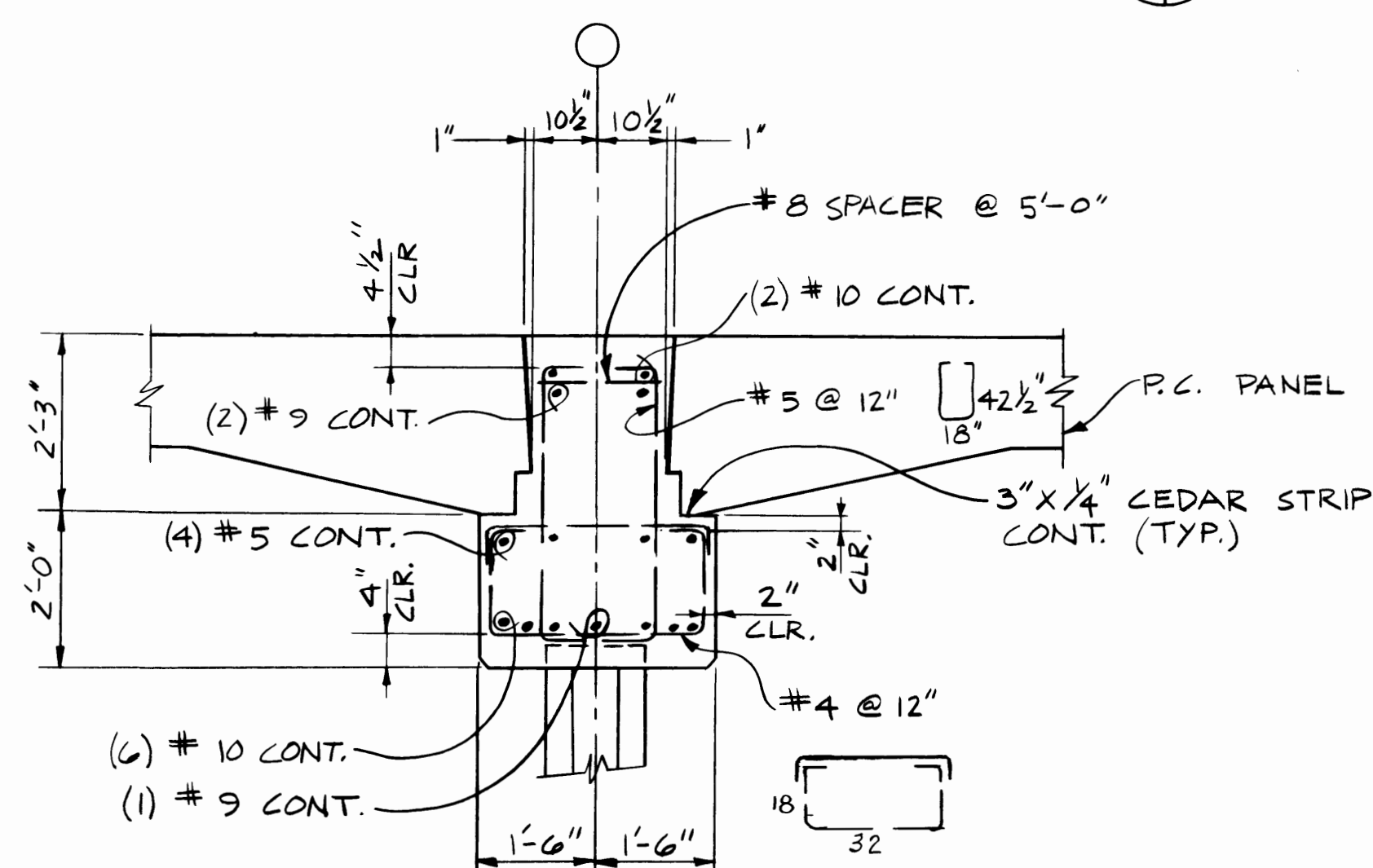
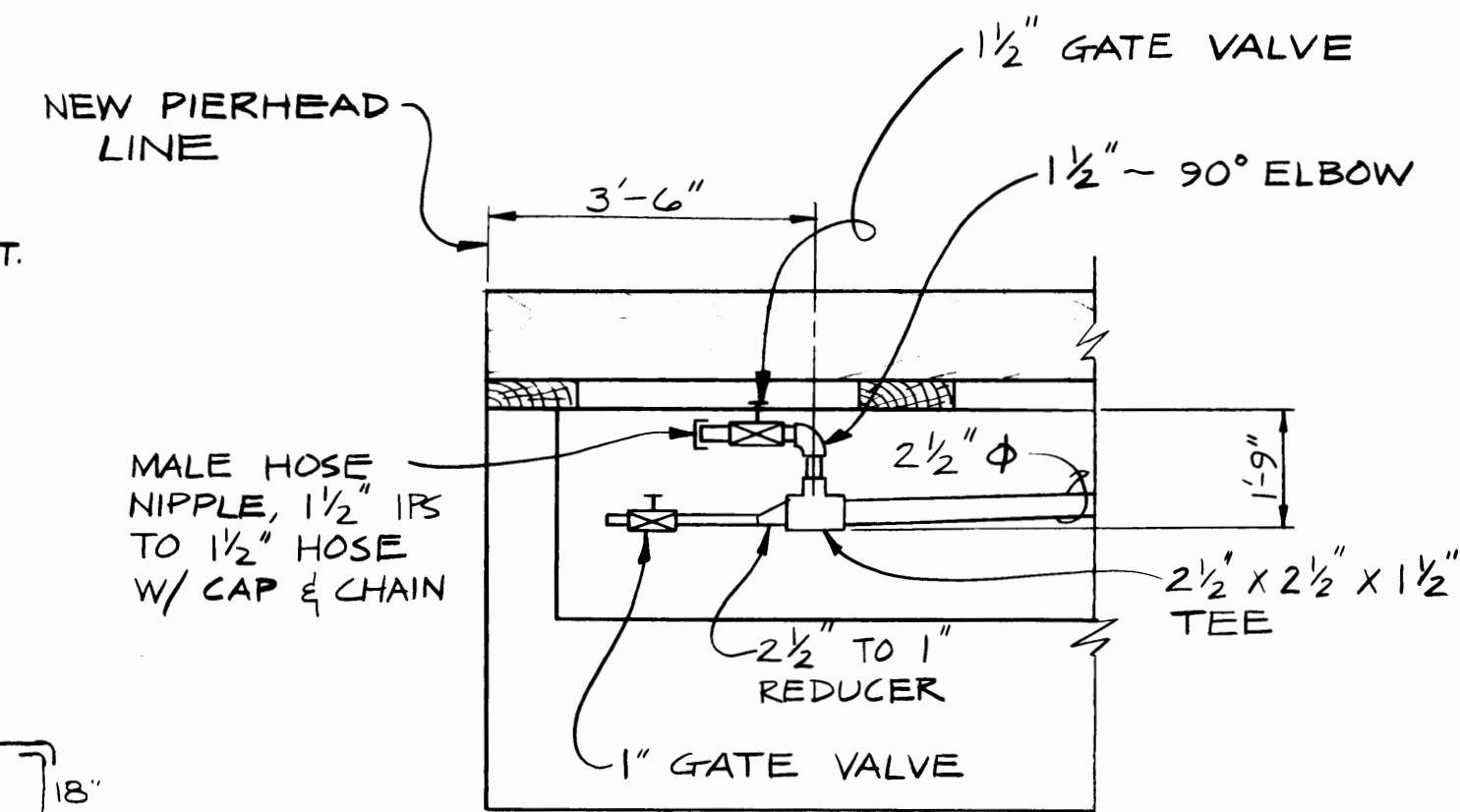
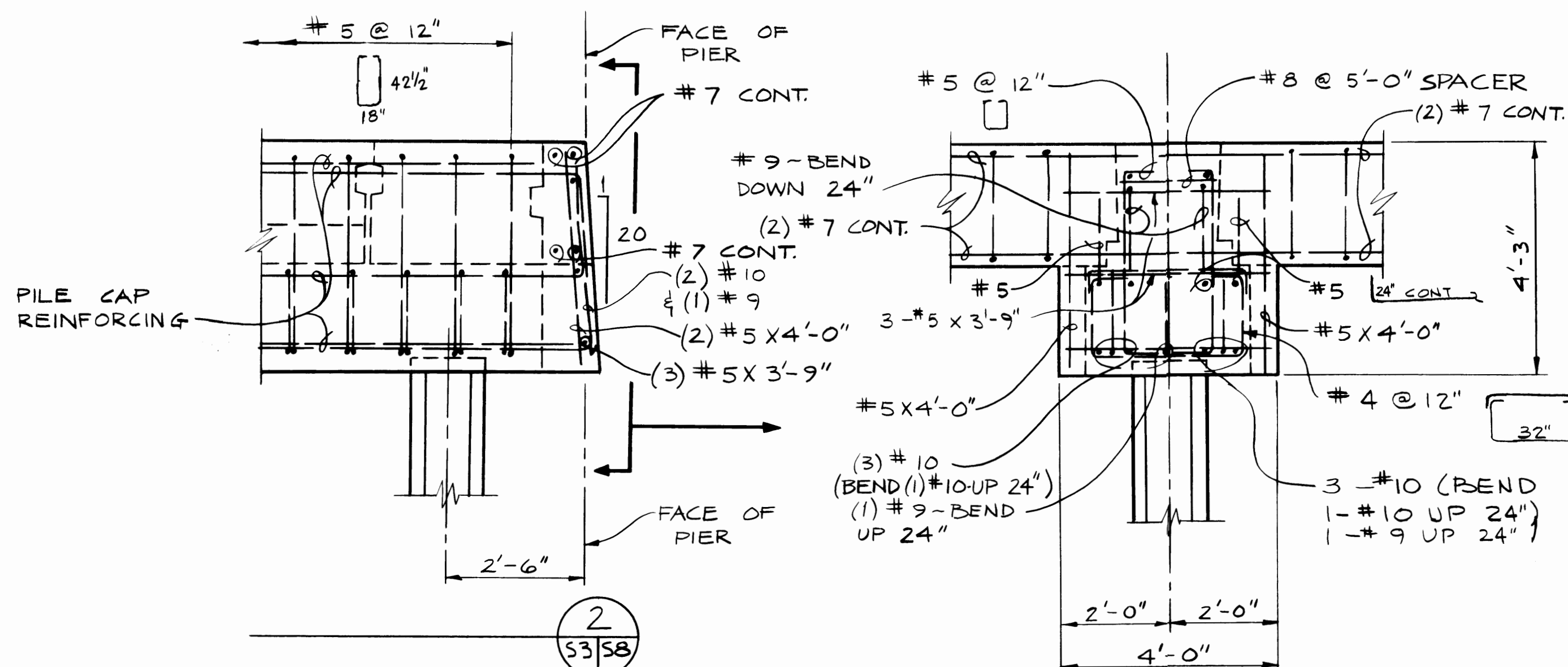
MARK	REVISION	BY	APP.	DATE

CHIEF ENGINEER

16 OF 25



NOTE: FOR TERMINATION OF PILE IN PILE CAP SEE SHEET S-2.



