

PORT OF PORT ARTHUR WHARF EXPANSION PROJECT (RELIEVING PLATFORM) PORT ARTHUR, TEXAS

BOARD OF PORT COMMISSIONERS

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DRAWING LIST

TITLE SHEETS

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RP-S6 RELIEVING PLATFORM SECTIONS RP-S7 DETAILS

REFERENCE DRAWINGS

96773-01 TOPOGRAPHIC SURVEY - PORT OF PORT ARTHUR FOR WHARF EXPANSION PROJECT, SURVEYED NOVEMBER, 1996.

FOLLOW-ON PROJECTS

UPON COMPLETION OF THIS PROJECT, OWNER INTENDS TO CONTINUE WHARF EXPANSION PROJECT BY BIDDING THE FOLLOWING PROJECTS:

- PILE SUPPORT WHARF 170,000 S.F.
- TRANSIT SHED 240,000 S.F.
- PAVED OPEN STORAGE 20 ACRES • RAIL TRACKAGE - 9,000 FEET
- ◆ DREDGING 75,000 C.Y.
- FOLLOW-ON WORK IS EXPECTED TO RANGE FROM \$10.0 TO \$30.0 MILLION.

DESIGN CRITERIA AND GENERAL NOTES

GENERAL

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- CONTRACTOR SHALL NOT INTERFERE WITH ACTIVITIES AT THE EXISTING
- 3. PARTIAL LIST OF CODE AND REFERENCES:
- CITY OF PORT ARTHUR, BUILDING CODES AND INSPECTION DIVISION ADA-TEXAS ACCESSIBILITY STANDARDS (TAS) REGIONAL 1996 REVISIONS TO THE STANDARD BUILDING CODE 1994 EDITION SBCCI MECH/PLUMBING 1988 SBCCI

ELECTRICAL 1996 NEC FIRE PROTECTION 1988 SBCCI

- ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI 318-89, ACI 347-88.
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRÉSS DESIGN" 9TH EDITION.
- AMERICAN WELDING SOCIETY AWS D1.1 (LATEST EDITION)
- SHORELINE AND BULKHEAD STABILITY. PILE VERTCAL AND LATERAL CAPACITIES. AND PAVEMENT DESIGN BY SUBSURFACE CONSULTANTS, INC. (DATED NOVEMBER 20, 1996). (AVAILABLE AT PROJECT SITE.)
- PILE LOAD TEST RESULTS BY LORAL CONSTRUCTION, INC. (DATED NOVEMBER 13, 1996). (AVAILABLE AT PROJECT SITE.)

AND BRIDGES. TEXAS DEPARTMENT OF TRANSPORTATION, 1993.

• STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS

CONCRETE

- CONCRETE COMPRESSIVE STRENGTH:
- A. PRESTRESSED CONCRETE PILES = 6000 PSI AT 28 DAYS
- B. PLATFORM = 5000 PSI AT 28 DAYS
- C. GROUT = 5000 PSI AT 7 DAYS
- 2. ALL CAST IN PLACE CONCRETE SHALL BE NORMAL WEIGHT.
- PROVIDE THE FOLLOWING MINIMUM PROTECTIVE COVER FOR REINFORCING STEEL UNLESS OTHERWISE SHOWN ON THE DRAWINGS:
- CONCRETE CAST DIRECTLY AGAINST THE EARTH ____ 3 INCHES
- FORMED CONCRETE ______ 3 INCHES
- PROVIDE CLASS B SPLICE LENGTHS FOR REINFORCING BARS UNLESS OTHERWISE NOTED. SPLICES PERMITTED ONLY AT LOCATIONS SHOWN OR APPROVED BY THE ENGINEER. SPLICES SHALL BE STAGGERED (UNLESS OTHERWISE NOTED).

CLASS B LAP SPLICE LENGTH

TOP BARS DEFINED AS HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 IN. OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE.

- 5. ALL EMBEDDED ITEMS INCLUDING REINFORCING, SHALL BE POSITIVELY SECURED IN PLACE BEFORE CONCRETE PLACEMENT IS COMMENCED.
- 6. EXCEPT AS NOTED. REINFORCING BARS SHALL BE DEFORMED AND SHALL CONFORM TO ASTM A615. BARS #5 AND LARGER SHALL BE GRADE 60. BARS #4 AND SMALLER SHALL BE EITHER GRADE 60 OR GRADE 40. BARS TO BE"WELDED SHALL CONFORM TO ASTM A706, GRADE 60. WELDING ELECTRODES FOR REINFORCING BARS SHALL BE E90XX. WELDING OF BARS IS NOT PERMITTED EXCEPT WHERE SHOWN OR APPROVED.

STRUCTURAL STEEL

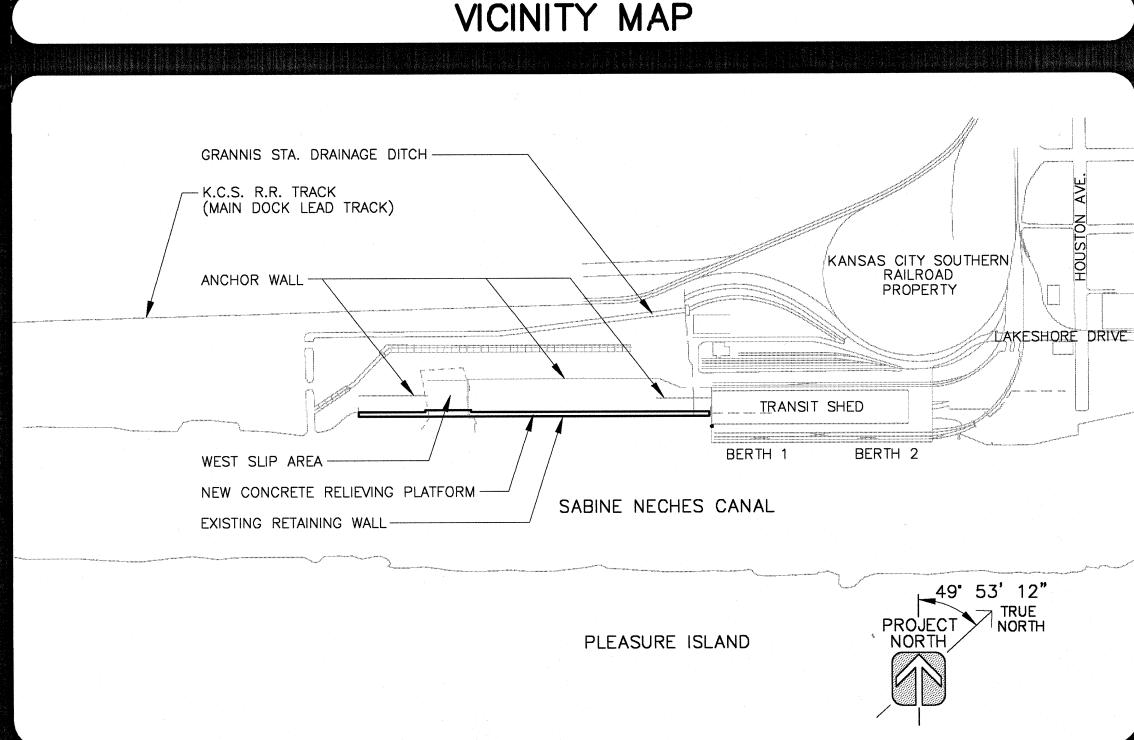
1. STEEL:

- PLATES AND SHAPES: ASTM A36
- BOLTS AND NUTS: ASTM A307, UNLESS NOTED OR DETAILED OTHERWISE.
- FOR SPECIALTY ITEMS, SEE SPECIFICATIONS.
- ALL FERROUS METAL, SHALL BE GALVANIZED PER SPECIFICATION UNLESS OTHERWISE NOTED.

2. WELDING:

- WELDING SHALL CONFORM TO ANSI/AWS D1.1, LATEST EDITION.
- ALL WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY, ANSI/AWS D1.1. PART 5.

BEAUMONT SABINE LAKE **PROJECT** SABINE NECHES CANAL WEST TURNING BASIN



CHECKED BY: APPROVED BY:

LOCATION MAP

Vickerman · Zachary · Miller Planning · Architecture · Engineering

Oakland California 94612-3741

PUBLIC PORT

3/15/98 EAC

RECORD DRAWINGS

CONSULTANTS

STRUCTURAL - WHARF

BEN C. GERWICK, INC

ELECTRICAL/MECHANICAL

Oakland, CA 94607 Phone (510) 891-0970

ALL DRAWINGS AND INFORMATION HEREIN CONSTITUTE THE ORIGINAL, UNPUBLISHED WORK OF THE ENGINEER / ARCHITECT AND SAID WORK SHALL NOT BE DUPLICATED OR USED WITHOUT THE WRITTEN CONSENT OF THE ENGINEER / ARCHITECT.

NO SCALE

12/23/96

V960171

FILE: F: \960171\RP\RP-T1

DESIGNED BY:

601 MONTGOMERY ST., SUITE 400 SAN FRANCISCO, CA 94111

TITLE SHEET, DRAWING LIST, DESIGN CRITERIA AND GENERAL NOTES

STANDARD ABBREVIATIONS

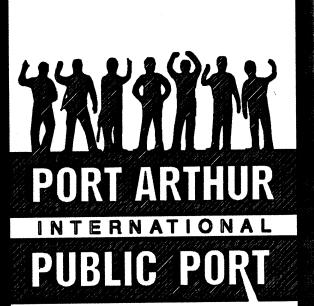
&c	And	DET.	Detail		G.V. GYP.	Gas Valve Gypsum		P P.A.	Pump Public Address
	Angle At	D.F. D.I.	Drinking Fountain/Douglas Fir Drop Inlet/Ductile Iron		GIF.	бурзан		P.A.D. P.B.	Powder Actuated Device Pull Box
Ç	Centerline	DIA. DIAG.	Diameter Diagonal		: H	High		PC.	Piece/Precast/Point of Curve
\$ ø	Construction Joint (For Plans) Diameter/Round/Phase	DIM.	Dimension		H.B.	Hose Bibb Hollow Core		PCC P.C.C.	Portland Cement Concrete Point of Compound Curve
(E) (N)	Existing	DISP. DKG.	Dispenser/Disposer Decking		H.C. HDR.	Header		P.D.	Differential Pressure Perimeter
(N)	New Parallel	D.L.	Door Louver		HDWD HDWE.	Hardwood Hardware		PERIM. PH	Phase
ď	Penny	D.N. DN.	Data Network Down		HGR.	Hanger		PL. P.LAM.	Plate/Property Line Plastic Laminate
P P	Perpendicular Plate/Property Line	DO	Ditto .	•	HK. H.M.	Hook Hollow Metal		PLCS.	Places
# 	Pound or Number Square Foot	D.O. D.O.T.	Door Opening Department of Transportation		HOR	Hydraulic Oil Return		PLAS. PLYWD.	Plastic Plywood
\$	Structural Line	DR.	Door		HORIZ. HOS	Horizontal Hydraulic Oil Supply		PNEU.	Pneumatic
		DS. D.S.P.	Downspout Dry Standpipe		H.P.	High Point		PNL. P.O.C.	Panel Point of Connection
Α	Amps/Amperes	DW. D/W	Dishwasher Driveway		HP HR.	Horsepower/ Heat Pump Hour		P.O.T.	Point on Tangent
A.B. ABAND.	Anchor Bolt/Aggregate Base Abandoned	DWG.(S).	Drawing(s)		HT.	Height		P.O.V. PR.	Privately Owned Vehicle Pair
A.C.	Asphalt Concrete	DWR.	Drawer		HW H.W.H.	Hot Water Hot Water Heater		P.R.C. PRESS.	Point of Reverse Curve
ACOUS. A.C.P.	Acoustical Asbestos Cement Pipe				HWR	Hot Water Recirculation/ Hot Water Return		PRESS. PRI.	Pressure Primary
A.D.	Area Drain/Access Door	E. EA.	East/Electrical Each		HZ	Hertz		P.R.V. P.S.	Pressure Reducing Valve Point of Switch
ADD'L ADJ.	Additional Adjustable/Adjacent	E/A	Exhaust Air					PSF	Pounds Per Square Foot
A.E.I.	Automatic Equipment	EAT E.B.	Entering Air Temperature Expansion Bolt		I.C.	Intercom		PSI PT.	Pounds Per Square Inch Point/Paint
A.F.F.	Identification Above Finish Floor	E.C.	End of Curve		I.D. IDW	Inside Diameter (Dim.) Indirect Waste		P.T.	Point of Tangent
A.F.G.	Above Finish Grade	E.C.R. E.F.	End Curb Return Each Face		I.F.	Inside Face		P.T.D. P.T.D. /R.	Paper Towel Dispenser Combination Paper Towel
A.F.S. AGG.	Above Finish Slab Aggregate	EF	Exhaust Fan		I.M.C. IN.	Intermediate Metallic Conduit Inch(es)		P. I.U./N.	Dispenser & Receptacle
ALT.	Alternate	E.J. EL.	Expansion Joint Elevation		IN./IN.	Inch Per Inch		PTN. P.T.R.	Partition Paper Towel Receptacle
ALUM. A.N.S.I.	Aluminum American National Standards	ELEC.	Electrical		INCAND. INFO.	Incandescent Information	· · · · · · · · · · · · · · · · · · ·	P.V.C.	Polyvinyl Chloride Pipe
A.P.	Institute Access Panel	ELEV. EMER.	Elevator/Elevation Emergency		INSUL.	Insulation		PVMT.	Pavement
APPROX.	Approximate	E.M.T.	Electrical Metallic Tubing		INT. INV.	Interior/Intermediate Invert			
ARCH. A.S.	Architectural Air Separator	E.N. ENCL.	Edge Nail Enclosure					Q.T.	Quarry Tile
ASB.	Asbestos	ENGR.	Engineer	#	JAN.	Janitor		QTY.	Quantity
A.S.B. ASPH.	Aggregate Sub-Base Asphalt	ENT. WB E.P.	Entering Wet Bulb Electrical Panelboard/		J.B.	Junction Box		D	Riser/Radius/Return
ATM.	Atmosphere		Edge of Pavement		J.S. JST.	Junction Service Joist		R. R/A	Return Air
		EQ. EQUIP.	Equal Equipment		JT.	Joint		R.A.	Run—Around Radius
В	Boiler	EQUIV.	Equivalent	* 1	KCS	Kansas City Southern		RAD. R.C.P.	Reinforced Concrete Pipe
B.B.	Bottom of Beam/ Bulletin Board	E.R. E.S.	Exhaust Register Each Side		KIT.	Kitchen		R.D.	Roof Drain
B.C.	Begin Curve	E.T.	Expansion Tank		KSI KVA	Kips Per Square Inch Kilo Volt Amperes		REF. REFR	Reference Refrigerator
B.C.R. BD.	Begin Curb Return Board	E.W. E.W.C.	Each Way Electric Water Cooler		KW	Kilowatts		REINF. REQ'D.	Reinforced/Reinforcing Required
BEG.	Begin	E.W.T.	Entering Water Temperature					RESIL.	Resilient
B.F.G. BITUM.	Below Finish Grade Bituminous	EX. EXIST.	Exhaust Existing		L.	Landscaping/Long		RFT.	Rafter Rigid Galvanized Steel
BLDG.	Building	EXP.	Expansion		LAB. LAM.	Laboratory Laminate		RGS RGTR.	Register
BLK. BLKG.	Block Blocking	EXPO. EXT.	Exposed Exterior		LAV.	Lavatory Round(s)		RIM.	Rim Elevation
BM.	Beam				LB(S) LD.	Pound(s) Loading		RM. R.O.	Room Rough Opening
B.N. B.O.	Boundary Nail By Others	°F	Degrees Fahrenheit		L.F.	Lineal Feet		R.O.W.	Right of Way
B.O.D.	Bottom of Duct	F	Filter		LG. LIQ.	Long Liquid		R.P.M. RR.	Revolutions Per Minute Railroad
BOT. BPH	Bottom BTUs Per Hour	F.A. F.B.	Fire Alarm Flat Bar		LKR.	Locker Location		R.S.C.	Rigid Steel Conduit
BRG.	Bearing	F.C.	Flexible Connection		LOC. LT.	Light/Left		RT. RWD.	Right Redwood
B.S.	Bottom of Sheathing/ Both Sides	FCO F.D.	Floor Clean—out Floor Drain/Fire Damper		LWT	Leaving Water Temperature		R.W.L.	Rain Water Leader
BTW.	Between	FDC	Fire Department Connection Foundation						
B.U.R. B.W.	Built—up Roofing Back of Sidewalk	FDN. F.E.	Fire Extinguisher		MAN. MAS.	Manual Masonry		S. S/A	South/Slope/Supply Supply Air
		F.E.C. F.G.	Fire Extinguisher Cabinet Finished Grade		MATL.	Material		S. & P.	Shelf and Pole
С	Conduit	F.H.	Fire Hydrant		MAX. MB.	Maximum Machine Bolt		S.A.D. S.B.	See Architectural Drawings Solid Blocking
C or [Channel	F.H.C. F.H.W.S.	Fire Hose Cabinet Flathead Wood Screw		MBPH	1000 BTU Per Hour		S.C.	Solid Core
C.A. CAB.	Compressed Air Cabinet	F.H.W.S. FIN.	Finish		MBTU M.C.	1000 BTU Medicine Cabinet		S.C.C. S.C.D.	Sign Computer Cable Seat Cover Dispenser
CAP.	Capacity	FIXT.	Fixture Flow Line		MCM	Thousand Circular Mils		SCHED.	Schedule
C.B. C.B.R.	Catch Basin/Circuit Breaker California Bearing Ratio	F.L. FLAM.	Flammable		MDL. MECH.	Model Mechanical		S.D. S.DISP.	Storm Drain/Standard Detail Soap Dispenser
C/C CCTV	Center to Center	FLASH. FLG.	Flashing Flange		MEMB.	Membrane		SECT.	Section
CCTV C.E.C.	Closed Circuit Television California Energy Commission	FLR.	Floor		MET./MTL. MFR.	Metal Manufacturer		S.E.D. SENS.	See Electrical Drawings Sensible
CEM.	Cement	FLUOR. F.O.C.	Fluorescent Face of Concrete/Face		MH.	Manhole		SF	Supply Fan
CER. CFM	Ceramic Cubic Feet Per Minute		of Curb		MIN. MIR.	Minimum Mirror		SH. SHR.	Shelf Shower
C.I. C.I.P.	Cast Iron Cast in Place/Cast Iron Pipe	F.O.F. F.O.M.	Face of Finish Face of Masonry		MISC.	Miscellaneous		SHT.	Sheet
CIRC.	Circulating	F.O.S.	Face of Studs		MNTG. M.O.	Mounting Masonry Opening		SHTG. SIM.	Sheathing Similar
C.J. C.L.	Construction Joint Chain Link	F.O.W. F.P.	Face of Wall Full Penetration		M.O.D.	Motor Operating Damper	ō.	S.M.D.	See Mechanical Drawings
CL.	Class	FPRF.	Fireproof		MON. MTD.	Monument Mounted		S.M.S S.N.D.	Sheet Metal Screw Sanitary Napkin Dispenser
CLG. CLKG.	Ceiling Caulking	FRM. FRMG.	Frame Framing		MUL.	Mullion		S.N.R.	Sanitary Napkin Receptacle
CLO.	Closet	F.S.	Far Side/Full Scale/Floor Sink					S.O.G.	Slab on Grade Shut Off Valve
CLR. C.M.P.	Clear Corrugated Metal Pipe	FT. FT. HD.	Foot/Feet Feet of Head		N.	North		S.O.V. SP	Spare/Static Pressure
C.M.U.	Concrete Masonry Unit	FTG.	Footing		NAT. N.E.C.	Natural National Electrical Code		SPCG.	Spacing
CNTR. C.O.	Counter Clean Out/Conduit Only	F.U. FURR.	Fixture Unit Furring		NEC.	Necessary		S.P.D. SPEC.	See Plumbing Drawings Specification
COL.	Column	FUT.	Future		NG N.I.C.	Natural Gas Not in Contract		SQ.	Square Sanitary Sewer/Stainless Steel/
CONC. COND.	Concrete Condensate	F.W. F.W.S.	Fire Water Fire Water Supply		NO.	Number Nominal		S.S.	Security System
CONN.	Connection	·	., -		NOM. NPT	National Pipe Thread		S.S.D.	See Structural Drawings
CONSTR. CONT.	Construction Continuous	G.	Gas		N.S.	Near Side		S.SK. STA.	Service Sink Station
CONTR.	Contractor	GA.	Gauge		N.T.S.	Not to Scale		STAGG.	Staggered
COR. CORR.	Corner Corridor	GAL. GALV.	Gallon(s) Galvanized		∧ •	Overall		STD. STIFF.	Standard Stiffener
C.P.	Complete Penetration	G.B.	Grab Bar/Grade Break		O.A. OBS.	Overall Obscure		STL.	Steel
C.T. CTR.	Ceramic Tile/Cooling Tower Center	GCO G.I.	Ground Clean—out Galvanized Iron		O.C.	On Center Outside Diameter		STOR. STRUCT.	Storage Structure
CTSK.	Countersunk	G.L.B.	Glulam Beam		O.D. O.F.	Outer Face		STRP.	Stirrup
CW	Cold Water	GLS. GND.	Glass Ground		OFF.	Office		SUSP. S.V.	Suspended Straightening Vanes
		GPH	Gallons Per Hour		O.H.D. OPNG.	Overhead Door Opening		S.W.	Sidewalk
D.B. DBL.	Duct Bank Double	GPM GRD.	Gallons Per Minute Grade/Ground (Electrical)	#1	OPP.	Opposite/Opposite Hand		SYM.	Symmetrical
DEPT.	Department	G.S.M.	Galvanized Sheet Metal		OSA OSL.	Outside Air Outstanding Leg			

