PORT OF TACOMA

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING AND SLIP 5 MITIGATION CONTRACT NO. 998149

MANSON/TRAYLOR RECORD DRAWINGS

RECORD DRAWINGS

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GEO ENGINEERS

NAME: _____ DATE: 2/09/05
HULTZ-BHU-CROSS CONSULTING ENGINEERS

NAME: _____ DATE: _____
BERGER/ABAM ENGINEERS, INC.

NAME: _____ DATE: _____
HART CROWSER INC.

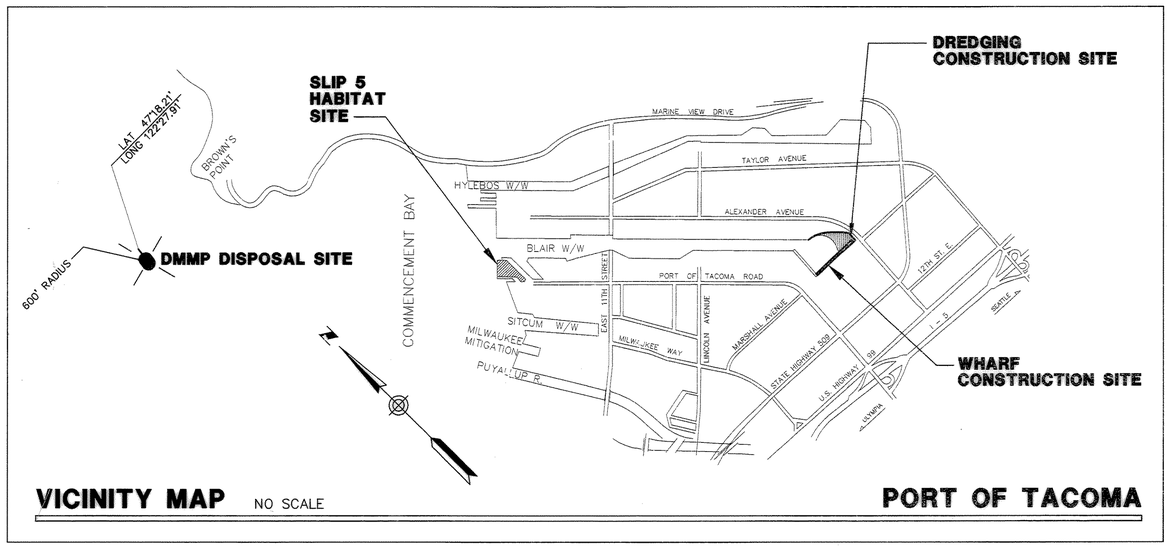
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JACK A. FABULICH
RICHARD P. MARZANO
CLARE PETRICH

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Director of Engineering/Chief Engineer



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PORT OF TACOMA

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MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED

CHIEF ENGINEER - DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	CHECKED BY - DATE	06/11/03
MB	PROJECT ENGR - DATE	06/11/03

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
COVER SHEET

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

EP-~~5661-17~~
G1
SHEET 1 OF 164

RECORD DRAWING

6320-17

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972G01.DWG
JOB # 102349.10
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 21, 2005 11:36:15 AM
UPDATED BY DIEMT
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW
XREFS: POT22x34TB-KPFF,

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MB 06/11/03
PROJECT ENGR.– DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
SITE PLAN

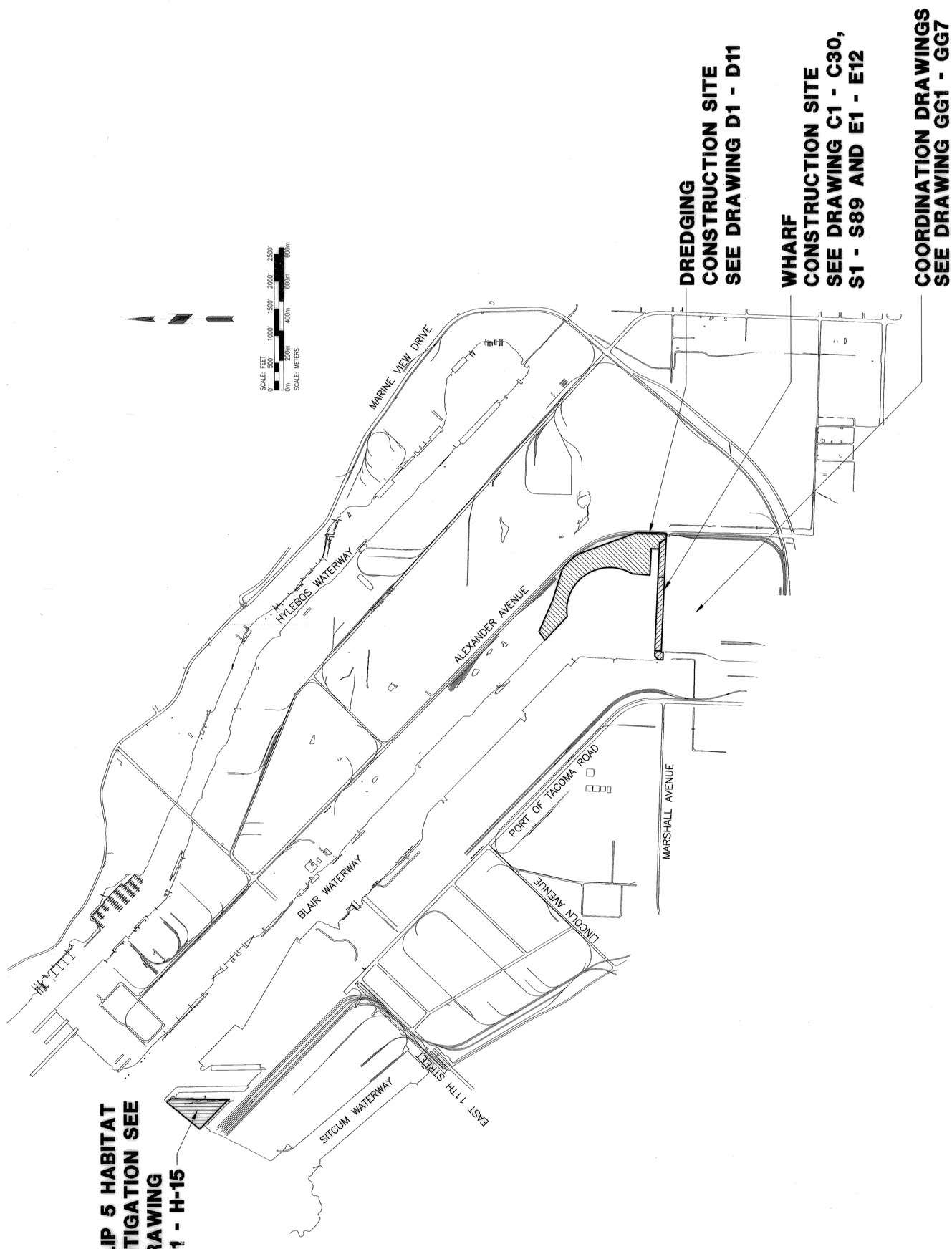
EP-~~5551-17~~
G2
SHEET 2 OF ~~164~~

DRAWING DATE: 06/11/03
PORT ADDRESS: 2001 MILWAUKEE WAY
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320–17



XREFS: P0122X34TB-KPFF.

JOB #	JOB NAME	PLOTTED DATE & TIME	UPDATED BY	PLOT SCALE	'PCP' FILE	PLOT VIEW
102349.10	Pierce County Terminal	JAN. 21, 2005 11:38:16 AM	DIEMT	1=1	---	

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MTL.ARS)\E1972602.DWG

DWG NO.	DRAWING LIST	SHT NO.	AUTOCAD FILE NO.
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GG4	PRIMARY CONTRACTS DEMOLITION OF BUILDINGS 8801, 8902, 8903, 8904 AND 8908		
GG5	PRIMARY CONTRACTS CONTAINER YARD & INTERMODAL YARD		
GG6	PRIMARY CONTRACTS BUILDING CONSTRUCTION		
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S6 (COPY)	PILE AND PILE CAP PLAN – EXISTING BENTS 30 THRU 50		
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CONTRACT NUMBER 998149
E-NUMBER E1972
PHASE: RECORD DOCUMENTS

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DRAWING LIST – SHEET 1

EP-~~5551-17~~

G3

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FILE PATH & NAME: L:\102-\102349 (PIERCE COUNTY TERMINAL)\102349(FINAL RECORD DRAWINGS-REV8-1-05)\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972G03.DWG
JOB #: 102349.10 | JOB NAME: Pierce County Terminal | UPDATED BY: DMUMMA | PLOTTED DATE & TIME: AUG. 02, 2005 7:59:01 AM | PLOT SCALE: 1=1 | 'PCP' FILE: --- | PLOT VIEW:
XREFS: PO122x341B-KPFF.

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MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	A	06/11/03
CHECKED BY	–	DATE
KN	D	
PROJECT ENGR.	–	DATE
06/11/03	P:	
	P:	

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
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PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DRAWING LIST – SHEET 2

EP-~~5551-17~~
G4
SHEET 4 OF 164

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

6320-17

FILE PATH & NAME: L:\102-\102349 (PIERCE COUNTY TERMINAL)\102349(FINAL RECORD DRAWINGS-REV8-1-05)\102349 (PCT-FINAL RECORD DRAWING MYLARS)\E1972004.DWG

JOB #	JOB NAME	PLOTTED DATE & TIME	UPDATED BY	PLOT SCALE	'PCP' FILE	PLOT VIEW
102349.10	Pierce County Terminal	AUG. 02, 2005 7:59:43 AM	DMUMMA	1=1	---	

XREFS: P0722x34TB-KPFF,

CIVIL DRAWING

AC, ACP	ASPHALT CONCRETE PAVEMENT
APPROX	APPROXIMATE
AWC	AUTO WAREHOUSE COMPANY
BLDG	BUILDING
BM	BENCH MARK
BOT	BOTTOM
CB	CATCH BASIN
CDF	CONTROL DENSITY FILL
CIP	CAST IN PLACE
℄	CENTER LINE
CLR	CLEAR
CONC	CONCRETE
CY	CUBIC YARDS
D	STORM DRAIN
DEMO	DEMOLITION
DET	DETAIL
DIA	DIAMETER
DIR	DIRECTION
DWG	DRAWING
E	EASTING, EAST, ELECTRICAL
EL, ELEV	ELEVATION
ESC	EROSION SEDIMENTATION CONTROL
EXIST	EXISTING
FG	FINISHED GRADE
FH	FIRE HYDRANT
FT	FEET
G	GAS
ID	INSIDE DIAMETER
INV., IE	INVERT ELEVATION
LBS	POUNDS
LF	LINEAR FEET
MAX	MAXIMUM
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
MSL	MEAN SEA LEVEL
N	NORTHING, NORTH
N/A	NOT APPLICABLE
N.I.C.	NOT IN CONTRACT
NO	NUMBER
NTP	NOTICE TO PROCEED
NTS	NOT TO SCALE
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OP	OVERHEAD POWER
P	POWER
PCT	PIERCE COUNTY TERMINAL
POT	PORT OF TACOMA
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCRD	RECORD INFORMATION
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RR	RAIL ROAD
S	SOUTH, SANITARY SEWER
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SHT	SHEET
SIM	SIMILAR
SS	SANITARY SEWER
STA	STATION
TEL	TELEPHONE
TYP	TYPICAL
UNK	UNKNOWN
W	WEST, WATER
WB	WATER LINE BEND
WR	WATER LINE REDUCER
WT	WATER LINE TEE
3:1	SLOPE 3 HORIZONTAL TO 1 VERTICAL

STRUCTURAL DRAWING

AB	ANCHOR BOLT
ADD'L	ADDITIONAL
ADJ	ADJUSTABLE
AGG	AGGREGATE
AFF	ABOVE FINISH FLOOR
ANCH	ANCHOR
APPROX	APPROXIMATE
ARCHT	ARCHITECTURAL
B/	BOTTOM OF
BLDG	BUILDING
BLK	BLOCKING
BM	BEAM
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
BUR	BUILT-UP ROOFING
C	CAMBER
CAP	CAPACITY
CB	CONCRETE BEAM
CC	CENTER TO CENTER
CIP	CAST IN PLACE
CJ	CONTROL JOINT
℄	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CP	COMPLETE PENETRATION
CR	CRANE RAIL
CTR	CENTER
CY	CUBIC YARD
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DET	DETAIL
DIA ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DKG	DECKING
DO	DITTO
DN	DOWN
DWF	DEFORMED WIRE FABRIC
DWG	DRAWING
DWL	DOWEL
EA	EACH
EF	EACH FACE
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMBED	EMBEDMENT
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FD	FLOOR DRAIN
FDN	FOUNDATION
FIN	FINISH
FLG	FLANGE
FLR	FLOOR
FS	FAR SIDE
FT	FEET
FTG	FOOTING
GA	GAGE
GALV	GALVANIZED
GB	GRADE BEAM
GEN	GENERAL
GL	GLUED LAMINATED BEAM
GOVT	GOVERNMENT
GR	GRADE
GWB	GYPSUM WALL BOARD
HF	HEM-FIR
HGR	HANGER
HK	HOOK
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
INV EL	INVERT ELEVATION
IF	INSIDE FACE
IN	INCH
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIP (1,000 LBS.)
KSF	KIPS PER SQ. FT.
LF	LINEAL FOOT
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
MOM	MOMENT
NIC	NOT IN CONTRACT
NOM	NOMINAL
NO	NUMBER
NS	NEAR SIDE, NONSHRINK
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
PDP	PLAN DIMENSION POINT
P	POST
PC	PILE CAP
P/C	PRECAST
PEN	PENETRATION
PL	PLATE
PL	PROPERTY LINE
PWD	PLYWOOD
PNL	PANEL
PP	PARTIAL PENETRATION
PS	PRESTRESSING
PSI	POUNDS PER SQ. IN.
PSF	POUNDS PER SQ. FT.
PT	POINT
P/T	POWER / TELEPHONE
PWT	PREFABRICATED WOOD TRUSS
RAD	RADIUS
RD	ROOF DRAIN
REINF	REINFORCING
REM	REMAIN(DER)
REQ'D	REQUIRED
RO	ROUGH OPENING
RND	ROUND
RTN	RETURN
SC	SLIP CRITICAL
SCHED	SCHEDULE
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SOG	SLAB-ON-GRADE
SP	SPACE
SPCG	SPACING
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STIFF	STIFFENER
STIRR	STIRRUP
STL	STEEL
STRUCT	STRUCTURAL
SUPP	SUPPORT
SYM	SYMMETRICAL
T/	TOP OF
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
THK	THICK(NESS)
THRU	THROUGH
TRANS	TRANSVERSE
TS	STRUCTURAL TUBE
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W	WATER
W/	WITH
WD	WOOD
WF	WIDE FLANGE
WHS	WELDED HEADED STUD
WL	WATER LINE
W/O	WITHOUT
WP	WORK POINT
WT	STRUCTURAL TEE
WWF	WELDED WIRE FABRIC

DREDGING DRAWING

NAD	NORTH AMERICAN DATUM
NOS	NATIONAL OCEANOGRAPHIC SURVEY
DMMP	DREDGE MATERIAL MANAGEMENT PROGRAM
DMMU	DREDGE MATERIAL MANAGEMENT UNIT
WAC	WASHINGTON ADMINISTRATIVE CODE
DNR	DEPARTMENT OF NATURAL RESOURCES
MLLW	MEAN LOWER LOW WATER
PCT	PIERCE COUNTY TERMINAL
SHT	SHEET
ELEV.	ELEVATION
APPROX.	APPROXIMATELY
EXIST.	EXISTING
A.C.	ASPHALT CONCRETE
DW	DOMESTIC WATER
SS	SANITARY SEWER
FW	FIRE WATER
TYP.	TYPICAL
W/	WITH
EQUAL.	EQUIVALENT
BLDG.	BUILDING
PVC	POLYVINYL CHLORIDE

PORT OF TACOMA U.S.A.
kpff
Consulting Engineers
601 Pine Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

MARK | REVISION | BY: | APPROVED: | DATE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
ABBREVIATIONS

EP-~~5661.17~~
G5
SHEET 5 OF 164

APPROVED
CHIEF ENGINEER - DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY - DATE
KN/MB 06/11/03
PROJECT ENGR - DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER E1972
E NUMBER 998149
PHASE RECORD DOCUMENTS

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972605.DWG

JOB #	JOB NAME	PLOTTED DATE & TIME
102349.10	Pierce County Terminal	JAN. 21, 2005 11:41:47 AM

XREFS: POT22x34IB-KPFF,

UPDATED BY	PLOT SCALE	'PCP' FILE	PLOT VIEW
DIEMT	1=1	---	

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

SEAL: GREG W. HENDERSON, STATE OF WASHINGTON, 19976, REGISTERED PROFESSIONAL ENGINEER
EXPIRES 7/20/06

APPROVED
CHIEF ENGINEER – DATE

SLF 03/29/05
CHECKED BY – DATE
GWH 03/29/05
PROJECT ENGR.– DATE

DRAWING DATE: 03/29/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
AS CONSTRUCTED

EP ~~5551.17~~
D1.1
SHEET 137 OF 164

MARK	REVISION	BY:	APPROVED:	DATE:
	AS CONSTRUCTED PLAN	SCY	SLF	03/29/05
	REVISION	SCY	SLF	03/29/05

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: POST CONSTRUCTED

6320-17

NOTES:
1. SEE SHEET D-1 FOR DESIGN INFORMATION, NOTES AND LEGEND.
2. AS CONSTRUCTED CONDITIONS BASED ON POST-DREDGING SURVEY PREPARED BY INCA ENGINEERINGS, INC., DATED 02-02-05 AND SUBMITTED TO THE PORT OF TACOMA BY MANSON CONSTRUCTION.

CONTROL POINT	COORDINATES
560	Y=705,901.5200; X=1,175,263.5800
562	Y=706,209.8600; X=1,175,273.2900
563	Y=705,981.7000; X=1,175,138.5900
564	Y=706,160.2400; X=1,175,144.2100
710	Y=705,842.5100; X=1,175,199.7800

SCALE IN FEET: 0, 120, 240

PORT OF TACOMA MONUMENT 117
PORT OF TACOMA MONUMENT 116
DESIGN TOP OF SLOPE
AS CONSTRUCTED TOP OF SLOPE
ALEXANDER AVE
PIER EXTENSION
EXISTING TOP OF SLOPE
DESIGN TOP OF SLOPE (ELEVATION VARIES)
AS CONSTRUCTED TOE OF SLOPE
DESIGN TOE OF SLOPE -51' MLLW
DESIGN TOE OF SLOPE 5' NORTH OF BULLRAIL OF NEW PIER (TYP.) -51' MLLW
2087'
EXISTING PCT PIER
BLAIR WATERWAY
FACE OF EXISTING PCT PIER
CHANNEL LINE
PIERHEAD LINE
PIER EXTENSION
BLAIR WATERWAY
N 705000 E 1175000

SLF/SCY 03/29/05
T:\GEO\0\045405\14\CAD\045405414_D1_1.dwg

NOTES:

1. CONTRACTOR SHALL ESTABLISH HORIZONTAL AND VERTICAL SURVEYING CONTROL BASED ON THE PORT OF TACOMA MONUMENTS 116 AND 117.

   HORIZONTAL DATUM: NAD 83/91
   VERTICAL DATUM: PORT OF TACOMA/NOS-TIDE 22= 19.51'

   REFERENCE DRAWINGS FOR PHASE 1 DREDGING
   USE VERTICAL DATUM PORT OF TACOMA/NOS-TIDE 22 = 19.36.

2. DREDGE AS SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS FOR PROJECT E1972, INCLUDED IN THIS CONTRACT. DMMP-SUITABLE MATERIAL WILL BE DISPOSED OF AT THE COMMENCEMENT BAY DMMP OPEN WATER DISPOSAL SITE, AND USED AS HABITAT FILL AT THE SLIP 5 SITE (PROJECT E2137). QUANTITIES TO BE DETERMINED BY CONTRACTOR BASED ON PRE- AND POST-DREDGE SURVEYS.

3. DREDGING OF DMMP-SUITABLE MATERIAL SHALL BE BY CLAMSHELL OR BY UPLAND EXCAVATION EQUIPMENT. THE RATE OF DREDGING AND DEWATERING SHALL NOT RESULT IN EXCEEDENCE OF CLASS B WATER QUALITY STANDARDS (173-201A WAC) BEYOND THE BOUNDARY OF THE ESTABLISHED TEMPORARY DILUTION ZONE. SEE PROJECT SPECIFICATIONS AND PERMITS FOR WATER QUALITY MODIFICATIONS, DILUTION ZONE AND WATER QUALITY MONITORING REQUIREMENTS.

4. DISPOSAL AT THE DMMP OPEN WATER SITE SHALL BE BY BOTTOM DUMP BARGE AND WILL BE SUBJECT TO THE CONDITIONS OF THE U.S. ARMY CORPS OF ENGINEERS PERMIT 2000-2-00765, DNR SITE USE AUTHORIZATION, AND IN ACCORDANCE WITH APPLICABLE DMMP DILUTION ZONE REQUIREMENTS AND CONDITIONS. SEE PROJECT SPECIFICATIONS AND PERMITS.

5. PLACEMENT OF DMMP-SUITABLE MATERIAL AT THE SLIP 5 HABITAT SITE SHALL BE AS SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS FOR PROJECT E2137, INCLUDED IN THIS CONTRACT.

6. DMMP-UNSUITABLE MATERIAL LOCATED AS SHOWN ON SHEETS D1, D3, D5, D7, D9, AND D10 SHALL BE EXCAVATED USING UPLAND EXCAVATION EQUIPMENT AND LOADED ONTO TRUCKS FOR DISPOSAL AT THE PORT OF TACOMA KAISER SITE AS DESCRIBED IN SPECIFICATION 02200 AND 02482.

7. DREDGING AREAS 1, 2, AND 3 WILL BE AVAILABLE TO THE CONTRACTOR NOVEMBER 1, 2003. DREDGING AREA 4 WILL BE AVAILABLE UPON NOTICE TO PROCEED. DREDGING AREA 5 WILL BE AVAILABLE JULY 16, 2004.

8. EXISTING TEMPORARY SLOPE PROTECTION MUST BE REMOVED AND DISPOSED OF AT AN APPROPRIATE OFF SITE UPLAND LOCATION.

9. PAVEMENT EDGES SHALL BE SAW CUT AT THE LIMITS OF PAVEMENT DEMOLITION.

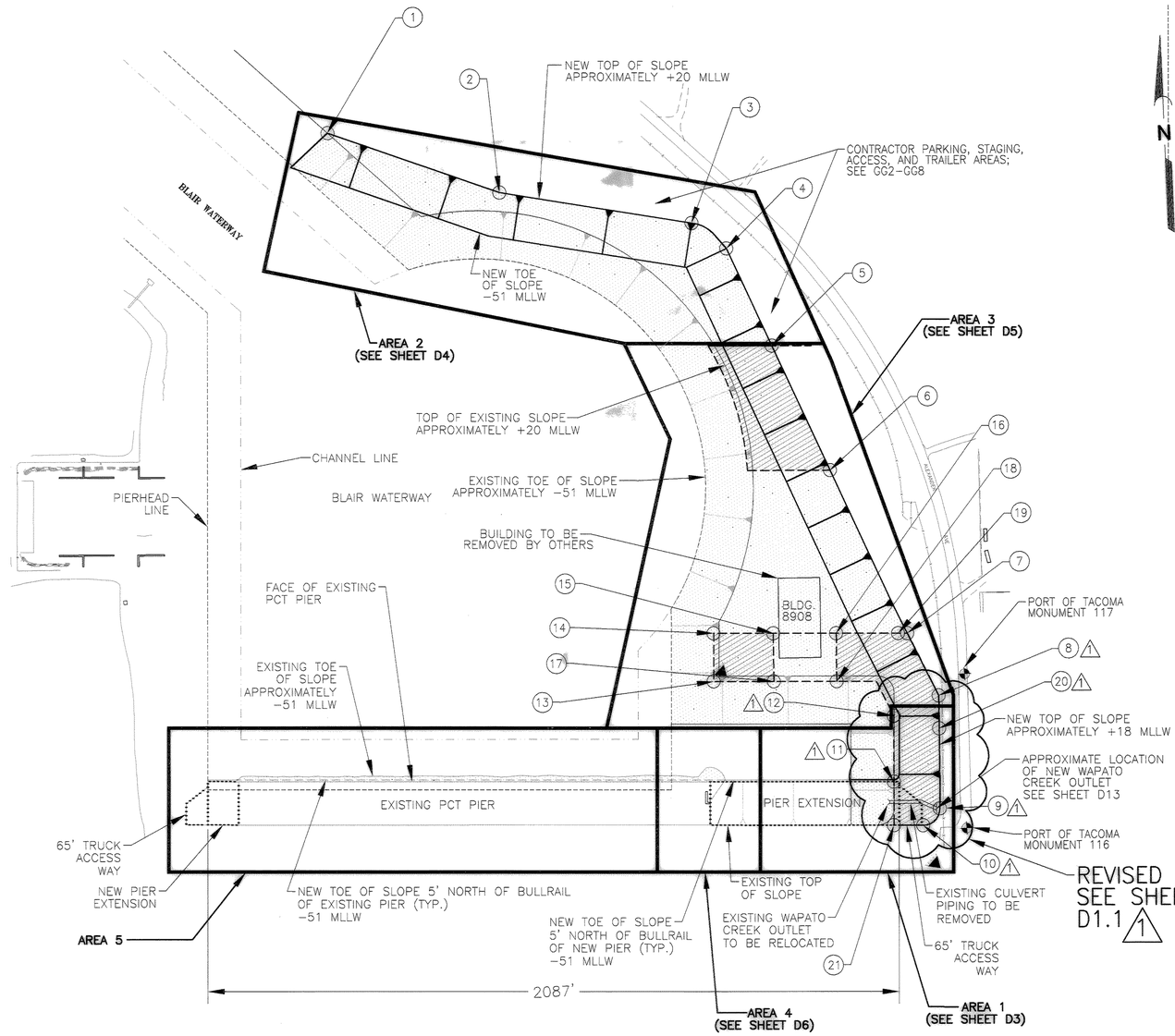
EXPLANATION:

- PIER EXTENSION
- DMMP – UNSUITABLE MATERIAL TO BE EXCAVATED SEE DETAILS FOR ELEVATION
- DMMP – SUITABLE MATERIAL TO BE DREDGED
- NAVIGATIONAL AID
- CONCRETE MONUMENT WITH SURFACE BRASS DISK
- (1) PHASE 2 DREDGING CONTROL POINT
- NEW SLOPE
- EXISTING SLOPE
- FENCE LINE
- DMMP DREDGE MATERIAL MANAGEMENT PROGRAM
- DMMU DREDGE MATERIAL MANAGEMENT UNIT

0 200 400
SCALE IN FEET

MONUMENT	COORDINATES
116	Y=705,828.3000; X=1,175,330.5360
117	Y=706,290.4840; X=1,175,345.2090

CONTROL POINT	COORDINATES
1	Y=707,997.8525; X=1,173,499.4761
2	Y=707,796.2556; X=1,174,009.7908
3	Y=707,678.6171; X=1,174,585.1128
4	Y=707,597.8943; X=1,174,686.3763
5	Y=707,300.8656; X=1,174,809.7242
6	Y=706,919.3099; X=1,174,968.1740
7	Y=706,420.0004; X=1,175,178.3965
8	Y=706,229.3979; X=1,175,264.4704
9	Y=705,890.7517; X=1,175,252.1621
10	Y=705,842.5104; X=1,175,199.7801
11	Y=705,977.1597; X=1,175,117.1867
12	Y=706,174.1861; X=1,175,126.2416
13	Y=706,302.8013; X=1,174,587.6074
14	Y=706,446.8542; X=1,174,594.0828
15	Y=706,438.5807; X=1,174,774.1064
16	Y=706,429.8573; X=1,174,963.9192
17	Y=706,294.4562; X=1,174,769.1853
18	Y=706,285.7328; X=1,174,958.9981
19	Y=706,421.2718; X=1,175,150.7322
20	Y=706,130.8874; X=1,175,261.3459
21	Y=705,846.7867; X=1,175,111.1950



1 TOP OF SLOPE MOVED EAST PER RFI 63. SEE "AS-CONSTRUCTED" CONDITIONS ON SHEET D1.1.

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

PORT OF TACOMA U.S.A.
PORT OF TACOMA, P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

MARK	REVISION	BY:	APPROVED	DATE:
1	AS CONSTRUCTED MODIFICATION	SCY	SLF	03/29/05

SEAL: CARL W. HULTGREN, DATE OF SIGNATURE, REGISTERED PROFESSIONAL ENGINEER, STATE OF WASHINGTON, EXPIRES 3/29/06

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 03/29/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SLF 03/29/05
CHECKED BY – DATE
GWH 03/29/05
PROJECT ENGR – DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
GENERAL DREDGING PLAN
AS CONSTRUCTED

DATUM: HORIZ: NAD83/91 TOWNSHIP: 20N RANGE: 3E SECTION: 1
VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

EP-~~555117~~
D1
SHEET 136 OF 164
CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: POST CONSTRUCTED

6320-17

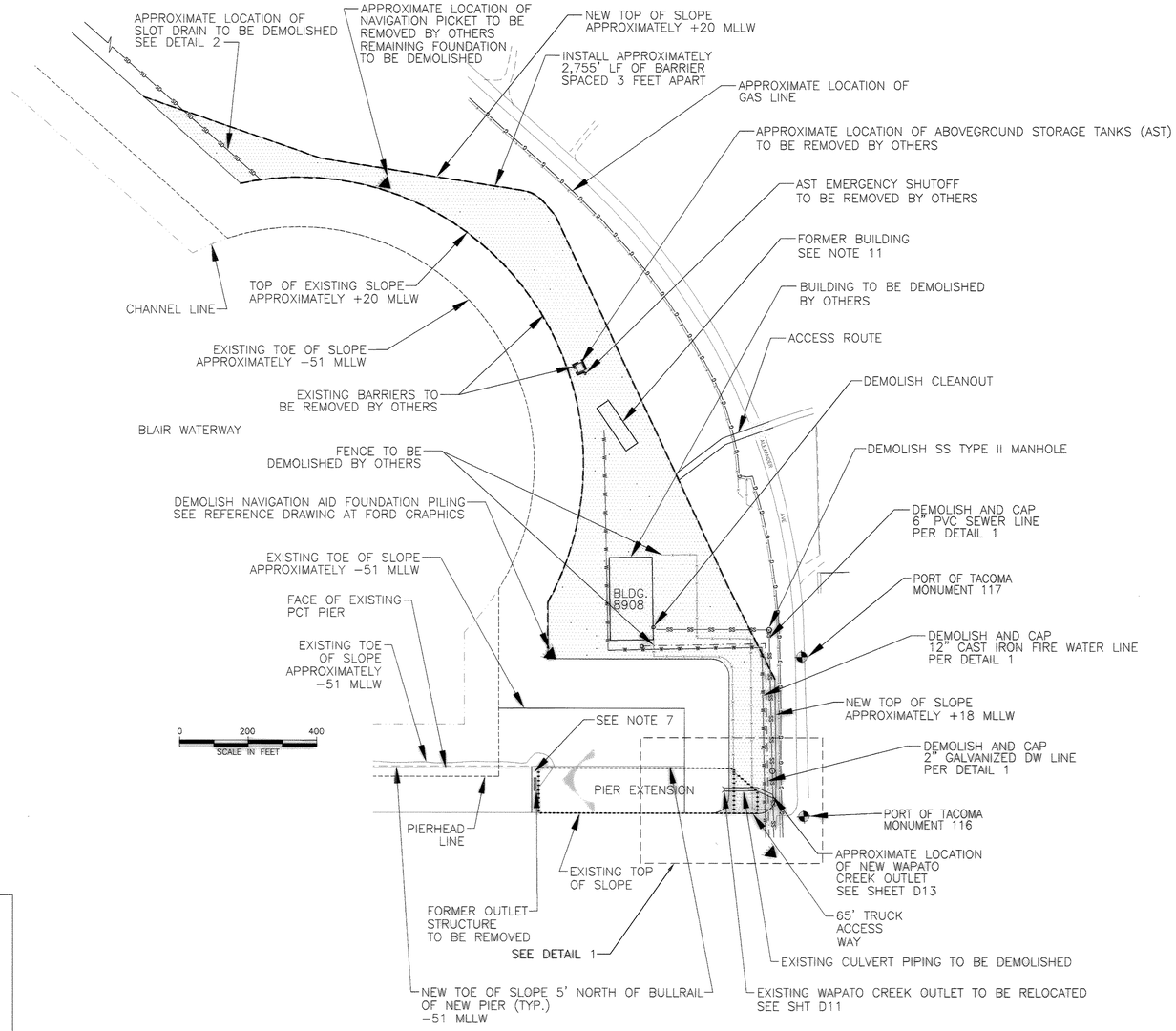
TACO\\0\045405A\1A\CAD\045405A114_D1_D3.dwg
SLF/SCY
03/29/05

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES TO BE CAPPED AND DEMOLISHED. SEE DETAIL 1 SHEET D2.
2. THE EXISTING GAS LINE EAST OF THE DREDGE LIMITS IS ACTIVE AND SHOULD BE PROTECTED FROM DAMAGE DURING DEMOLITION AND DREDGING ACTIVITIES.
3. KNOWN UTILITIES INCLUDING FIREWATER, SLOT DRAIN, DRINKING WATER, AND SEWER WITHIN THE DREDGE AREA ARE TO BE DEMOLISHED AS PART OF THIS WORK. THE LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY.
4. DEMOLISH FORMER OUTLET STRUCTURE, LOCATED BENEATH EAST END OF PIER. SEE REFERENCE DRAWINGS AT FORD GRAPHICS FOR INFORMATION REGARDING THE EXISTING STRUCTURE.
5. RELOCATE EXISTING WAPATO CREEK OUTLET STRUCTURE. SEE PLANS AND SPECIFICATIONS FOR TIMING RESTRICTIONS ASSOCIATED WITH OUTLET RELOCATION.
6. EXISTING PAVEMENT SHALL BE SAWCUT AT NEW TOP OF SLOPE.
7. DEMOLISH WESTERN PORTION (20 FT) OF EXISTING PIER. CONTRACTOR SHALL NOT DAMAGE REMAINING PORTION OF EXISTING PIER. (SEE STRUCTURAL DRAWINGS FOR MORE INFORMATION).
8. EXISTING PIER DECKING SHALL BE SAWCUT PRIOR TO DEMOLITION.
9. CONTRACTOR SHALL REMOVE EXISTING DECK PANELS AS SHOWN ON SHEET D6 TO FACILITATE DREDGING. PANELS SHALL BE REPLACED WHEN DREDGING AND SLOPE PROTECTION PLACEMENT IS COMPLETED.
10. ALL MATERIALS RESULTING FROM DEMOLITION INCLUDING ASPHALT, CONCRETE, PIPING AND OTHER ITEMS SHALL BE DISPOSED AT AN APPROPRIATE, PERMITTED OFF-SITE DISPOSAL FACILITY. CONTRACTOR TO PROVIDE VERIFICATION OF DISPOSAL.
11. CONTRACTOR SHALL IMEDIATELY NOTIFY THE ENGINEER IF SUSPECTED PETROLEUM-IMPACTED SOIL IS ENCOUNTERED IN THIS AREA OR IN THE FORMER AST AREA.

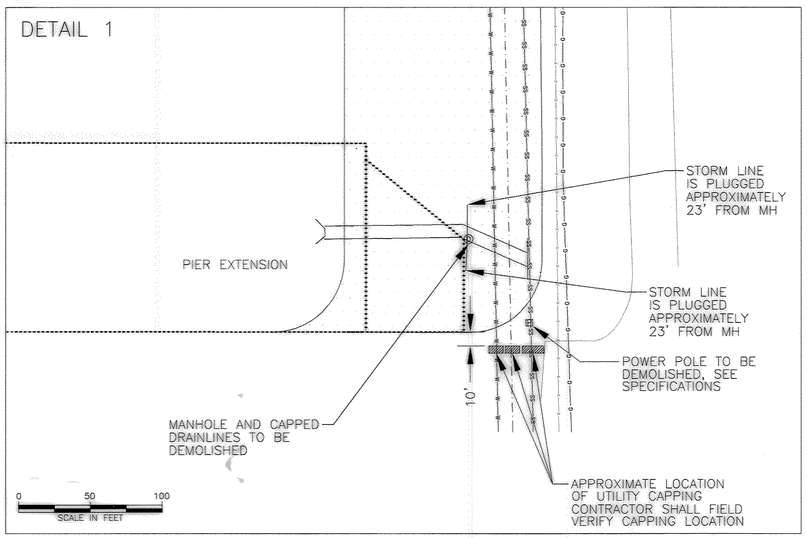
EXPLANATION:

- PIER EXTENSION
- ASPHALT PAVEMENT TO BE REMOVED
- NAVIGATIONAL AID
- CONCRETE MONUMENT WITH SURFACE BRASS DISK
- FENCE LINE
- GAS LINE
- DW LINE
- SS LINE
- FW LINE
- JERSEY BARRIER

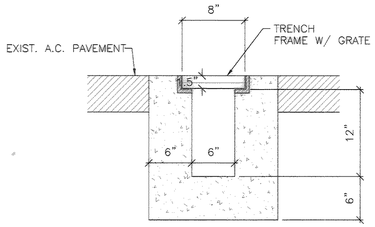


⚠1

DETAIL 1



DETAIL 2



NOTE:

1. IN-PLACE STRUCTURE MAY VARY FROM THIS DETAIL. CONTRACTOR TO FIELD VERIFY.

SLOT DRAIN DETAIL
NOT TO SCALE

MARK	REVISION	BY:	APPROVED	DATE:
⚠1	ADDENDUM 1: REVISED DETAIL 1	SLF	GWH	8/1/03
	RECORD DRAWING	SLF	GWH	7/27/05

PORT OF TACOMA, U.S.A.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

SEAL: GARY W. HENRY, STATE OF WASHINGTON, 19257, REGISTERED PROFESSIONAL ENGINEER, EXPIRES 7/27/06

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 07/27/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SLF 07/27/05
CHECKED BY – DATE:
GWH 07/27/05
PROJECT ENGR – DATE:

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DEMOLITION PLAN

SHEET 138 OF 164
CONTRACT NUMBER 998149
E-NUMBER E1972
PHASE POST CONSTRUCTED

EP-~~551-T7~~
D2

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

07/27/05 SLF:SGY
T:\COO\0\045405A\1A\CAD\045405I14_D2-D5.dwg

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

GARY W. HENDERSON
STATE OF WASHINGTON
12979
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 3/30/06

APPROVED:
CHIEF ENGINEER – DATE

SLF 07/27/05
CHECKED BY – DATE
GWH 07/27/05
PROJECT ENGR.– DATE

DRAWING DATE: 07/27/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PHASE 2 AREA 5

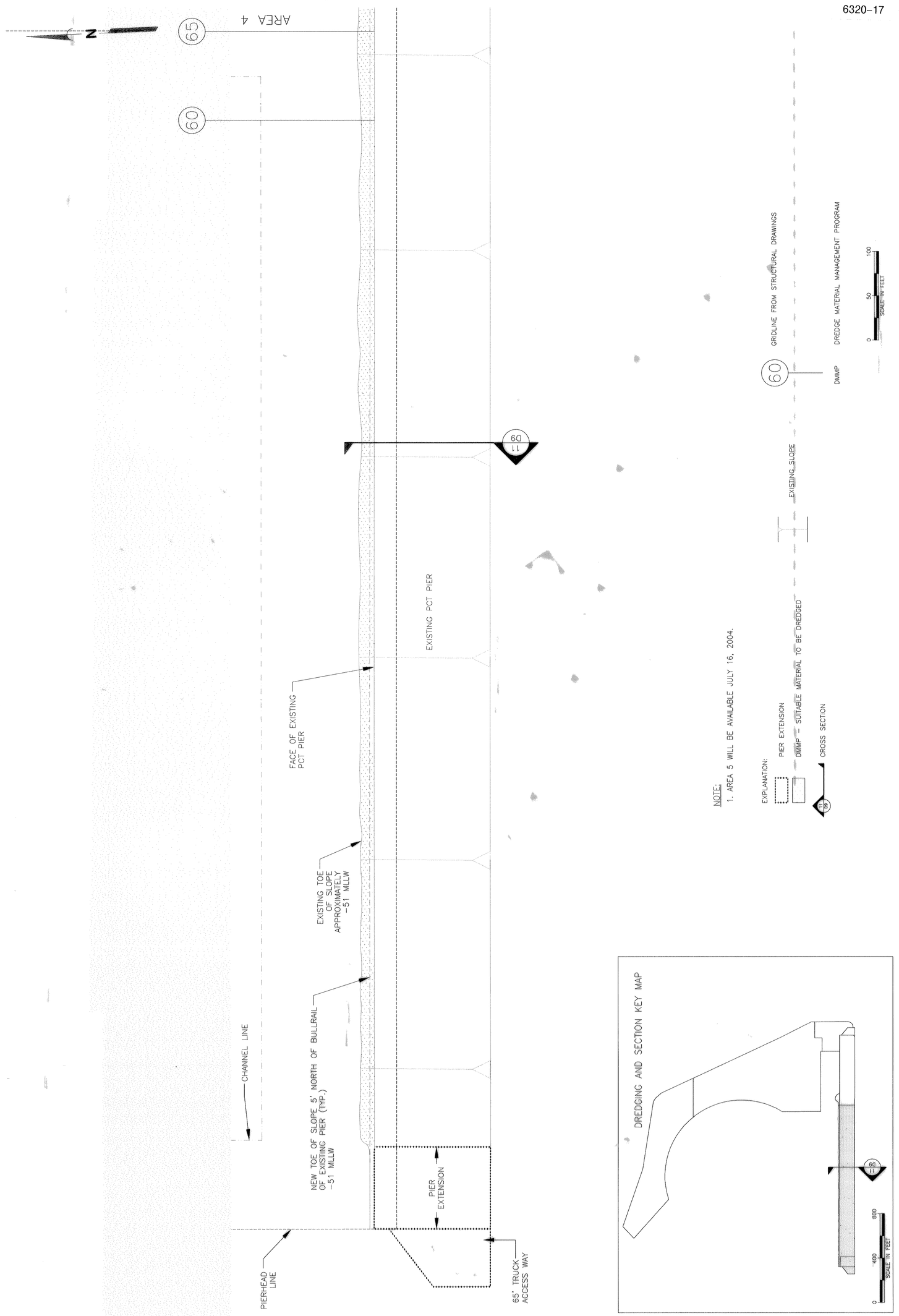
EP-~~5554-17~~
D3.1
SHEET 140 OF 164

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

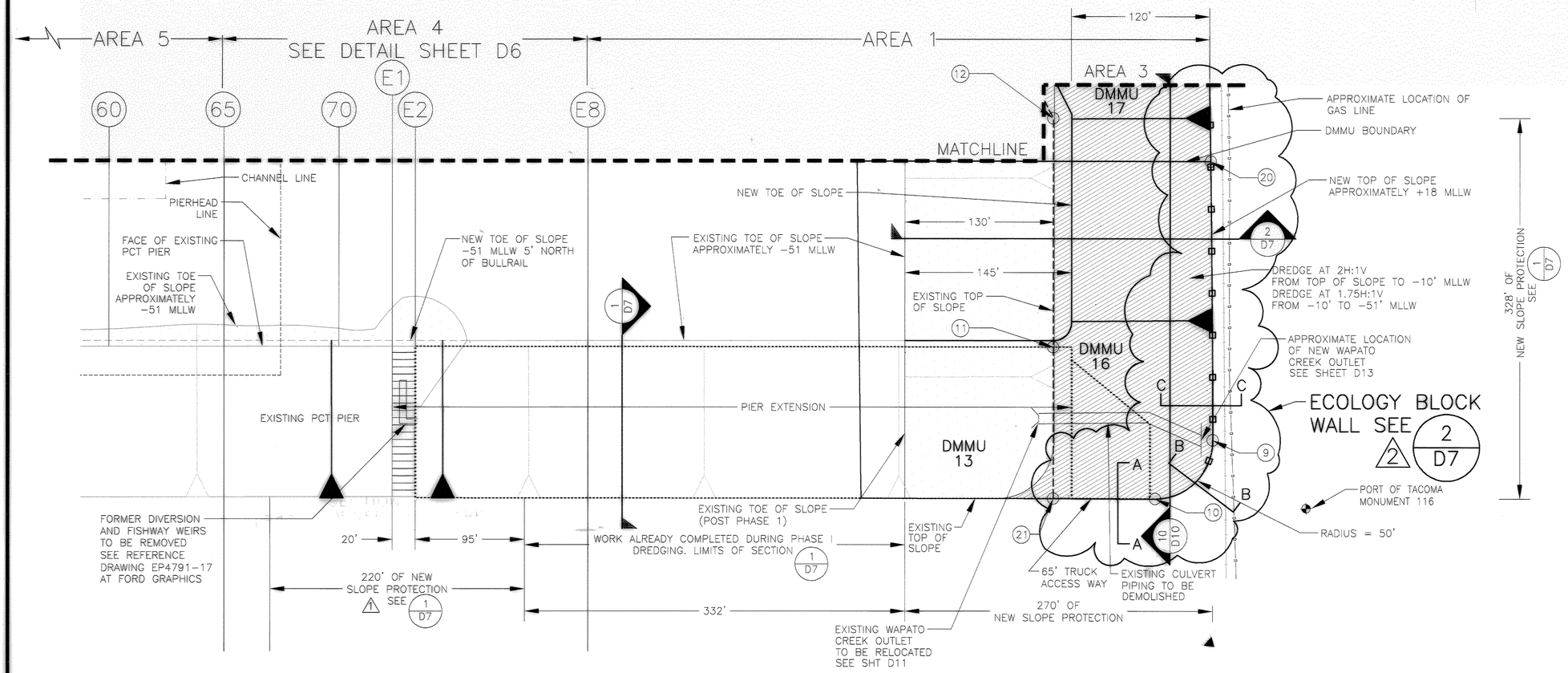
CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: POST CONSTRUCTED

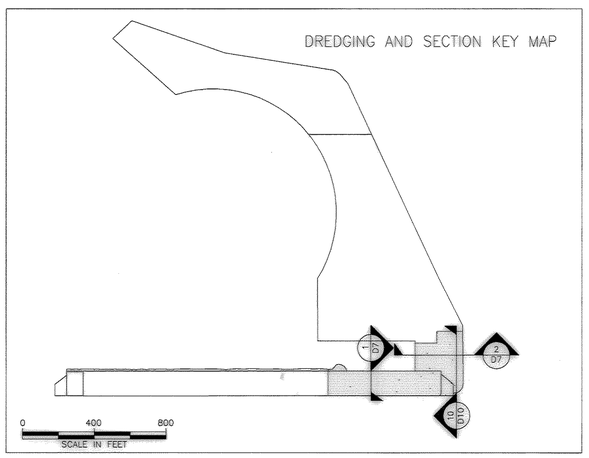
6320-17

MARK	REVISION	BY:	APPROVED	DATE:
	RECORD DRAWING	SLF	GWH	7/27/05



T:\CO\0\045405\4\CAD\045405414_02-D3.dwg SLF:SCY 07/27/05





2 ECOLOGY BLOCK WALL MODIFIED AND EXTENDED PER RFP 00019. SEE SECTIONS A, B, AND C SHEET D7.1.

NOTE:

1. SEE SHEET D10 FOR DMMP−UNSUITABLE MATERIAL LOCATIONS.

EXPLANATION:

- PORTION OF EXISTING PIER TO BE DEMOLISHED OR WHERE DECK PANELS ARE TO BE REMOVED TO FACILITATE DREDGING AND SLOPE PROTECTION PLACEMENT
- PIER EXTENSION
- DMMP − UNSUITABLE MATERIAL TO BE EXCAVATED SEE DETAILS FOR ELEVATION
- DMMP − SUITABLE MATERIAL TO BE DREDGED
- CROSS SECTION
- ECOLOGY BLOCK WALL
- PHASE 2 DREDGING CONTROL POINT
- NAVIGATIONAL AID
- CONCRETE MONUMENT WITH SURFACE BRASS DISK
- NEW SLOPE
- EXISTING SLOPE
- FENCE LINE
- GAS LINE
- GRIDLINE FROM STRUCTURAL DRAWINGS

DMMP DREDGE MATERIAL MANAGEMENT PROGRAM
DMMU DREDGE MATERIAL MANAGEMENT UNIT

0 50 100
SCALE IN FEET

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

MARK	REVISION	BY:	APPROVED	DATE:
1	ADDENDUM 1: REVISED DIMENSION	SLF	GWH	8/1/03
2	AS CONSTRUCTED MODIFICATION	SCY	SLF	03/29/05

PORT OF TACOMA, P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

SEAL
GARY W. HENRIKSON
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 3/29/06

APPROVED
CHIEF ENGINEER − DATE

DRAWING DATE: 03/29/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SLF 03/29/05
CHECKED BY − DATE
GWH 03/29/05
PROJECT ENGR − DATE

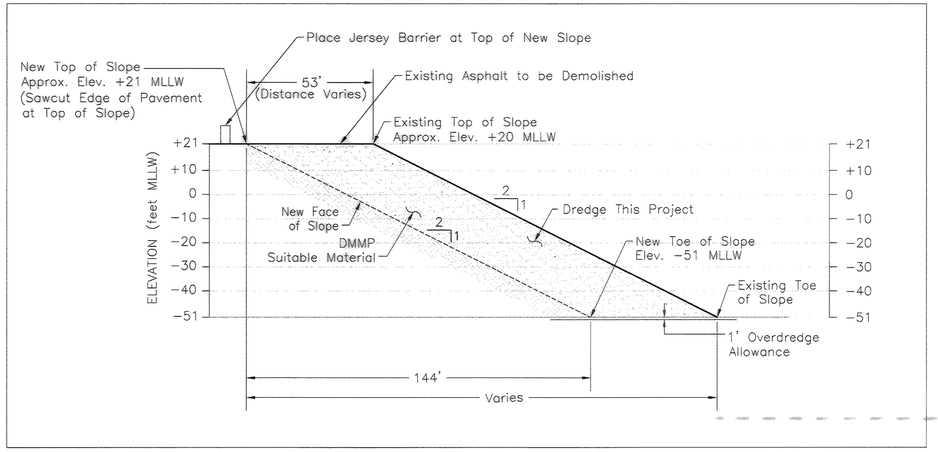
TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PHASE 2 AREAS 1 AND 4
AS CONSTRUCTED

EP-~~556-17~~
D3
SHEET 139 OF 164
CONTRACT NUMBER 998149
F NUMBER F1972
PHASE POST CONSTRUCTED

6320-17

TA(20)\D\0454095A\14\CAD\0454095A14_D1_D3.dwg SLF/SCY 03/29/05



3/D4 **SECTION (TYP.)**

SCALE: 1"=30'

0 30 60
SCALE IN FEET

EXPLANATION:

(1) PHASE 2 DREDGING CONTROL POINT

DMMP – SUITABLE MATERIAL TO BE DREDGED

X/D4 CROSS SECTION

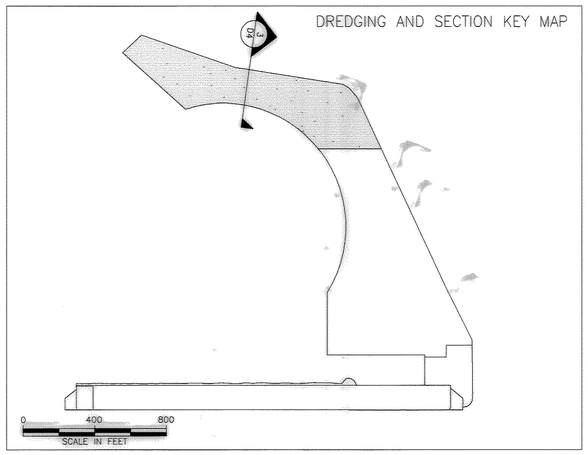
NEW SLOPE

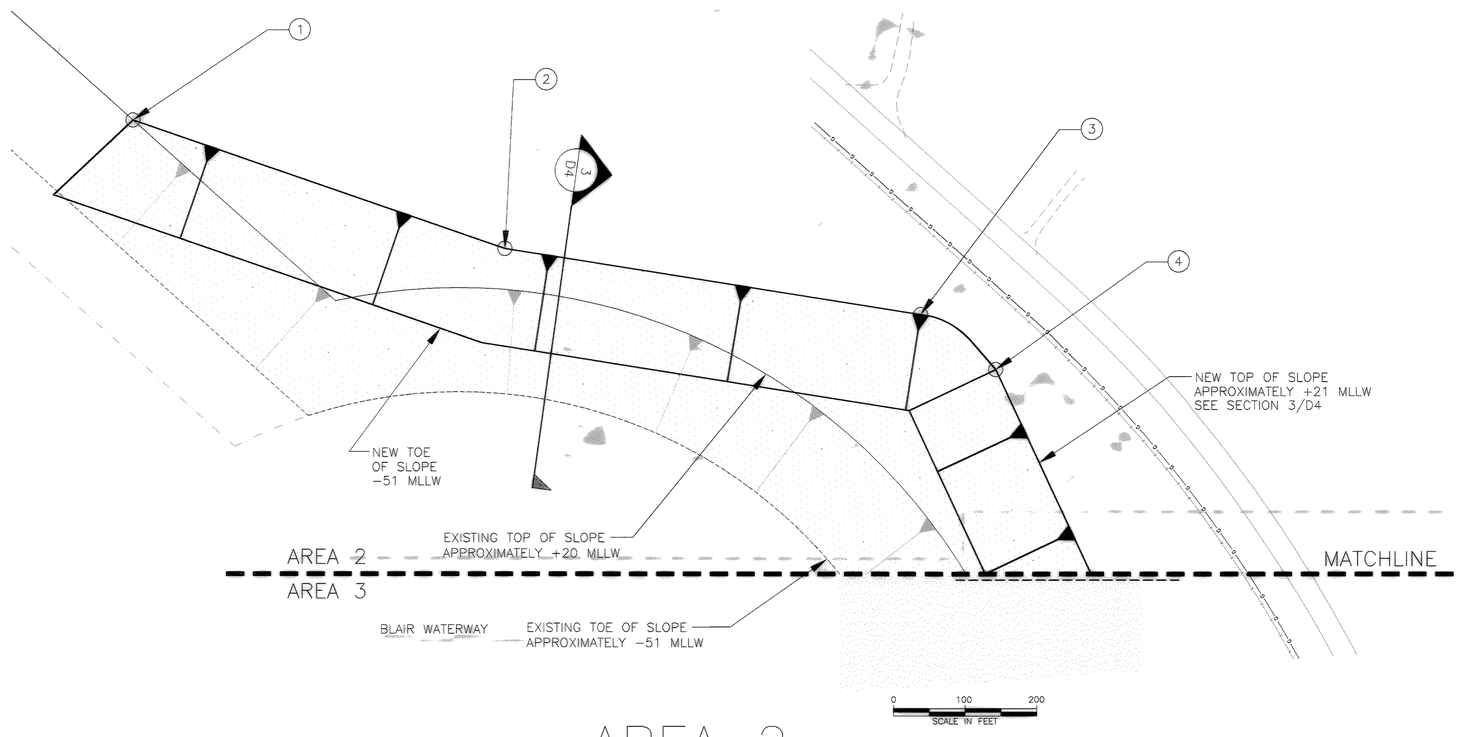
EXISTING SLOPE

FENCE LINE

GAS LINE

DMMP DREDGE MATERIAL MANAGEMENT PROGRAM





AREA 2

N

MARK	REVISION	BY:	APPROVED	DATE:
	RECORD DRAWING	SLF	GWH	7/27/05

PORT OF TACOMA
U.S.A.

PORT OF TACOMA, P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 363-4940

SEAL: STATE OF WASHINGTON — JEFFREY HERRICK — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 3/9/06

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 07/27/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SLF 07/27/05
CHECKED BY – DATE
GWH 07/27/05
PROJECT ENGR – DATE

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PHASE 2 AREA 2

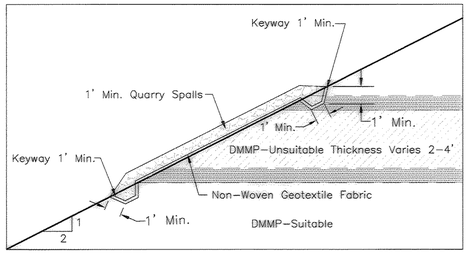
EP-~~555T-17~~ **D4**

SHEET 141 OF 164
CONTRACT NUMBER: 998148
E NUMBER: E1972
PHASE: POST CONSTRUCTED

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

T:\GEO\0_045405A\141\CAD\045405414_D2_05.dwg SLF/SCY 07/27/05

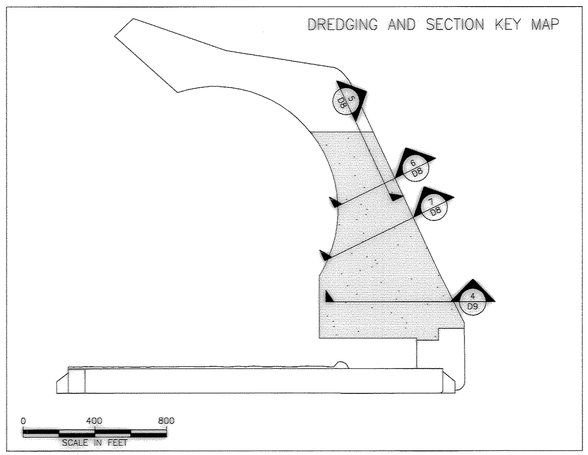


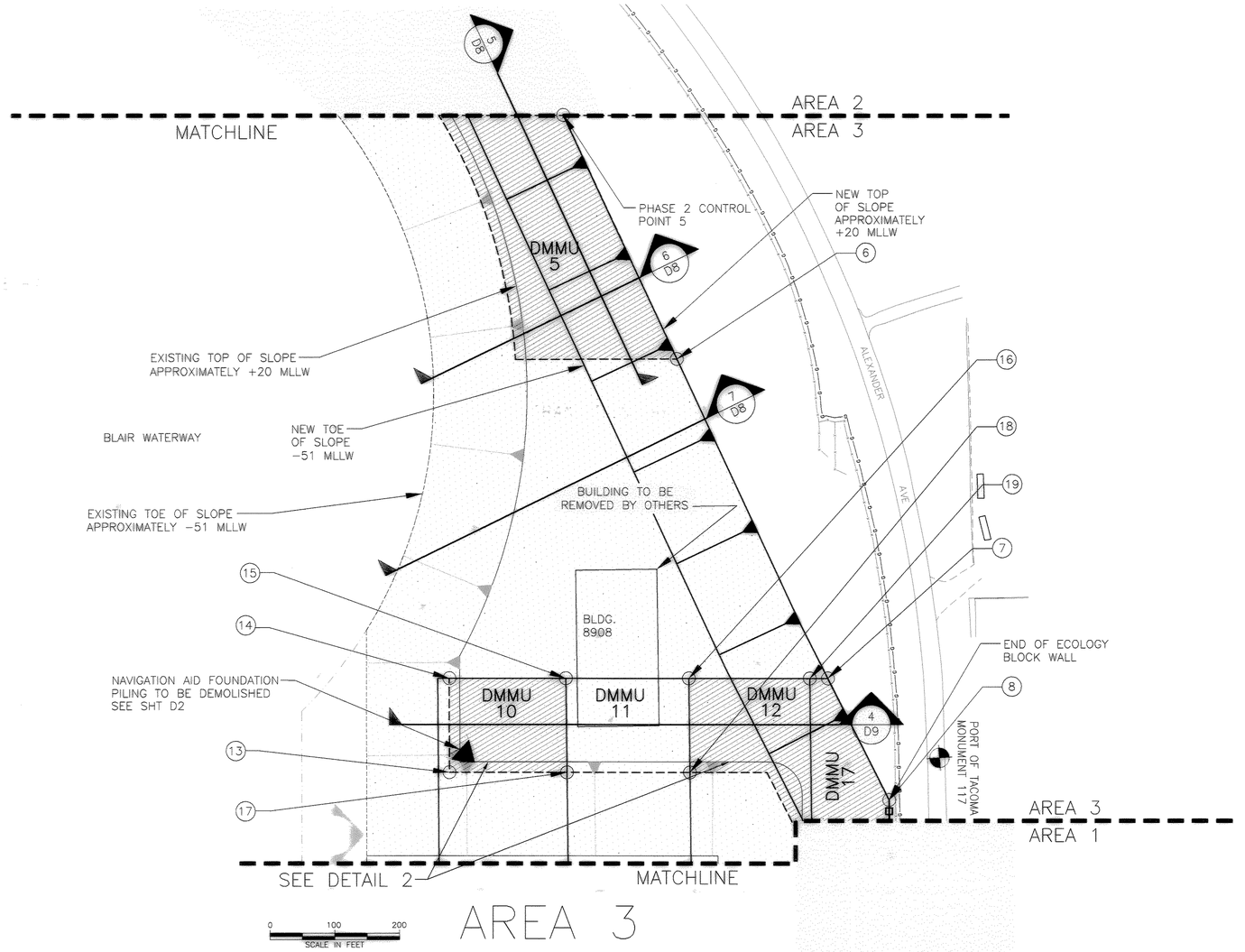
EXISTING TEMPORARY SLOPE PROTECTION SECTION

(2) NOT TO SCALE

EXPLANATION:

- (1) PHASE 2 DREDGING CONTROL POINT
- DMMP – UNSUITABLE MATERIAL TO BE EXCAVATED SEE DETAILS FOR APPROXIMATE ELEVATION
- DMMP – SUITABLE MATERIAL TO BE DREDGED
- 7 D9 CROSS SECTION
- NAVIGATIONAL AID
- CONCRETE MONUMENT WITH SURFACE BRASS DISK
- NEW SLOPE
- EXISTING SLOPE
- FENCE LINE
- GAS LINE
- DMMP DREDGE MATERIAL MANAGEMENT PROGRAM
- DMMU DREDGE MATERIAL MANAGEMENT UNIT
- ECOLOGY BLOCK WALL





N

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

PORT OF TACOMA P.O. BOX 1837 TACOMA, WA 98401 253-383-5841

CONSULTANTS: GeoEngineers 1101 FAWCETT AVENUE SUITE 200 TACOMA, WASHINGTON 98402 (253) 383-4940

MARK	REVISION	BY:	APPROVED	DATE
	RECORD DRAWING	SLF	GWH	7/27/05

SEAL: GARY W. HENRICHSON, STATE OF WASHINGTON, PROFESSIONAL ENGINEER, EXPIRES 3/10/06

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 07/27/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

DESIGNED BY	SLF	07/27/05
CHECKED BY	–	DATE
PROJECT ENGR.	GWH	07/27/05
	–	DATE

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING PHASE 2 AREA 3

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

EP ~~5554-17~~

D5

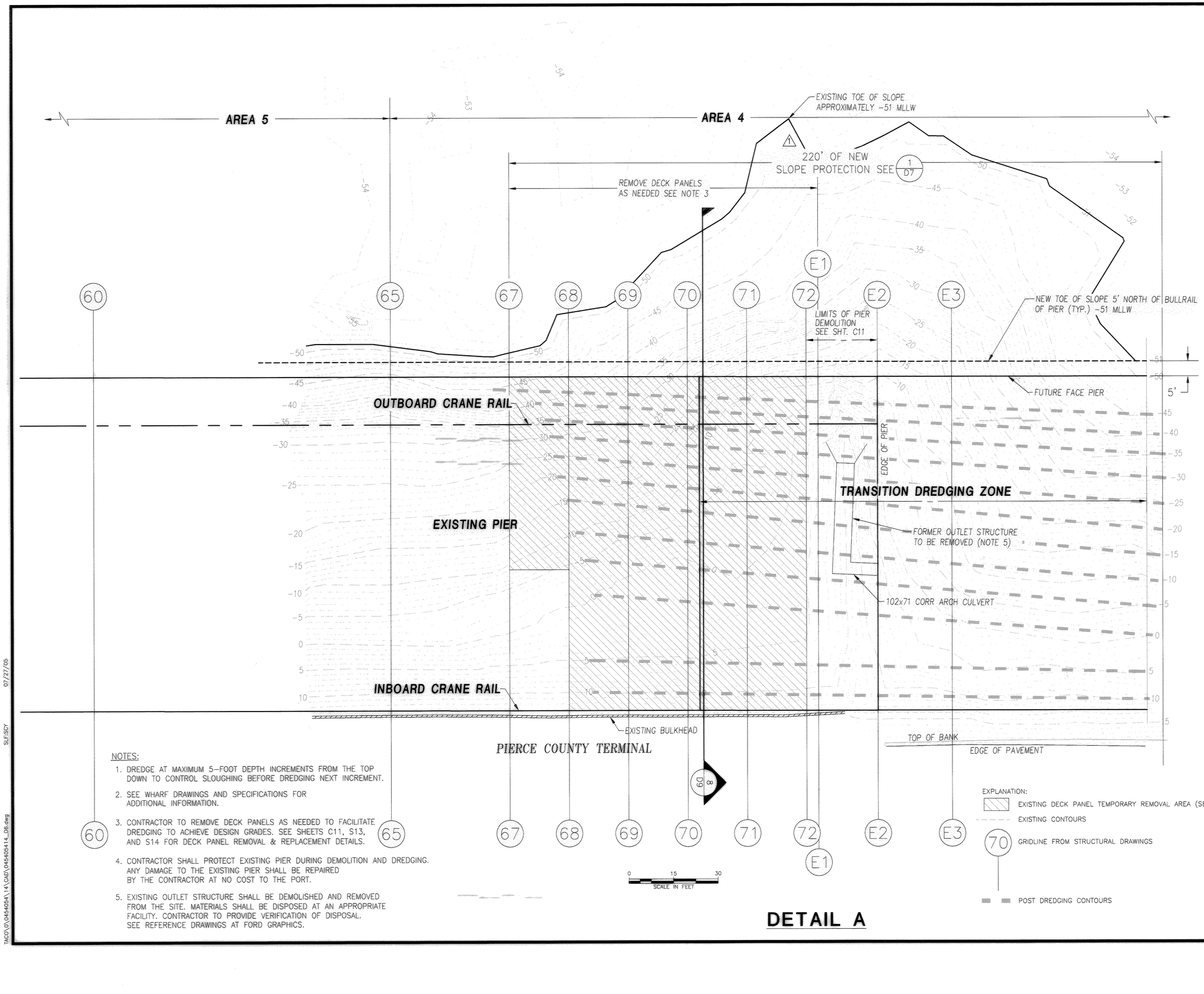
SHEET 142 OF 164

CONTRACT NUMBER: 998149

PHASE: POST CONSTRUCTED

6320-17

TA\DWG\0\0454054\14\CAD\0454054_02-D5.dwg 07/27/05 JCS-SCY



NOTES:

1. DREDGE AT MAXIMUM 5-FOOT DEPTH INCREMENTS FROM THE TOP DOWN TO CONTROL SLOUGHING BEFORE DREDGING NEXT INCREMENT.
2. SEE WHARF DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. CONTRACTOR TO REMOVE DECK PANELS AS NEEDED TO FACILITATE DREDGING TO ACHIEVE DESIGN GRADES. SEE SHEETS C11, S13, AND S14 FOR DECK PANEL REMOVAL & REPLACEMENT DETAILS.
4. CONTRACTOR SHALL PROTECT EXISTING PIER DURING DEMOLITION AND DREDGING. ANY DAMAGE TO THE EXISTING PIER SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE PORT.
5. EXISTING OUTLET STRUCTURE SHALL BE DEMOLISHED AND REMOVED FROM THE SITE. MATERIALS SHALL BE DISPOSED AT AN APPROPRIATE FACILITY. CONTRACTOR TO PROVIDE VERIFICATION OF DISPOSAL. SEE REFERENCE DRAWINGS AT FORD GRAPHICS.

DETAIL A

N

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

MARK	REVISION	BY:	APPROVED	DATE:
1	ADDENDUM 1: REVISED DIMENSION	SLF	GWH	8/1/03
	RECORD DRAWING	SLF	GWH	7/27/05

SEALED
GARY W. HENRY — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 3/26/06

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 07/27/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SLF CHECKED BY – DATE 07/27/05
GWH PROJECT ENGR.– DATE 07/27/05

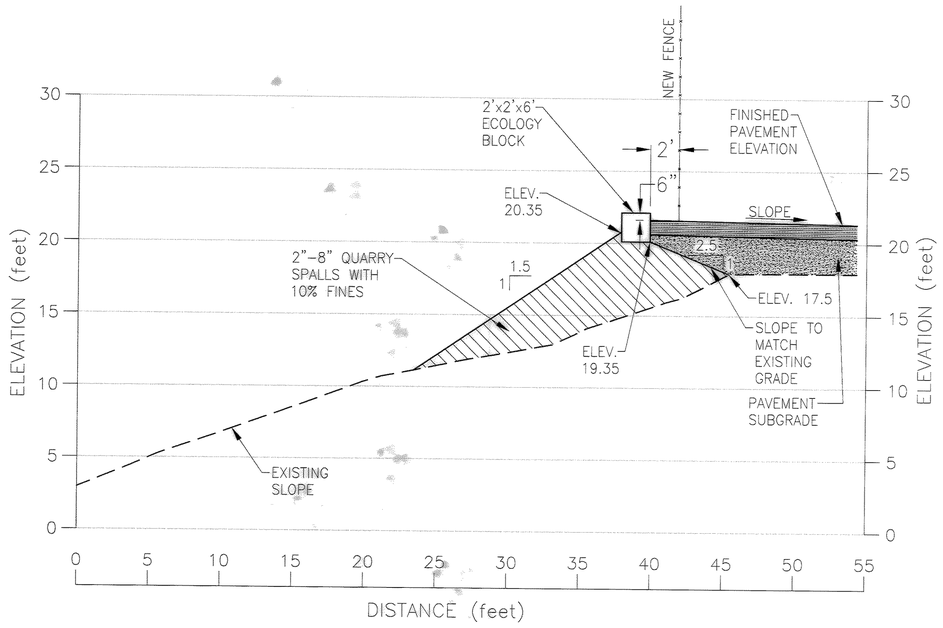
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PHASE 2 AREA 4 DETAILS

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

EP ~~5561.47~~
D6
SHEET 143 OF 164
CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: POST CONSTRUCTED

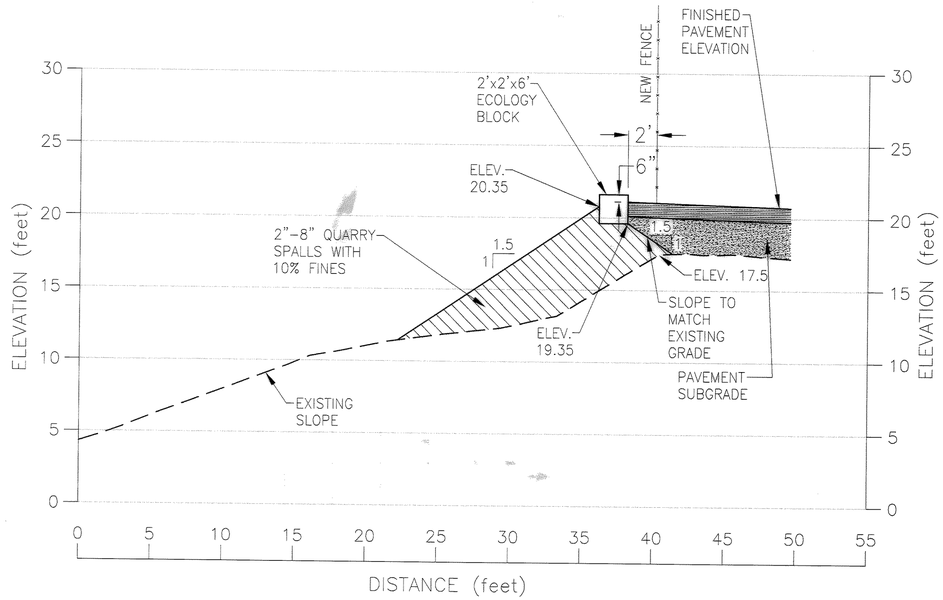
6320-17

TACO\D\045405A\14\CAD\045405414_D6.dwg 07/27/05 SLF-SCY



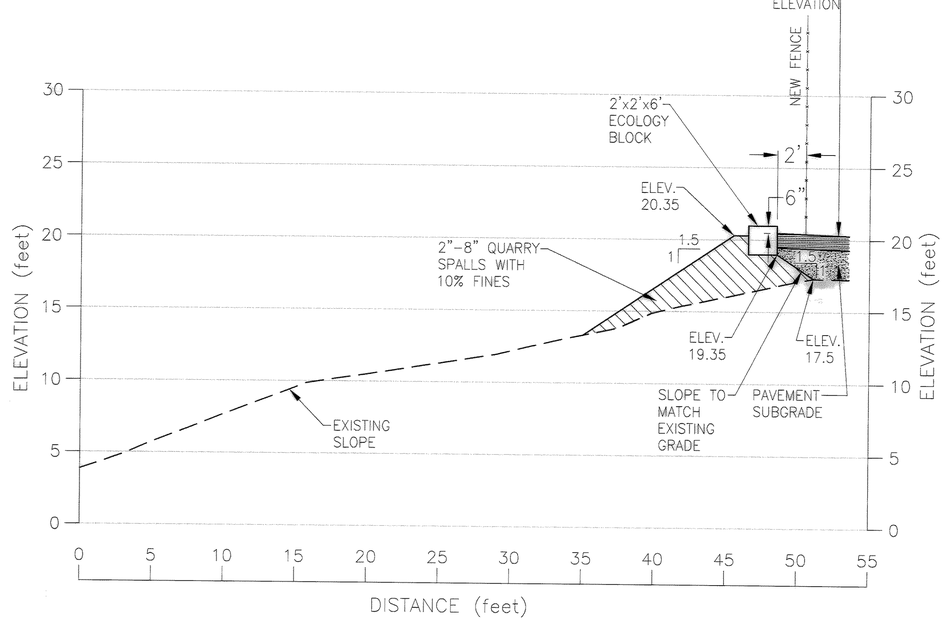
A/D3 **SECTION A**
EAST CORNER OF WHARF
SCALE: 1"=5'

0 5 10
SCALE IN FEET



B/D3 **SECTION B**
EAST CORNER OF WHARF
SCALE: 1"=5'

0 5 10
SCALE IN FEET



C/D3 **SECTION C**
EAST CORNER OF WHARF
SCALE: 1"=5'

0 5 10
SCALE IN FEET

REFERENCE:
BASED ON CROSS SECTIONS PROVIDED BY MANSON CONSTRUCTION (RFP NO. 00019).