58

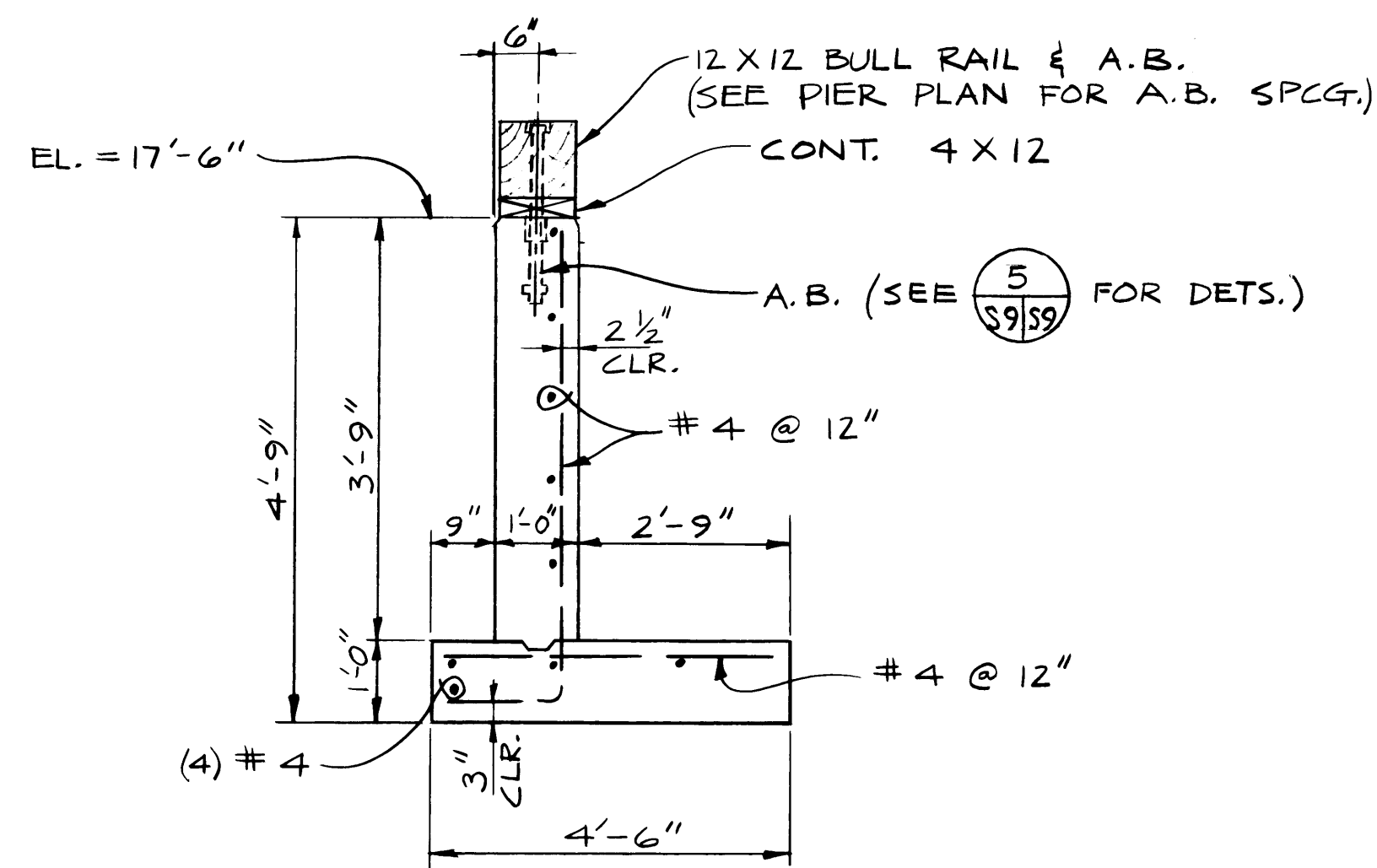


AS BUILT SEPT. 84

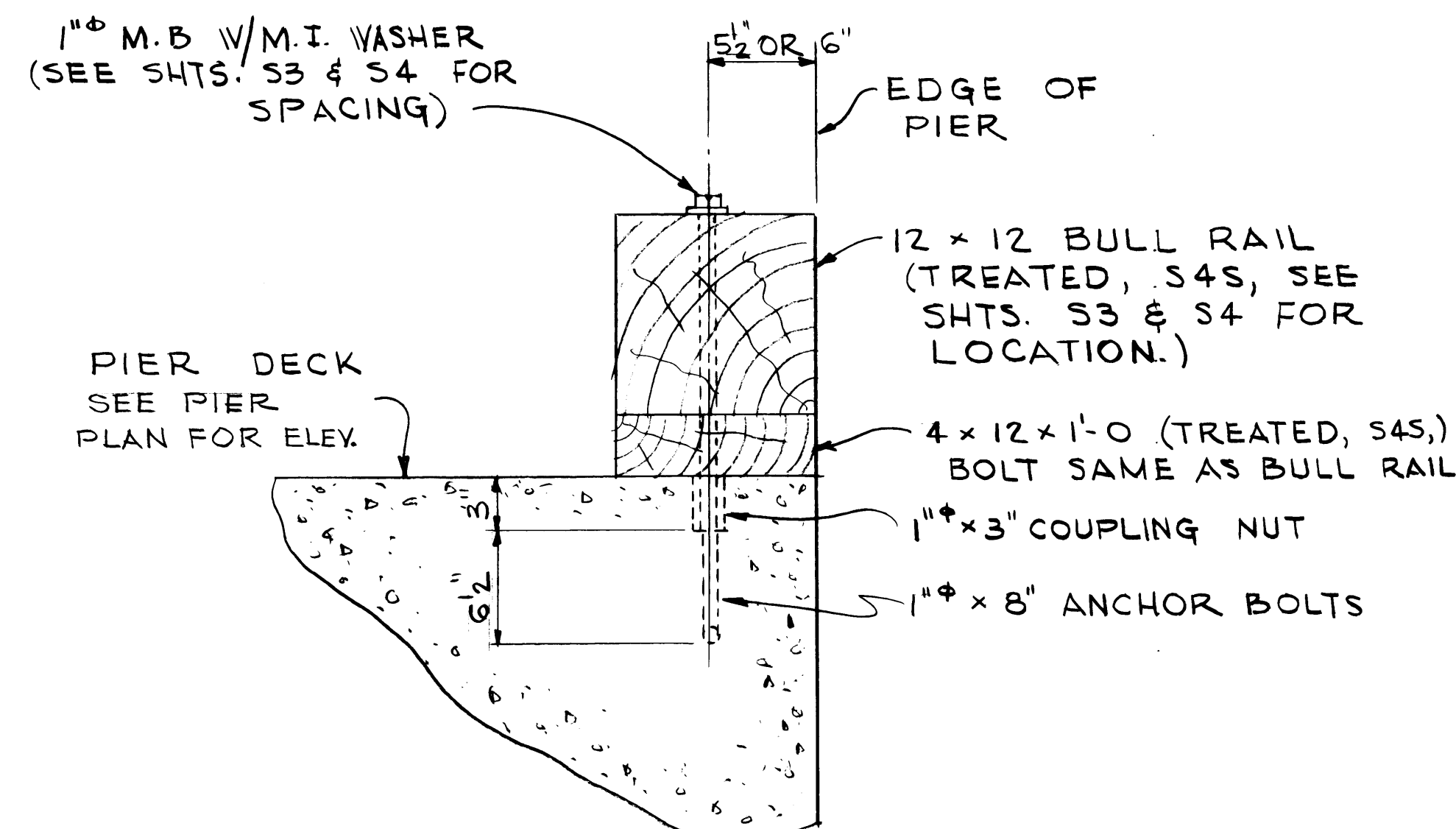
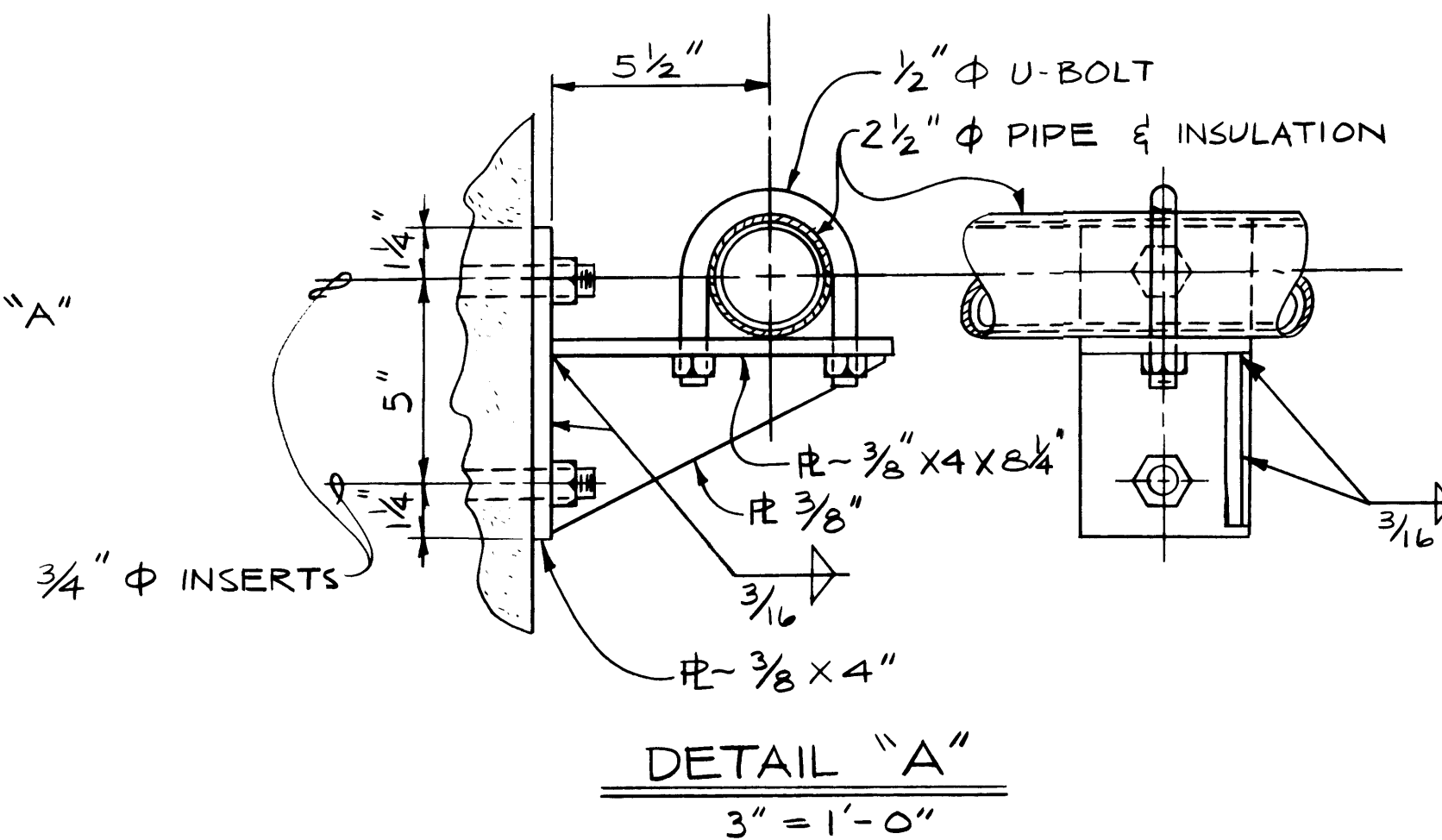
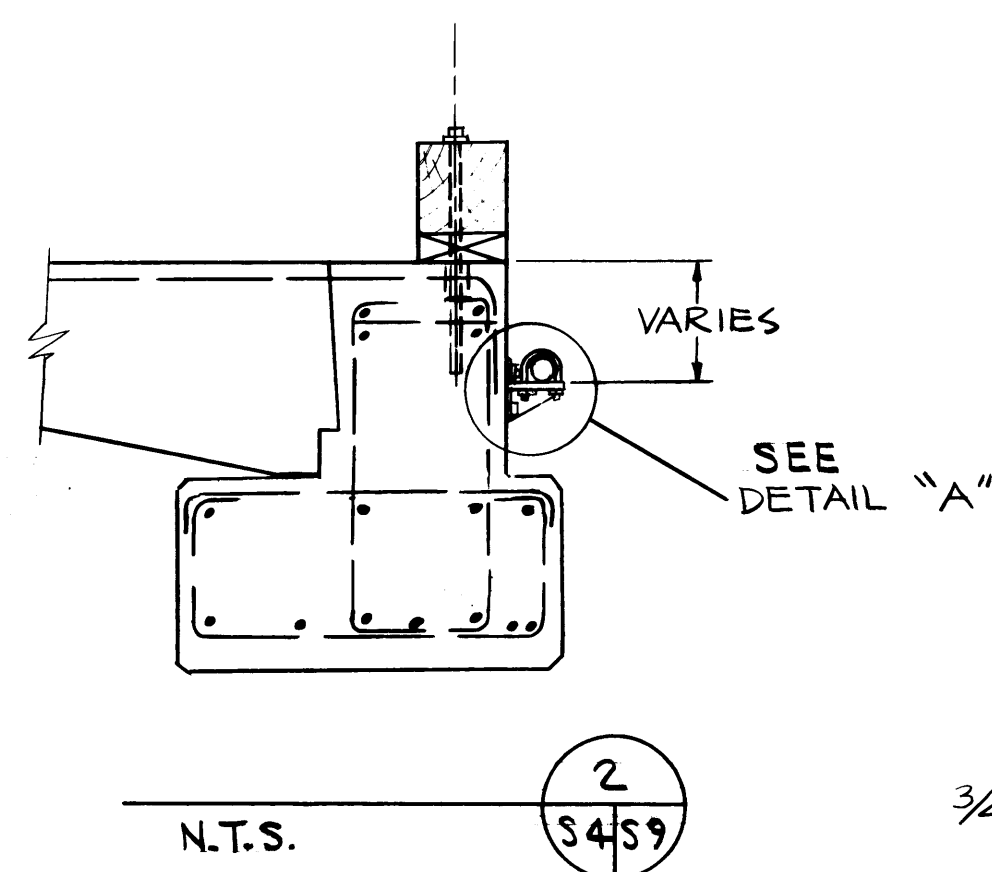
SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40th TACOMA, WA 98409

MARK	REVISION	BY	APP.	DATE

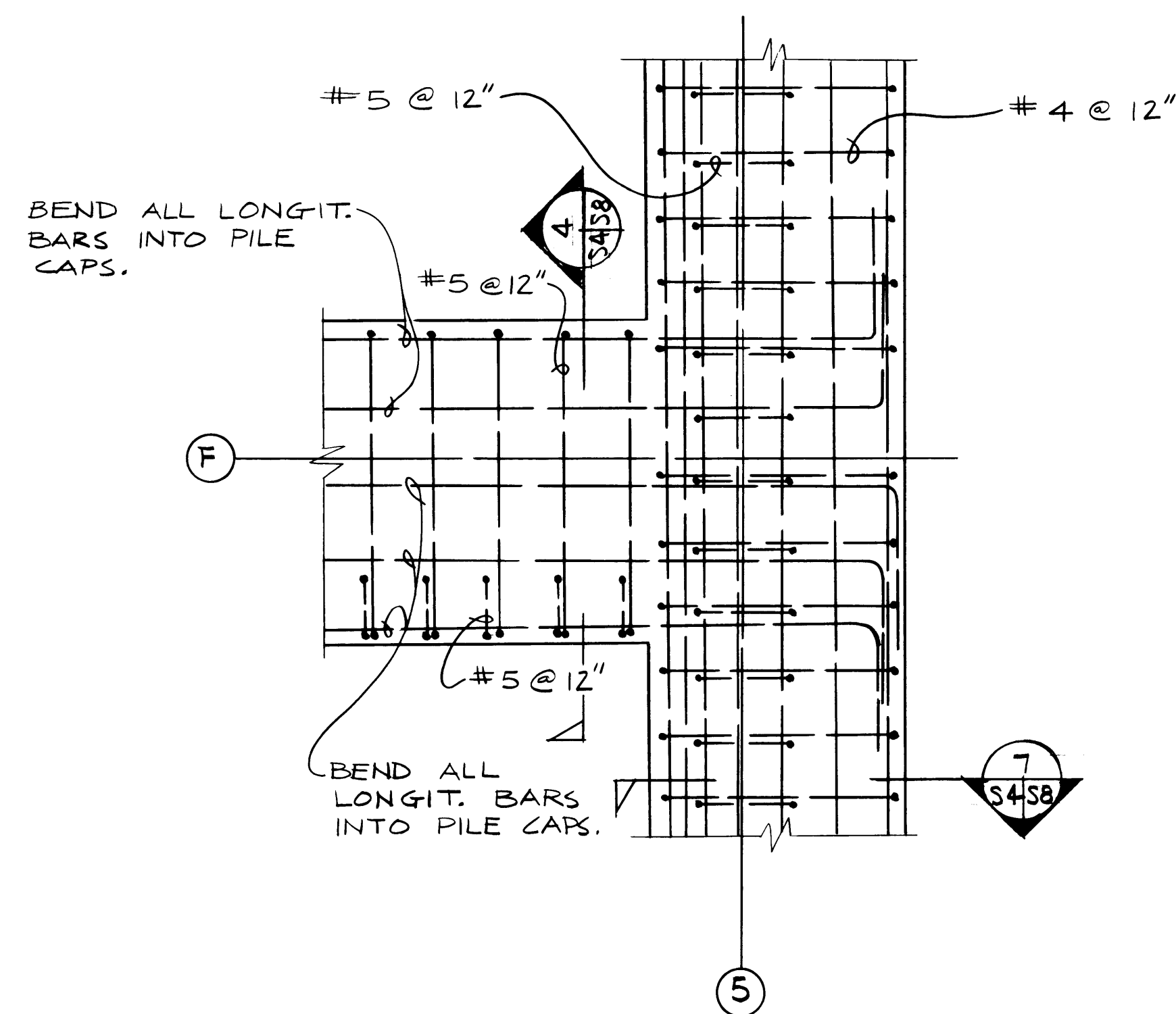
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CHECKED: W.S. DATE: APRIL 1983	TYPICAL PILE CAP DETAILS
CHECKED: HLC DATE: MAY 1983	TOTE PIER FACILITY
CONT. NO.	BLAIR WATERWAY, 1983
FIELD BOOK (S):	SCALE: NOTED
APPROVED: R.L. MacLeod CHIEF ENGINEER	DRAWING NO. EP 3823-12
DATE: 5/20/83	SHEET 17 OF 25