T.B. T. & B. T.C. T.D.L. T/TEL. TEMP. TER. T.G. T. & G. THD. THK. THRES. TK. TKS. T.O.C. T.O.C. T.O.S. TOT. T.P.B. T.P.D. TR. TRANS. TRD. T.S. T.S.C.D. T.S.W. T.V. T.W. T.YP.	Towel Bar Top & Bottom Top of Curb Total Developed Length Telephone Temperature Terrazzo Top of Grade/Grate Tongue & Groove Threaded Thick Threshold Track Tracks Top Of/TURN-OUT Top of Concrete Top of Pavement Top of Steel Total Top of Steel Total Top of Pavement Telephone Panel Board Toilet Paper Dispenser Top of Rail Transverse Tread Top Soil/Structural Tube Toilet Seat Cover Dispenser Top of Sidewalk Television Top of Wall Typical
UG. UNF. U.O.N. UR.	Underground Unfinished Unless Otherwise Noted Urinal
V V.A.T. V.C.P. V.C.T. VERT. VEST. VIBR. V.I.F. VLV. V.T.R.	Vent/Volts Vinyl Asbestos Tile Vitrified Clay Pipe Vinyl Composition Tile Vertical Vestibule Vibration Verify In Field Valve Vent Through Roof
W. W/ W.C. WCO WD. W.H. WNDW. W/O WP. WPF. WSCT. WS	West/Water/Wide Flange/Wide Wattage With Water Closet/Water Column Waste Clean—Out Wood Water Heater Window Without Workpoint Waterproofing Wainscot Water Source Weight

a division of **Transystems**

Vickerman · Zachary · MillerPlanning · Architecture · Engineering

180 Grand Avenue, Suite 400 Oakland California 94612-3741 phone 510.835.2761 fax 510.835.9839



REVISIONS / ISSUES

NO. A DATE 1/29/97 EAC APP'D MAH

ISSUED FOR BID

NO. DATE 4/3/97 EAC APP'D MAH

ISSUED FOR CONSTRUCTION

NO. DATE 7/18/97 EAC MAH

REV. PLATFORM & PILES

NO. DATE 3/15/98 EAC APP'D

RECORD DRAWINGS

CONSULTANTS

601 MONTGOMERY ST., SUITE 400 SAN FRANCISCO, CA 94111



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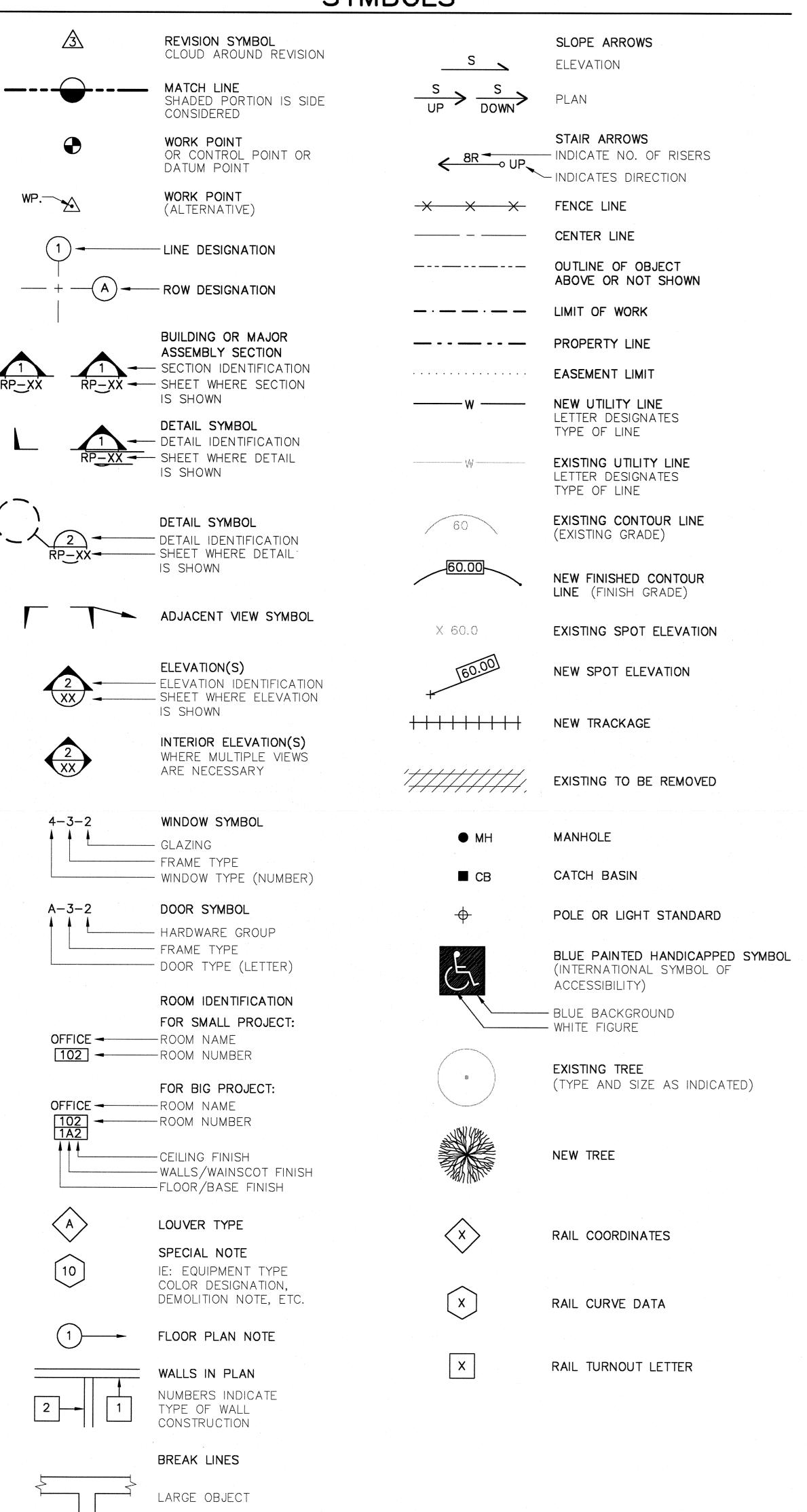
RP-T2 REV. NO.

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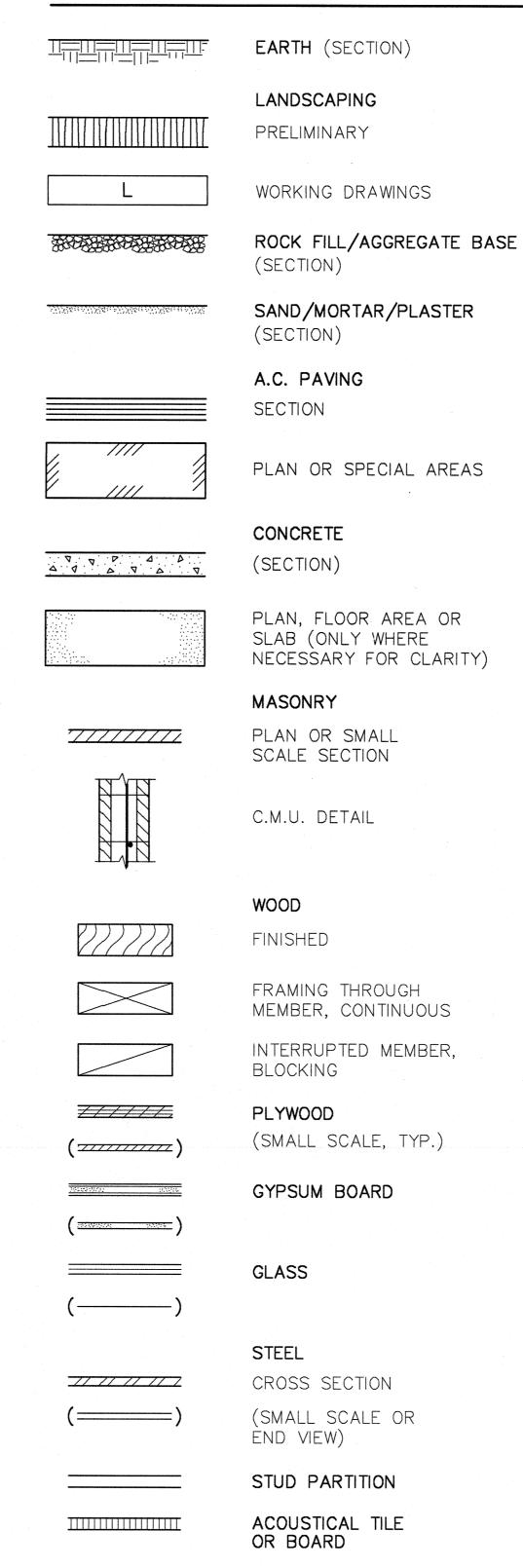
PROJECT NO.:

STANDARD GRAPHIC SYMBOLS

SYMBOLS



MATERIALS INDICATIONS



RIGID INSULATION

BATT INSULATION

WELDED WIRE FABRIC

--/--/--

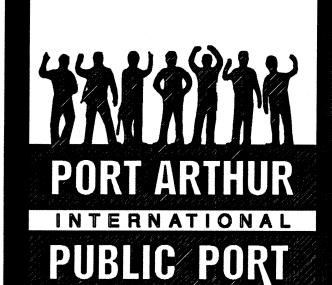
NOTES

1. SCREENED IMAGES IN DRAWING SET INDICATE EXISTING FEATURES.



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REVISIONS / ISSUES NO. A 1/29/97 EAC MAH

ISSUED FOR BID

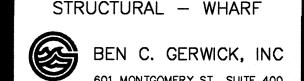
NO. APP'D APP'D APP'D MAH ISSUED FOR CONSTRUCTION NO. 1 DATE 7/18/97 EAC MAH

REV. PLATFORM & PILES NO. 2 DATE 3/15/98 EAC APP'D RECORD DRAWINGS

CONSULTANTS

601 MONTGOMERY ST., SUITE 400 SAN FRANCISCO, CA 94111

STRUCTURAL - WHARF



ELECTRICAL/MECHANICAL

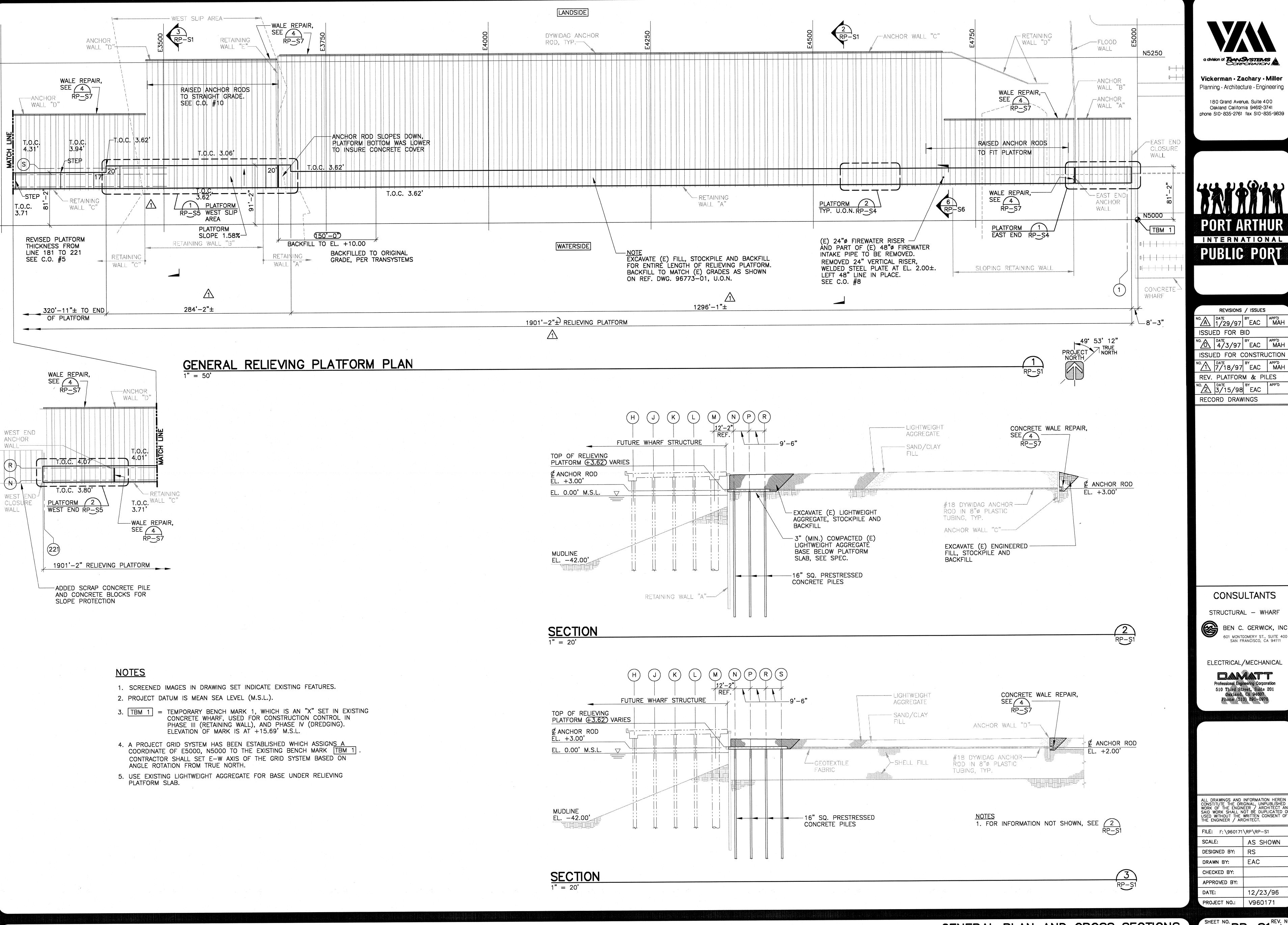


FILE: F: \960171\RP\RP-T3							
SCALE:	NO SCALE						
DESIGNED BY:	EAC						
DRAWN BY:	RRP						
CHECKED BY:							
APPROVED BY:							
DATE:	12/23/96						