Notes:

1. Hoe pack fine graded material under ecology block.

2. Set ecology block 2'–0" from new fence.

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

MARK	REVISION	BY	APPROVED	DATE
	AS CONSTRUCTED DETAILS	SCY	SLF	03/29/05
	REVISION	SCY	SLF	03/29/05

SEAL

GARY W. HENRIKSON
STATE OF WASHINGTON
12979
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 3/30/06

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 03/29/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SLF CHECKED BY – DATE 03/29/05
GWH PROJECT ENGR.– DATE 03/29/05

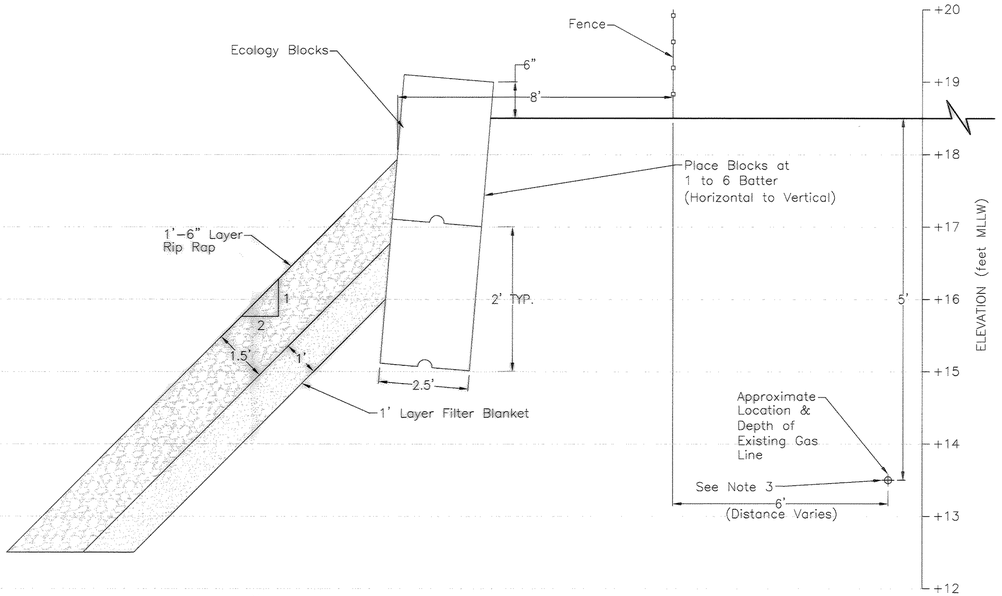
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
SECTIONS AS CONSTRUCTED

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

EP ~~551117~~
D7.1
SHEET 145 OF 164
CONTRACT NUMBER: 998149
E NUMBER E1972
PHASE POST CONSTRUCTED

6320-17

TA\GIS\LS\045405A\14\CAD\045405414_07_1.dwg 06/02/05 SLF SCY

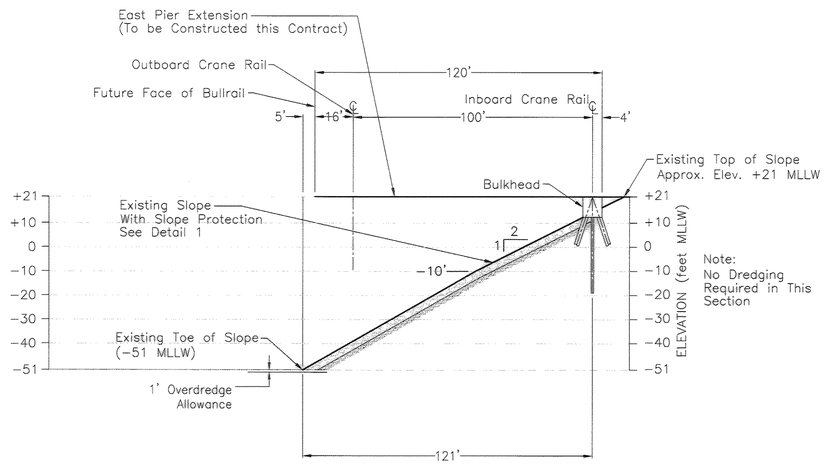


ECOLOGY BLOCK DETAIL

3

HORIZONTAL SCALE: 1"=2'
VERTICAL SCALE: 1"=1'
VERTICAL EXAGERATION: .5X

0 2 4
HORIZONTAL SCALE IN FEET
0 1 2
VERTICAL SCALE IN FEET



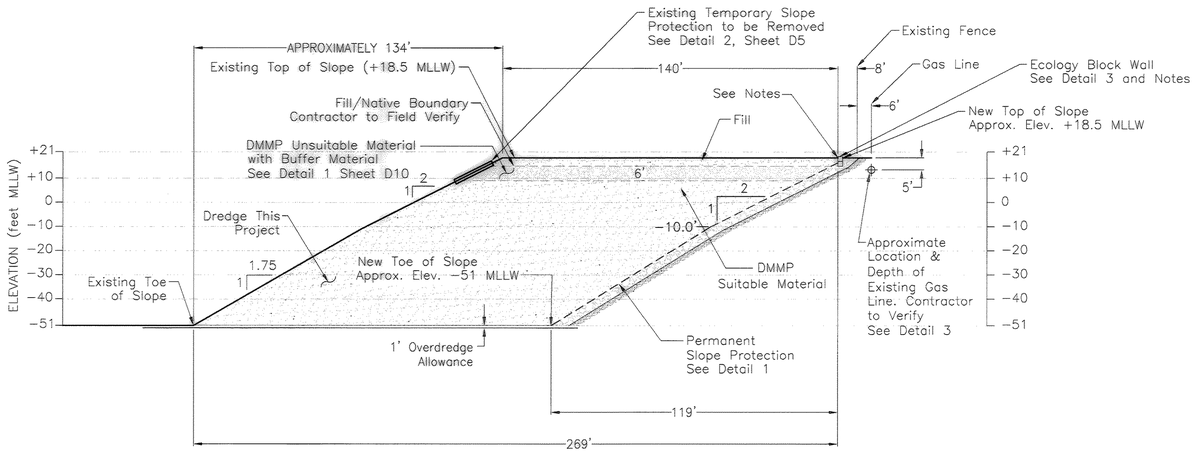
Note:
No Dredging
Required in This
Section

1
D3

SECTION

SCALE: 1"=30'

0 30 60
SCALE IN FEET



Notes:

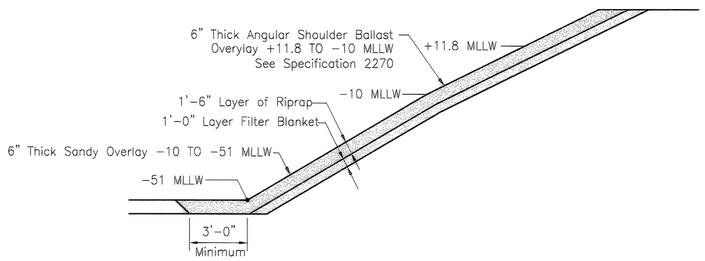
1. THE WEST FACE OF THE ECOLOGY BLOCK WALL SHALL BE 8-FOOT WEST OF THE EXISTING FENCE.
2. THE ECOLOGY BLOCK WALL BACKFILL SHALL CONSIST OF 6-INCH OF CLEAR FREE DRAINING GRANULAR MATERIAL SEPARATED FROM THE EXISTING SOIL BY AN APPROPRIATE GEOSYNTHETIC.
3. ACTUAL LOCATION OF EXISTING GAS LINE AND DEPTH MAY VARY. CONTRACTOR TO FIELD LOCATE GAS LINE PRIOR TO COMMENCING WORK.

2
D3

SECTION

SCALE: 1"=30'

0 30 60
SCALE IN FEET



SLOPE PROTECTION DETAIL

1

NOT TO SCALE

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

PORT OF TACOMA U.S.A.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

MARK	REVISION	BY:	APPROVED	DATE
	RECORD DRAWING	SLF	GWH	7/27/05

STATE OF WASHINGTON
CARL L. HOLMBERG
REGISTERED PROFESSIONAL ENGINEER
19979
EXPIRES 3/29/06

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 07/27/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SLF 07/27/05
CHECKED BY – DATE

GWH 07/27/05
PROJECT ENGR.– DATE

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING

SECTIONS AND SLOPE PROTECTION DETAILS

EP-5551-17

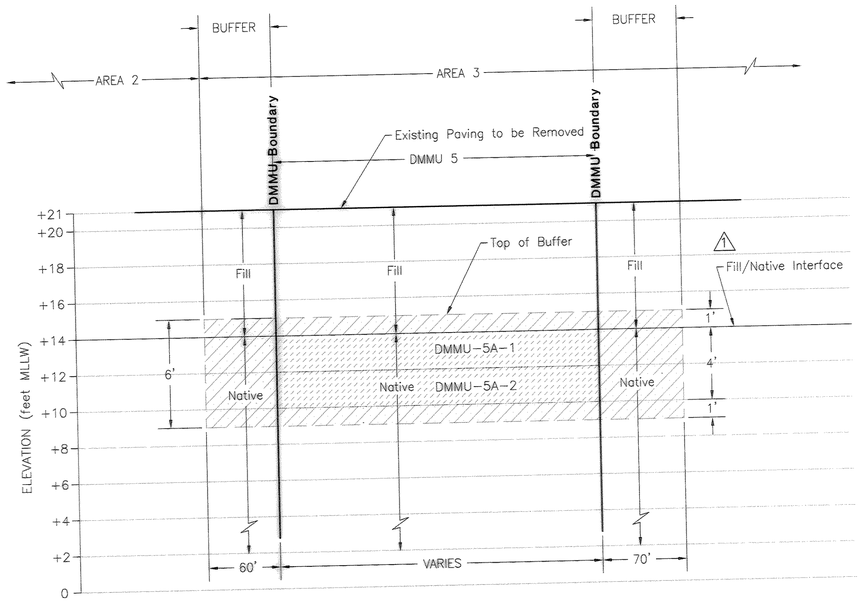
D7

SHEET 144 OF 164

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: POST CONSTRUCTED

6320-17

TACO\O\045405A\14\CAD\045405414_D7.dwg
SLF SCY
07/27/05



EXPLANATION:

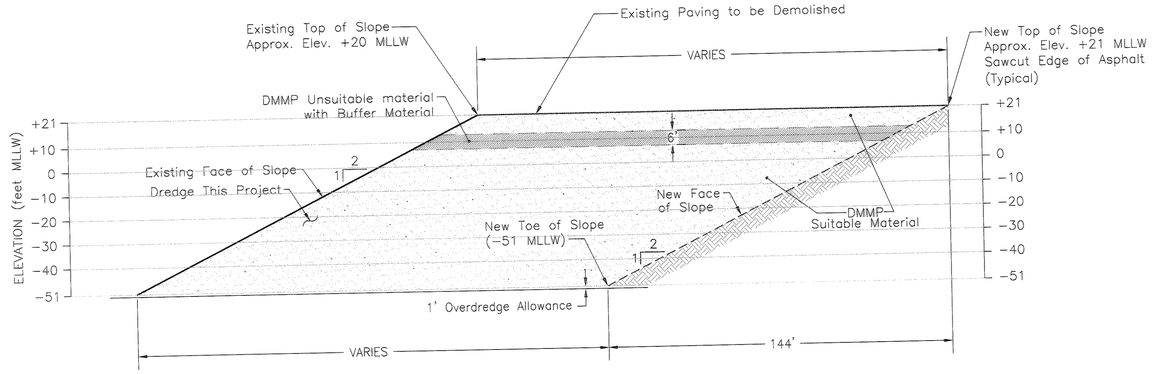
- DMMP-SUITABLE MATERIAL
- BUFFER ZONE MATERIAL (DMMP-UNSUITABLE)
- DMMP-UNSUITABLE MATERIAL

5/D5 **SECTION**

HORIZONTAL SCALE: 1"=60'
VERTICAL SCALE: 1"=4'
VERTICAL EXAGERATION: 15X

HORIZONTAL SCALE IN FEET: 0, 60, 120
VERTICAL SCALE IN FEET: 0, 4, 8

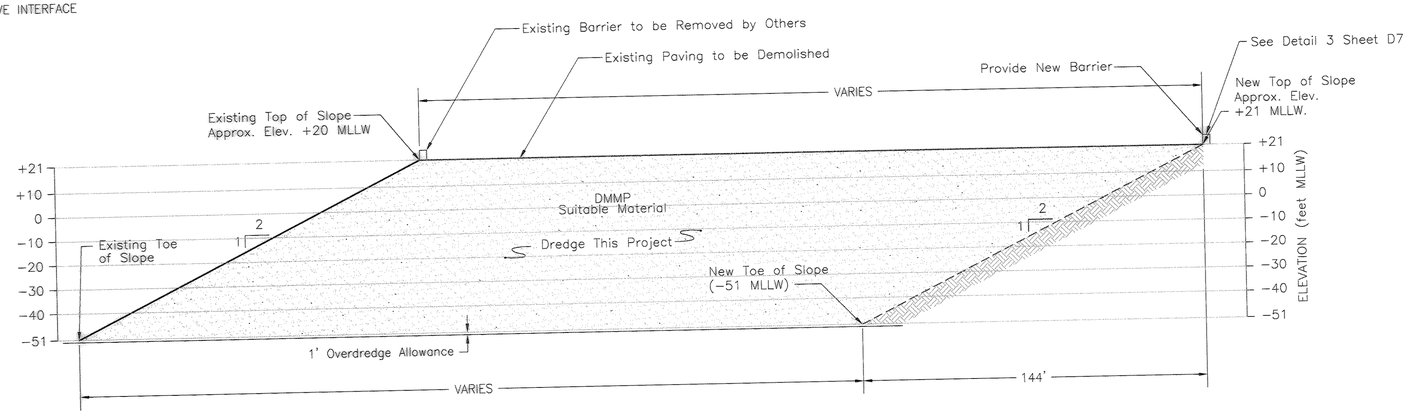
1 PROVIDED CLARIFICATION REGARDING FILL/NATIVE INTERFACE AND TOP OF BUFFER LOCATIONS.



6/D5 **SECTION**

SCALE: 1"=30'

SCALE IN FEET: 0, 30, 60



7/D5 **SECTION**

SCALE: 1"=30'

SCALE IN FEET: 0, 30, 60

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

MARK	REVISION	BY	APPROVED	DATE
1	CLARIFICATION, SEE NOTES RECORD DRAWING	SLF	GWH	10/27/05
		SLF	GWH	11/27/05

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

GARY W. HANNINGTON — STATE OF WASHINGTON — 20082 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 3/22/06

APPROVED

CHIEF ENGINEER - DATE

DRAWING DATE: 07/27/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SLF 07/27/05
CHECKED BY - DATE

GWH 07/27/05
PROJECT ENGR. - DATE

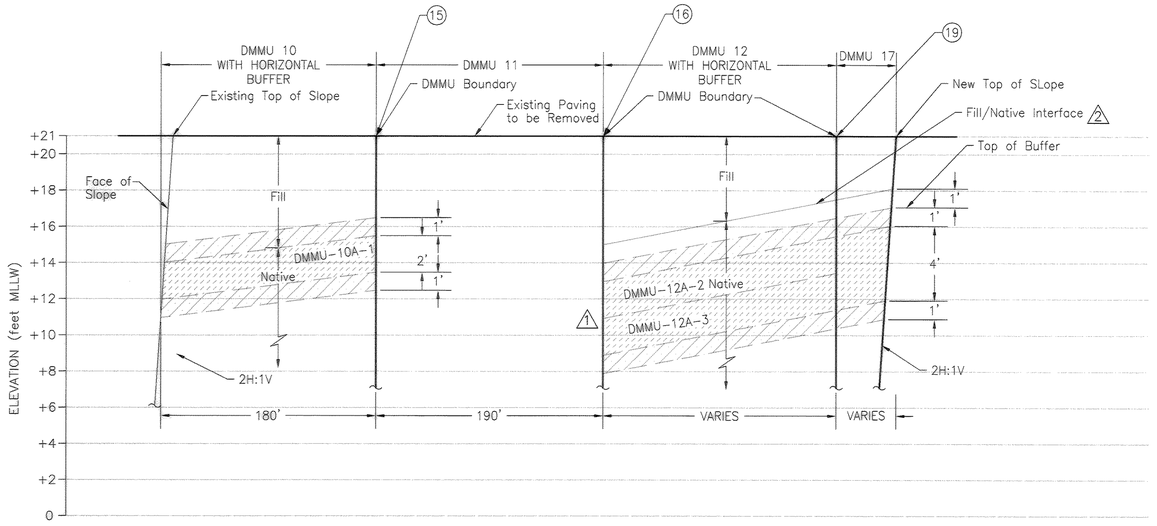
TOWNSHIP: 20N RANGE: 3E SECTION:
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
SECTIONS

EP-~~553117~~
D8
SHEET 146 OF 164
CONTRACT NUMBER 998149
E-NUMBER E1972
PHASE POST CONSTRUCTED

6320-17

07/27/05
SLF:SCY
T:\CAD\D\04540514\1\A\D4\04540514_D8.dwg



4/D5 **SECTION**

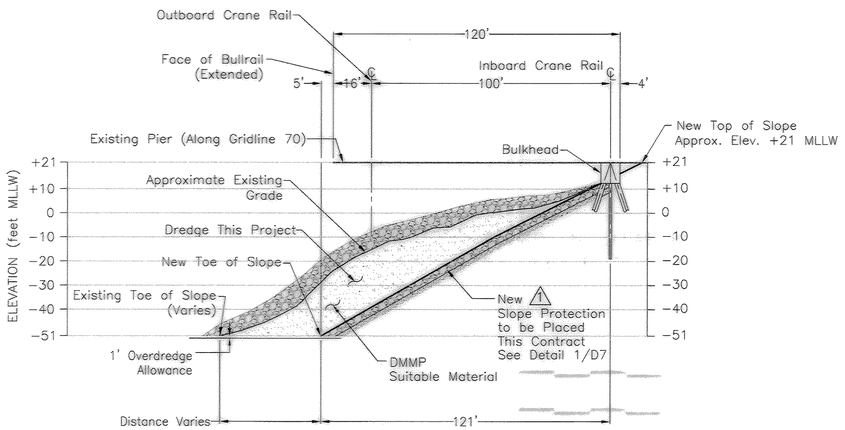
HORIZONTAL SCALE: 1"=60'
VERTICAL SCALE: 1"=4'
VERTICAL EXAGERATION: 15X

0 60 120
HORIZONTAL SCALE IN FEET
0 4 8
VERTICAL SCALE IN FEET

EXPLANATION:
- DMMP-SUITABLE MATERIAL
- VERTICAL BUFFER ZONE MATERIAL (DMMP-UNSUITABLE)
- DMMP-UNSUITABLE MATERIAL

NOTES:
1. SEE SPECIFICATIONS FOR EXCAVATION PLAN AND FIELD VERIFICATION REQUIREMENTS.
2. SEE SHEET D1 FOR PHASE 2 CONTROL POINT COORDINATES.

2 PROVIDED CLARIFICATION REGARDING FILL/NATIVE INTERFACE AND TOP OF BUFFER LOCATIONS.

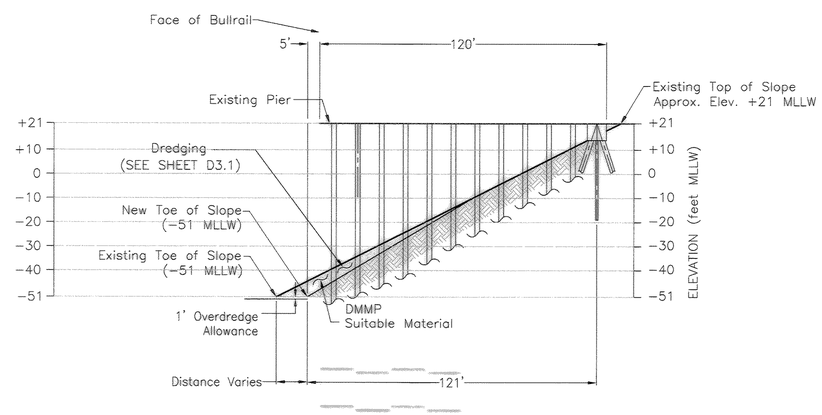


8/D6 **SECTION**

SCALE: 1"=30'

0 30 60
SCALE IN FEET

SEE NOTE 1 SHEET D6



11/D3.1 1 **SECTION: AREA 5 DREDGING**

SCALE: 1"=30'

0 30 60
SCALE IN FEET

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

MARK	REVISION	BY:	APPROVED	DATE:
1	ADDENDUM 1: REVISED SECTION DETAILS	SLF	GWH	8/1/03
2	CLARIFICATION, SEE NOTES	SLF	GWH	10/22/03
	RECORD DRAWING	SLF	GWH	7/27/05

SEAL: CARL L. HOSTEDT, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER, EXPIRES 3/10/06

APPROVED: 7/27/05
CHIEF ENGINEER – DATE

DRAWING DATE: 07/27/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SLF 07/27/05
CHECKED BY – DATE

GWH 07/27/05
PROJECT ENGR.– DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
SECTIONS

EP-~~555-17~~

D9

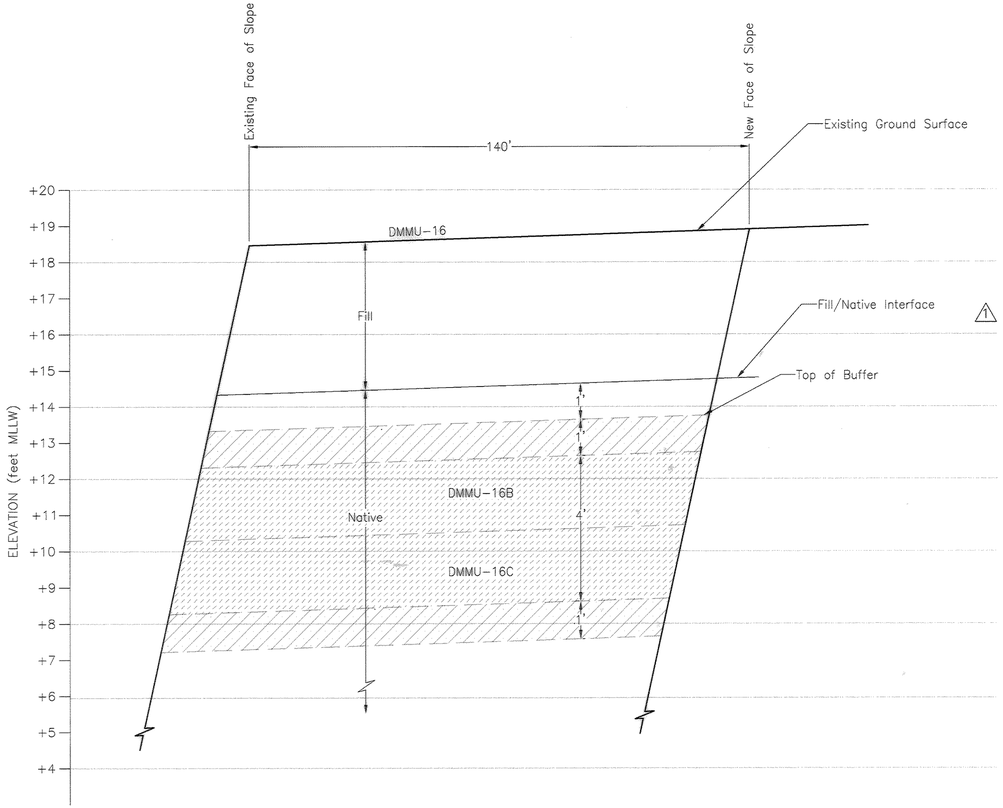
SHEET 147 OF 164

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: POST CONSTRUCTED

6320-17

TACOM\O\0454054\14\CAD\0454054_D9.dwg 07/27/05 SLF/SCY



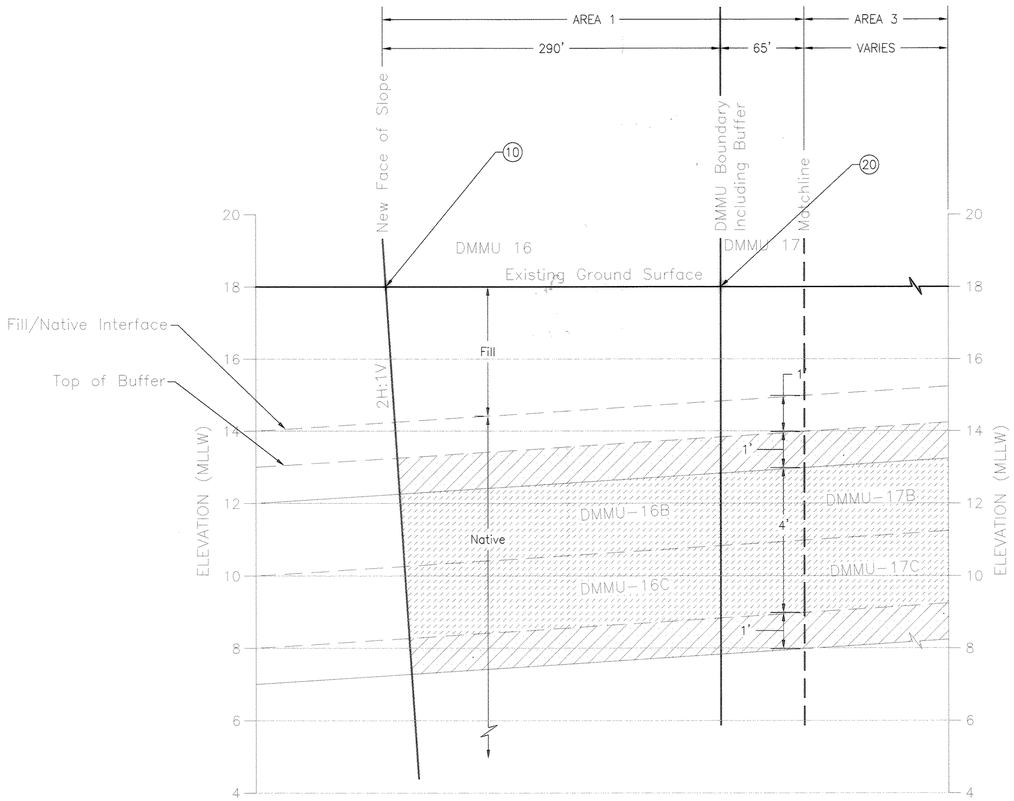
DMMP UNSUITABLE
DETAIL 1 - SEE SECTION 2 SHT D7

1

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=2'
VERTICAL EXAGERATION: 10X

0 20 40
HORIZONTAL SCALE IN FEET
0 2 4
VERTICAL SCALE IN FEET

⚠1 PROVIDED CLARIFICATION REGARDING FILL/NATIVE INTERFACE AND TOP OF BUFFER LOCATIONS.



10/D3

SECTION

HORIZONTAL SCALE: 1"=60'
VERTICAL SCALE: 1"=2'
VERTICAL EXAGERATION: 30X

0 60 120
HORIZONTAL SCALE IN FEET
0 2 4
VERTICAL SCALE IN FEET

EXPLANATION:
DMMP-SUITABLE MATERIAL
VERTICAL BUFFER ZONE MATERIAL (DMMP-UNSUITABLE)
DMMP-UNSUITABLE MATERIAL

NOTE:
1. SEE SHEET D1 FOR PHASE 2 CONTROL POINT COORDINATES.

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

MARK	REVISION	BY:	APPROVED:	DATE:
1	CLARIFICATION	SLF	GWH	10/22/03
	RECORD DRAWING	SLF	GWH	7/27/05

SEAL: CARL E. HEMSTROM, STATE OF WASHINGTON, 13999, REGISTERED PROFESSIONAL ENGINEER, EXPIRES 3/May/06

APPROVED
CHIEF ENGINEER — DATE

DRAWING DATE: 07/27/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SLF 07/27/05
CHECKED BY — DATE
GWH 07/27/05
PROJECT ENGR — DATE

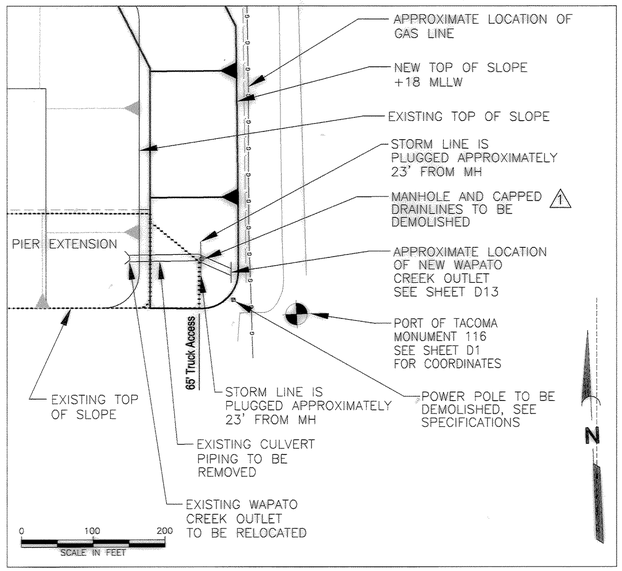
TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

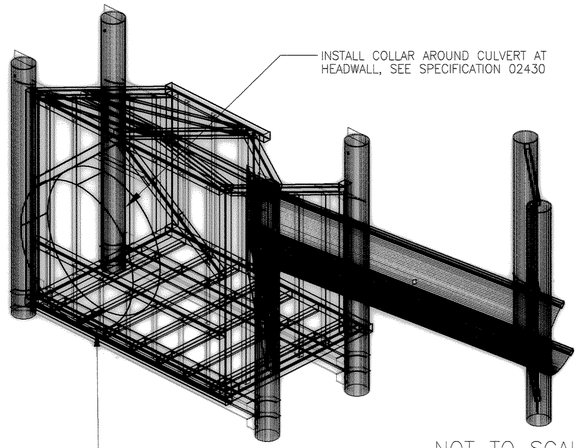
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
SECTIONS

EP ~~6551.47~~
D10
SHEET 148 OF 164
CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: POST CONSTRUCTED

6320-17

07/27/05
SLF:SCY
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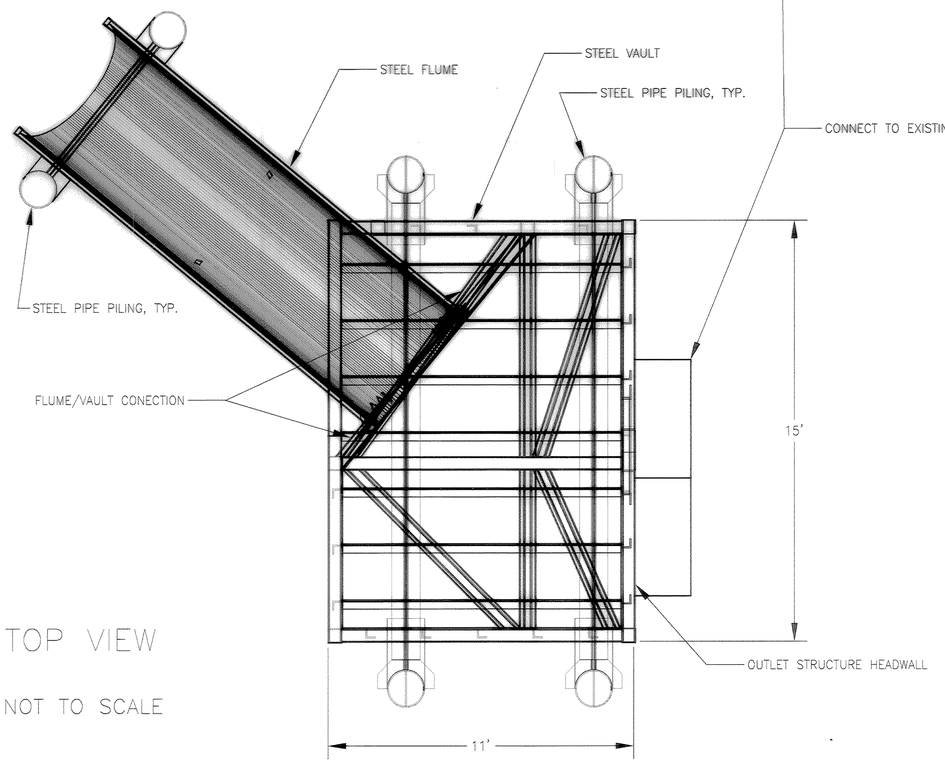


NOT TO SCALE

3-D VIEW

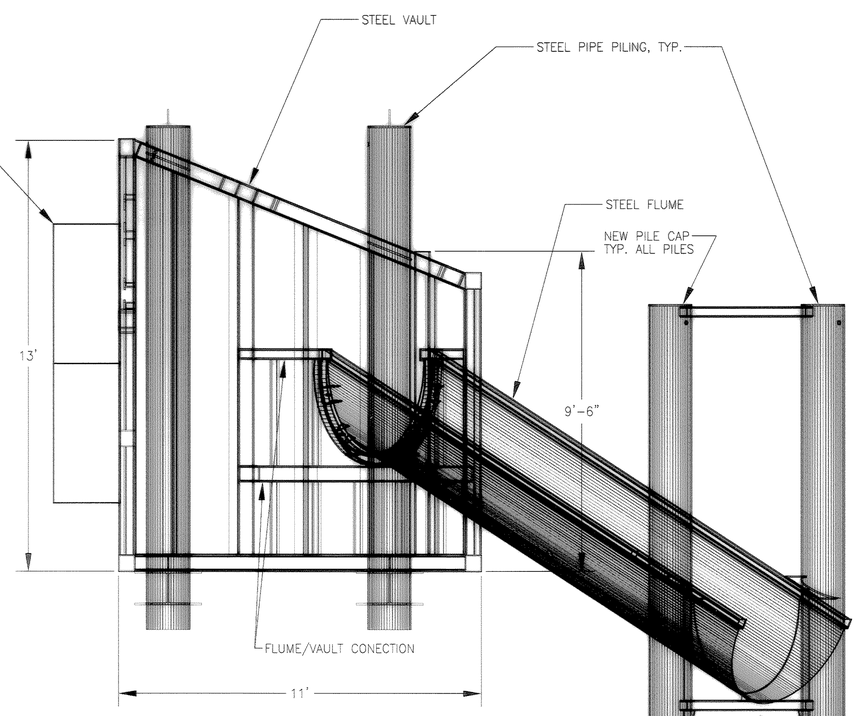
NOTES:

1. REFERENCE DRAWINGS REGARDING THE WAPATO CREEK OUTLET STRUCTURE ARE AVAILABLE AT FORD GRAPHICS.
2. THE NEW LOCATION OF THE WAPATO CREEK OUTLET STRUCTURE SHALL BE VERIFIED IN THE FIELD DURING DEMOLITION OF THE EXISTING CULVERT PIPE AND DREDGING OF THE NEW SLOPE. THE NEW OUTLET SHALL BE CONSTRUCTED ONTO THE EXPOSED CULVERT PIPING AT THE NEW SLOPE FACE. THE ENGINEER SHALL APPROVE THE LOCATION PRIOR TO INSTALLATION.
3. THE OUTLET STRUCTURE WAS DESIGNED AS TWO PIECES; 1) THE VAULT, AND 2) THE FLUME.
4. THE VAULT AND FLUME SHALL BE SEPARATED FROM EACH OTHER PRIOR TO RELOCATION.
5. THE VAULT AND FLUME SHALL BE SEPARATED FROM THE SUPPORTING PILING BEFORE REMOVAL AND RELOCATION.
6. MODIFICATIONS TO THE STRUCTURE WILL BE REQUIRED TO ORIENT THE STRUCTURE RELATIVE TO THE SLOPE FACE AND CULVERT AS DESCRIBED ON SHEETS D12, D13, AND SPECIFICATION SECTION 02430.
7. THE OUTLET STRUCTURE DIMENSIONS SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD AND WITH THE JESSE ENGINEERING SHOP DRAWINGS.
8. CONTRACTOR TO PERFORM PRE-RELOCATION SURVEY TO ESTABLISH EXISTING GRADES. SEE SPECIFICATION 02430.



TOP VIEW

NOT TO SCALE



RIGHT-SIDE VIEW NOT TO SCALE

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

MARK	REVISION	BY:	APPROVED	DATE
1	ADDENDUM 1; ADDED MANHOLE LOCATION	SLF	GWH	8/1/03
	RECORD DRAWING	SLF	GWH	7/27/05

SEAL
ROBERT PHILLIP MCMURRY
REGISTERED PROFESSIONAL ENGINEER
STATE OF WASHINGTON
EXPIRES 10-22-2006

APPROVED
CHIEF ENGINEER -- DATE

SLF 07/27/05
CHECKED BY -- DATE
GWH 07/27/05
PROJECT ENGR -- DATE

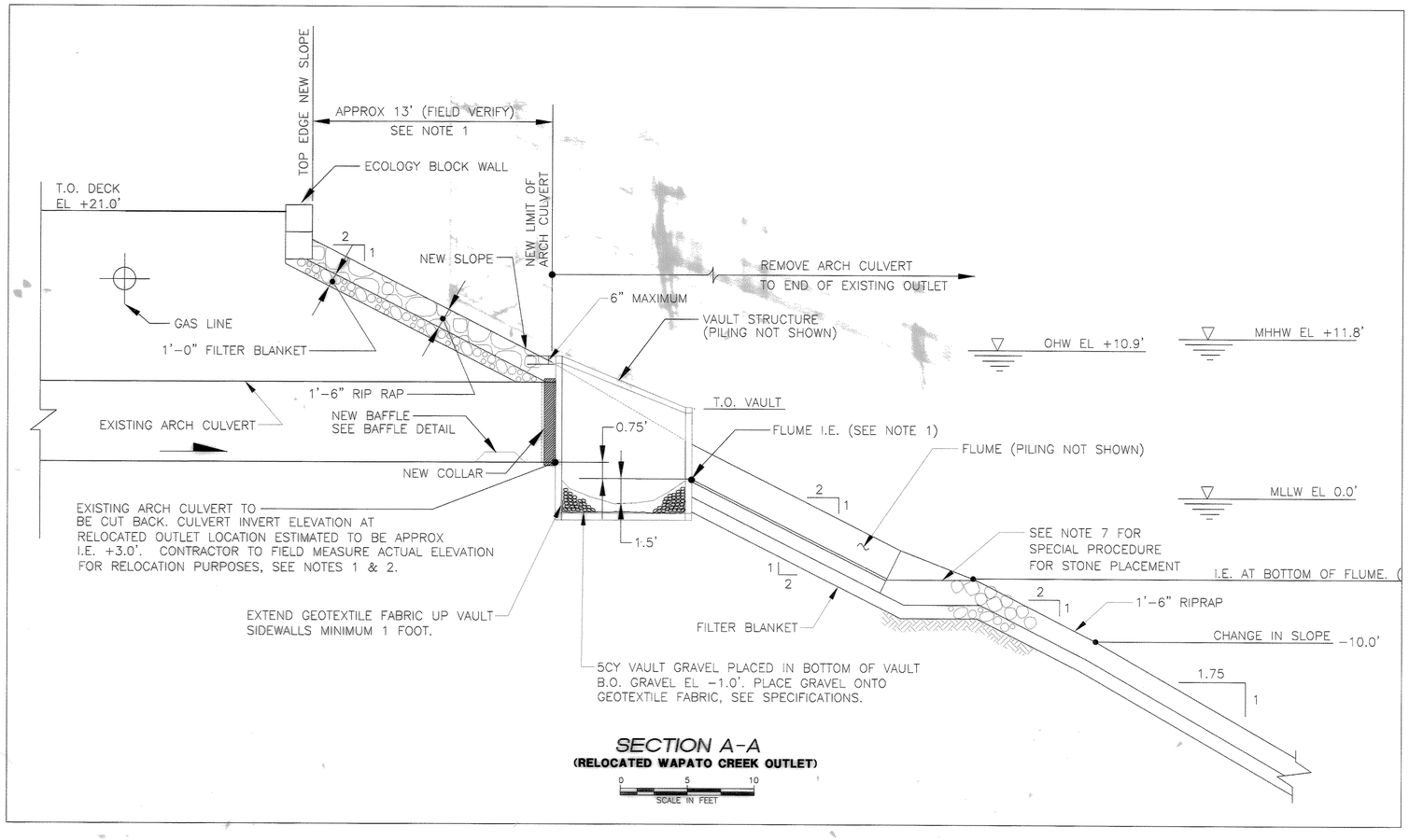
DRAWING DATE: 07/27/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WAPATO CREEK OUTLET
EXISTING STRUCTURE

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

EP-~~5554.47~~
D11
SHEET 149 OF 164
CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: POST CONSTRUCTED
6320-17

07/27/05
SLF/SCY
T:\ACAD\0\045405A\14\CAD\045405414_D11.dwg



SECTION A-A
(RELOCATED WAPATO CREEK OUTLET)

NOTES:

1. THE I.E. AT BOTTOM OF FLUME AT THE VAULT OUTLET SHALL BE 9-INCHES BELOW THE CULVERT I.E. MEASURED AT THE VAULT HEADWALL. CONTRACTOR TO FIELD VERIFY I.E. AT EXISTING OUTLET LOCATION TO ESTABLISH THE FINISHED GRADES FOR RELOCATED OUTLET AT THE NEW LOCATION.
2. EXISTING ARCH CULVERT INVERT ELEVATION IS APPROXIMATE. CONTRACTOR TO FIELD MEASURE ACTUAL INVERT ELEVATION AT EXISTING CULVERT'S NEW TERMINUS AND ADJUST VAULT ELEVATIONS AS REQUIRED.
3. FOR SURVEY AND DATUM INFORMATION, SEE SHEET 1.
4. POSITION OF EXISTING TOP OF BANK SHOWN IS APPROXIMATE. EXISTING ELEVATION IN UPLAND PORTION OF DREDGE CUT VARIES.
5. FOR SCHEDULING CONSTRAINTS RELATED TO WORK ON THE EXISTING OUTFALL, AND CONSTRUCTION OF THE NEW OUTFALL, SEE SPECIFICATION SECTION 02430 – WAPATO CREEK OUTLET.
6. DEMOLITION OF THE EXISTING ARCH CULVERT IS THE RESPONSIBILITY OF THE CONTRACTOR. DISPOSAL SHALL BE AT AN UPLAND DISPOSAL SITE IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.
7. "CHINK" VOIDS OF RIPRAP WITH FILTER BLANKET MATERIAL AT BOTTOM OF FLUME.
8. LOCALLY GRADE FINISHED SLOPE ADJACENT TO OUTLET TO MATCH TOP OF VAULT AND FLUME ELEVATIONS.

DEFINITIONS:
B.O. = BOTTOM OF
T.O. = TOP OF
I.E. = INVERT ELEVATION
APPROX = APPROXIMATELY
TYP. = TYPICAL

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

MARK	REVISION	BY:	APPROVED	DATE
	RECORD DRAWING	SLF	GWH	7/27/05

SEAL
ROBERT PHILLIPS
REGISTERED PROFESSIONAL ENGINEER
STATE OF WASHINGTON
EXPIRES 10-22-2006

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 07/27/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SLF 07/27/05
CHECKED BY – DATE
GWH 07/27/05
PROJECT ENGR – DATE

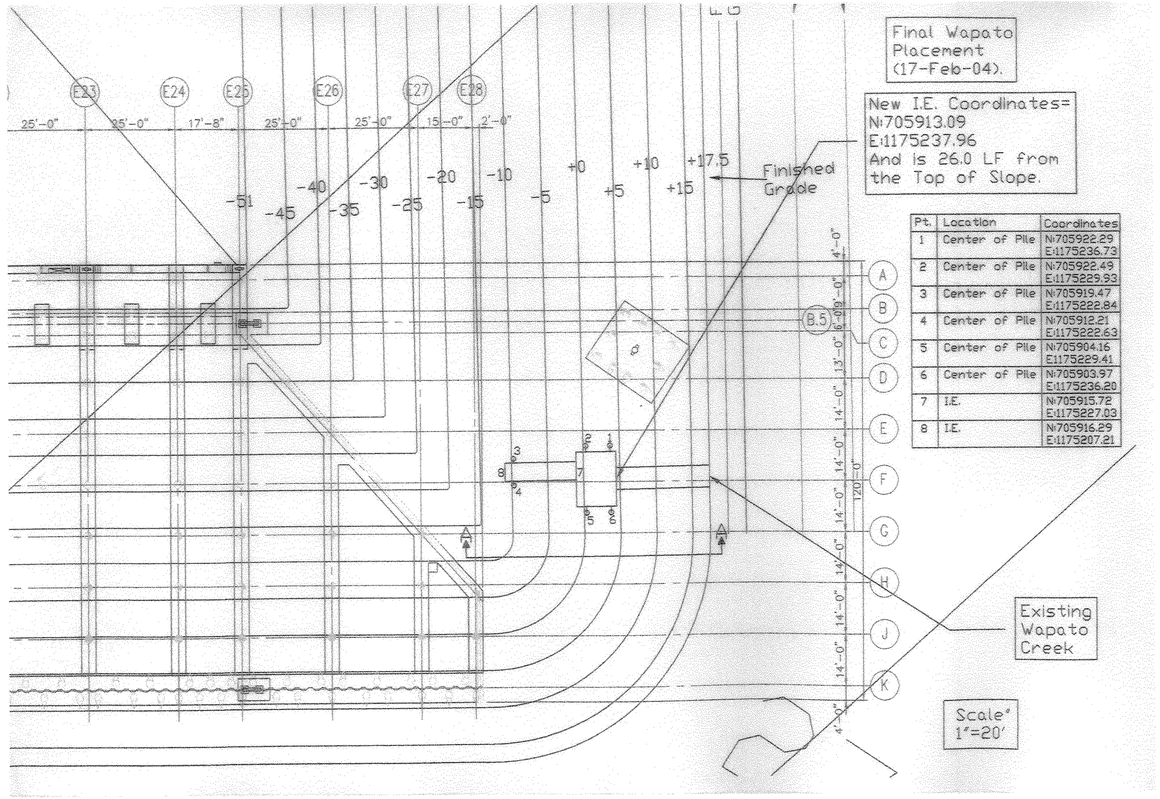
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WAPATO CREEK OUTLET

EP-~~5551-17~~
D12
SHEET 150 OF 164
CONTRACT NUMBER 998149

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN
F. NUMBER: F1972
PHASE: POST CONSTRUCTED

6320-17

J:\ACAD\D\04540954\14\CAD\04540954_D12.dwg SLF;SGY 07/27/05



Final Wapato Placement (17-Feb-04).

New I.E. Coordinates=
N:705913.09
E:1175237.96
And is 26.0 LF from the Top of Slope.

Pt.	Location	Coordinates
1	Center of Pile	N:705922.29 E:1175236.73
2	Center of Pile	N:705922.49 E:1175229.93
3	Center of Pile	N:705919.47 E:1175222.84
4	Center of Pile	N:705912.21 E:1175222.63
5	Center of Pile	N:705904.16 E:1175229.41
6	Center of Pile	N:705903.97 E:1175236.20
7	I.E.	N:705915.72 E:1175227.03
8	I.E.	N:705916.29 E:1175207.21

WAPATO CREEK OUTLET

SCALE IN FEET 0 20 40

REFERENCE:
PROVIDED BY MANSON CONSTRUCTION
RECORD DRAWINGS.

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

MARK	REVISION	BY:	APPROVED	DATE:

SEAL
ROBERT PHILLIPS
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 10-22-04
3/29/05

APPROVED
CHIEF ENGINEER — DATE

DRAWING DATE: 03/29/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SLF	03/29/05
CHECKED BY —	DATE
GWH	03/29/05
PROJECT ENGR. —	DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WAPATO CREEK OUTLET
AS CONSTRUCTED

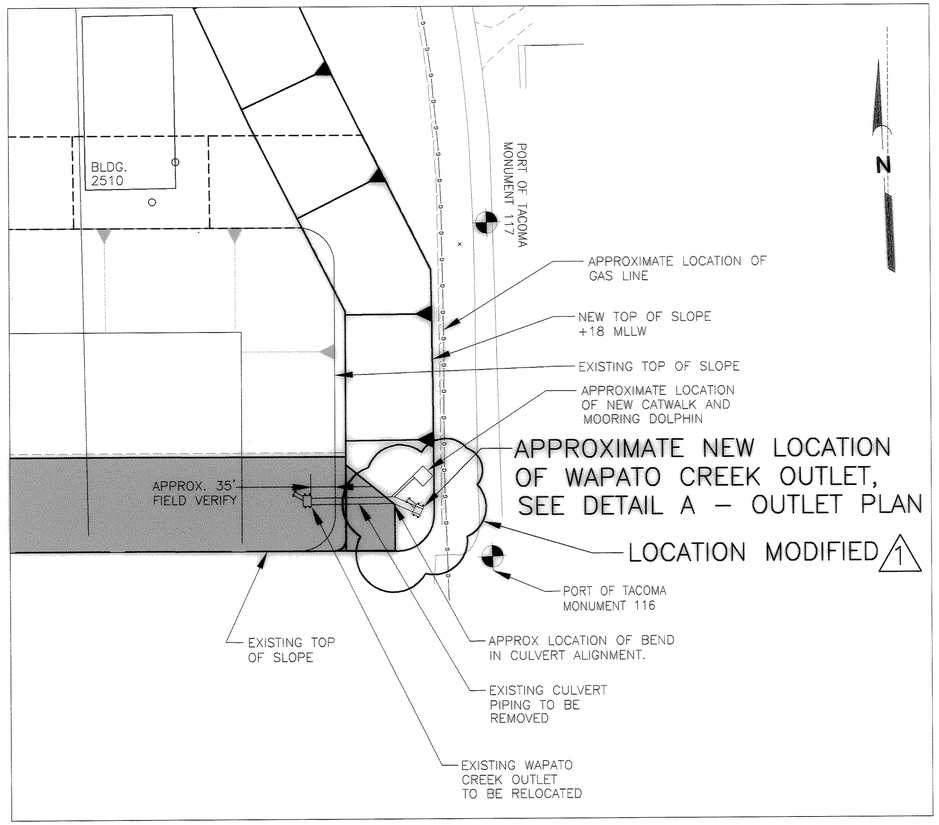
EP-~~5551-17~~
D13.1
SHEET 152 OF 164

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: MLLW=0.0
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: POST CONSTRUCTED

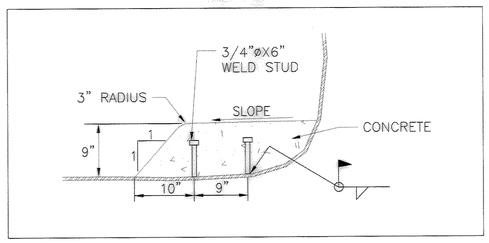
6320-17

TACO\DWG\045405A\14\CAD\045405A14_D13_1.dwg SLF:SCY 03/29/05



OUTLET PLAN

0 100 200
SCALE IN FEET



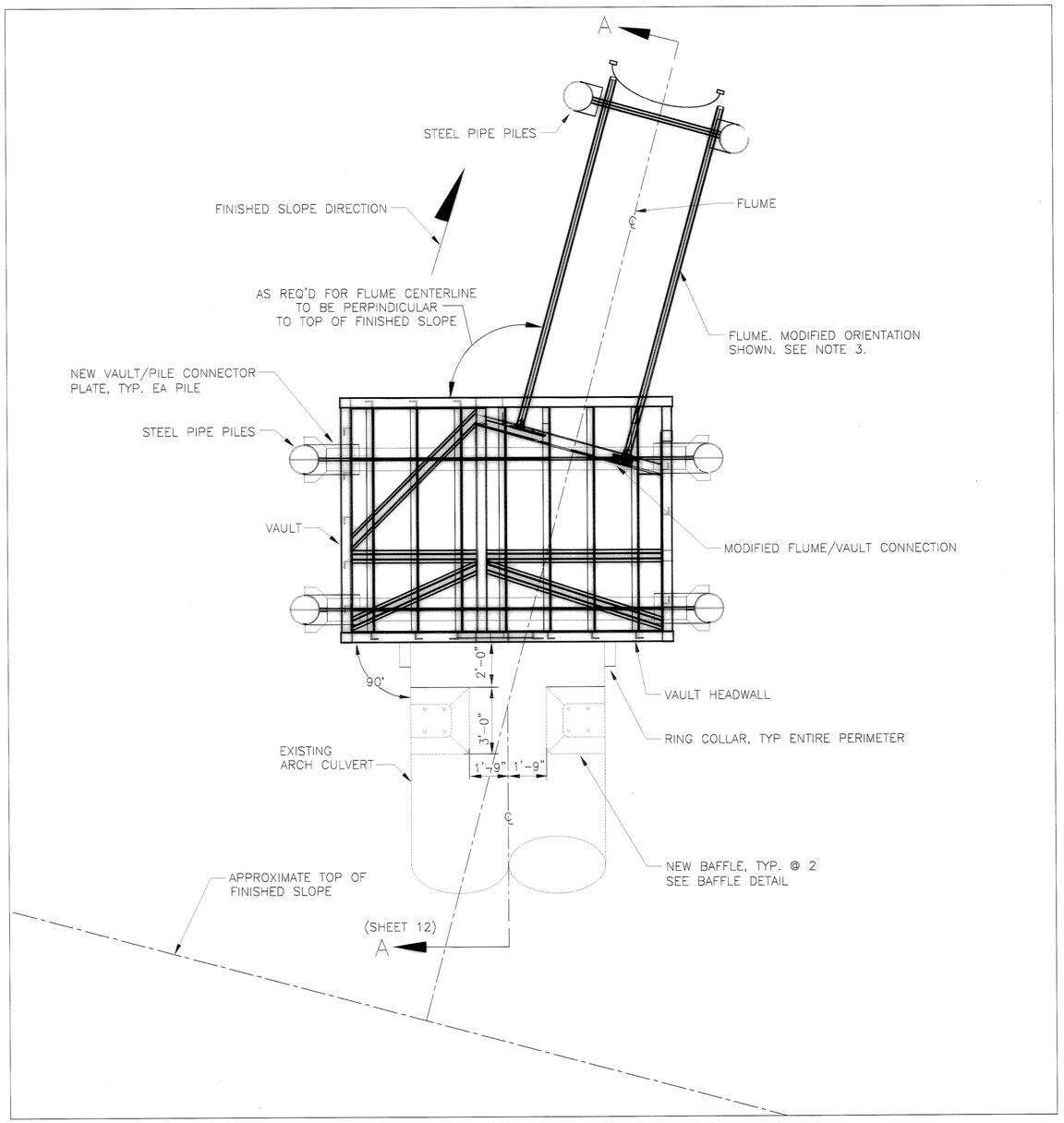
BAFFLE DETAIL

NTS

NOTES:

1. THE I.E. AT BOTTOM OF FLUME AT THE VAULT OUTLET SHALL BE 9–INCHES BELOW THE CULVERT I.E. MEASURED AT THE VAULT HEADWALL. CONTRACTOR TO FIELD VERIFY I.E. AT EXISTING OUTLET LOCATION TO ESTABLISH THE FINISHED GRADES FOR RELOCATED OUTLET AT THE NEW LOCATION.
2. EXISTING ARCH CULVERT INVERT ELEVATION IS APPROXIMATE. CONTRACTOR TO FIELD MEASURE ACTUAL INVERT ELEVATION AT EXIST. CULVERT TERMINUS AND ADJUST VAULT ELEVATIONS AT THE NEW LOCATION AS REQUIRED.
3. FLUME SHALL BE INSTALLED TO BE POSITIONED SO THAT THE FLUME CENTERLINE IN PLAN VIEW IS PERPENDICULAR TO THE TOP OF THE FINISHED SLOPE. THE VAULT HEADWALL SHALL BE POSITIONED PERPENDICULAR TO THE CULVERT CENTERLINE. CONTRACTOR TO MODIFY VAULT/FLUME CONNECTION TO PROVIDE MODIFIED FLUME ORIENTATION, SEE TECHNICAL SPECIFICATIONS.

DEFINITIONS:
B.O. = BOTTOM OF
T.O. = TOP OF
I.E. = INVERT ELEVATION
APPROX = APPROXIMATELY
TYP. = TYPICAL



DETAIL A – OUTLET PLAN

0 3 6
SCALE IN FEET

1 WAPATO CREEK OUTLET LOCATION MODIFIED. SEE SHEET D13.1.

RECORD DRAWING (FOR BASIS OF RECORD DRAWING SEE G1)

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 03/29/05
PORT ADDRESS: BLAIR WATERWAY
PORT PARCEL:

SEAL

ROBERT PHILLIPS STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER
EXPIRES 10-22-05

MARK	REVISION	BY:	APPROVED:	DATE:
1	AS CONSTRUCTED MODIFICATION	SCY	SLF	03/29/05

CONSULTANTS:
GeoEngineers
1101 FAWCETT AVENUE
SUITE 200
TACOMA, WASHINGTON 98402
(253) 383-4940

PORT OF TACOMA, P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

SLF 03/29/05
CHECKED BY – DATE

GWH 03/29/05
PROJECT ENGR – DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WAPATO CREEK OUTLET
AS CONSTRUCTED

TOWNSHIP: 20N RANGE: 3E SECTION: 1
DATUM: HORIZ: NAD83/91 VERT: POT MLLW=0.0
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: POST CONSTRUCTED

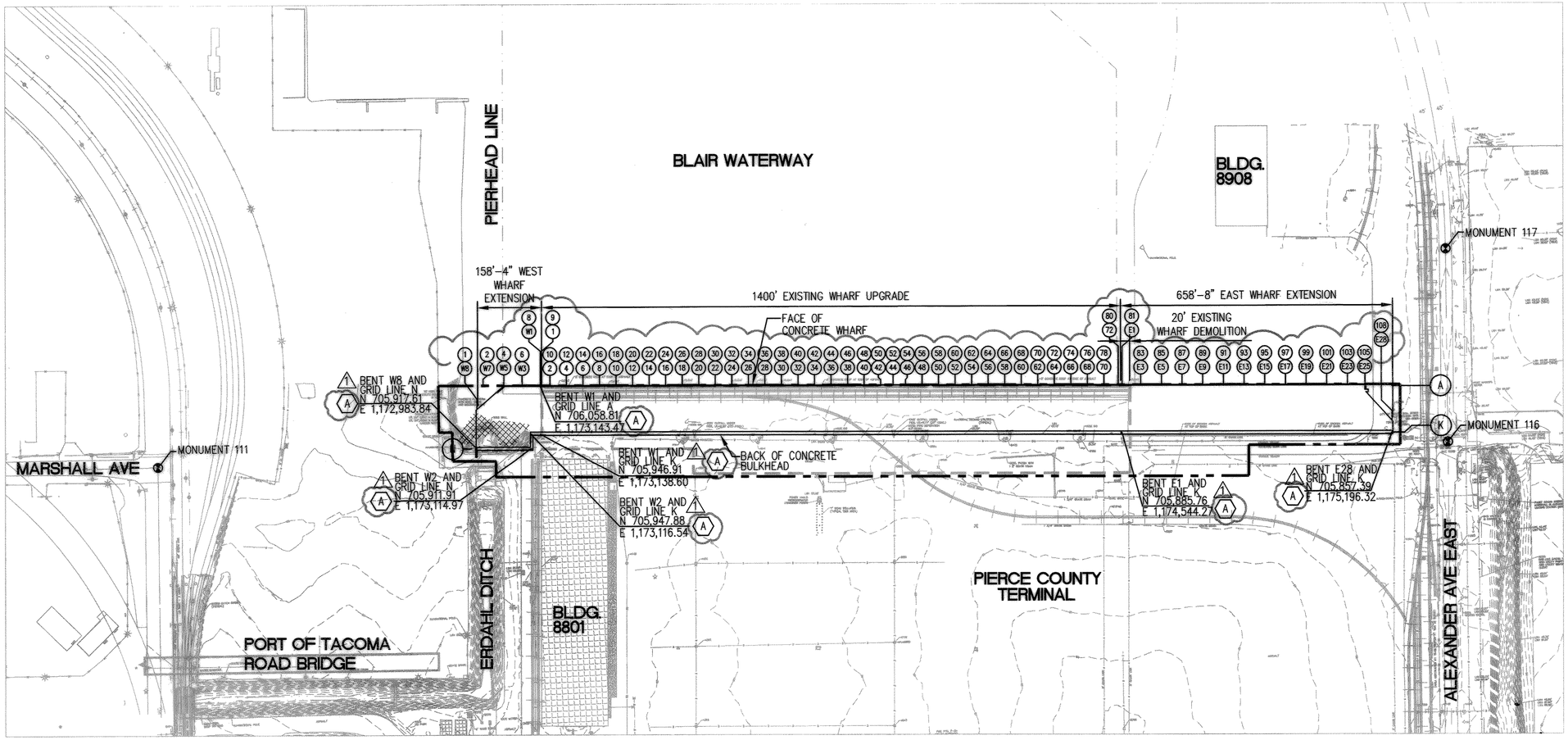
SHEET 151 OF 164

D13

EP-~~5551-17~~

6320-17

03/29/05
SLF:SCY
TACO:\0454054\14\CAD\0454054141_D13.dwg



LEGEND

- CONTRACTOR USE AREA, STAGE 1
- CONTRACTOR USE AREA, STAGE 2
- (XXX) BENT NUMBER
- SPECIAL AQUATIC SITE, SEE ERDAHL OUTFALL GRADING NOTES, SHEET C20
- MONUMENT

NOTES:

1. SEE SHEETS C2 AND C3 FOR CONSTRUCTION STAGING AND ACCESS PLANS.
2. INFORMATION SHOWN IS BASED ON AS-BUILT AND AVAILABLE RECORDS. THE CONTRACTOR IS TO VERIFY ALL SITE AND UTILITY INFORMATION, INCLUDING INVERTS, PRIOR TO CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED TO THE OWNER PRIOR TO COMMENCEMENT OF WORK.
3. REFERENCE DRAWINGS OF EXISTING WHARF ARE AVAILABLE FOR CONTRACTOR'S REVIEW AT FORD GRAPHICS, SEE SPEC SECTION 01010.
4. SEE SHEET D1 FOR DREDGING HORIZONTAL & VERTICAL CONTROL.
5. CONTRACTOR TO FIELD VERIFY RELATIONSHIP BETWEEN BENTS W1 AND 1 AND BETWEEN BENTS 72 AND E1. CONTRACTOR SHALL ALSO FIELD VERIFY ALL DIMENSIONS INDICATED AS "FIELD VERIFY" IN THE PLANS. THE CONTRACTOR SHALL SUBMIT SURVEY DATA AND SKETCHES STAMPED BY A SURVEYOR LICENSED IN THE STATE OF WASHINGTON WHICH DOCUMENTS THIS VERIFICATION WITHIN 30 DAYS OF NOTICE TO PROCEED OR PRIOR TO PILE DRIVING WHICHEVER OCCURS FIRST."

(A) REVISE COORDINATES AS SHOWN INCA DRAWING TITLED 'PILE AND PILE CAP AS-BUILT' ON BACK OF G5 ALSO REFER TO POT LETER 26 ON BACK OF G5.

HORIZONTAL DATUM:

BASIS OF BEARING:
WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE.
BASED UPON VALUES ESTABLISHED BY OTHERS AND PROVIDED TO AHBL BY THE PORT OF TACOMA. THE CONTROL MONUMENTS AND THEIR VALUES ARE AS FOLLOWS:
SURFACE BRASS DISK MONUMENT
LOCATED AT THE INTERSECTION OF PORT OF TACOMA ROAD AND MARSHALL AVENUE (MONUMENT 111)
N 705908.4396
E 1172211.3415
ELEV=17.088' SUBMITAL 01050-03 AND POT LETER 26 SEE BACK OF G5

MONUMENT IN CASE (MONUMENT NUMBER UNKNOWN)
LOCATED ON THE CENTERLINE OF MARSHALL AVENUE 790.42 FEET WEST OF THE ABOVE DESCRIBED MONUMENT.
N 705925.8369
E 1171421.1094

A LINE BETWEEN THESE TWO MONUMENTS BEARS N88°44'20" W

VERTICAL DATUM:

MEAN LOWER LOW WATER (MLLW) PER PORT OF TACOMA BENCHMARK TIDE 22.
FOUND BRASS DISK STAMPED "TIDE 22 1933" SET IN CONCRETE SIDEWALK ON THE NORTH SIDE OF AND AT THE EAST END OF EAST 11TH STREET BRIDGE OVER THE PUYALLUP RIVER.
ELEVATION = 19.51 FEET PER PORT OF TACOMA SURVEY CONTROL MAP DRAWING NO. EP-4593-2, LAST REVISION 12-12-95.

BENCHMARK:
SURFACE BRASS MONUMENT LOCATED AT THE INTERSECTION OF PORT OF TACOMA ROAD AND MARSHALL AVENUE.
ELEVATION =17.088'

N

GRAPHIC SCALE
150 0 75 150 300 600
(IN FEET)
1 inch = 150 ft.

6320-17

MARK	REVISION	BY:	APPROVED	DATE:
A	ADDENDUM 1: MOVED TEXT	BSO	SWK	8/1/03

PORT OF TACOMA
U.S.A.

kpff
Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

APPROVED

CHIEF ENGINEER - DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

SWK CHECKED BY - DATE 06/11/03
BSO PROJECT ENGR. - DATE 06/11/03

TOWNSHIP:
DATUM - HORIZ: RANGE: SECTION:
DRAWING SCALE: VERT:

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING SITE & HORIZONTAL CONTROL PLAN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

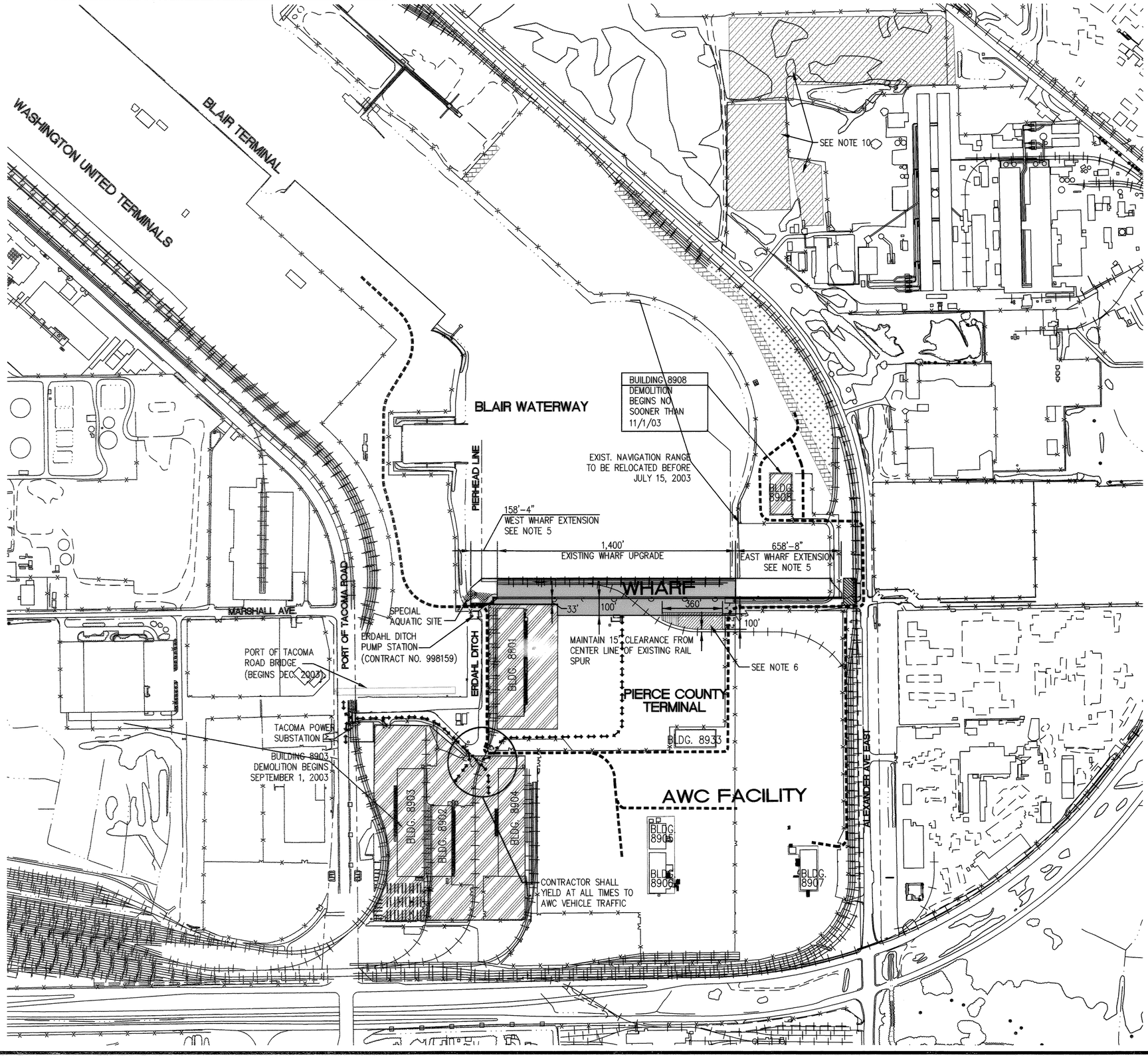
EP-5554-17

SHEET 6 OF 164
C1

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

NOTES:
JOB #
JOB NAME
FILE PATH & NAME
PLOTTED DATE & TIME
UPDATED BY
PLOT SCALE
'CTB' FILE
PLOT VIEW

V:\FINAL RECORD DRAWING MYLARS AND PDF\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972C01.DWG
FEB. 07, 2005 11:20:23 AM
RICKT
1=1
XREFS: E1972B02, stage-limits, X63-PROP, P0722xJ41b-KEY1, xemarf, 20230,



STAGE 1 NOTES:

STAGE 1: JULY 15, 2003 TO OCTOBER 31, 2003

1. EXISTING PCT BERTH CLOSED TO VESSELS JULY 15, 2003.
2. IN-WATER WORK SUBJECT TO FISHERIES WINDOW - JULY 16, 2003 TO FEB. 29, 2004.
3. AUTO WAREHOUSE COMPANY (AWC) IS ON SITE THROUGHOUT THE DURATION OF THIS STAGE. CONTRACTOR SHALL NOT IMPACT AWC VEHICLE MOVEMENTS.
4. CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH OTHER CONTRACTORS' WORKING IN THE AREA.
5. STAGE 1 WORK TO INCLUDE IN-WATER PILE DRIVING ONLY FOR WEST AND EAST WHARF EXTENSIONS. UPLAND WORK NOT ALLOWED.
6. PRE-PURCHASED STEEL SHEET PILE AND PIPE PILE STORAGE AREAS. CONTRACTOR MAY CONTINUE TO USE THIS AREA FOR STORAGE OF MATERIALS THROUGH FEBRUARY 29, 2004. SEE SHEET S89 FOR OWNER PROVIDED PILING QUANTITIES AND SCHEDULES.
7. ERDAHL DITCH PUMP STATION MODIFICATIONS BEGIN JULY 1, 2003 TO OCT. 31, 2003 (COINTRACT NO. 998159).
8. TRAFFIC CONTROL TO BE PROVIDED BY BUILDING DEMOLITION CONTRACTOR (CONTRACT NO. 998151).
9. SEE SEE SHEETS GG1-GG8 FOR ADDITIONAL REFERENCE DRAWINGS ON SITE AVAILABILITY AND OTHER CONTRACT LOCATIONS.
10. DMMP UNSUITABLE DISPOSAL SITE, SEE DREDGING DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ⚠1 ESTABLISHING AND MAINTAINING A GRAVEL ROADWAY BETWEEN ALEXANDER AVENUE EAST AND THE DISPOSAL SITE FROM NOVEMBER 1, 2003 THROUGH FEBRUARY 29, 2004. GRAVEL ROADWAY WILL BE APPROXIMATELY 1000' LONG, 12' WIDE AND SHALL BE CONSTRUCTED USING A MINIMUM 6 INCH DEPTH OF MAINTENANCE ROCK CONFORMING TO THE WSDOT STANDARD SPECIFICATIONS SECTION 9-03.9(4). THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE ROADWAY THROUGHOUT THIS TIME PERIOD TO SUPPORT HAULING OF DMMP MATERIAL AND ALSO FOR THE HAULING ACTIVITIES OF THE CONTAINER YARD AND INTERMODAL YARD CONTRACTOR (CONTRACT 998153). MAINTENANCE RESPONSIBILITIES WILL INCLUDE REGRADING ROUGH, POTHOLED OR ERODED AREAS, OBTAINING AND PLACING ADDITIONAL MAINTENANCE ROCK, AND OTHERWISE PROVIDING A SAFE AND STABLE ACCESS FOR CONSTRUCTION TRAFFIC.