N.T.S. 1/59



4/59
S7, S8 & S9

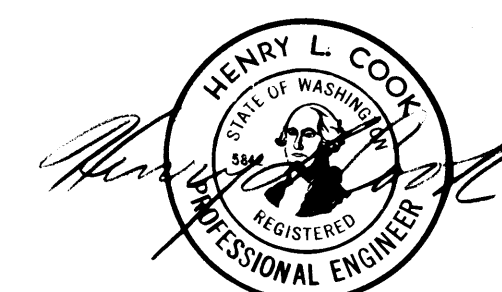


3/59

PLAN - INTERSECTION OF PILE CAPS

AS BUILT SEPT. 84

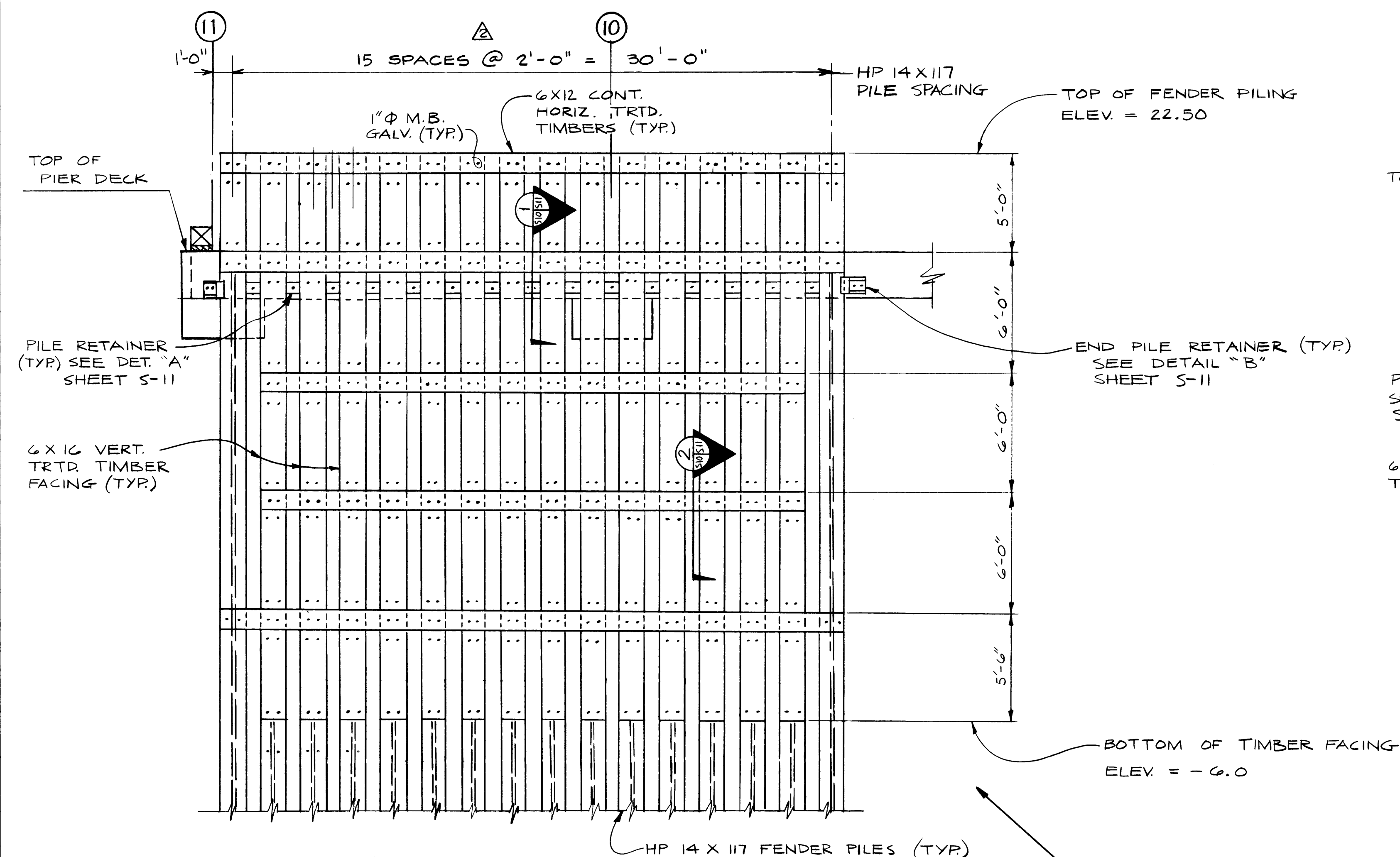
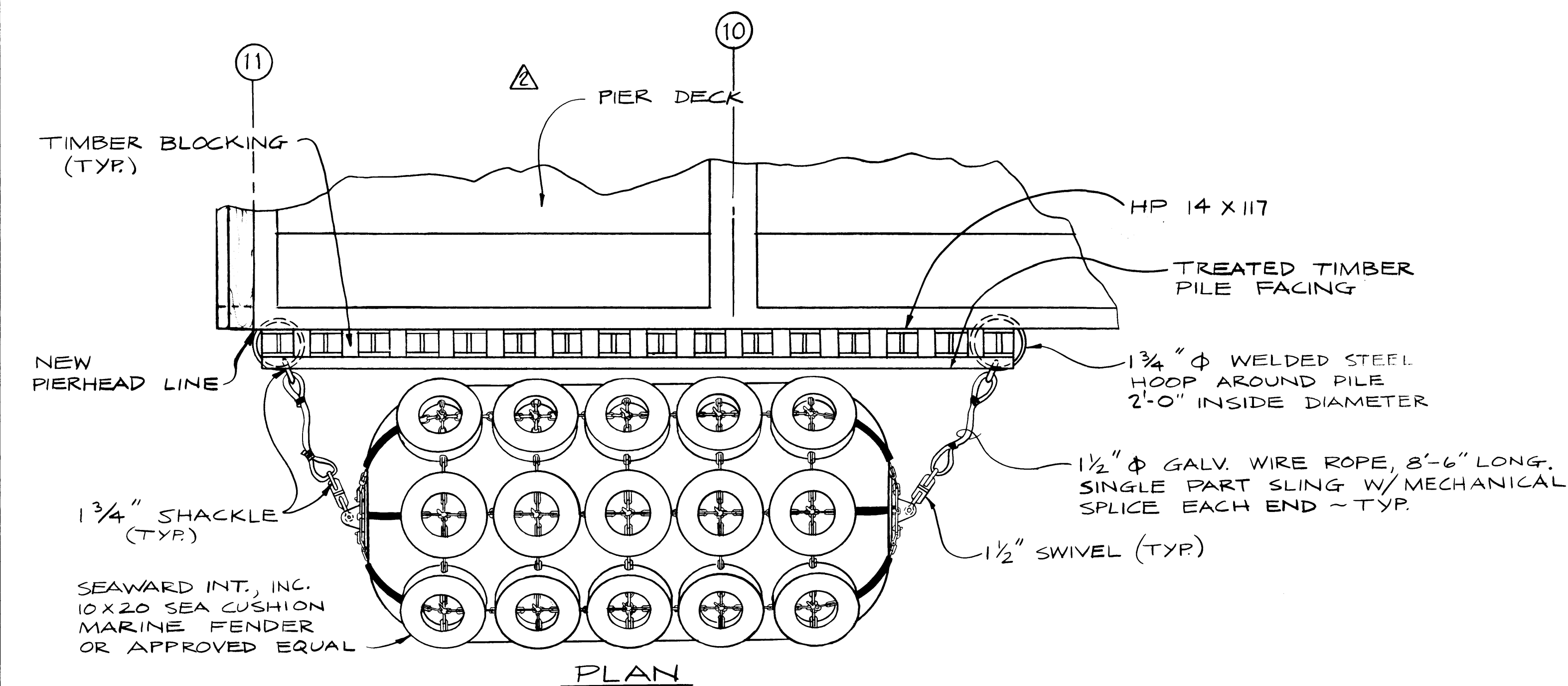
59



SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40th TACOMA WA 98409

MARK	REVISION	BY	APP.	DATE

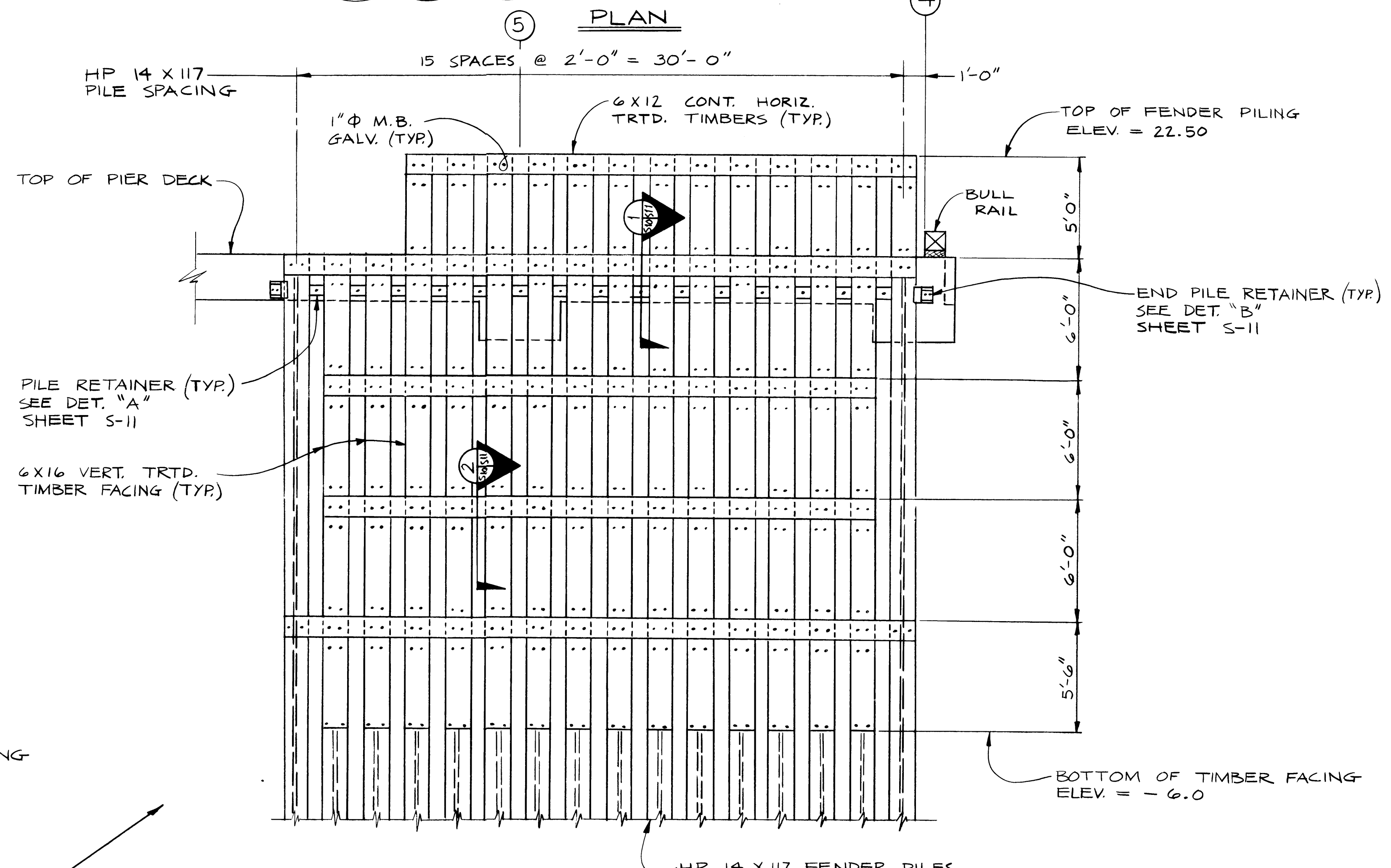
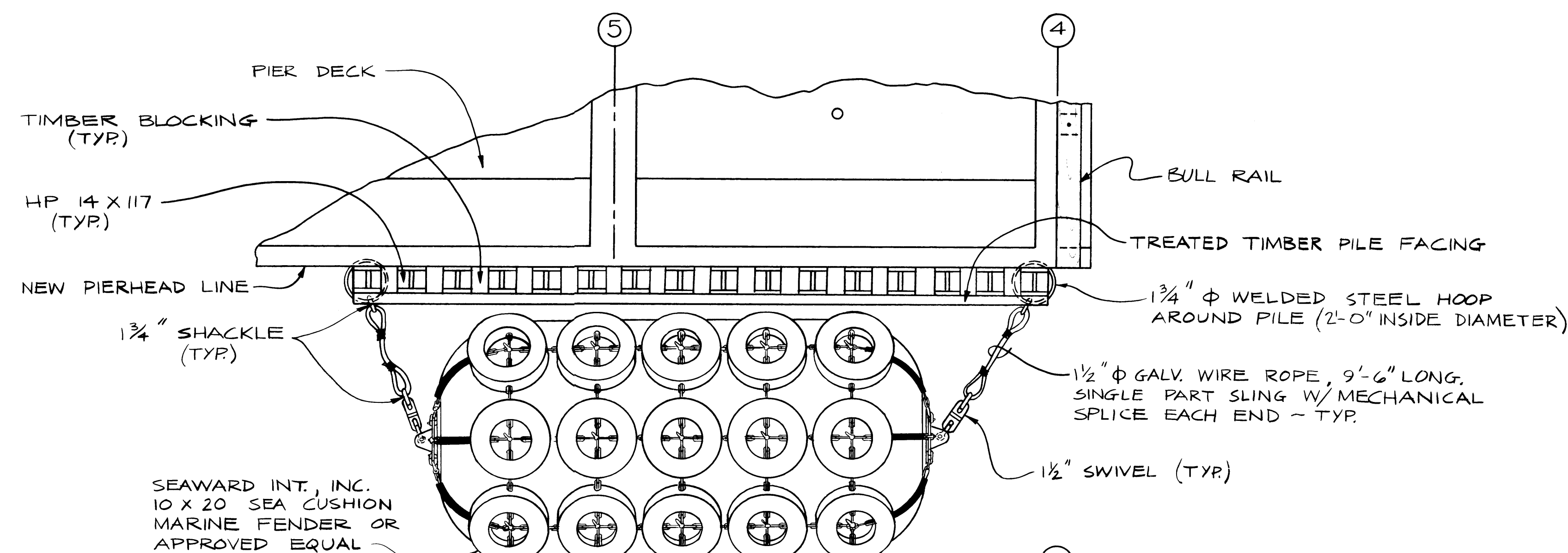
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CHECKED WS DATE APRIL 1983	MISCELLANEOUS DETAILS	
CHECKED HLC DATE MAY 1983	TOTE PIER FACILITY BLAIR WATERWAY, 1983	
CONT. NO.	FIELD BOOK(S)	SCALE NOTED
APPROVED	5/20/83 DATE	DRAWING NO. EP 3823-12
R. L. MacLeod CHIEF ENGINEER		SHEET 18 OF 25



NOTE: 1) HP 14 X 17 TO BE DRIVEN TO A MINIMUM TIP ELEVATION OF -70.00
2) HP 14 X 17 PILING TO BE TREATED PER SPECIFICATIONS

FENDER SYSTEM

1/4" = 1'-0"