PROJECT NO.: V960171

SMALL OBJECT

ROUND OBJECT



a division of Tan Systems Corporation

Vickerman · Zachary · Miller Planning · Architecture · Engineering 180 Grand Avenue, Suite 400

Oakland California 94612-3741

PORT ARTHUR INTERNATIONAL PUBLIC PORT

REVISIONS / ISSUES NO. A DATE 1/29/97 EAC MAH ISSUED FOR BID NO. O DATE 4/3/97 EAC MAH ISSUED FOR CONSTRUCTION NO. 1 DATE 7/18/97 BY EAC MAH REV. PLATFORM & PILES NO. 2 DATE 3/15/98 EAC APP'D RECORD DRAWINGS

> CONSULTANTS STRUCTURAL - WHARF

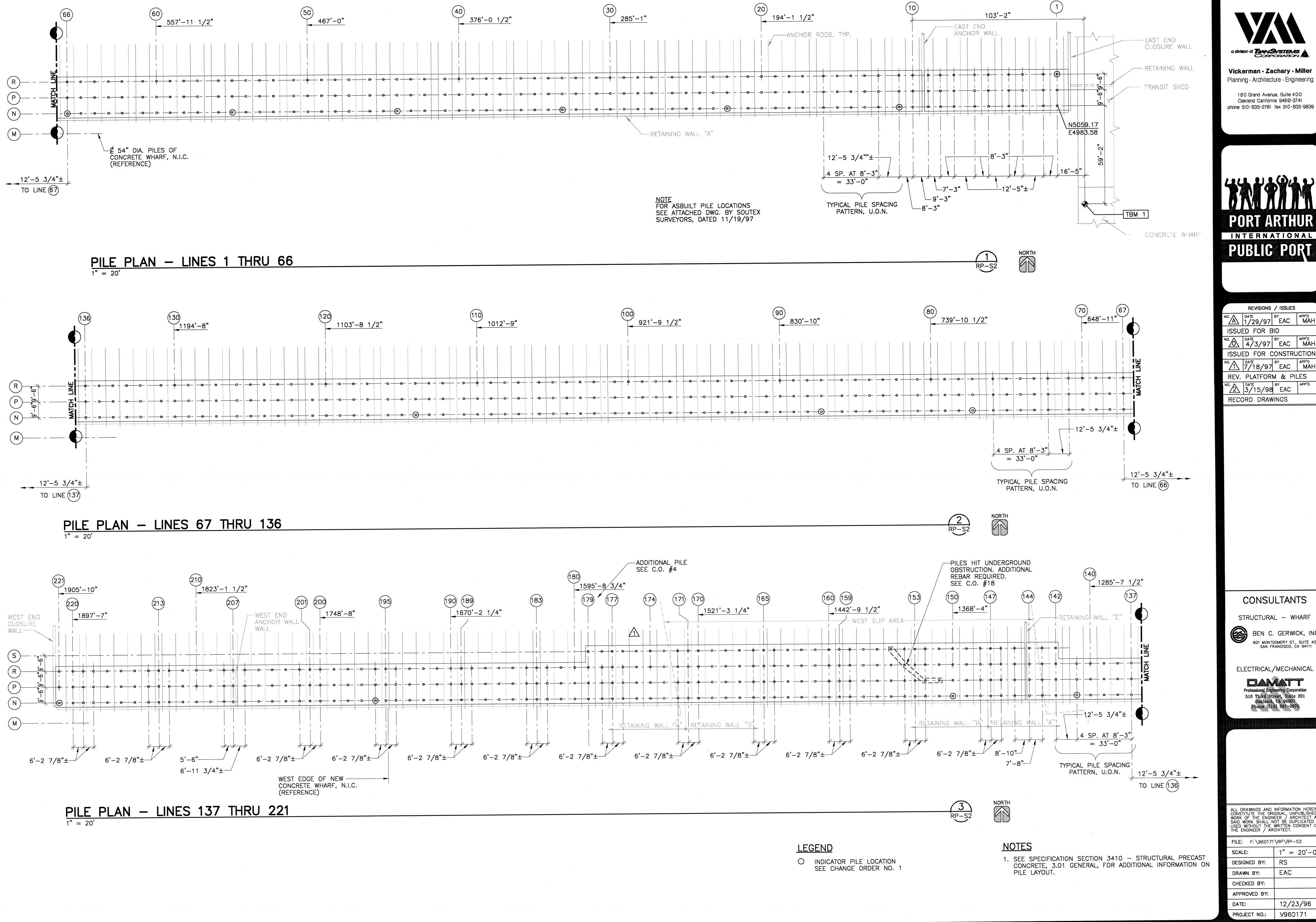
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PROJECT NO .:

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a division of **Tanny Systems**

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PORT ARTHUR INTERNATIONAL PUBLIC PORT

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CONSULTANTS

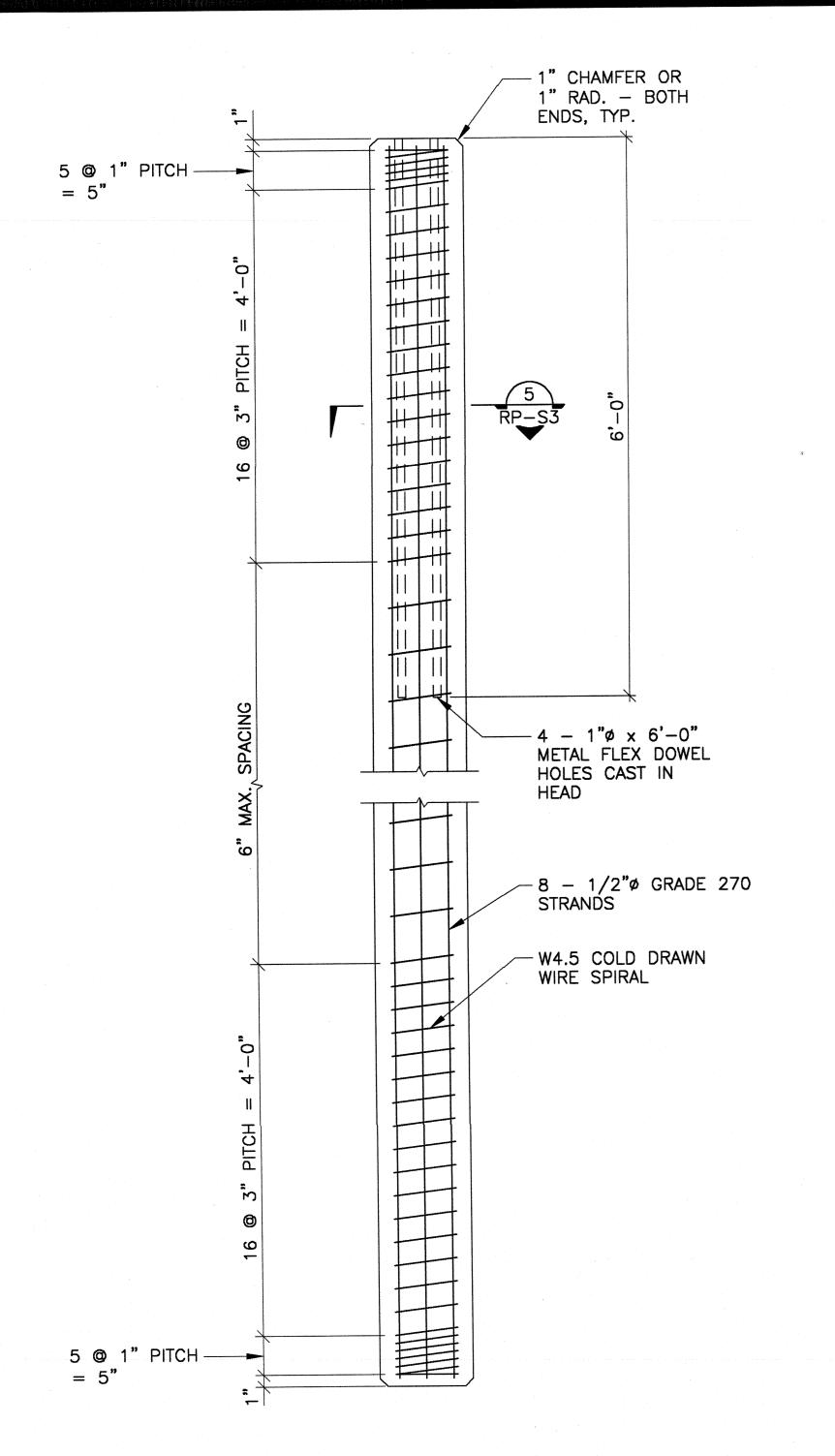
STRUCTURAL - WHARF BEN C. GERWICK, INC
601 MONTGOMERY ST., SUITE 400 601 MONTGOMERY ST., SUITE 400 SAN FRANCISCO, CA 94111