LEGEND

- WHARF CONSTRUCTION/LAYDOWN BEGINS JULY 15, 2003 (CONTRACT NO. 998149)
- BUILDING DEMOLITION/LAYDOWN BEGINS AUGUST 1, 2003 EXCEPT AS NOTED (CONTRACT NO. 998151)
- STEEL PIPE PILE AND PZ-22 DELIVERY/STORAGE AREA - SEE NOTE 6 ABOVE
- AZ-13 SHEET PILE DELIVERY/STORAGE AREA. SEE NOTE 6 ABOVE.
- SPECIAL AQUATIC SITE, SEE ERDAHL OUTFALL GRADING NOTES, SHEET C20
- SHARED CONTRACTOR PARKING
- SHARED ACCESS CORRIDOR
- KAISER STOCKPILE AREA - FOR DREDGING CONTRACTOR ⚠1
- AUTO WAREHOUSING (AWC) VEHICLE ROUTE UNTIL NOVEMBER 1, 2003.
- SHARED CONTRACTOR ACCESS ROUTE

NOTE: NO IN-WATER WORK UNTIL JULY 16, 2003

N

GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 300 ft.

6320-17

MARK	REVISION	BY:	APPROVED	DATE
1	ADDENDUM 1: CHANGED NOTE 10 & LEGEND	BSO	SWK	8/1/03

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

APPROVED

CHIEF ENGINEER - DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

SWK CHECKED BY - DATE 06/11/03
MAB PROJECT ENGR - DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE:

CONTRACT NUMBER 998149
E. NUMBER E1972
PHASE RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
CONSTRUCTION STAGING & ACCESS PLAN
STAGE 1

EP-~~5564-17~~

C2

SHEET 7 OF 164

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PLOTTED DATE & TIME: JAN. 28, 2005 11:00:26 | UPDATED BY PLOT SCALE: AW RIGXT 1=1 | 'CTB' FILE: --- | PLOT VIEW:

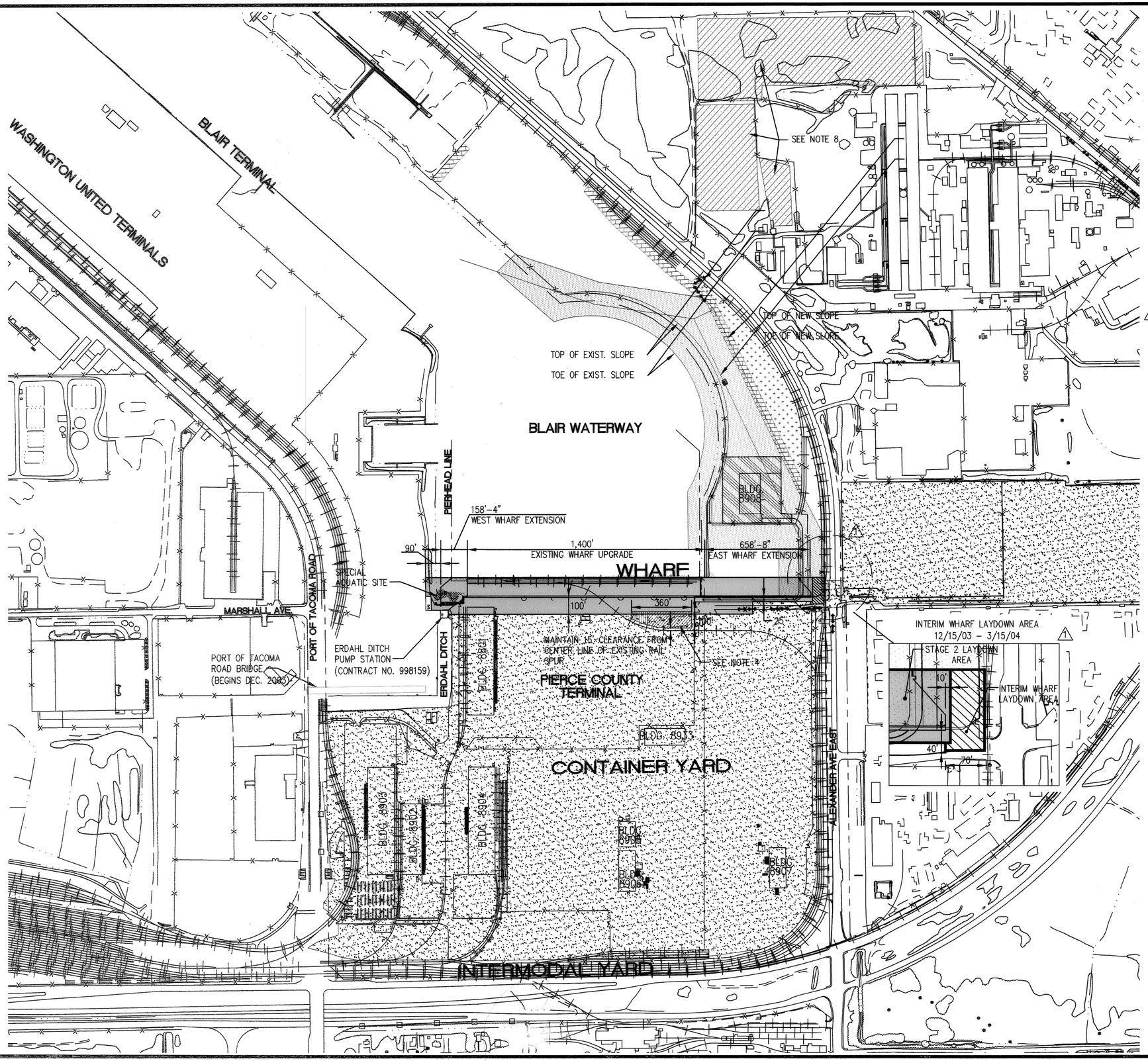
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JOB NAME: ---

JOB #: ---

XREFS: xstage, E1973802, E1973801, P0122x24TB-HDPF, xwharf,

NOTES:



STAGE 2 NOTES:

STAGE 2: NOV. 1, 2003 TO JULY 15, 2004

1. IN-WATER WORK SUBJECT TO FISHERIES WINDOW – JULY 16, 2003 TO FEB. 29, 2004.
2. CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH OTHER CONTRACTORS' WORKING IN THE AREA.
3. BUILDING CONSTRUCTION BEGINS NOV. 1, 2003. (CONTRACT NO. 998154)
4. PRE-PURCHASED STEEL SHEET PILE AND PIPE PILE STORAGE AREAS. CONTRACTOR MAY CONTINUE TO USE THIS AREA FOR STORAGE OF MATERIALS THROUGH FEBRUARY 29, 2004. SEE SHEET S89 FOR OWNER PROVIDED PILING QUANTITIES AND SCHEDULES.
5. ERDAHL DITCH PUMP STATION MODIFICATIONS ENDS OCTOBER 21, 2003 (CONTRACT NO. 998159).
6. TRAFFIC CONTROL TO BE PROVIDED BY CONTAINER YARD CONTRACTOR (CONTRACT NO. 998153).
7. SEE SHEETS GG1-GG8 FOR ADDITIONAL REFERENCE DRAWINGS ON SITE AVAILABILITY AND OTHER CONTRACT LOCATIONS.
8. DMMP UNSUITABLE DISPOSAL SITE, SEE DREDGING DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING A GRAVEL ROADWAY BETWEEN ALEXANDER AVENUE EAST AND THE DISPOSAL SITE FROM NOVEMBER 1, 2003 THROUGH FEBRUARY 29, 2004. GRAVEL ROADWAY WILL BE APPROXIMATELY 1000' LONG, 12' WIDE AND SHALL BE CONSTRUCTED USING A MINIMUM 6 INCH DEPTH OF MAINTENANCE ROCK CONFORMING TO THE WSDOT STANDARD SPECIFICATIONS SECTION 9-03.9(4). THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE ROADWAY THROUGHOUT THIS TIME PERIOD TO SUPPORT HAULING OF DMMP MATERIAL AND ALSO FOR HAULING ACTIVITIES OF THE CONTAINER YARD AND INTERMODAL YARD CONTRACTOR (CONTRACT 998153). MAINTENANCE RESPONSIBILITIES WILL INCLUDE REGRADING ROUGH, POTHOLED OR ERODED AREAS, OBTAINING AND PLACING ADDITIONAL MAINTENANCE ROCK, AND OTHERWISE PROVIDING A SAFE AND STABLE ACCESS FOR CONSTRUCTION. △1

LEGEND

- WHARF CONSTRUCTION/LAYDOWN BEGINS JULY 1, 2003 (CONTRACT NO. 998149)
- BUILDING DEMOLITION/LAYDOWN BEGINS NOVEMBER 1, 2003 (CONTRACT NO. 998151)
- STEEL PIPE PILE AND PZ-22 DELIVERY/STORAGE AREA – SEE NOTE 4 ABOVE
- AZ-13 SHEET PILE DELIVERY/STORAGE AREA. SEE NOTE 4 ABOVE.
- CONTAINER YARD, INTERMODAL YARD, & BUILDING CONSTRUCTION BEGINS OCTOBER 2, 2003 (CONTRACT NO. 998153 & 998154)
- PHASE 2 DREDGE, SEE SHEET D1 NOVEMBER 1, 2003 TO FEBRUARY 14, 2004 JULY 16, 2004 TO DECEMBER 31, 2004 (CONTRACT NO. 998149)
- SPECIAL AQUATIC SITE, SEE ERDAHL OUTFALL GRADING NOTES, SHEET C20
- SHARED CONTRACTOR PARKING
- SHARED ACCESS CORRIDOR
- KAISER STOCKPILE AREA – FOR DREDGING CONTRACTOR △1
- SHARED CONTRACTOR ACCESS ROUTE

N

GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 300ft.

6320-17

MARK	REVISION	BY	APPROVED	DATE
△1	ADDENDUM 1: REV. NOTE 8, LEGEND, LAYDOWN	BSO	SWK	8/7/03

PORT OF TACOMA
USA
PORT OF TACOMA P.O. BOX 1837
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kpff
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(206) 622-5822 Fax (206) 622-8130

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

SWK 06/11/03 CHECKED BY – DATE
MAB 06/11/03 PROJECT ENGR – DATE

TOWNSHIP: RANGE:
DATUM: HORIZ: SECTION:
DRAWING SCALE: VERT:

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING CONSTRUCTION STAGING & ACCESS PLAN STAGE 2

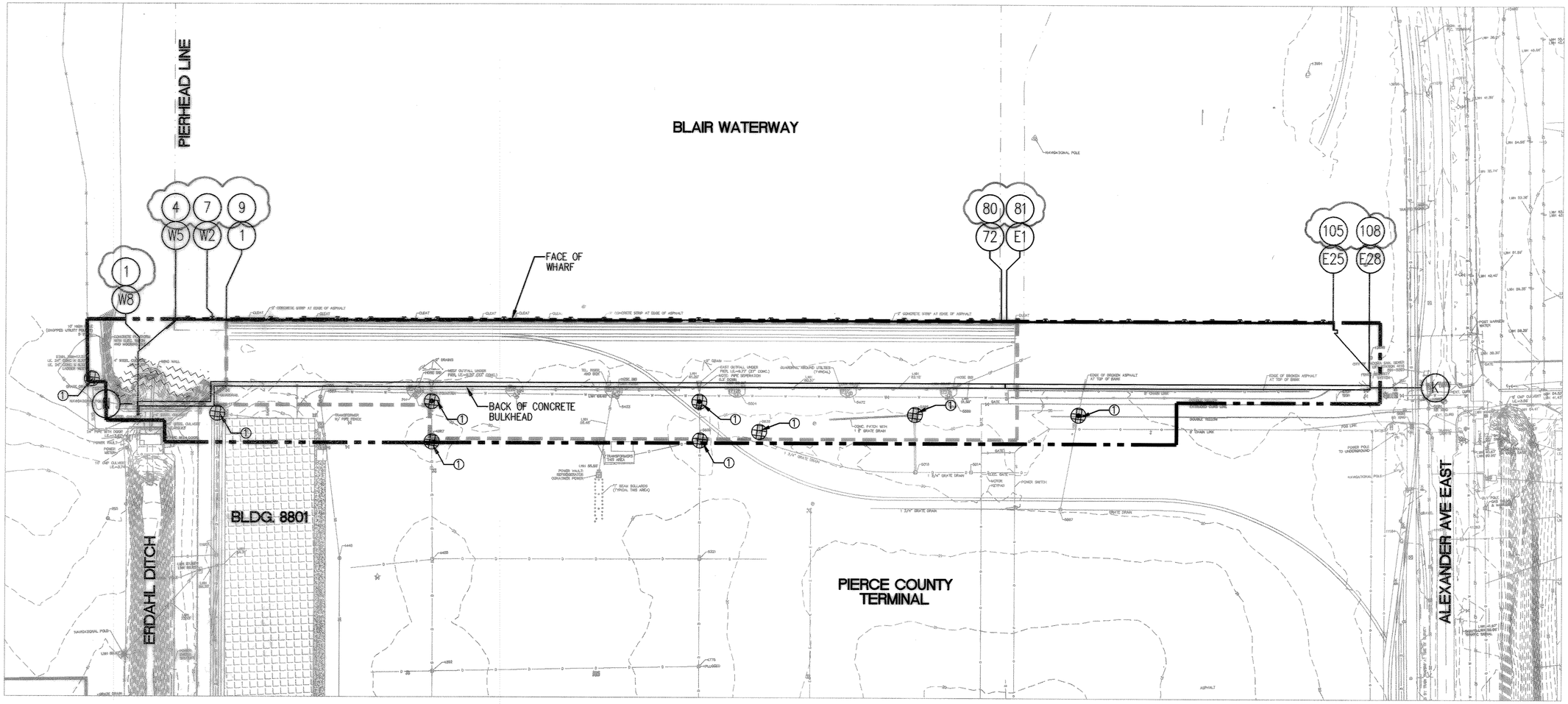
EP-~~555-17~~

SHEET 8 OF 164

C3

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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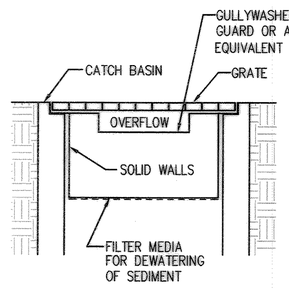


LEGEND

- CONTRACTOR USE AREA, STAGE 1
- CONTRACTOR USE AREA, STAGE 2
- (XXX) BENT NUMBER
- SPECIAL AQUATIC SITE, SEE ERDAHL OUTFALL GRADING NOTES, SHEET C20
- CATCH BASIN FILTER AT PROPOSED CATCH BASIN
- CATCH BASIN FILTER AT EXISTING CATCH BASIN

CONSTRUCTION NOTES:

(1) INSTALL CATCH BASIN FILTER PER DETAIL 1/C4



CATCH BASIN FILTER DETAIL 1/C4
SCALE: NTS

CATCH BASIN FILTER MAINTENANCE STANDARDS:

1. ANY ACCUMULATED SEDIMENT ON OR AROUND THE FILTER FABRIC SHALL BE REMOVED IMMEDIATELY. SEDIMENT SHALL NOT BE REMOVED WITH WATER, AND ALL SEDIMENT MUST BE DISPOSED OF AS FILL ON-SITE OR HAULED AND DISPOSED OF OFF-SITE AT A LANDFILL PERMITTED TO ACCEPT SUCH MATERIAL.
2. ANY SEDIMENT IN THE CATCH BASIN INSERT SHALL BE REMOVED WHEN THE SEDIMENT HAS FILLED ONE THIRD OF THE AVAILABLE STORAGE. THE FILTER MEDIA FOR THE INSERT SHALL BE CLEANED OR REPLACED AT LEAST MONTHLY.
3. REGULAR MAINTENANCE IS CRITICAL FOR CATCH BASIN PROTECTION. UNLIKE MANY FORMS OF PROTECTION THAT FAIL GRADUALLY, CATCH BASIN PROTECTION WILL FAIL SUDDENLY AND COMPLETELY IF NOT MAINTAINED PROPERLY.

EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH SPECIFICATION SECTION 02270.
2. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
3. ON SITE EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO WORK BEGINNING AND SHALL BE MAINTAINED DURING AND AFTER THE FILLING AND GRADING OPERATIONS TO THE APPROVAL OF THE BUILDING OFFICIAL.
4. IF CONSTRUCTION OCCURS DURING DRY WEATHER PERIODS, DUST FROM CONSTRUCTION SHALL BE MINIMIZED THROUGH USE OF GOOD OPERATIONAL TECHNIQUES SUCH AS WATERING OF EXPOSED AREAS.
5. CALL FOR INSPECTION AT 253-591-5004 UPON COMPLETION OF STAKING OF CLEARING LIMITS, INSTALLATION OF EROSION CONTROL AND PRIOR TO SITE GRADING AND REMOVAL OF EROSION CONTROL DEVICES.
6. THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED.
7. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
8. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
9. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY OR AS DIRECTED BY THE CITY OF TACOMA TO ENSURE THEIR CONTINUED
10. FUNCTIONING.

ALL NECESSARY FACILITIES SHALL BE MAINTAINED ON-SITE TO PREVENT DEBRIS, DUST AND MUD FROM ACCUMULATING ON THE PUBLIC RIGHT-OF-WAY.

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

N

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

PORT OF TACOMA P.O. BOX 1837
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MARK	REVISION	BY	APPROVED	DATE
A	ADDENDUM 1: DELETED NOTE 11	BSD	SWK	8/11/03

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
DRAWN: SWK CHECKED BY – DATE 06/11/03
PORT PARCEL: BSD PROJECT ENGR.– DATE 06/11/03

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EROSION CONTROL PLAN

EP-~~555-17~~

SHEET 9 OF 164

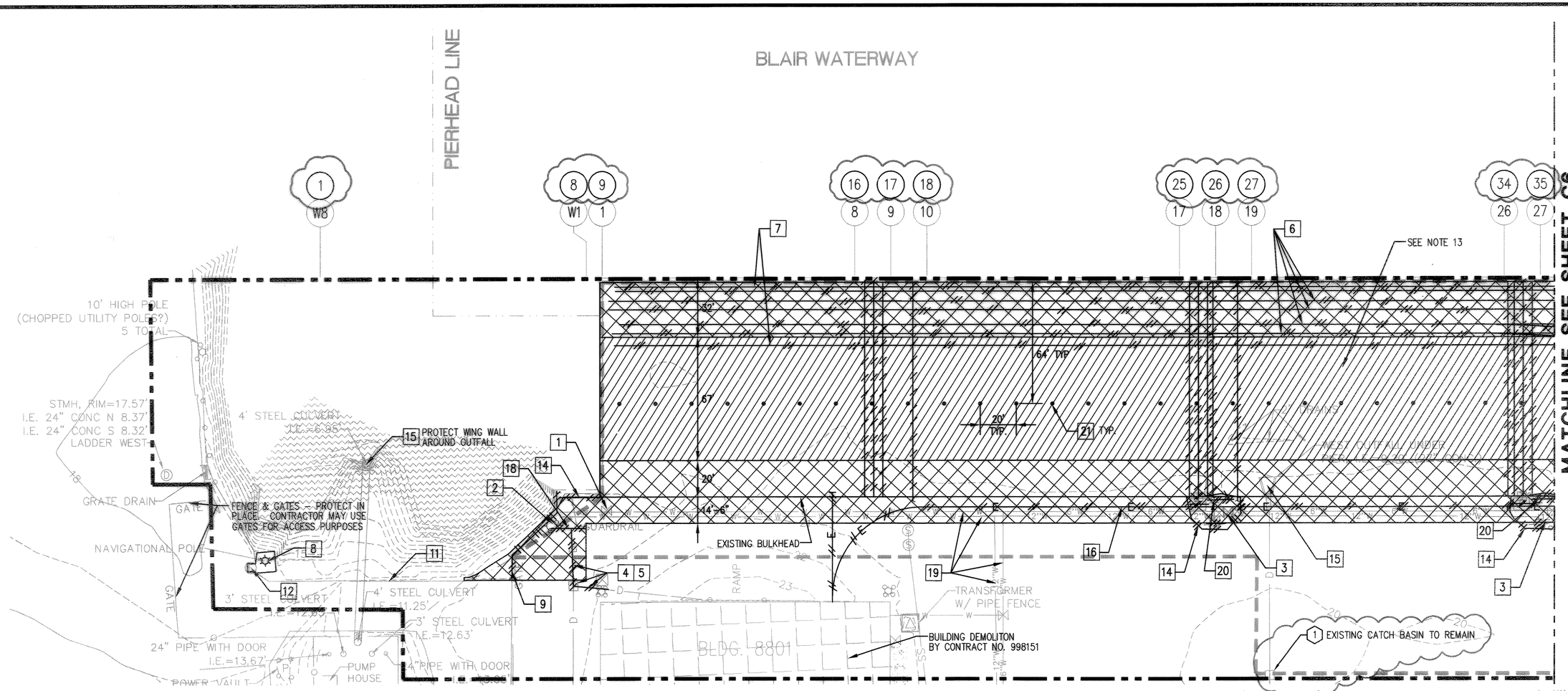
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TOWNSHIP: RANGE: SECTION:
DATUM - HORIZ: VERT:
DRAWING SCALE:

CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

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NOTES:



LEGEND

- W — WATER LINE
- SS — SANITARY SEWER
- D — STORM DRAIN
- E — ELECTRICAL
- OP — OVERHEAD POWER
- P — POWER VAULT
- T — TELEPHONE VAULT
- CATCH BASIN
- D — STORM DRAIN MANHOLE
- S — SANITARY SEWER MANHOLE
- STORM DRAIN OUTFALL
- GATE VALVE
- FIRE HYDRANT
- LIGHT POLE
- CHAINLINK FENCE
- SIGN
- EXISTING WHARF DECK DRAINS, TO REMAIN
- 20 — EXISTING CONTOURS

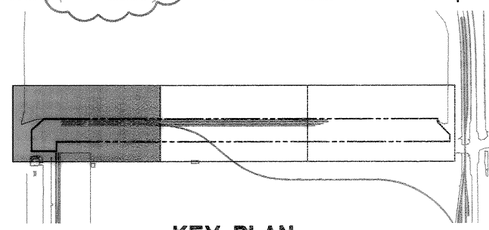
- ASPHALT REMOVAL OR RECYCLE. SEE DEMOLITION NOTE 2. EXISTING BASE COURSE TO REMAIN IN PLACE.
- ASPHALT & BASE COURSE REMOVAL OR RECYCLE. SEE DEMOLITION NOTE 2.
- SPECIAL AQUATIC SITE, SEE ERDAHL OUTFALL GRADING NOTES, SHEET C20
- ABANDON UTILITY, SEE NOTE 12
- ITEM TO BE DEMOLISHED
- CONTRACTOR USE AREA, STAGE 1
- CONTRACTOR USE AREA, STAGE 2
- XXX — BENT NUMBER

DEMOLITION ITEMS:

1. DEMOLISH VALVE, VALVE BOX AND WATER LINE. CUT AND CAP WATER LINE AT MAIN AND PLACE CONCRETE THRUST BLOCKING.
2. DEMOLISH FIRE HYDRANT.
3. DEMOLISH UTILITY ISLAND. SEE DETAIL 1/C7
4. DEMOLISH CATCH BASIN.
5. DEMOLISH STORM DRAIN PIPE.
6. DEMOLISH RAILROAD TRACKS
7. DEMOLISH CRANE RAIL – SEE SHEET C16, DETAIL 1 FOR CRANE BEAM DEMOLITION.
8. NAVIGATION POLE – PROTECT IN PLACE.
9. DEMOLISH CHAINLINK FENCE & GATES.
10. DEMOLISH SIGN.
11. CONCRETE ECOLOGY BLOCKS – TO BE SALVAGED DURING STAGE 2. ⚠1
12. PROTECT ELECTRICAL VAULT/MANHOLE & CONDUIT.
13. DEMOLISH CURB.
14. DEMOLISH GUARD RAIL.
15. LOCATE & PROTECT EXISTING CULVERT AND OUTFALL.
16. DEMOLISH ELECTRICAL CONDUIT
17. OVERHEAD POWER & LIGHT POLE TO BE REMOVED.
18. DEMOLISH APPROX. 30 LF 6" CAST IRON WATER LINE. SEE UTILITY PLANS FOR NEW CONNECTION.
19. WATER LINE – PROTECT IN PLACE.
20. DEMOLISH LIGHT POLE. REFER TO SPECIFICATIONS FOR COORDINATION REQUIREMENTS.
21. SURFACE WHARF DECK DRAIN TO REMAIN, TYP. CUT TOP OF EXISTING DECK DRAINS TO ELEV. 20.84.
22. DEMOLISH APPROX. 169 LF 6" CAST IRON WATER LINE. SEE UTILITIY PLANS FOR LOCATION.

DEMOLITION NOTES:

1. EXISTING WHARF DRAWINGS ARE AVAILABLE FOR CONTRACTOR'S REVIEW AT FORD GRAPHICS, SEE SPEC SECTION 01010.
2. ASPHALT AND BASE MATERIAL IN THESE AREAS MAY BE PROCESSED AND RE-USED AS BASE COURSE. SEE SPECIFICATIONS SECTIONS 02230 AND 02965 AND DRAWINGS C20 THROUGH C22, FOR LIMITATIONS AND CRITERIA IF MATERIAL IS RE-USED. MATERIAL FOR RE-USE SHALL BE STOCKPILED WITHIN CONTRACTOR LAYDOWN AREA. EXCESS MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED AWAY FROM THE SITE AND ON PROPERTY NOT OWNED BY THE PORT OF TACOMA. ⚠1
3. SEE SHEETS C5 TO C19 FOR EXISTING WHARF STRUCTURE DEMOLITION.
4. SEE SHEETS C2 & C3 FOR CONTRACTOR USE AREAS, STAGE 1 & 2.
5. THERE ARE NUMEROUS EXISTING SUBSURFACE WHARF DECK DRAINS. PROTECT IN PLACE. SEE UTILITY PLANS FOR ADDITIONAL INFORMATION.
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13. SEE SPECIFICATIONS FOR LEAD PAINT REMOVAL REQUIREMENTS.
14. ANY DAMAGE TO EXISTING STRUCTURE OR UTILITIES SHALL BE REPAIRED OR REPLACED AT NO COST TO THE ENGINEER.



KEY PLAN

SCALE: N.T.S.



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

6320-17

MARK	REVISION	BY:	APPROVED	DATE:
A	ADDENDUM 1: EDITED DEMO ITEM 11 & NOTE 2	BSO	SWK	8/1/03

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APPROVED

CHIEF ENGINEER – DATE

SWK CHECKED BY – DATE 06/11/03
BSO PROJECT ENGR. – DATE 06/11/03

DRAWING DATE: 06/17/03
PORT ADDRESS:
PORT PARCEL:

TOWNSHIP: RANGE:
DATUM: HORIZ SECTION:
VERT:
DRAWING SCALE:

CONTRACT NUMBER: 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING EXISTING WHARF CIVIL DEMOLITION

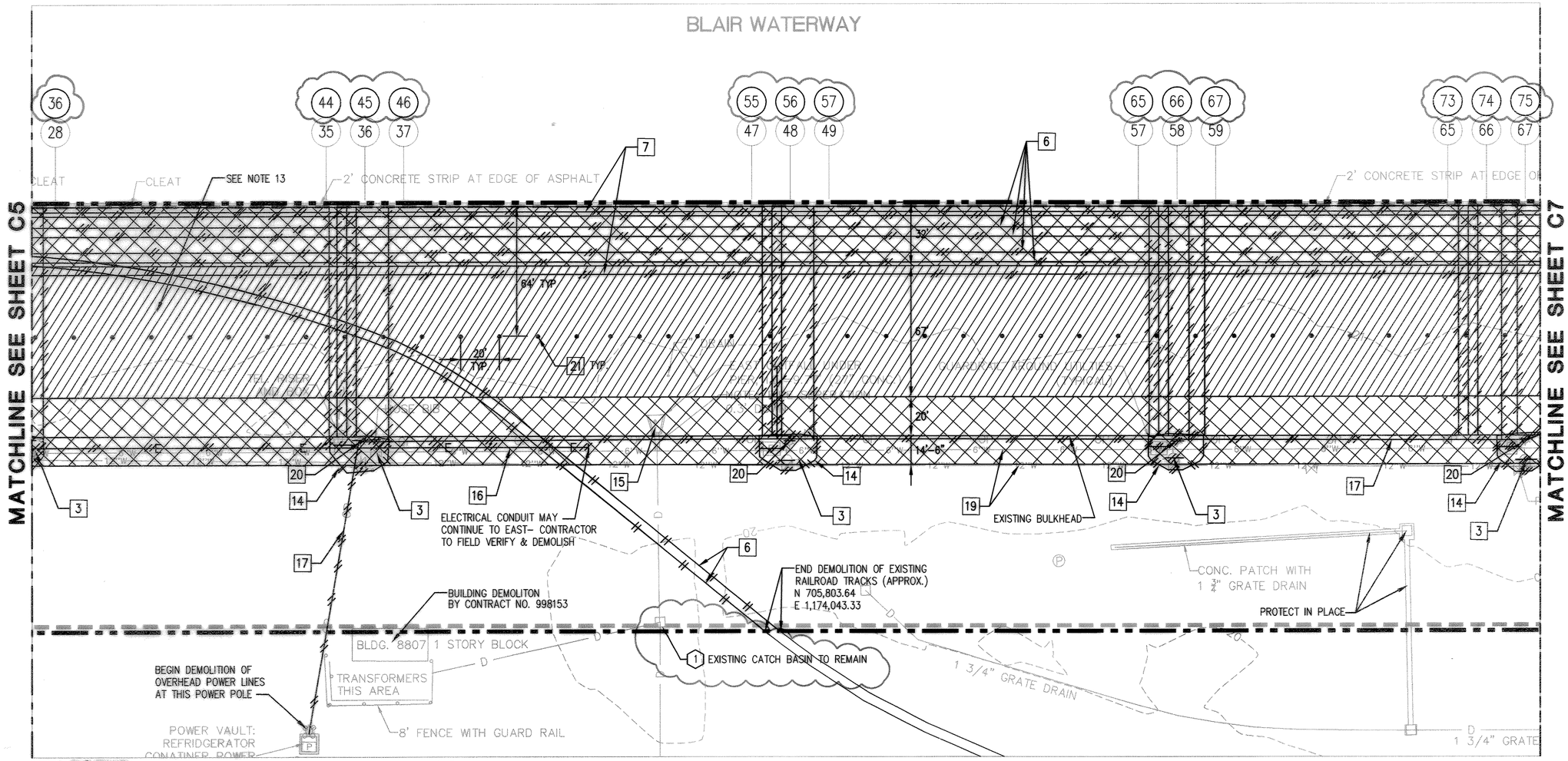
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C5

EP-~~555-17~~

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

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NOTES:



LEGEND

- W — WATER LINE
- SS — SANITARY SEWER
- D — STORM DRAIN
- E — ELECTRICAL
- OP — OVERHEAD POWER
- P — POWER VAULT
- T — TELEPHONE VAULT
- CATCH BASIN
- D — STORM DRAIN MANHOLE
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- STORM DRAIN OUTFALL
- GATE VALVE
- FIRE HYDRANT
- LIGHT POLE
- CHAINLINK FENCE
- SIGN
- EXISTING WHARF DECK DRAINS, TO REMAIN
- 20 — EXISTING CONTOURS

- ASPHALT REMOVAL OR RECYCLE. SEE DEMOLITION NOTE 2. EXISTING BASE COURSE TO REMAIN IN PLACE.
- ASPHALT & BASE COURSE REMOVAL OR RECYCLE. SEE DEMOLITION NOTE 2.
- SPECIAL AQUATIC SITE, SEE ERDAHL OUTFALL GRADING NOTES, SHEET C20
- ABANDON UTILITY, SEE NOTE 12
- ITEM TO BE DEMOLISHED
- CONTRACTOR USE AREA, STAGE 1
- CONTRACTOR USE AREA, STAGE 2
- XXX — BENT NUMBER

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19. WATER LINE – PROTECT IN PLACE.
20. DEMOLISH LIGHT POLE. REFER TO SPECIFICATIONS FOR COORDINATION REQUIREMENTS.
21. SURFACE WHARF DECK DRAIN TO REMAIN, TYP. CUT TOP OF EXISTING DECK DRAINS TO ELEV. 20.84.
22. DEMOLISH APPROX. 169 LF 6" CAST IRON WATER LINE. SEE UTILITIY PLANS FOR LOCATION.

KEY PLAN

SCALE: N.T.S.

DEMOLITION NOTES:

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3. SEE SHEETS C5 TO C19 FOR EXISTING WHARF STRUCTURE DEMOLITION.
4. SEE SHEETS C2 & C3 FOR CONTRACTOR USE AREAS, STAGE 1 & 2.
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13. SEE SPECIFICATIONS FOR LEAD PAINT REMOVAL REQUIREMENTS.
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N

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

MARK	REVISION	BY:	APPROVED	DATE:
1	ADDENDUM 1: EDITED DEMO ITEM 11 & NOTE 2	BSO	SWK	8/1/03

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

SWK CHECKED BY – DATE 06/11/03
BSO PROJECT ENGR – DATE 06/11/03

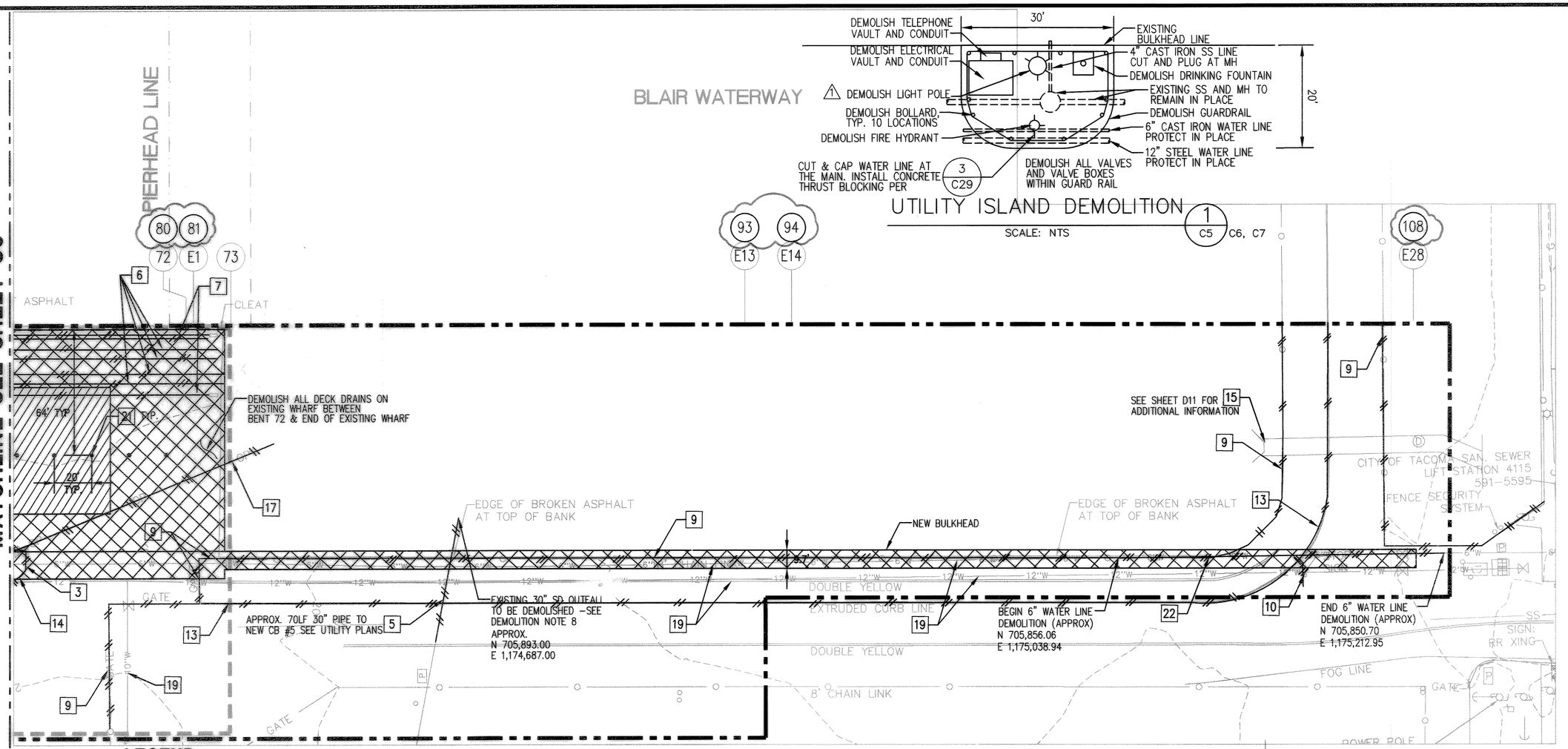
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF CIVIL DEMOLITION

SHEET 11 OF 164
C6
EP 655-17

CONTRACT NUMBER 998149
E-NUMBER E1972
PHASE: RECORD DOCUMENTS

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ. VERT:
DRAWING SCALE:

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UPDATED BY: RICK1
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JOB #: ---
NOTES:
XREFS: xwtr_mkt_stage-limits, xdemodepend, xdemo, P0722x34TB-KPFF, kevindo, 202328,



UTILITY ISLAND DEMOLITION

SCALE: NTS

1 / C5 — C6, C7

LEGEND

- W — WATER LINE
- SS — SANITARY SEWER
- D — STORM DRAIN
- E — ELECTRICAL
- OP — OVERHEAD POWER
- P — POWER VAULT
- T — TELEPHONE VAULT
- CATCH BASIN
- (D) — STORM DRAIN MANHOLE
- (S) — SANITARY SEWER MANHOLE
- STORM DRAIN OUTFALL
- GATE VALVE
- FIRE HYDRANT
- LIGHT POLE
- CHAINLINK FENCE
- SIGN
- EXISTING WHARF DECK DRAINS, TO REMAIN
- 20 — EXISTING CONTOURS

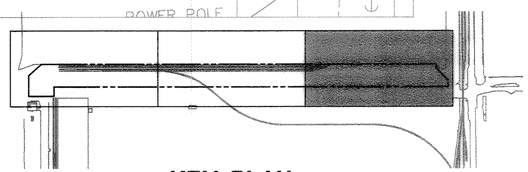
- ASPHALT REMOVAL OR RECYCLE. SEE DEMOLITION NOTE 2. EXISTING BASE COURSE TO REMAIN IN PLACE.
- ASPHALT & BASE COURSE REMOVAL OR RECYCLE. SEE DEMOLITION NOTE 2.
- SPECIAL AQUATIC SITE, SEE ERDAHL OUTFALL GRADING NOTES, SHEET C20
- ABANDON UTILITY, SEE NOTE 12
- ITEM TO BE DEMOLISHED
- CONTRACTOR USE AREA, STAGE 1
- CONTRACTOR USE AREA, STAGE 2
- XXX — BENT NUMBER

DEMOLITION ITEMS:

1. DEMOLISH VALVE, VALVE BOX AND WATER LINE. CUT AND CAP WATER LINE AT MAIN AND PLACE CONCRETE THRUST BLOCKING.
2. DEMOLISH FIRE HYDRANT.
3. DEMOLISH UTILITY ISLAND. SEE DETAIL 1 / C7
4. DEMOLISH CATCH BASIN.
5. DEMOLISH STORM DRAIN PIPE.
6. DEMOLISH RAILROAD TRACKS
7. DEMOLISH CRANE RAIL – SEE SHEET C16, DETAIL 1 FOR CRANE BEAM DEMOLITION.
8. NAVIGATION POLE – PROTECT IN PLACE.
9. DEMOLISH CHAINLINK FENCE & GATES.
10. DEMOLISH SIGN.
11. CONCRETE ECOLOGY BLOCKS – TO BE SALVAGED DURING STAGE 2.
12. PROTECT ELECTRICAL VAULT/MANHOLE & CONDUIT.
13. DEMOLISH CURB.
14. DEMOLISH GUARD RAIL.
15. LOCATE & PROTECT EXISTING CULVERT AND OUTFALL.
16. DEMOLISH ELECTRICAL CONDUIT
17. OVERHEAD POWER & LIGHT POLE TO BE REMOVED.
18. DEMOLISH APPROX. 30 LF 6" CAST IRON WATER LINE. SEE UTILITY PLANS FOR NEW CONNECTION.
19. WATER LINE – PROTECT IN PLACE.
20. DEMOLISH LIGHT POLE. REFER TO SPECIFICATIONS FOR COORDINATION REQUIREMENTS.
21. SURFACE WHARF DECK DRAIN TO REMAIN, TYP. CUT TOP OF EXISTING DECK DRAINS TO ELEV. 20.84.
22. DEMOLISH APPROX. 169 LF 6" CAST IRON WATER LINE. SEE UTILITY PLANS FOR LOCATION.

DEMOLITION NOTES:

1. EXISTING WHARF DRAWINGS ARE AVAILABLE FOR CONTRACTOR'S REVIEW AT FORD GRAPHICS, SEE SPEC SECTION 01010.
2. ASPHALT AND BASE MATERIAL IN THESE AREAS MAY BE PROCESSED AND RE-USED AS BASE COURSE. SEE SPECIFICATIONS SECTIONS 02230 AND 02965 AND DRAWINGS C20 THROUGH C22, FOR LIMITATIONS AND CRITERIA IF MATERIAL IS RE-USED. MATERIAL FOR RE-USE SHALL BE STOCKPILED WITHIN CONTRACTOR LAYDOWN AREA. EXCESS MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED AWAY FROM THE SITE AND ON PROPERTY NOT OWNED BY THE PORT OF TACOMA.
3. SEE SHEETS C5 TO C19 FOR EXISTING WHARF STRUCTURE DEMOLITION.
4. SEE SHEETS C2 & C3 FOR CONTRACTOR USE AREAS, STAGE 1 & 2.
5. THERE ARE NUMEROUS EXISTING SUBSURFACE WHARF DECK DRAINS. PROTECT IN PLACE. SEE UTILITY PLANS FOR ADDITIONAL INFORMATION.
6. EXCEPT THOSE NOTED TO REMAIN, THE CONTRACTOR SHALL CUT OFF THE TOP 5" OF EXISTING SURFACE WHARF DECK DRAINS AND PLUG WITH 4" GALVANIZED CAST IRON CAP.
7. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER IN-SERVICE LINES NOT OF RECORD OR SHOWN ON THESE PLANS.
8. THE CONTRACTOR SHALL PROVIDE PUMPS AND PIPING OR OTHER TEMPORARY MEANS OF MAINTAINING STORMWATER FLOW TO THE WATERWAY, DURING CONSTRUCTION OF NEW OUTFALL, AND DEMOLITION OF EXISTING OUTFALL.
9. DEMOLITION CALL-OUTS ARE REPRESENTATIVE OF WHAT IS TO BE DONE, NOT AN ITEMIZED ACCOUNTING FOR EACH PIPE, CB, MH, FENCE, ETC. THAT IS TO BE DEMOLISHED, REMOVED AND DISPOSED OF.
10. NO DEMOLITION MATERIALS OR CONSTRUCTION DEBRIS SHALL BE ALLOWED TO ENTER BLAIR WATERWAY. THE CONTRACTOR SHALL REMOVE DAILY ALL FLOATING DEMOLITION DEBRIS FROM THE WATER PRIOR TO NIGHTTIME SHUTDOWN OF THE PROJECT.
11. DEMOLITION NOTES AND DEMOLITION ITEMS DO NOT APPLY TO ALL DEMOLITION SHEETS.
12. CONTRACTOR SHALL DEMOLISH ALL EXISTING UTILITIES VISIBLE ON EXISTING WHARF'S SURFACE & BENEATH EXISTING WHARF. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING WHARF UTILITIES TO BE DEMOLISHED. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
13. SEE SPECIFICATIONS FOR LEAD PAINT REMOVAL REQUIREMENTS.
14. ANY DAMAGE TO EXISTING STRUCTURE OR UTILITIES SHALL BE REPAIRED OR REPLACED AT NO COST TO THE ENGINEER.



KEY PLAN

SCALE: N.T.S.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

N

6320-17

MARK	REVISION	BY	APPROVED	DATE
A	ADDENDUM 1: EDITED ITEM 11, NOTE 2, DET. 1	BSO	SWK	8/1/03

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

BSO PROJECT ENGR. – DATE 06/11/03
SWK CHECKED BY – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE:

CONTRACT NUMBER 998149
E. NUMBER E1972
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

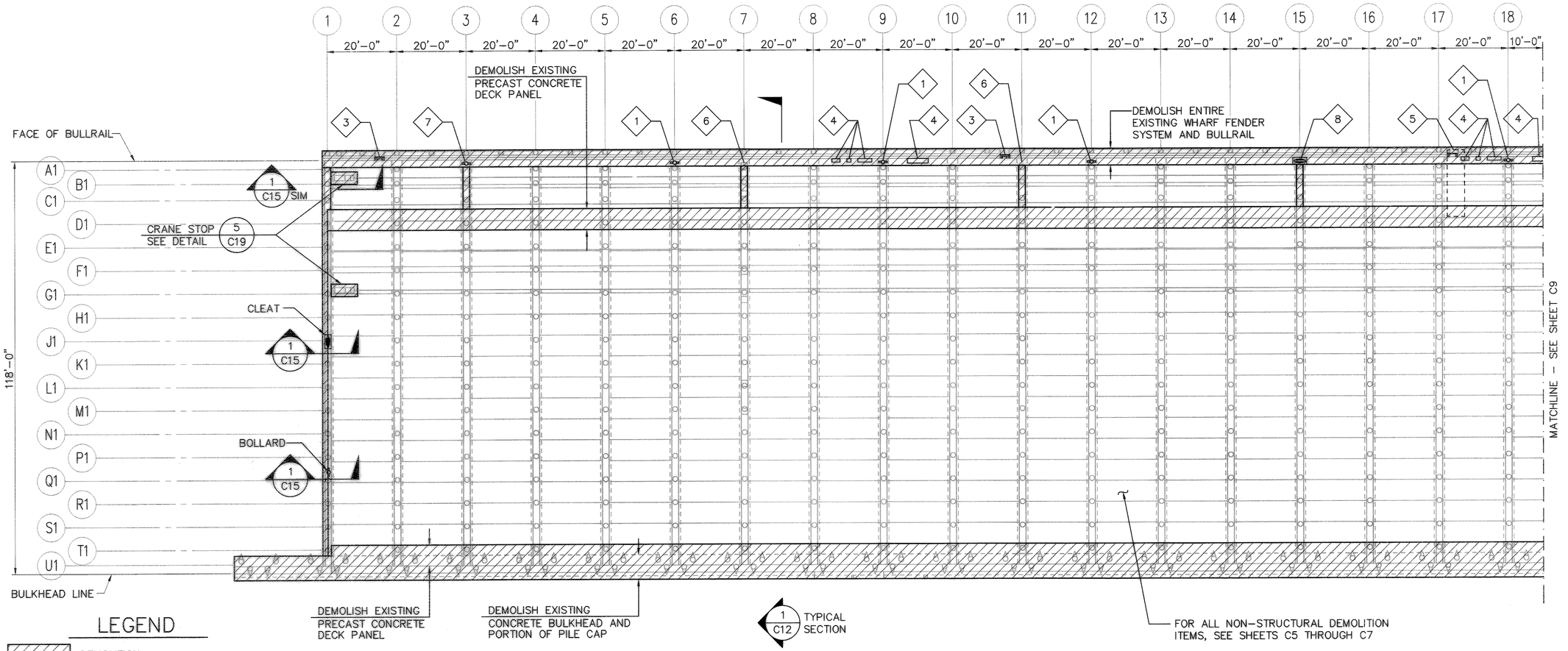
PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING EXISTING WHARF CIVIL DEMOLITION

EP-~~5551-17~~

C7

SHEET 12 OF 164

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PLOT VIEW:
UPDATED BY: RICKT
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JOB NAME:
JOB #:
NOTES:
XREFS: xatr_mAt, xdemo, stage-limits, xdemolegend, PDT22x34TB-xOFF, keymap, 20232B,



LEGEND

- DEMOLITION
- EXISTING BOLLARD
- EXISTING CLEAT
- EXISTING LADDER
- EXISTING UTILITY VAULTS
- 1 — EXISTING BOLLARD DEMOLITION, SEE 2 C18 AND 5 C18
- 2 — EXISTING CLEAT DEMOLITION, SEE 3 C18 AND 6 C18
- 3 — EXISTING LADDER DEMOLITION, SEE 3 C19 AND 4 C19
- 4 — EXISTING UTILITY VAULT DEMOLITION, SEE 5 C17
- 5 — EXISTING CATWALK DEMOLITION, SEE 1 C19 AND 2 C19
- 6 — EXISTING PILE CAP DEMOLITION FOR BOLLARD, SEE 1 C18 AND 4 C18
- 7 — EXISTING BOLLARD DEMOLITION AND PARTIAL EXISTING PILE CAP DEMOLITION FOR BOLLARD, SEE 2 C18 AND 5 C18
- 8 — EXISTING CLEAT DEMOLITION AND PARTIAL EXISTING PILE CAP DEMOLITION FOR BOLLARD, SEE 3 C18 AND 6 C18

EXISTING WHARF STRUCTURAL DEMOLITION PLAN

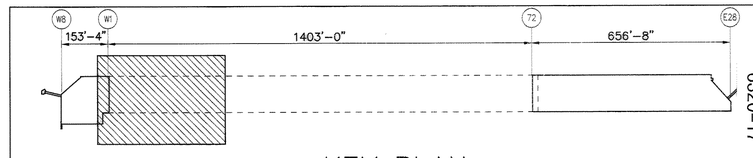
SCALE: 1/16"= 1'-0"

1 / - N

NOTES:

1. CONTRACTOR SHALL EXAMINE THE SITE PRIOR TO BID TO DETERMINE THE EXTENT AND DETAILS OF ALL ITEMS NOTED FOR DEMOLITION.
2. SEE THE CIVIL DRAWINGS C5 THROUGH C7 FOR THE EXTENT OF DEMOLITION OF EXISTING AC PAVING, BALLAST, RAILS AND WATER PIPES, TELEPHONE LINES EMBEDDED IN BALLAST.
3. DEMOLISH THE ENTIRE FENDER SYSTEM NEAR TO GRID LINE (A1), INCLUDING TIMBER PILES, RUBBER FENDER, TIMBER BEAMS, LADDERS, CATWALKS AND THE METAL ENCLOSURES FOR THE WATER, TELEPHONE AND ELECTRICAL SERVICES RECESSED IN THE CONCRETE BULLRAIL. SEE THE CIVIL DRAWINGS FOR THE EXTENT OF DEMOLITION OF THE EXISTING WATER LINES, ELECTRICAL AND TELEPHONE LINES AT BULLRAIL.
4. DEMOLISH THE EXISTING BROKEN CONCRETE PRESTRESSED PILES. THE LENGTHS OF EXISTING BROKEN PILES VARY FROM 2 TO 25 FT. THEY ARE MOSTLY LOCATED ON THE BANK IN THE VICINITY OF THE BULKHEAD. TOTAL LENGTH IS APPROXIMATELY 2500 LINEAR FEET.
5. CONTRACTOR SHALL PROTECT ALL PARTS OF WHARF THAT IS NOT SHOWN ON THESE DRAWINGS TO BE DEMOLISHED FROM ANY DAMAGE. ANY DAMAGE SHALL BE REPLACED IN KIND AT NO COST TO THE ENGINEER OR OWNER.
6. **CONTRACTOR SHALL PREVENT ANY DEMOLITION MATERIALS OR DEBRIS FROM ENTERING THE WATERWAY.**

1 7. BULKHEAD REMOVAL AND REPLACEMENT SHALL BE PHASED SUCH THAT 55 LINEAL FEET OF EVERY 250 LINEAL FEET OF EXISTING BULKHEAD REMOVED SHALL STAY IN PLACE UNTIL 55 LINEAL FEET OF NEW BULKHEAD IS INSTALLED OVER THE SAME 250 FOOT LENGTH. THE 55 FOOT LENGTHS SHALL BE CENTERED ON 3 BENT LINES. THE CONTRACTOR SHALL SUBMIT A BULKHEAD CONSTRUCTION SEQUENCE PLAN FOR APPROVAL WHICH SHOWS HOW THIS PHASED CONSTRUCTION WILL OCCUR.



KEY PLAN

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

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MARK	REVISION	BY	APPROVED	DATE
A	ADDENDUM 1: ADDED NOTE 7	MB	RKJ	8/1/03

APPROVED
CHIEF ENGINEER - DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	CHECKED BY	06/11/03
ML	PROJECT ENGR.	06/11/03

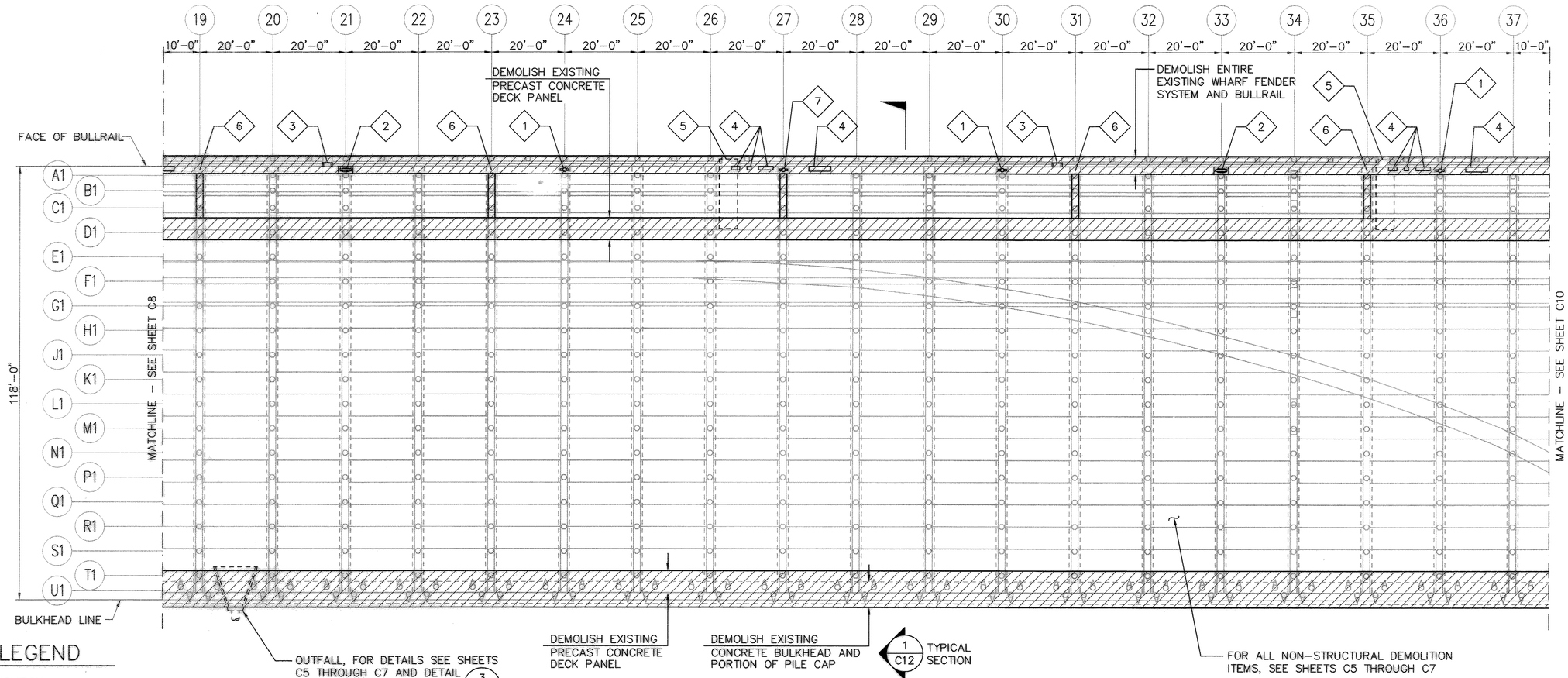
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DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF STRUCTURAL DEMOLITION PLAN - SHEET 1

CONTRACT NUMBER: E1972
E NUMBER: 998149
PHASE: RECORD DOCUMENTS

EP-555T-17
C8
SHEET 13 OF 164

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972C08.DWG
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JOB NAME: Pierce County Terminal
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UPDATED BY: RICK1
PLOT SCALE: 1=1
'PCP' FILE: ---
PLOT VIEW:



LEGEND

- DEMOLITION
- EXISTING BOLLARD
- EXISTING CLEAT
- EXISTING LADDER
- EXISTING UTILITY VAULTS
- 1 EXISTING BOLLARD DEMOLITION, SEE 2/C18 AND 5/C18
- 2 EXISTING CLEAT DEMOLITION, SEE 3/C18 AND 6/C18
- 3 EXISTING LADDER DEMOLITION, SEE 3/C19 AND 4/C19
- 4 EXISTING UTILITY VAULT DEMOLITION, SEE 5/C17
- 5 EXISTING CATWALK DEMOLITION, SEE 1/C19 AND 2/C19
- 6 EXISTING PILE CAP DEMOLITION FOR BOLLARD, SEE 1/C18 AND 4/C18
- 7 EXISTING BOLLARD DEMOLITION AND PARTIAL EXISTING PILE CAP DEMOLITION FOR BOLLARD, SEE 2/C18 AND 5/C18
- 8 EXISTING CLEAT DEMOLITION AND PARTIAL EXISTING PILE CAP DEMOLITION FOR BOLLARD, SEE 3/C18 AND 6/C18

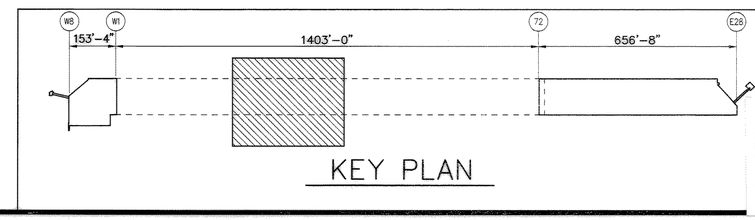
EXISTING WHARF STRUCTURAL DEMOLITION PLAN

SCALE: 1/16"= 1'–0"

1/– N

NOTES:

1. SEE NOTES ON SHEET C8.



KEY PLAN

6320-17

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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(206) 622-5822 Fax (206) 622-9130

MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED

CHIEF ENGINEER – DATE

RKJ	CHECKED BY – DATE	06/11/03
ML	PROJECT ENGR.– DATE	06/11/03

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

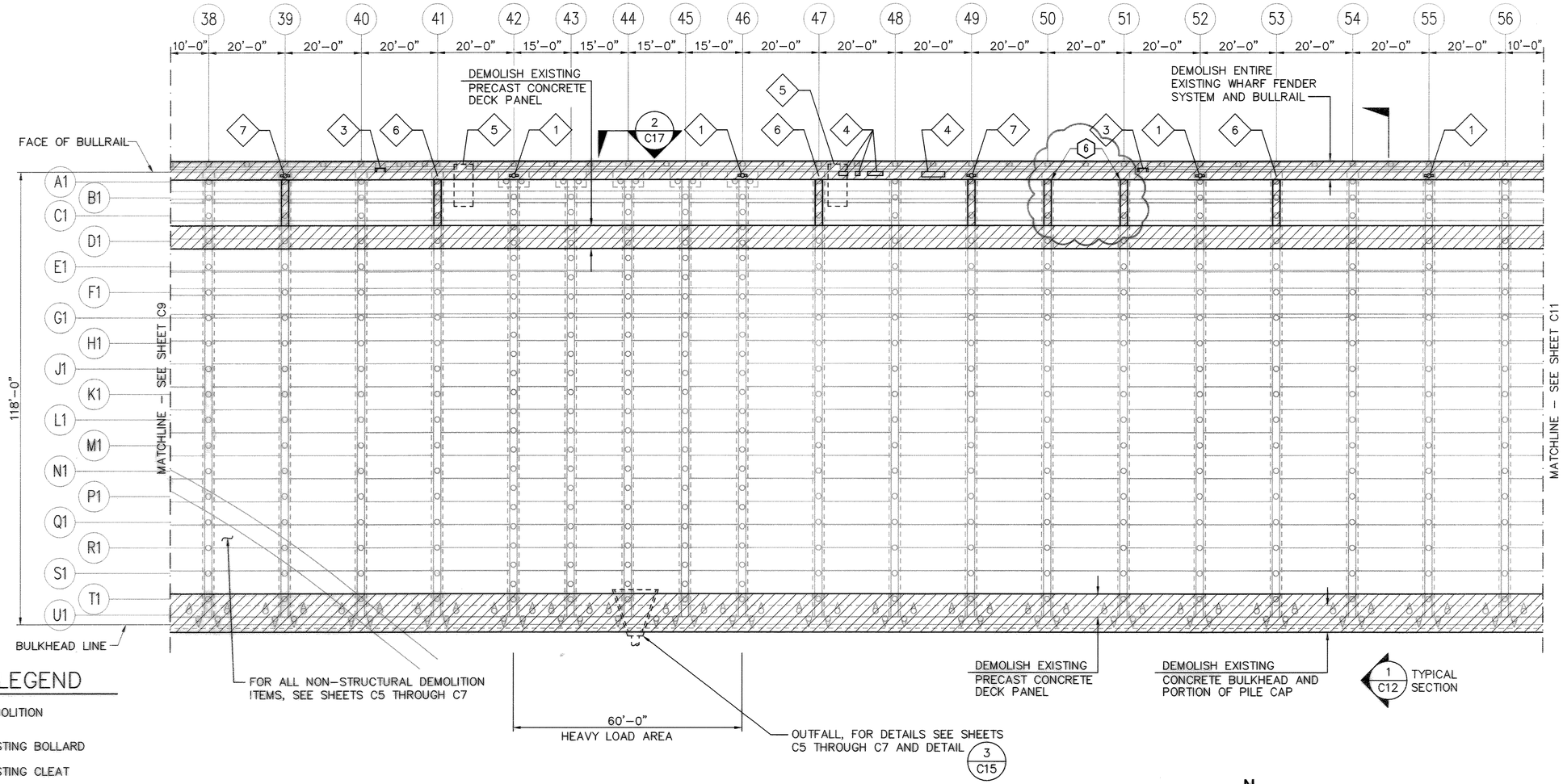
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF STRUCTURAL DEMOLITION
PLAN - SHEET 2

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

EP-~~551-17~~
C9
SHEET 14 OF 164
CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

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		RICKT	FEB. 01, 2005 8:16:16 AM



LEGEND

- DEMOLITION
- EXISTING BOLLARD
- EXISTING CLEAT
- EXISTING LADDER
- EXISTING UTILITY VAULTS
- 1 EXISTING BOLLARD DEMOLITION, SEE 2/C18 AND 5/C18
- 2 EXISTING CLEAT DEMOLITION, SEE 3/C18 AND 6/C18
- 3 EXISTING LADDER DEMOLITION, SEE 3/C19 AND 4/C19
- 4 EXISTING UTILITY VAULT DEMOLITION, SEE 5/C17
- 5 EXISTING CATWALK DEMOLITION, SEE 1/C19 AND 2/C19
- 6 EXISTING PILE CAP DEMOLITION FOR BOLLARD, SEE 1/C18 AND 4/C18
- 7 EXISTING BOLLARD DEMOLITION AND PARTIAL EXISTING PILE CAP DEMOLITION FOR BOLLARD, SEE 2/C18 AND 5/C18
- 8 EXISTING CLEAT DEMOLITION AND PARTIAL EXISTING PILE CAP DEMOLITION FOR BOLLARD, SEE 3/C18 AND 6/C18
- (6) ADDED DEMOLITION FOR NEW BOLLARDS 50, 51 PER RFP #4

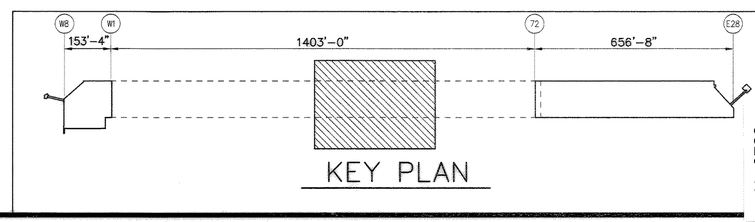
EXISTING WHARF STRUCTURAL DEMOLITION PLAN

1/– SCALE: 1/16"= 1'–0"

N

NOTES:

1. SEE NOTES ON SHEET C8.



KEY PLAN

PORT OF TACOMA P.O. BOX 1837
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(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED

– CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
ML PROJECT ENGR – DATE 06/11/03

TOWNSHIP: RANGE:
DATUM–HORIZ: SECTION:
DRAWING SCALE: AS SHOWN VERT:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF STRUCTURAL DEMOLITION PLAN - SHEET 3

SHEET 15 OF 164
CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~5551-17~~

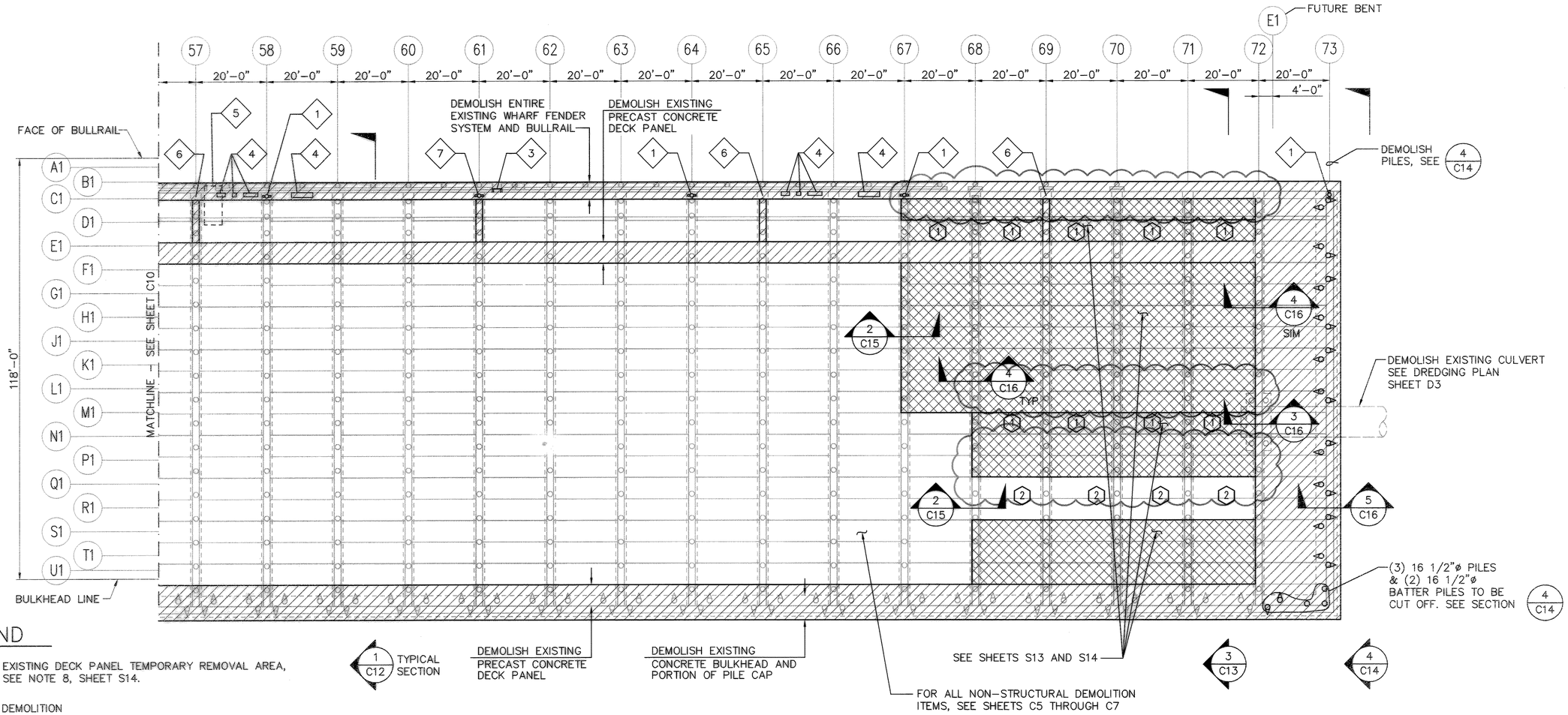
C10

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

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XREFS: PCTXDEMO-LEGEND-1, PCT-XWHARF-DEMO, PCTXKEYPLAN, P0722x341B-KPFF,

UPDATED BY RICKT | PLOT SCALE 1=1 | 'PCP' FILE | PLOT VIEW



EXISTING WHARF STRUCTURAL DEMOLITION PLAN 1

SCALE: 1/16"= 1'-0"

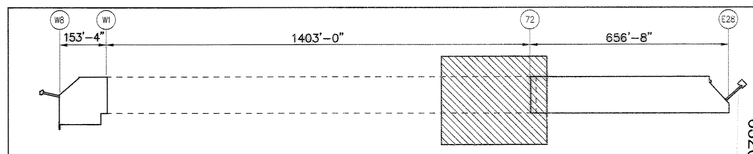
LEGEND

- EXISTING DECK PANEL TEMPORARY REMOVAL AREA, SEE NOTE 8, SHEET S14.
- DEMOLITION
- EXISTING BOLLARD
- EXISTING CLEAT
- EXISTING LADDER
- EXISTING UTILITY VAULTS
- 1 EXISTING BOLLARD DEMOLITION, SEE 2 C18 AND 5 C18
- 2 EXISTING CLEAT DEMOLITION, SEE 3 C18 AND 6 C18
- 3 EXISTING LADDER DEMOLITION, SEE 3 C19 AND 4 C19
- 4 EXISTING UTILITY VAULT DEMOLITION, SEE 5 C17
- 5 EXISTING CATWALK DEMOLITION, SEE 1 C19 AND 2 C19
- 6 EXISTING PILE CAP DEMOLITION FOR BOLLARD, SEE 1 C18 AND 4 C18
- 7 EXISTING BOLLARD DEMOLITION AND PARTIAL EXISTING PILE CAP DEMOLITION FOR BOLLARD, SEE 2 C18 AND 5 C18
- 8 EXISTING CLEAT DEMOLITION AND PARTIAL EXISTING PILE CAP DEMOLITION FOR BOLLARD, SEE 3 C18 AND 6 C18

NOTES:

1. SEE NOTES ON SHEET C8.

(1) THESE PANELS WERE REMOVED.
(2) THESE PANELS WERE NOT REMOVED



KEY PLAN

6320-17

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPRVD:	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03

KN/ML PROJECT ENGR. – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF STRUCTURAL DEMOLITION
PLAN - SHEET 4

SHEET 16 OF 164

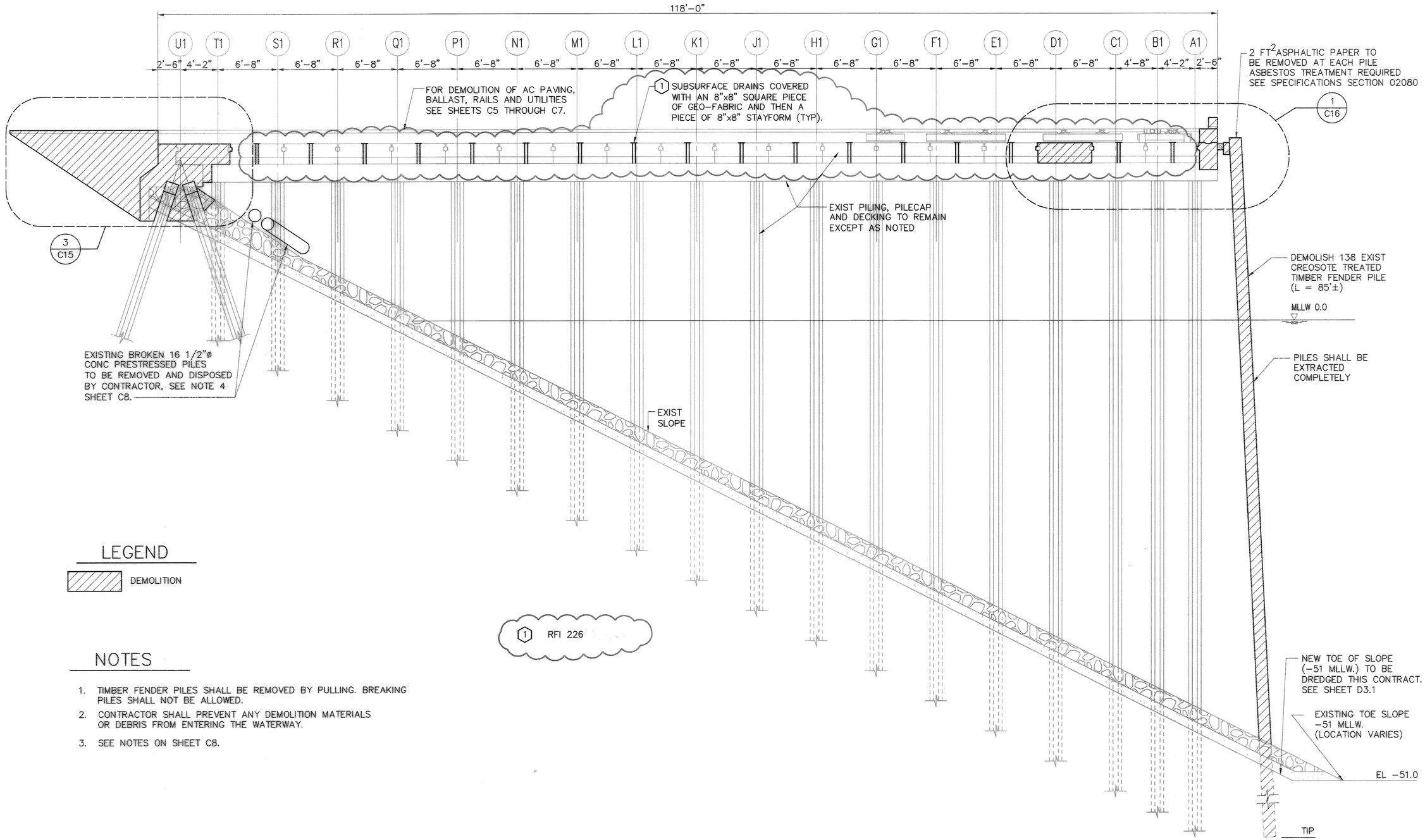
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E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~555-17~~

C11

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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JOB NAME Pierce County Terminal
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UPDATED BY RICKT
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW
XREFS: PCTXDEMO-LEGEND-1, PCT-XWHARF-DEMO, PCTXKEYPLAN, P0122x34TB-KPFF.