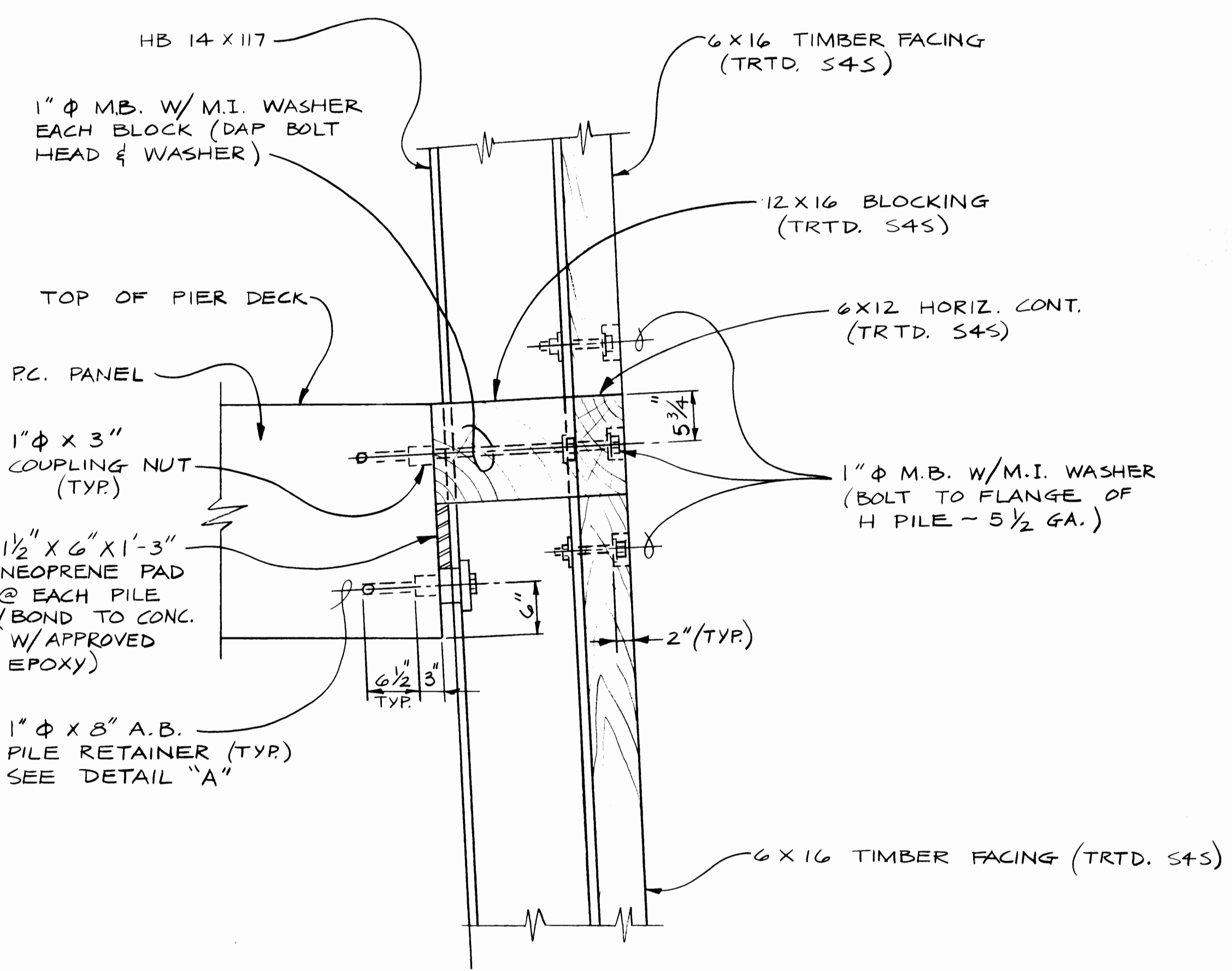
AS BUILT SEPT, 84

SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40th TACOMA WA 98409

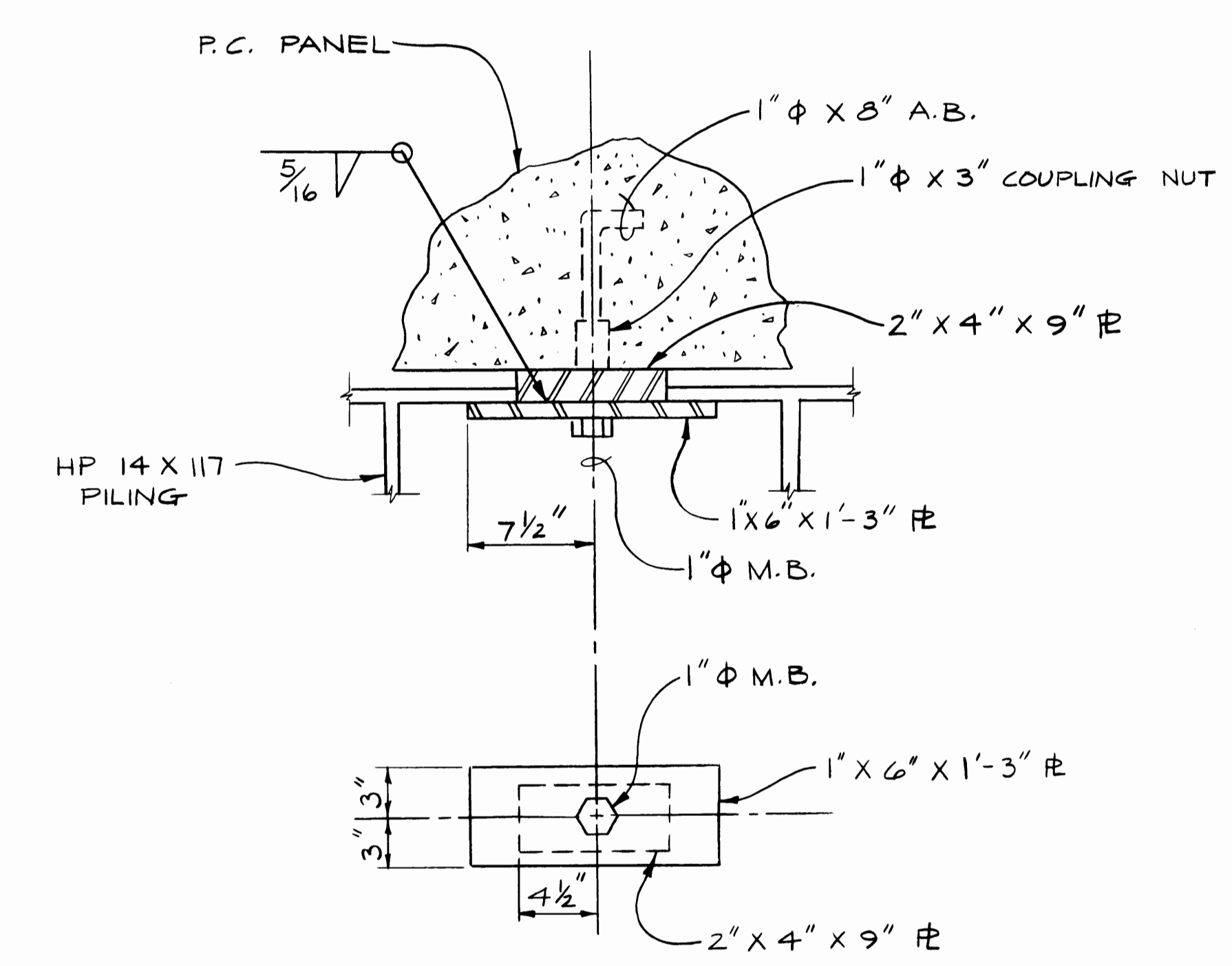
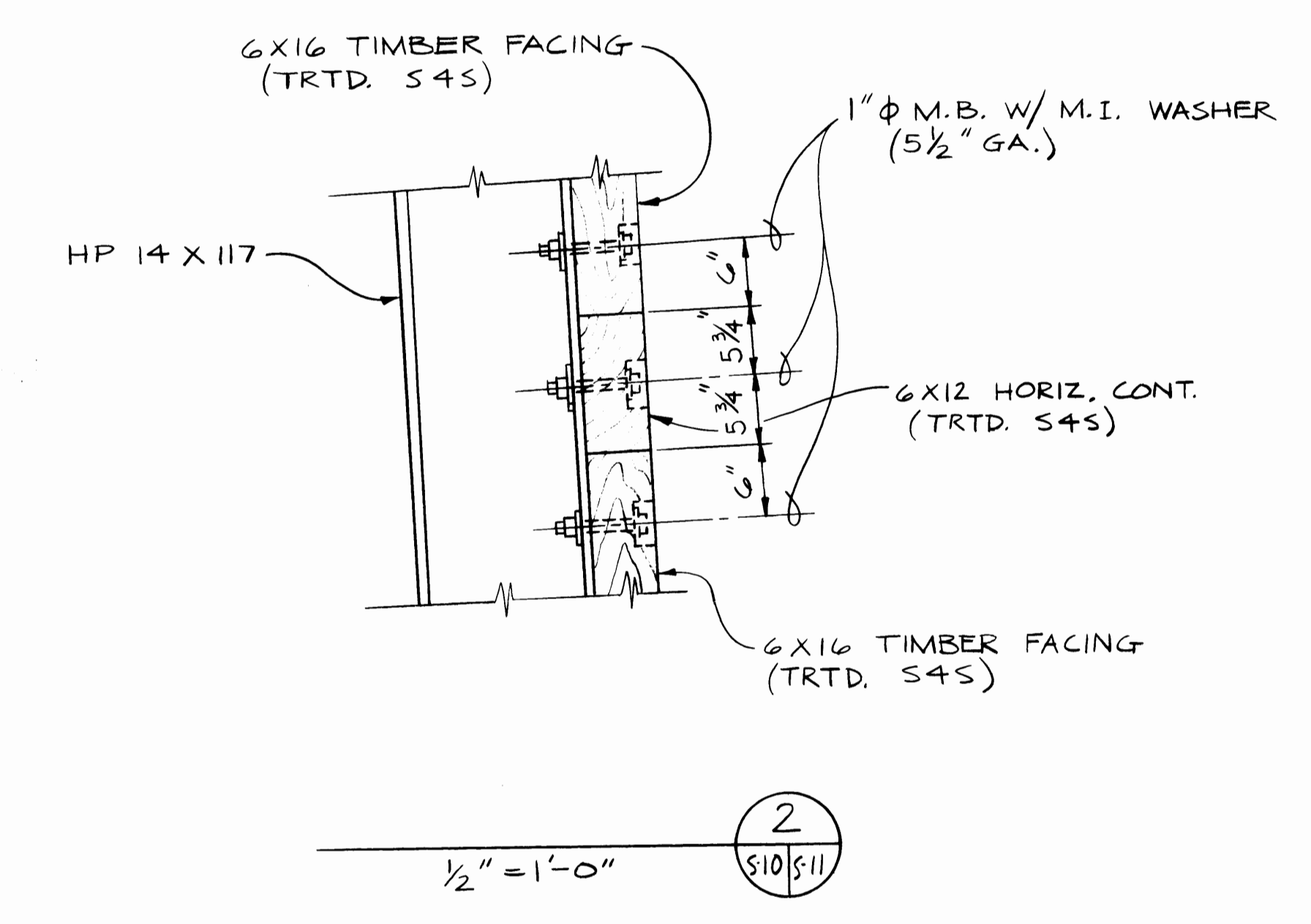
MARK	REVISION	BY	APP.	DATE
1	RELOCATE FOR ON PIER	HLC		9/7/83
2	REF. ADDENDUM NO. 2 - 6/22/83			6/22/83

DRAWN: DJA DATE: APRIL, 1983	PORT OF TACOMA
CHECKED: WS DATE: APRIL, 1983	FENDER SYSTEM LAYOUT
CHECKED: HLC DATE: MAY, 1983	TOTE PIER FACILITY BLAIR WATERWAY, 1983
CONT. NO.	SCALE: 1/4" = 1'-0"
FIELD BOOK(S)	APPROVED: R.L. MacLeod DATE: 5/20/83
DRAWING NO.	EP 3823-12
SHEET	19 OF 25

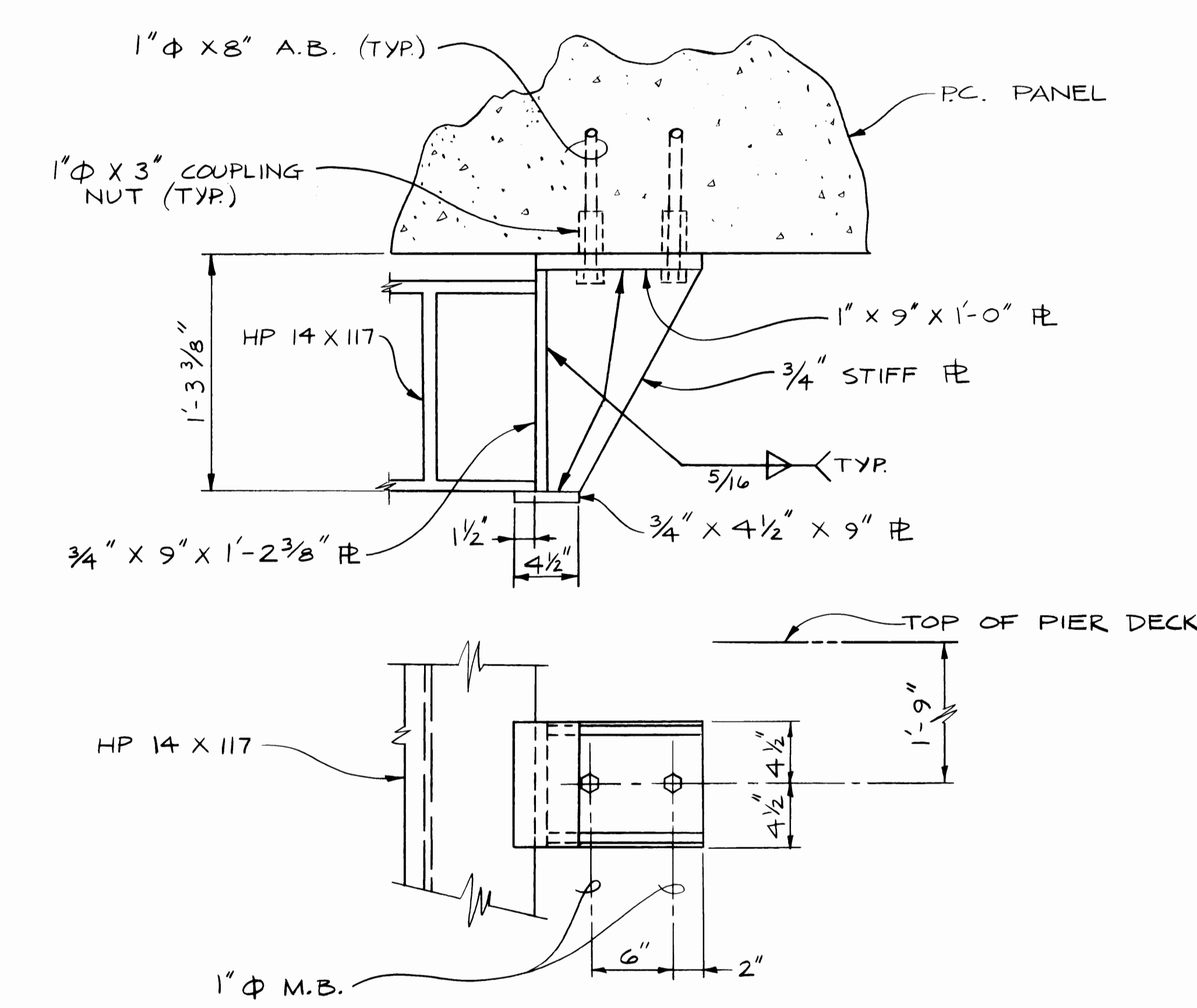
S 10



1
510 S11



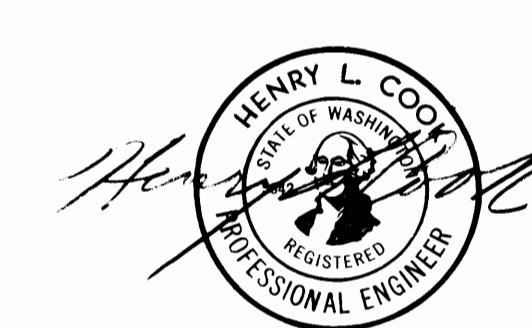
DETAIL "A"
1/2" = 1'-0"



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

AS BUILT SEPT. 84

5 11



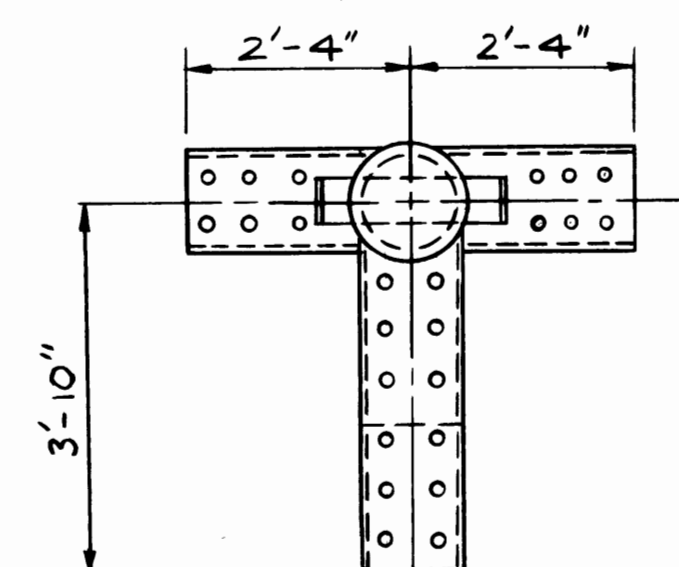
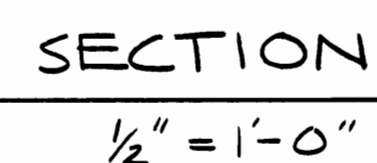
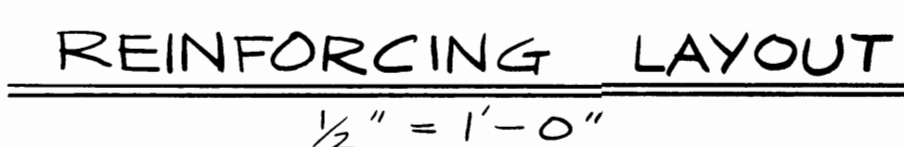
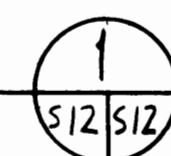
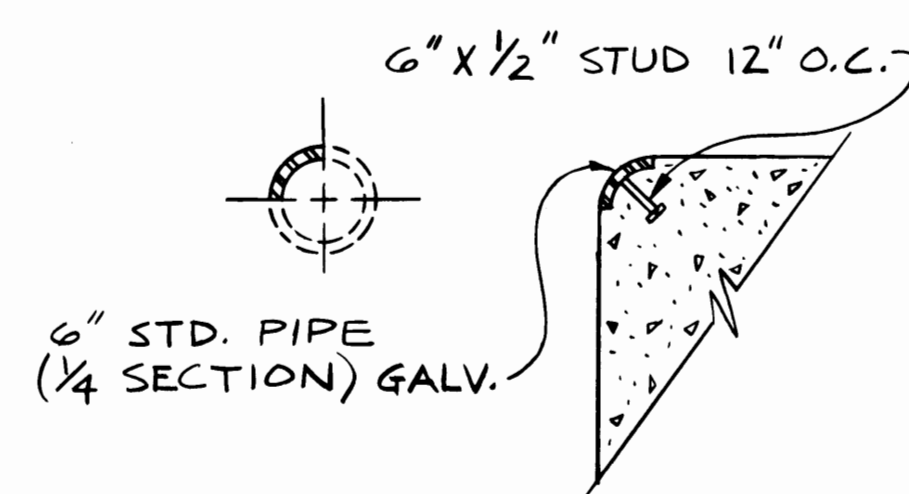
SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40TH TACOMA WA 98409