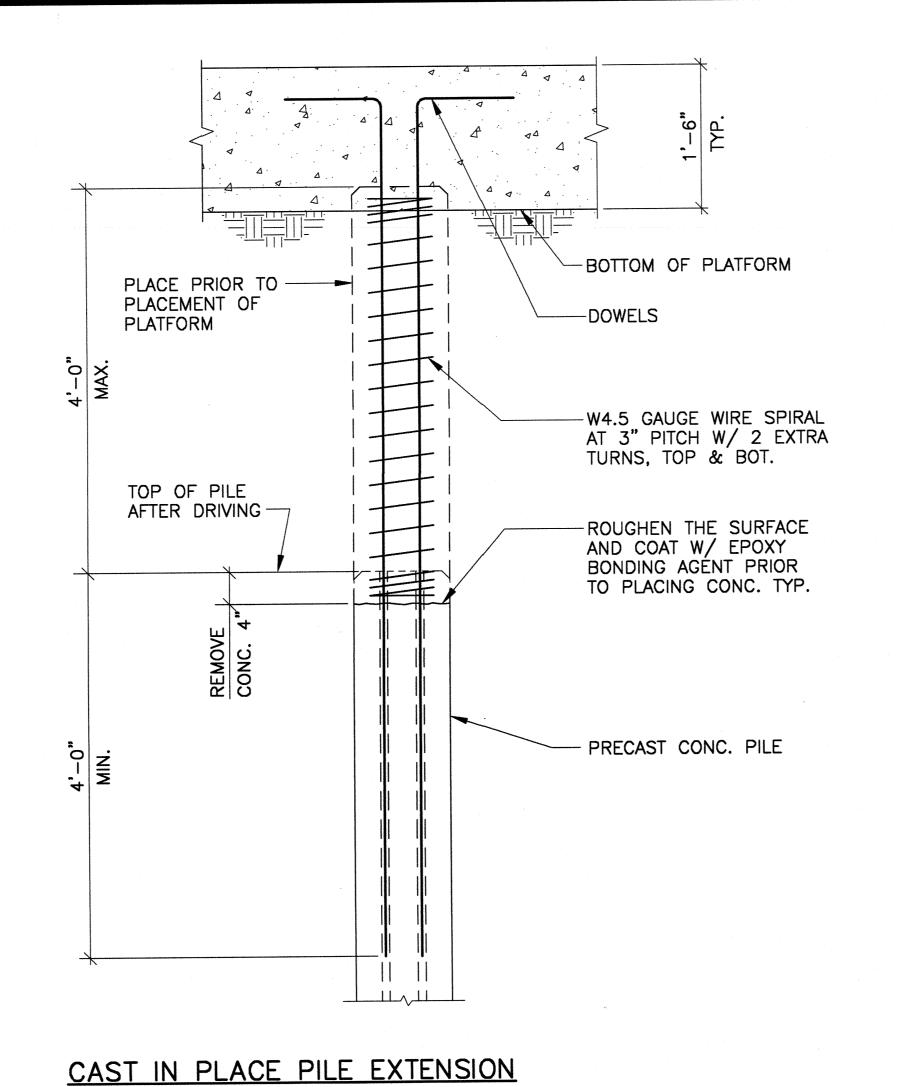
ELECTRICAL/MECHANICAL

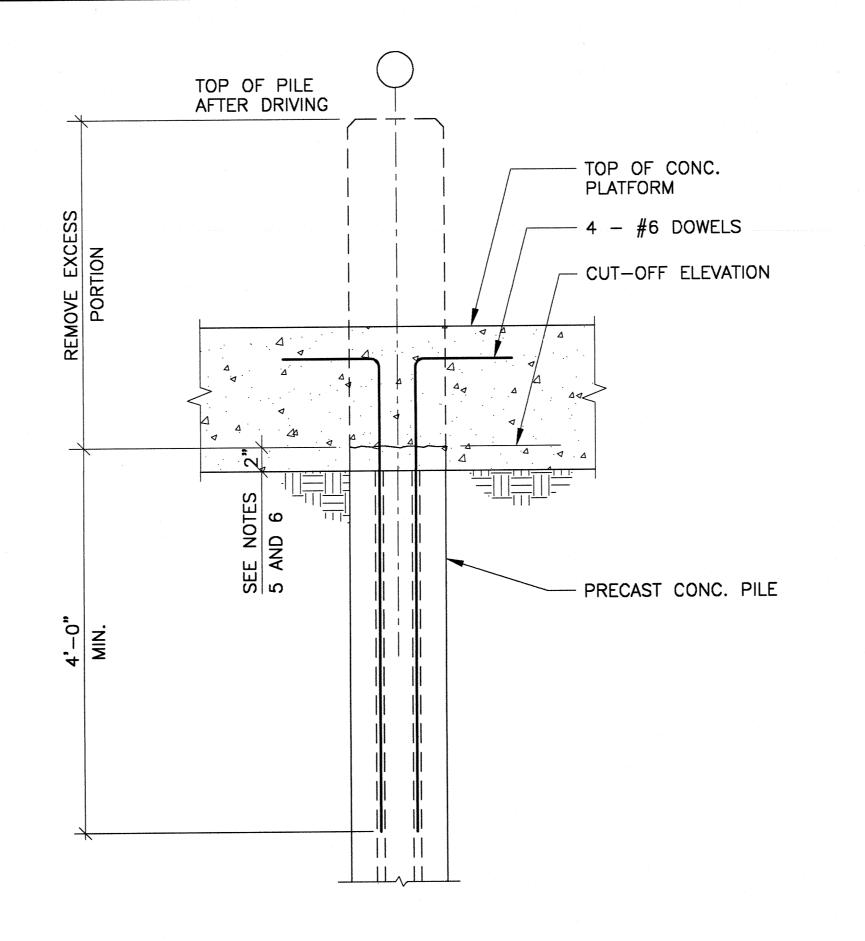
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1" = 20'-0"DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY: 12/23/96

V960171

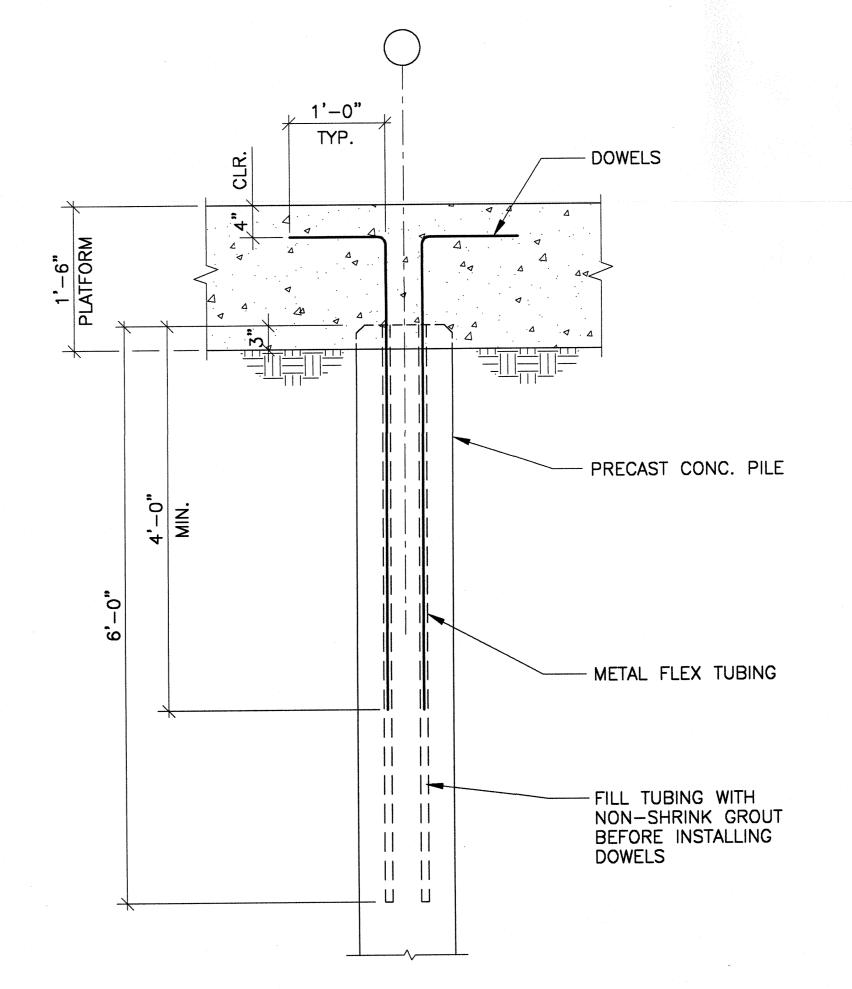






PILE CUT-OFF

DETAIL



DOWEL EMBEDMENT PILE AT DECK SLAB

DETAIL

N.T.S.

16" SQ. PRESTRESSED PILE

DETAIL

N.T.S.

RP-S3

2" CLR. TO ———————————————————————————————————
1" CHAMFER OR 1" RAD., TYP.
W4.5 SPIRAL
METAL FLEX TUBE, TYP. HOOK SPIRAL AT
1/2"ø STRAND, PILE ENDS AND SPLICES 135°
3 1/2" TYP.
16" SQ. NOM.
DETAIL 5
N.T.S. RP-S3

DETAIL

N.T.S.

					N.	T.S.			RP-S3				
PILE SCHEDULE													
REQ. TIP EL. = -60.00 ' REQ. TIP EL. = -61.00 '		REQ. TIP EL. = -66.00 '		REQ. TIP EL. = -70.00 '		REQ. TIP EL. = $-95.00'$		INDICATOR PILES					
ROW DESIGNATION	LINE NUMBER	ROW DESIGNATION	LINE NUMBER	ROW DESIGNATION	LINE NUMBER	ROW DESIGNATION	LINE NUMBER	ROW DESIGNATION	LINE NUMBER	INDICATOR PILE NO.	LINE NUMBER	TIP EL. (FT.)	
N, P, R	1, 8, 9, 10	N, P, R	183	N, P, R	2 THRU 7	P, R	143 THRU 149	P, R	156 THRU 159	1	1	-105	
	13, 14, 15		189		11, 12	REQ. TIP E	L. = -80.00		167 THRU 173	2	11	-105	
	18, 19, 20		195		16, 17	ROW	LINE	N, S	160 THRU 166	3	22	-105	
	23, 24, 25	,	201	·	21, 22	DESIGNATION	NUMBER	REQ. TIP E	L. = -100.00'	4	33	-105 105	
	28, 29, 30		207		26, 27	N, S	142 THRU 149	ROW	LINE	5	55	-105 -105	
	33, 34, 35		213		31, 32	N, P, R	150 THRU 155	DESIGNATION	NUMBER	6	66	-105 -105	
	38, 39, 40		219		36, 37	REQ. TIP E	EL. = -85.00	P, R	160 THRU 166	8	77	-105	(SAND AT DEPTH)
	43, 44, 45	REQ. TIP E	L. = -68.00	·	41, 42	ROW	LINE			9	87	-105	
	48, 49, 50	ROW	LINE		46, 47	DESIGNATION	NUMBER 141, 142			10	114	-105	
·	53, 54, 55	DESIGNATION	NUMBER		51, 52 56, 57	P, R	150 THRU 155			11	141	-135	
	58, 59, 60	N, P, R	182, 184, 188		61, 62	N, S	174 THRU 179			12	168	-135	
	63, 64, 65		190, 194, 196 200, 202, 206		66, 67					13	196	-135	
	68, 69, 70		208, 212, 214		71, 72		EL. = -90.00'		- -	14	221	-135	
	73, 74, 75 78, 79, 80		218, 220, 221		76, 77	ROW DESIGNATION	LINE NUMBER						,
	83, 84, 85				81, 82	N, S	156 THRU 159					-	
	88, 89, 90		EL. = -75.00'		86, 87		167 THRU 173						
	93, 94, 95	ROW DESIGNATION	LINE NUMBER		91, 92	P, R	174 THRU 179	\triangle					
	98, 99, 100	N, P, R	180, 181		96, 97						R PILE NOTE		
	103, 104, 105		185, 186, 187		101, 102					1. CONTI	RACTOR MAY ATOR PILE V	' CHOOSE WH WITHIN THE S	HICH ROW TO PLACE PECIFIED LINE.
	108, 109, 110		191, 192, 193		106, 107					(ONE	INDICATOR	PILE PER LIN	NE)
	113, 114, 115		197, 198, 199		111, 112					11		FOR LOCATION	
	118, 119, 120		203, 204, 205		116, 117					ll show	N TO BE L	OWER THAN	R PILES IN SAND LAYER ARE THE TIP ELEVATIONS
	123, 124, 125		209, 210, 211		121, 122					I OF P	RODUCTION	PILES SHOW	N IN PILE SCHEDULE. FUSAL IN SAND LAYER AT
	128, 129, 130		215, 216, 217		126, 127					SHAL	LOWER ELEV	ATIONS MAY	REQUIRE CUTTING.)
	133, 134, 135				131, 132								
	138, 139, 140				136, 137								
	1	\$		N N.	141								

PRESTRESSED PILES NOTES

OF $f_{pu} = 270$ KSI.