LEGEND

DEMOLITION

NOTES

1. TIMBER FENDER PILES SHALL BE REMOVED BY PULLING. BREAKING PILES SHALL NOT BE ALLOWED.
2. CONTRACTOR SHALL PREVENT ANY DEMOLITION MATERIALS OR DEBRIS FROM ENTERING THE WATERWAY.
3. SEE NOTES ON SHEET C8.

TYPICAL EXISTING WHARF STRUCTURAL DEMOLITION SECTION

1 / C8 — C9, C10, C11

SCALE: 3/16"= 1'-0"

TYPICAL SECTION SHOWN, HEAVY LOAD SECTION SIMILAR.

PORT OF TACOMA, P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

RKJ 06/11/03
CHECKED BY – DATE

ML 06/11/03
PROJECT ENGR – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF STRUCTURAL DEMOLITION SECTIONS AND DETAILS

EP-~~553117~~

C12

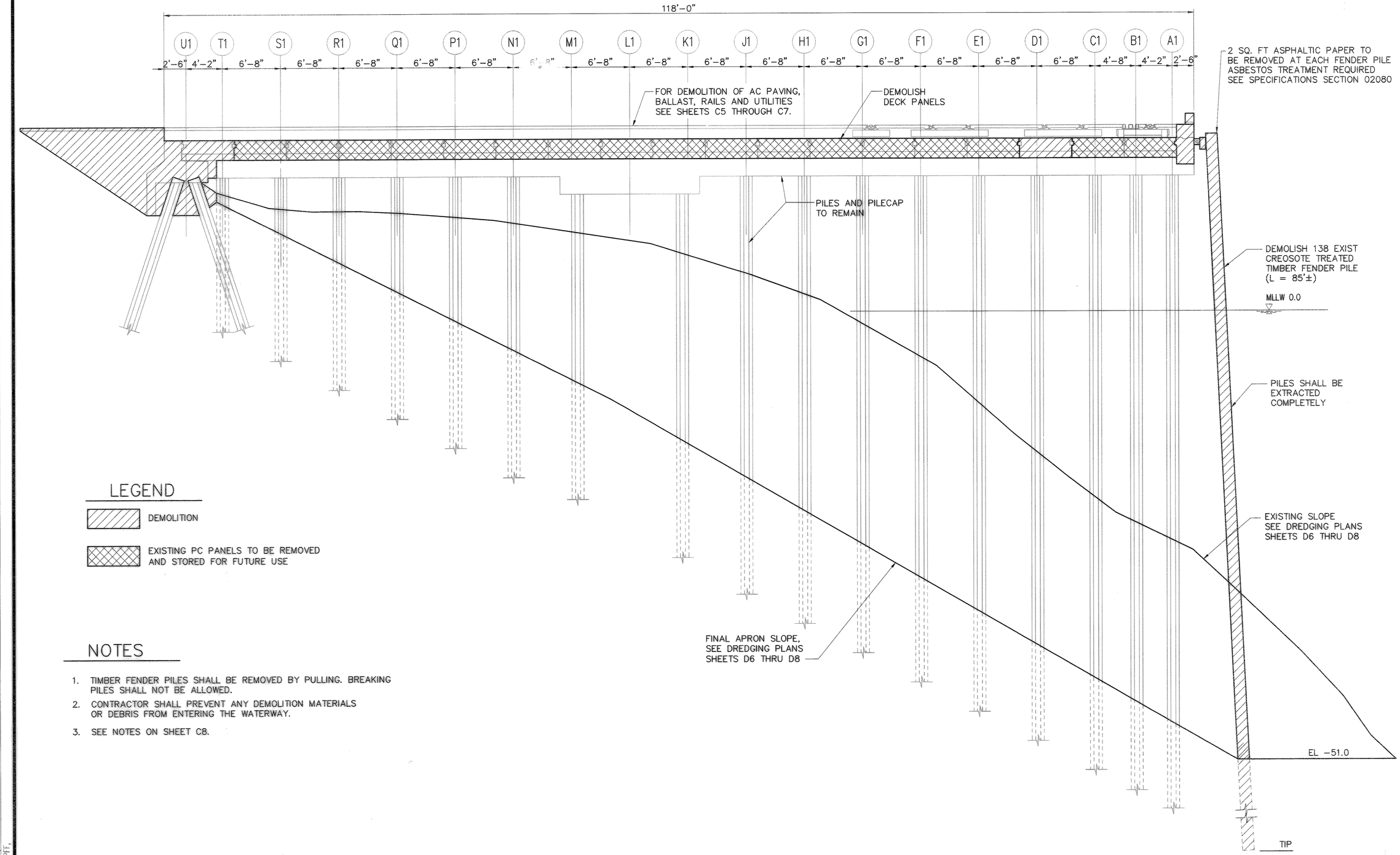
SHEET 17 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

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XREFS: POT22x34TB-KPFF,			

PLOT SCALE	'PCP' FILE	PLOT VIEW
1=1	---	



LEGEND

DEMOLITION

EXISTING PC PANELS TO BE REMOVED AND STORED FOR FUTURE USE

NOTES

1. TIMBER FENDER PILES SHALL BE REMOVED BY PULLING. BREAKING PILES SHALL NOT BE ALLOWED.
2. CONTRACTOR SHALL PREVENT ANY DEMOLITION MATERIALS OR DEBRIS FROM ENTERING THE WATERWAY.
3. SEE NOTES ON SHEET C8.

TYPICAL EXISTING WHARF STRUCTURAL DEMOLITION SECTION BETWEEN EXISTING BENT 72 AND 73

SCALE: 3/16"= 1'-0"

3 / C11

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

RKJ 06/11/03
CHECKED BY – DATE

KN 06/11/03
PROJECT ENGR. – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF STRUCTURAL DEMOLITION SECTIONS AND DETAILS

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

EP-~~665117~~

C13

SHEET 18 OF 164

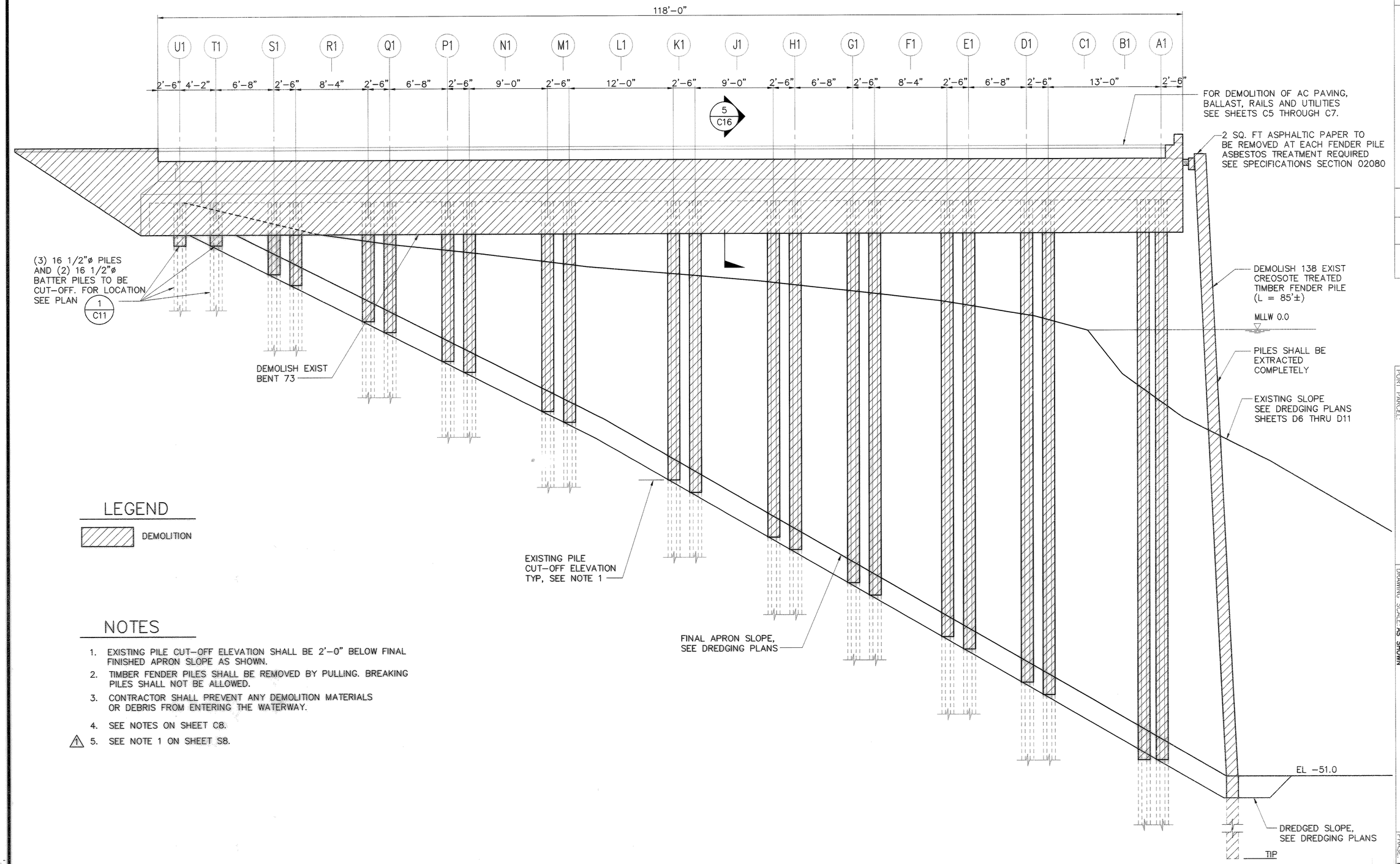
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E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972C13.DWG

JOB #	JOB NAME	PLOTTED DATE & TIME
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XREFS: POT22x34TB-KPFF.

UPDATED BY	PLOT SCALE	'PCP' FILE	PLOT VIEW
RK(K)	1=1	---	



LEGEND

DEMOLITION

NOTES

1. EXISTING PILE CUT-OFF ELEVATION SHALL BE 2'-0" BELOW FINAL FINISHED APRON SLOPE AS SHOWN.
2. TIMBER FENDER PILES SHALL BE REMOVED BY PULLING. BREAKING PILES SHALL NOT BE ALLOWED.
3. CONTRACTOR SHALL PREVENT ANY DEMOLITION MATERIALS OR DEBRIS FROM ENTERING THE WATERWAY.
4. SEE NOTES ON SHEET C8.
5. SEE NOTE 1 ON SHEET S8.

TYPICAL EXISTING WHARF STRUCTURAL DEMOLITION SECTION AT BENT 73

SCALE: 3/16"= 1'-0"

4
C11

6320-17

MARK	REVISION	BY:	APPROVED:	DATE:
A	ADDENDUM 1: ADDED NOTE 5	MB	RKJ	8/1/03

PORT OF TACOMA U.S.A.

kpff Consulting Engineers 601 Fifth Avenue, Suite 600 Seattle, Washington 98101 (206) 622-5822 Fax (206) 622-6600

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

APPROVED

CHIEF ENGINEER — DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY — DATE

ML 06/11/03 PROJECT ENGR. — DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF STRUCTURAL DEMOLITION SECTIONS AND DETAILS

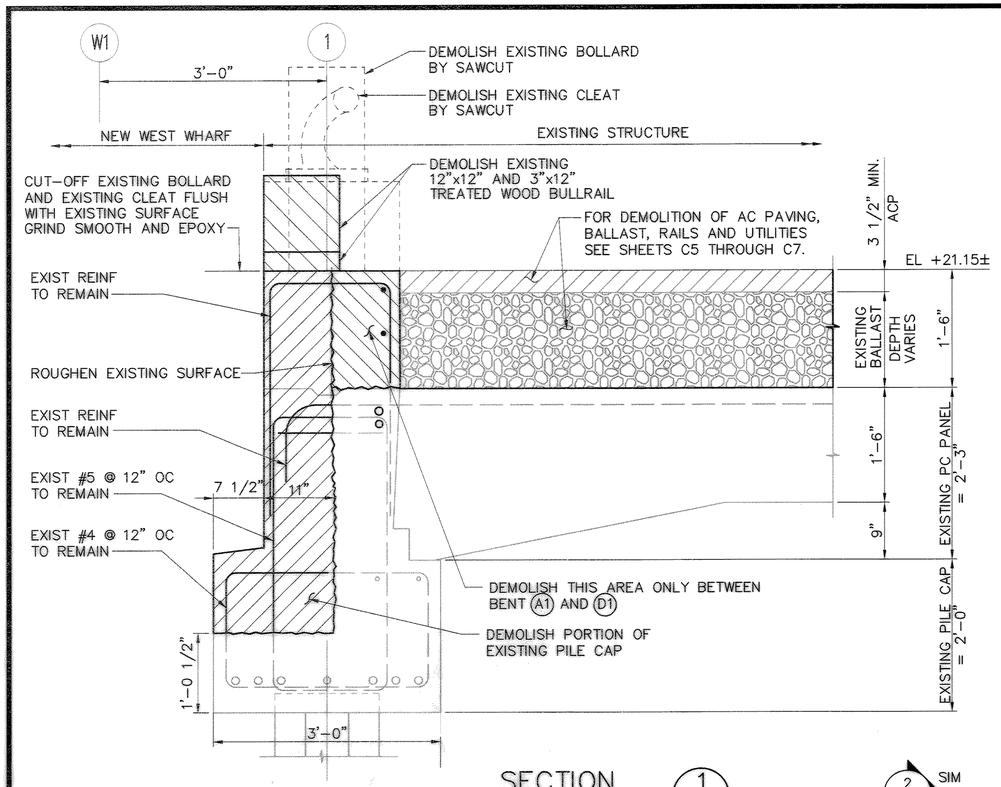
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CONTRACT NUMBER: 998149
E NUMBER: E1972
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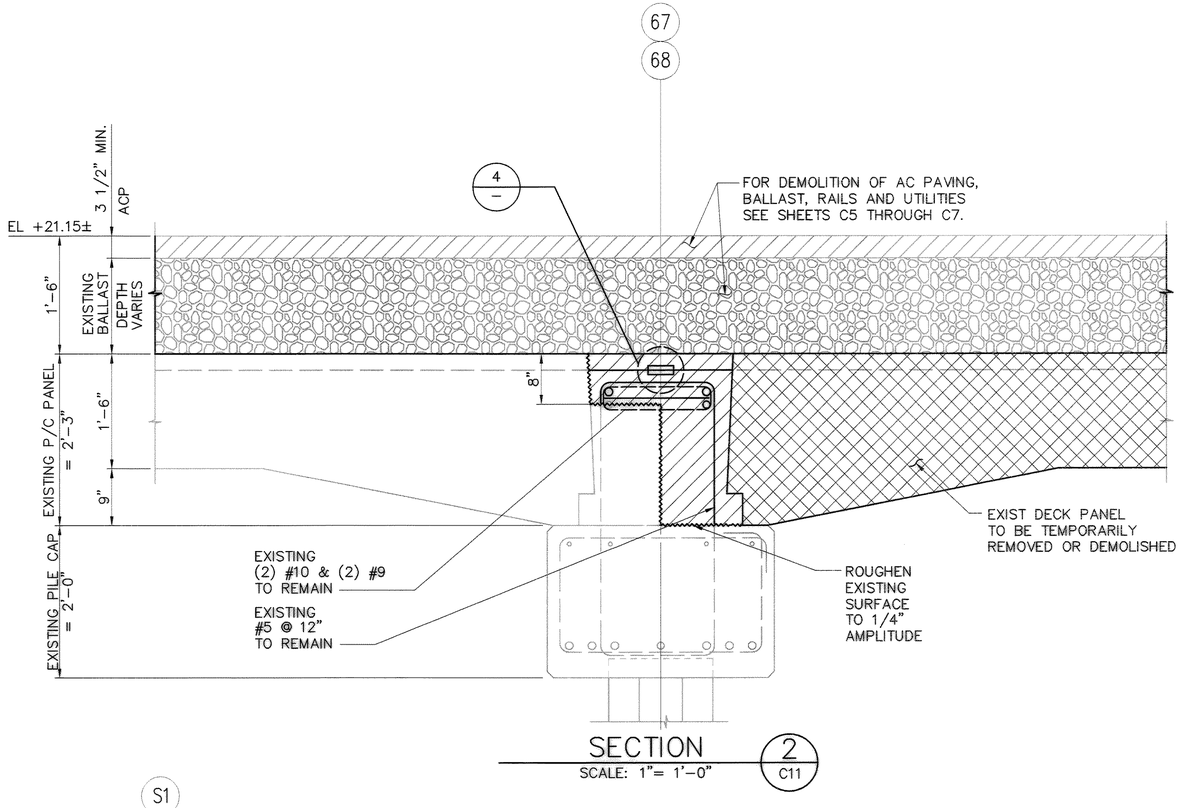
EP-~~6331-17~~ C14

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

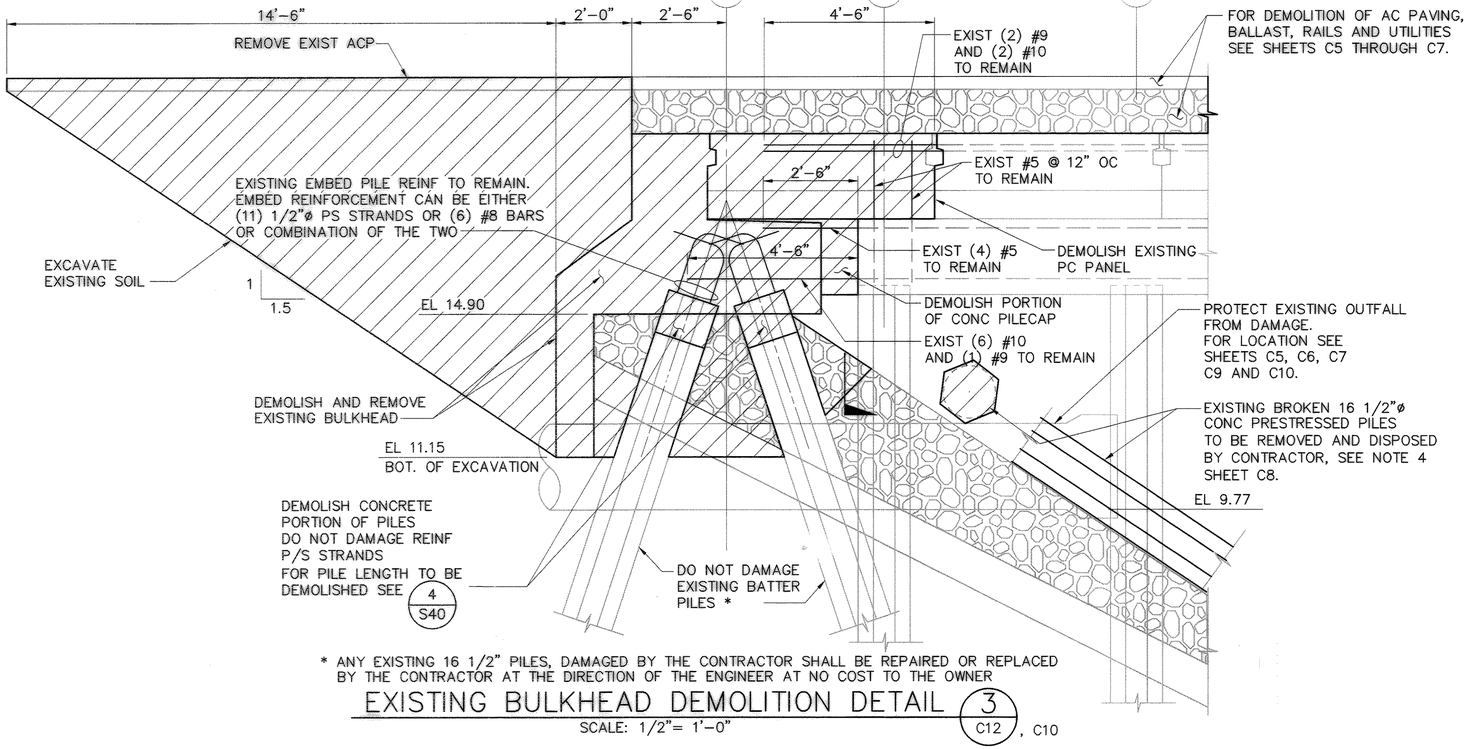
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UPDATED BY RICK1
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW



SECTION 1 / C8
SCALE: 1"= 1'–0"

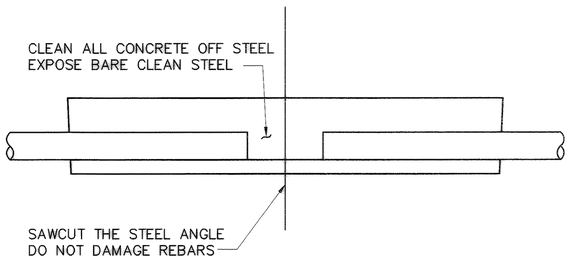


SECTION 2 / C11
SCALE: 1"= 1'–0"



* ANY EXISTING 16 1/2" PILES, DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER AT NO COST TO THE OWNER

EXISTING BULKHEAD DEMOLITION DETAIL 3 / C12, C10
SCALE: 1/2"= 1'–0"



DETAIL 4 / –
SCALE: 3"= 1'–0"

LEGEND

- DEMOLITION
- DEMOLITION WITHIN CERTAIN AREA
- EXISTING PC PANELS TO BE REMOVED AND STORED FOR FUTURE USE

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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TACOMA, WA 98401 253-383-5841

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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 08/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
ML 06/11/03
PROJECT ENGR – DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF STRUCTURAL DEMOLITION SECTIONS AND DETAILS

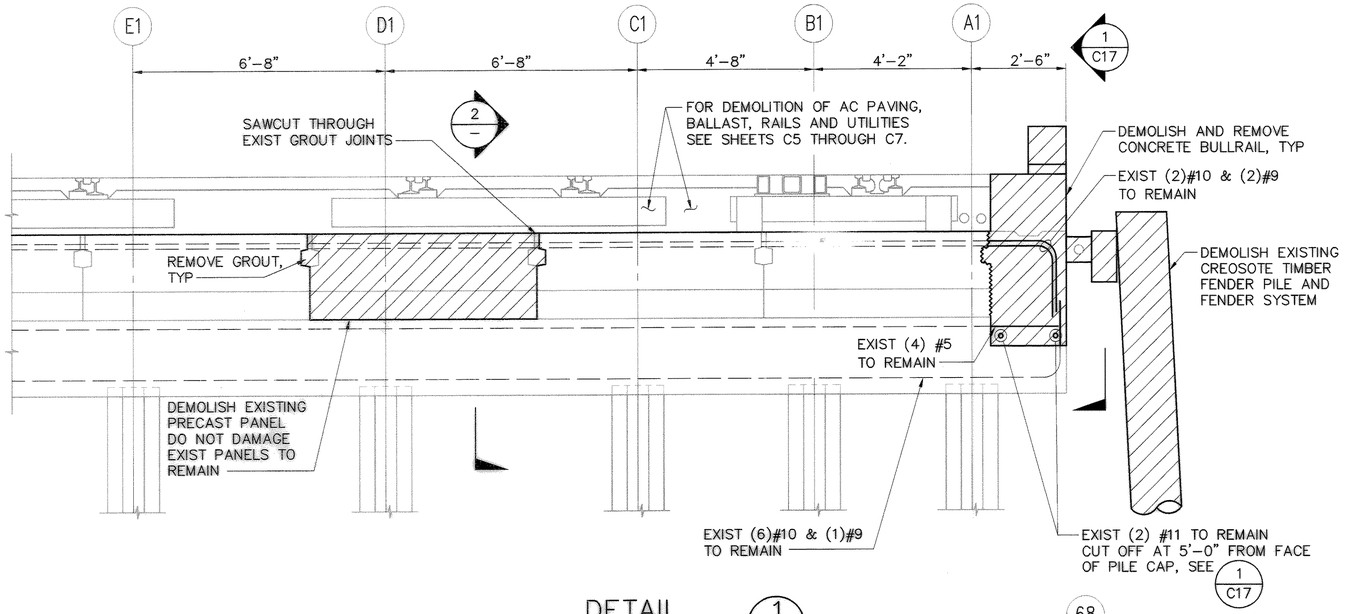
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DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

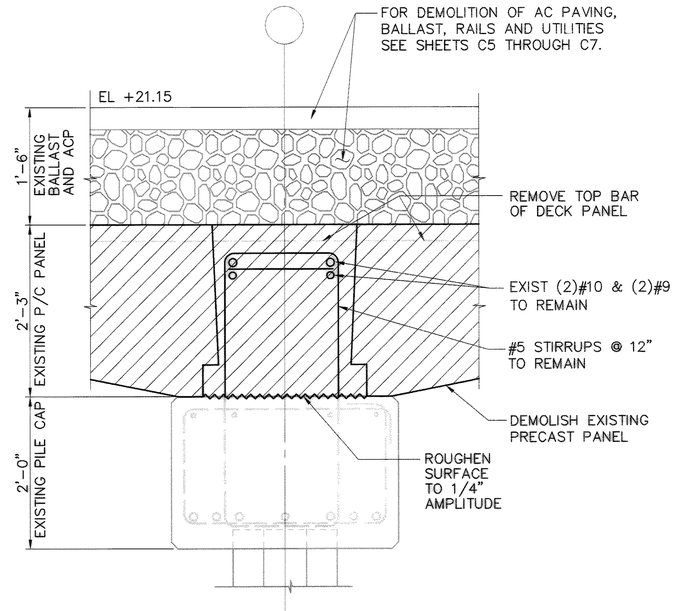
EP-~~5661-17~~
C15
SHEET 20 OF 164

6320-17

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UPDATED BY RICKT
PLOT SCALE 1=1
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PLOT VIEW

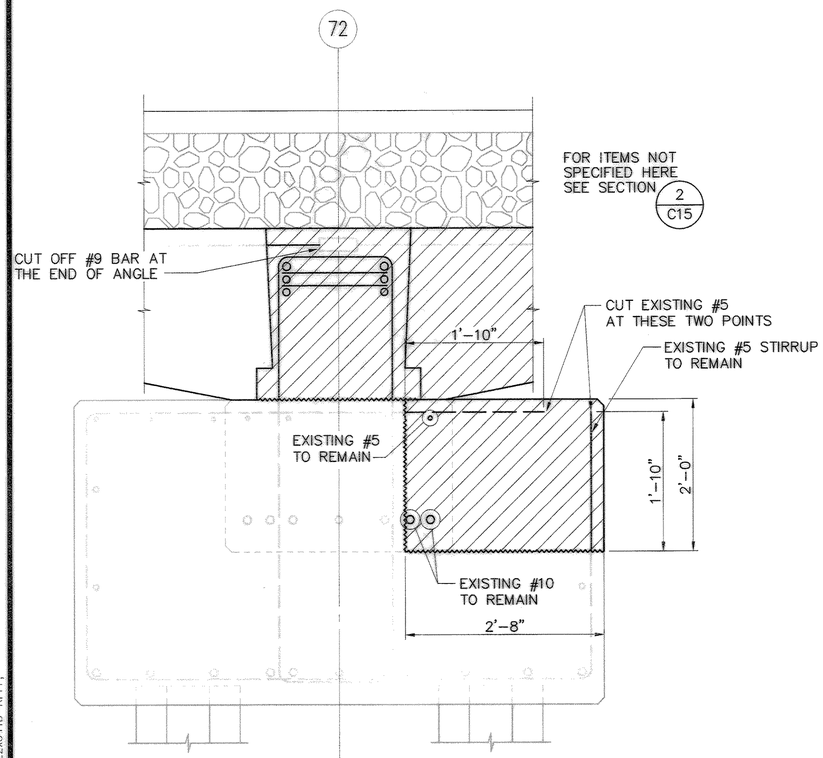


DETAIL 1 / C12
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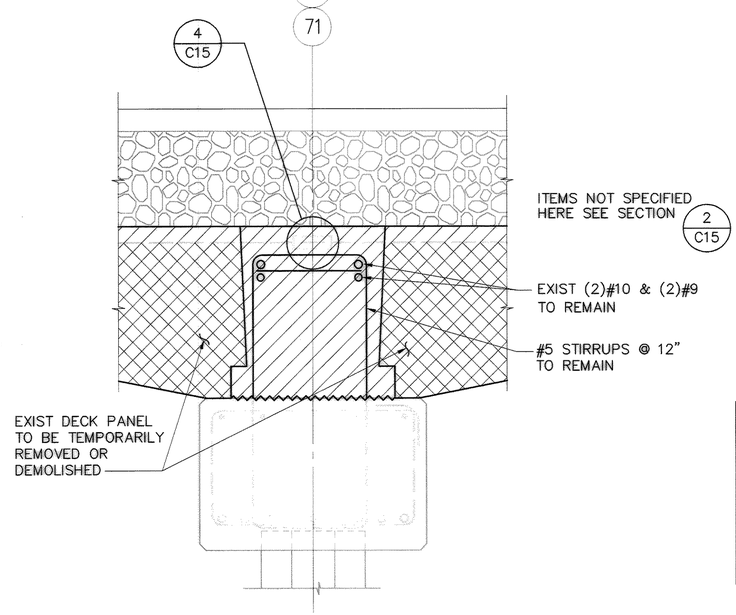


SECTION 2 / C15
SCALE: 1"= 1'–0"

68
69
70
71
72
73



SECTION 3 / C11
SCALE: 1"= 1'–0"

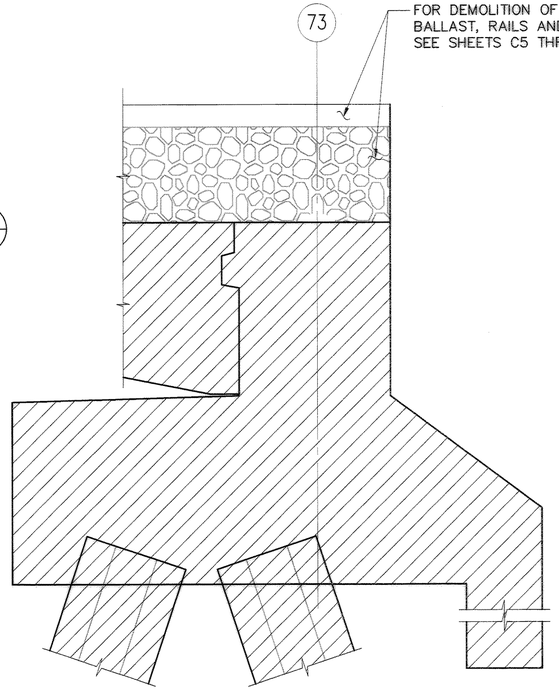


SECTION 4 / C11
SCALE: 1"= 1'–0"

LEGEND

DEMOLITION

EXISTING PC PANELS TO BE REMOVED AND STORED FOR FUTURE USE



SECTION 5 / C11, C14
SCALE: 1"= 1'–0"

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	06/11/03	CHECKED BY – DATE
ML	06/11/03	PROJECT ENGR – DATE

PORT OF TACOMA U.S.A.

PORT OF TACOMA P.O. BOX 1637
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED:	DATE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF STRUCTURAL DEMOLITION
SECTIONS AND DETAILS

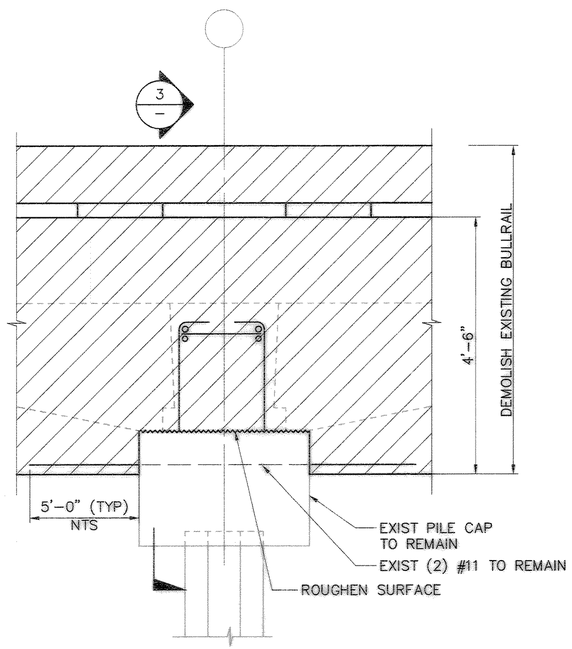
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DATUM: HORIZ: VERT:
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CONTRACT NUMBER 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-5551.17
C16
SHEET 21 OF 164

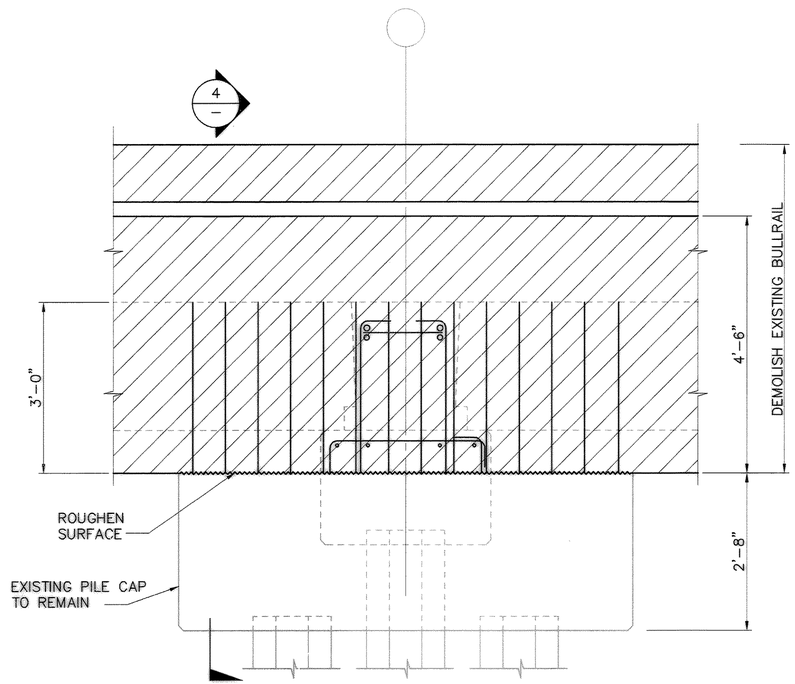
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JOB NAME Pierce County Terminal
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UPDATED BY RICKT
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PLOT VIEW
XREFS: POT22x34TB-KPFF,



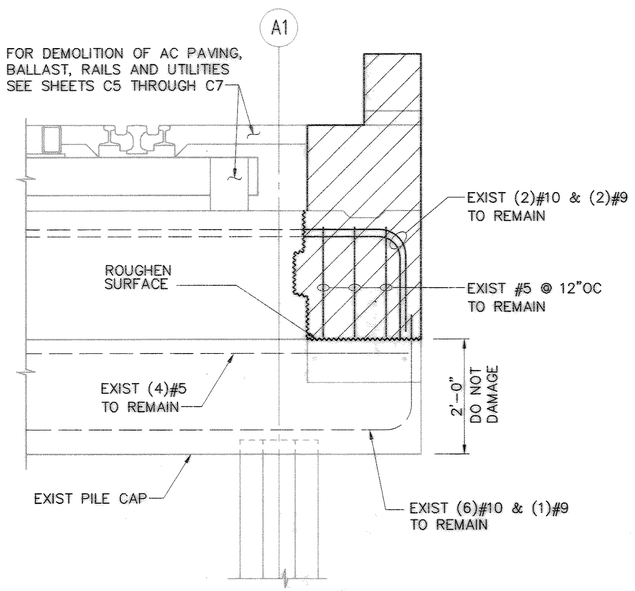
BULLRAIL DEMOLITION AT TYPICAL PILE CAP DETAIL 1/C16

SCALE: 3/4"= 1'-0"



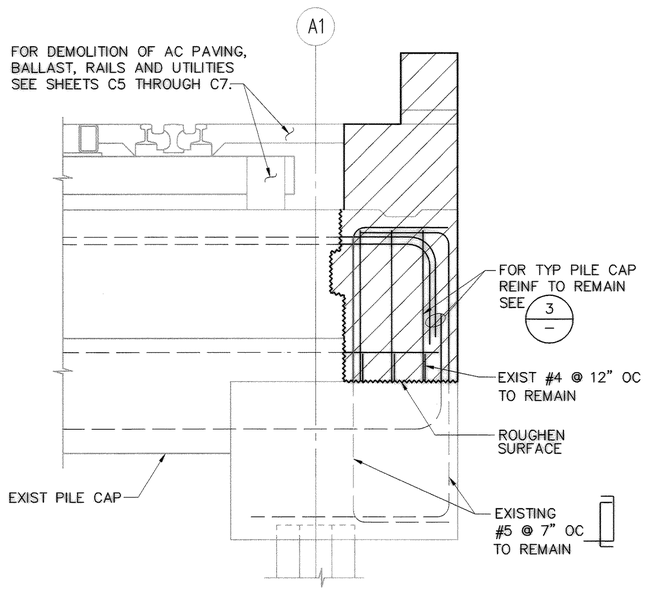
BULLRAIL DEMOLITION AT HEAVY LOAD AREA DETAIL 2/C10

SCALE: 3/4"= 1'-0"



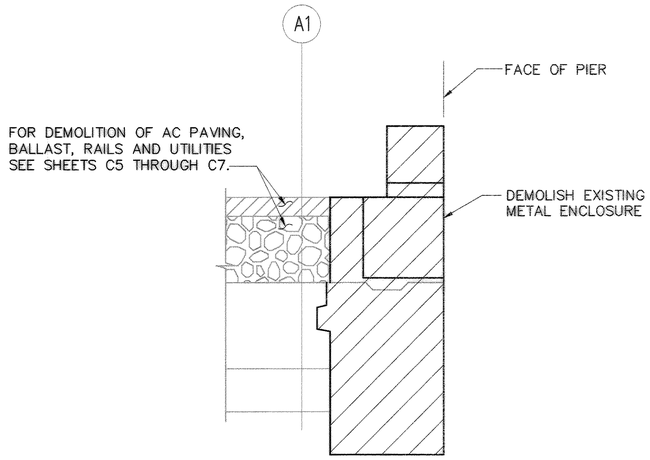
BULLRAIL DEMOLITION AT TYPICAL PILE CAP SECTION 3/–

SCALE: 3/4"= 1'-0"



BULLRAIL DEMOLITION AT HEAVY LOAD AREA SECTION 4/–

SCALE: 3/4"= 1'-0"



UTILITY VAULT DEMOLITION SECTION 5/C7

SCALE: 3/4"= 1'-0"

C8, C9, C10

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1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
ML 06/11/03 PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF
DEMOLITION SECTIONS AND DETAILS

EP-~~5551-17~~

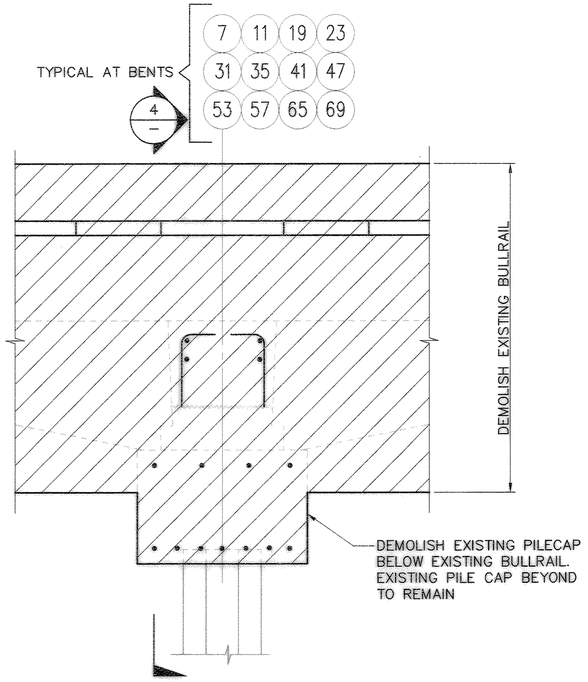
SHEET 22 OF 164

C17

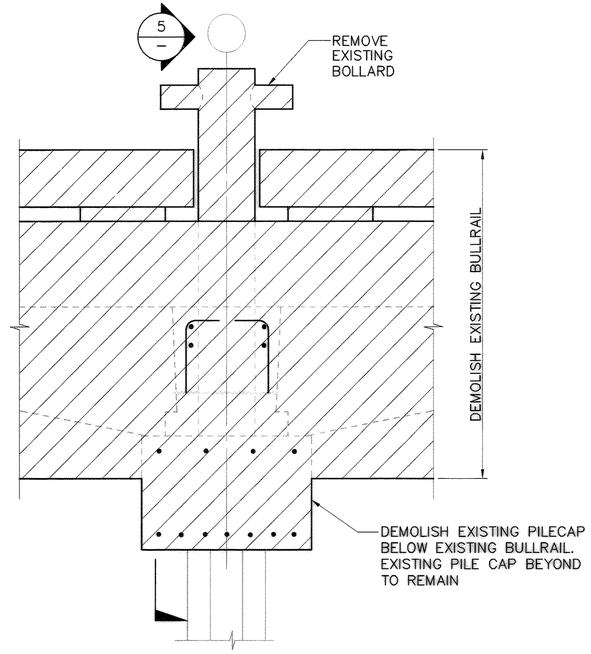
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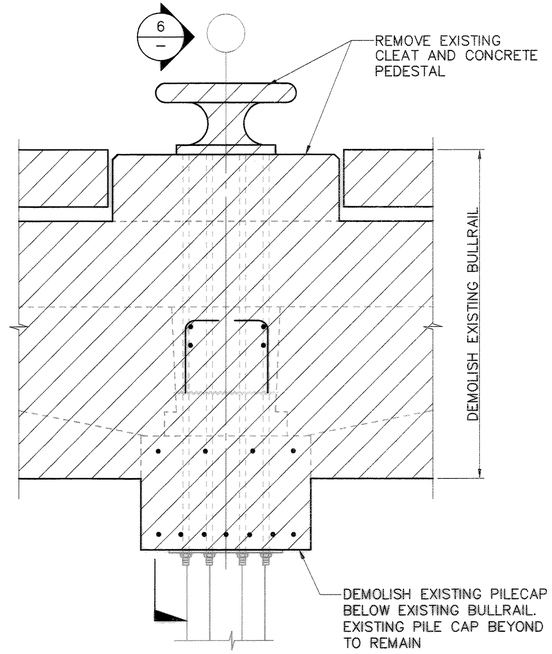
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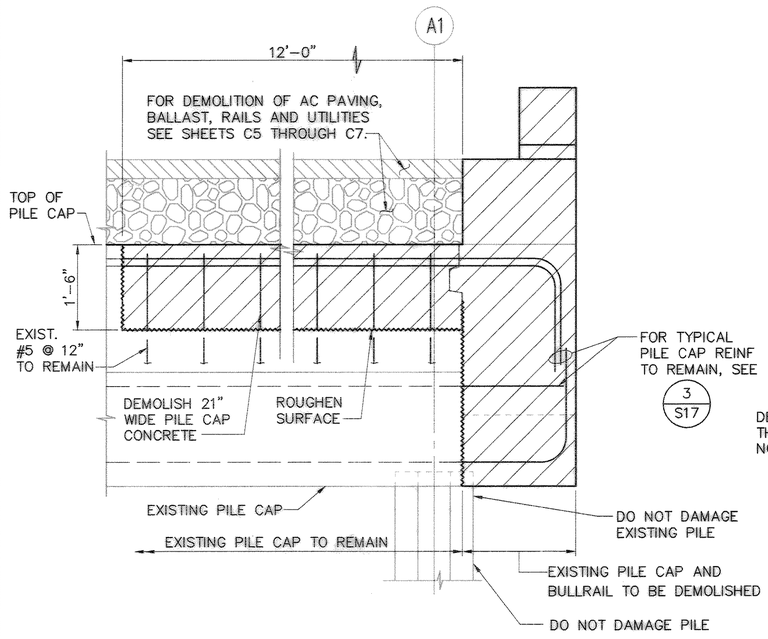
BULLRAIL AND PILE CAP
DEMOLITION FOR NEW BOLLARD – DETAIL 1
SCALE: 3/4"= 1'–0"
C8, C9, C10, C11



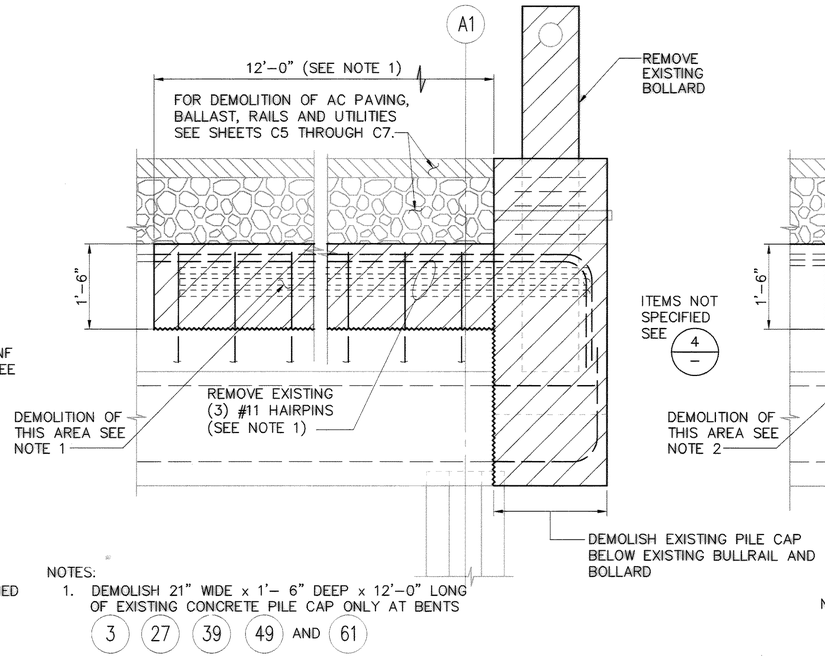
BULLRAIL PILE CAP AND BOLLARD
DEMOLITION DETAIL 2
SCALE: 3/4"= 1'–0"
C8, C9, C10, C11



BULLRAIL PILE CAP AND CLEAT
DEMOLITION DETAIL 3
SCALE: 3/4"= 1'–0"
C8, C9, C10, C11

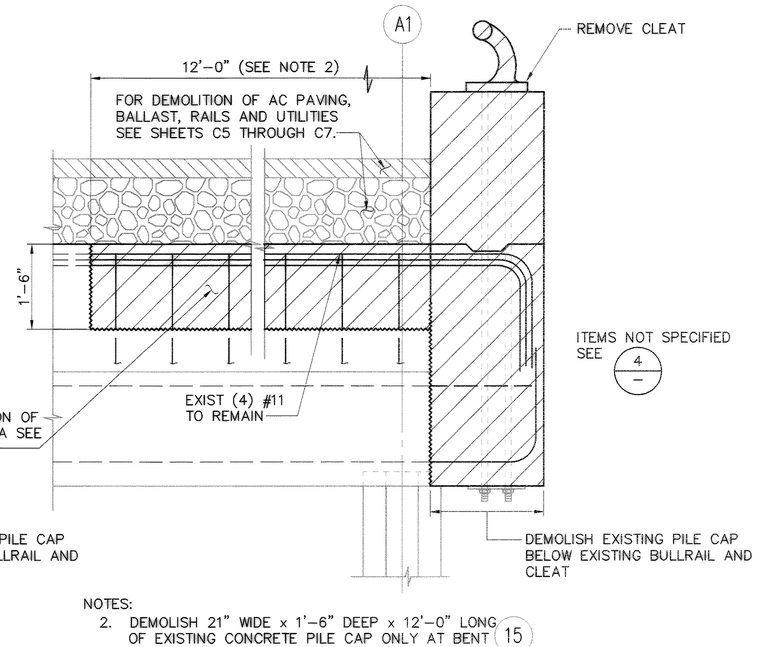


BULLRAIL AND PILE CAP
DEMOLITION FOR NEW BOLLARD – SECTION 4
SCALE: 3/4"= 1'–0"



NOTES:
1. DEMOLISH 21" WIDE x 1'– 6" DEEP x 12'–0" LONG OF EXISTING CONCRETE PILE CAP ONLY AT BENTS 3 27 39 49 AND 61

BULLRAIL PILE CAP AND BOLLARD
DEMOLITION SECTION 5
SCALE: 3/4"= 1'–0"



NOTES:
2. DEMOLISH 21" WIDE x 1'–6" DEEP x 12'–0" LONG OF EXISTING CONCRETE PILE CAP ONLY AT BENT 15

BULLRAIL PILE CAP AND CLEAT
DEMOLITION SECTION 6
SCALE: 3/4"= 1'–0"

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MARK	REVISION	BY:	APPROVED	DATE:

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CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
ML PROJECT ENGR. – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF
DEMOLITION SECTIONS AND DETAILS

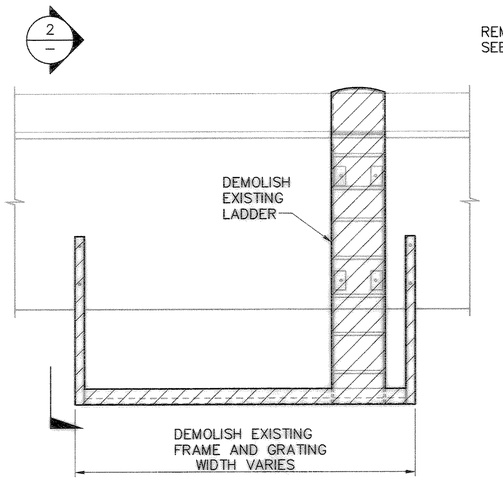
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E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~556-17~~
SHEET 23 OF 164
C18

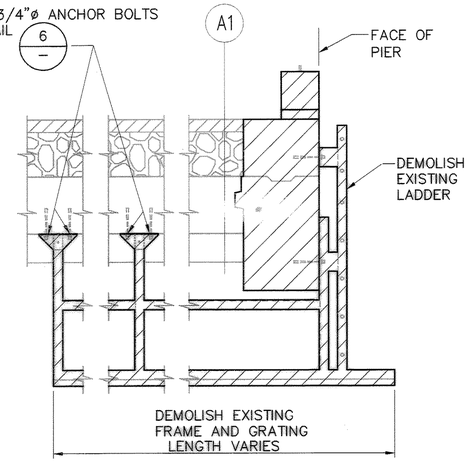
6320-17

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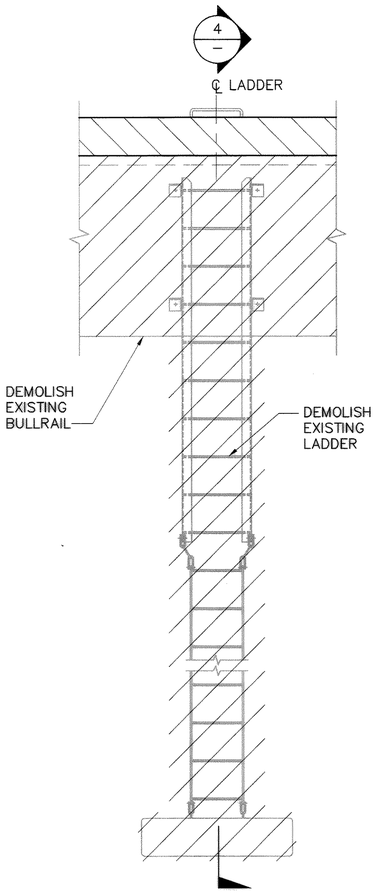
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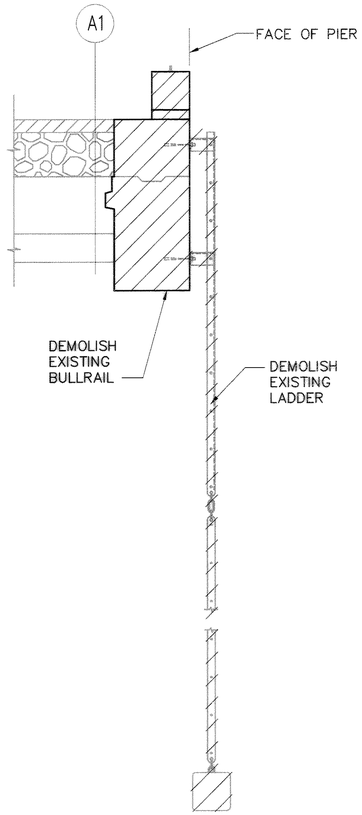
CATWALK
DEMOLITION DETAIL 1
SCALE: 1/2"= 1'-0"
C8, C9, C10, C11



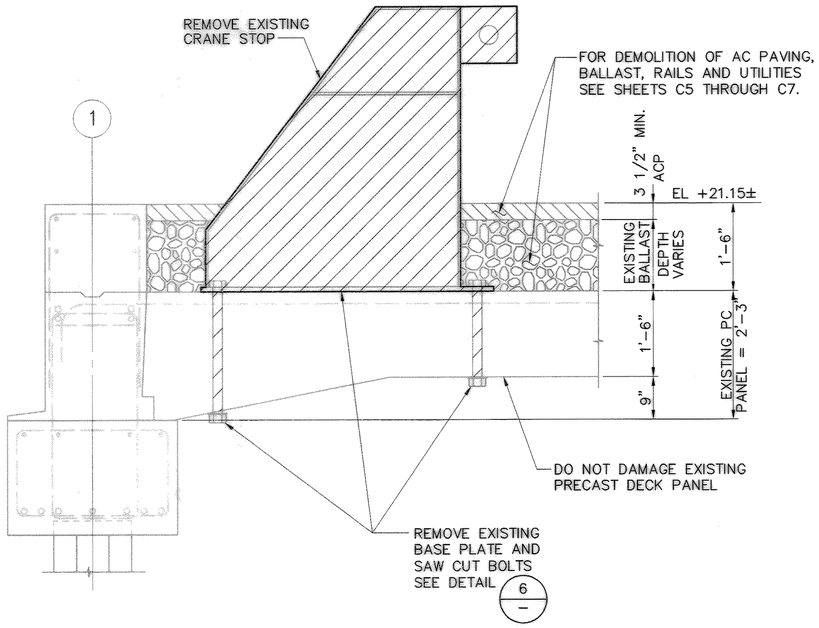
SECTION 2
SCALE: 1/2"= 1'-0"



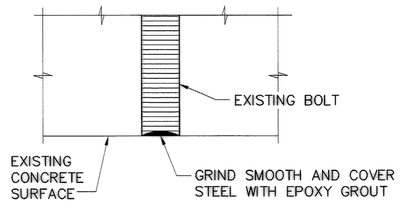
LADDER DEMOLITION
DETAIL 3
SCALE: 1/2"= 1'-0"
C8, C9, C10, C11



LADDER DEMOLITION
SECTION 4
SCALE: 1/2"= 1'-0"



CRANE STOP DEMOLITION DETAIL 5
SCALE: 3/4"= 1'-0"
C7



TYPICAL DETAIL 6
SCALE: 3"= 1'-0"

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MARK	REVISION	BY:	APPROVED	DATE

APPROVED

CHIEF ENGINEER - DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY - DATE
ML 06/11/03
PROJECT ENGR. - DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ. VERT.
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF
DEMOLITION SECTIONS AND DETAILS

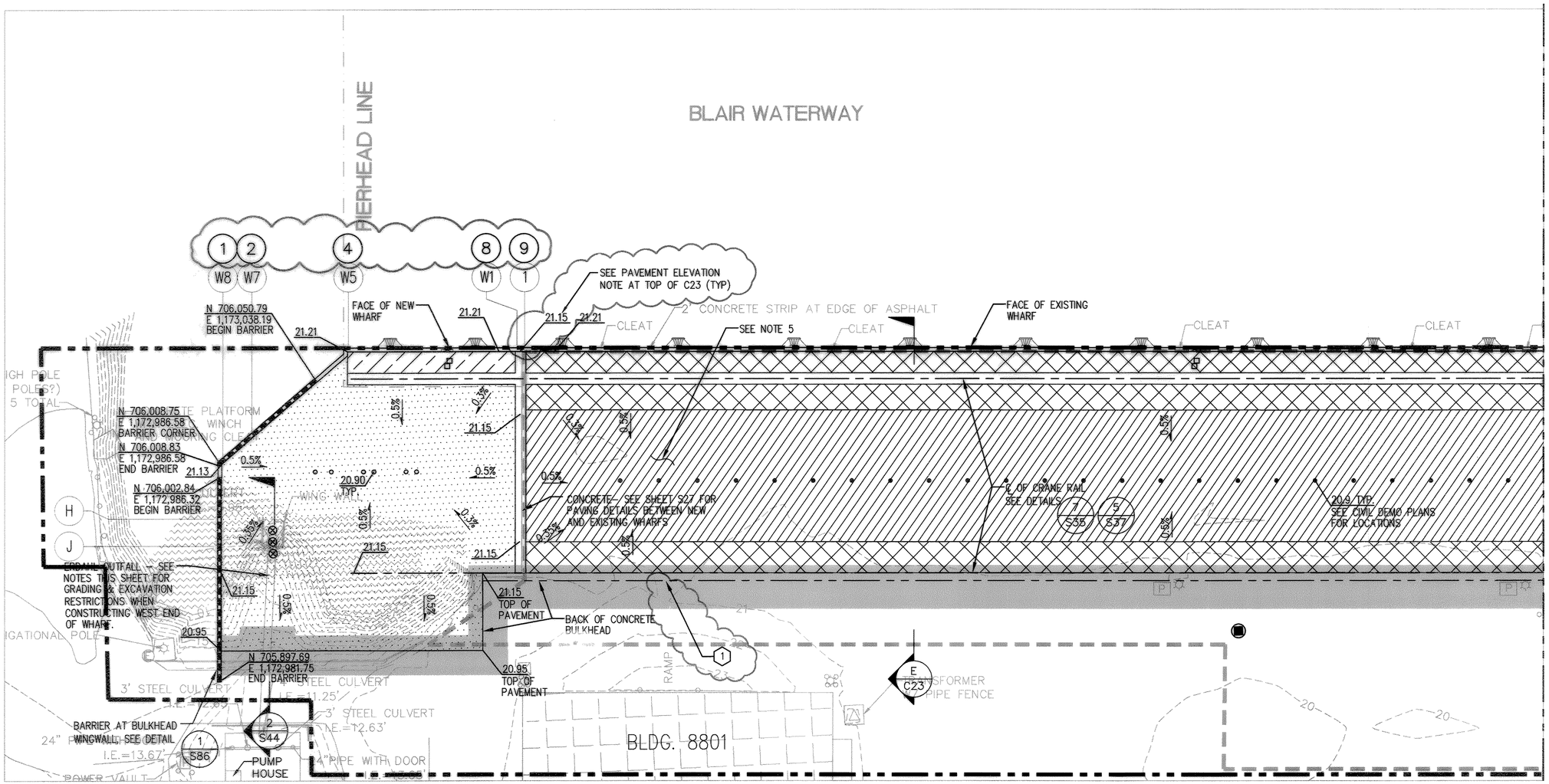
EP-~~333T-17~~
SHEET 24 OF 164
C19

CONTRACT NUMBER: 988149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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JOB NAME Pierce County Terminal
PLOTTED DATE & TIME FEB. 01, 2005 8:25:14 AM
UPDATED BY RICKT
XREFS: POT22x34TB-KPFF.
PLOT SCALE 1=1
'POP' FILE ---
PLOT VIEW



LEGEND

- NEW PAVEMENT SECTION 2, SEE D/C23
- NEW PAVEMENT SECTION 1, SEE B/C23
- NEW ASPHALT CONCRETE PAVEMENT ON WHARF DECK, SEE A/C23
- NEW WHARF UTILITY TRENCH PAVEMENT SECTION, SEE C/C23
- EXCAVATION FOR BULKHEAD AND ERDAHL DITCH OUTFALL
- SPECIAL AQUATIC SITE, SEE ERDAHL OUTFALL GRADING NOTES, SHEET C20
- 3" DIA. BRASS SURVEY MARKER TO BE SET IN FINAL LIFT OF ACP. INSTALL IN CENTER OF EACH REMOVABLE PANEL. SEE STRUCTURAL SHEETS FOR PANEL LOCATION.
- 20 — EXISTING CONTOUR
- 0.5% — FINISHED GRADE SLOPE
- 19.10 — FINISHED GRADE ELEVATION
- 19.10 — EXISTING GRADE ELEVATION
- PROPOSED CATCH BASIN, SEE UTILITY PLANS FOR LOCATIONS
- POWER/COMMUNICATION VAULT, SEE ELECTRICAL PLANS
- 4" DECK DRAIN, SEE UTILITY PLANS
- EXISTING SURFACE DRAIN, TO REMAIN
- XXX — BENT NUMBER
- CONCRETE TRAFFIC BARRIER, SEE 5/S47
- CONTRACTOR USE AREA, STAGE 1
- CONTRACTOR USE AREA, STAGE 2

GRADING AND PAVING NOTES:

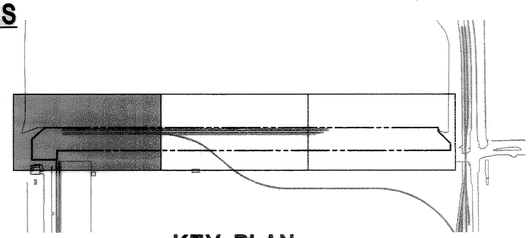
1. STRAIGHT GRADE SHALL BE MAINTAINED BETWEEN SPOT ELEVATIONS UNLESS OTHERWISE SHOWN ON THE PLANS.
2. ALL FILL SOILS OR SOILS DISTURBED OR OVEREXCAVATED DURING CONSTRUCTION SHALL BE COMPACTED PER THE SPECIFICATION.
3. SEE UTILITY PLANS FOR CATCH BASIN RIM ELEVATIONS.
4. REFER TO SHEET C1 FOR SURVEY CONTROL INFORMATION.
5. EXISTING WHARF HAS NUMEROUS SURFACE DRAIN HOLES. SIMILAR TO 2/C28 SLOPE NEW ACP TOWARDS EXISTING DRAIN HOLES TO REMAIN.
6. ALL NEW AND EXISTING UTILITY STRUCTURES SHALL BE ADJUSTED TO FINISH GRADE.
7. FOR PAVING AT PIN SOCKETS SEE SHEET S70.
8. BASE COURSE PLACED FOR NEW ASPHALT CONCRETE PAVING MAY BE COMPOSED OF UP TO 50% RECYCLED ASPHALT CONCRETE PAVEMENT AND BASE MATERIALS MEETING THE REQUIREMENTS OF SPECIFICATION SECTION 02965. WHERE RECYCLED MATERIALS ARE USED THEY SHALL BE THOROUGHLY MIXED WITH NEW MATERIALS PRIOR TO PLACEMENT.

FENCING NOTES:

1. COORDINATES ARE TO CENTER OF CONCRETE BARRIER.

ERDAHL OUTFALL GRADING NOTES

1. NO EXCAVATION OR FILLING IS TO OCCUR BELOW +11.8' MLLW.
2. NO FILL OR LOOSE MATERIAL IS TO BE PLACED ON THE SLOPE NORTH OF THE EXCAVATION.
3. CONTRACTOR SHALL PROTECT THE SLOPE NORTH OF EXCAVATION FROM SLOUGHING OR FAILURE.
4. ANY DAMAGE TO THE SPECIAL AQUATIC SITE LOCATED NORTH OF THE BULKHEAD SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE PORT.



KEY PLAN

SCALE: N.T.S.

1 HELD 18" BELOW TOP OF BULKHEAD PER CO #8.

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

N

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98601
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPRVD:	DATE:

APPROVED

CHIEF ENGINEER – DATE

SWK 06/11/03
CHECKED BY – DATE
BSO 06/11/03
PROJECT ENGR – DATE

DRAWING DATE: 08/11/03
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PORT PARCEL:

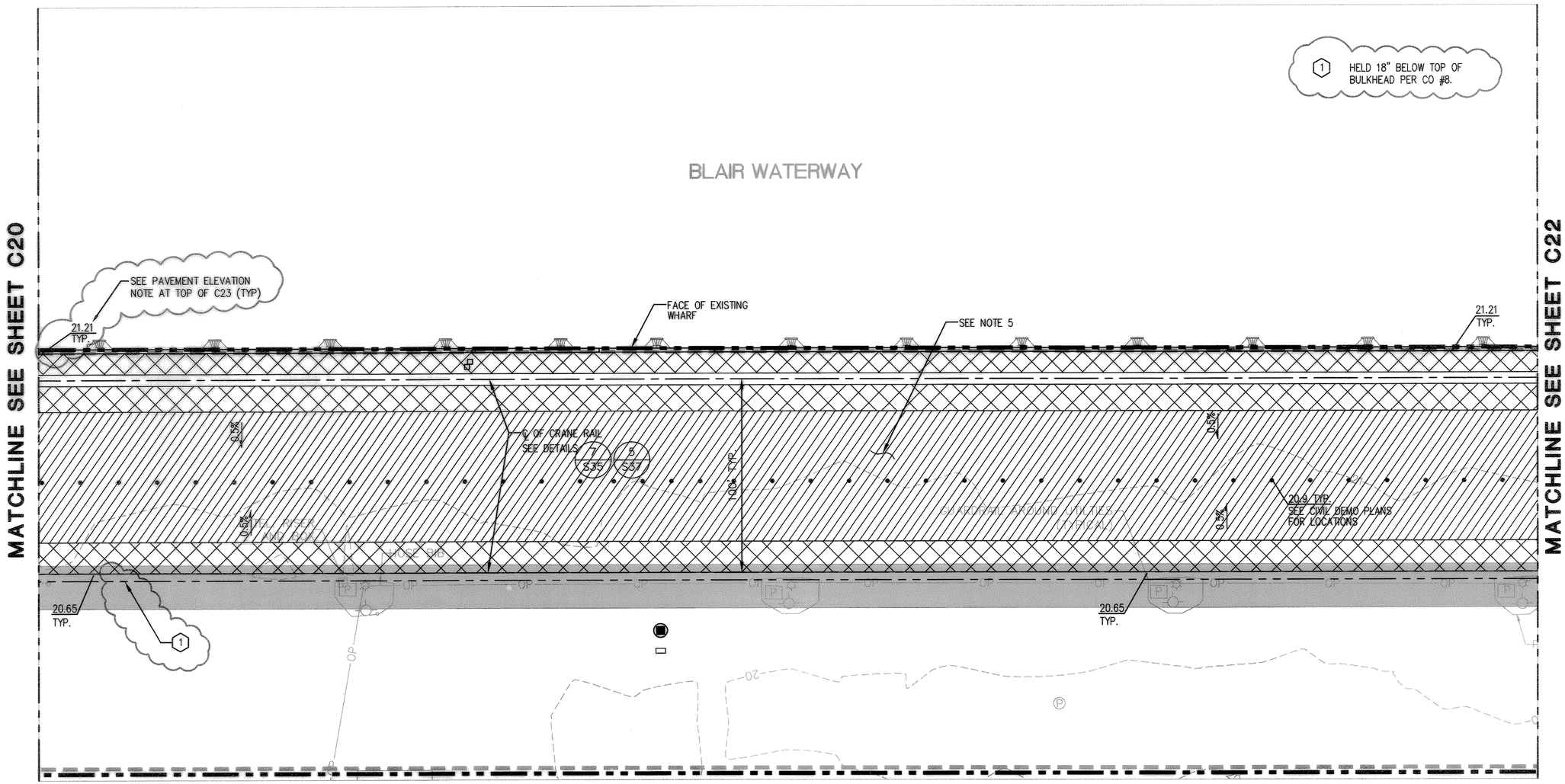
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DATUM: HORIZ. VERT.
DRAWING SCALE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WHARF GRADING, PAVING, & FENCING PLAN

EP-~~5551-17~~
C20
SHEET 25 OF 164
CONTRACT NUMBER 998149
F. NUMBER F1927
PHASE: RECORD DOCUMENTS

6320-17

PLOTTED DATE & TIME: FEB. 01, 2005 8:26:15 AM
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JOB #:
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NOTES:



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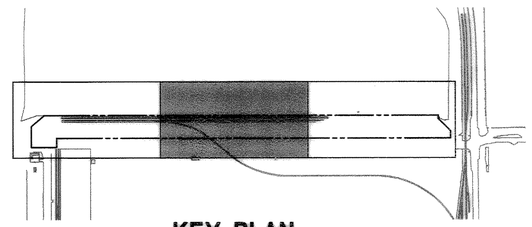
- NEW PAVEMENT SECTION 2, SEE D / C23
- NEW PAVEMENT SECTION 1, SEE B / C23
- NEW ASPHALT CONCRETE PAVEMENT ON WHARF DECK, SEE A / C23
- NEW WHARF UTILITY TRENCH PAVEMENT SECTION, SEE C / C23
- EXCAVATION FOR BULKHEAD
- 20 — EXISTING CONTOUR
- 0.5% — FINISHED GRADE SLOPE
- 19.10 — FINISHED GRADE ELEVATION
- 19.10 — EXISTING GRADE ELEVATION
- PROPOSED CATCH BASIN, SEE UTILITY PLANS FOR LOCATIONS
- POWER/COMMUNICATION VAULT, SEE ELECTRICAL PLANS
- 4" DECK DRAIN, SEE UTILITY PLANS
- EXISTING SURFACE DRAIN, TO REMAIN
- XXX — BENT NUMBER
- CONCRETE TRAFFIC BARRIER, SEE 5 / S47
- CONTRACTOR USE AREA, STAGE 1
- CONTRACTOR USE AREA, STAGE 2

GRADING AND PAVING NOTES:

1. STRAIGHT GRADE SHALL BE MAINTAINED BETWEEN SPOT ELEVATIONS UNLESS OTHERWISE SHOWN ON THE PLANS.
2. ALL FILL SOILS OR SOILS DISTURBED OR OVEREXCAVATED DURING CONSTRUCTION SHALL BE COMPACTED PER THE SPECIFICATION.
3. SEE UTILITY PLANS FOR CATCH BASIN RIM ELEVATIONS.
4. REFER TO SHEET C1 FOR SURVEY CONTROL INFORMATION.
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6. ALL NEW AND EXISTING UTILITY STRUCTURES SHALL BE ADJUSTED TO FINISH GRADE.
7. FOR PAVING AT PIN SOCKETS SEE SHEET S70.
8. BASE COURSE PLACED FOR NEW ASPHALT CONCRETE PAVING MAY BE COMPOSED OF UP TO 50% RECYCLED ASPHALT CONCRETE PAVEMENT AND BASE MATERIALS MEETING THE REQUIREMENTS OF SPECIFICATION SECTION 02965. WHERE RECYCLED MATERIALS ARE USED THEY SHALL BE THOROUGHLY MIXED WITH NEW MATERIALS PRIOR TO PLACEMENT.