MARK	REVISION	BY	APP.	DATE

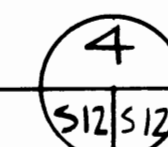
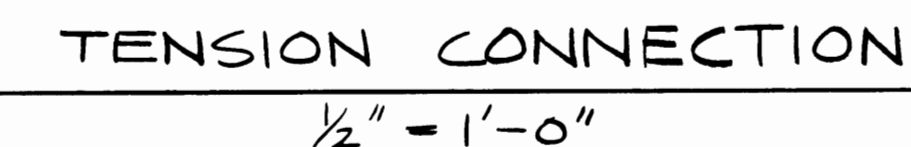
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CHECKED: WS	DATE: APRIL 1983	
CHECKED: HLC	DATE: MAY 1983	
CONT. NO.		
FIELD BOOK(S):		SCALE NOTED
APPROVED: <i>RL MacLeod</i>		DRAWING NO. EP 3823-12
		SHEET 20 OF 25



- NOTE: SEE SHEET S-1 FOR
LOCATIONS (4 REQUIRED)



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



S 12

PORT OF TACOMA

BOLLARD DETAILS

TOTE PIER FACILITY
BLAIR WATERWAY, 1983

FIELD BOOK (E)

APPROVE	
---------	--

R. L. MacLeod
CHIEF ENGINEER

SCALE NOTED

	DRAWING NO.
--	--------------------

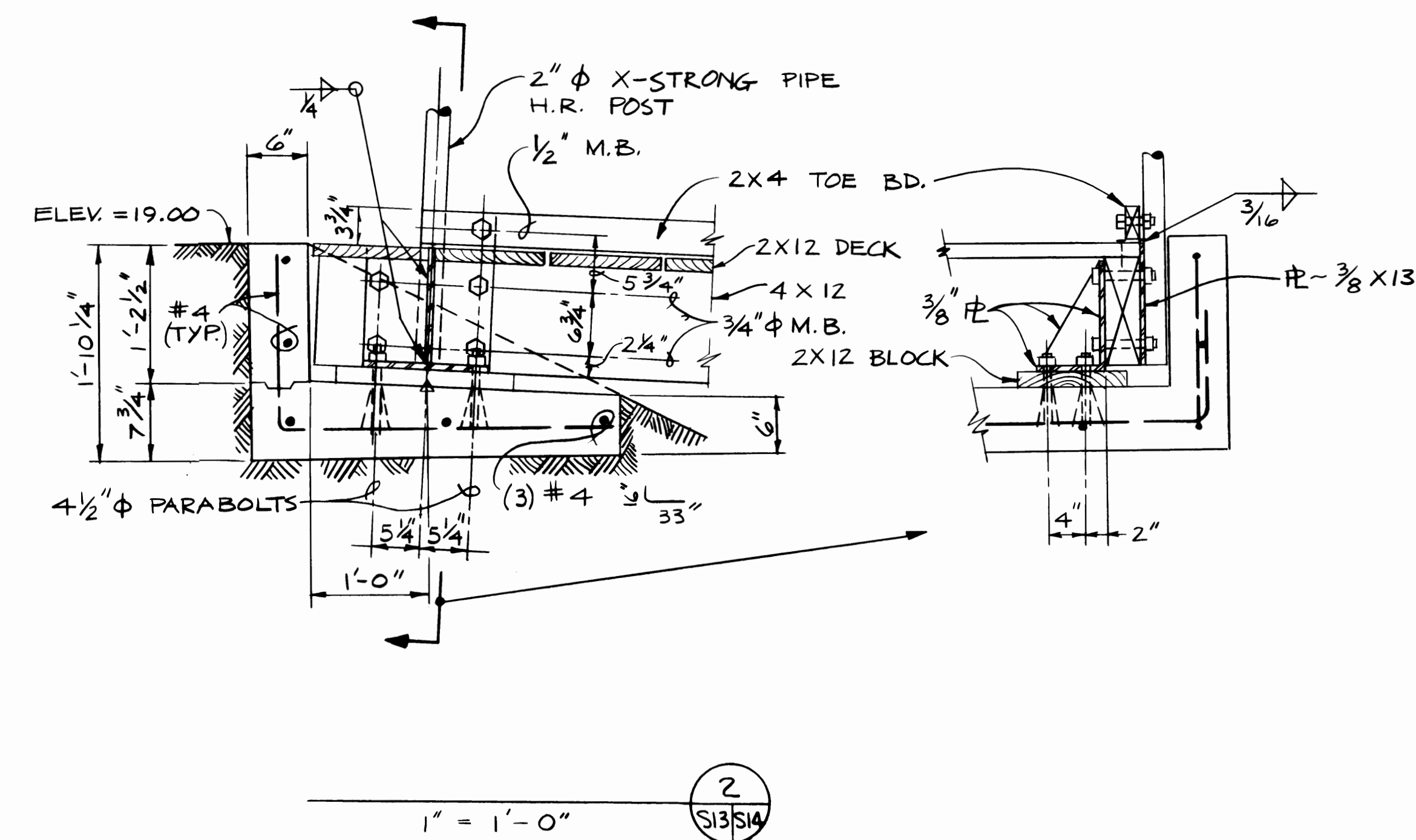
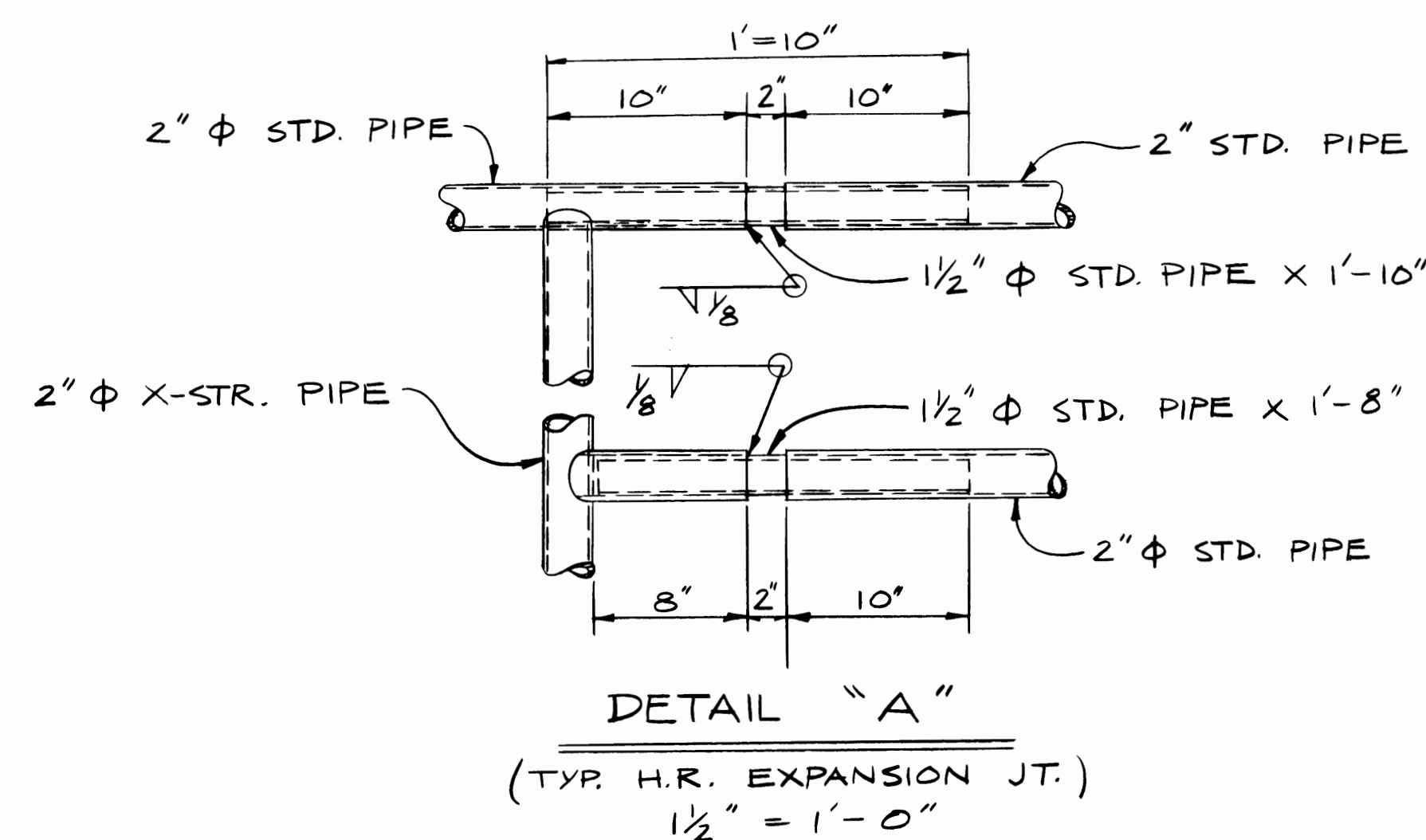
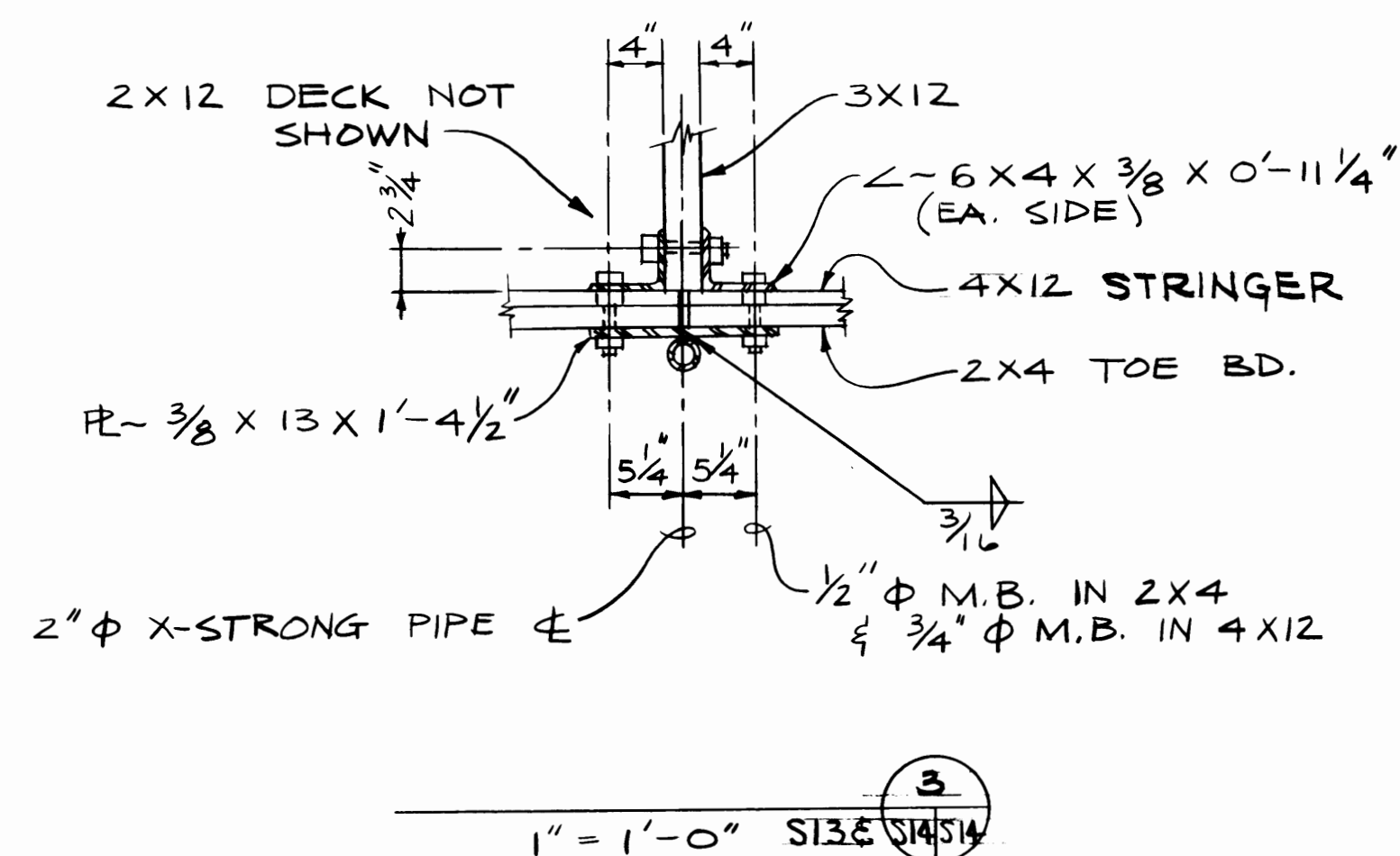
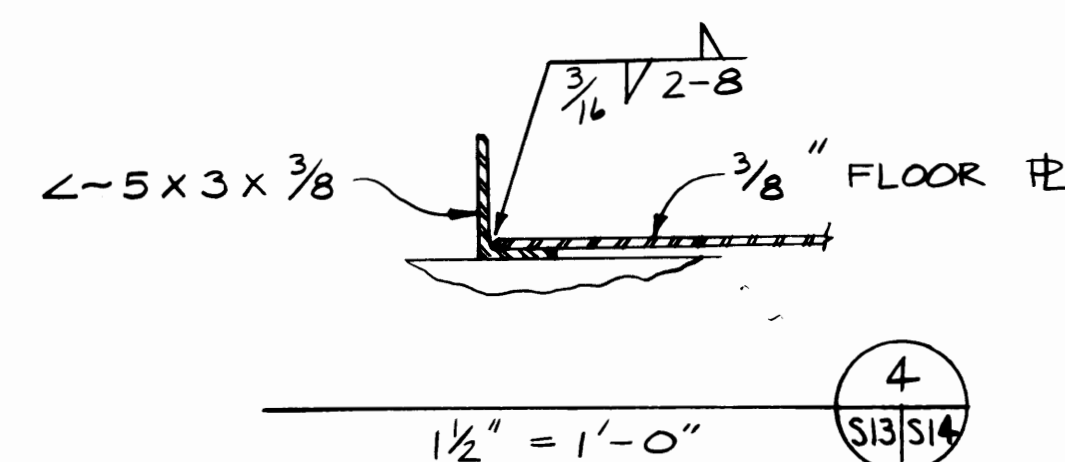
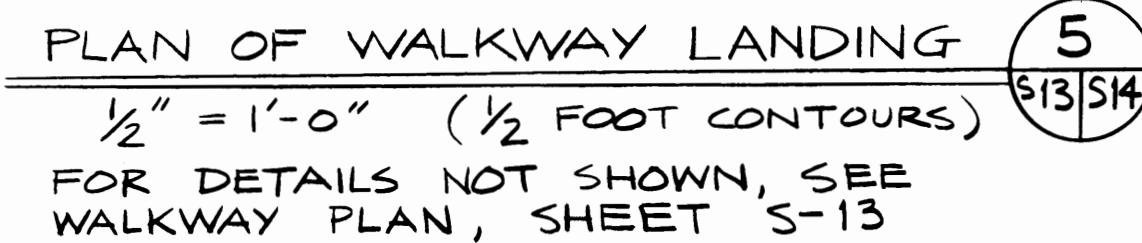
EP 3823-

SHEET **21** OF **2**

AS BUILT SEPT. 84

SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40th TACOMA WA 98409

MARK	REVISION	BY	APP.	DATE



PORT OF TACOMA

WALKWAY DETAILS

TOTE PIER FACILITY
BLAIR WATERWAY, 1983

CONT. NO. _____	SCALE NOTED
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FIELD BOOK(S)		
APPROVED	<i>[Signature]</i>	DRAWING NO.