- 1. MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE f'c=6000 PSI AT 28 DAYS AND f'c=4000 PSI AT TRANSFER.
- 2. MATERIALS :
- CEMENT SHALL BE TYPE II OR MODIFIED TYPE II [CONFORMING TO ASTM C150].
- CONCRETE SHALL HAVE A TOTAL CEMENTITIOUS CONTENT OF 7-1/2

 CONCRETE SHALL HAVE A TOTAL CEMENTITIOUS CONTENT OF 7-1/2

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 CONCRETE SHALL HAVE A TOTAL CEMENTITIOUS CONTENT OF 7-1/2

 CONCRETE SHALL HAVE A TOTAL CEMENT OF 7-1/2

 CONCRETE SHALL HAVE A TOT
- SACKS USING 15% POZZOLANIC MATERIAL
- AGGREGATES SHALL BE PER ASTM C33 (3/4" MAX.)
 PRESTRESSING STRAND SHALL BE 1/2" SEVEN—WIRE ASTM A416 LOW RELAXATION STRAND WITH A MINIMUM BREAKING STRENGTH
- THE DOWELS SHALL BE EPOXY COATED, ASTM A615, GRADE 60 REINFORCING STEEL.
- SPIRAL WIRE SHALL BE W4.5, ASTM A82 COLD DRAWN WIRE WITH MINIMUM YIELD STRENGTH OF 70 KSI.
- METAL FLEX TUBING SHALL HAVE A MINIMUM METAL THICKNESS
- OF 26 GAGE AND I.D. = 1".
- 3. MINIMUM CONCRETE COVER OVER SPIRAL REINFORCING SHALL BE 2".
- 4. THE CAST DOWEL TUBE SHALL BE FILLED WITH SAND CEMENT GROUT & SUPERPLASTICIZER AS REQUIRED BEFORE EMBEDDING THE DOWELS.
- 5. DOWELS SHALL PENETRATE A MINIMUM OF 4 FEET INTO THE PILE HEAD. IF PILE IS CUT OFF MORE THAN 2 FEET, THE DOWEL HOLE SHALL BE DRILLED OUT IN ORDER TO ACCOMMODATE THE 4 FOOT EMBEDMENT.
- 6. IF NO FLEX TUBING REMAINS AFTER CUT-OFF, DRILL 1 1/4" DIAMETER HOLES AND GROUT DOWELS USING NON-SHRINK GROUT. IF A PORTION OF THE FLEX TUBING REMAINS AFTER CUT-OFF, DRILL 1" DIAMETER HOLES.
- 7. MAXIMUM STRAND TENSION AT RELEASE SHALL BE = $0.7f_{pu}A_{ps} = 28.9$ KIPS/STRAND (MAXIMUM JACKING FORCE BEFORE LOSSES).
- 8. MINIMUM EFFECTIVE PRESTRESS $f_{pc}=830$ PSI COMPRESSIVE STRESS IN CONCRETE AT CENTROID OF CROSS SECTION DUE TO PRESTRESS (AFTER ALLOWANCE FOR ALL PRESTRESS LOSSES).
- 9. CONTRACTOR MAY PREDRILL TO EL. +1.00 WITH A MAXIMUM DIAMETER AUGER OF 24".
- 10. INDICATOR PILE LOCATION AS SHOWN IN SCHEDULE.



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PORT ARTHUR

INTERNATIONAL

REVISIONS / ISSUES

NO. A DATE 1/29/97 EAC MAH

NO. DATE 4/3/97 BY EAC MAH

ISSUED FOR CONSTRUCTION

NO. 1 DATE 7/18/97 EAC MAH

NO. 2 DATE 3/15/98 EAC

RECORD DRAWINGS

ISSUED FOR BID

CONSULTANTS



BEN C. GERWICK, INC
601 MONTGOMERY ST., SUITE 400
SAN FRANCISCO, CA 94111

ELECTRICAL/MECHANICAL



CONSTITUTE THE ORIGINAL, UNPUBLISHED
WORK OF THE ENGINEER / ARCHITECT AND
SAID WORK SHALL NOT BE DUPLICATED OR
USED WITHOUT THE WRITTEN CONSENT OF
THE ENGINEER / ARCHITECT.

FILE: F:\960171\RP\RP-S3

SCALE: AS SHOWN

DESIGNED BY: RS

DRAWN BY: EAC

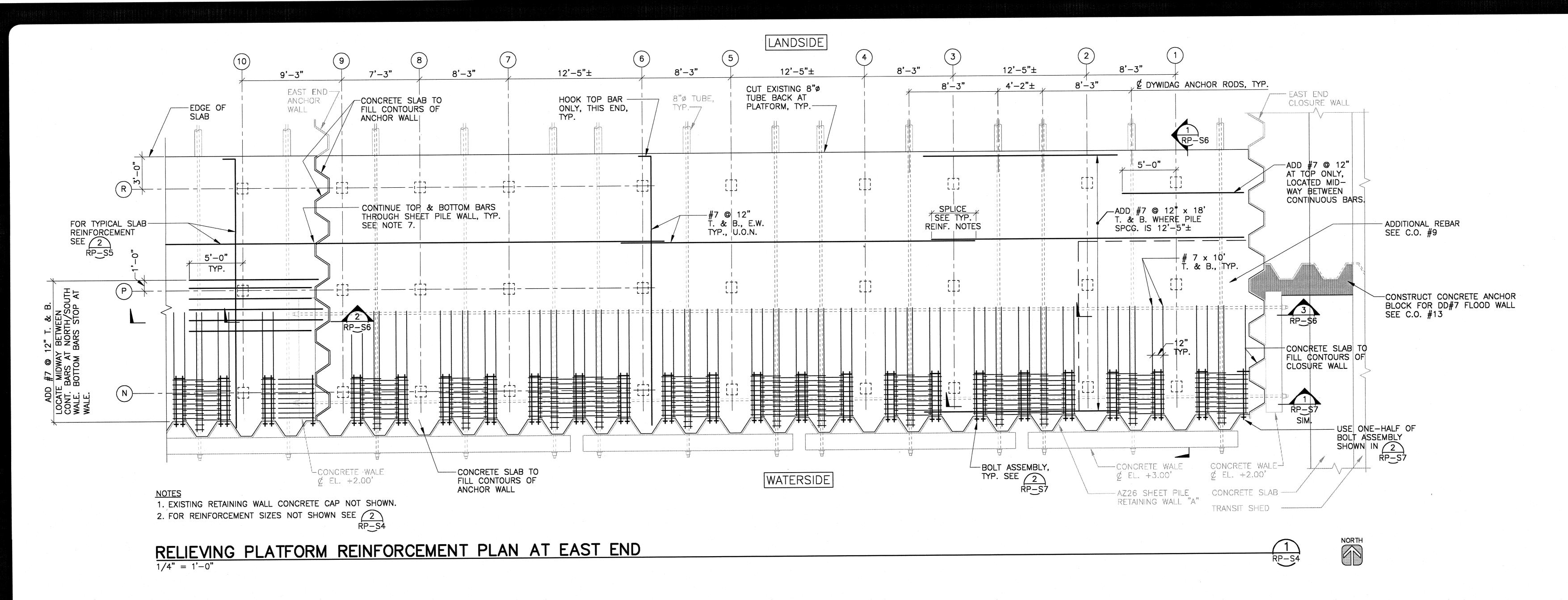
CHECKED BY:

APPROVED BY:

DATE: 12/23/96

PROJECT NO.: V960171

SHEET NO. RP-S3 PREV. NO.



LANDSIDE 12'-5 3/4"± 8'-3" 8'-3" 8'-3" 12'-5 3/4"± $4'-2 \ 3/4"\pm$ & DYWIDAG ANCHOR RODS, TYP. CUT EXISTING 8"Ø HOOK TOP BAR TUBE BACK AT 8"ø TUBE ONLY, THIS END, PLATFORM, TYP.-T'P'] RP-S6 -----L \ _ _ _ -ADD #7 @ 12" x 18' SPLICE . & B. WHERE PILE -#7 @ 12**"** SPCG. IS 12'-5 3/4"± SEE TYP. Τ̈́. & B., E.W. REINF. NOTES TYP., U.O.N. _# 7 x 10' →ADD 2 - # 7 x 11' √T. & B., TYP. T. & B., TYP. TYP. CLOSE-#4 TIES \bigcirc \rightarrow 6", TYP. ___CONCRETE WALE BOLT ASSEMBLY, HOOK, TYP. -CONCRETE SLAB TO TYP. SEE 2 WATERSIDE FILL CONTOURS OF ------- AZ26 OR AZ18 ANCHOR WALL RETAINING WALL #4 TIES @ 6", TYP.

1. EXISTING RETAINING WALL CONCRETE CAP NOT SHOWN.

RELIEVING PLATFORM REINFORCEMENT PLAN AT TYPICAL BAYS 1/4" = 1'-0"



TYPICAL REINFORCEMENT NOTES

- 1. FOR GENERAL NOTES, SEE SHTS. RP-T1.
- 2. ENGINEER SHALL BE NOTIFIED IF ANY DRIVEN PILES LOCATED BEYOND THE TOLERANCE SHOWN IN THE SPECIFICATION. ADDITIONAL SLAB REINFORCING MAY BE REQUIRED. IN SUCH AN EVENT, CONTRACTOR SHALL PROVIDE ADDITIONAL REINFORCEMENT AT NO EXTRA COST TO THE OWNER. SEE NOTE.
- 3. PLACE THE TRANSVERSE REINFORCING BARS BELOW LONGITUDINAL BARS FOR THE TOP AND BOTTOM REINFORCING LAYERS.
- 4. SPLICES, HOOKS AND BENDS SHALL CONFORM TO THE LATEST EDITION OF ACI-318.
- 5. SHOP DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH ACI-315 AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK. METHOD OF SUPPORTING LAYERS OF REINFORCING BARS SHALL BE CLEARLY SHOWN ON SHOP DRAWINGS.
- 6. LONGITUDINAL REINFORCEMENT SHALL BE MINIMUM 3 BAYS LONG, EXCEPT 2 BAYS MINIMUM AT ENDS. ALTERNATE SPLICES SHALL BE STAGGERED AT A MIN. OF ONE (1) BAY APART. FOR SCHEDULE OF SPLICE LENGTH, SEE GENERAL NOTES ON SHT. RP-T1.
- 7. FLAME CUT 1 1/2"ø TO 2"ø HOLE IN SHEET PILE WALL TO ALLOW TOP AND BOTTOM LONGITUDINAL BARS TO PASS, TYP.

NOTE ADDITIONAL REBAR PER TRANSYSTEM DRAWING. LOCATION: 9R, 77R, 87N, 106N, 142R, 142S, 149R, 159N, 186R, 193N, 193P, 194N, 194P, 194R, 195N, 195R,

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REVISIONS / ISSUES NO. A 1/29/97 BY EAC MAH