FENCING NOTES:

1. COORDINATES ARE TO CENTER OF CONCRETE BARRIER.



KEY PLAN

SCALE: N.T.S.

N

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

SWK CHECKED BY – DATE 06/11/03
BSO PROJECT ENGR – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WHARF GRADING AND PAVING PLAN

SHEET 26 OF 164
C21

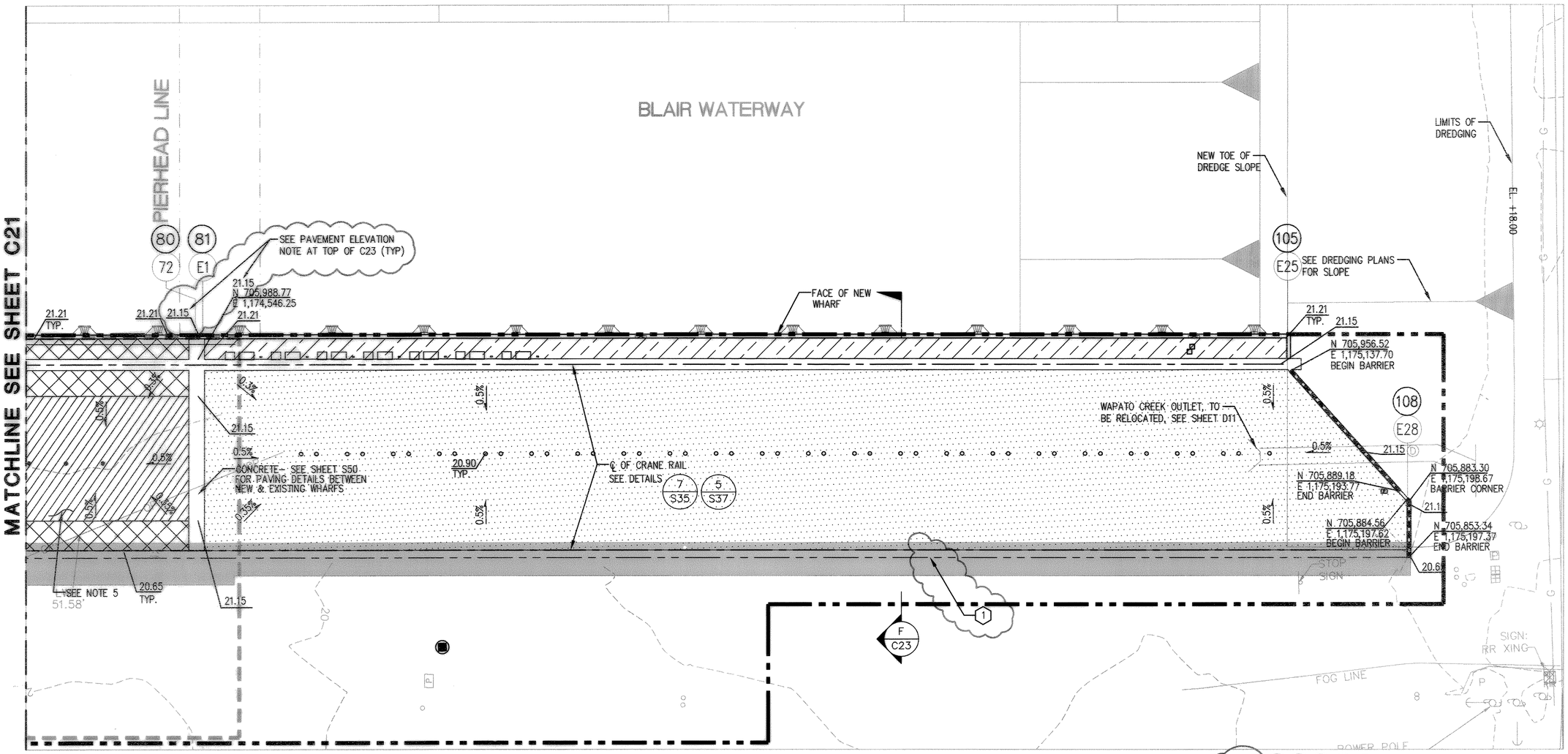
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E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

EP-5661-17

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JOB #: ---
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NOTES:



LEGEND

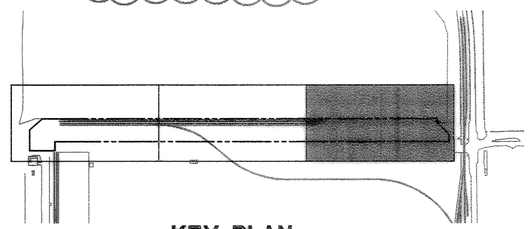
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- NEW PAVEMENT SECTION 1, SEE B C23
- NEW ASPHALT CONCRETE PAVEMENT ON WHARF DECK, SEE A C23
- NEW WHARF UTILITY TRENCH PAVEMENT SECTION, SEE C C23
- EXCAVATION FOR BULKHEAD
- EXISTING CONTOUR
- FINISHED GRADE SLOPE
- FINISHED GRADE ELEVATION
- EXISTING GRADE ELEVATION
- PROPOSED CATCH BASIN, SEE UTILITY PLANS FOR LOCATIONS
- POWER/COMMUNICATION VAULT, SEE ELECTRICAL PLANS
- 4" DECK DRAIN, SEE UTILITY PLANS
- EXISTING SURFACE DRAIN, TO REMAIN
- XXX BENT NUMBER
- CONCRETE TRAFFIC BARRIER, SEE 5 S47
- CONTRACTOR USE AREA, STAGE 1
- CONTRACTOR USE AREA, STAGE 2

GRADING AND PAVING NOTES:

1. STRAIGHT GRADE SHALL BE MAINTAINED BETWEEN SPOT ELEVATIONS UNLESS OTHERWISE SHOWN ON THE PLANS.
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3. SEE UTILITY PLANS FOR CATCH BASIN RIM ELEVATIONS.
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FENCING NOTES:

1. COORDINATES ARE TO CENTER OF CONCRETE BARRIER.



KEY PLAN

SCALE: N.T.S.

N

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK | REVISION | BY | APPROVED | DATE

APPROVED
CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

SWK 06/11/03 CHECKED BY – DATE
BSO 06/11/03 PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
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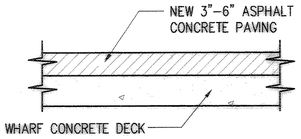
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WHARF GRADING, PAVING, & FENCING PLAN

CONTRACT NUMBER 99149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

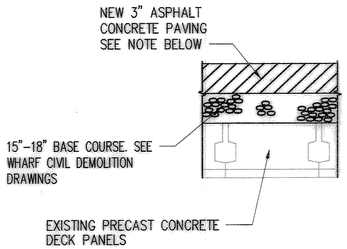
EP-~~5554-17~~
C22
SHEET 27 OF 164

6320-17

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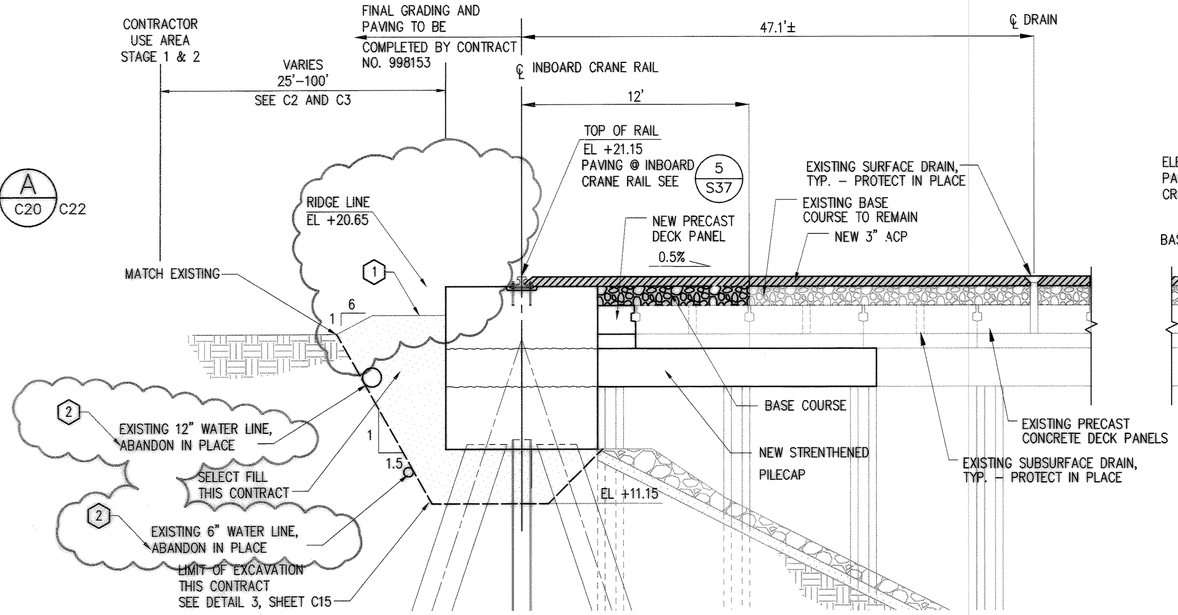


WHARF PAVEMENT SECTION A
SCALE: NTS
C20 C22

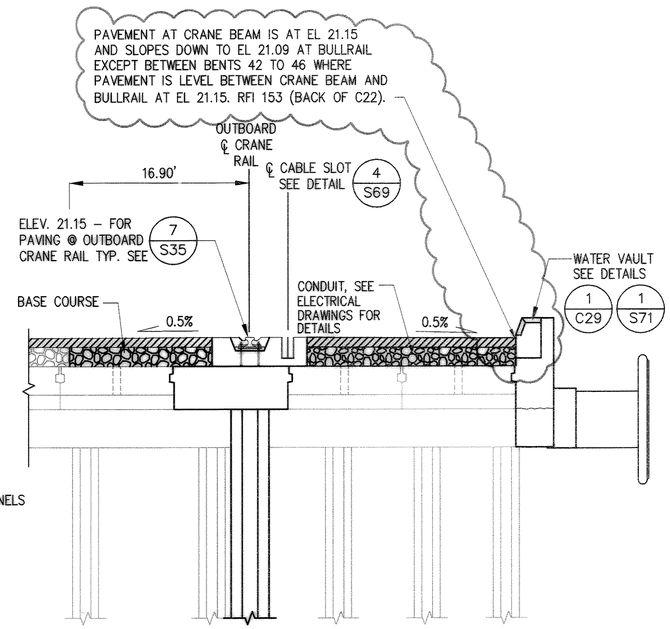


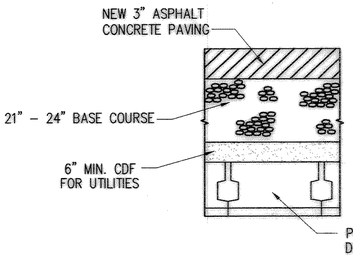
NOTE: ACP SHALL BE 6" AT PIN SOCKETS PER DETAIL 3 ON SHEET S70. FOR PAVING AT CRANE RAIL SEE DETAIL 7 ON SHEET S35 AND DETAIL 5 ON SHEET S37.

PAVEMENT SECTION 1 EXISTING WHARF
SCALE: NTS
B C20 C21, C22

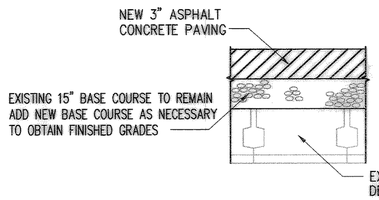


SECTION–EXISTING WHARF E
SCALE: NTS
C20

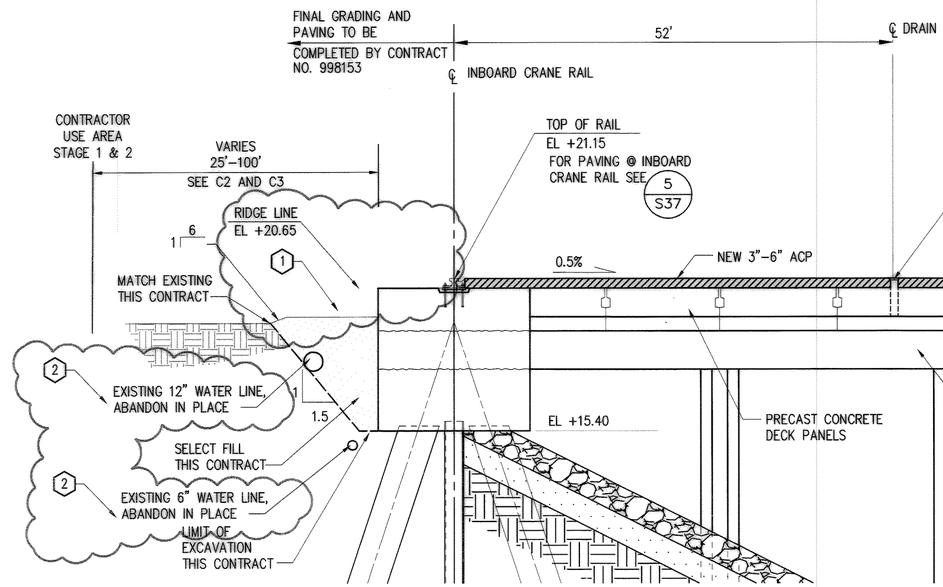


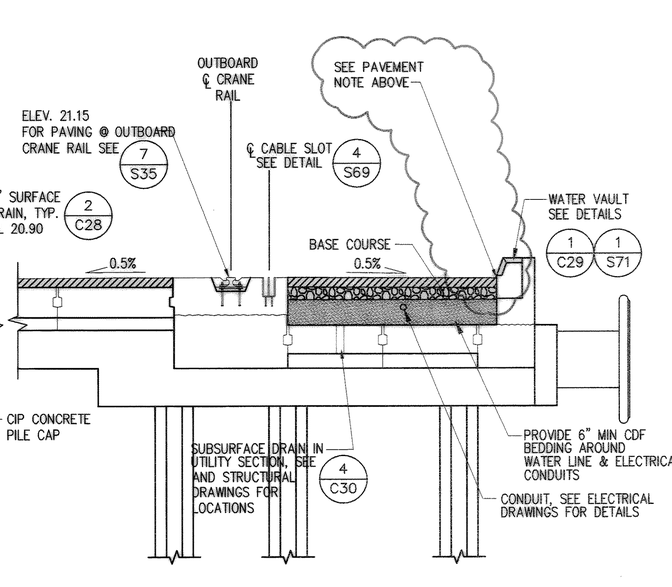


PAVEMENT SECTION NEW WHARF UTILITY TRENCH C
SCALE: NTS
C20 C22



PAVEMENT SECTION 2 EXISTING WHARF
SCALE: NTS
D C20 C21, C22





SECTION–NEW EAST WHARF F
SCALE: NTS
C22

1. HELD 18" BELOW TOP OF BULKHEAD PER CO #8.
2. ABANDON PER RFP 16.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841
kpff Consulting Engineers
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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK | REVISION | BY | APPROVD. | DATE

APPROVED
CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

SWK 06/11/03
CHECKED BY – DATE
BSO 06/11/03
PROJECT ENGR. – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ. VERT.
DRAWING SCALE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PAVING & GRADING SECTIONS

CONTRACT NUMBER 998149
E.C.N. NUMBER E1972
PHASE: RECORD DOCUMENTS

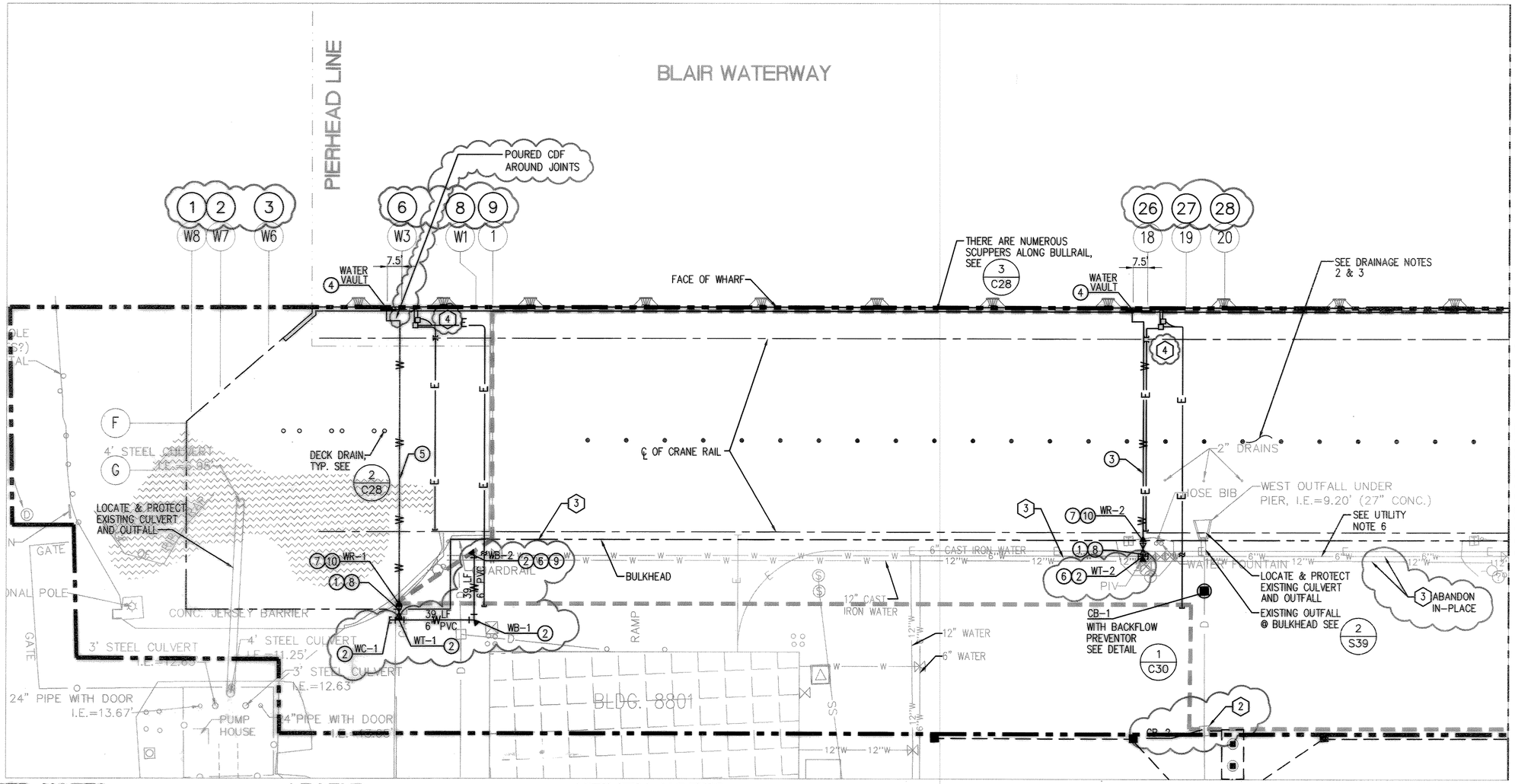
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SHEET 28 OF 164
C23

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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CTB FILE:
PLOT VIEW:
NOTES:



WATER NOTES

1. CONSTRUCT GATE VALVES AND BOX PER 4 C29.
2.
3. CONSTRUCT 2"ø SCHEDULE 40 PVC PIPE WITH 2" POLYURETHANE FOAM INSULATION & POLYETHYLENE CASING ATTACHED TO WHARF, SEE SECTION B C27
4. CONSTRUCT WATER VAULT PER 1 C29.
5. CONSTRUCT 2"ø PVC WATER PIPE IN 4"ø SCHEDULE 80 PVC SLEEVE. SEE SECTION A C27.
6. CONNECT TO EXISTING 6" CAST IRON WATER LINE. FIELD VERIFY LOCATION FOR CONNECTION.
7. INSERT LINE SIZE REDUCER.
8. INSERT DEFLECTION JOINT (BRASS FLEX-TEND FLEXIBLE EXPANSION JOINT).
9. TEST & DISINFECT NEW LINE BEFORE MAKING NEW CONNECTIONS TO EXISTING LINE.
10. CONSTRUCT PVC FITTING

SEE SHEET C29, DETAIL 5, FOR SCHEDULE OF TEES, BENDS, AND OTHER FITTINGS.

LEGEND

- CATCH BASIN, SEE DRAINAGE STRUCTURE SCHEDULE ON SHEET C28 FOR TYPE & SIZE
- 4" DECK DRAIN
- EXISTING SURFACE DRAIN, TO REMAIN
- POWER/COMMUNICATION VAULT
- WATER VAULT
- TELEPHONE VAULT
- WATER VALVE
- EXISTING FIRE HYDRANT
- 6" W — EXISTING WATER LINE
- SS — EXISTING SEWER LINE
- D — EXISTING STORM DRAIN LINE
- E — EXISTING ELECTRICAL LINE
- W — PROPOSED WATER LINE
- E — PROPOSED ELECTRICAL LINE
- PROPOSED CONTAINER YARD DRAINAGE, CONTRACT NO.998153
- XXX — BENT NUMBER
- CONTRACTOR USE AREA, STAGE 1
- CONTRACTOR USE AREA, STAGE 2
- SPECIAL AQUATIC SITE, SEE ERDAHL OUTFALL GRADING NOTES, SHEET C20

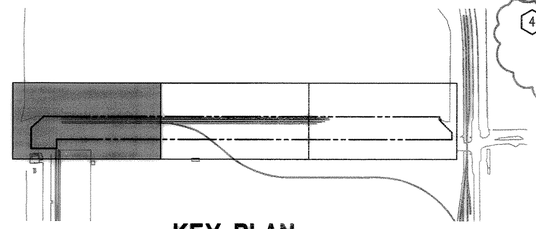
UTILITY NOTES

1. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM A REVIEW OF AVAILABLE RECORD DATA. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL POTHOLE OR OTHERWISE CONFIRM CONDITIONS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER IN-SERVICE LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
3. SEE EXISTING WHARF CIVIL DEMOLITION DRAWINGS FOR EXISTING UTILITIES TO DEMOLISH & ABANDON.
4. SEE DETAIL 3 C30 FOR TYPICAL WATER LINE AND STORM DRAIN TRENCH.
5. SEE ELECTRICAL SHEETS FOR DETAILS ON PROPOSED ELECTRICAL CONDUITS & VAULTS
6. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING 6" CAST IRON WATER LINE.
7. ALL WATER LINES SHALL BE INSTALLED WITH 8' MINIMUM COVER FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

DRAINAGE NOTES

1. COORDINATES AND INVERT ELEVATIONS OF CATCH BASINS ARE AT THE CENTERLINE OF THE CATCH BASIN. THE CENTERLINE OF INLET AND OUTLET PIPES INTERSECT AT CATCH BASIN CENTERLINE.
2. EXISTING WHARF HAS NUMEROUS SURFACE DRAIN HOLES SIMILAR TO DETAIL 2 C28 PROTECT IN PLACE. REFERENCE DRAWINGS OF EXISTING WHARF ARE AVAILABLE FOR CONTRACTOR'S REVIEW, SEE SPEC SECTION 1010.
3. THE EXISTING WHARF HAS NUMEROUS SUBSURFACE DRAINS NOT SHOWN ON THESE PLANS. PROTECT IN PLACE. SEE REFERENCE DRAWINGS OF EXISTING WHARF.

1. RFI 093
2. CO #8
3. RFP 16
4. ALL ELECTRICAL CONDUIT NORTH OF O/B CRANE BEAM ENCASED IN RED CDF.



KEY PLAN

SCALE: N.T.S.

N

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPVD:	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT PARCEL:

SWK CHECKED BY – DATE 06/11/03
MB/BSO PROJECT ENGR– DATE 06/11/03

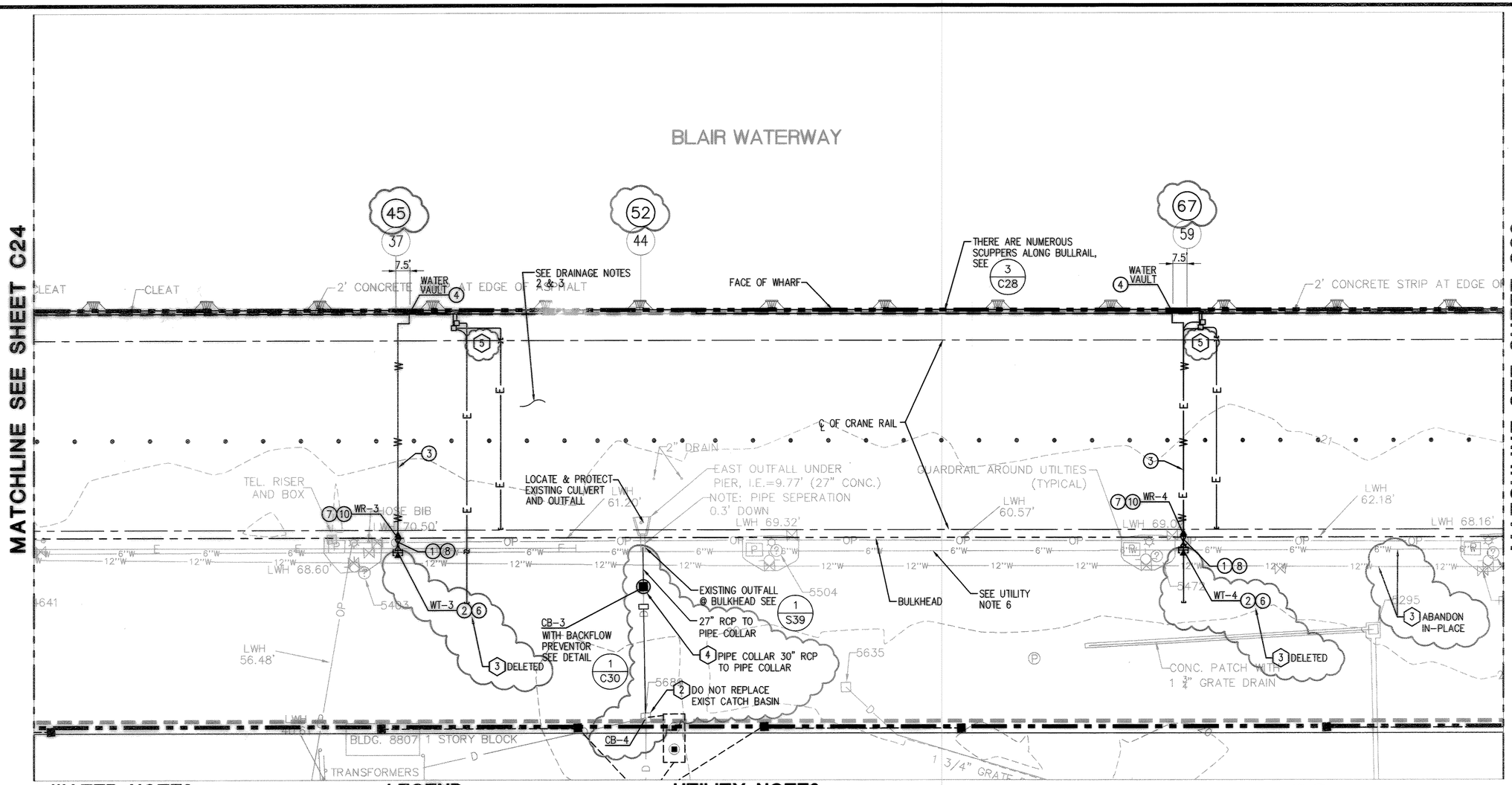
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WHARF UTILITY PLAN

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE:

EP-5661-17
C24
SHEET 29 OF 164
CONTRACT NUMBER: 998149
E-NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

PLOTTED DATE & TIME: FEB. 01, 2005 8:32:01 AM | UPDATED BY: RICKT | PLOT SCALE: 1=1 | 'CTB' FILE: --- | PLOT VIEW:
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NOTES:



WATER NOTES

1. CONSTRUCT GATE VALVES AND BOX PER 4 C29.
2.
3. CONSTRUCT 2"ø SCHEDULE 40 PVC PIPE WITH 2" POLYURETHANE FOAM INSULATION & POLYETHYLENE CASING ATTACHED TO WHARF, SEE SECTION B C27
4. CONSTRUCT WATER VAULT PER 1 C29.
5. CONSTRUCT 2"ø PVC WATER PIPE IN 4"ø SCHEDULE 80 PVC SLEEVE. SEE SECTION A C27.
6.
7. INSERT LINE SIZE REDUCER.
8. INSERT DEFLECTION JOINT (BRASS FLEX-TEND FLEXIBLE EXPANSION JOINT).
9. TEST & DISINFECT NEW LINE BEFORE MAKING NEW CONNECTIONS TO EXISTING LINE.
10. CONSTRUCT PVC FITTING

SEE SHEET C29, DETAIL 5, FOR SCHEDULE OF TEES, BENDS, AND OTHER FITTINGS.

LEGEND

- CATCH BASIN, SEE DRAINAGE STRUCTURE SCHEDULE ON SHEET C28 FOR TYPE & SIZE
- 4" DECK DRAIN
- EXISTING SURFACE DRAIN, TO REMAIN
- POWER/COMMUNICATION VAULT
- WATER VAULT
- TELEPHONE VAULT
- WATER VALVE
- EXISTING FIRE HYDRANT
- 6" W — EXISTING WATER LINE
- SS — EXISTING SEWER LINE
- D — EXISTING STORM DRAIN LINE
- E — EXISTING ELECTRICAL LINE
- W — PROPOSED WATER LINE
- E — PROPOSED ELECTRICAL LINE
- PROPOSED CONTAINER YARD DRAINAGE, CONTRACT NO.998153
- XXX — BENT NUMBER
- CONTRACTOR USE AREA, STAGE 1
- CONTRACTOR USE AREA, STAGE 2

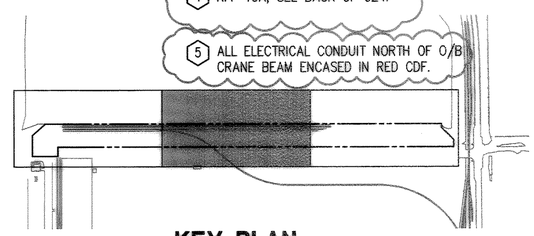
UTILITY NOTES

1. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM A REVIEW OF AVAILABLE RECORD DATA. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL POTHOLE OR OTHERWISE CONFIRM CONDITIONS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER IN-SERVICE LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
3. SEE EXISTING WHARF CIVIL DEMOLITION DRAWINGS FOR EXISTING UTILITIES TO DEMOLISH & ABANDON.
4. SEE DETAIL 3 C30 FOR TYPICAL WATER LINE AND STORM DRAIN TRENCH.
5. SEE ELECTRICAL SHEETS FOR DETAILS ON PROPOSED ELECTRICAL CONDUITS & VAULTS
6. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING 6" CAST IRON WATER LINE.
7. ALL WATER LINES SHALL BE INSTALLED WITH 8' MINIMUM COVER FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

DRAINAGE NOTES

1. COORDINATES AND INVERT ELEVATIONS OF CATCH BASINS ARE AT THE CENTERLINE OF THE CATCH BASIN. THE CENTERLINE OF INLET AND OUTLET PIPES INTERSECT AT CATCH BASIN CENTERLINE.
2. EXISTING WHARF HAS NUMEROUS SURFACE DRAIN HOLES SIMILAR TO DETAIL 2 C28 PROTECT IN PLACE. REFERENCE DRAWINGS OF EXISTING WHARF ARE AVAILABLE FOR CONTRACTOR'S REVIEW, SEE SPEC SECTION 1010.
3. THE EXISTING WHARF HAS NUMEROUS SUBSURFACE DRAINS NOT SHOWN ON THESE PLANS. PROTECT IN PLACE. SEE REFERENCE DRAWINGS OF EXISTING WHARF.

1. RFI 093
2. RFI 196
3. RFP 16
4. RFP 10A, SEE BACK OF C24.
5. ALL ELECTRICAL CONDUIT NORTH OF O/B CRANE BEAM ENCASED IN RED CDF.



KEY PLAN

SCALE: N.T.S.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

N

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

PORT of TACOMA U.S.A.

kpff Consulting Engineers 601 Fifth Avenue, Suite 600 Seattle, Washington 98101 (206) 622-5822 Fax (206) 622-9300

PORT OF TACOMA P.O. BOX 1837 TACOMA, WA 98401 253-383-5841

MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED

CHIEF ENGINEER - DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

SWK CHECKED BY - DATE 06/11/03
MB/BSO PROJECT ENGR - DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORZ: VERT:
DRAWING SCALE:

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING
WHARF UTILITY PLAN

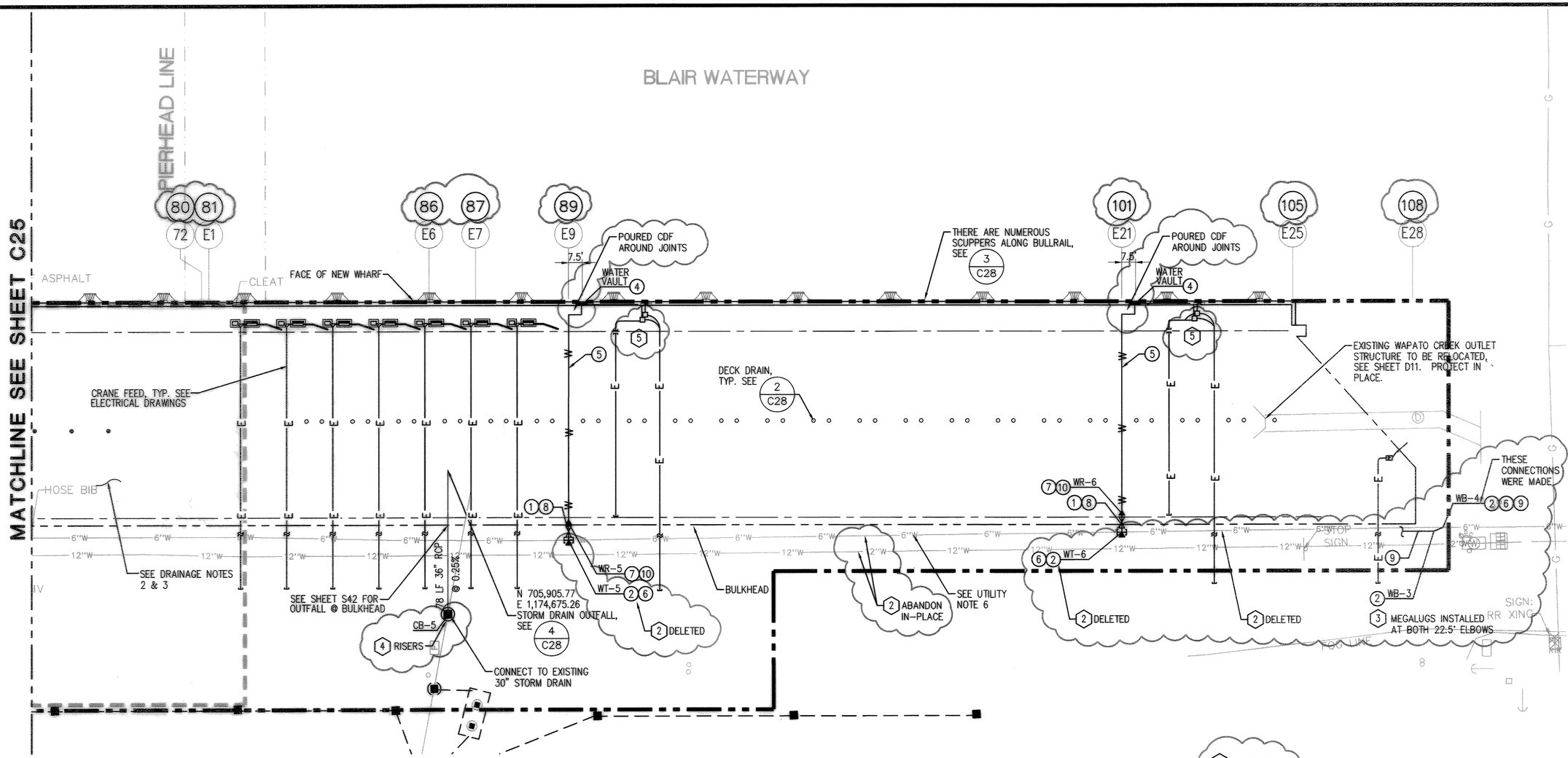
SHEET 30 OF 164
C25

CONTRACT NUMBER: 9981.49
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-8551-17

6320-17

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WATER NOTES

1. CONSTRUCT GATE VALVES AND BOX PER 4 C29.
2.
3. CONSTRUCT 2"ø SCHEDULE 40 PVC PIPE WITH 2" POLYURETHANE FOAM INSULATION & POLYETHYLENE CASING ATTACHED TO WHARF, SEE SECTION B C27
4. CONSTRUCT WATER VAULT PER 1 C29.
5. CONSTRUCT 2"ø PVC WATER PIPE IN 4"ø SCHEDULE 80 PVC SLEEVE. SEE SECTION A C27.
6.
7. INSERT LINE SIZE REDUCER.
8. INSERT DEFLECTION JOINT (BRASS FLEX-TEND FLEXIBLE EXPANSION JOINT).
9. TEST & DISINFECT NEW LINE BEFORE MAKING NEW CONNECTIONS TO EXISTING LINE.
10. CONSTRUCT PVC FITTING

SEE SHEET C29, DETAIL 5, FOR SCHEDULE OF TEES, BENDS, AND OTHER FITTINGS.

LEGEND

- CATCH BASIN, SEE DRAINAGE STRUCTURE SCHEDULE ON SHEET C28 FOR TYPE & SIZE
- 4" DECK DRAIN
- EXISTING SURFACE DRAIN, TO REMAIN
- POWER/COMMUNICATION VAULT
- WATER VAULT
- TELEPHONE VAULT
- WATER VALVE
- EXISTING FIRE HYDRANT
- 6" W — EXISTING WATER LINE
- SS — EXISTING SEWER LINE
- D — EXISTING STORM DRAIN LINE
- E — EXISTING ELECTRICAL LINE
- W — PROPOSED WATER LINE
- E — PROPOSED ELECTRICAL LINE
- PROPOSED CONTAINER YARD DRAINAGE, CONTRACT NO.998153
- XXX — BENT NUMBER
- CONTRACTOR USE AREA, STAGE 1
- CONTRACTOR USE AREA, STAGE 2

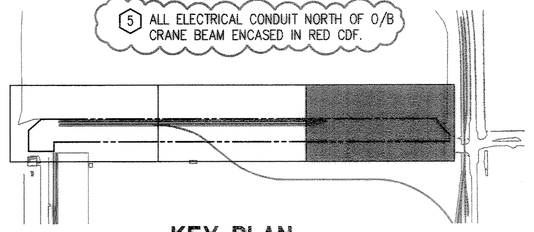
UTILITY NOTES

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3. SEE EXISTING WHARF CIVIL DEMOLITION DRAWINGS FOR EXISTING UTILITIES TO DEMOLISH & ABANDON.
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5. SEE ELECTRICAL SHEETS FOR DETAILS ON PROPOSED ELECTRICAL CONDUITS & VAULTS
6. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING 6" CAST IRON WATER LINE.
7. ALL WATER LINES SHALL BE INSTALLED WITH 8' MINIMUM COVER FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

DRAINAGE NOTES

1. COORDINATES AND INVERT ELEVATIONS OF CATCH BASINS ARE AT THE CENTERLINE OF THE CATCH BASIN. THE CENTERLINE OF INLET AND OUTLET PIPES INTERSECT AT CATCH BASIN CENTERLINE.
2. EXISTING WHARF HAS NUMEROUS SURFACE DRAIN HOLES SIMILAR TO DETAIL 2 C28 PROTECT IN PLACE. REFERENCE DRAWINGS OF EXISTING WHARF ARE AVAILABLE FOR CONTRACTOR'S REVIEW, SEE SPEC SECTION 1010.
3. THE EXISTING WHARF HAS NUMEROUS SUBSURFACE DRAINS NOT SHOWN ON THESE PLANS. PROTECT IN PLACE. SEE REFERENCE DRAWINGS OF EXISTING WHARF.

1. RFI 093
2. RFP 16
3. MEGALUGS INSTALLED AT BOTH 22.5°ELBOWS
4. SUBMITTAL 02400-08, SEE DWG H02 ON BACK OF C25.
5. ALL ELECTRICAL CONDUIT NORTH OF O/B CRANE BEAM ENCASED IN RED CDF.



KEY PLAN

SCALE: N.T.S.

N

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY	APPROVED	DATE

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

SWK 06/11/03
CHECKED BY – DATE
MB/BSO 06/11/03
PROJECT ENGR. – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WHARF UTILITY PLAN

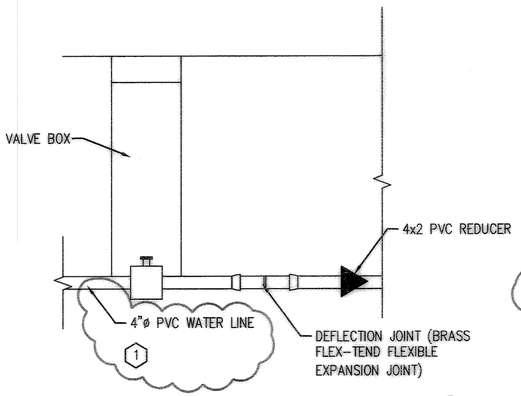
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E NUMBER E1372
PHASE: RECORD DOCUMENTS

EP-~~5561-17~~

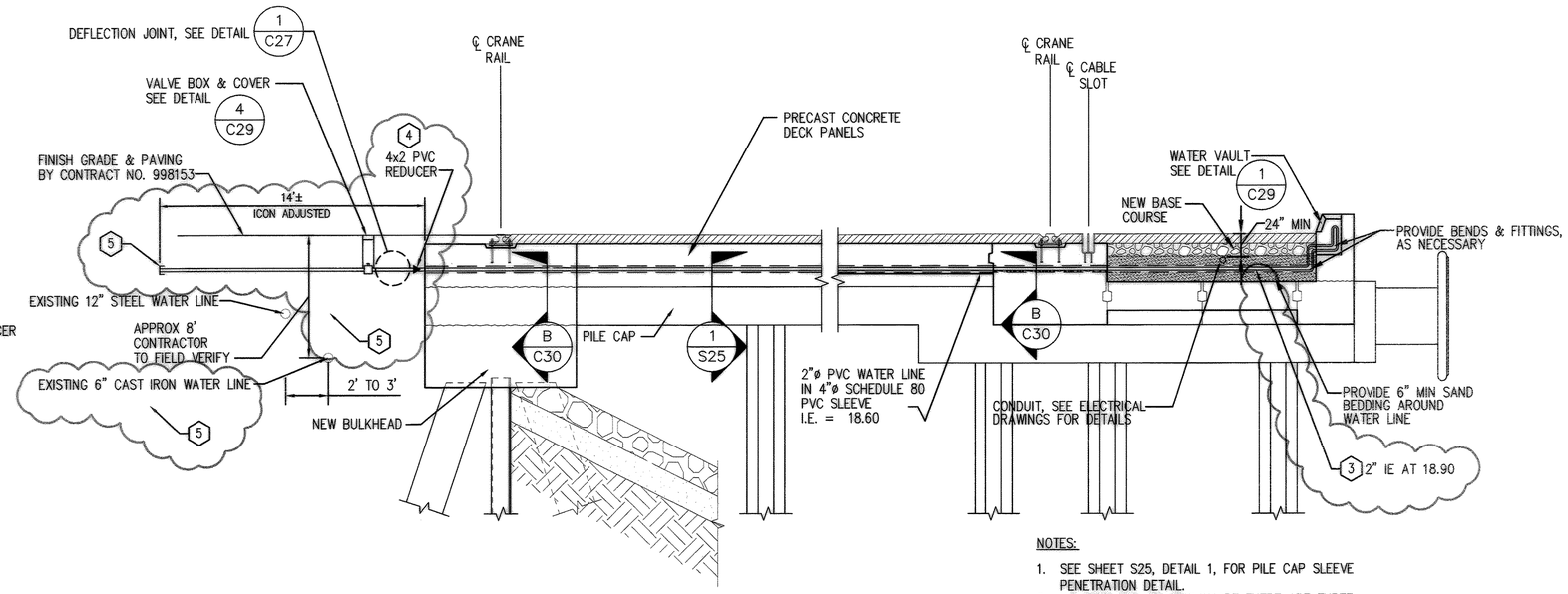
SHEET 31 OF 164
C26

6320-17

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NOTES:



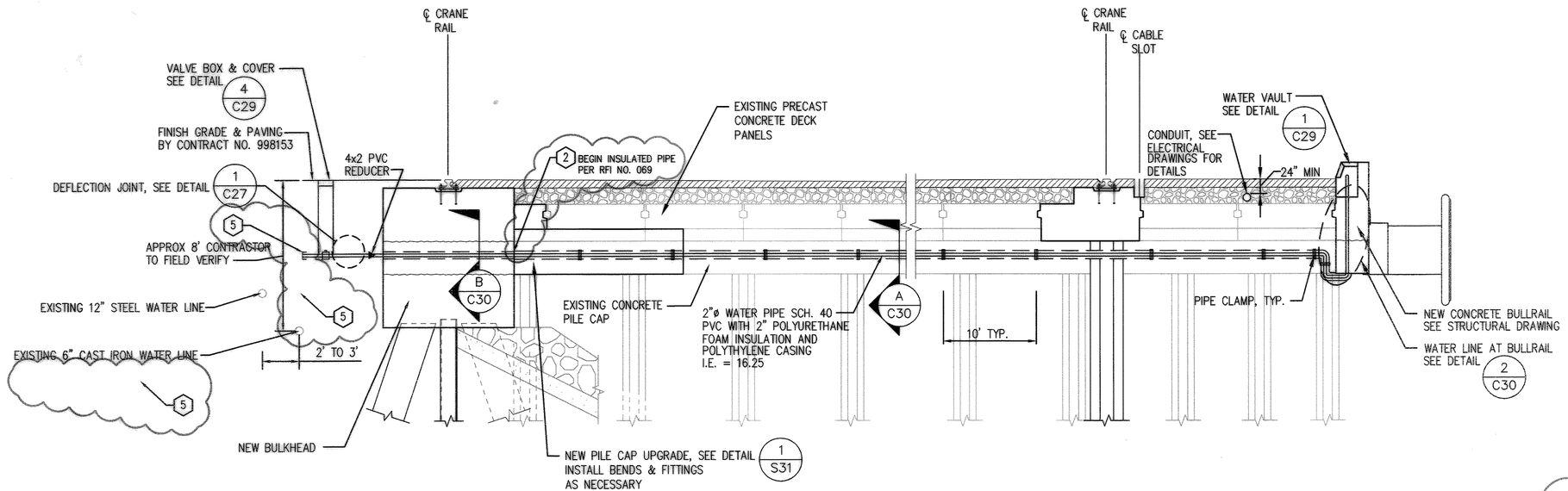
DEFLECTION JOINT 1 / C27
SCALE: NTS



NOTES:

1. SEE SHEET S25, DETAIL 1, FOR PILE CAP SLEEVE PENETRATION DETAIL.
2. AT WEST END OF NEW WHARF THERE ARE THREE PENETRATIONS REQUIRED, INSTEAD OF TWO, AS DEPICTED IN ABOVE SECTION. SEE SHEET S16, DETAIL 1.

SECTION–WATER LINE AT NEW WHARF A / C24 C26
SCALE: NTS



SECTION–WATER LINE AT EXISTING WHARF B / C24 C25
SCALE: NTS

1. RFI 023
2. RFI 069
3. RFI 105
4. RFI 219
5. RFP 16

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

MARK	REVISION	BY:	APPROVED	DATE:

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CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
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PORT PARCEL:

SWK CHECKED BY – DATE 06/11/03
BSO PROJECT ENGR. – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ. VERT:
DRAWING SCALE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WHARF UTILITIES SECTIONS

CONTRACT NUMBER 998149
F. NUMBER E1972
PHASE: RECORD DOCUMENTS

EP-~~5551-17~~
C27
SHEET 32 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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JOB #:
XREFS: P0122x34TB-KPFF.
NOTES:

DRAINAGE STRUCTURE SCHEDULE

NUMBER	NORTHING	EASTING	GRATE EL.	INV.	TYPE/SIZE	GRATE TYPE	REMARKS
1	705,900.71	1,173,510.32	20.95	9.50± (N & S)	2/96"	B	INSTALL BACK FLOW PREVENTOR, SEE DETAIL 1/C30.
							CONNECT TO EXISTING 27" SD (N & S)
2	705,828.68	1,173,507.37	20.70	10.30± (N & S)	2/48"	A	CONNECT TO EXISTING 24"
3	705,879.80	1,173,991.32	20.95	10.10± (N & S)	2/96"	B	INSTALL BACK FLOW PREVENTOR, SEE DETAIL 1/C30.
							CONNECT TO EXISTING 27" SD (N & S)
4	705,810.57	1,173,989.58	20.70	10.80± (N)	2/48"	A	CONNECT TO EXISTING 27" SD (N & S)
				10.90± (S)			
5	705,828.09	1,174,671.88	20.55	5.08± (N)	2/54"	A	CONNECT TO EXISTING 60" SD (SW)
				9.11± (SW)			

(1) 27" PER TRANS #00153 & RFI 033

(1) SD (S) & 27" SD (N) TRANS #00153 & RFI 033

(4) FOR UTILITY AS-BUILTS SEE BACK OF C27

GRATES

NOTE: GRATES FOR CATCH BASINS & MANHOLES SHALL BE DESIGNED TO ACCOMMODATE THE DESIGN LOADING CRITERIA ON THIS SHEET. GRATES LISTED BELOW SHALL BE MODIFIED IF NECESSARY TO MEET CRITERIA.

TYPE "A" – NEENAH R-3475 HEAVY DUTY FRAME AND GRATE

TYPE "B" – NEENAH R-3492-1 24" DIA. HEAVY DUTY MANHOLE FRAME AND COVER WITH ANCHOR BOLT HOLES DRILLED INTO EACH VERTICAL WALL.

DRAINAGE STRUCTURE SCHEDULE — SCALE: N/A — 1 / C24 — C25, C26

UNDERGROUND UTILITY STRUCTURES DESIGN LOADING CRITERIA

1. ALL UNDERGROUND AND AT GRADE STRUCTURES INCLUDING MANHOLES & CATCH BASINS, AND OTHER STRUCTURES, INCLUDING ALL RINGS, COVERS, GRATES AND OTHER FEATURES WHICH MAY APPLY, SHALL BE DESIGNED TO ACCOMMODATE THE LOAD CRITERIA SHOWN. FOR ALL UNDERGROUND UTILITY STRUCTURES, SHOP DRAWINGS AND CALCULATIONS STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER PRIOR TO FABRICATION.
2. STANDARD PLAN REFERENCES AND MANUFACTURER MODEL NUMBERS FOR UNDERGROUND UTILITY STRUCTURES, GRATES, COVERS ARE INTENDED TO PROVIDE INTERIOR GEOMETRY AND INTENT ONLY. THE CONTRACTOR SHALL INCREASE REQUIRED REINFORCING AND WALL THICKNESS, AND CHANGE ACCESS GRATE AND COVER AS REQUIRED TO ACCOMMODATE LOADING CRITERIA.
3. THE SOIL DESIGN CRITERIA SHALL BE:
   *2500 PSF FOR ALLOWABLE SOIL BEARING PRESSURE
4. LATERAL SOIL LOADS SHALL BE APPLIED TO ALL STRUCTURES AS FOLLOWS:
   *SEE SOILS REPORT: GEOTECHNICAL ENGINEERING SERVICES, PIERCE COUNTY TERMINAL DEVELOPMENT, PORT OF TACOMA, WASHINGTON, DATED AUGUST 2, 2000.
5. DEAD LOAD SHALL BE APPLIED TO ALL STRUCTURES WHICH INCLUDE THE WEIGHT OF THE CONSTRUCTION MATERIALS AND THE SOIL.
6. LIVE LOADS 1, 2 AND 3 SHALL ACT SIMULTANEOUSLY AND IN COMBINATION WITH DEAD LOADS AND HYROSTATIC PRESSURE WHEN DESIGNING UTILITY STRUCTURES WITHIN THE LIMITS OF THE SITE.

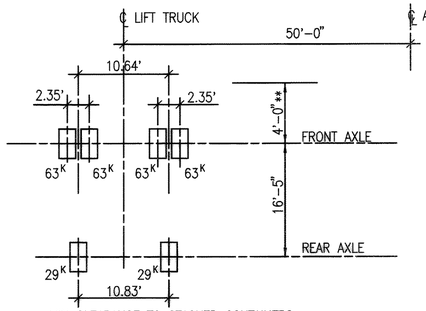
* LOADING SHALL ACT SIMULTANEOUSLY, BUT NEED NOT OCCUPY THE SAME SPACE. WHEEL LOAD CONFIGURATION FOR CONTAINER LIFT TRUCK SHALL BE ARRANGED IN PROXIMITY TO THE STACKED CONTAINERS TO RESULT IN THE LARGEST DESIGN REQUIREMENT FOR THE UTILITY STRUCTURE. SEE FIGURE 1 FOR LIFT TRUCK PROXIMITY TO STACKED CONTAINER REQUIREMENTS.

LIVE LOAD DEFINITIONS

LIVE LOAD 1 – GROUNDED CONTAINERS: UNIFORM LIVE LOAD IS 750 PSF CONFIGURATION 4 STACKED 8' x 40' CONTAINERS AT 30 TONS EACH.
LOAD FACTOR = 1.7 FOR ULTIMATE STRENGTH DESIGN.

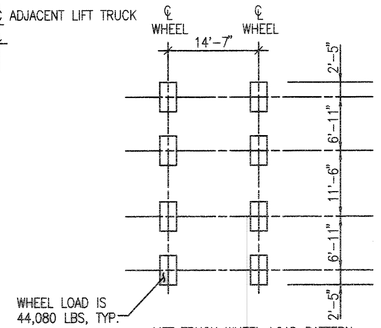
LIVE LOAD 2 – CONTAINER YARD LIFT TRUCK: KALMAR DC4580RS4 REACH STACKER
IMPACT I = 1.3
LOAD FACTOR = 1.7 FOR ULTIMATE STRENGTH DESIGN.

LIVE LOAD 3 – CONTAINER STRADDLE CARRIER: KALMAR CSC350
IMPACT I = 1.3
LOAD FACTOR = 1.7 FOR ULTIMATE STRENGTH DESIGN.



** MIN CLEARANCE TO STACKED CONTAINERS
LIFT TRUCK WHEEL LOAD PATTERN
KALMAR DC4580SRC4

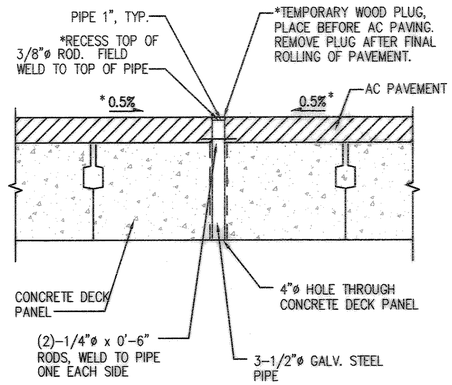
FIGURE 1



LIFT TRUCK WHEEL LOAD PATTERN
KALMAR CSC350

FIGURE 2

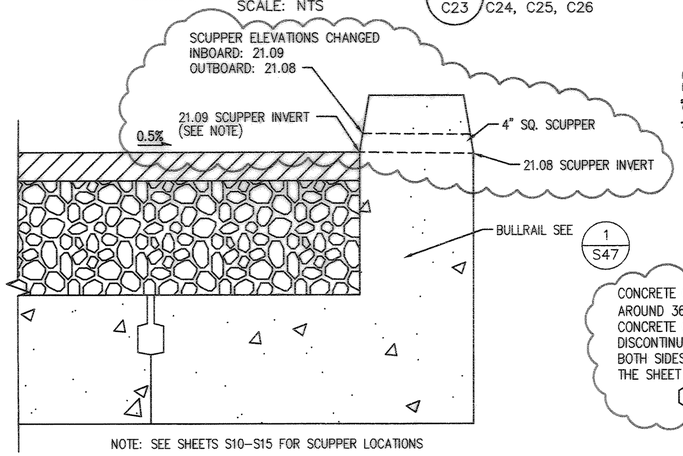
(1) RFI 033
(2) RFI 084
(3) RFI 092
(4) UTILITY AS-BUILTS, SEE BACK OF C27.
(5) ABANDON PER RFP 16.



NOTES

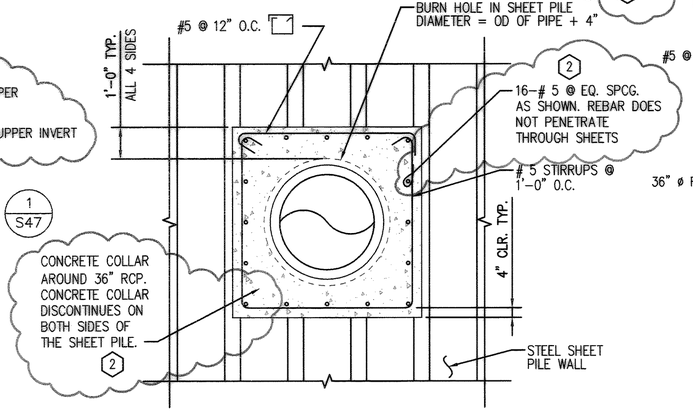
1. NOTES WITH * APPLY TO NEW WHARF DECK DRAINS AND EXISTING WHARF DECK DRAINS. OTHER NOTES APPLY TO NEW WHARF DECK DRAINS ONLY.
2. SEE SHEET S53 THRU S60 FOR ADDITIONAL INFORMATION ABOUT LOCATION OF DECK DRAIN IN DECK PANEL.

DECK DRAIN DETAIL — SCALE: NTS — 2 / C23 — C24, C25, C26



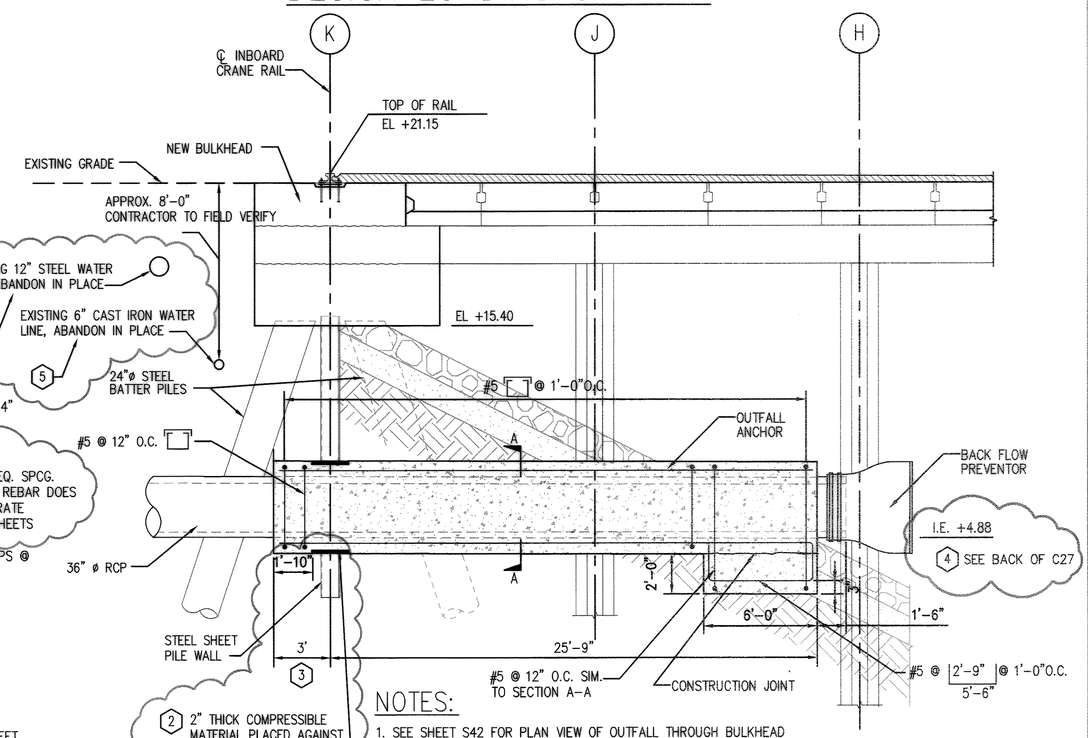
NOTE: SEE SHEETS S10–S15 FOR SCUPPER LOCATIONS

SCUPPER DETAIL — SCALE: 3/4" = 1'-0" — 3 / C24 — C25, C26



OUTFALL ANCHOR SECTION A–A — SCALE: NTS

DESIGN LOADING CRITERIA



NOTES:
1. SEE SHEET S42 FOR PLAN VIEW OF OUTFALL THROUGH BULKHEAD
2. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND/OR COFFERDAM AND DEWATERING AS REQUIRED TO COMPLETE THE CONSTRUCTION OF THE OUTFALL. SHORING AND COFFERDAM DESIGN AND DEWATERING SHALL BE SUBMITTED TO THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS.

STORM DRAIN OUTFALL DETAIL — SCALE: 1/4"=1'-0" — 4 / C26

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MARK | REVISION | BY | APPROVED | DATE

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
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SWK CHECKED BY – DATE 06/11/03
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CONTRACT NUMBER: 9981.49
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PHASE: RECORD DOCUMENTS

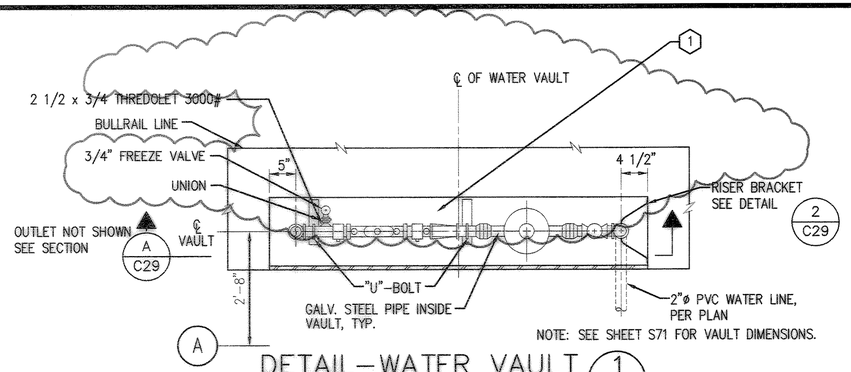
RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WHARF DRAINAGE DETAILS

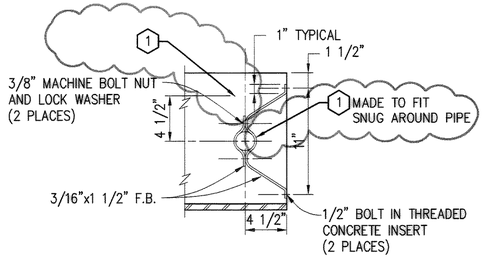
EP-~~5661-17~~
C28
SHEET 33 OF 164

6320-17

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JOB NAME | JOB # | XREFS: P0122x34B-KPFF
NOTES:



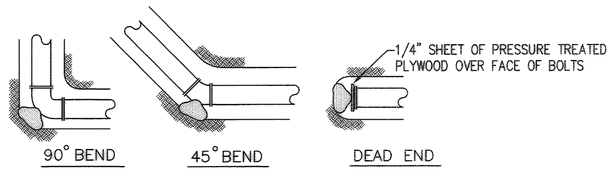
DETAIL–WATER VAULT 1
SCALE: NTS
C23 C24, C25, C26



DETAIL–RISER BRACKET 2
SCALE: NTS
C29

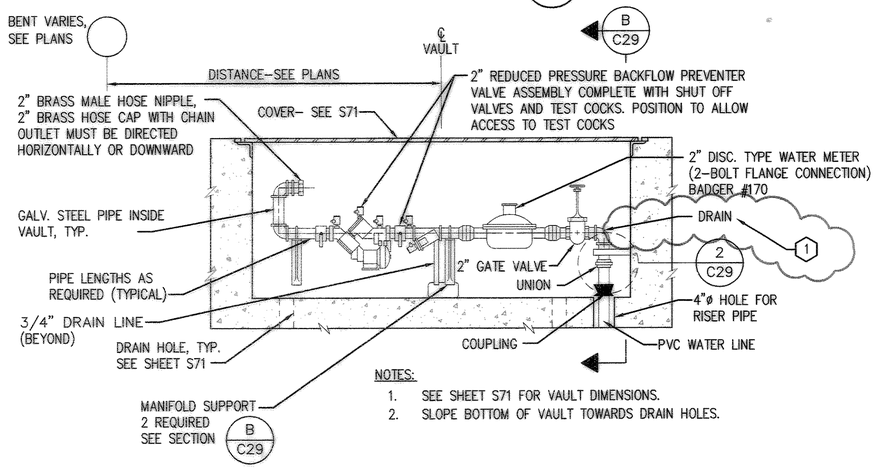
THRUST BLOCK BEARING AREA TABLE				
	90° BEND	"T" & CAP	45° BEND	22 1/2° BEND
4"	3.6 SF	2.5 SF	1.9 SF	1.0 SF
6"	8.0 SF	5.7 SF	4.4 SF	2.2 SF

4' COVER



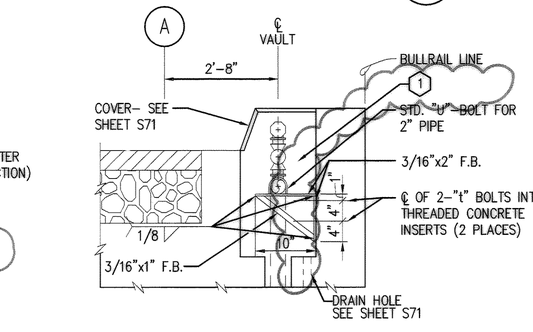
BLOCKS:
A. BLOCKS MUST BE POURED AGAINST UNDISTURBED SOIL.
B. THE PIPE JOINT AND BOLTS MUST BE ACCESSIBLE.
C. CONCRETE SHOULD BE CURED FOR AT LEAST 5 DAYS AND SHOULD HAVE A COMPRESSION STRENGTH OF 2,000 LBS. AT 28 DAYS.
D. BLOCKS MUST BE POSITIONED TO COUNTERACT THE DIRECTION OF THE RESULTANT THRUST FORCE.

2. ALL PIPE SHALL BE PROPERLY BEDDED, SEE STANDARD TRENCH DETAIL 3 C30



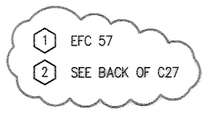
NOTES:
1. SEE SHEET S71 FOR VAULT DIMENSIONS.
2. SLOPE BOTTOM OF VAULT TOWARDS DRAIN HOLES.

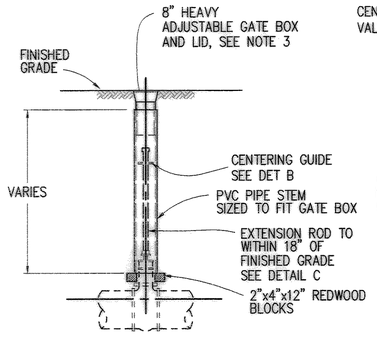
SECTION–WATER VAULT B
SCALE: NTS
C29



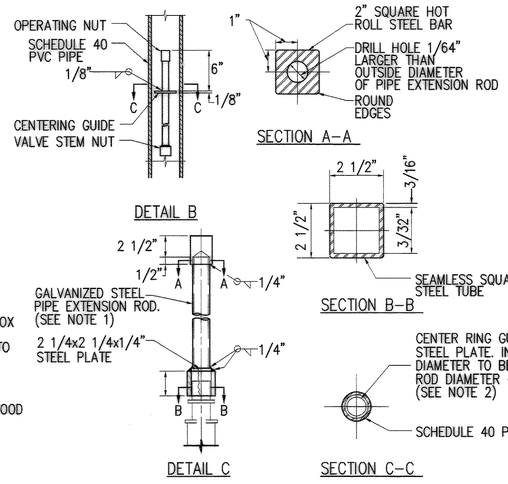
SECTION–WATER VAULT A
SCALE: NTS
C29

THRUST BLOCKING DETAIL 3
SCALE: NTS
C7 C24, C25, C26





DETAIL A



NOTES:
1. COAT ENTIRE EXTENSION ROD ASSEMBLY WITH NO–OX–ID A SPECIAL COMPOUND.
2. DIAMETER OF CENTERING GUIDE TO BE 1/2" SMALLER THAN INSIDE DIAMETER OF GATE BOX.
3. GATE BOX AND LID SHALL BE HEAVY TRAFFIC RATED, AND MARKED "WATER". USE 8" GATE BOX FOR 12" WATER MAIN AND SMALLER

DETAIL–GATE BOX 4
SCALE: NTS
C24 C25, C26, C27

WATER SCHEDULE

STRUCTURE ID	FITTING TYPE	NORTHING	EASTING
WB–3	6" 22 1/2° BEND	705,848.88	1,175,207.96
WB–4	6" 22 1/2° BEND	705,850.70	1,175,212.95
WR–1	4" TO 2", PVC LINE REDUCER	705,907.89	1,173,092.19
WR–2	4" TO 2", PVC LINE REDUCER	705,927.08	1,173,479.56
WR–3	4" TO 2", PVC LINE REDUCER	705,910.43	1,173,862.20
WR–4	4" TO 2", PVC LINE REDUCER	705,892.30	1,174,278.80
WR–5	4" TO 2", PVC LINE REDUCER	705,872.27	1,174,739.37
WR–6	4" TO 2", PVC LINE REDUCER	705,859.23	1,175,039.08
WC–1	6" CAP OR PLUG	705,903.58	1,173,087.00

2 SEE BACK OF C27 FOR AS–BUILTS. USED MECHANICAL JOINT RESTRAINTS TO MAKE CONNECTIONS.

WATER SCHEDULE 5
SCALE: N/A
C24 C25, C26

NOTE:
1. NORTHING/EASTING ARE APPROXIMATE – CONTRACTOR SHALL FIELD VERIFY LOCATION OF 6" WATER LINE PRIOR TO CONSTRUCTING NEW WATER LINES.

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY	APPROVED	DATE

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

SWK 06/11/03 CHECKED BY – DATE
BSO 06/11/03 PROJECT ENGR. – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE:

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

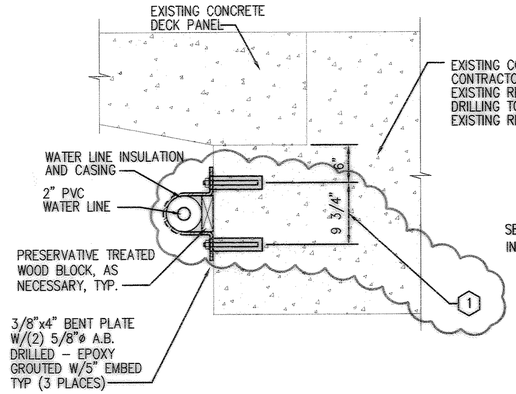
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WATER DETAILS

EP-555T-17
C29
SHEET 34 OF 164

6320-17

NOTES:
JOB #
JOB NAME
XREFS: P0722x341B-HPF.