DATE 3/20/83 EP 3873

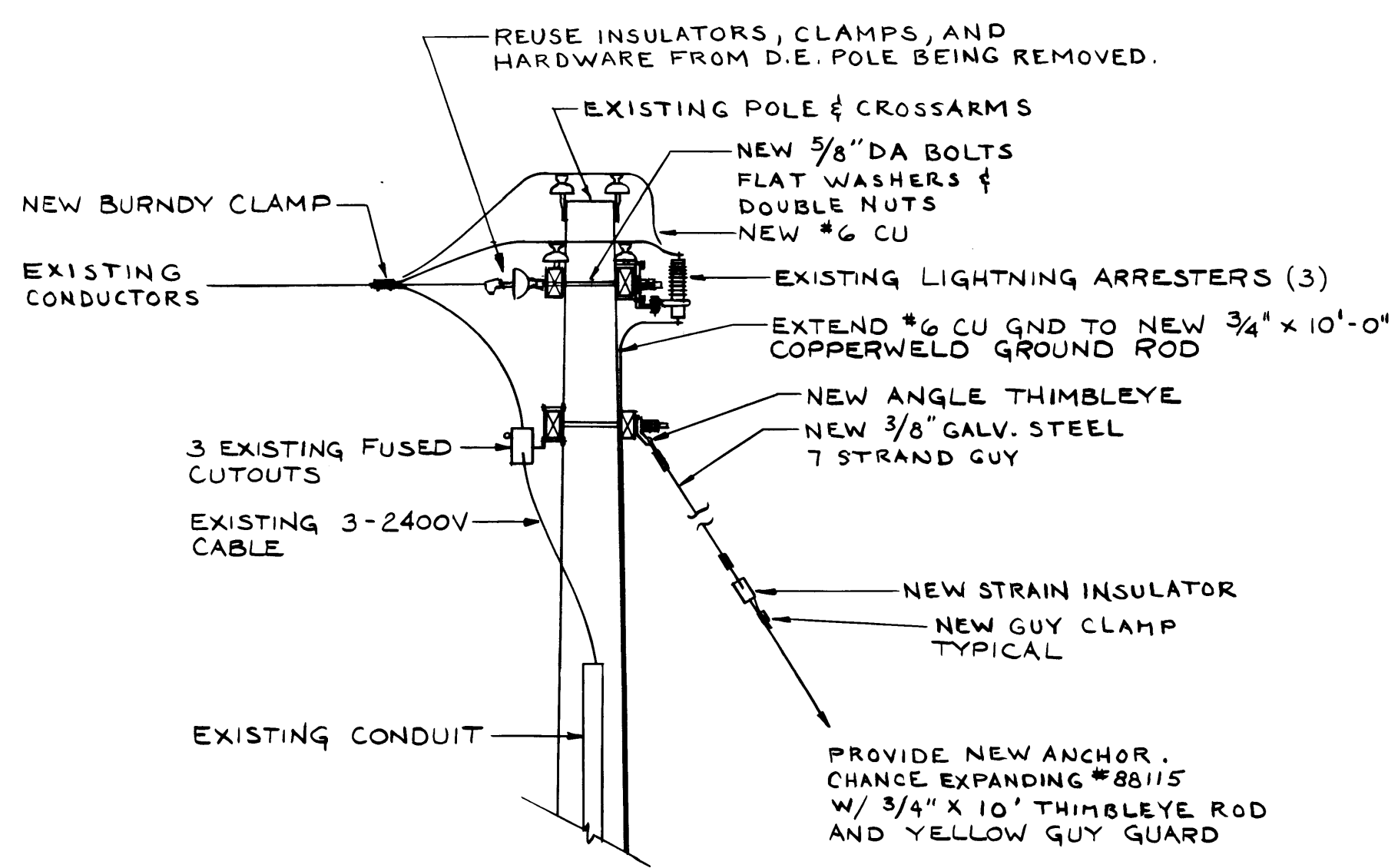
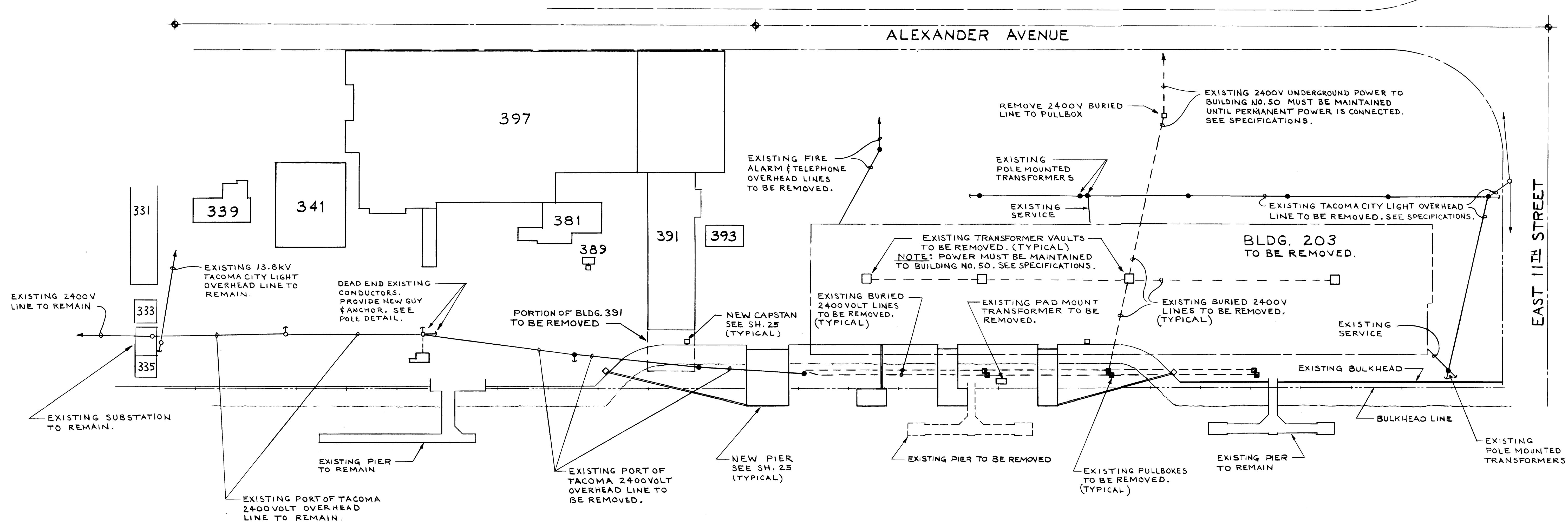
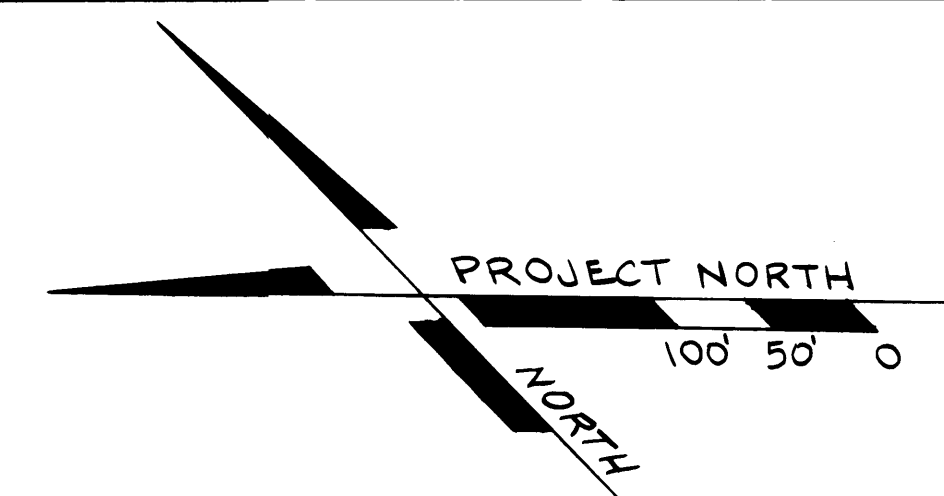
2004 01 01

17 L MacLeod	23
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CHIEF ENGINEER	SHEET <u> 2 </u> OF <u> 2 </u>
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SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40th TACOMA WA 98409

MARK	REVISION	BY	APP.	DATE



LEGEND

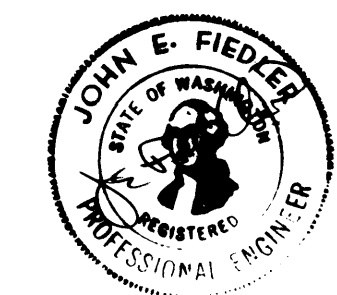
- EXISTING POLE TO REMAIN.
- EXISTING POLE TO BE REMOVED THIS CONTRACT.
- EXISTING BURIED POWER LINE
- EXISTING OVERHEAD LINE TO BE REMOVED THIS CONTRACT.
- EXISTING PORT OF TACOMA OVERHEAD LINE TO REMAIN.
- ⊠ EXISTING PULLBOX TO BE REMOVED THIS CONTRACT.

NOTES

1. THE DRAWINGS ARE NOT COMPLETE WITHOUT THE ACCOMPANYING SPECIFICATIONS. SEE THE SPECIFICATIONS FOR FURTHER DESCRIPTION AND REQUIREMENTS OF THE WORK.
2. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO INCLUDE ALL ITEMS NEEDED FOR COMPLETE DEMOLITION OF THE EXISTING ELECTRICAL INSTALLATION WITHIN THE DESCRIBED LIMITS AND ALL ITEMS NEEDED FOR NEW INSTALLATION INDICATED. PROVIDE ALL ITEMS.
3. REFER TO THE CIVIL, STRUCTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL DETAILS OF THE EXISTING AND NEW INSTALLATIONS WHICH AFFECT THE ELECTRICAL WORK.

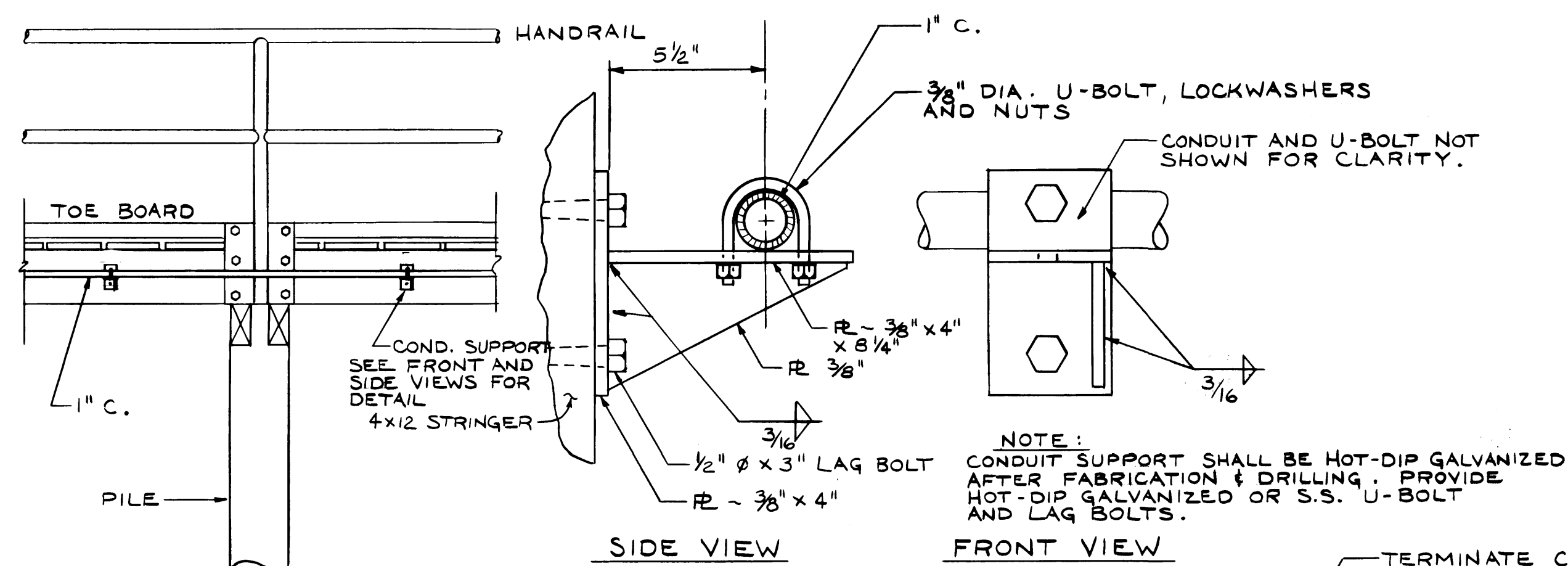
4. The existing Tacoma City Light overhead power line along the east side of Building 203 shall be maintained in service to provide power for the Tacoma Boat steel yard until the contractor is notified by the Port of Tacoma that the line is no longer required. At that time, the contractor shall coordinate with Tacoma City Light for removal of the line. The contractor shall protect the line from damage until it is removed.

NW UTILITY CONSULTANTS, INC.
CONSULTING ENGINEERS
1402 47TH AVENUE EAST
TACOMA, WASHINGTON 98404

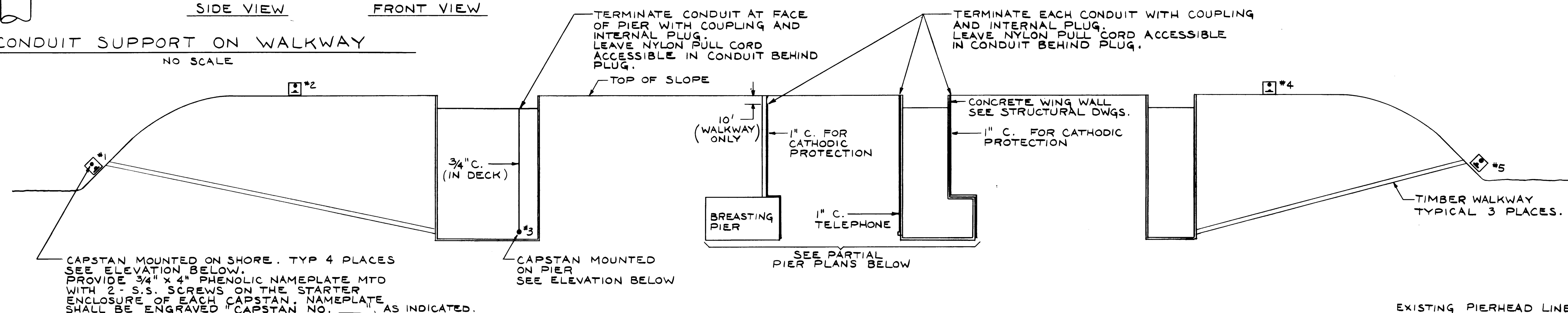
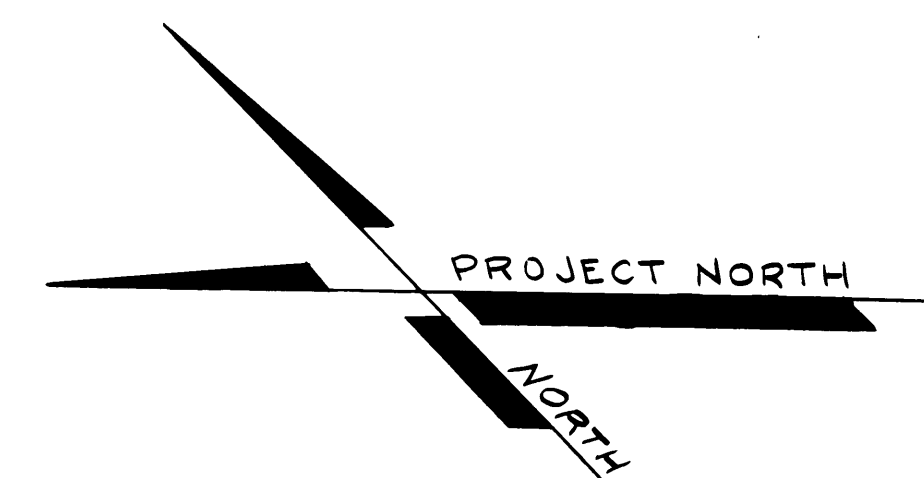