ISSUED FOR BID NO. DATE 4/3/97 BY EAC MAH ISSUED FOR CONSTRUCTION NO. 1 DATE 7/18/97 EAC MAH

REV. PLATFORM & PILES NO. 2 3/15/98 BY EAC RECORD DRAWINGS

CONSULTANTS

STRUCTURAL - WHARF

BEN C. GERWICK, INC 601 MONTGOMERY ST., SUITE 400 SAN FRANCISCO, CA 94111

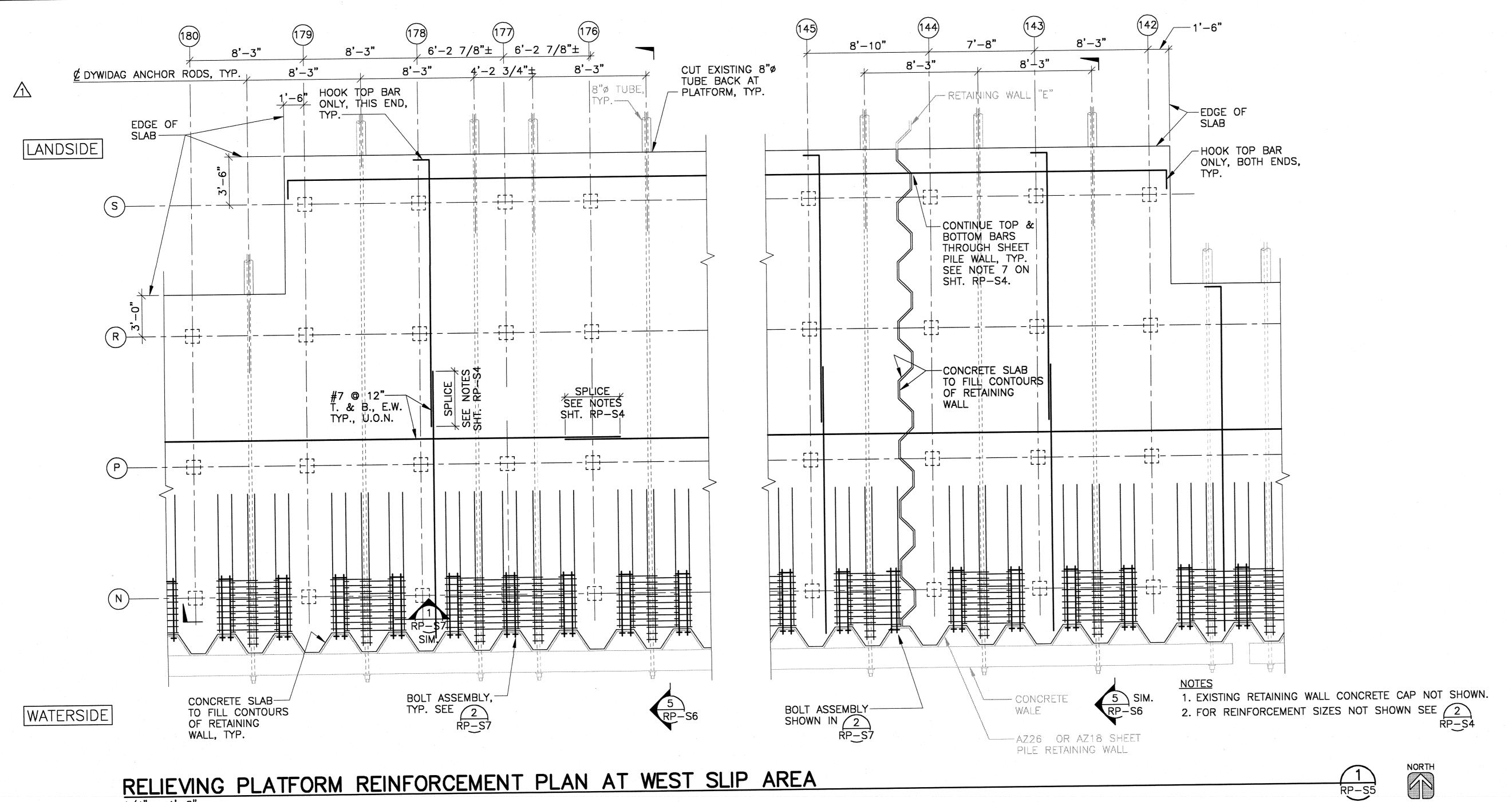
ELECTRICAL/MECHANICAL

Professional Engineering Corporation 510 Third Street, Suite 201 Oakland, CA 94607 Phone (510) 891-0970

FILE: F: \960171\RP\RP-S4 1/4" = 1'-0"DESIGNED BY:

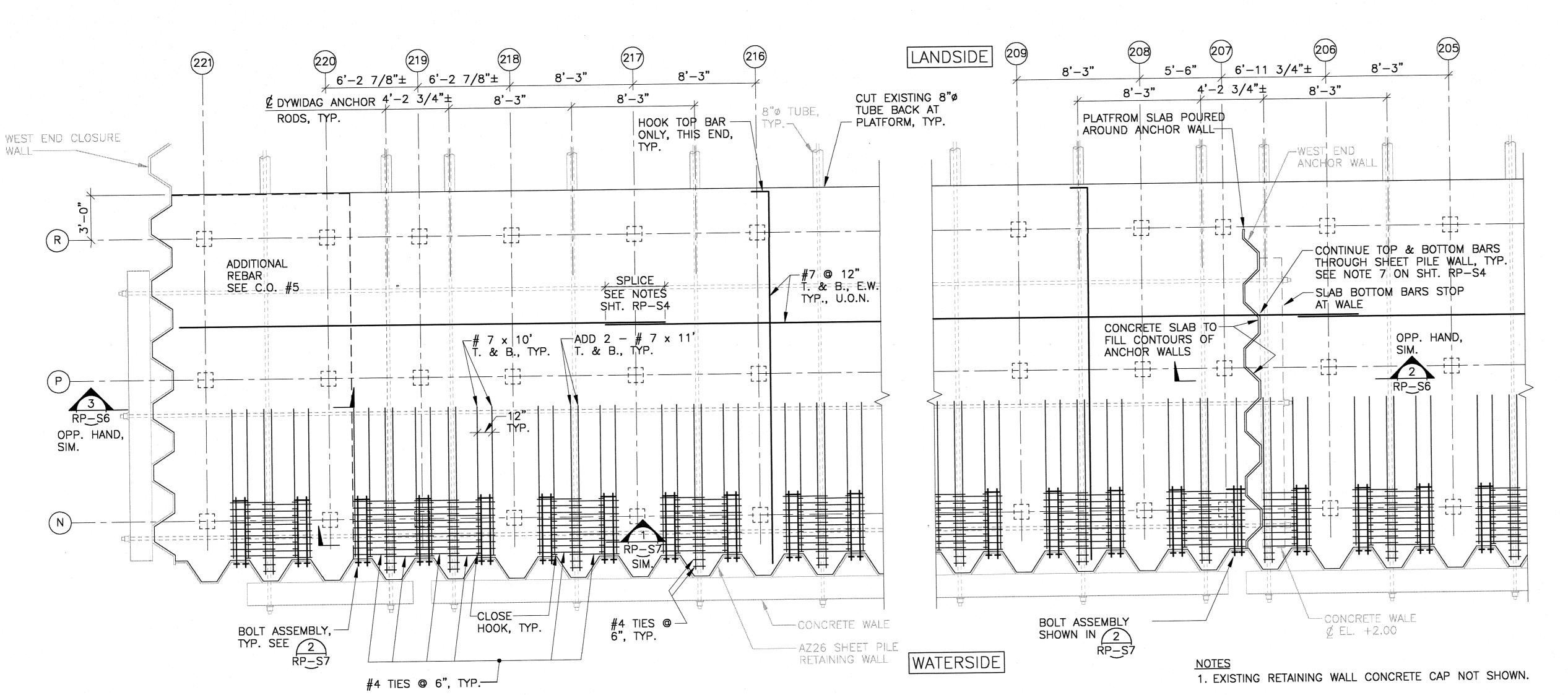
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> 12/23/96 V960171 PROJECT NO .: RP-S4 2



RELIEVING PLATFORM REINFORCEMENT PLAN AT WEST SLIP AREA





NORTH RP-S5

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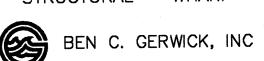
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NO. 1 DATE 7/18/97 EAC MAH REV. PLATFORM & PILES NO. 2 DATE 3/15/98 EAC

RECORD DRAWINGS

CONSULTANTS

STRUCTURAL - WHARF



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ELECTRICAL/MECHANICAL Professional Engineering Corporation
510 Third Street, Suite 201
Oakland, CA 94507
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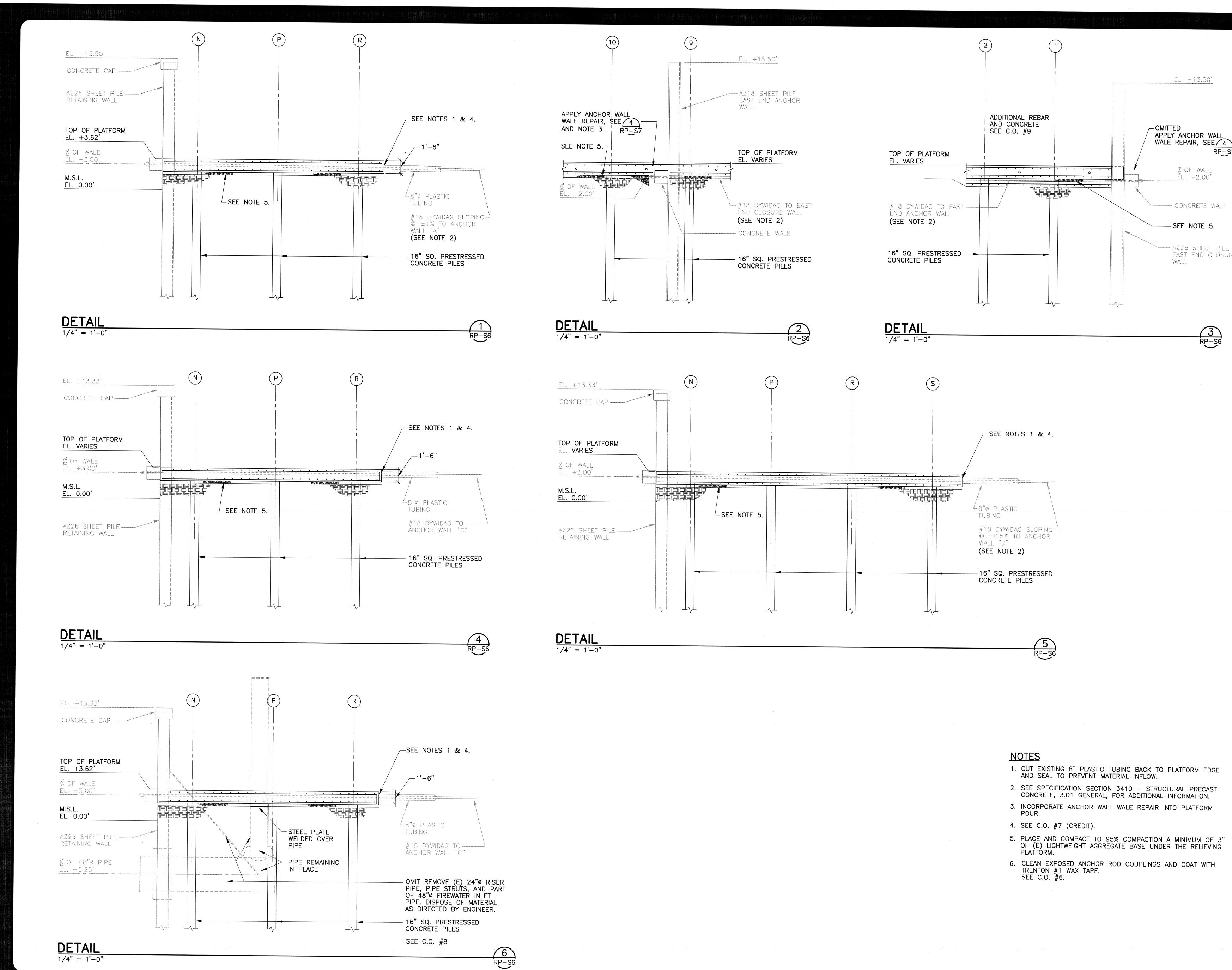
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FILE: F:\960171\RP\RP-S5 1/4" = 1'-0"

DESIGNED BY: EAC DRAWN BY: CHECKED BY:

APPROVED BY: 12/23/96 DATE: V960171 PROJECT NO.:

RELIEVING PLATFORM REINFORCEMENT PLAN AT WEST END



a division of Tany Systems Corporation

EL. +13.50'

Ø OF WALE <u>ĒĻ. +2.00°</u>

- CONCRETE WALE

- AZ26 SHEET PILE

EAST END CLOSURE

RP-S6

-SEE NOTE 5.