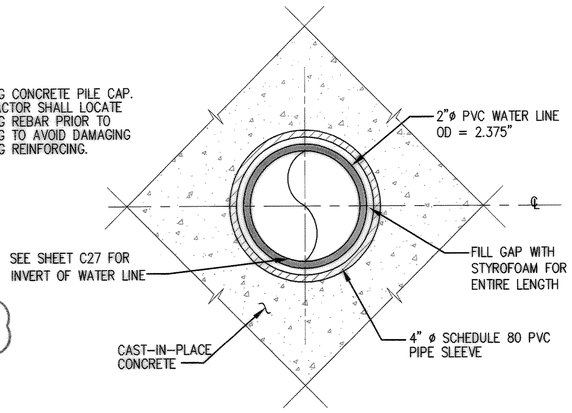
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UPDATED BY: RICKT
PLOT SCALE: 1=1
'CTB' FILE: ---
PLOT VIEW: ---



SECTION–PIPE CLAMP @ EXISTING PILE CAP

SCALE: 2"=1'–0"

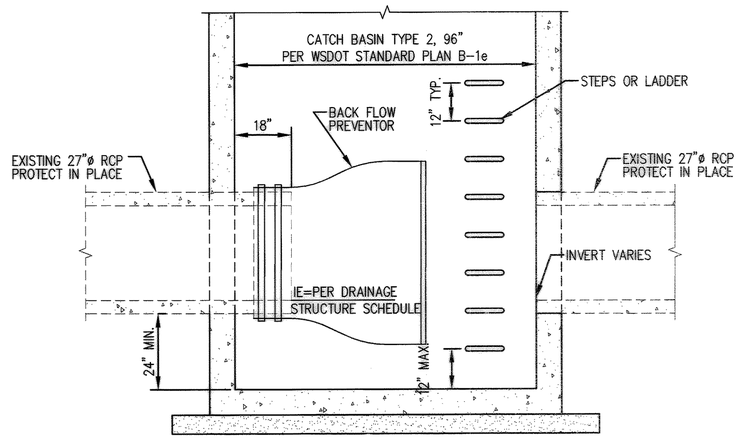
A / C28



CAST–IN–PLACE PENETRATION SECTION

SCALE: 6"=1'–0"

B / C27

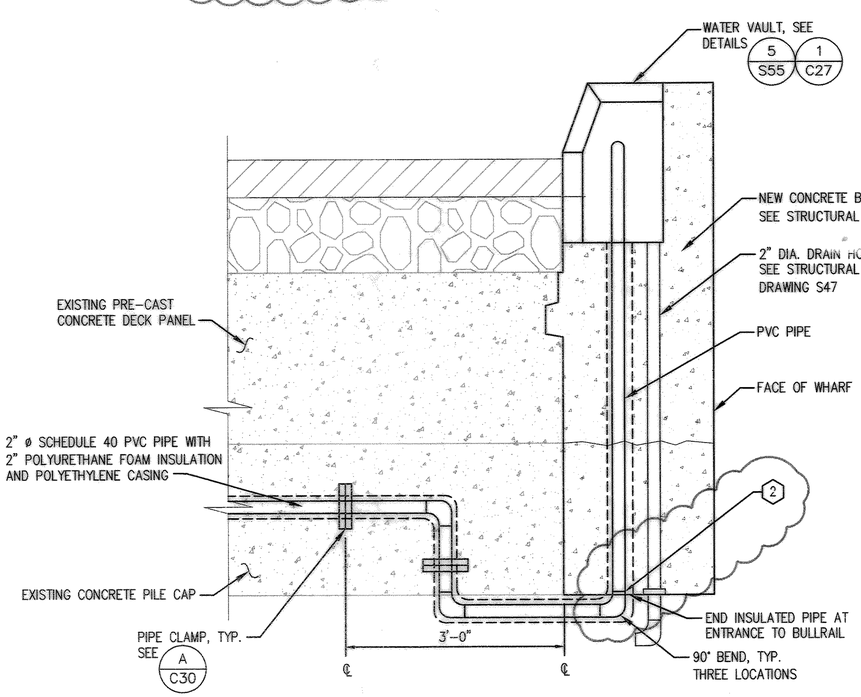


BACK FLOW PREVENTOR IN CATCH BASIN DETAIL

SCALE: NTS

1 / C24 C25, C28

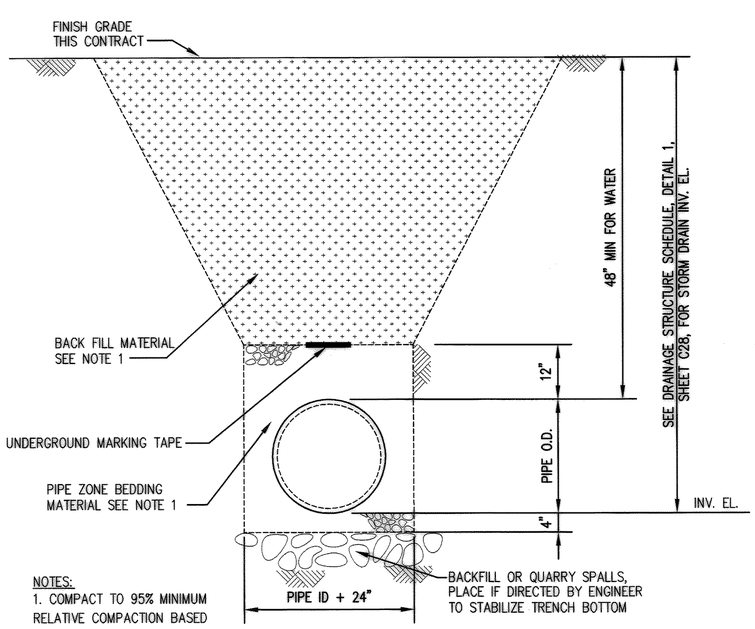
1. RFI 067
2. RFI 239, SEE BACK OF C29



WATER LINE AT EXISTING WHARF

SCALE: 1"=1'–0"

2 / C27

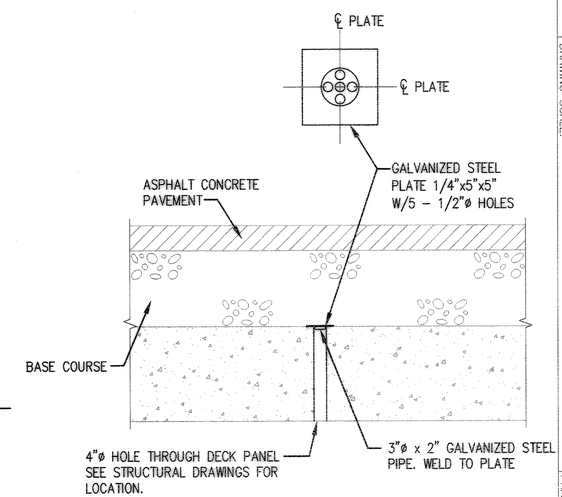


NOTES:
1. COMPACT TO 95% MINIMUM RELATIVE COMPACTION BASED ON ASTM D1557.

TYPICAL TRENCH DETAIL

SCALE: NTS

3 / C22 C23, C24, C29



DETAIL

SCALE: NTS

4 / C24 C26

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK | REVISION | BY: | APPRVD: | DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

SWK CHECKED BY – DATE 06/11/03
BSO PROJECT ENGR.– DATE 06/11/03

TOWNSHIP: NORTH
RANGE: EAST
SECTION:
DRAWING SCALE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WATER & DRAINAGE DETAILS

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

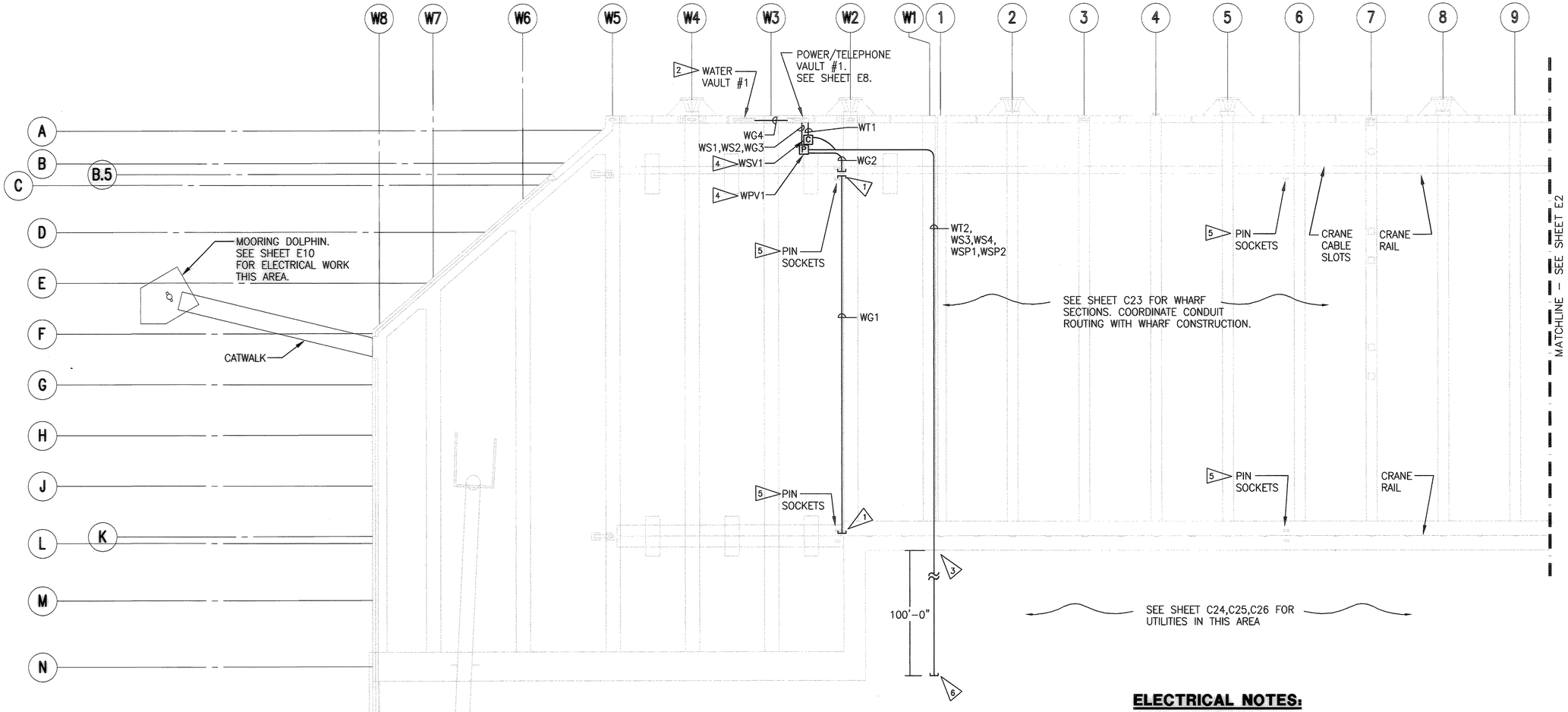
SHEET 35 OF 164
C30

EP-~~5551-47~~

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

6320-17

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JOB #: ---
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XREFS: P0722X34B-XPFF.



PARTIAL WHARF ELECTRICAL PLAN

SCALE:1/16"=1'-0"

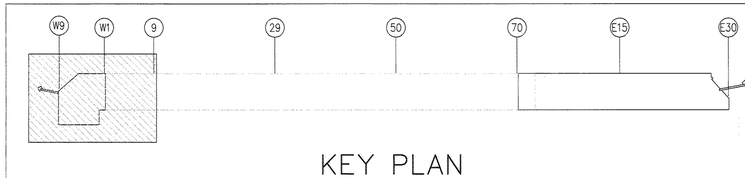
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GENERAL NOTES:

1. PROVIDE REMOVABLE FOAM (HANDY FOAM OR EQUAL) FILL IN ALL CONDUIT OPENINGS.
2. ALL CONDUIT BELOW GRADE IN WHARF BALLAST AREA SHALL BE PVC SCHEDULE 80.
3. ALL CONDUITS ENTERING AND LEAVING POWER VAULTS, WHARF UTILITY VAULTS AND TELEPHONE VAULTS SHALL BE PROVIDED WITH BELL ENDS.
4. COUPLINGS AND JOINTS OF CONDUITS EMBEDDED IN CONCRETE SHALL BE TAPED OR OTHERWISE MADE WATERTIGHT TO PREVENT INTRUSION OF MORTAR OR OTHER OBSTRUCTIONS. TEST CONDUIT BY PULLING A PROPERLY SIZED MANDREL THROUGH CONDUIT FOR ABSENCE OF ANY BLOCKAGE WITHIN 24 HOURS OF COMPLETING THE CONCRETE POUR. COORDINATE AND HAVE TEST WITNESSED BY ENGINEER.
5. NOT ALL STRUCTURAL FEATURES OF THE WHARF AREAS ARE SHOWN ON THIS SHEET. REFER TO STRUCTURAL DRAWINGS AND COORDINATE INSTALLATION METHODS AND REQUIREMENTS FOR ELECTRICAL WORK. THIS INCLUDES THE INSTALLATION OF REQUIRED SLEEVES, CORE DRILLING AND CONDUIT HANGERS FOR ROUTING CONDUITS.
6. ELECTRICAL REQUIREMENTS ARE NOT LIMITED TO ELECTRICAL DRAWINGS AND SPECIFICATIONS. THERE IS ADDITIONAL ELECTRICAL WORK REQUIRED TO BE INCLUDED IN THE BID, INDICATED ON DEMOLITION, STRUCTURAL AND CIVIL DRAWINGS. ADDITIONAL ELECTRICAL WORK REQUIRED IN THE BID IS ALSO LOCATED IN THE SPECIFICATIONS. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL ELECTRICAL INFORMATION. CONDUIT ROUTING SHOWN IS DIAGRAMMATIC. CONTRACTOR IS REQUIRED TO REVIEW DRAWINGS AND FIELD COORDINATE SLEEVES, CORE DRILLING AND CONDUIT ROUTING WITH THE PIER CONSTRUCTION.
7. ALL EXISTING TELEPHONE, ELECTRICAL EQUIPMENT, CONDUIT, WIRE AND RELATED HARDWARE SHALL BE REMOVED IN IT'S ENTIRELY WITHIN THE LIMITS OF THE WHARF PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE SITE CONTRACTOR, SITE DEMOLITION CONTRACTOR AND RELATED UTILITIES TO SAFE OFF ALL POWER SOURCES PRIOR TO REMOVING SERVICES.

ELECTRICAL NOTES:

1. PROVIDE EXOTHERMIC WELDS FOR GROUND WIRE CONNECTION AT CRANE RAILS. SEE STRUCTURAL DRAWINGS. SAW CUTTING IS REQUIRED.
2. IN THE WATER VAULT, PROVIDE 4"Hx1/2"Wx8"L SOLID BARE COPPER GROUND BUS WITH SIX (6) SCREW DOWN LUGS SIZED FOR #10 THRU #4 CU WIRE. PROVIDE #10 CU BARE GROUND WIRE FROM THE GROUND BUS TO THE VAULT LID/FRAME, AND THE WATER PIPING.
3. PROVIDE FLEXIBLE CONDUIT TRANSITION BETWEEN WHARF AND SITE FOR ALL CONDUITS. DO NOT USE EXPANSION JOINT TRANSITIONS.
4. PROVIDE LABEL LID WITH WELDED BEAD "ELECTRICAL" OR "SIGNAL" AS APPLIES. VAULT WITH COVER SHALL BE RATED FOR H25 TRAFFIC LOADING. PROVIDE 4"Hx1/2"Wx8"L SOLID BARE COPPER GROUND BUS WITH SIX (6) SCREW DOWN LUGS SIZED FOR #10 THRU #4 CU WIRE. UTILITY VAULT #3030-LA WITH 3030-P COVER MODIFIED FOR H25 TRAFFIC LOADING.
5. PROVIDE 1" PVC SCHEDULE 80-(1)#4 CU GRD FROM CRANE RAIL TO EACH CRANE PIN SOCKET, AND THE CRANE CABLE SLOTS. PROVIDE EXOTHERMIC WELD FOR ALL CONNECTIONS OF THE GROUND WIRE. THESE ARE NOT SHOWN ON THIS DRAWING. REVIEW STRUCTURAL DRAWINGS S35, S36 AND S37 FOR EXACT LOCATION OF EQUIPMENT. FIELD COORDINATE CONDUIT AND CABLE ROUTING, SLEEVES, SAWCUTTING REQUIREMENTS AND CONNECTIONS.
6. CONTRACTOR SHALL LEAVE CONDUIT AT AN ELEVATION BETWEEN 2' AND 3' BELOW FINAL FINISHED GRADE FOR SITE CONTRACTOR TO EXTEND INTO VAULTS. PIER CONTRACTOR SHALL PULL A PROPERLY SIZED MANDREL THROUGH CONDUIT AND DEMONSTRATE TO THE ENGINEER THE CONDUIT IS NOT DAMAGED PRIOR TO CAPPING AND LEAVING CONDUITS FOR THE SITE CONTRACTORS' USE.



KEY PLAN

6320-17

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

HULTZ • BHU • CROSS

2607 Ruston Way Tacoma, WA 98402
Phone: (253) 759-0118 Fax: (253) 759-1979
gsmeritt@hultzbhucross.com Job Number: 03-009

MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED

CHIEF ENGINEER - DATE

DRAWING DATE: 11/16/04
PORT ADDRESS:
PORT PARCEL:

GLW/TJC 11/16/04 CHECKED BY - DATE
GLW 11/16/04 PROJECT ENGR. - DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PARTIAL WHARF ELECTRICAL PLAN

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

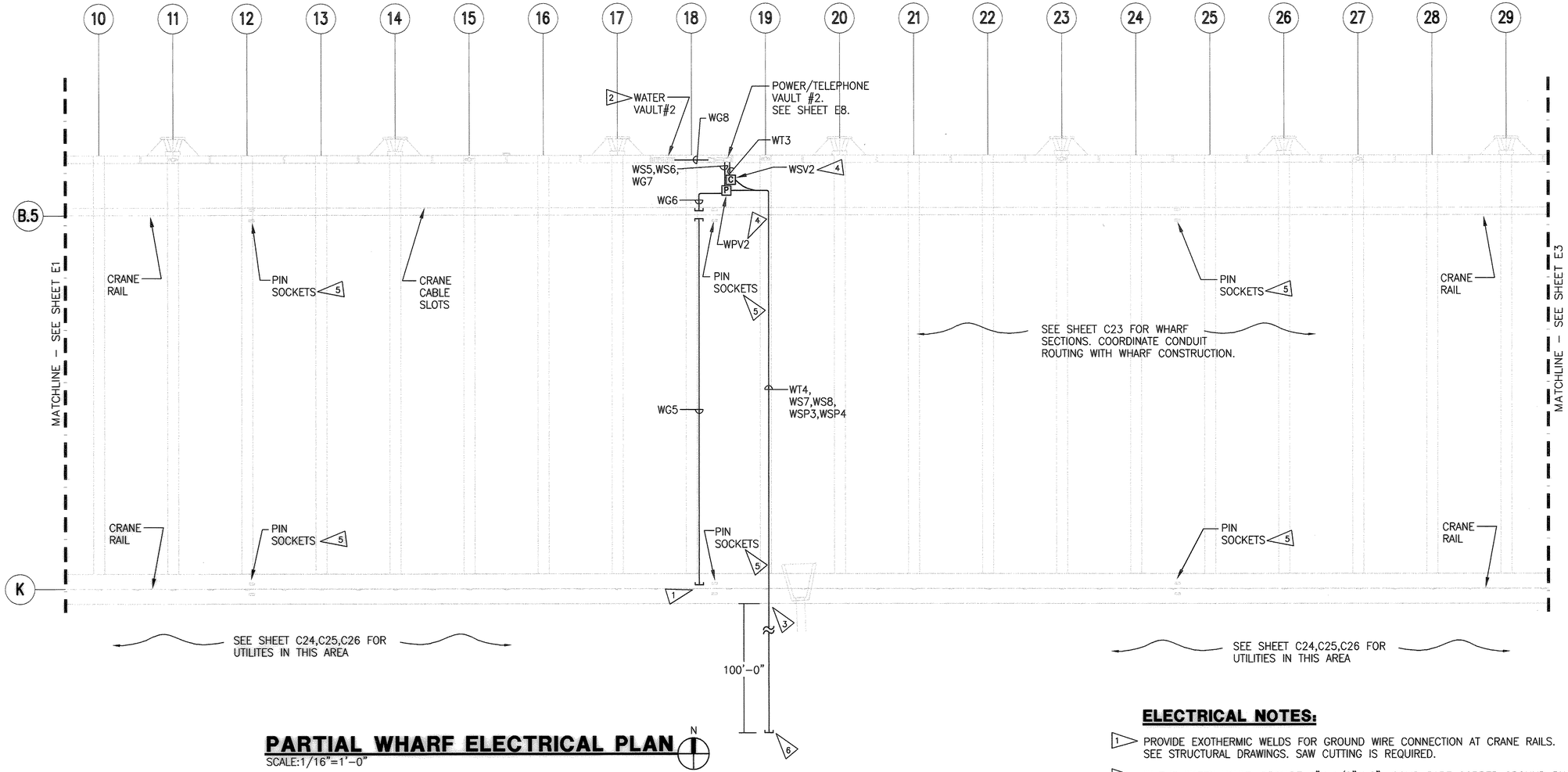
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E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~555-17~~

SHEET 153 OF 164

E1

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI



PARTIAL WHARF ELECTRICAL PLAN

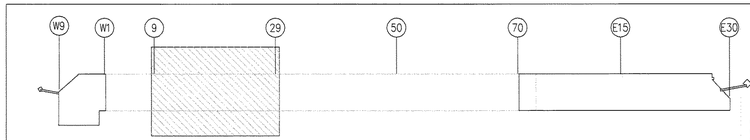
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2. ALL CONDUIT BELOW GRADE IN WHARF BALLAST AREA SHALL BE PVC SCHEDULE 80.
3. ALL CONDUITS ENTERING AND LEAVING POWER VAULTS, WHARF UTILITY VAULTS AND TELEPHONE VAULTS SHALL BE PROVIDED WITH BELL ENDS.
4. COUPLINGS AND JOINTS OF CONDUITS EMBEDDED IN CONCRETE SHALL BE TAPED OR OTHERWISE MADE WATERTIGHT TO PREVENT INTRUSION OF MORTAR OR OTHER OBSTRUCTIONS. TEST CONDUIT BY PULLING A PROPERLY SIZED MANDREL THROUGH CONDUIT FOR ABSENCE OF ANY BLOCKAGE WITHIN 24 HOURS OF COMPLETING THE CONCRETE POUR. COORDINATE AND HAVE TEST WITNESSED BY ENGINEER.
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3. PROVIDE FLEXIBLE CONDUIT TRANSITION BETWEEN WHARF AND SITE FOR ALL CONDUITS. DO NOT USE EXPANSION JOINT TRANSITIONS.
4. PROVIDE LABEL LID WITH WELDED BEAD "ELECTRICAL" OR "SIGNAL" AS APPLIES. VAULT WITH COVER SHALL BE RATED FOR H25 TRAFFIC LOADING. PROVIDE 4"Hx1/2"Wx8"L SOLID BARE COPPER GROUND BUS WITH SIX (6) SCREW DOWN LUGS SIZED FOR #10 THRU #4 CU WIRE. UTILITY VAULT #3030–LA WITH 3030–P COVER MODIFIED FOR H25 TRAFFIC LOADING AND MAXIMUM OUTSIDE HEIGHT OF 1'–6".
5. PROVIDE 1" PVC SCHEDULE 80–(1)#4 CU GRD FROM CRANE RAIL TO EACH CRANE PIN SOCKET, AND THE CRANE CABLE SLOTS. PROVIDE EXOTHERMIC WELD FOR ALL CONNECTIONS OF THE GROUND WIRE. THESE ARE NOT SHOWN ON THIS DRAWING. REVIEW STRUCTURAL DRAWINGS S35, S36 AND S37 FOR EXACT LOCATION OF EQUIPMENT. FIELD COORDINATE CONDUIT AND CABLE ROUTING, SLEEVES, SAWCUTTING REQUIREMENTS AND CONNECTIONS.
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KEY PLAN

6320–17

PORT OF TACOMA
U.S.A.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

HULTZ • BHU • CROSS

2407 North 31st Street, Suite 2
Tacoma, WA 98407
Phone: (253) 759-0118
Fax: (253) 759-1879
general@hultzbhucross.com
Job Number: 03-009

MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 11/16/04
PORT ADDRESS:
PORT PARCEL:

TJC/GLW 11/16/04
CHECKED BY – DATE

GLW 11/16/04
PROJECT ENGR.– DATE

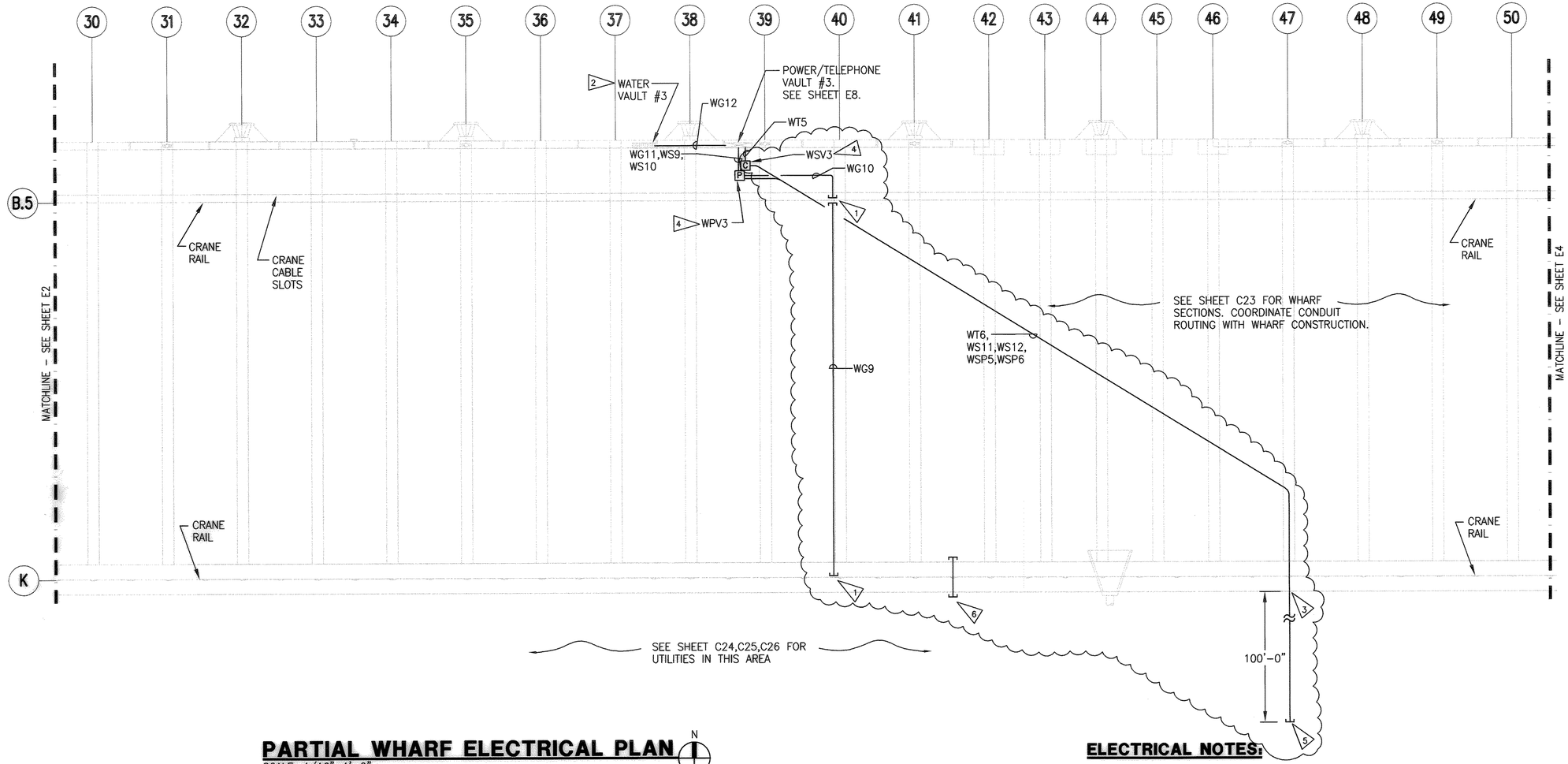
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PARTIAL WHARF ELECTRICAL PLAN

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

EP-~~5551-17~~
E2
SHEET 154 OF 164

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI



PARTIAL WHARF ELECTRICAL PLAN

N

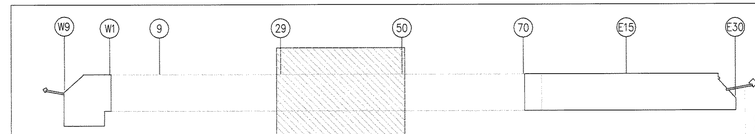
SCALE: 1/16"=1'-0"

GENERAL NOTES:

1. PROVIDE REMOVABLE FOAM (HANDY FOAM OR EQUAL) FILL IN ALL CONDUIT OPENINGS.
2. ALL CONDUIT BELOW GRADE IN WHARF BALLAST AREA SHALL BE PVC SCHEDULE 80.
3. ALL CONDUITS ENTERING AND LEAVING POWER VAULTS, WHARF UTILITY VAULTS AND TELEPHONE VAULTS SHALL BE PROVIDED WITH BELL ENDS.
4. COUPLINGS AND JOINTS OF CONDUITS EMBEDDED IN CONCRETE SHALL BE TAPED OR OTHERWISE MADE WATERTIGHT TO PREVENT INTRUSION OF MORTAR OR OTHER OBSTRUCTIONS. TEST CONDUIT BY PULLING A PROPERLY SIZED MANDREL THROUGH CONDUIT FOR ABSENCE OF ANY BLOCKAGE WITHIN 24 HOURS OF COMPLETING THE CONCRETE POUR. COORDINATE AND HAVE TEST WITNESSED BY ENGINEER.
5. NOT ALL STRUCTURAL FEATURES OF THE WHARF AREAS ARE SHOWN ON THIS SHEET. REFER TO STRUCTURAL DRAWINGS AND COORDINATE INSTALLATION METHODS AND REQUIREMENTS FOR ELECTRICAL WORK. THIS INCLUDES THE INSTALLATION OF REQUIRED SLEEVES, CORE DRILLING AND CONDUIT HANGERS FOR ROUTING CONDUITS.
6. ELECTRICAL REQUIREMENTS ARE NOT LIMITED TO ELECTRICAL DRAWINGS AND SPECIFICATIONS. THERE IS ADDITIONAL ELECTRICAL WORK REQUIRED TO BE INCLUDED IN THE BID, INDICATED ON DEMOLITION, STRUCTURAL AND CIVIL DRAWINGS. ADDITIONAL ELECTRICAL WORK REQUIRED IN THE BID IS ALSO LOCATED IN THE SPECIFICATIONS. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL ELECTRICAL INFORMATION. CONDUIT ROUTING SHOWN IS DIAGRAMMATIC. CONTRACTOR IS REQUIRED TO REVIEW DRAWINGS AND FIELD COORDINATE SLEEVES, CORE DRILLING AND CONDUIT ROUTING WITH THE PIER CONSTRUCTION.
7. ALL EXISTING TELEPHONE, ELECTRICAL EQUIPMENT, CONDUIT, WIRE AND RELATED HARDWARE SHALL BE REMOVED IN IT'S ENTIRELY WITHIN THE LIMITS OF THE WHARF PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE SITE CONTRACTOR, SITE DEMOLITION CONTRACTOR AND RELATED UTILITIES TO SAFE OFF ALL POWER SOURCES PRIOR TO REMOVING SERVICES.

ELECTRICAL NOTES:

1. PROVIDE EXOTHERMIC WELDS FOR GROUND WIRE CONNECTION AT CRANE RAILS. SEE STRUCTURAL DRAWINGS. SAW CUTTING IS REQUIRED.
2. IN THE WATER VAULT, PROVIDE 4"Hx1/2"Wx8"L SOLID BARE COPPER GROUND BUS WITH SIX (6) SCREW DOWN LUGS SIZED FOR #10 THRU #4 CU WIRE. PROVIDE #10 CU BARE GROUND WIRE FROM THE GROUND BUS TO THE VAULT LID/FRAME, AND THE WATER PIPING.
3. PROVIDE FLEXIBLE CONDUIT TRANSITION BETWEEN WHARF AND SITE FOR ALL CONDUITS. DO NOT USE EXPANSION JOINT TRANSITIONS.
4. PROVIDE LABEL LID WITH WELDED BEAD "ELECTRICAL" OR "SIGNAL" AS APPLIES. VAULT WITH COVER SHALL BE RATED FOR H25 TRAFFIC LOADING. PROVIDE 4"Hx1/2"Wx8"L SOLID BARE COPPER GROUND BUS WITH SIX (6) SCREW DOWN LUGS SIZED FOR #10 THRU #4 CU WIRE. UTILITY VAULT #3030-LA WITH 3030-P COVER MODIFIED FOR H25 TRAFFIC LOADING AND MAXIMUM OUTSIDE HEIGHT OF 1'-6".
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6. SIX (6)4" CONDUIT SLEEVES FOR FUTURE SHIP TO SHORE POWER.



KEY PLAN

6320-17

PORT OF TACOMA
TACOMA, U.S.A.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

HULTZ • BHU • CROSS

2401 North 31st Street, Suite 110
Tacoma, WA 98407
Phone: (253) 759-0116 Fax: (253) 759-1879
gwerek@hultzbhucross.com Job Number: 03.009

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 11/16/04
PORT ADDRESS:
PORT PARCEL:

TJC/GLW 11/16/04
CHECKED BY – DATE

GLW 11/16/04
PROJECT ENGR.– DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PARTIAL WHARF ELECTRICAL PLAN

EP ~~5551.17~~

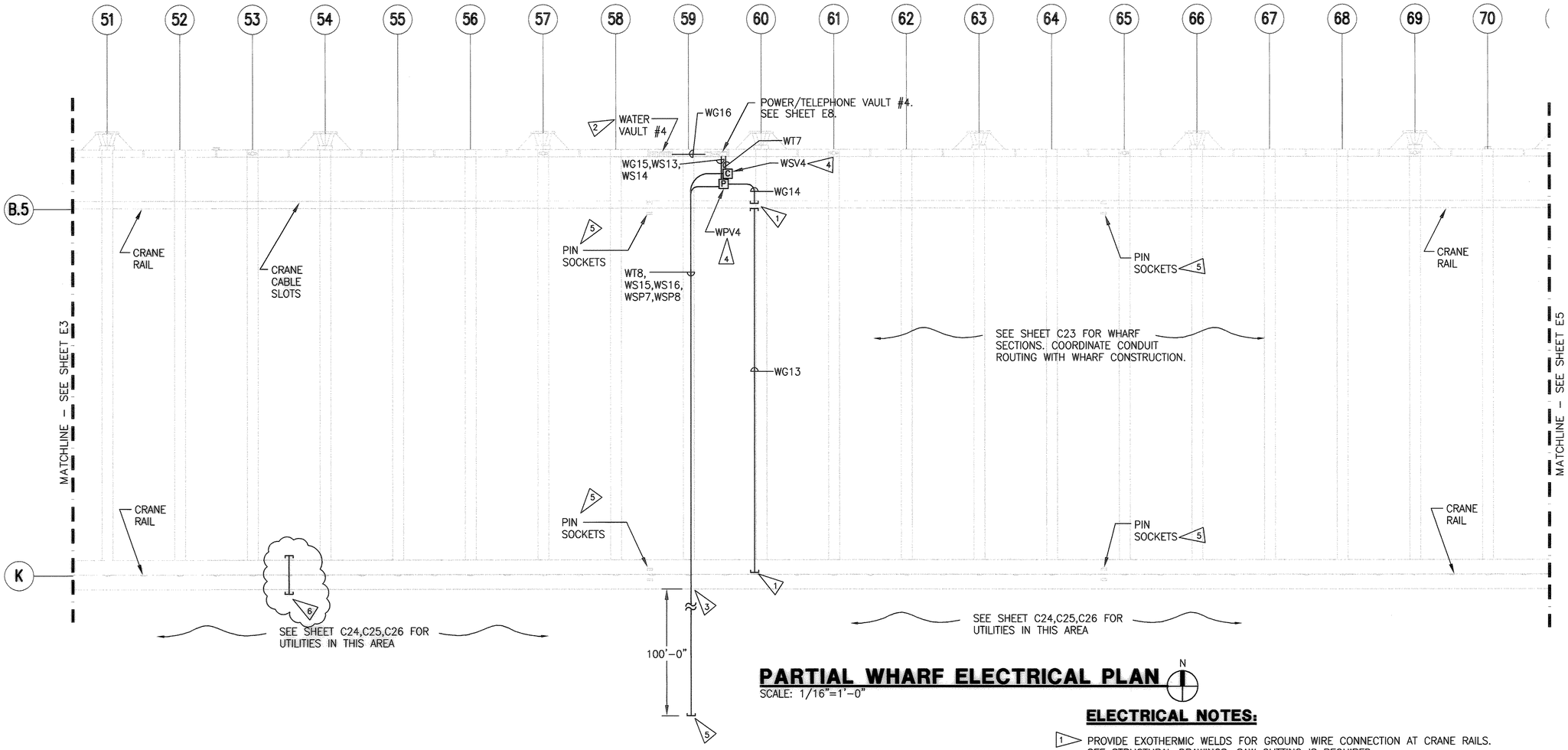
E3

SHEET 155 OF 164

TOWNSHIP: RANGE: SECTION:
DATUM: HORZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)



PARTIAL WHARF ELECTRICAL PLAN

SCALE: 1/16"=1'–0"

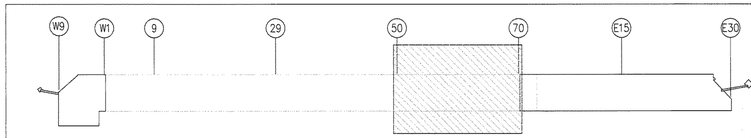
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6. SIX (6)4" CONDUIT SLEEVES FOR FUTURE SHIP TO SHORE POWER.



KEY PLAN

6320-17

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

HULTZ ▪ BHU ▪ CROSS
consulting engineers, inc.
2407 North 31st Street, Tacoma, WA 98407
Phone: (253) 759-9118 Fax: (253) 759-1970
generalmail@hultzbhucross.com Job Number: 03.009

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE:	11/16/04
PORT ADDRESS:	
PORT PARCEL:	

T.J.C./G.L.W. CHECKED BY – DATE	11/16/04
G.L.W. PROJECT ENGR.– DATE	11/16/04

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PARTIAL WHARF ELECTRICAL PLAN

TOWNSHIP:	RANGE:
DATUM: HORZ:	SECTION:
DRAWING SCALE: AS SHOWN	VERT:

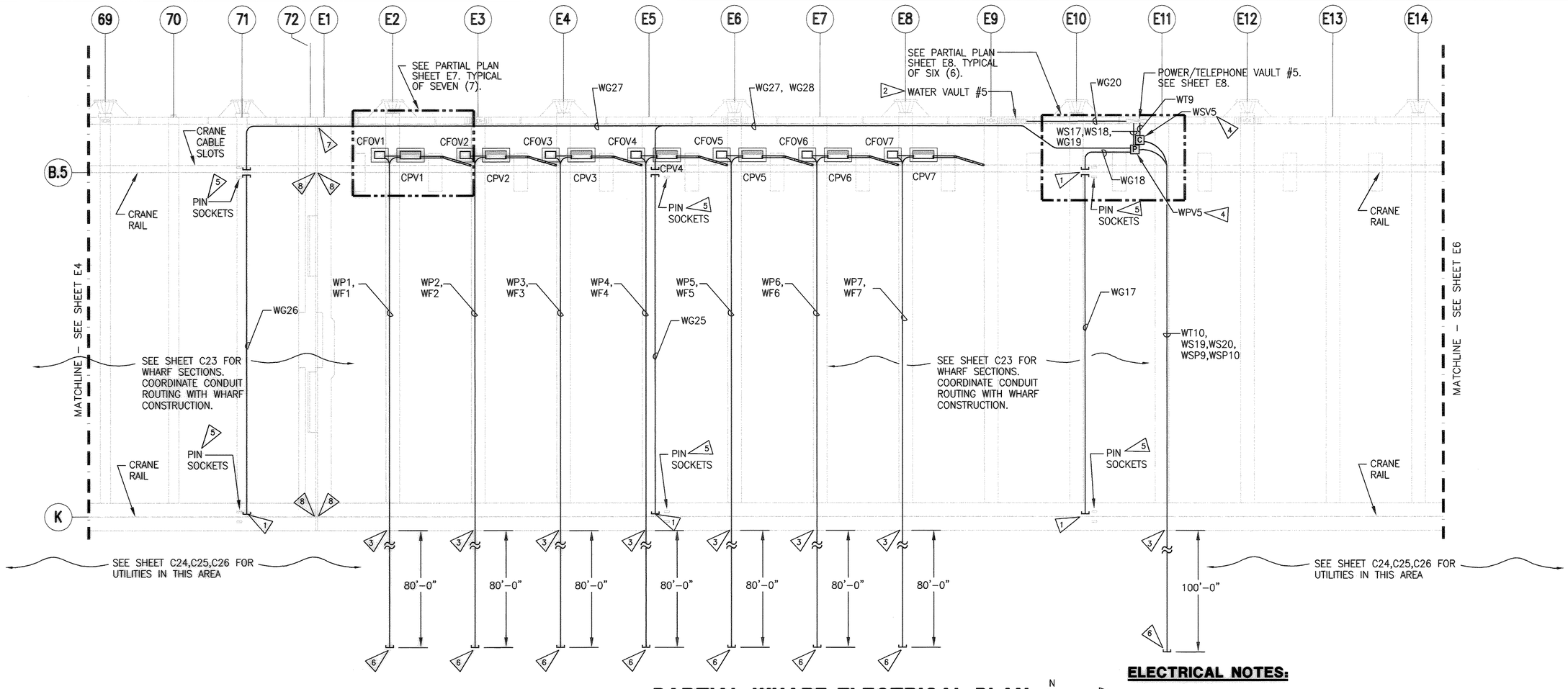
EP-~~555-17~~

E4

SHEET 150 OF 164

CONTRACT NUMBER: 998149
E. NUMBER: 1972
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI



PARTIAL WHARF ELECTRICAL PLAN

SCALE: 1/16"=1'–0"

N

GENERAL NOTES:

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7 WHARF EXPANSION JOINT. PROVIDE EXPANSION COUPLING AT THIS LOCATION.

8 ON EACH SIDE OF THE WHARF EXPANSION JOINT PROVIDE A #4 GROUND FROM THE CRANE RAIL TO THE WHARF EXPANSION JOINT. CABLE SHALL BE EXOTHERMICALLY WELDED AT EACH LOCATION.

ELECTRICAL NOTES:

1 PROVIDE EXOTHERMIC WELDS FOR GROUND WIRE CONNECTION AT CRANE RAILS. SEE STRUCTURAL DRAWINGS. SAW CUTTING IS REQUIRED.

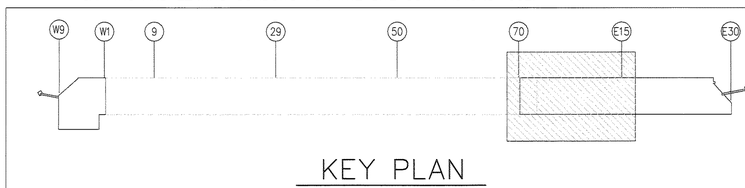
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4 PROVIDE LABEL LID WITH WELDED BEAD "ELECTRICAL" OR "SIGNAL" AS APPLIES. VAULT WITH COVER SHALL BE RATED FOR H25 TRAFFIC LOADING. PROVIDE 4"Hx1/2"Wx8"L SOLID BARE COPPER GROUND BUS WITH SIX (6) SCREW DOWN LUGS SIZED FOR #10 THRU #4 CU WIRE. UTILITY VAULT #3030–LA WITH 3030–P COVER MODIFIED FOR H25 TRAFFIC LOADING.

5 PROVIDE 1" PVC SCHEDULE 80–(1)#4 CU GRD FROM CRANE RAIL TO EACH CRANE PIN SOCKET, AND THE CRANE CABLE SLOTS. PROVIDE EXOTHERMIC WELD FOR ALL CONNECTIONS OF THE GROUND WIRE. THESE ARE NOT SHOWN ON THIS DRAWING. REVIEW STRUCTURAL DRAWINGS S35, S36 AND S37 FOR EXACT LOCATION OF EQUIPMENT. FIELD COORDINATE CONDUIT AND CABLE ROUTING, SLEEVES, SAWCUTTING REQUIREMENTS AND CONNECTIONS.

6 CONTRACTOR SHALL LEAVE CONDUIT AT AN ELEVATION BETWEEN 2' AND 3' BELOW FINAL FINISHED GRADE FOR SITE CONTRACTOR TO EXTEND INTO VAULTS. PIER CONTRACTOR SHALL PULL A PROPERLY SIZED MANDREL THROUGH CONDUIT AND DEMONSTRATE TO THE ENGINEER THE CONDUIT IS NOT DAMAGED PRIOR TO CAPPING AND LEAVING CONDUITS FOR THE SITE CONTRACTORS' USE.



KEY PLAN

6320-17

MARK | REVISION | BY: | APPROVED | DATE:

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

HULTZ • BHU • CROSS
Consulting Engineers, Inc.
2407 North 31st Street
Tacoma, WA 98407
Phone: (253) 759-0118
Fax: (253) 759-1879
generalle@hultzbhucross.com
Job Number: 03-009

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 11/16/04
PORT ADDRESS:
PORT PARCEL:

TJC/GLW CHECKED BY – DATE 11/16/04
GLW PROJECT ENGR.– DATE 11/16/04

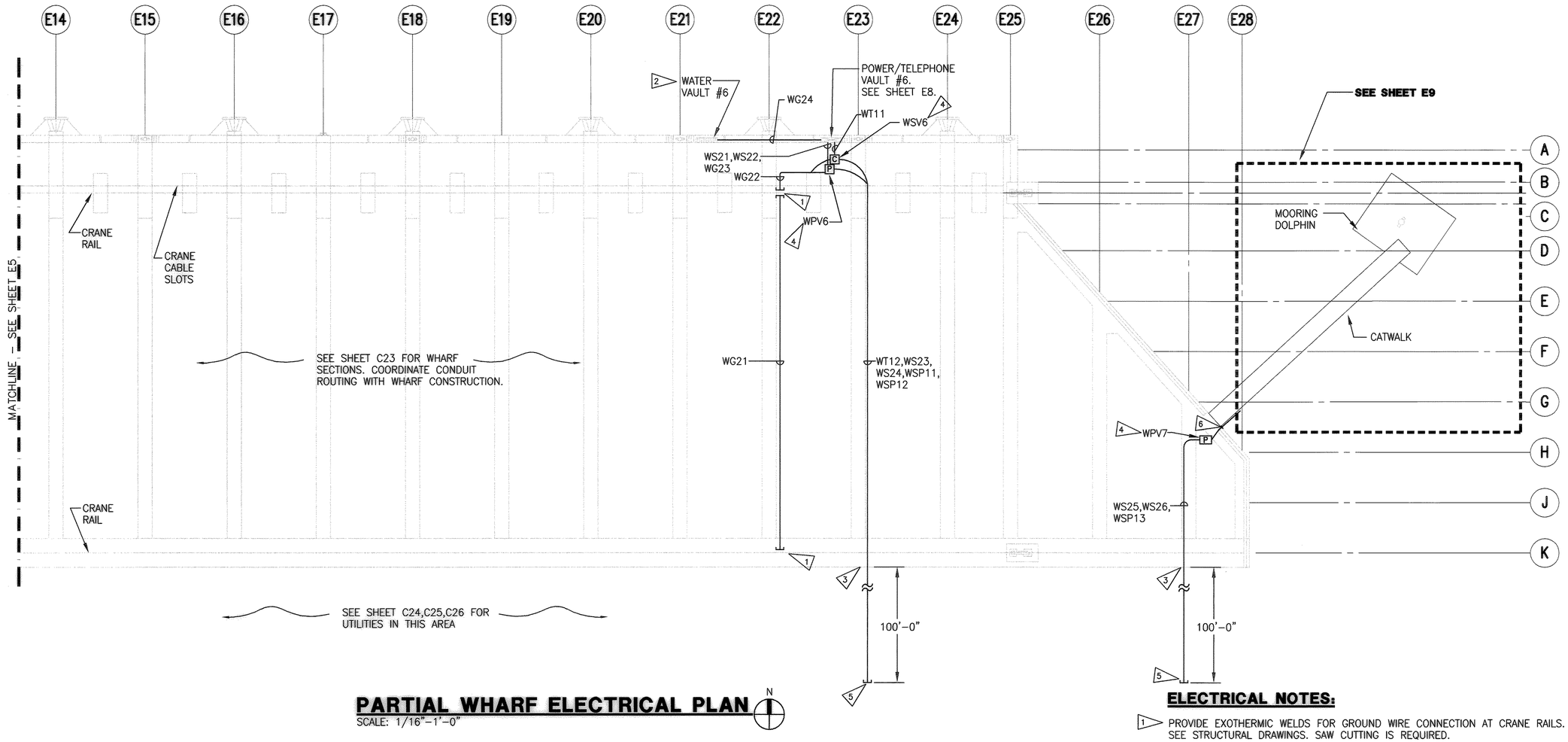
TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ.: VERT.:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PARTIAL WHARF ELECTRICAL PLAN

CONTRACT NUMBER:998149
E NUMBER:E1972
PHASE: RECORD DOCUMENTS

EP-~~5561-17~~
E5
SHEET 157 OF 164

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)



PARTIAL WHARF ELECTRICAL PLAN

SCALE: 1/16"–1'–0"

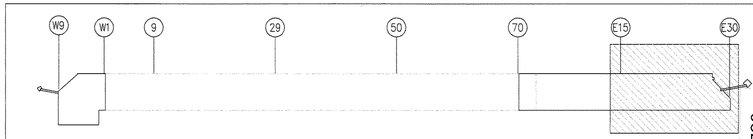
N

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6. PROVIDE (2)1" LIQUIDTIGHT FLEX CONNECTIONS TO (2)1"PVRGS SUPPORTED FROM CATWALK. CATWALK MANUFACTURE WILL PROVIDE 5/8" THREADED ROD SUPPORTS FROM CATWALK. CONTRACTOR SHALL PROVIDE PVC COATED C–CHANNEL FOR SUPPORTING PVRGS CONDUITS FROM CATWALK. PROVIDE CONDUIT AND WIRE WEIGHTS TO CATWALK MANUFACTURE FOR CONSTRUCTION OF CATWALK.



KEY PLAN

6320–17

MARK | REVISION | BY: | APPROVED: | DATE:

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

HULTZ • BHU • CROSS

2407 North 31st Street, Suite 1
Tacoma, WA 98407
Phone: (253) 759-0118 Fax: (253) 759-1879
gmerrell@hultzbhucross.com Job Number: 03-009

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 11/16/04
PORT ADDRESS:
PORT PARCEL:

TJC/GLW 11/16/04
CHECKED BY – DATE

GLW 11/16/04
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
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PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PARTIAL WHARF ELECTRICAL PLAN

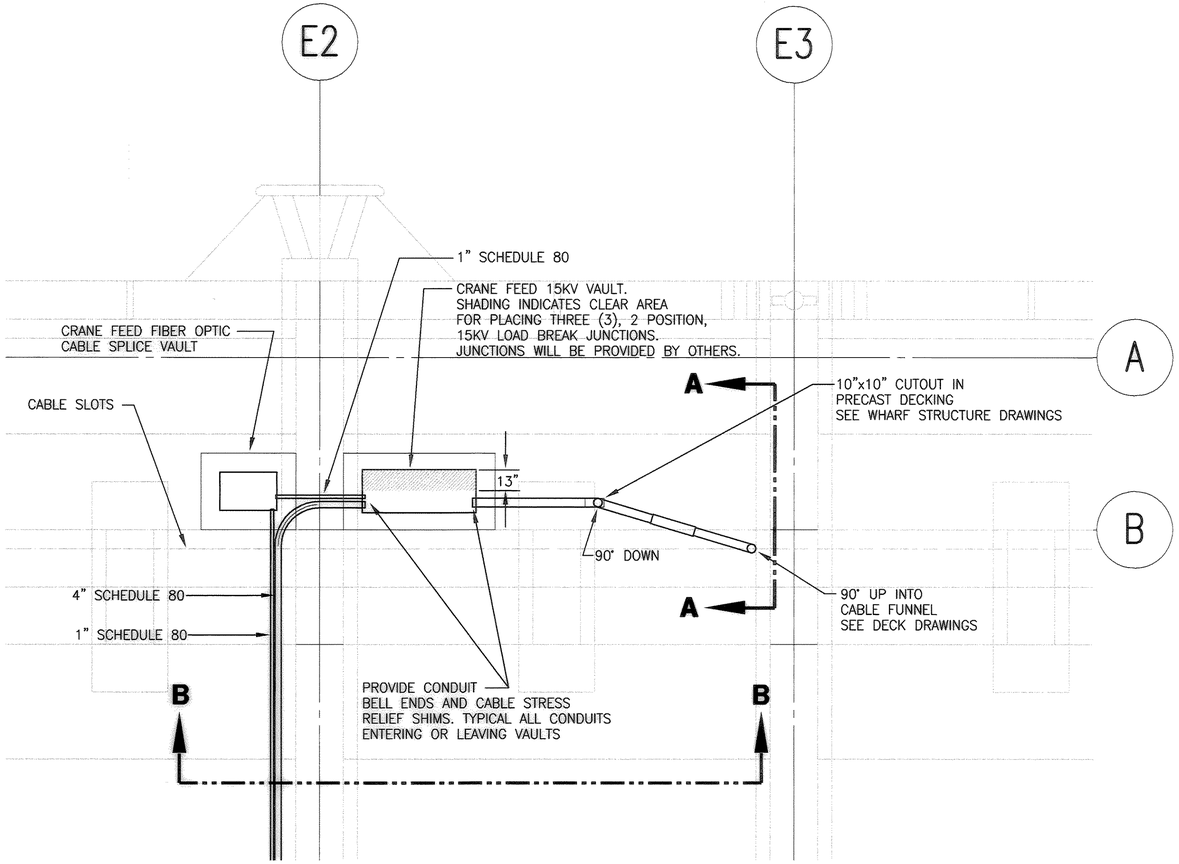
CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

EP-~~5661-17~~

E6

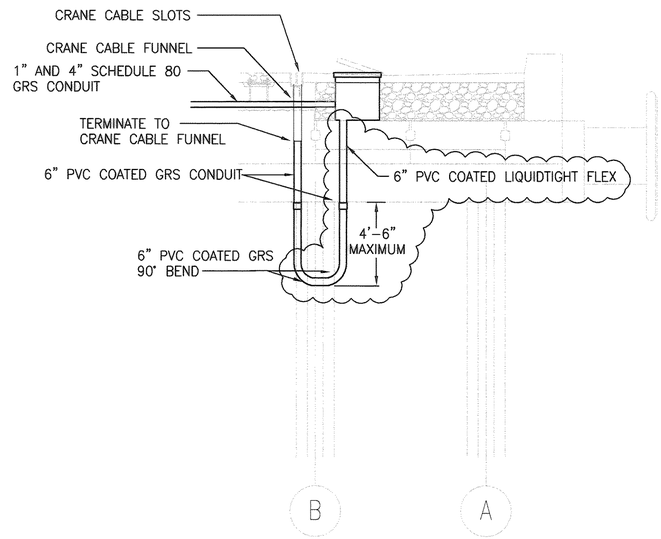
SHEET 15~~8~~ OF 164

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI



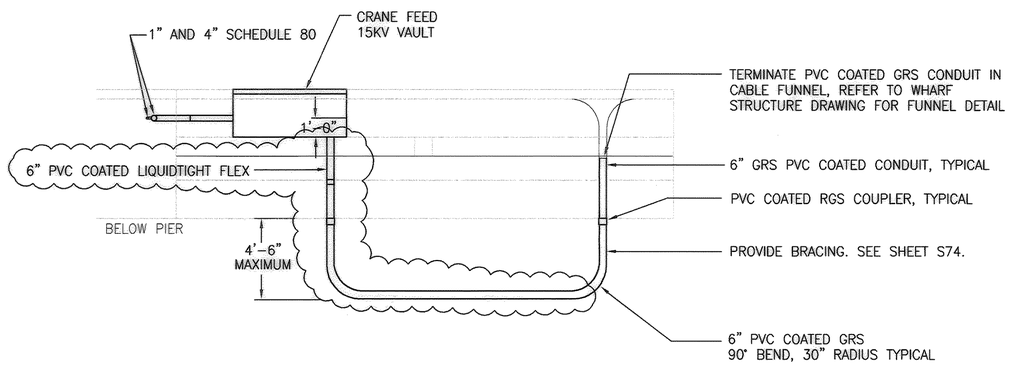
TYPICAL CRANE POWER/FIBER FEED VAULTS-TOP VIEW

SCALE: 1/4"=1'-0"



CONDUIT ROUTING A-A

SCALE: 1/4"=1'-0"



CONDUIT ROUTING B-B

SCALE: 1/4"=1'-0"

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

HULTZ • BHU ~ CROSS
consulting engineers, inc.
3007 Judson Street, Gig Harbor, WA 98335
Phone: (253) 858-9370 Fax: (253) 858-9379
gmeine@hultzbhucross.com Job Number: 03.009

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE:- 11/16/04
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TJC/GLW 11/16/04
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GLW 11/16/04
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TOWNSHIP:- RANGE:- SECTION:
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DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE:- RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WHARF CRANE FEED DETAILS

SHEET 159 OF 164

E7

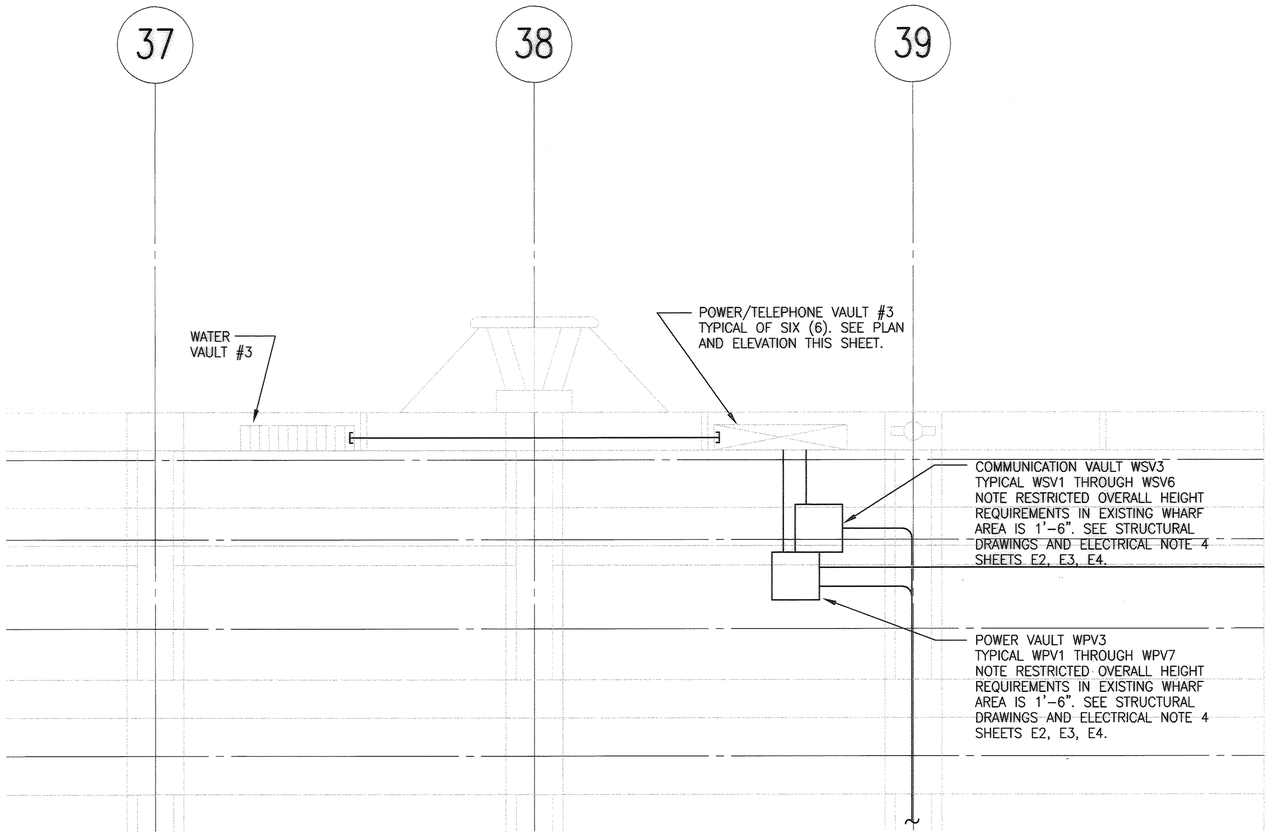
EP-~~6551-17~~

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

6320-17

ELECTRICAL DETAIL NOTES:

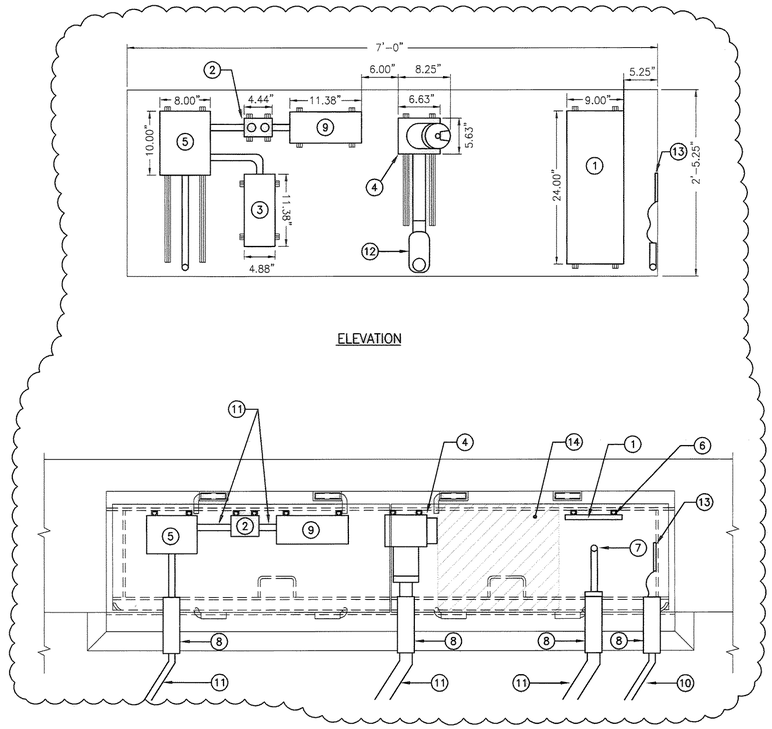
1. 3/4"x9"x24" THREE HOUR FIRE RATED EXTERIOR PLYWOOD MOUNTING PLATE FOR TELEPHONE TERMINAL.
2. 120V, 1 PHASE, 20 AMP GFI DUPLEX RECEPTACLE AND BOX.
3. 240V, 1 PHASE, 20 AMP RECEPTACLE WITH LOCKOUT SWITCH.
4. 100A, 480V, 3 PHASE, 5 WIRE, PIN AND SLEEVE RECEPTACLE AND FOURWAY FEED THROUGH BACK BOX.
5. JUNCTION BOX WITH NEOPRENE GASKET, WITH UNION HUBS IN BOTTOM AND THREADED TAPPINGS INSIDE. CROUSE HINDS WCB SERIES.
6. PROVIDE MINIMUM 1-5/8"x1-5/8" GALVANIZED STEEL CHANNEL FOR MOUNTING ELECTRICAL EQUIPMENT TYPICAL.
7. TERMINATE CONDUIT AT BASE OF TELEPHONE BOARD.
8. 3" CONDUIT SLEEVE GROUT AFTER INSTALLED. SEAL BETWEEN CONDUIT AND SLEEVE WITH HANDY FOAM OR EQUAL.
9. MOTOR RATED TOGGLE SWITCH WITH PILOT LIGHT IN NEMA 4 HOUSING.
10. 1"C-#4 CU GROUND WIRE BACK TO CRANE RAIL. PROVIDE EXOTHERMIC WELD TO CRANE RAIL.
11. SEE CONDUIT AND WIRE SCHEDULE, SHEETS E10 AND E11.
12. TYPE L CONDUIT BODY.
13. 4"H x 1/2"W x 8"L SOLID BARE COPPER GROUND BUS WITH 6 SCREW DOWN LUGS SIZED FOR #10 THRU #4 CU WIRE. PROVIDE #6 CU GROUND WIRE FROM THE GROUND BUS TO THE VAULT LID FRAME, AND THE ELECTRICAL EQUIPMENT MOUNTING CHANNEL.
14. KEEP SPACE CLEAR FOR RECEPTACLE PLUG.



TYPICAL POWER/COMMUNICATION VAULT PARTIAL PLAN

SCALE: 1/4"=1'-0"

N



WHARF POWER/TELEPHONE VAULT WITH 100A SERVICE

SCALE: 1"=1'-0"

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

MARK	REVISION	BY:	APPROVED	DATE:

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

HULTZ ● BHU ● CROSS
1119 SW Klickitat Way, Suite 120
Seattle, WA 98134-1162
24007 North 31st Street
Phone: (253) 759-0118
Tacoma, WA 98407
Fax: (253) 759-1879
gsmerrell@hultzbhucross.com
Job Number: 03-009

APPROVED

CHIEF ENGINEER - DATE

DRAWING DATE:	11/16/04
PORT ADDRESS:	
PORT PARCEL:	

TJC/GLW 11/16/04
CHECKED BY - DATE

GLW 11/16/04
PROJECT ENGR - DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WHARF POWER/COMMUNICATION VAULT DETAILS

TOWNSHIP:	RANGE:
DATUM: HORIZ:	SECTION:
DRAWING SCALE: AS SHOWN	VERT:

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

EP-~~555-17~~

E8

SHEET 160 OF 164

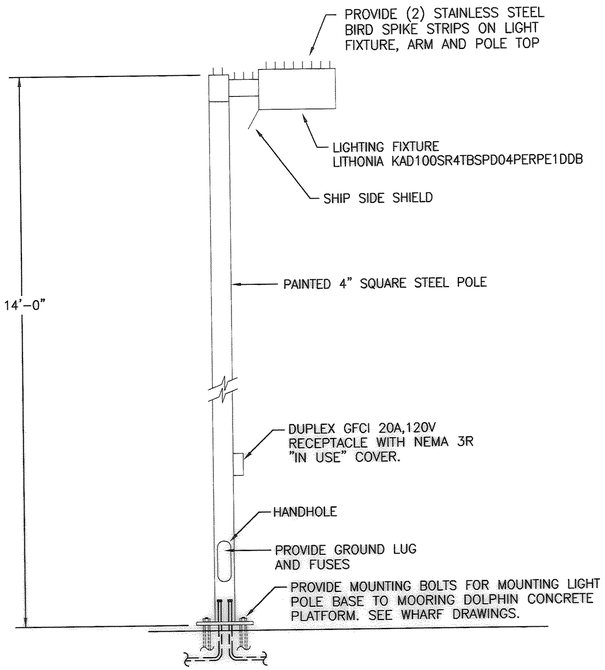
6320-17

GENERAL NOTES:

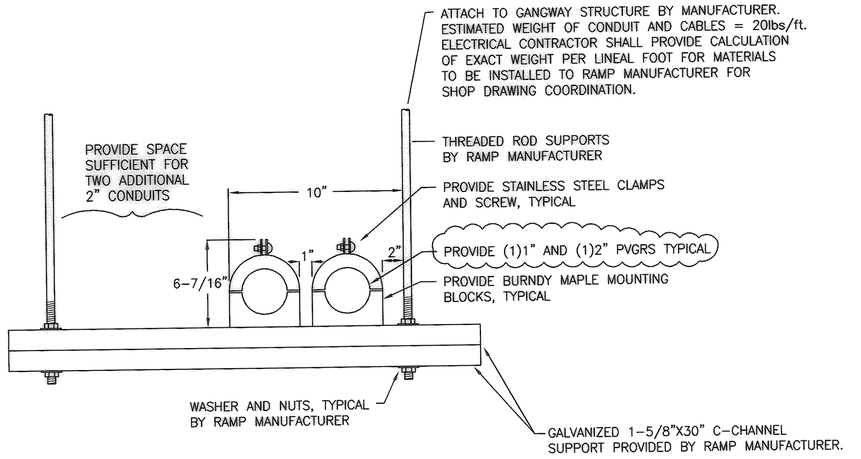
1. ALL CONDUIT SHOWN ON MOORING DOLPHIN SHALL BE INSTALLED CONCEALED UNLESS NOTED OTHERWISE.

ELECTRICAL NOTES:

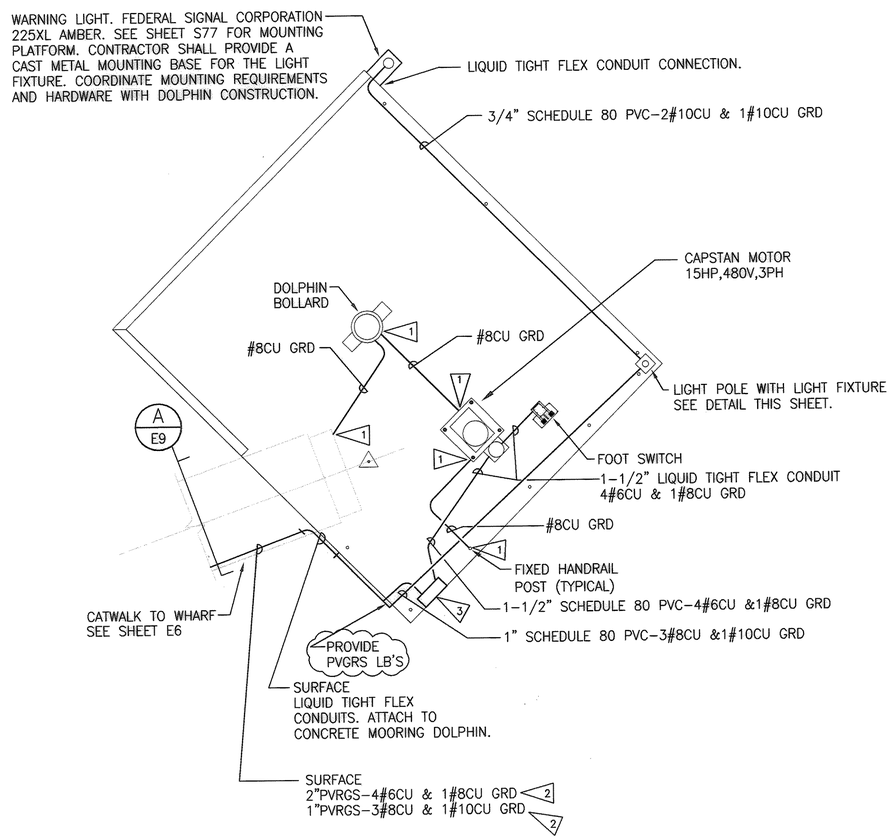
1. PROVIDE EXOTHERMIC WELD FOR GROUND WIRE CONNECTION(S).
2. PROVIDE TO VAULT WPV7 WITH 6' COIL IN VAULT. SPLICE BY OTHERS.
3. MOUNT COMBINATION MOTOR STARTER TO (2) 1–1/4" GALVANIZED STRUT FIXED TO HANDRAIL. COMBINATION MOTOR STARTER PROVIDED WITH CAPSTAN MOTOR. INSTALLATION BY DIVISION 16.