MARK	REVISION	BY	APP.	DATE
Δ1	REF. ADDENDUM NO. 2 - DATED 6/24/83			6/24/83

DRAWN: PAF DATE: APRIL 83		PORT OF TACOMA ELECTRICAL SITE PLAN TOTE PIER FACILITY BLAIR WATERWAY - 1983	
CHECKED: JEF DATE: 5-20-83			
DATE: _____		SCALE: 1" = 100'	
CONT. NO. _____		DRAWING NO. EP 3823-12	
FIELD BOOK(S): _____		SHEET 24 OF 25	
APPROVED: <i>[Signature]</i> DATE: 5/20/83			

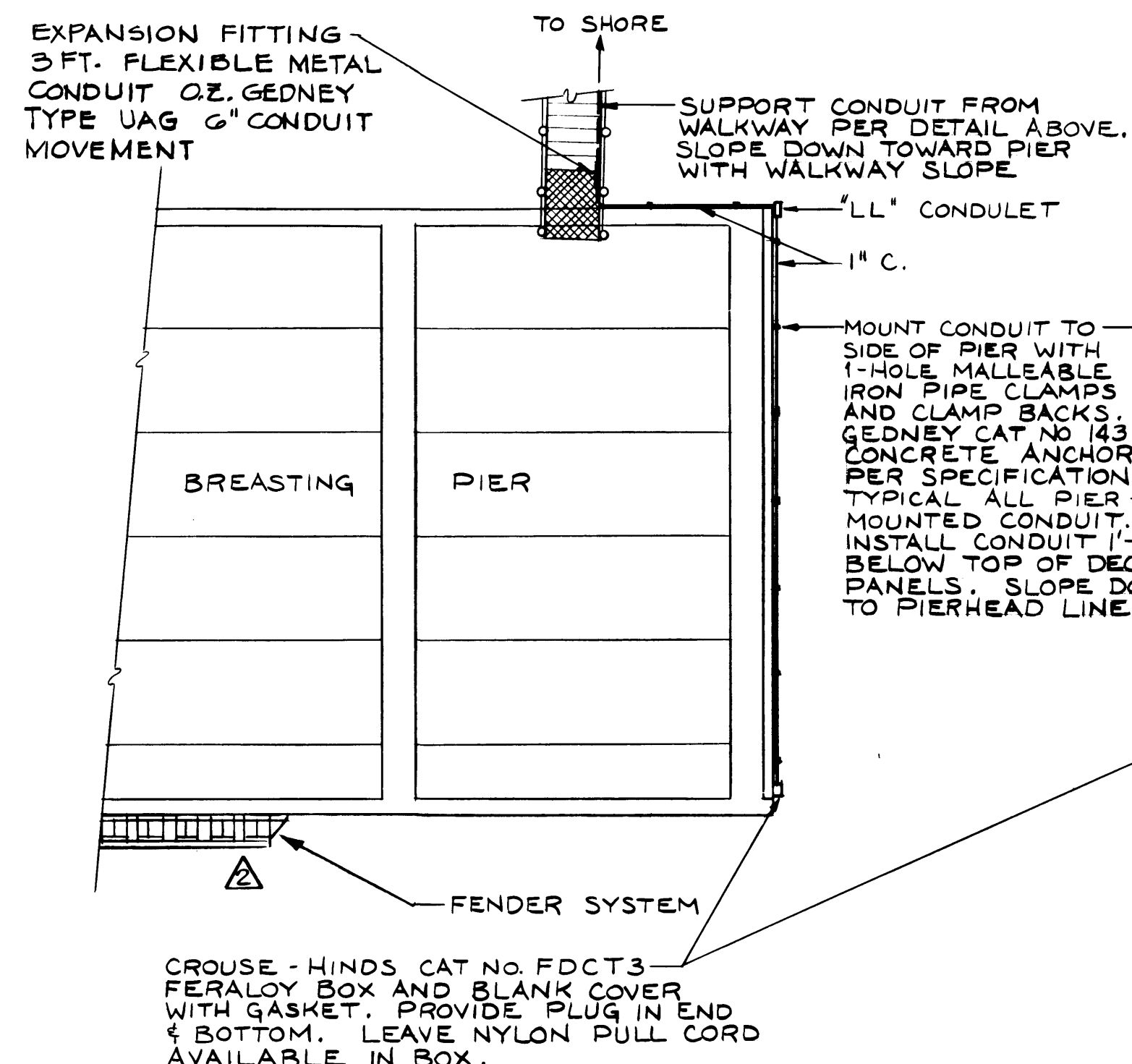
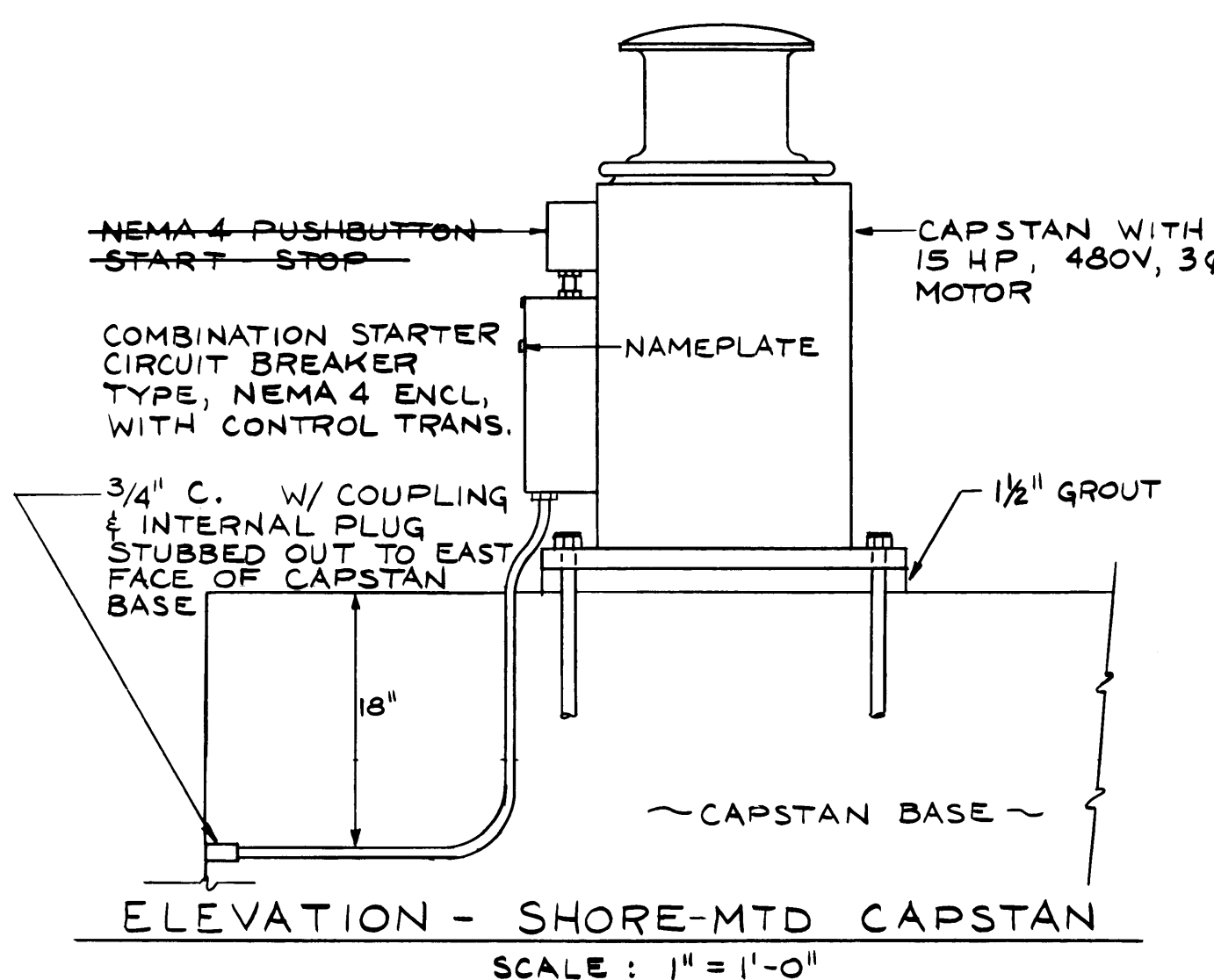
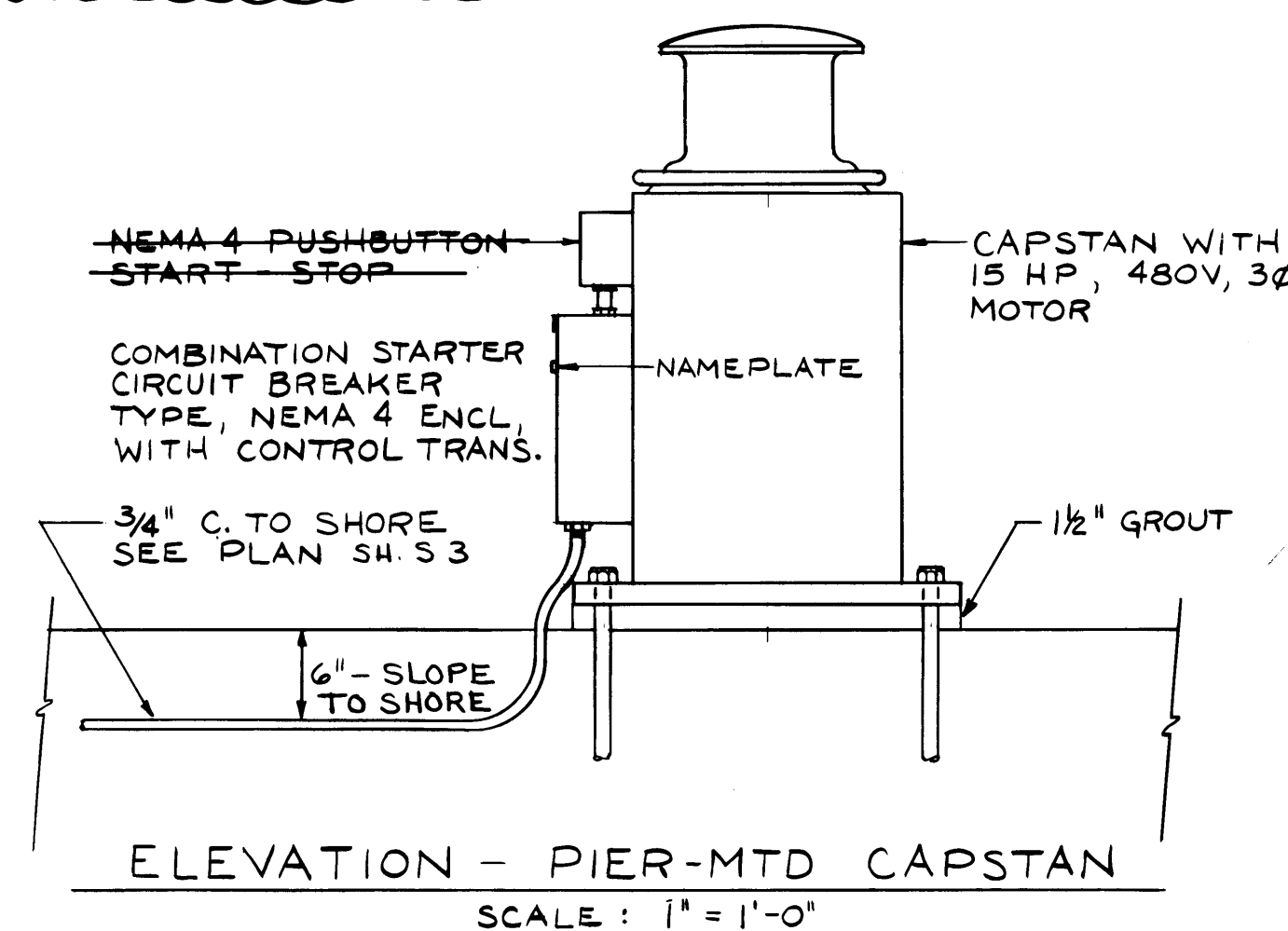


CONDUIT SUPPORT ON WALKWAY
NO SCALE

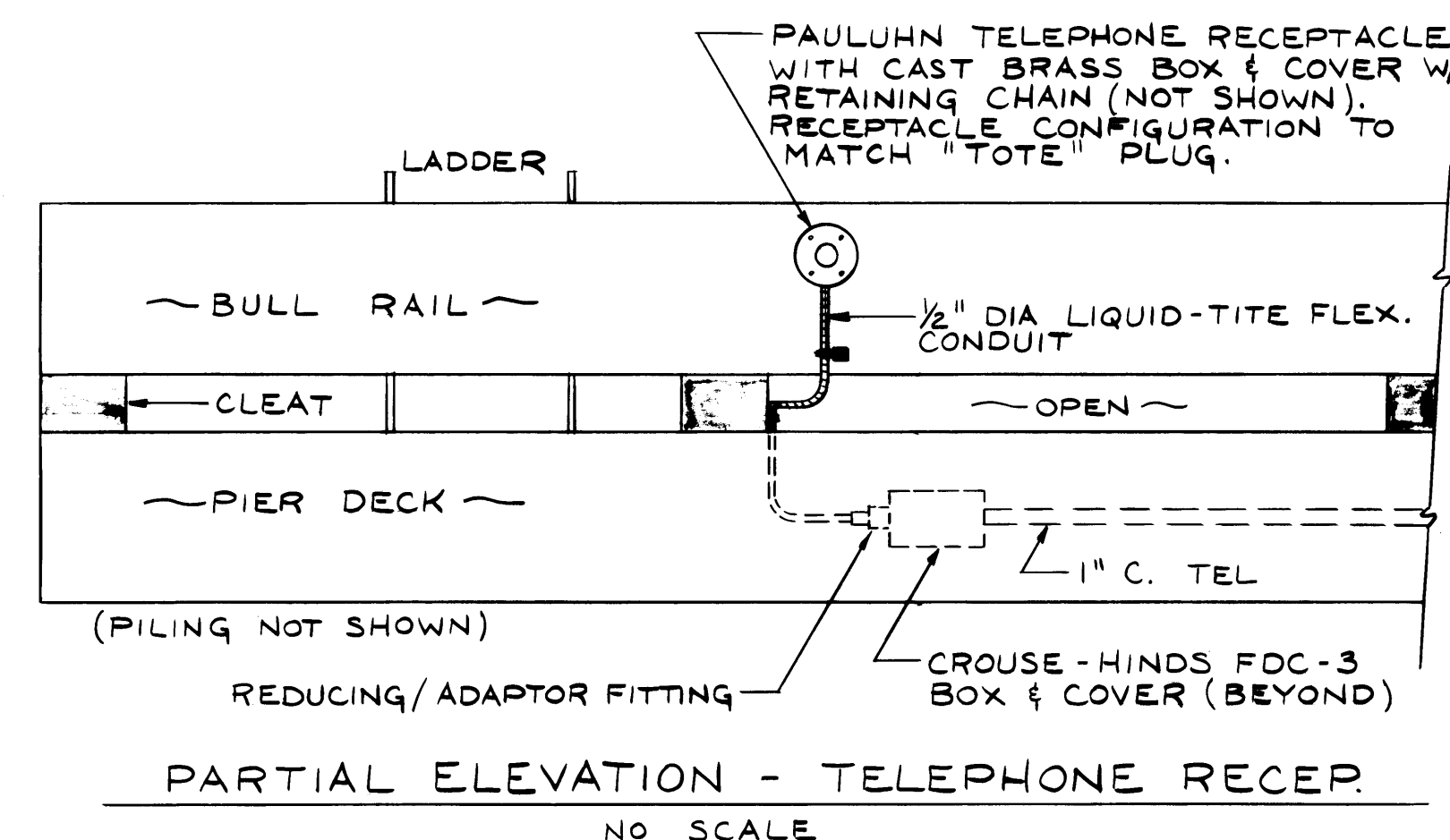


PIER ELECTRICAL LAYOUT
SCALE: 1" = 50'

Capstans are foot switch operated as described in Specifications Section 14370. Contractor shall install and wire foot switches and make all connections. Provide raceway, wire, hardware, fasteners, and all items to completely install and connect all power and controls.