WALL

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INTERNATIONAL PUBLIC PORT

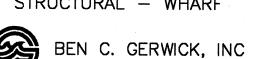
REVISIONS / ISSUES NO. A DATE BY EAC MAH ISSUED FOR BID

NO. APP'D APP'D APP'D MAH ISSUED FOR CONSTRUCTION NO. 1 DATE 7/18/97 EAC MAH REV. PLATFORM & PILES NO. 2 DATE BY EAC

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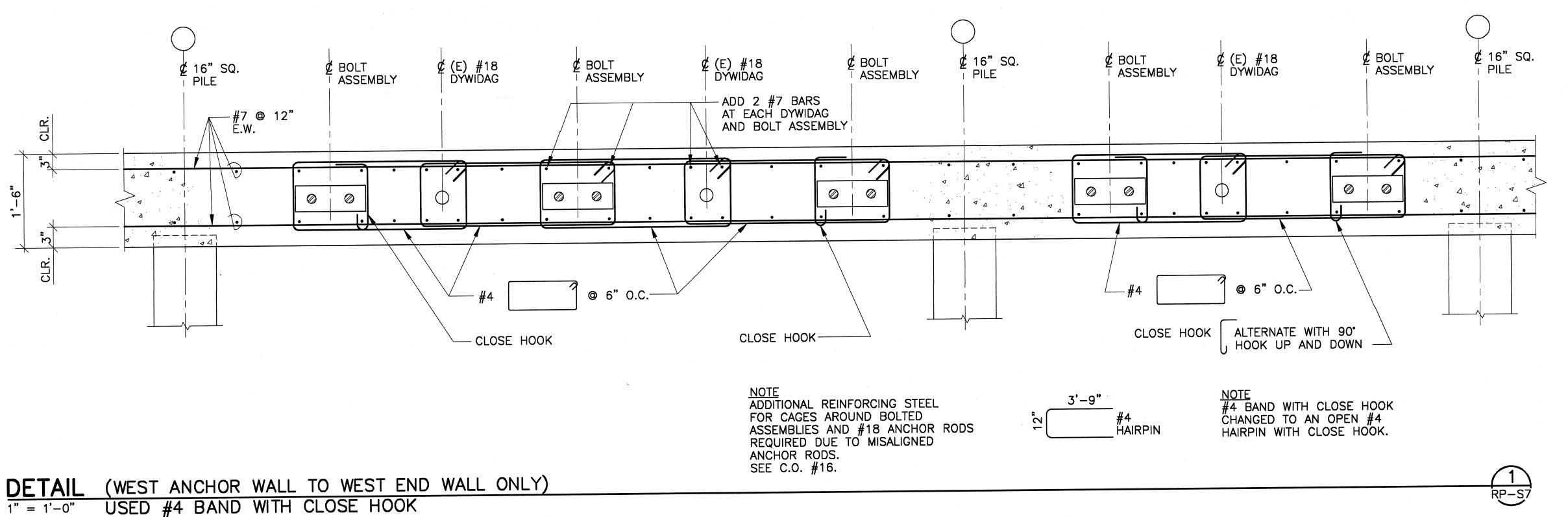
FILE: F:\960171\RP\RP-S6 1/4" = 1'-0"DESIGNED BY:

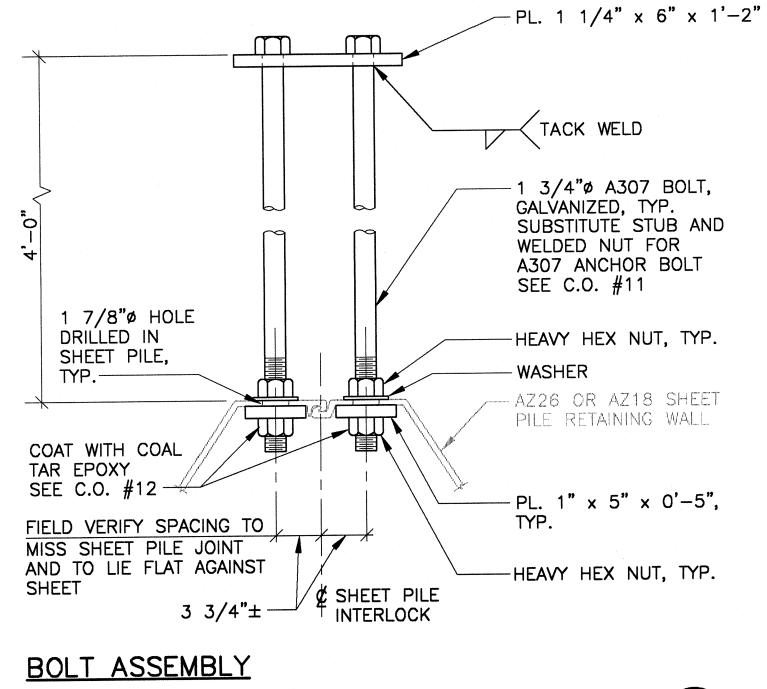
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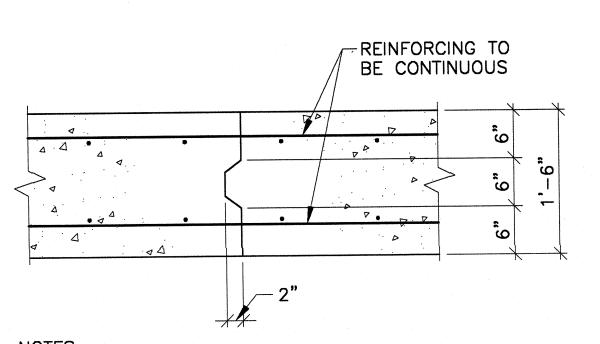
12/23/96

V960171





RP-S7 **DETAIL** $1 \frac{1}{2} = 1'-0$ "

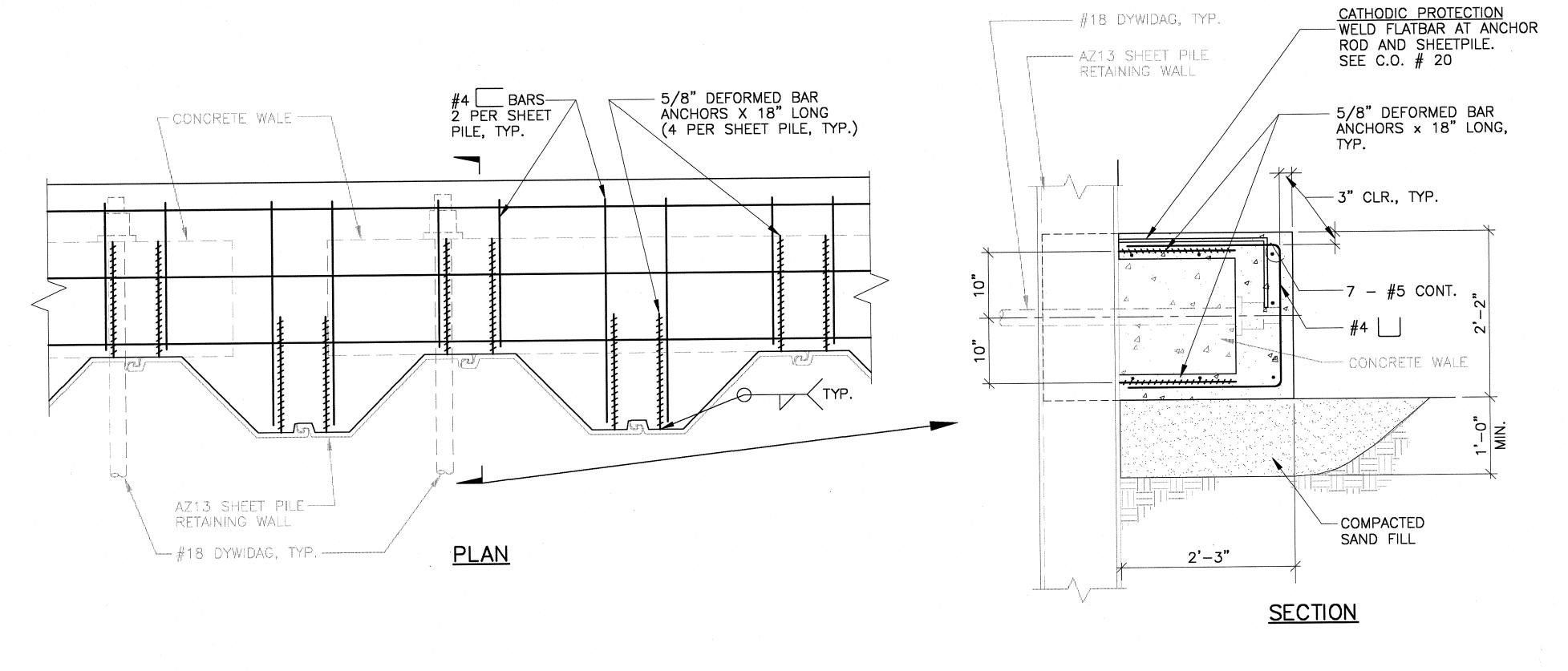


1. CONSTRUCTION JOINTS SHALL BE PERPENDICULAR TO THE LENGTH OF THE PLATFORM AND SHALL BE SPACED NO MORE THAN 200 FEET APART. THE JOINTS SHOULD BE LOCATED AT THE 1/4 POINT BETWEEN PILES.

TYPICAL CONSTRUCTION JOINT

DETAIL RP-S7 1 = 1'-0"

CONCRETE WALE REPAIR



ANCHOR WALL REPAIR NOTES

- 1. MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE
 - f'c = 5,000 PSI AT 28 DAYS.
- 2. MATERIALS : • CEMENT SHALL BE TYPE II [CONFORMING TO ASTM C150].
- CONCRETE SHALL HAVE A TOTAL CEMENTITIOUS CONTENT OF 7 SACKS USING 15% POZZOLANIC MATERIAL
- AGGREGATES SHALL BE PER ASTM C33 (3/4" MAX.)
- REINFORCING SEE GENERAL NOTES, SHT. RP-T1
- 3. GAPS BETWEEN THE EXISTING WALE AND THE SHEET PILES SHALL BE WATER BLASTED CLEAN AND FILLED WITH SAND GROUT AND SUPERPLASTICIZER AS REQUIRED TO CREATE A HOMOGENEOUS BEARING SURFACE BEFORE PLACING CONCRETE. ADDITIONALLY, GAPS GREATER THAN 1/4" SHALL BE SHIMMED WITH STEEL WEDGES (1" WIDE) IN 2 PLACES AROUND THE #18 RODS PRIOR TO GROUTING.
- 4. CONTRACTOR WILL VERIFY THAT THE EXISTING #18 RODS HAVE A MINIMUM OF 3" COVER. IF THEY DO NOT, THEY ARE TO BE TREATED WITH EPOXY. THE ROD MAY BE SAW CUT TO WITHIN 1" OF THE NUT.
- 5. CONCRETE ANCHORS SHALL BE FLUX FILLED DEFORMED BAR ANCHORS MADE FROM ASTM A108 COLD WORKED, DEFORMED WIRE PER ASTM A496, HAVE A MINIMUM YIELD STRENGTH fy = 70,000 PSI, AND AREA OF STUD SHANK $A_s = 0.31$ IN.2, AND BE WELDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. THE SURFACE OF THE SHEET PILE SHALL BE ABRASIVELY CLEANED WHERE WELDING IS TO OCCUR.
- 6. ALL EXISTING WALES WHICH ARE BACK FILLED OVER ARE TO BE REPAIRED AS SHOWN HEREIN.
- 7. CLEAN AND COAT BOLT/NUT/WASHER ASSEMBLY AFTER INSTALLATION.

DRAWINGS AND INFORMATION HEREIN CONSTITUTE THE ORIGINAL, UNPUBLISHED WORK OF THE ENGINEER / ARCHITECT AND SAID WORK SHALL NOT BE DUPLICATED OR USED WITHOUT THE WRITTEN CONSENT OF THE ENGINEER / ARCHITECT.

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NO. APP'D APP'D MAH

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NO. 1 DATE BY EAC MAH

CONSULTANTS

STRUCTURAL - WHARF

ELECTRICAL/MECHANICAL

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REV. PLATFORM & PILES

NO. 2 DATE 3/15/98 EAC

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Oakland California 94612-3741

12/23/96 V960171 PROJECT NO .:

APPROVED BY:

RP-S7 PREV. NO.