LIGHT POLE
NOT TO SCALE



A/E9 **CATWALK CONDUIT/CABLE SUPPORT RACK - LOOKING EAST**
NOT TO SCALE



EAST MOORING DOLPHIN LAYOUT
SCALE:1/4"=1'-0"

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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Structural Engineers, Inc.
2407 North 31st Street, Tacoma, WA 98407
Phone: (253) 759-0118 Fax: (253) 759-1879
gmerrell@hultzbhucross.com Job Number: 03-300

MARK	REVISION	BY:	APPROVD.	DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 11/16/04
PORT ADDRESS:
PORT PARCEL:

GLW/TJC 11/16/04
CHECKED BY – DATE

GLW 11/16/04
PROJECT ENGR – DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EAST MOORING DOLPHIN LAYOUT

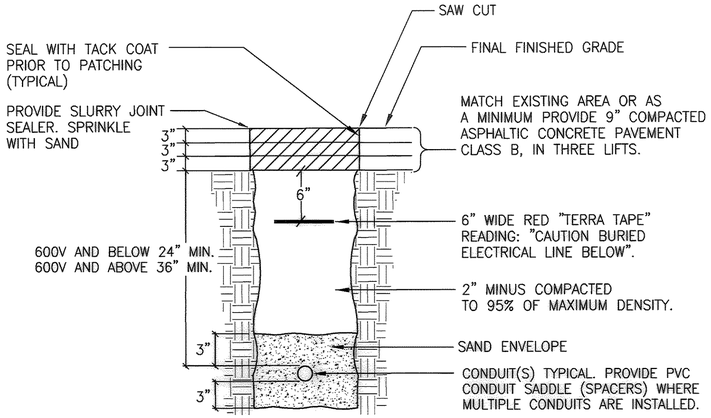
TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ. VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

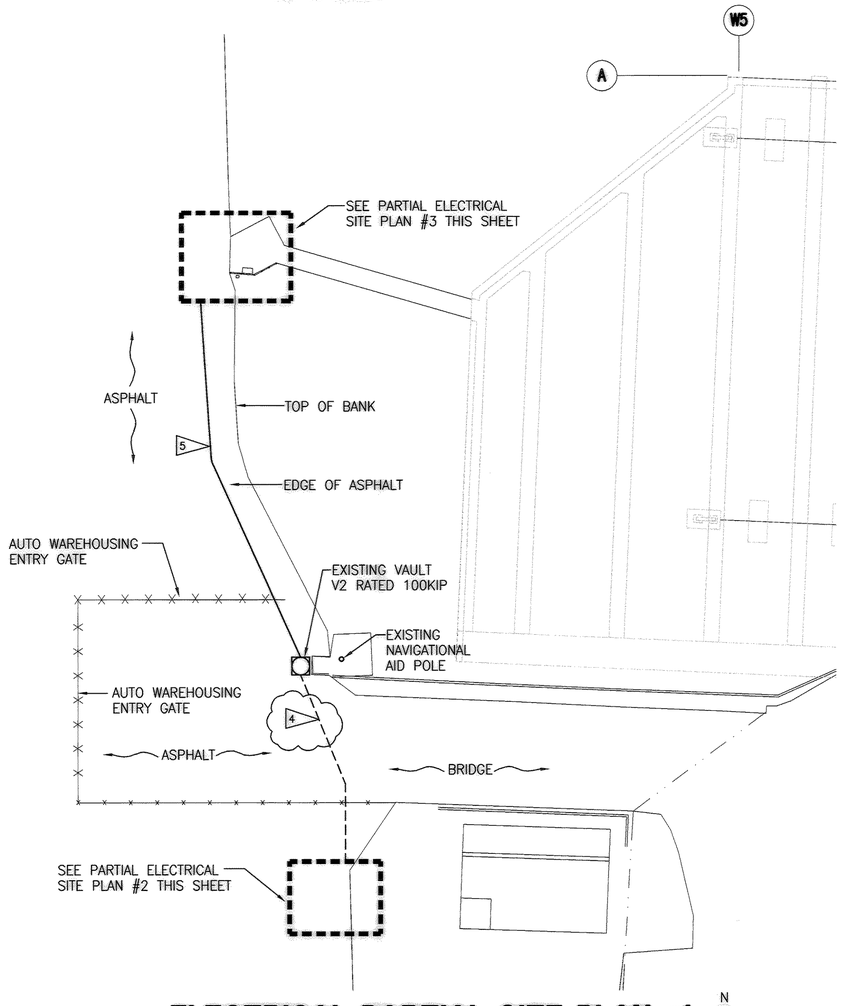
EP ~~6561-17~~
E9
SHEET 161 OF 164

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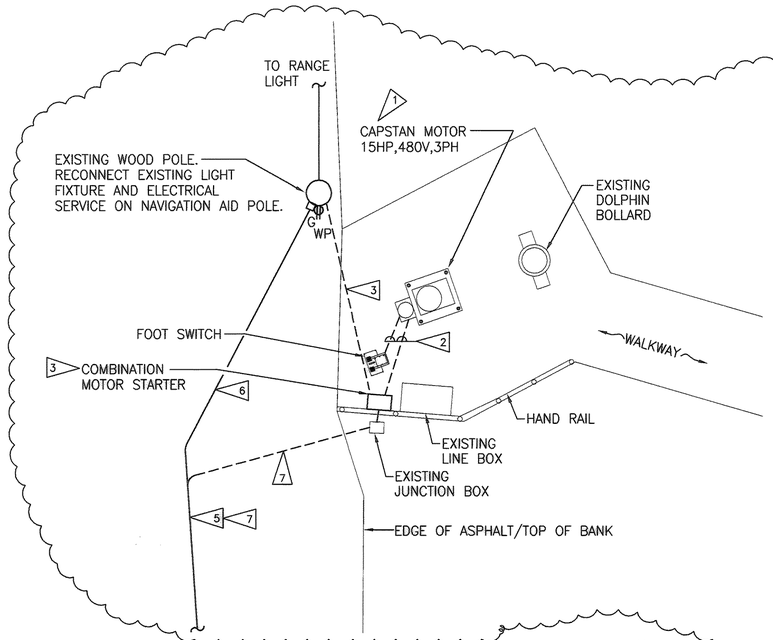
RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)



TYPICAL TRENCH
NOT TO SCALE



ELECTRICAL PARTIAL SITE PLAN #1
SCALE:1"=20'-0"



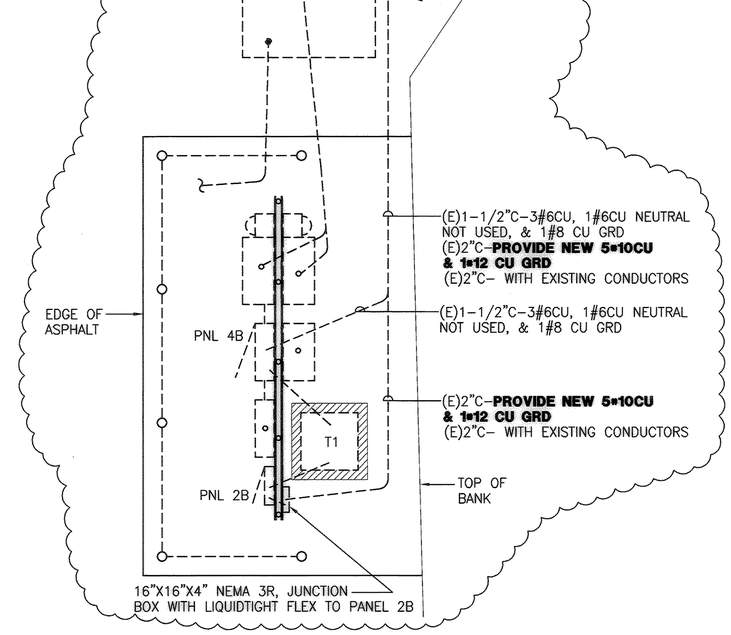
ELECTRICAL NOTES:

1. 15HP MOTOR PROVIDED BY OTHERS. ELECTRICAL CONTRACTOR SHALL DISCONNECT THE EXISTING 10HP MOTOR AND CONNECT THE 15HP MOTOR INCLUDING FOOT CONTROLS.
2. REMOVE EXISTING CONDUCTORS TO MOTOR AND PROVIDE 3#8CU FROM COMBINATION MOTOR STARTER DISCONNECT TO MOTOR. RETAIN EXISTING FOOTSWITCH WIRING.
3. REMOVE EXISTING COMBINATION MOTOR STARTER DISCONNECT AND DRY-TYPE TRANSFORMER. CONTRACTOR SHALL REMOVE ALL CONDUCTORS FROM SECONDARY SIDE OF TRANSFORMER TO EXISTING WOOD POLE.
4. 2"C EXISTING-PROVIDE 5#10CU & 1#12 CU GRD. 1-1/2"C EXISTING - PROVIDE 3#8CU &1#10 CU GRD.
5. SAWCUT AND REMOVE EXISTING ASPHALT, TRENCH AND PROVIDE (2)2"C.O. AND (1)2"C-5#10CU & 1#12 CU GRD. PROVIDE 1-1/2"C-3#8CU & 1#10 CU GRD TO CAPSTAN MOTOR FROM EXISTING PANEL 4B. CIRCUIT BREAKER FOR 15HP CAPSTAN MOTOR IS EXISTING IN PANEL 4B. REPAIR ASPHALT TO MATCH EXISTING.
6. SAWCUT, REMOVE EXISTING ASPHALT, TRENCH AND PROVIDE (1)2"C-3#10CU & 1#12 CU GRD TO NEW 8"X8"X6" J-BOX (NEMA 3R) ON POLE. CONNECT TO NEW GFCI DUPLEX RECEPTACLE SHOWN, TO EXISTING SITE LIGHT AND TO EXISTING NAVIGATIONAL AID CIRCUIT.
7. SAWCUT, HAND DIG, REMOVE EXISTING ASPHALT, TRENCH AND PROVIDE 1-1/2"C-3#8CU & 1#10 CU GRD TO COMBINATION MOTOR STARTER DISCONNECT SWITCH.

PARTIAL ELECTRICAL SITE PLAN #3
SCALE:1/4"=1'-0"

N

LEGEND
NEW
EXISTING



PARTIAL ELECTRICAL SITE PLAN #2
SCALE:1/4"=1'-0"

N

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Fax: 253-759-3167
pmoore@hultzbhucross.com
Job Number: 03.009

MARK	REVISION	BY:	APPRVD:	DATE:

APPROVED

CHIEF ENGINEER - DATE

DRAWING DATE: 11/16/04
PORT ADDRESS:
PORT PARCEL:

TJC/GLW 11/16/04
CHECKED BY - DATE

GLW 11/16/04
PROJECT ENGR.- DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WEST MOORING DOLPHIN LAYOUT

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E-NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~555-1-17~~
E10
SHEET 162 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT NUMBER	CONDUIT NO.	CONDUIT SIZE	CONDUIT TYPE	CONDUCTORS EACH CONDUIT NO.	CONDUCTORS EACH CONDUIT SIZE	CONDUCTORS EACH CONDUIT TYPE	FROM	TO	REMARKS
WF1	1	1"	(2)	–	–	–	CFOV1	80' PAST WHARF	(5) (8)
WF2				–	–	–	CFOV2		
WF3				–	–	–	CFOV3		
WF4				–	–	–	CFOV4		
WF5				–	–	–	CFOV5		
WF6	▼	▼	▼	–	–	–	CFOV6	▼	▼
WF7	1	1"	(2)	–	–	–	CFOV7	80' PAST WHARF	(5) (8)
WG1	1	1"	(2)	1	4	XHHW-2	CRANE RAIL	CRANE RAIL AND PIN SOCKETS	
WG2							CRANE RAIL	WPV1	
WG3							WPV1	WHARF POWER/TELEPHONE VAULT #1	
WG4							WHARF POWER/TELEPHONE VAULT #1	WATER VAULT #1	
WG5							CRANE RAIL	CRANE RAIL AND PIN SOCKETS	
WG6							CRANE RAIL	WPV2	
WG7							WPV2	WHARF POWER/TELEPHONE VAULT #2	
WG8							WHARF POWER/TELEPHONE VAULT #2	WATER VAULT #2	
WG9							CRANE RAIL	CRANE RAIL	
WG10							CRANE RAIL	WPV3	
WG11							WPV3	WHARF POWER/TELEPHONE VAULT #3	
WG12							WHARF POWER/TELEPHONE VAULT #3	WATER VAULT #3	
WG13							CRANE RAIL	CRANE RAIL	
WG14							CRANE RAIL	WPV4	
WG15							WPV4	WHARF POWER/TELEPHONE VAULT #4	
WG16							WHARF POWER/TELEPHONE VAULT #4	WATER VAULT #4	
WG17							CRANE RAIL	CRANE RAIL AND PIN SOCKETS	
WG18							CRANE RAIL	WPV5	
WG19							WPV5	WHARF POWER/TELEPHONE VAULT #5	
WC20							WHARF POWER/TELEPHONE VAULT #5	WATER VAULT #5	
WG21							CRANE RAIL	CRANE RAIL	
WG22							CRANE RAIL	WPV6	
WG23							WPV6	WHARF POWER/TELEPHONE VAULT #6	
WG24							WHARF POWER/TELEPHONE VAULT #6	WATER VAULT #6	
WG25							CRANE RAIL	CRANE RAIL AND PIN SOCKETS	
WG26							CRANE RAIL	CRANE RAIL AND PIN SOCKETS	
WG27	▼	▼	▼	▼	▼	▼	CRANE RAIL	WPV5	
WG28	1	1"	(2)	1	4	XHHW-2	CRANE RAIL	WPV5	
WP1	1	4"	(2)	–	–	–	WPV1	80' PAST WHARF	(1) (5) (8)
WP2				–	–	–	WPV2		
WP3				–	–	–	WPV3		
WP4				–	–	–	WPV4		
WP5				–	–	–	WPV5		
WP6	▼	▼	▼	–	–	–	WPV6	▼	▼
WP7	1	4"	(2)	–	–	–	WPV7	80' PAST WHARF	(1) (5) (8)
WS1	1	1"	(2)	4/1	8/10	XHHW-2	POWER/TELEPHONE VAULT #1	WPV1	
WS2		2"		4/1	0/6	XHHW-2	POWER/TELEPHONE VAULT #1	WPV1	
WS3		1"		–	–	–	WPV1	100' PAST WHARF	
WS4		2"		–	–	–	WPV1	100' PAST WHARF	
WS5		1"		4/1	8/10	XHHW-2	POWER/TELEPHONE VAULT #2	WPV3	
WS6		2"		4/1	0/6	XHHW-2	POWER/TELEPHONE VAULT #2	WPV2	
WS7		1"		–	–	–	WPV2	WPV3	
WS8		2"		–	–	–	WPV2	WPV3	
WS9		1"		4/1	8/10	XHHW-2	WPV3	POWER/TELEPHONE VAULT #3	
WS10		2"		4/1	0/6	XHHW-2	WPV3	POWER/TELEPHONE VAULT #3	
WS11		1"		–	–	–	WPV3	100' PAST WHARF	
WS12		2"		–	–	–	WPV3	100' PAST WHARF	
WS13		1"		4/1	8/10	XHHW-2	WPV4	POWER/TELEPHONE VAULT #4	
WS14		2"		4/1	0/6	XHHW-2	WPV4	POWER/TELEPHONE VAULT #4	
WS15		1"		–	–	–	WPV4	100' PAST WHARF	
WS16		2"		–	–	–	WPV4	100' PAST WHARF	
WS17		1"		4/1	8/10	XHHW-2	WPV5	POWER/TELEPHONE VAULT #5	
WS18		2"		4/1	0/6	XHHW-2	WPV5	POWER/TELEPHONE VAULT #5	
WS19		1"		–	–	–	WPV5	100' PAST WHARF	
WS20		2"		–	–	–	WPV5	100' PAST WHARF	
WS21		1"		4/1	8/10	XHHW-2	WPV6	100' PAST WHARF	
WS22		2"		4/1	0/6	XHHW-2	WPV6	100' PAST WHARF	
WS23		1"		–	–	–	WPV6	POWER/TELEPHONE VAULT #6	
WS24		2"		–	–	–	WPV6	POWER/TELEPHONE VAULT #6	
WS25	▼	2"	▼	–	–	–	WPV7	100' PAST WHARF	
WS26	1	1"	(2)	–	–	–	WPV7	100' PAST WHARF	
WSP1	1	2"	(2)	–	–	–	WPV1	100' PAST WHARF	
WSP2		1"		–	–	–	WSV1		
WSP3		2"		–	–	–	WPV2		
WSP4		1"		–	–	–	WSV2		
WSP5		2"		–	–	–	WPV3		(5)
WSP6		1"		–	–	–	WSV3		
WSP7		2"		–	–	–	WPV4		
WSP8		1"		–	–	–	WSV4		
WSP9		2"		–	–	–	WPV5		
WSP10		1"		–	–	–	WSV5		
WSP11		2"		–	–	–	WPV6		
WSP12	▼	1"	▼	–	–	–	WSV6		
WSP13	1	2"	(2)	–	–	–	WPV7	100' PAST WHARF	(5)
WT1	1	2"	(2)	–	–	–	WSV1	POWER/TELEPHONE VAULT #1	(7) (8)
WT2				–	–	–	WSV1	100' PAST WHARF	
WT3				–	–	–	WSV2	POWER/TELEPHONE VAULT #2	
WT4				–	–	–	WSV2	100' PAST WHARF	
WT5				–	–	–	WSV3	POWER/TELEPHONE VAULT #3	
WT6				–	–	–	WSV3	100' PAST WHARF	
WT7				–	–	–	WSV4	POWER/TELEPHONE VAULT #4	
WT8				–	–	–	WSV4	100' PAST WHARF	
WT9				–	–	–	WSV5	POWER/TELEPHONE VAULT #5	
WT10				–	–	–	WSV5	100' PAST WHARF	
WT11	▼	▼	▼	–	–	–	WSV6	POWER/TELEPHONE VAULT #6	▼ ▼
WT12	1	2"	(2)	–	–	–	WSV6	100' PAST WHARF	(7) (8)

LEGEND

CPV = CRANE POWER 13.8KV VAULT

CFOV = CRANE FIBER OPTIC CABLE VAULT

WPV = WHARF POWER VAULT

WSV = WHARF SIGNAL VAULT

SP = SPARE CONDUIT

T = TELEPHONE

WF = WHARF FIBER OPTICS

WG = WHARF GROUNDING

WP = WHARF PRIMARY 13.8KV DISTRIBUTION

WS = WHARF SECONDARY 600V DISTRIBUTION

WSP = WHARF SPARE CONDUIT

WT = WHARF TELEPHONE

NUMBERING = INDIVIDUAL CONDUIT IDENTIFICATION

NOTES:

(1) ENCASED IN RED CDF CONCRETE SOUTH OF BULKHEAD

(2) PVC SCHEDULE 80.

(3) GALVANIZED RIGID STEEL (GRS) CONDUIT.

(4) PROVIDE #10 CU FINGER SPLICE AT BREAKER AND RECEPTACLES FOR TERMINATION.

(5) CAP CONDUIT ENDS USING MANUFACTURED END CAPS AND MARK WITH 8' GROUND ROD 3' ABOVE GRADE.

(6) SCHEDULE 80 PVC ENCASED IN CONCRETE. PROVIDE PVC COATED GRS AND CONNECTORS WHERE EXPOSED.

(7) PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT AT WHARF BULKHEAD AND EXPANSION JOINTS.

(8) CONDUCTORS/WIRES OR FIBER OPTIC CABLE BY OTHERS.

GENERAL NOTES:

1. ALL CONDUCTORS ARE STRANDED COPPER.
2. CONTRACTOR SHALL LABEL ALL CONDUCTORS IN EACH VAULT WITH SOURCE AND DESTINATION.

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Job Number: 03-009

MARK | REVISION | BY: | APPROVED | DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 11/16/04
PORT ADDRESS:
PORT PARCEL:

TJC/GLW 11/16/04
CHECKED BY – DATE

GLW
PROJECT ENGR.– DATE 11/16/04

TOWNSHIP: RANGE: SECTION:
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DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E-NUMBER: E-1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
CONDUIT AND CONDUCTOR
SCHEDULE

E11

SHEET 163 OF 164

EP-~~555-17~~

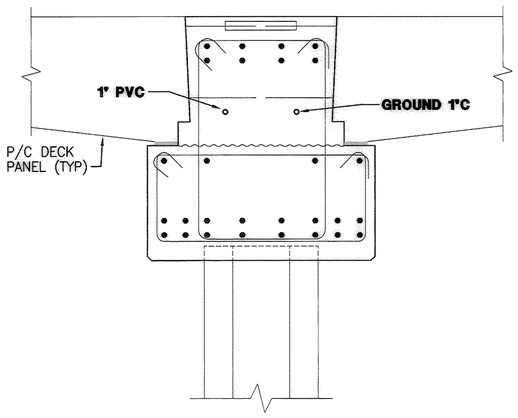
6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

GENERAL NOTES:

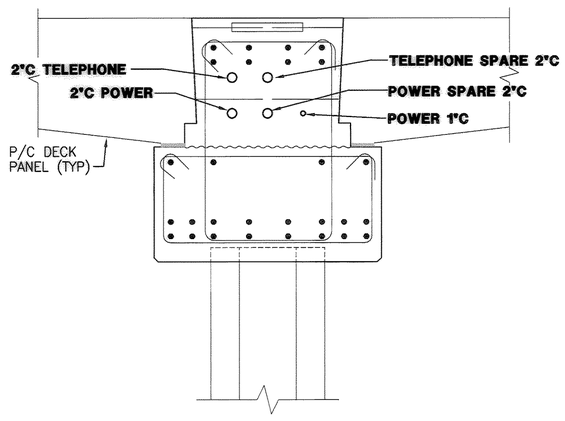
1. ELECTRICAL REQUIREMENTS ARE NOT LIMITED TO ELECTRICAL DRAWINGS AND SPECIFICATIONS. THERE IS ADDITIONAL ELECTRICAL WORK REQUIRED TO BE INCLUDED IN THE BID, INDICATED ON DEMOLITION, STRUCTURAL AND CIVIL DRAWINGS. ADDITIONAL ELECTRICAL WORK REQUIRED IN THE BID IS ALSO LOCATED IN THE SPECIFICATIONS. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL ELECTRICAL INFORMATION. CONDUIT ROUTING SHOWN IS DIAGRAMMATIC. CONTRACTOR IS REQUIRED TO REVIEW DRAWINGS AND FIELD COORDINATE SLEEVES, CORE DRILLING AND CONDUIT ROUTING WITH THE PIER CONSTRUCTION.

2. SEE STRUCTURAL SHEET S25 FOR PILE CAP DIMENSIONS AND COORDINATION WITH WHARF CONSTRUCTION.



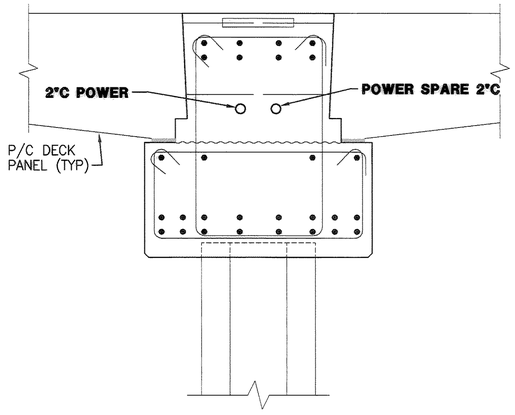
TYPICAL PILE CAP SECTION
SCALE: 3/4"=1'-0"

LOCATIONS: GRIDS W2, 18, 40, 60, 71, E10, E22



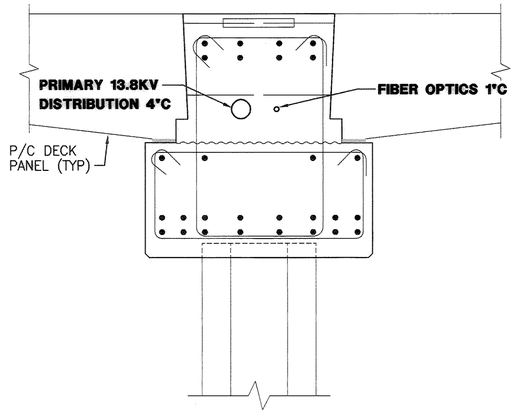
TYPICAL PILE CAP SECTION
SCALE: 3/4"=1'-0"

LOCATIONS: GRIDS W1, 19, 39, 59, E11, E23



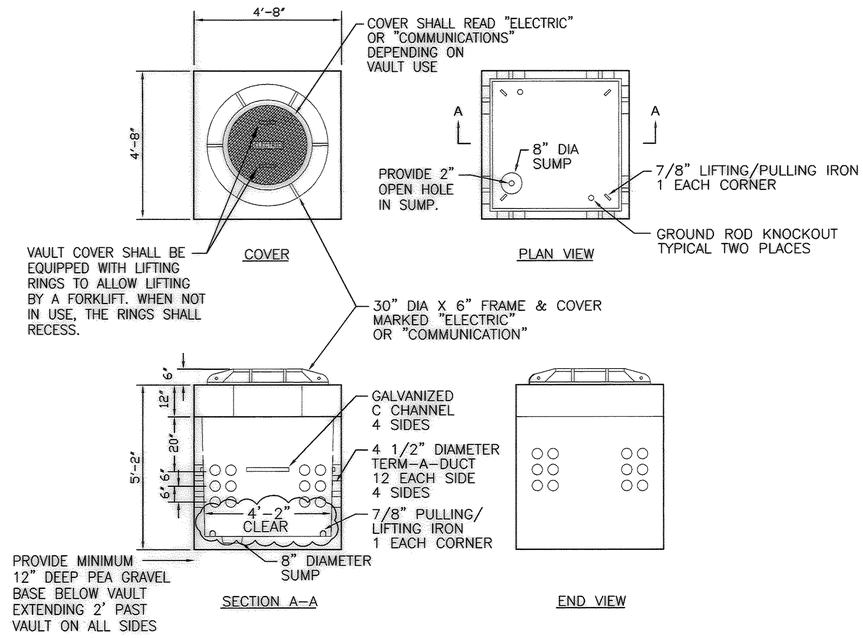
TYPICAL PILE CAP SECTION
SCALE: 3/4"=1'-0"

LOCATIONS: GRID E27

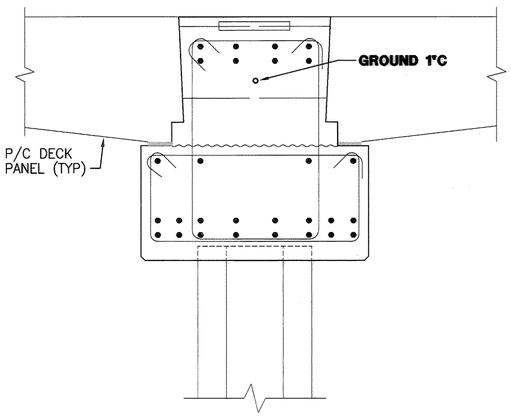


TYPICAL PILE CAP SECTION
SCALE: 3/4"=1'-0"

LOCATIONS: GRIDS E2, E3, E4, E5, E6, E7, E8



4 / E12 **TYPICAL 125 KIP POWER AND TELEPHONE VAULTS**
SCALE:1/2"=1'-0"
REFERENCE UTILITY VAULT DWG. NO. CA-2558
UTILITY VAULT S.O. NO. 3951



TYPICAL PILE CAP SECTION
SCALE: 3/4"=1'-0"

LOCATIONS: GRID E5

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

EP-~~5551-17~~

E12

SHEET 164OF 164

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PILE CAP DETAILS

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

TOWNSHIP:
RANGE:
SECTION:
DATUM: HORIZ:
VERT:
DRAWING SCALE: AS SHOWN

TJC/GLW 11/16/04
CHECKED BY - DATE
GLW 11/16/04
PROJECT ENGR. - DATE

DRAWING DATE: 11/16/04
PORT ADDRESS:
PORT PARCEL:

APPROVED
CHIEF ENGINEER - DATE

MARK | REVISION | BY: | APPROVED: | DATE:

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

HULTZ ● BHU ● C ROSS
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Job Number: 03-009

GENERAL

1. THESE NOTES CONTAIN GENERAL INFORMATION AND ARE NOT COMPLETE FOR CONSTRUCTION PURPOSES. CONTRACTOR SHALL VERIFY INFORMATION GIVEN HERE WITH SPECIFICATIONS AND OTHER DOCUMENTS AND BRING ANY CONFLICTS TO THE ATTENTION OF THE PORT BEFORE BEGINNING AFFECTED WORK. THE ENGINEER WILL RESOLVE ANY SUCH CONFLICT.

2. ALL DIMENSIONS AND DETAILS WILL BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION.

3. ALL SHOP DRAWINGS FOR PRECAST CONCRETE ELEMENTS, REINFORCING STEEL, MISCELLANEOUS STEEL, AND FENDER SYSTEM SHALL BE SUBMITTED TO AND REVIEWED BY THE ENGINEER PRIOR TO FABRICATION.

4. IN THE EVENT OF CONFLICTING REQUIREMENTS BETWEEN THE CONTRACT DRAWINGS, GENERAL NOTES AND SPECIFICATIONS, THE MORE STRINGENT PROVISIONS SHALL GOVERN.

CODES AND STANDARDS

1. STRUCTURAL

A. ALL METHODS AND MATERIALS SHALL CONFORM TO THE UNIFORM BUILDING CODE, 1997 EDITION, AS AMENDED AND ADOPTED BY THE CITY OF TACOMA.

B. REINFORCED CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301) AND "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318), 1995.

C. STRUCTURAL AND MISCELLANEOUS STEEL FABRICATION AND ERECTION SHALL CONFORM TO THE "AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" 1995.

D. WELDING OF STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE AWS D1.1, 2000.

E. WELDING OF REINFORCING STEEL SHALL CONFORM TO THE AWS D1.4, 1998.

F. ALL TRACKWORK SHALL CONFORM TO THE AMERICAN RAILROAD ENGINEERS AND MAINTENANCE-OF-WAY ASSOCIATION (AREMA) MANUAL FOR RAILWAY ENGINEERING, 1996 EDITION.

PILING

1. PILES SHALL BE DRIVEN TO THE MINIMUM TIP ELEVATIONS INDICATED.

2. STEEL PILING SHALL CONFORM TO ASTM A 252, GRADE 3, (MINIMUM 45KSI YIELD STRENGTH) WITH MODIFICATIONS AS DESCRIBED IN THE SPECIFICATIONS.

3. SHEET PILING FURNISHED IN PAIRS BY PORT. SEE SHEET S89 FOR TABLE OF PORT PREORDERED SHEET PILING. SHEET PILING CONFORMS TO ASTM A 690 GRADE 50. FOR CONCRETE PILING, SEE SHEET S89. FOR STEEL PIPE PILING, SEE SHEET S89.

REINFORCED CONCRETE

1. REINFORCING STEEL

A. PRESTRESSING STEEL SHALL BE UNCOATED LOW-RELAXATION SEVEN-WIRE STRAND CONFORMING TO ASTM A 416, GRADE 270.

B. ALL REINFORCING STEEL, EXCEPT AS NOTED BELOW, SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A 615, GRADE 60.

C. ALL DOWELS AND NO. 10 BARS AT STEEL PILING SHALL CONFORM TO ASTM A 706. ALL REINFORCING STEEL OVER NO. 6 IN SIZE IN PRECAST CONCRETE DECK PANELS SHALL BE OF WELDABLE QUALITY AND SHALL CONFORM TO A 706. ALL OTHER REINFORCING STEEL CALLED OUT AS "WELDABLE" SHALL ALSO CONFORM TO ASTM A 706. ADDITIONALLY, THE CARBON EQUIVALENT SHALL NOT EXCEED 0.55% FOR ALL WELDABLE REINFORCING STEEL.

D. WIRE FOR SPIRAL REINFORCEMENT SHALL CONFORM TO ASTM A 82.

E. SPLICING OF LONGITUDINAL REINFORCEMENT OVER 40 FT IN LENGTH, EXCEPT AS SPECIFICALLY NOTED ON THE DRAWINGS, WILL BE PERMITTED. SPLICES SHALL BE CLASS "B" (AC1 318) STAGGERED WITH NO MORE THAN 50% OF THE BARS BEING SPLICED AT ANY ONE LOCATION. MINIMUM LENGTH OF LAP SPLICE SHALL BE 50 TIMES THE BAR DIAMETER EXCEPT LAP SPLICES FOR TOP BARS #8 OR GREATER IN SIZE SHALL BE PER ACI 318 PROVISIONS.

F. PROVIDE CORNER BARS AT ALL CORNERS. CORNER BARS SHALL MATCH THE NUMBER, SPACING AND DIAMETER OF ALL HORIZONTAL REINFORCEMENT AT THE CORNER, UNLESS SHOWN OTHERWISE. TERMINATED STRAIGHT BARS SHALL EXTEND FULL AVAILABLE LENGTH INTO ADJOINING MEMBERS. INCREASE SPLICE LENGTH FOR TOP BAR CONDITIONS PER AC1 318. SPLICE CORNER BARS TO TERMINATED STRAIGHT BARS WITH A MINIMUM SPLICE LENGTH OF 50 BAR DIAMETERS.

G. MECHANICAL SPLICES SHALL DEVELOP AT LEAST 125 PERCENT OF THE YIELD STRENGTH OF THE BAR IN TENSION.

H. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315.

I. ALL HORIZONTAL REINFORCEMENT IN BULLRAIL, BULKHEAD AND PILE CAPS AT DISCONTINUITIES AND CORNERS SHALL END WITH STANDARD 90° HOOKS, UNLESS HOOKS ARE SHOWN OTHERWISE.

2. PRECAST CONCRETE

		MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS
A.	PRECAST PRESTRESSED CONCRETE PILES	8000 PSI
B.	PRECAST CONCRETE PANELS	6000 PSI

3. CAST-IN-PLACE CONCRETE

		MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS
A.	CAST-IN-PLACE CONCRETE PILE CAPS	4000 PSI
B.	BULLRAILS	4000 PSI
C.	DECK PANEL SHEAR KEY CONCRETE	4000 PSI
D.	CAST-IN-PLACE CONCRETE IN PILE BUILDUP	6000 PSI

4. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4 IN.

5. CONSTRUCTION JOINTS SHALL BE PROVIDED ONLY AS NOTED ON THE DRAWINGS AND AS SPECIFICALLY PERMITTED BY THE ENGINEER. 1

6. CONCRETE MIX SHALL HAVE A MAXIMUM WATER CEMENT RATIO OF 0.40 UNLESS NOTED OTHERWISE.

7. ALL CONCRETE SHALL BE AIR ENTRAINED WITH A TARGET OF 5% ± 1 1/2% UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS.

GROUT

1. ALL GROUT SHALL BE NON-SHRINK. GROUT FOR ALL ITEMS OTHER THAN CRANE RAILS SHALL BE MASTERFLOW 928. GROUT FOR CRANE RAILS SHALL BE EMBECO 885.

MISCELLANEOUS STEEL

1. ALL MISCELLANEOUS STEEL SHAPES AND PLATES, EXCEPT AS NOTED BELOW, SHALL CONFORM TO ASTM A 36.

2. ALL BOLTS AND NUTS SHALL CONFORM TO ASTM A 307, UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.

3. ALL ANCHOR BOLTS AND NUTS SHALL CONFORM TO ASTM F 1554, GRADE 36 (TYPICAL), AND GRADE 105 (AT CRANE STOPS AND CAPSTANS). (MINIMUM 45 KSI YIELD STRENGTH).

4. ALL MISCELLANEOUS STEEL, SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH SPECIFICATIONS AND ASTM A153 AND A123 TO A MINIMUM OF 2 OZ/SF. COVER PLATES FOR PULL BOXES, CRANE PIN SOCKETS, UTILITY VAULT COVERS, BOLLARDS, CRANE STOPS, AND CRANE RAIL SOLE PLATE SHALL BE PAINTED IN ADDITION TO GALVANIZING. WALKING SURFACES SHALL BE PAINTED WITH NON-SKID COATING IN ADDITION TO GALVANIZING. DAMAGE DUE TO FIELD WELDING SHALL BE RESTORED WITH FIELD-APPLIED GALVANIZING COMPOUND (SEE SPECIFICATIONS). 1

5. PROVIDE BLEED HOLES IN EMBEDDED PLATES AND SHAPES AT 24-IN. ON CENTER MAXIMUM.

6. ALL MISCELLANEOUS PIPES AND SLEEVES, INCLUDING BOLLARDS, SHALL CONFORM TO ASTM A 53, GRADE B.

DESIGN CONCEPT

1. VERTICAL LOADS

LOADS ARE DISTRIBUTED THROUGH ASPHALT/CONCRETE PAVING TO DECK PANELS, DECK PANELS TO PILE CAPS, PILE CAPS TO PILES, PILES TO SOIL IN FRICTION.

2. HORIZONTAL LOADS

HORIZONTAL LOADS INCLUDING SEISMIC FORCES, SOIL PRESSURE, SHIP IMPACT, AND MOORING FORCES ARE TRANSMITTED THROUGH THE DECK ACTING AS A DIAPHRAGM TO THE BATTER PILES. HORIZONTAL LOADS PARALLEL TO THE WHARF ARE RESISTED BY A COMBINATION OF THE SHEET PILES AND BATTER PILES.

3. EXPANSION JOINT/SHEAR KEY

SHEAR KEY AND EXPANSION JOINT DESIGNED FOR OLE EARTHQUAKE. TRANSVERSE FORCE PER SHEAR KEY IS 820 KIPS.

SEISMIC DESIGN

1. THE SEISMIC DESIGN IS IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (1996 EDITION), DIVISION I-A, SEISMIC DESIGN EXCEPT AS INDICATED HEREIN.

2. THE SEISMIC LOADING IS REPRESENTED BY TWO EARTHQUAKE EVENTS.

A. THE CONTINGENCY LEVEL EARTHQUAKE (CLE) REPRESENTS GROUND MOTIONS WITH A 10 PERCENT CHANCE OF EXCEEDENCE IN 50 YEARS - IN ACCORDANCE WITH AASHTO.

B. THE OPERATING LEVEL EARTHQUAKE (OLE) REPRESENTS GROUND MOTIONS WITH A 50 PERCENT CHANCE OF EXCEEDENCE IN 50 YEARS.

3. AASHTO SEISMIC PARAMETERS

A. IMPORTANCE CLASSIFICATION	II	
B. ACCELERATION COEFFICIENT	0.33 - CLE 0.15 - OLE	
C. SEISMIC PERFORMANCE CATEGORY	C	
D. SOIL PROFILE TYPE	III	
E. RESPONSE MODIFICATION FACTOR (R)	CLE: R=1	FOR AXIAL LOADS AND SHEAR
	R=2	FOR MOMENT
	OLE: R=1	FOR ALL FORCES

DESIGN CRITERIA

DESIGN LOADS

1. UNIFORM LIVE LOAD:

A. PIER
1000 PSF
EXCEPT 2000 PSF ON HEAVY LOAD SECTION

B. 250 PSF ON TRUCK ACCESS WAY AREA (BENT (W5) TO BENT (W8) AND BENT (E27) TO BENT (E30) AND BENT (B.5) TO BENT (A2)) EXCEPT 1000 PSF FOR PILES.

2. CONCENTRATED LIVE LOAD (WHEELS, OUTRIGGERS, ETC.):

P = 100 KIPS, INCLUDING IMPACT
WHEEL/OUTRIGGER TRANSVERSE SPACING > 8 FEET
WHEEL/OUTRIGGER LONGITUDINAL SPACING > 18 FEET
CONTACT PRESSURE: 100 PSI
HS-25 TRUCK ON TRUCK ACCESS WAY

3. DEAD LOAD: (NEW AND EXISTING PIER)

CONCRETE	160 PCF
BALLAST	120 PCF
ACP	150 PCF

4. CONTAINER CRANE LOADS

A. VERTICAL LOADS:		WHEEL LOAD	EQUIVALENT UNIFORM LOAD
OPERATING CONDITION	CRANE RAIL A (WS)	198.0 KIPS	44.0 KIPS/FT
	CRANE RAIL D (LS)	198.0 KIPS	44.0 KIPS/FT
STOWED (WIND) CONDITION	CRANE RAIL A (WS)	247.5 KIPS	55.0 KIPS/FT
	CRANE RAIL D (LS)	225.0 KIPS	50.0 KIPS/FT

PLUS 250 PSF APPLIED SIMULTANEOUSLY WITHIN 10 FEET OF BOTH SIDES OF CRANE RAIL.

B. LONGITUDINAL LOADS AT PIN SOCKETS: P = 150 KIPS, PER SOCKET.

C. CRANE STOPS: P = 200 KIPS ACTING HORIZONTALLY 4'-6" ABOVE TOP OF RAIL, PER STOP.

5. FENDER SYSTEM DESIGN CRITERIA

A. VESSELS

1. CURRENT VESSEL
LENGTH OVERALL (LOA): 984 FEET
BEAM: 140 FEET
DRAFT: 46 FEET
LOADED DISPLACEMENT TONNAGE (LDT): 76,000 DEADWEIGHT TONS

2. POTENTIAL FUTURE VESSEL
LOA: 1,246 FEET
BEAM: 176 FEET
LDT: 156,250 DEADWEIGHT TONS

3. MAX. ALLOWABLE HULL PRESSURE = 5KIP/SQ. FT.

B. BERTHING LOADS

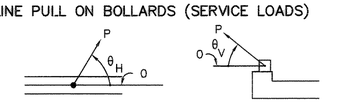
1. CURRENT VESSEL
APPROACH VELOCITY: 1 KNOT
APPROACH ANGLE: 10 DEGREES

2. POTENTIAL FUTURE VESSEL
APPROACH VELOCITY: .75 KNOT
APPROACH ANGLE: 10 DEGREES

C. FENDER SYSTE'' DESIGN CRITERIA

1. REACTION 155 KIPS
2. ENERGY OBSERVATION 230 KIPS-FT
THESE FORCES ARE FOR BERTHING LOADS SHOWN ABOVE.

6. LINE PULL ON BOLLARDS (SERVICE LOADS)



PLAN ELEVATION

LOCATION	LINE PULL P	RANGE OF HORIZONTAL ANGLE θH	RANGE OF VERTICAL ANGLE θV
PIER BOLLARD	125 KIPS	0° TO 180°	0° TO 30°
EAST DOLPHIN BOLLARD	350 KIPS	SEE SHEET S2	0° TO 40°
EXISTING WEST DOLPHIN BOLLARD	150 KIPS	SEE SHEET S2 SEE REFERNCE DRAWINGS	0° TO 30°

7. LOAD COMBINATIONS

SERVICE LOAD
S1 = 1.0D + 1.0L
S2 = 1.0D + 1.0Ls WITH 1/3 ALLOWABLE STRESS INCREASE

ULTIMATE LOAD
U1 = 1.4D + 1.7L (1.5L FOR EXISTING STRUCTURE)
U2 = 1.3D + 1.7L (1.5L FOR EXISTING STRUCTURE) + 1.3E
U3 = 1.3D + 0.17L + 1.7B + 1.3E
U4 = 1.0D + 1.0E + 1.0 EQ + 1.0 CD
U5 = .9D + 1.0E + 1.0EQ
U6 = 1.3D + 1.3L + 1.3T + 1.3E
U7 = 1.0D + 1.0 EQ

D - DEAD LOAD
L - LIVE LOAD (UNIFORM AND/OR CONTAINER CRANE)
Ls - CONTAINER CRANE UNDER STOWED CONDITION
B - BERTHING LOAD
E - EARTH PRESSURE LOAD
EQ - EARTHQUAKE LOAD
CD - CONTAINER CRANE DEAD LOAD (80% OF OPERATING)
T - TEMPERATURE LOAD (ΔT=±30°)

8. SPECIAL INSPECTION

THE CRITICAL ELEMENTS REQUIRING SPECIAL INSPECTION PER UBC CHAPTER 17 ARE AS FOLLOWS:

A. CONCRETE
B. BOLTS INSTALLED IN CONCRETE
C. REINFORCING STEEL
D. STRUCTURAL WELDING
E. PILE DRIVING

SPECIAL INSPECTION WILL BE PERFORMED BY THE ENGINEER

6320-17

MARK	REVISION	BY:	APPROVD	DATE:
1	ADDENDUM 1: REVISED NOTES	MB	RKJ	8/1/03

PORT OF TACOMA P.O. BOX 1837
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Seattle, Washington 98101
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APPROVED
CHIEF ENGINEER - DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY - DATE
KN 06/11/03 PROJECT ENGR. - DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER E-1972 998149
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
GENERAL NOTES

SHEET 36 OF 164
S1

EP-5564-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
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MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED

CHIEF ENGINEER – DATE

RKJ 06/11/03 CHECKED BY – DATE

MB 06/11/03 PROJECT ENGR.– DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WHARF PLAN

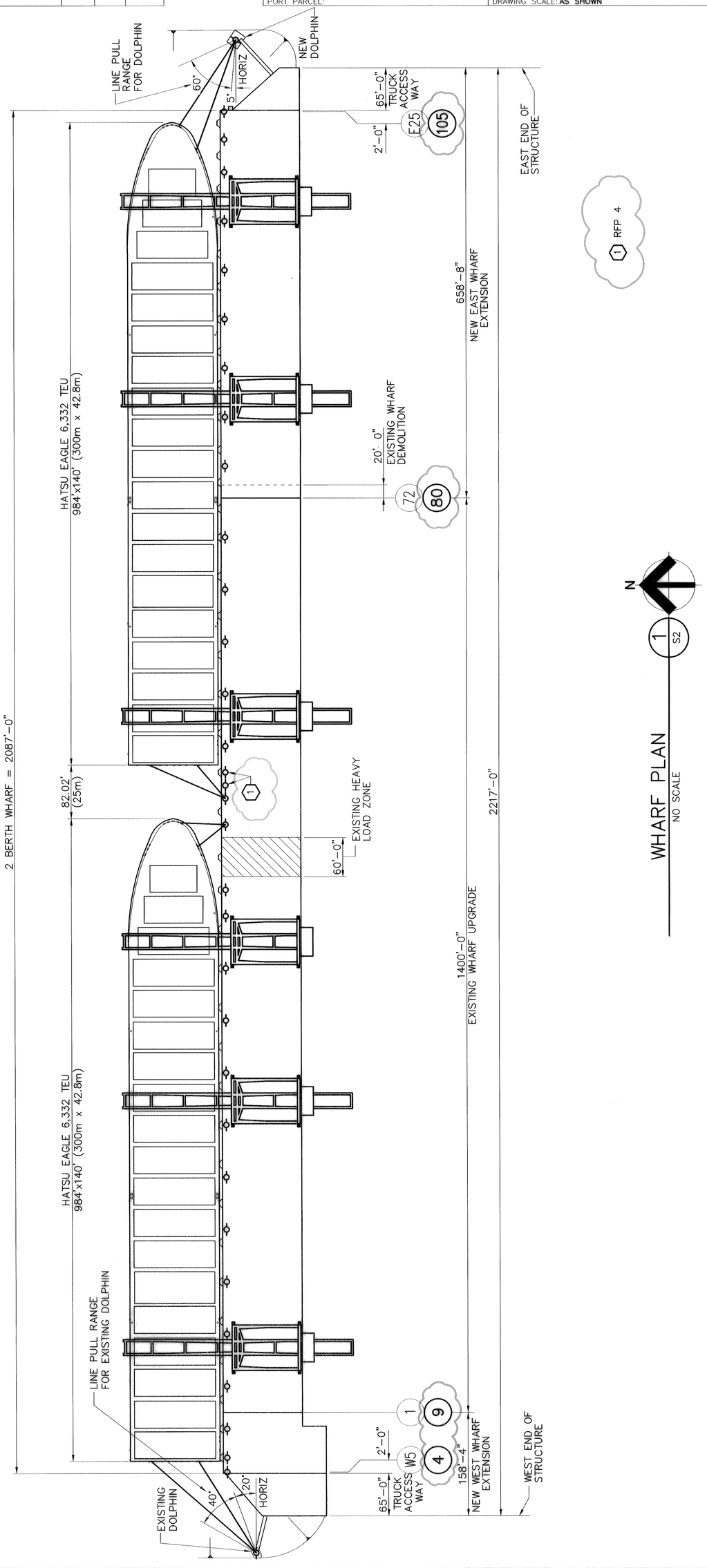
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SHEET 37 OF ~~164~~

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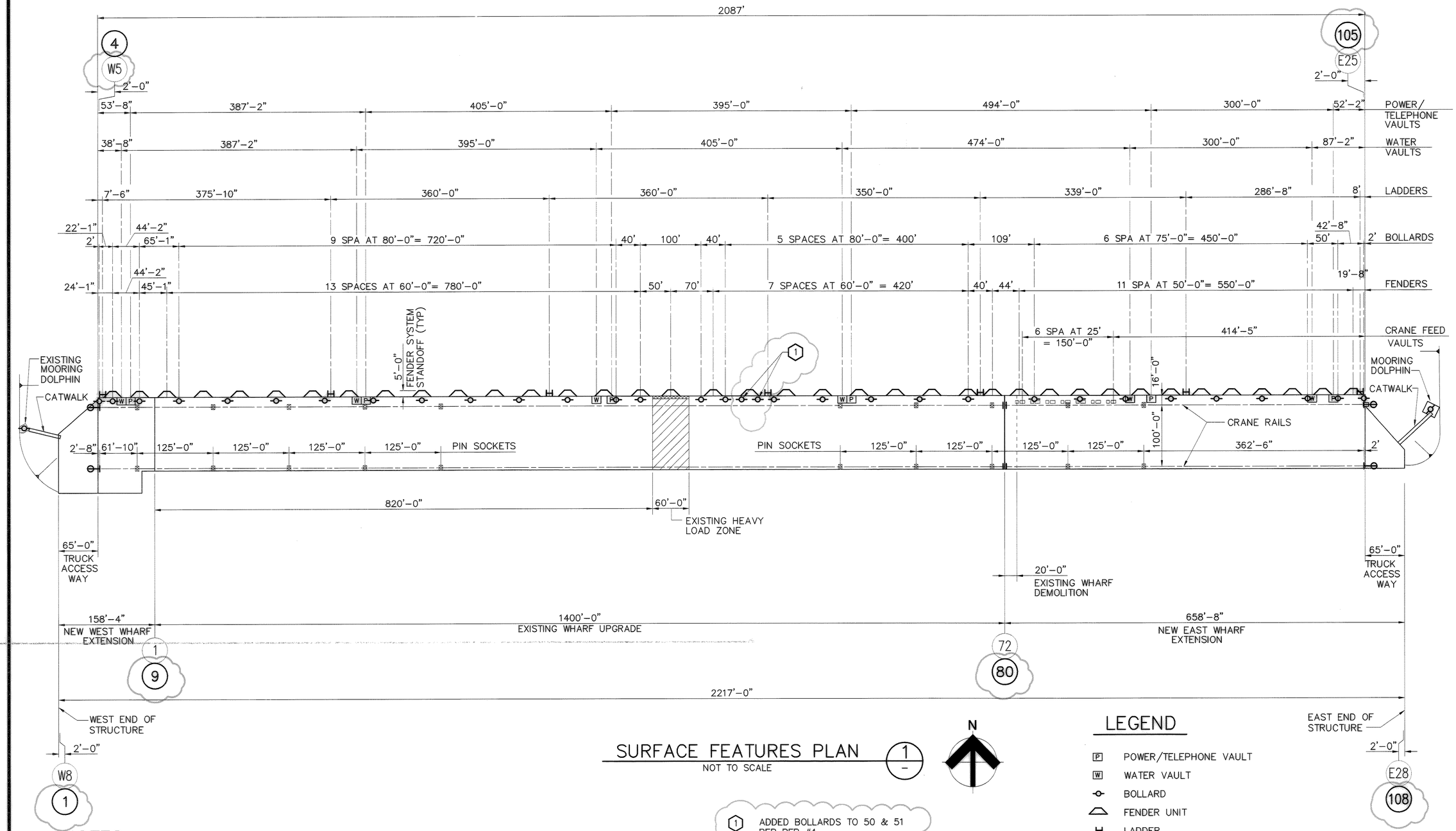
6320-17



N

1 S2

WHARF PLAN
NO SCALE



SURFACE FEATURES PLAN

1 – NOT TO SCALE

N

(1) ADDED BOLLARDS TO 50 & 51 PER RFP #4

LEGEND

- P — POWER/TELEPHONE VAULT
- W — WATER VAULT
- BOLLARD
- FENDER UNIT
- LADDER
- CRANE STOP
- RAIL EXPANSION JOINT, AND TYPICAL CRANE RAIL, SEE SHEET S87
- CRANE PIN SOCKET
- CABLE SPLICE BOX
- REMOVABLE BULLRAIL, SEE SHEET S45
- HEAVY LOAD ZONE

NOTES

1. CONTRACTOR TO VERIFY FINAL LOCATION OF CRANE PIN SOCKETS AND CABLE TRENCH WITH CRANE SUPPLIER AND NOTIFY THE ENGINEER IF THERE ARE ANY DISCREPANCIES.

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PORT OF TACOMA P.O. BOX 1837
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MARK | REVISION | BY: | APPROVED: | DATE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
SURFACE FEATURES PLAN

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
MB 06/11/03 PROJECT ENGR – DATE

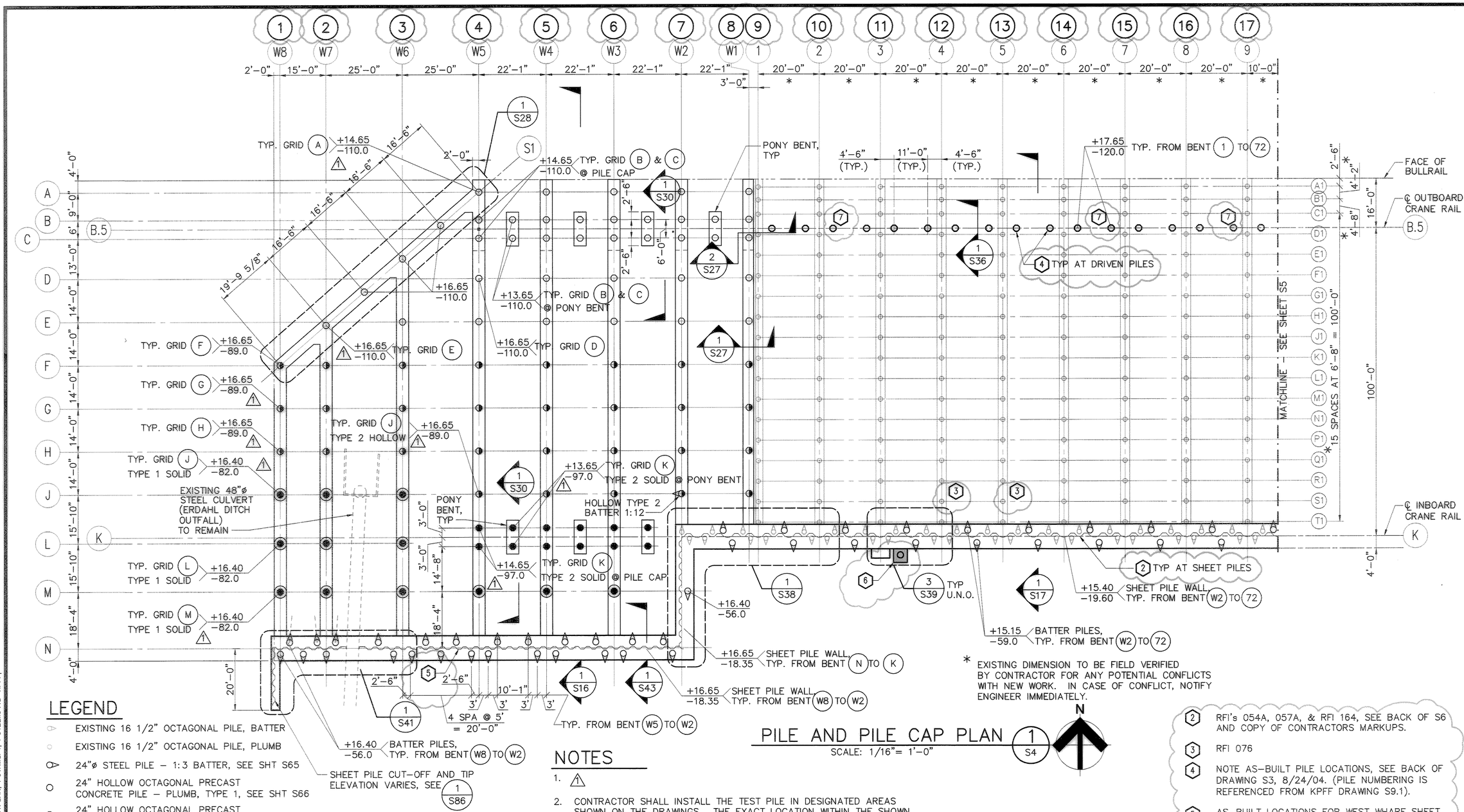
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DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER E1972
E NUMBER 998149
PHASE RECORD DOCUMENTS

EP-5561-17
S3
SHEET 38 OF 164

6320-17

FILE PATH & NAME: L:\102349 (PIERCE COUNTY TERMINAL)\RECORD DRAWINGS\E1972S03.DWG
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UPDATED BY BRUCEA
PLOTTED DATE & TIME SEP 16, 2004 10:37:48 AM
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW ---



LEGEND

- EXISTING 16 1/2" OCTAGONAL PILE, BATTER
- EXISTING 16 1/2" OCTAGONAL PILE, PLUMB
- 24"ø STEEL PILE – 1:3 BATTER, SEE SHT S65
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 1, SEE SHT S66
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 2, SEE SHEET S66
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – 1:3 BATTER, TYPE 2, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 1, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 2, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE TEST PILE
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE TEST PILE
- SHEET PILE BULKHEAD
- +XX.XX −XX.X PILE CUT-OFF ELEVATION / PILE TIP ELEVATION
- +XX.XX −XX.X SHEET PILE CUT-OFF ELEVATION / SHEET PILE TIP ELEVATION

NOTES

1. ⚠1
2. CONTRACTOR SHALL INSTALL THE TEST PILE IN DESIGNATED AREAS SHOWN ON THE DRAWINGS. THE EXACT LOCATION WITHIN THE SHOWN AREA SHALL BE SUCH THAT, ANY POTENTIAL INTERFERENCE IS ELIMINATED AND ANY REMNANT LEFT IN THE GROUND DOES NOT INTERFERE WITH PILE INSTALLATION OR OTHER WORK.
3. THE TEST PILES SHALL BE REMOVED OF BROKEN OFF BELOW MUDLINE AND DISPOSED OF BY THE CONTRACTOR. (SEE SPECIFICATION FOR REQUIREMENTS).
4. FOR DETAILS OF PRECAST PRESTRESSED CONCRETE PILES AND CONNECTIONS, SEE SHEETS S66 THROUGH S68.
5. FOR PILECAP, SEE SHEETS S21 THROUGH S32.
6. FOR BULKHEAD, SEE SHEETS S38 THROUGH S44.
7. BULKHEAD STAGE 2 AND PILE CAP STAGE 1 SHALL BE PLACED MONOLITHIC WITHOUT ANY CONSTRUCTION JOINTS.
8. THE CENTERLINE LOCATION OF THE TEST PILES SHALL BE AT LEAST 6 FEET AWAY FROM CENTERLINE OF ANY PRODUCTION PILES.
9. ⚠1 SEE NOTE 7 ON SHEET C8.

* EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR FOR ANY POTENTIAL CONFLICTS WITH NEW WORK. IN CASE OF CONFLICT, NOTIFY ENGINEER IMMEDIATELY.

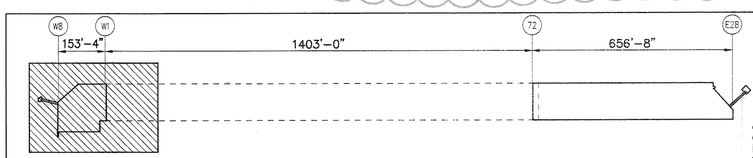
PILE AND PILE CAP PLAN

1 / S4

SCALE: 1/16"= 1'-0"

N

2. RFI's 054A, 057A, & RFI 164, SEE BACK OF S6 AND COPY OF CONTRACTORS MARKUPS.
3. RFI 076
4. NOTE AS-BUILT PILE LOCATIONS, SEE BACK OF DRAWING S3, 8/24/04. (PILE NUMBERING IS REFERENCED FROM KPFF DRAWING S9.1).
5. AS-BUILT LOCATIONS FOR WEST WHARF SHEET PILES & S1–S10 PIPE PILES. SEE BACK OF S3.
6. BULKHEAD REMEDIATION PILES, RE: POT TRANSMITTAL NO. 00420, SEE BACK OF S3.
7. MISALIGNED PILE TABOUTS, SEE KPFF DRAWINGS SK-1 AND SK-2.



KEY PLAN

6320-17

MARK	REVISION	BY:	APPROVED:	DATE:
A	ADDENDUM 1: REVISED NOTES & CALLOUTS	MB	RKJ	8/1/03

PORT OF TACOMA U.S.A.

kpff Consulting Engineers 601 Fifth Avenue Suite 1600 Seattle, Washington 98101 (206) 622-3822 Fax (206) 622-9130

PORT OF TACOMA P.O. BOX 1837 TACOMA, WA 98401 253-383-5841

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PILE AND PILE CAP PLAN
NEW WEST WHARF AND EXISTING

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
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TOWNSHIP: RANGE: SECTION:
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CONTRACT NUMBER: 998149
F. NUMBER: E1972
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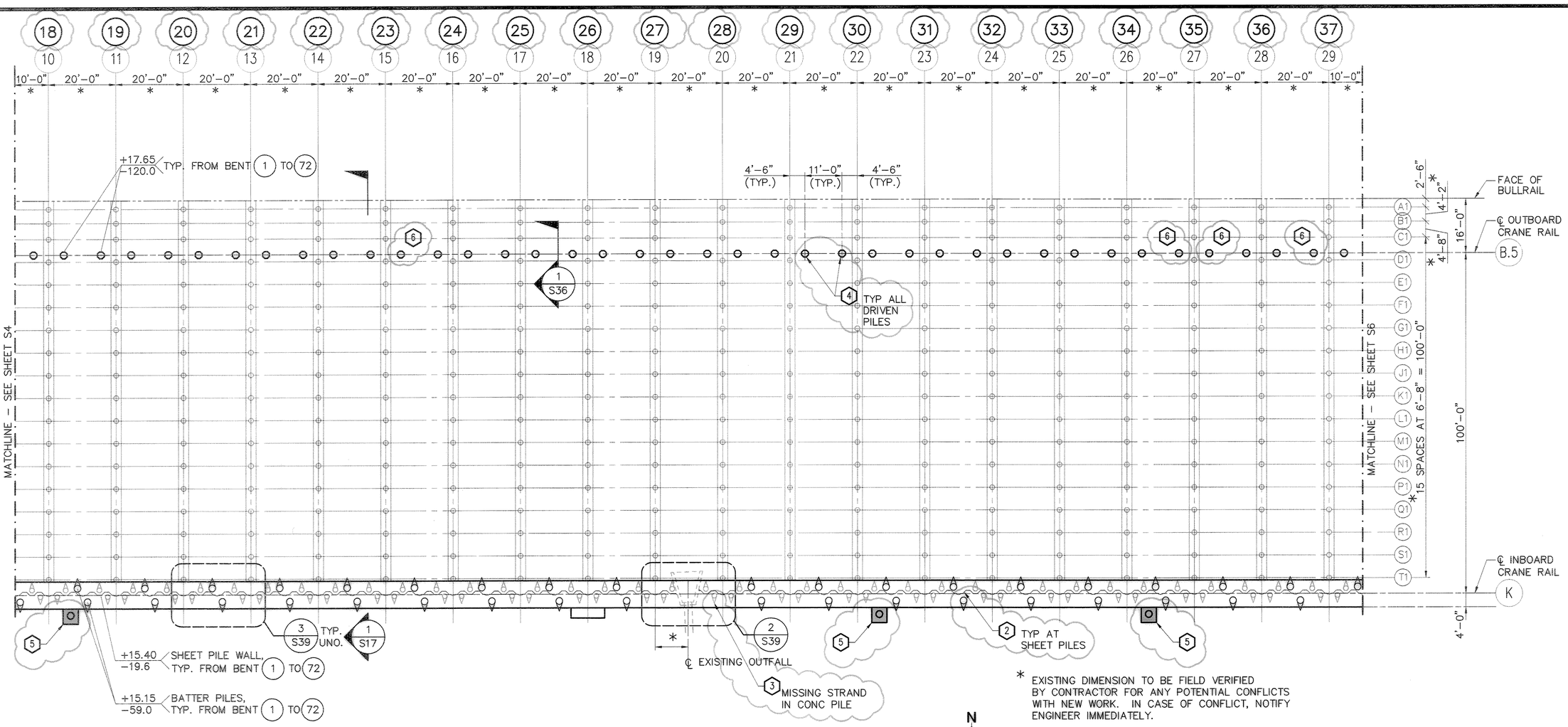
EP-~~5551-17~~

SHEET 39 OF 164

S4

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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XREFS: PCTXPILECAP-NOTES-1(b), PCTXLEGEND-1, PCTXKEYPLAN, PCTXMSP1, P0722x34TB-KPFF.



* EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR FOR ANY POTENTIAL CONFLICTS WITH NEW WORK. IN CASE OF CONFLICT, NOTIFY ENGINEER IMMEDIATELY.

PILE AND PILE CAP PLAN

1 / S5

SCALE: 1/16"= 1'–0"

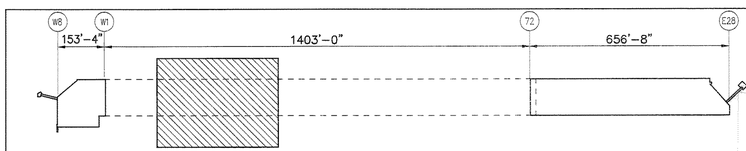
LEGEND

- EXISTING 16 1/2" OCTAGONAL PILE, BATTER
- EXISTING 16 1/2" OCTAGONAL PILE, PLUMB
- 24"ø STEEL PILE – 1:3 BATTER, SEE SHT S65
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 1, SEE SHT S66
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 2, SEE SHEET S66
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – 1:3 BATTER, TYPE 2, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 1, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 2, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE TEST PILE
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE TEST PILE
- SHEET PILE BULKHEAD
- +XX.XX / –XX.X PILE CUT–OFF ELEVATION / PILE TIP ELEVATION
- +XX.XX / –XX.X SHEET PILE CUT–OFF ELEVATION / SHEET PILE TIP ELEVATION

NOTES

1. ⚠
2. CONTRACTOR SHALL INSTALL THE TEST PILE IN DESIGNATED AREAS SHOWN ON THE DRAWINGS. THE EXACT LOCATION WITHIN THE SHOWN AREA SHALL BE SUCH THAT, ANY POTENTIAL INTERFERENCE IS ELIMINATED AND ANY REMNANT LEFT IN THE GROUND DOES NOT INTERFERE WITH PILE INSTALLATION OR OTHER WORK.
3. THE TEST PILES SHALL BE REMOVED OF BROKEN OFF BELOW MUDLINE AND DISPOSED OF BY THE CONTRACTOR. (SEE SPECIFICATION FOR REQUIREMENTS).
4. FOR DETAILS OF PRECAST PRESTRESSED CONCRETE PILES AND CONNECTIONS, SEE SHEETS S66 THROUGH S68.
5. FOR PILECAP, SEE SHEETS S21 THROUGH S32.
6. FOR BULKHEAD, SEE SHEETS S38 THROUGH S44.
7. BULKHEAD STAGE 2 AND PILE CAP STAGE 1 SHALL BE PLACED MONOLITHIC WITHOUT ANY CONSTRUCTION JOINTS.
8. THE CENTERLINE LOCATION OF THE TEST PILES SHALL BE AT LEAST 6 FEET AWAY FROM CENTERLINE OF ANY PRODUCTION PILES.
9. ⚠ SEE NOTE 7 ON SHEET C8.

2. RFI 054A, 057A & 164, SEE BACK OF S6 AND COPY OF CONTRACTORS MARKUPS.
3. RFI 192
4. NOTE AS–BUILT PILE LOCATIONS, SEE BACK OF DRAWING S4. (PILE NUMBERING IS REFERENCED FROM DRAWING S9.1).
5. BULKHEAD REMEDIATION PILES, RE: POT TRANSMITTAL NO. 00420, SEE BACK OF S3.
6. MISALIGNED PILE TABOUTS, SEE KPFF DRAWINGS SK–1 AND SK–2.



KEY PLAN

6320–17

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841
kpff Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE
1	ADDENDUM 1: REVISED NOTES	MB	RKJ	8/1/03

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
KN 06/11/03 PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PILE AND PILE CAP PLAN
EXISTING BENTS 10 THRU 29

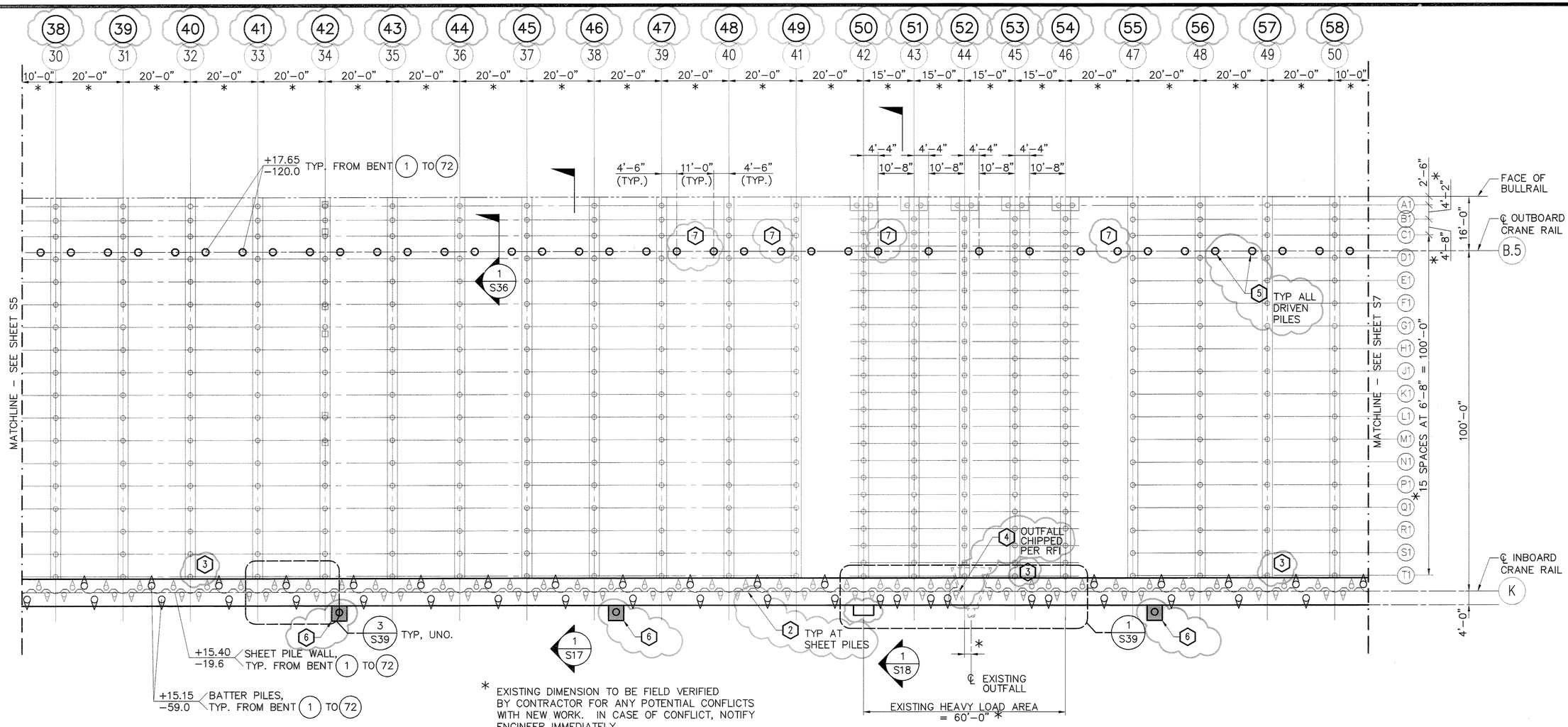
SHEET 40 OF 164

S5

EP-556-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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PLOT SCALE 1=1 | 'PCP' FILE | PLOT VIEW
XREFS: PCTXPILECAP-NOTES-1(b), PCTXLEGEND-1, PCTXKEYPLAN, PCTXMSP1, PO122x341B-KPFF.



PILE AND PILE CAP PLAN

1 S6

SCALE: 1/16"= 1'-0"

LEGEND

- EXISTING 16 1/2" OCTAGONAL PILE, BATTER
- EXISTING 16 1/2" OCTAGONAL PILE, PLUMB
- 24"ø STEEL PILE – 1:3 BATTER, SEE SHT S65
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 1, SEE SHT S66
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 2, SEE SHEET S66
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – 1:3 BATTER, TYPE 2, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 1, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 2, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE TEST PILE
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE TEST PILE
- SHEET PILE BULKHEAD
- +XX.XX / −XX.X PILE CUT–OFF ELEVATION / PILE TIP ELEVATION
- +XX.XX / −XX.X SHEET PILE CUT–OFF ELEVATION / SHEET PILE TIP ELEVATION

NOTES

1. ⚠
2. CONTRACTOR SHALL INSTALL THE TEST PILE IN DESIGNATED AREAS SHOWN ON THE DRAWINGS. THE EXACT LOCATION WITHIN THE SHOWN AREA SHALL BE SUCH THAT, ANY POTENTIAL INTERFERENCE IS ELIMINATED AND ANY REMNANT LEFT IN THE GROUND DOES NOT INTERFERE WITH PILE INSTALLATION OR OTHER WORK.
3. THE TEST PILES SHALL BE REMOVED OF BROKEN OFF BELOW MUDLINE AND DISPOSED OF BY THE CONTRACTOR. (SEE SPECIFICATION FOR REQUIREMENTS).
4. FOR DETAILS OF PRECAST PRESTRESSED CONCRETE PILES AND CONNECTIONS, SEE SHEETS S66 THROUGH S68.
5. FOR PILECAP, SEE SHEETS S21 THROUGH S32.
6. FOR BULKHEAD, SEE SHEETS S38 THROUGH S44.
7. BULKHEAD STAGE 2 AND PILE CAP STAGE 1 SHALL BE PLACED MONOLITHIC WITHOUT ANY CONSTRUCTION JOINTS.
8. THE CENTERLINE LOCATION OF THE TEST PILES SHALL BE AT LEAST 6 FEET AWAY FROM CENTERLINE OF ANY PRODUCTION PILES.
9. ⚠ SEE NOTE 7 ON SHEET C8.

(2) RFI 054A, 057A & 164, SEE BACK OF S6 AND COPY OF CNTRACTOR'S MARKUPS.

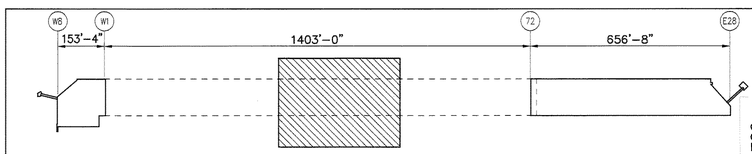
(3) RFI 076, SEE SK–1, BACK OF S3

(4) RFI 147

(5) NOTE AS–BUILT PILE LOCATIONS, SEE BACK OF DRAWING S5. (PILE NUMBERING IS REFERENCED FROM DRAWING S9.1)

(6) BULKHEAD REMEDIATION PILES, RE: P.O.T. TRANSMITTAL NO. 00420, SEE BACK OF S3.

(7) MISALIGNED PILE TABOUTS, SEE KPFF DRAWINGS SK–1 AND SK–2.