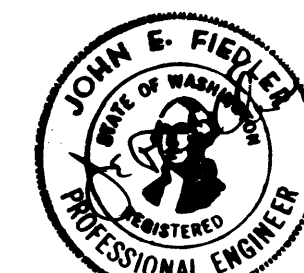
PARTIAL PIER PLANS
SCALE: 1/8" = 1'-0"



MOUNT CONDUIT TO SIDE OF PIER WITH 1-HOLE MALLEABLE IRON PIPE CLAMPS AND CLAMP BACKS, GEDNEY CAT NO 143. CONCRETE ANCHORS PER SPECIFICATION. (TYPICAL ALL PIER-MOUNTED CONDUIT.) INSTALL CONDUIT BELOW POTABLE WATER LINE SUPPORT BRACKETS. SLOPE WITH THE POTABLE WATER LINE.

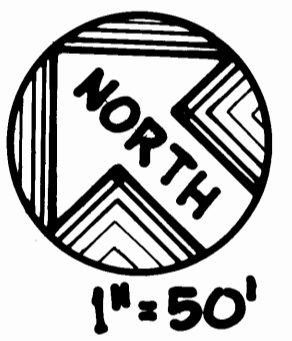
CROUSE-HINDS CAT NO. FDCT-3 FERALLOY BOX AND BLANK COVER WITH GASKET. PROVIDE PLUG IN OPEN END AND BOTTOM. LEAVE NYLON PULL CORD AVAILABLE IN BOX.

NW UTILITY CONSULTANTS, INC.
CONSULTING ENGINEERS
1402 47TH AVENUE EAST
TACOMA, WASHINGTON 98404



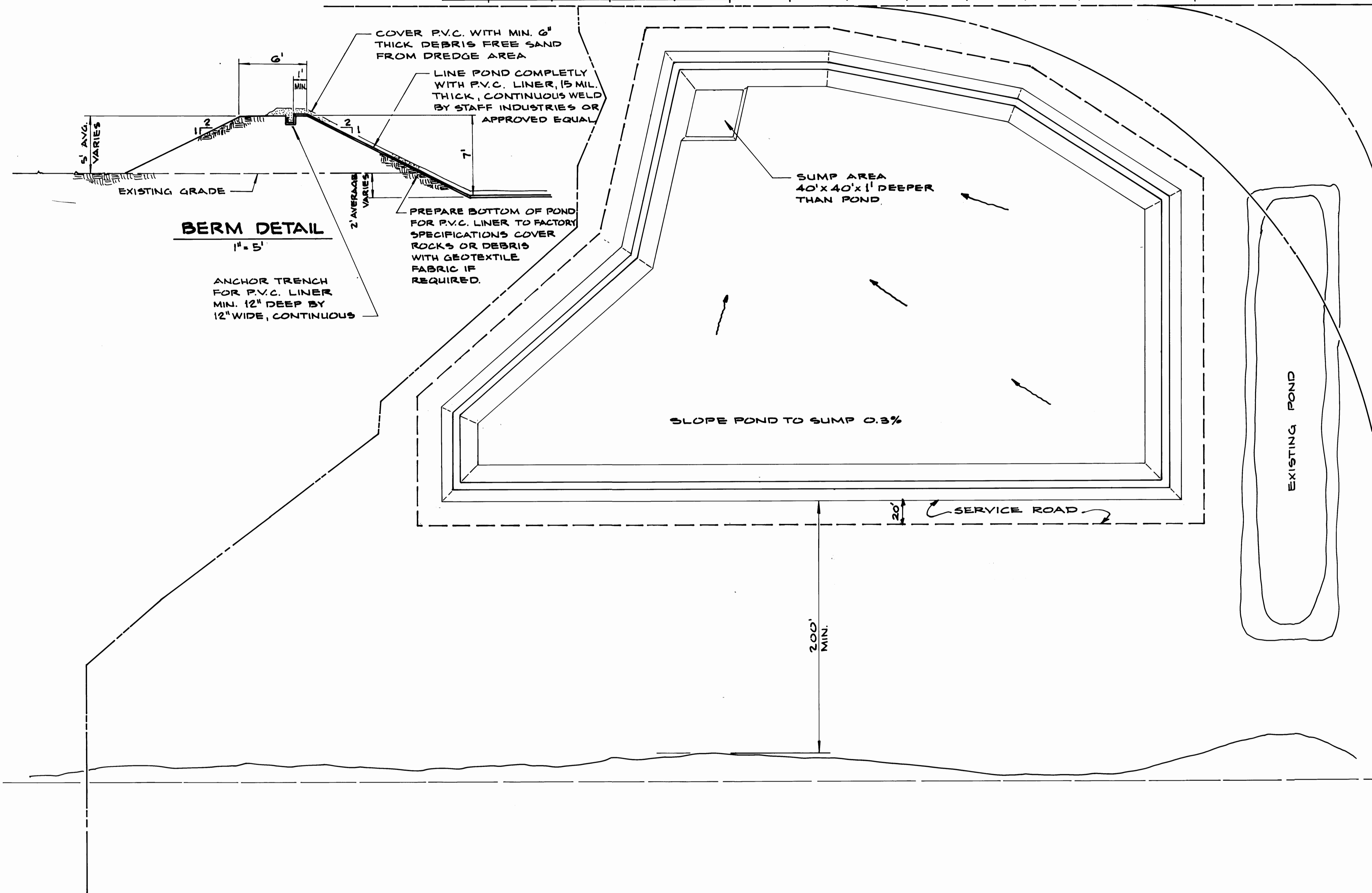
RELOCATE FDR. ON BREAST PIER	HLC	9/1/83
REF. ADDENDUM NO. 2	2/24/83	2/24/83
MARK	REVISION	BY APP. DATE

DRAWN: PAF DATE: APRIL 83		PORT OF TACOMA ELECTRICAL DETAILS TOTE PIER FACILITY BLAIR WATERWAY-1983	SCALE NOTED
CHECKED: JEF	DATE: 5-20-83		DRAWING NO. EP 3823-12
CHECKED:	DATE:		SHEET 25 OF 25
CONT. NO.	FIELD BOOK(S):		



LINCOLN

ALEXANDER AVENUE



BLAIR WATERWAY

CONTRACT MODIFICATION DRAWING

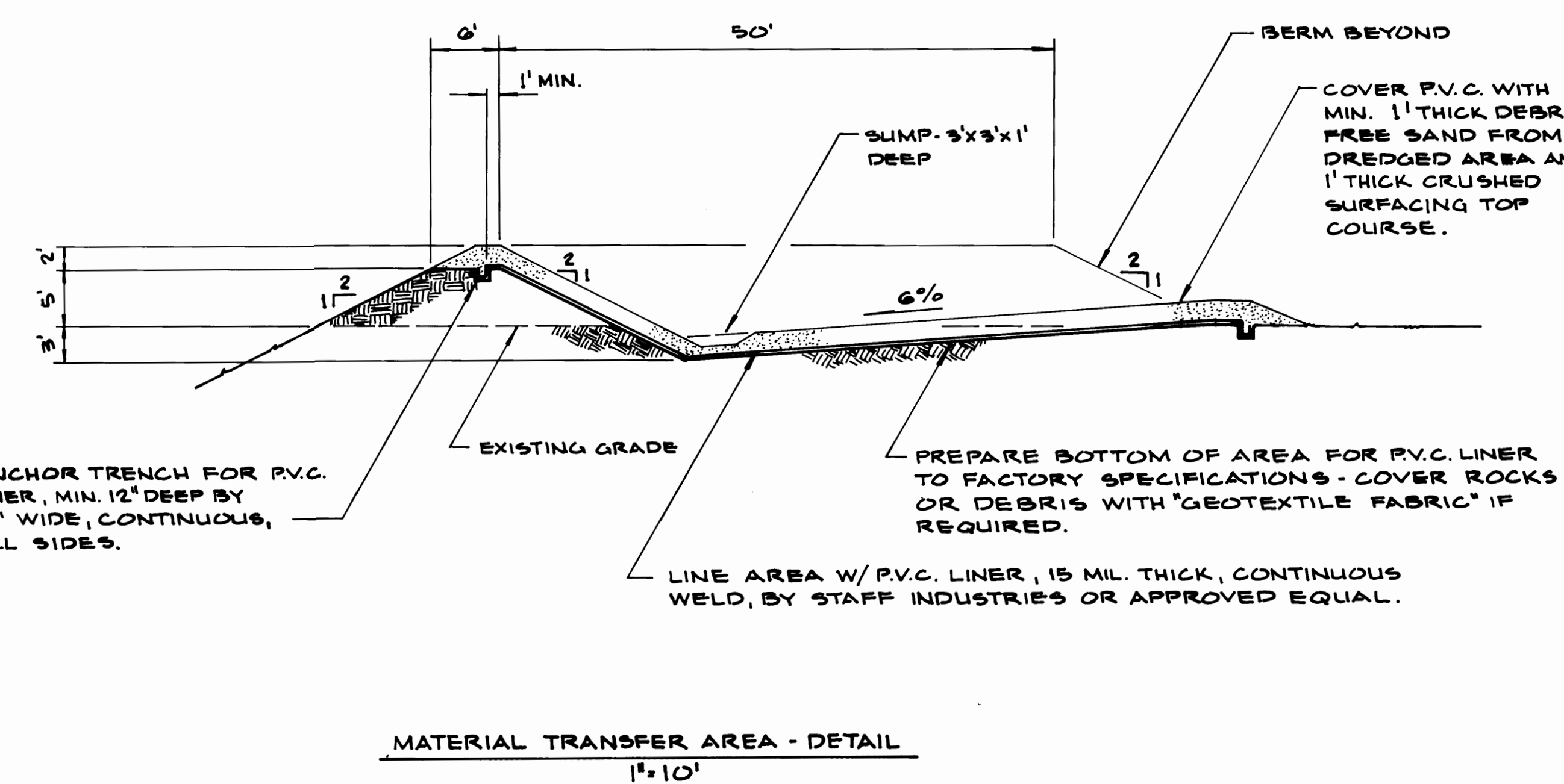
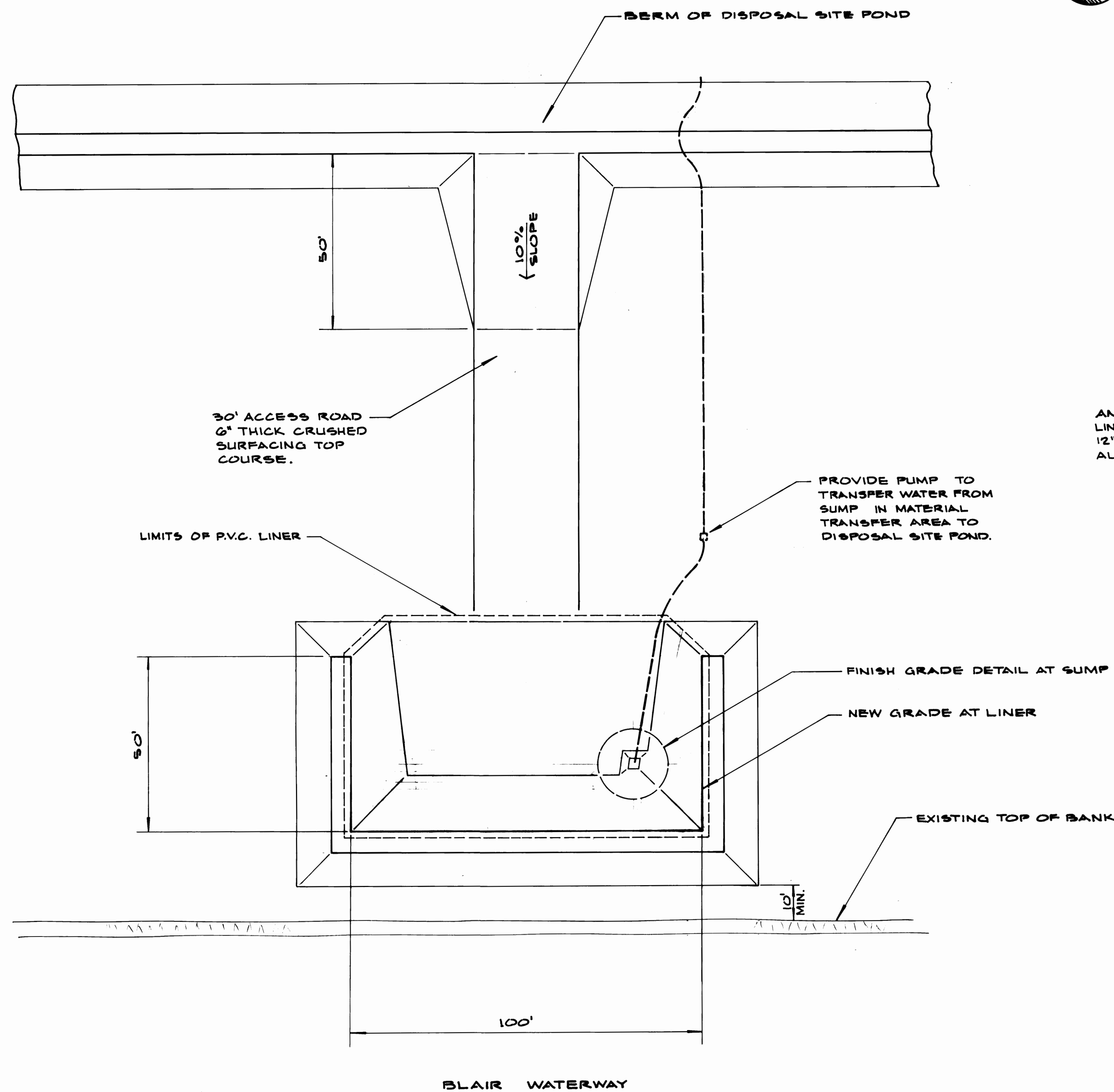
SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40TH TACOMA WA 98409

DRAWN P.A.T.
DATE 16 AUG 83
CHECKED
DATE
CHECKED
DATE
CONT. NO. 532

PORT OF TACOMA
DISPOSAL SITE

APPROVED
DATE 8/30/83
PROJECT MANAGER
SCALE 1"=50'
DRAWING NO. EP-3823-12
SHEET 26 OF 27

MARK	REVISION	BY	APP.	DATE



MATERIAL TRANSFER AREA - PLAN
1"=20'

MATERIAL TRANSFER AREA - DETAIL
1"=10'

CC-2

SITTS & HILL ENGINEERS
CIVIL, STRUCTURAL & SURVEYING
2901 SO. 40th TACOMA WA 98409

DRAWN <u>D.A.T.</u> DATE <u>23 AUG 03</u>		PORT OF TACOMA MATERIAL TRANSFER AREA	
CHECKED _____ DATE _____			
CHECKED _____ DATE _____			
CONT. NO. <u>535</u>		SCALE <u>AS NOTED</u>	
FIELD BOOK (S) _____		DRAWING NO. <u>EP-3823-12</u>	
APPROVED _____ PROJECT MANAGER		DATE <u>8/31/03</u> SHEET <u>27</u> OF <u>27</u>	

CONTRACT MODIFICATION DRAWING