KEY PLAN

6320-17

MARK	REVISION	BY:	APPROVD.	DATE:
A	ADDENDUM 1: REVISED NOTES	MB	RKJ	8/1/03

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9305

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE

KN 06/11/03 PROJECT ENGR. – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PILE AND PILE CAP PLAN
EXISTING BENTS 30 THRU 50

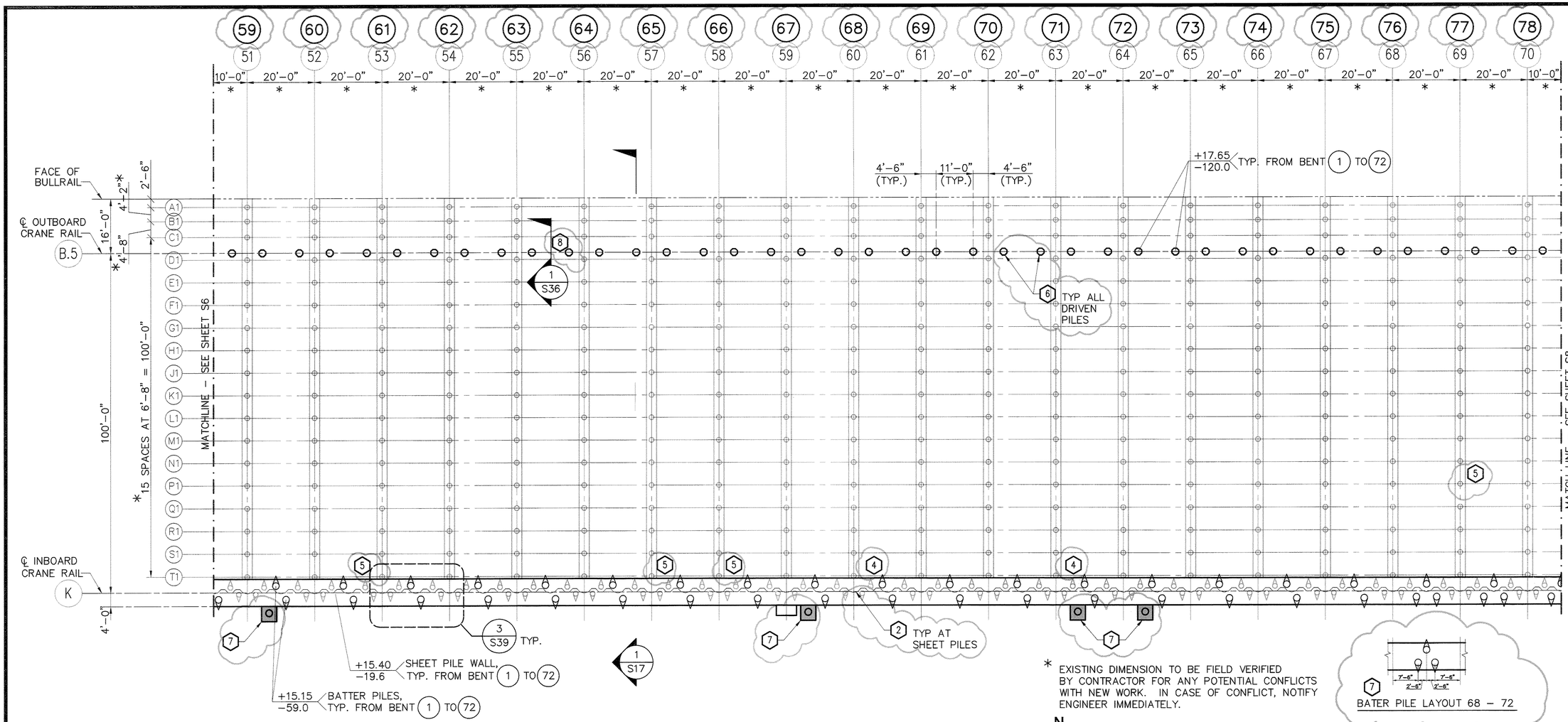
EP-~~5551-17~~

S6

SHEET 41 OF 164

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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XREFS: PCTXPILECAP-NOTES-1(b), PCTXLEGEND-1, PCTXKEYPLAN, PCTXMISP1, P0T22X34TB-KPFF,
PLOT SCALE 1=1 | 'POP' FILE --- | PLOT VIEW



PILE AND PILE CAP PLAN (1/S7)

SCALE: 1/16"= 1'–0"

N

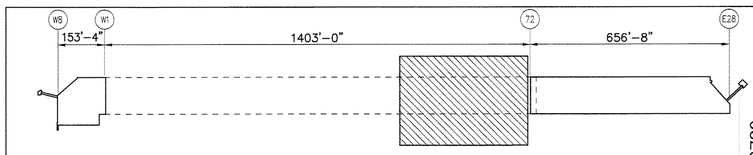
LEGEND

- EXISTING 16 1/2" OCTAGONAL PILE, BATTER
- EXISTING 16 1/2" OCTAGONAL PILE, PLUMB
- 24"ø STEEL PILE – 1:3 BATTER, SEE SHT S65
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 1, SEE SHT S66
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 2, SEE SHEET S66
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – 1:3 BATTER, TYPE 2, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 1, SEE SHT S66
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- 24" SOLID OCTAGONAL PRECAST CONCRETE TEST PILE
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- SHEET PILE BULKHEAD
- +XX.XX / −XX.X PILE CUT–OFF ELEVATION / PILE TIP ELEVATION
- +XX.XX / −XX.X SHEET PILE CUT–OFF ELEVATION / SHEET PILE TIP ELEVATION

NOTES

1. ⚠1
2. CONTRACTOR SHALL INSTALL THE TEST PILE IN DESIGNATED AREAS SHOWN ON THE DRAWINGS. THE EXACT LOCATION WITHIN THE SHOWN AREA SHALL BE SUCH THAT, ANY POTENTIAL INTERFERENCE IS ELIMINATED AND ANY REMNANT LEFT IN THE GROUND DOES NOT INTERFERE WITH PILE INSTALLATION OR OTHER WORK.
3. THE TEST PILES SHALL BE REMOVED OF BROKEN OFF BELOW MUDLINE AND DISPOSED OF BY THE CONTRACTOR. (SEE SPECIFICATION FOR REQUIREMENTS).
4. FOR DETAILS OF PRECAST PRESTRESSED CONCRETE PILES AND CONNECTIONS, SEE SHEETS S66 THROUGH S68.
5. FOR PILECAP, SEE SHEETS S21 THROUGH S32.
6. FOR BULKHEAD, SEE SHEETS S38 THROUGH S44.
7. BULKHEAD STAGE 2 AND PILE CAP STAGE 1 SHALL BE PLACED MONOLITHIC WITHOUT ANY CONSTRUCTION JOINTS.
8. THE CENTERLINE LOCATION OF THE TEST PILES SHALL BE AT LEAST 6 FEET AWAY FROM CENTERLINE OF ANY PRODUCTION PILES.
9. ⚠1 SEE NOTE 7 ON SHEET C8.

2. RFI 054A, 057A & 164, SEE BACK OF S6. SEE COPY OF CONTRACTOR'S MARKUPS.
3. RFI 19, BATTER PILE LAYOUT 68 – 72.
4. RFI 068
5. RFI 076, SEE SK–1, BACK OF S3.
6. NOTE AS–BUILT PILE LOCATIONS, SEE BACK OF DRAWING S6. (PILE NUMBERING IS REFERENCED FROM DRAWING S9.1)
7. BULKHEAD REMEDIATION PILES, RE: POT TRANSMITTAL NO. 00420, SEE BACK OF S3.
8. MISALIGNED PILE TABOUTS, SEE KPFF DRAWINGS SK–1 AND SK–2.



KEY PLAN

6320–17

MARK	REVISION	BY:	APPROVED:	DATE:
A	ADDENDUM 1: REVISED NOTES	MB	RKJ	8/17/03

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
KN 06/11/03
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING
PILE AND PILE CAP PLAN EXISTING BENTS 51 THRU 70

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

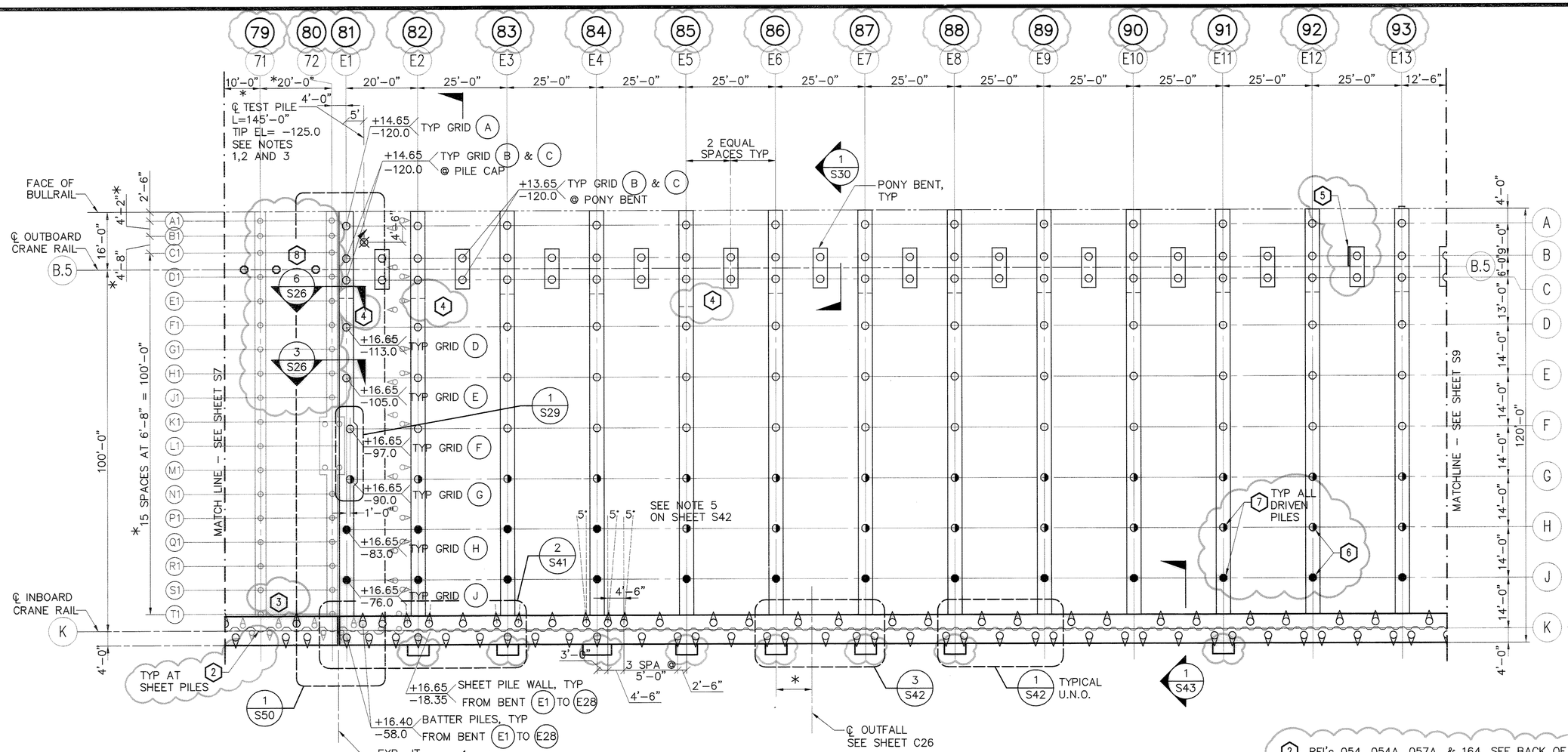
EP-~~5551-17~~

S7

SHEET 42 OF 164

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

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JOB NAME Pierce County Terminal
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PLOTTED DATE & TIME: SEP. 28, 2004 3:42:54 PM
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW
UPDATED BY BRUCEA



EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR FOR ANY POTENTIAL CONFLICTS WITH NEW WORK. IN CASE OF CONFLICT, NOTIFY ENGINEER IMMEDIATELY.

PILE AND PILE CAP PLAN

1 S8

SCALE: 1/16"= 1'–0"

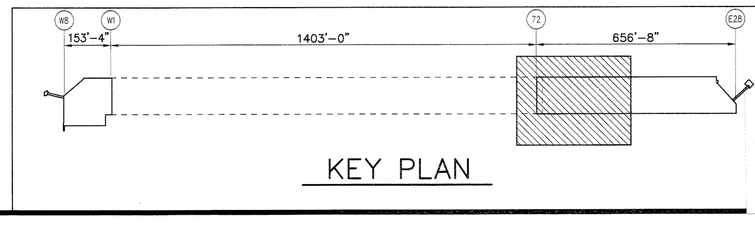
LEGEND

- EXISTING 16 1/2" OCTAGONAL PILE, BATTER (SEE NOTE 1)
- EXISTING 16 1/2" OCTAGONAL PILE, PLUMB
- 24"ø STEEL PILE – 1:3 BATTER, SEE SHT S65
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 1, SEE SHT S66
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 2, SEE SHEET S66
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – 1:3 BATTER, TYPE 2, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 1, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 2, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE TEST PILE
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE TEST PILE
- SHEET PILE BULKHEAD
- +XX.XX –XX.X PILE CUT–OFF ELEVATION / PILE TIP ELEVATION
- +XX.XX –XX.X SHEET PILE CUT–OFF ELEVATION / SHEET PILE TIP ELEVATION

NOTES

1. PILES INSTALLED ALONG BENTS E1, E2 AND E3 AS WELL AS PONY BENTS BETWEEN E1 AND E3 MAY BE IN CONFLICT WITH THE REMAINDER OF EXISTING PILING FROM THE DEMOLISHED BENT 73 AND BULKHEAD, SEE SHEET C14. AFTER DEMOLITION OF THE EXISTING BENT 73 AND BULKHEAD, THE CONTRACTOR SHALL PREPARE A SURVEY OF THE
   ⚠1 EXISTING PILES WHICH REMAIN, (i.e. THESE PILES ARE BROKEN OFF ABOVE THE MUD LINE DURING DEMOLITION AND THE UNDERGROUND PORTION WILL REMAIN), AND DETERMINE IF CONFLICTS OCCUR BETWEEN THE NEW AND EXISTING PILES. THIS SURVEY AND PILE CONFLICT DETERMINATION WILL BE SUBMITTED TO THE ENGINEER FOR REVIEW 30 DAYS PRIOR TO PILE DRIVING IN THIS AREA. IF CONFLICTS OCCUR, THE ENGINEER WILL EITHER ADJUST PILE LOCATIONS BY 1 TO 2 FEET ALONG GRID LINES OR BATTER PILES UP TO A 1:12 BATTER AS REQUIRED TO AVOID THE PILE CONFLICTS. THE ENGINEER WILL SUBMIT THESE REVISIONS TO THE CONTRACTOR WITHIN 3 WEEKS OF RECEIVING THE PILE CONFLICT DETERMINATION FROM THE CONTRACTOR. THE CONTRACTOR SHALL MAKE ALL ADJUSTMENTS TO THE PILE LOCATIONS AND BATTER PILES AT NO COST TO THE PORT OR REVISION TO THE SUBSTANTIAL COMPLETION DATE.
2. CONTRACTOR SHALL INSTALL THE TEST PILE IN DESIGNATED AREAS SHOWN ON THE DRAWINGS. THE EXACT LOCATION WITHIN THE SHOWN AREA SHALL BE SUCH THAT, ANY POTENTIAL INTERFERENCE IS ELIMINATED AND ANY REMNANT LEFT IN THE GROUND DOES NOT INTERFERE WITH PILE INSTALLATION OR OTHER WORK.
3. THE TEST PILES SHALL BE REMOVED OF BROKEN OFF BELOW MUDLINE AND DISPOSED OF BY THE CONTRACTOR. (SEE SPECIFICATION FOR REQUIREMENTS).
4. FOR DETAILS OF PRECAST PRESTRESSED CONCRETE PILES AND CONNECTIONS, SEE SHEETS S66 THROUGH S68.
5. FOR PILECAP, SEE SHEETS S21 THROUGH S32.
6. FOR BULKHEAD, SEE SHEETS S38 THROUGH S44.
7. BULKHEAD STAGE 2 AND PILE CAP STAGE 1 SHALL BE PLACED MONOLITHIC WITHOUT ANY CONSTRUCTION JOINTS.
8. THE CENTERLINE LOCATION OF THE TEST PILES SHALL BE AT LEAST 6 FEET AWAY FROM CENTERLINE OF ANY PRODUCTION PILES.
   ⚠1 9. SEE NOTE 7 ON SHEET C8.

2. RFI's 054, 054A, 057A, & 164. SEE BACK OF S6 AND COPY OF CONTRACTOR'S MARKUPS.
3. RFI 076, SEE SK–1 BACK OF S3.
4. RFI 161, DROP CAP EXTENDED SOUTH, BENTS E1: 1'–0", E2: 1'–1" & E5: 3'–7".
5. RFI 175, SEE CSS1 BACK OF S7, 6" TAB OUT.
6. RFI 174 & EFC 24, PILE BUILDUPS, SEE BACK OF S6.
7. NOTE AS–BUILT PILE LOCATIONS. SEE BACK OF DRAWING S7. (PILE NUMBERING IS REFERENCED FROM DRAWING S9.1)
8. RFP 8, DEMO OF PILES & THE INSTALLATION OF NEW PILES IN BENTS 71 & 72, SEE BACK OF DRAWING S6 & S7 (CHANGE ORDER 2).



KEY PLAN

6320–17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PORT OF TACOMA P.O. BOX 1837 TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers 601 Fifth Avenue, Suite 1600 Seattle, Washington 98101 (206) 622-5822 Fax (206) 622-9180

MARK	REVISION	BY:	APPROVED	DATE:
A	ADDENDUM 1: REVISED NOTE 1, ADDED NOTE 9	MB	RKJ	8/1/03

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	06/11/03	
CHECKED BY	– DATE	
AB	06/11/03	
PROJECT ENGR –	DATE	

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING PILE AND PILE CAP PLAN NEW EAST WHARF

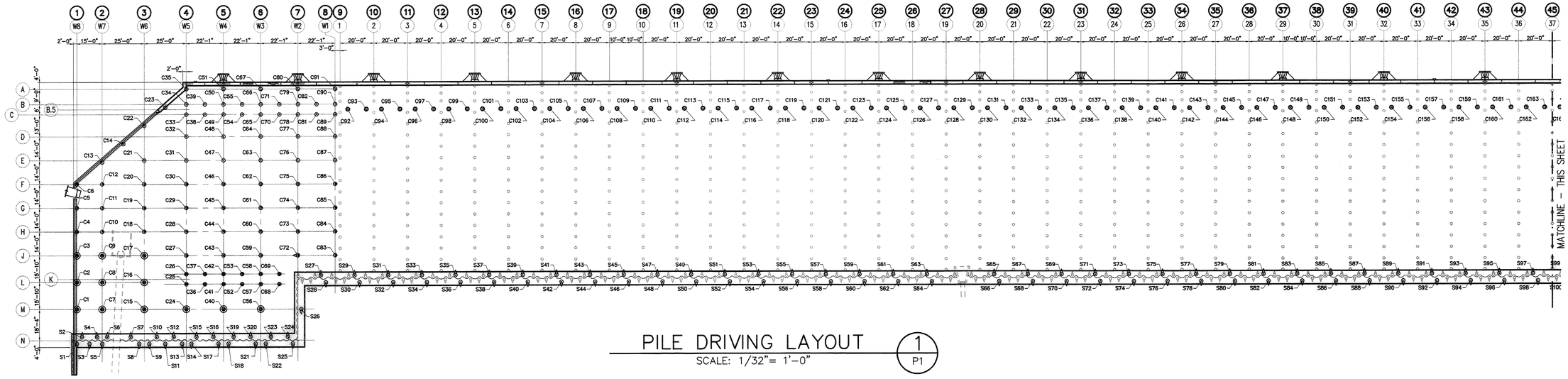
EP-~~5551-17~~

S8

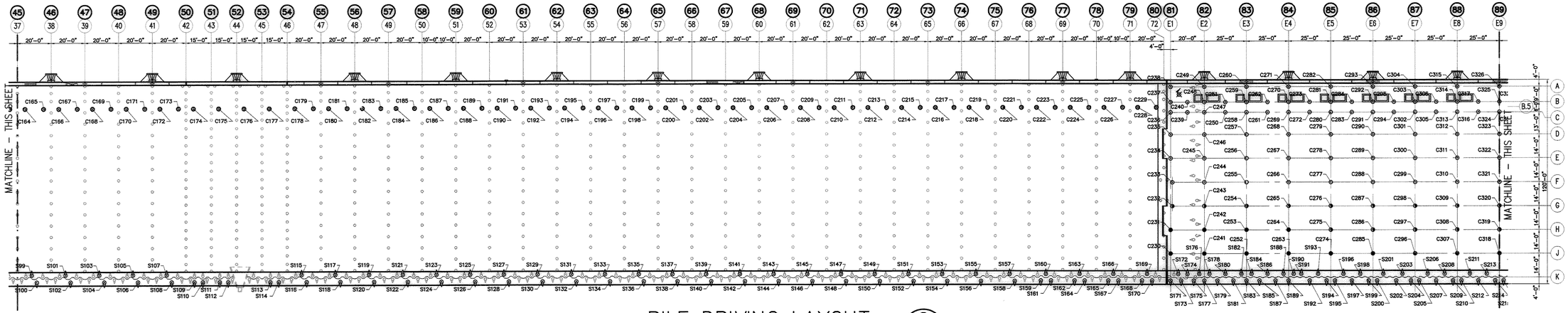
SHEET 43 OF 164

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

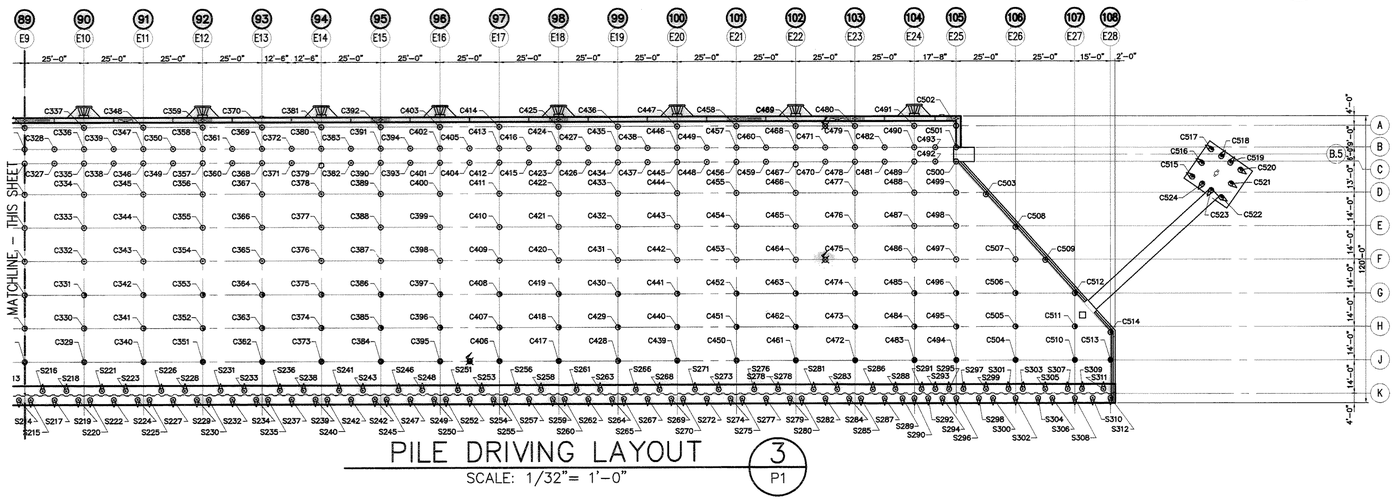
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JOB # 102349.10 | JOB NAME Pierce County Terminal | PLOTTED DATE & TIME SEP. 29, 2004 8:45:13 AM
UPDATED BY BRUCEA | PLOT SCALE 1=1 | 'PCP' FILE --- | PLOT VIEW
XREFS: PCTXPILECAP-NOTES-1(a), PCTXLEGND-1, PCTXKEYPLAN, PCTXMSP1, POT22x34TB-KPFF,



PILE DRIVING LAYOUT
SCALE: 1/32"= 1'–0"
1
P1

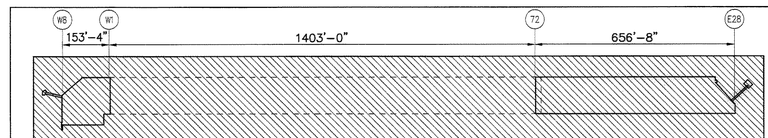


PILE DRIVING LAYOUT
SCALE: 1/32"= 1'–0"
2
P1



PILE DRIVING LAYOUT
SCALE: 1/32"= 1'–0"
3
P1

FOR REFERENCE ONLY



KEY PLAN

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff
Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED

CHIEF ENGINEER – DATE

RKJ 06/11/03
CHECKED BY – DATE
RKJ 06/11/03
PROJECT ENGR – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS: 2001 MILWAUKEE WAY
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: 1/32" = 1'–0"

CONTRACT NUMBER: 998149
E. NUMBER: E19272
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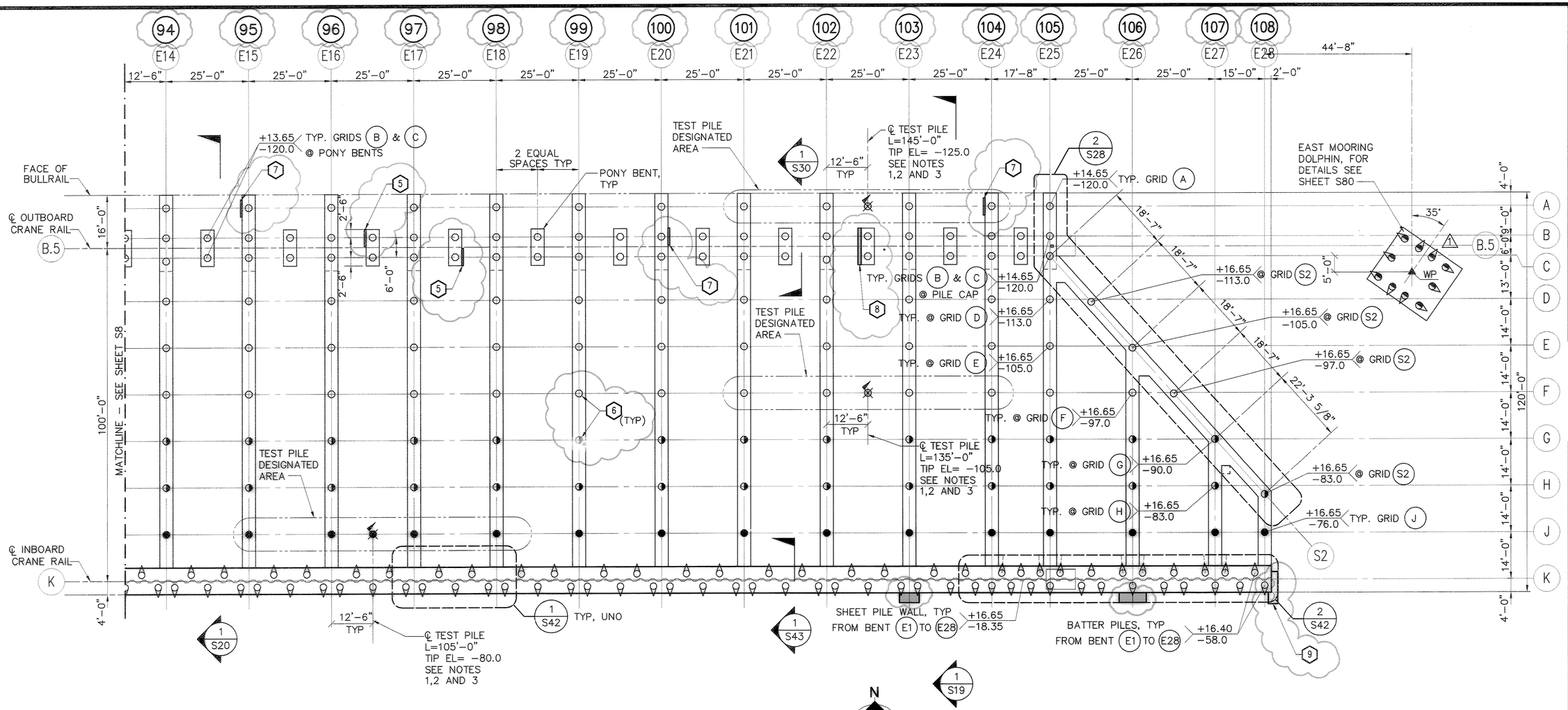
RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PILE DRIVING LAYOUT

EP-555+17
S09.1
SHEET 44 OF 164

6320-17

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E19272S09_1.DWG
JOB # 102349.10
JOB NAME: Pierce County Terminal
PLOTTED DATE & TIME: JAN. 26, 2005 8:09:43 AM
UPDATED BY: RICKT
PLOT SCALE: 1=1
'POP' FILE:
PLOT VIEW:
XREFS: POT22x34TB-KPFF, PCTXPILE, PCTXKEYPLAN,



PILE AND PILE CAP PLAN

1 / S9

SCALE: 1/16"= 1'-0"

N

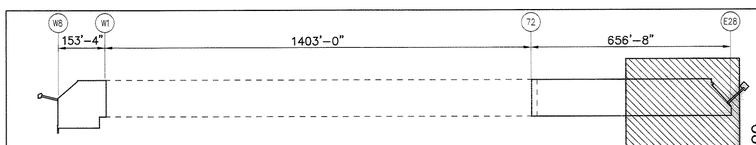
LEGEND

- EXISTING 16 1/2" OCTAGONAL PILE, BATTER
- EXISTING 16 1/2" OCTAGONAL PILE, PLUMB
- 24"ø STEEL PILE – 1:3 BATTER, SEE SHT S65
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 1, SEE SHT S66
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 2, SEE SHEET S66
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE PILE – 1:3 BATTER, TYPE 2, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 1, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE PILE – PLUMB, TYPE 2, SEE SHT S66
- 24" SOLID OCTAGONAL PRECAST CONCRETE TEST PILE
- 24" HOLLOW OCTAGONAL PRECAST CONCRETE TEST PILE
- SHEET PILE BULKHEAD
- +XX.XX / −XX.X PILE CUT–OFF ELEVATION / PILE TIP ELEVATION
- +XX.XX / −XX.X SHEET PILE CUT–OFF ELEVATION / SHEET PILE TIP ELEVATION

NOTES

1. CONTRACTOR SHALL PROBE PRIOR TO PILE INSTALLATIONS AS REQUIRED TO IDENTIFY POTENTIAL INTERFERENCE'S BETWEEN ALL NEW AND EXISTING PILES OR EXISTING BROKEN OFF PILES. NOTIFY ENGINEER OF ANY POTENTIAL INTERFERENCE'S PRIOR TO PILE INSTALLATION.
2. CONTRACTOR SHALL INSTALL THE TEST PILE IN DESIGNATED AREAS SHOWN ON THE DRAWINGS. THE EXACT LOCATION WITHIN THE SHOWN AREA SHALL BE SUCH THAT, ANY POTENTIAL INTERFERENCE IS ELIMINATED AND ANY REMNANT LEFT IN THE GROUND DOES NOT INTERFERE WITH PILE INSTALLATION OR OTHER WORK.
3. THE TEST PILES SHALL BE REMOVED OF BROKEN OFF BELOW MUDLINE AND DISPOSED OF BY THE CONTRACTOR. (SEE SPECIFICATION FOR REQUIREMENTS).
4. FOR DETAILS OF PRECAST PRESTRESSED CONCRETE PILES AND CONNECTIONS, SEE SHEETS S66 THROUGH S68.
5. FOR PILECAP, SEE SHEETS S21 THROUGH S32.
6. FOR BULKHEAD, SEE SHEETS S38 THROUGH S44.
7. BULKHEAD STAGE 2 AND PILE CAP STAGE 1 SHALL BE PLACED MONOLITHIC WITHOUT ANY CONSTRUCTION JOINTS.
8. THE CENTERLINE LOCATION OF THE TEST PILES SHALL BE AT LEAST 6 FEET AWAY FROM CENTERLINE OF ANY PRODUCTION PILES.

5. RFI 175 AND CSS1, SEE BACK OF S7, BOTH TAB OUTS ARE 6".
6. NOTE AS–BUILT PILE LOCATIONS. SEE BACK OF DRAWING S8. (PILE NUMBERING IS REFERENCED FROM DRAWING S9.1)
7. 6" TAB OUT, SEE CSS1 ON BACK OF S7.
8. 12" TAB OUT PER RFI 185 (BACK OF S8) AND CSS1 (BACK OF S7).
9. RFP 13/CO #6: EAST RETURN WALL, SEE THE BACK OF S8.



KEY PLAN

6320-17

MARK	REVISION	BY	APPROVED	DATE
A	ADDENDUM 1: DELETE EXTRA PIER	MB	RKJ	8/1/03

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
AB PROJECT ENGR – DATE 06/11/03

RECORD DRAWING FOR BASIS OF RECORD DRAWINGS SEE G1

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING
PILE AND PILE CAP PLAN NEW EAST WHARF

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~5661-17~~

SHEET 44 OF 164

S9

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S09.DWG
JOB # 102349.10 | JOB NAME Pierce County Terminal | PLOTTED DATE & TIME FEB. 01, 2005 11:23:19 AM | UPDATED BY RICKT | PLOT SCALE 1=1 | 'POP' FILE --- | PLOT VIEW ---
XREFS: PCTXPILECAP-NOTES-1, PCTXLEGEND-1, PCTXKEYPLAN, PCTXMSP1, P0T22x34TB-KPFF,

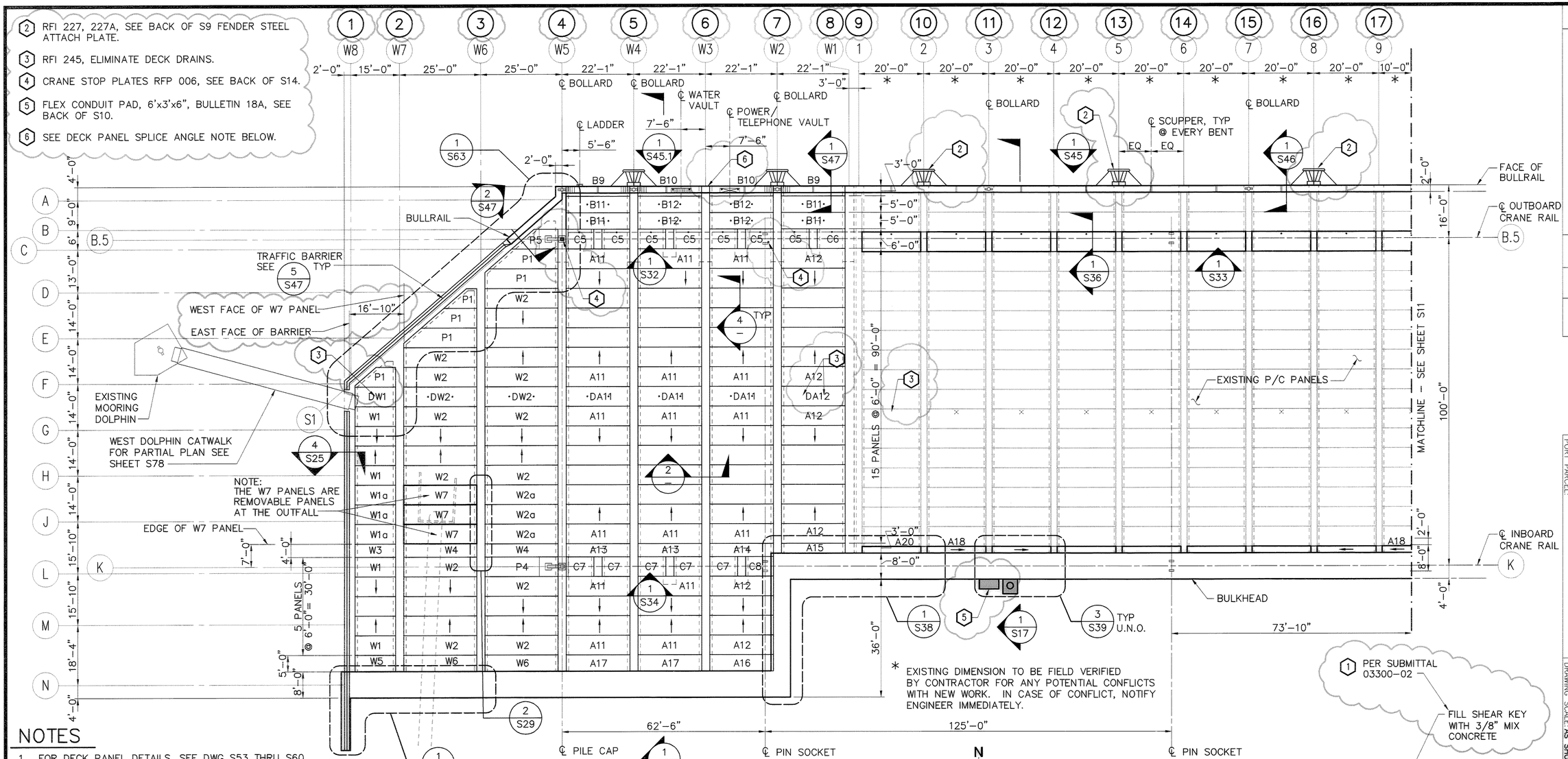
(2) RFI 227, 227A, SEE BACK OF S9 FENDER STEEL ATTACH PLATE.

(3) RFI 245, ELIMINATE DECK DRAINS.

(4) CRANE STOP PLATES RFP 006, SEE BACK OF S14.

(5) FLEX CONDUIT PAD, 6'x3'x6", BULLETIN 18A, SEE BACK OF S10.

(6) SEE DECK PANEL SPLICE ANGLE NOTE BELOW.



* EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR FOR ANY POTENTIAL CONFLICTS WITH NEW WORK. IN CASE OF CONFLICT, NOTIFY ENGINEER IMMEDIATELY.

DECK PLAN
SCALE: 1/16"= 1'-0" — 1/S10

NOTES

1. FOR DECK PANEL DETAILS, SEE DWG S53 THRU S60.
2. FOR DRAIN DETAILS, SEE DWG C24–C26.
3. FOR UTILITY VAULT DETAILS, SEE DWG S71.
4. FOR BULLRAIL AND BOLLARD DETAILS, SEE DWGS S45 THRU S49 AND S74.
5. FOR PIN SOCKET DETAILS, SEE DWG S70.
6. FOR SPLICE BOX AND CABLE FUNNEL DETAILS, SEE DWG S69.
7. FOR SCUPPER DETAILS SEE DWG C28 AND (1/S47)

LEGEND

A/B/C/D/P/W/E — DECK PANEL DESIGNATION

CRANE PIN SOCKETS WITH DRAINS, SEE DWG S70

CRANE STOP, SEE DWG S75.

LADDER, FOR DETAILS SEE DWG S77.

FENDER, FOR DETAILS SEE DWG S76.

PIER BOLLARD

POWER/TELEPHONE VAULT WITH DRAINS, SEE DWG S71.

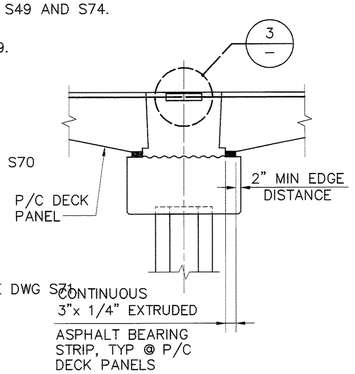
WATER VAULT WITH DRAINS, SEE DWG S71.

DRAIN

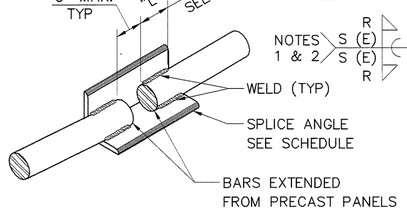
EXISTING DRAIN RESTORED

SCUPPER

LOCATION OF SPECIAL PANELS FOR BOLLARD SEE DWG S55.



SECTION – PILE CAP (2/–)
SCALE: NONE



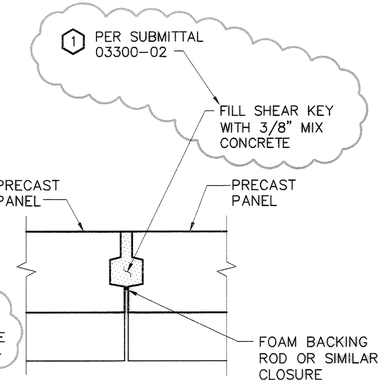
NOTES:
1. 3/16" MAX GAP BETWEEN BAR AND ANGLE AT ANY POINT TO BE WELDED.
2. PREHEAT PER ASW D1.4

REBAR SPLICE (3/–)
SCALE: NONE

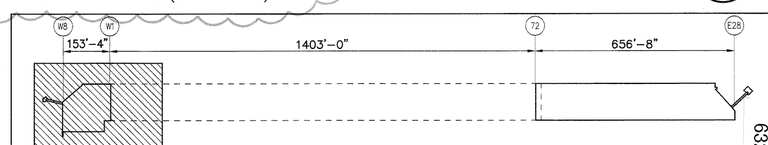
BAR SIZE	SPLICE ANGLE	WELD SIZE		WELD LENGTH "L"
		EFF THROAT "E"	REINF "R"	
#9	L3x3x3/8x1'-4"	7/32" MIN	1/8" MIN	6 1/2"
#8	L3x3x3/8x1'-3"	3/16" MIN	1/8" MIN	6"

5 1/2" WELD IS ACCEPTABLE WHERE NECESSARY EFC 14 (BACK OF S9)

DECK PANELS DIRECTLY UNDER BULLRAIL ONLY REQUIRE (3) WELDED SPLICE ANGLES, (1) ON NORTH BAR, (1) ON SOUTH BAR AND AN INTERMEDIATE BAR AS THE THIRD. RFI 155 (BACK OF S9)



TYPICAL SHEAR KEY (4/–)
SCALE: NONE



KEY PLAN

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-3822 Fax (206) 622-9130

MARK | REVISION | BY: | APPROVED: | DATE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PLAN
NEW WEST WHARF AND EXISTING

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
KN/ML 06/11/03
PROJECT ENGR.– DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

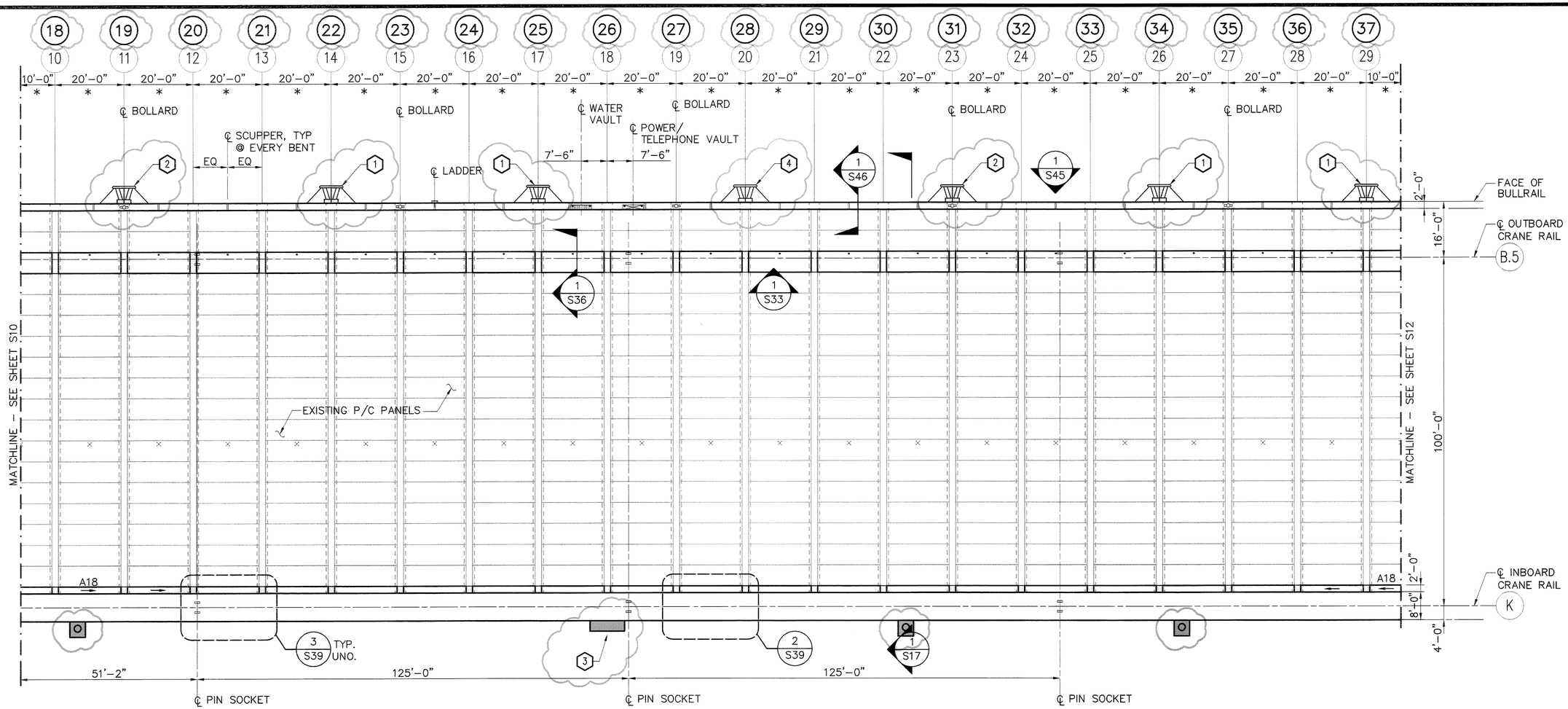
CONTRACT NUMBER: E1972
E NUMBER: 998149
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)
EP-~~5511-17~~

SHEET 45 OF 164
S10

6320-17

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S10.DWG
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XREFS: PCTXTEXT1, PCTXLEGEND-2, PCTXKEYPLAN, PCTXMISP1, POT22x34TB-KPFF,



NOTES

1. FOR DECK PANEL DETAILS, SEE DWG S53 THRU S60.
2. FOR DRAIN DETAILS, SEE DWG C24-C26.
3. FOR UTILITY VAULT DETAILS, SEE DWG S71.
4. FOR BULLRAIL AND BOLLARD DETAILS, SEE DWGS S45 THRU S49 AND S74.
5. FOR PIN SOCKET DETAILS, SEE DWG S70.
6. FOR SPLICE BOX AND CABLE FUNNEL DETAILS, SEE DWG S69.
7. FOR SCUPPER DETAILS SEE DWG C28 AND 1/S47

LEGEND

A/B/C/D/P/W/E	DECK PANEL DESIGNATION
	CRANE PIN SOCKETS WITH DRAINS, SEE DWG S70
	CRANE STOP, SEE DWG S75.
	LADDER, FOR DETAILS SEE DWG S77.
	FENDER, FOR DETAILS SEE DWG S76.
	PIER BOLLARD
	POWER/TELEPHONE VAULT WITH DRAINS, SEE DWG S71.
	WATER VAULT WITH DRAINS, SEE DWG S71.
·	DRAIN
×	EXISTING DRAIN RESTORED
	SCUPPER
	LOCATION OF SPECIAL PANELS FOR BOLLARD SEE DWG S55.

DECK PLAN

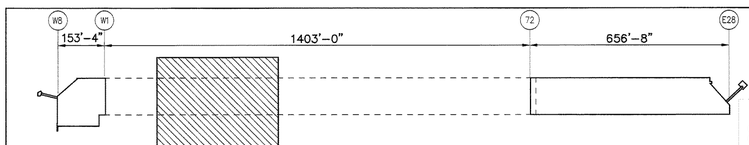
SCALE: 1/16"= 1'-0"

1/S11

N

1. RFI 227, 227A, SEE BACK OF S9 FENDER STEEL ATTACH PLATE.
2. RFI 158, U-BOLT (UPPER) MOVED 8" TO 10" LATERALLY.
3. FLEX CONDUIT PAD, 10'x3'x6", BULLETIN 18A, SEE BACK OF S10.
4. RFI 151, (3) RESIN BONDED ANCHORS, SEE BACK OF S10.
7. RFI 243 STEEL PLATE BACKING FENDER SEE BACK OF S10.

* EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR FOR ANY POTENTIAL CONFLICTS WITH NEW WORK. IN CASE OF CONFLICT, NOTIFY ENGINEER IMMEDIATELY.



KEY PLAN

6320-17

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers 1601 Fifth Avenue, Suite 1600 Seattle, Washington 98101 (206) 622-5822 Fax: (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER - DATE

DRAWING DATE:	06/11/03
PORT ADDRESS:	
PORT PARCEL:	

RKJ	CHECKED BY - DATE	06/11/03
KN/ML	PROJECT ENGR - DATE	06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PLAN
EXISTING WHARF BENTS 10 THRU 29

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

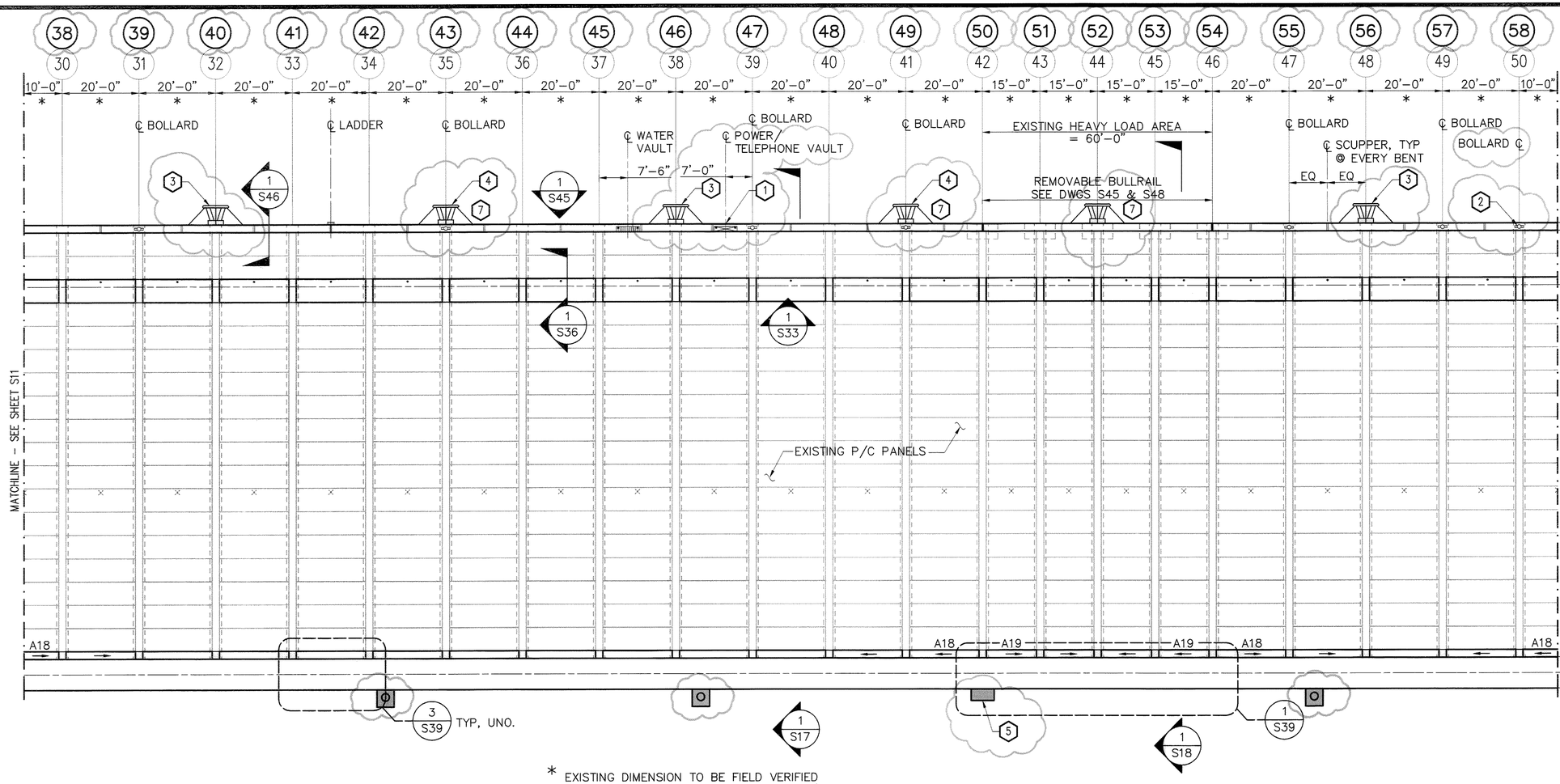
EP-~~6551-17~~

S11

SHEET 46 OF 164

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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XREFS: PCTXTEXT, PCTXLEGEND-2, PCTXKEYPLAN, PCTXMSP1, P0T22x34TB-KPFF,



* EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR FOR ANY POTENTIAL CONFLICTS WITH NEW WORK. IN CASE OF CONFLICT, NOTIFY ENGINEER IMMEDIATELY.

DECK PLAN

SCALE: 1/16"= 1'-0"

1 S12

N

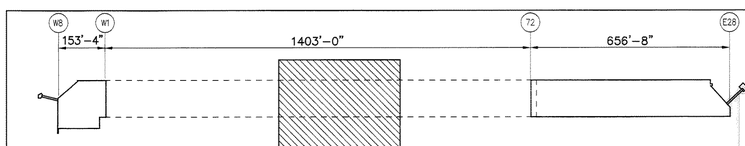
NOTES

1. FOR DECK PANEL DETAILS, SEE DWG S53 THRU S60.
2. FOR DRAIN DETAILS, SEE DWG C24–C26.
3. FOR UTILITY VAULT DETAILS, SEE DWG S71.
4. FOR BULLRAIL AND BOLLARD DETAILS, SEE DWGS S45 THRU S49 AND S74.
5. FOR PIN SOCKET DETAILS, SEE DWG S70.
6. FOR SPLICE BOX AND CABLE FUNNEL DETAILS, SEE DWG S69.
7. FOR SCUPPER DETAILS SEE DWG C28 AND 1 S47

LEGEND

A/B/C/D/P/W/E	DECK PANEL DESIGNATION
	CRANE PIN SOCKETS WITH DRAINS, SEE DWG S70
	CRANE STOP, SEE DWG S75.
	LADDER, FOR DETAILS SEE DWG S77.
	FENDER, FOR DETAILS SEE DWG S76.
	PIER BOLLARD
	POWER/TELEPHONE VAULT WITH DRAINS, SEE DWG S71.
	WATER VAULT WITH DRAINS, SEE DWG S71.
	DRAIN
	EXISTING DRAIN RESTORED
	SCUPPER
	LOCATION OF SPECIAL PANELS FOR BOLLARD SEE DWG S55.

1. RFI 182, SEE BACK OF S11.
2. RFP 4.
3. RFI 227, 227A, SEE BACK OF S9 FENDER STEEL ATTACH PLATE.
4. RFI 158, UPPER U–BOLT MOVED LATERALLY 8"x10".
5. FLEX CONDUIT PAD, 6'x3'x8", BULLETIN 18B, SEE BACK OF S11.
7. RFI 243 STEEL PLATE BACKING FENDER SEE BACK OF S10.



KEY PLAN

6320-17

PORT OF TACOMA U.S.A.

kpff Consulting Engineers 601 Fifth Avenue, Suite 600 Seattle, Washington 98101 (206) 622-5822 Fax (206) 622-8130

PORT OF TACOMA P.O. BOX 1837 TACOMA, WA 98401 253-383-5841

MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
KN/ML 06/11/03 PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING

DECK PLAN EXISTING WHARF BENTS 30 THRU 50

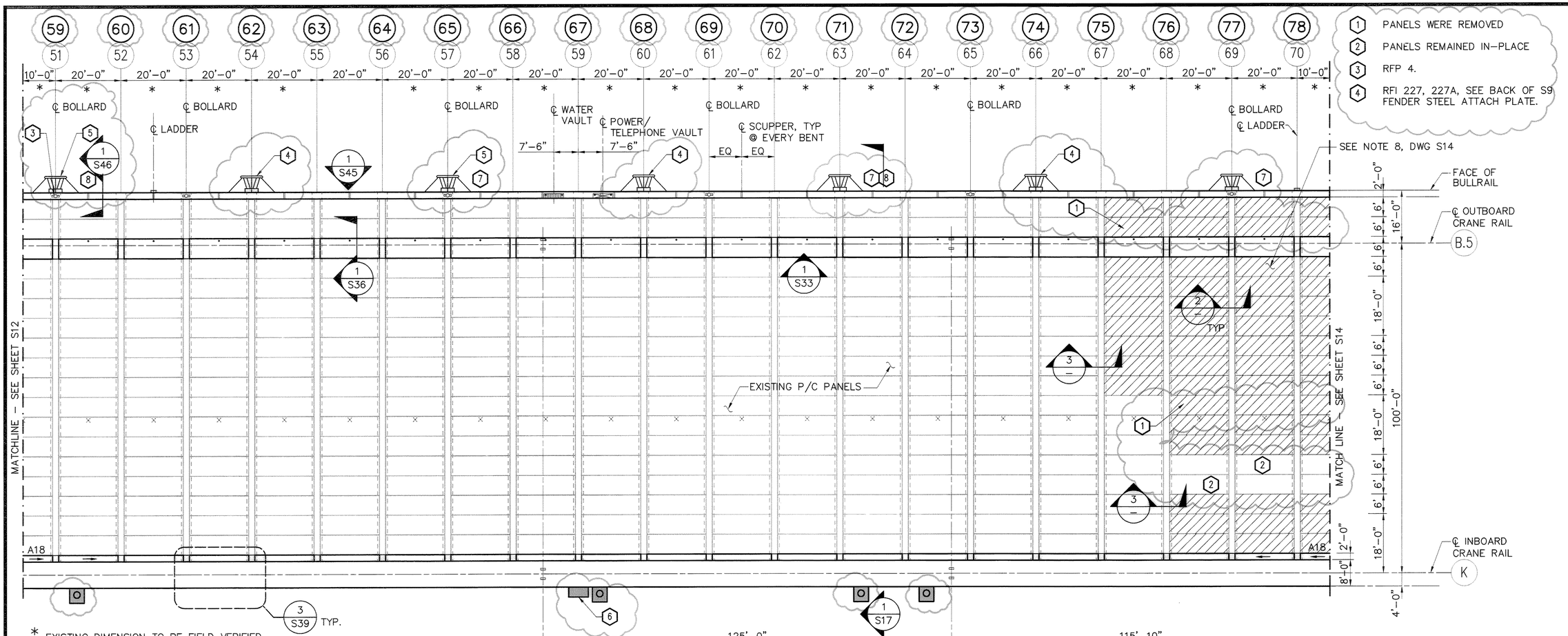
EP-~~5551-17~~

S12

SHEET 47 OF 164

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

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XREFS: PCTXTIEX1, PCTXLEGEND-2, PCTXKEYPLAN, PCTXMSP1, P0722x34TB-KPFF,



1. PANELS WERE REMOVED
2. PANELS REMAINED IN–PLACE
3. RFP 4.
4. RFI 227, 227A, SEE BACK OF S9 FENDER STEEL ATTACH PLATE.

* EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR FOR ANY POTENTIAL CONFLICTS WITH NEW WORK. IN CASE OF CONFLICT, NOTIFY ENGINEER IMMEDIATELY.

DECK PLAN

SCALE: 1/16"= 1'–0" (1 / S13)

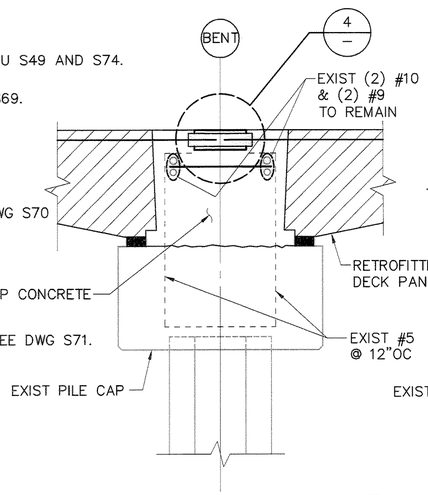
NOTES

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2. FOR DRAIN DETAILS, SEE DWG C24–C26.
3. FOR UTILITY VAULT DETAILS, SEE DWG S71.
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6. FOR SPLICE BOX AND CABLE FUNNEL DETAILS, SEE DWG S69.
7. FOR SCUPPER DETAILS SEE DWG C28 AND (1 / S47)

LEGEND

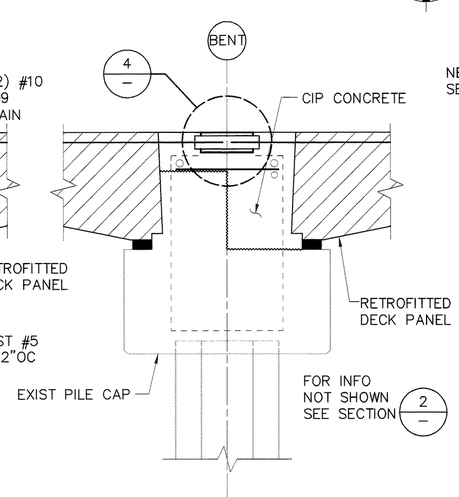
A/B/C/D/P/W/E	DECK PANEL DESIGNATION
	CRANE PIN SOCKETS WITH DRAINS, SEE DWG S70
	CRANE STOP, SEE DWG S75.
	LADDER, FOR DETAILS SEE DWG S77.
	FENDER, FOR DETAILS SEE DWG S76.
	PIER BOLLARD
	POWER/TELEPHONE VAULT WITH DRAINS, SEE DWG S71.
	WATER VAULT WITH DRAINS, SEE DWG S71.
	DRAIN
	EXISTING DRAIN RESTORED
	SCUPPER
	LOCATION OF SPECIAL PANELS FOR BOLLARD SEE DWG S55.
	EXISTING DECK PANELS TEMPORARY REMOVAL AREA (TYP) SEE NOTE 8, SHEET S14

5. RFI 158, UPPER U–BOLT MOVED LATERALLY 8" TO 10".
6. FLEX CONDUIT PAD, 6'x3'x8", BULLETIN 18B, SEE BACK OF S11.
7. RFI 243 STEEL PLATE BACKING FENDER SEE BACK OF S10.
8. RFI 151, (3) RESIN BONDED ANCHORS, SEE BACK OF S10



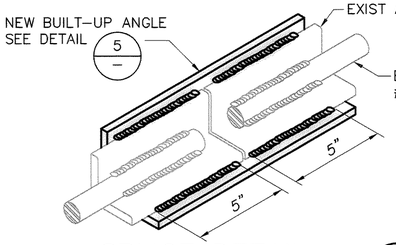
SECTION – PILE CAP

SCALE: NONE (2)



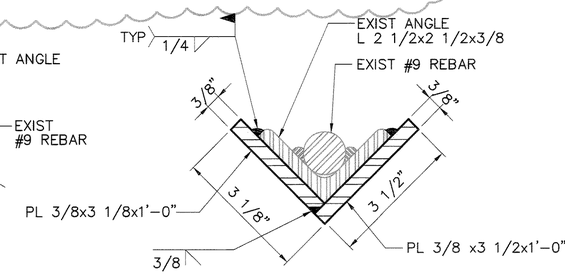
SECTION – PILE CAP

SCALE: NONE (3)



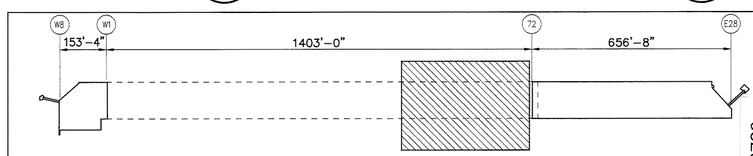
SPLICE DETAIL

SCALE: NONE (4)



BUILT–UP ANGLE DETAIL

HALF SIZE (5)



KEY PLAN

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PORT OF TACOMA U.S.A.

kpff Consulting Engineers 601 Fifth Avenue, Suite 1600 Seattle, Washington 98101 (206) 622-5822 Fax (206) 622-8130

PORT OF TACOMA P.O. BOX 1837 TACOMA, WA 98401 253-383-5841

MARK | REVISION | BY: | APPROVED: | DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
KN/ML 06/11/03 PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PLAN
EXISTING WHARF BENTS 50 THRU 70

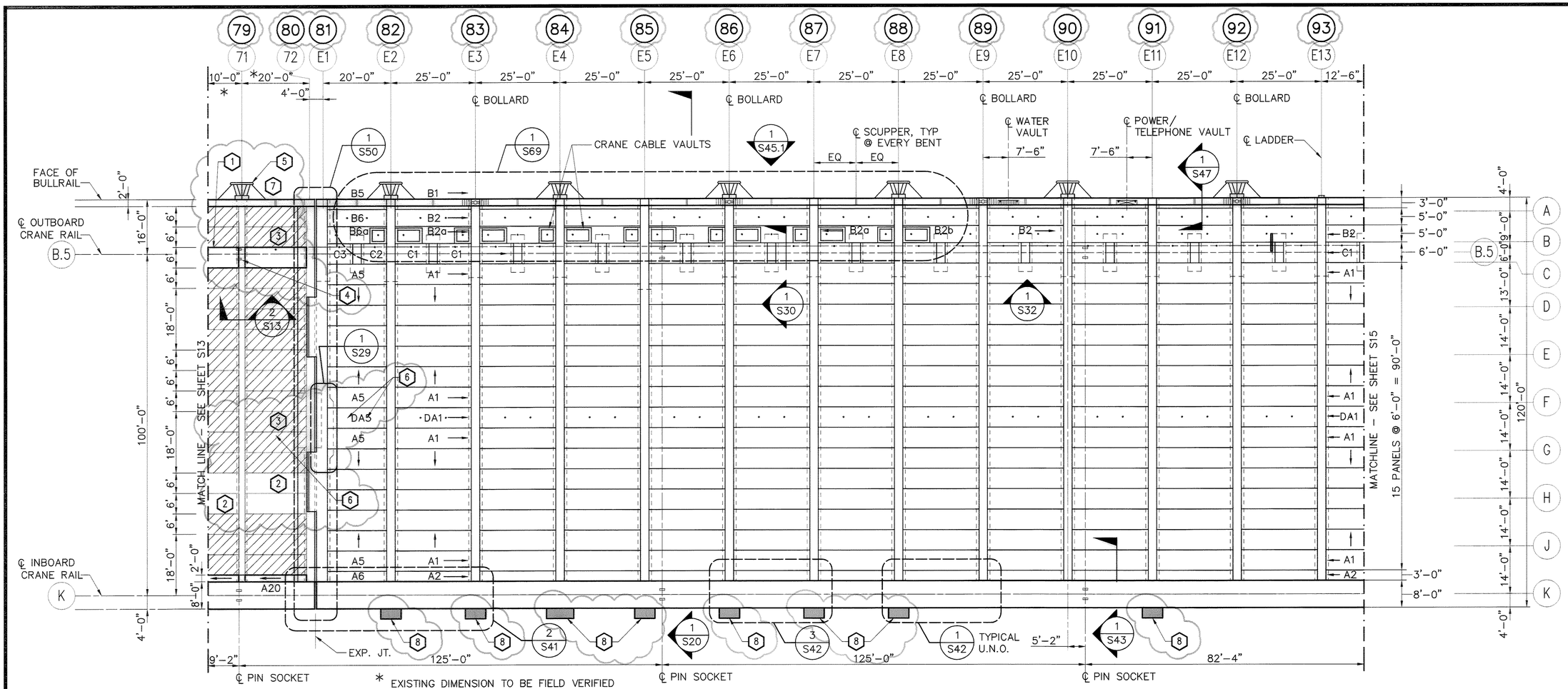
CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~5551-17~~

SHEET 48 OF 164

S13

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S13.DWG
JOB #: 102349.10
JOB NAME: Pierce County Terminal
PLOTTED DATE & TIME: JAN. 26, 2005 7:44:53 AM
XREFS: PCTXTEXT, PCTXLEGEND-2, PCTXKEYPLAN, PCTXMSP1, P0122x341B-KPFF,
UPDATED BY: RICKT
PLOT SCALE: 1=1
'POP' FILE: ---
PLOT VIEW:



* EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR FOR ANY POTENTIAL CONFLICTS WITH NEW WORK. IN CASE OF CONFLICT, NOTIFY ENGINEER IMMEDIATELY.

NOTES

1. FOR DECK PANEL DETAILS, SEE DWG S53 THRU S60.
2. FOR DRAIN DETAILS, SEE DWG C24–C26.
3. FOR UTILITY VAULT DETAILS, SEE DWG S71.
4. FOR BULLRAIL AND BOLLARD DETAILS, SEE DWGS S45 THRU S49 AND S74.
5. FOR PIN SOCKET DETAILS, SEE DWG S70.
6. FOR SPLICE BOX AND CABLE FUNNEL DETAILS, SEE DWG S69.
7. FOR SCUPPER DETAILS SEE DWG C28 AND (1 / S47)

LEGEND

A/B/C/D/P/W/E	DECK PANEL DESIGNATION
	CRANE PIN SOCKETS WITH DRAINS, SEE DWG S70
	CRANE STOP, SEE DWG S75.
	LADDER, FOR DETAILS SEE DWG S77.
	FENDER, FOR DETAILS SEE DWG S76.
	PIER BOLLARD
	POWER/TELEPHONE VAULT WITH DRAINS, SEE DWG S71.
	WATER VAULT WITH DRAINS, SEE DWG S71.
·	DRAIN
×	EXISTING DRAIN RESTORED
	SCUPPER
	LOCATION OF SPECIAL PANELS FOR BOLLARD SEE DWG S55.
	EXISTING DECK PANEL TEMPORARY REMOVAL AREA, (TYP) SEE NOTE 8

NOTES (CONT)

8. THE EXISTING PRECAST DECK PANELS SHALL BE TEMPORARILY REMOVED IN THESE AREAS TO ALLOW DREDGING UNDERNEATH THE EXISTING STRUCTURE AS SHOWN ON SHEET D6 OF THE DREDGING DRAWINGS. THE CONTRACTOR SHALL DETERMINE IF SOME OR ALL OF THESE DECK PANELS ARE TO BE REMOVED BASED ON THE CONTRACTORS ACTUAL MEANS AND METHODS FOR DREDGING. THE CONTRACTOR SHALL ONLY REMOVE THE SHADED AREAS TO FACILITATE DREDGING. DECK PANELS SHOWN UNSHADED SHALL REMAIN IN PLACE TO STABILIZE THE EXISTING BENT LINES. ALTERNATIVE BENT LINE STABILIZATION METHODS MAY BE USED, SUBJECT TO THE APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL SUBMIT A PLAN FOR TEMPORARY DECK PANEL REMOVAL AND STORAGE FOR APPROVAL PRIOR TO REMOVING ANY DECK PANELS. THE CONTRACTOR SHALL NOT DAMAGE THE DECK PANELS DURING TEMPORARY REMOVAL, STORAGE AND RE–INSTALLATION. THE CONTRACTOR SHALL PERFORM ALL DREDGING SUCH THAT EQUIPMENTS OR SOIL MOVEMENT WILL NOT RESULT IN DAMAGE TO THE EXISTING PILE CAPS OR PILING. ANY DAMAGE TO PILING, PILE CAPS, DECK PANELS OR ANY OTHER PARTS OF THE STRUCTURE SHALL BE REPAIRED OR REPLACED AT NO COST TO THE PORT.

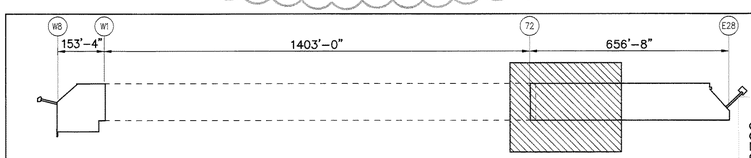
DECK PLAN

SCALE: 1/16"= 1'-0"

(1 / S14)

N

1. RFI 203, SEE BACK OF S13.
2. PANELS REMAINED IN–PLACE.
3. PANELS WERE REMOVED.
4. RFI 229 CORE DRILL & REROUTE PIN DRAIN, SEE BACK OF S13.
5. RFI 227, 227A, SEE BACK OF S9 FENDER STEEL ATTACH PLATE.
6. RFI 245, ELIMINATE DECK DRAINS.
7. RFI 243 STEEL PLATE BACKING FENDER, SEE BACK OF S10.
8. FLEX CONDUIT PAD, BULLETIN 18A, SEE BACK OF S10.
   E2 – 6'x3'x8" E5 – 6'x3'x6" E8 – 6'x3'x6"
   E3 – 6'x3'x8" E6 – 6'x3'x6" E11 – 6'x3'x6"
   E4 – 8'x3'x8" E7 – 6'x3'x6"



KEY PLAN

6320-17

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers 601 Fifth Avenue, Suite 600 Seattle, Washington 98101 (206) 622-5822 Fax (206) 622-9130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
AB/ML 06/11/03 PROJECT ENGR – DATE

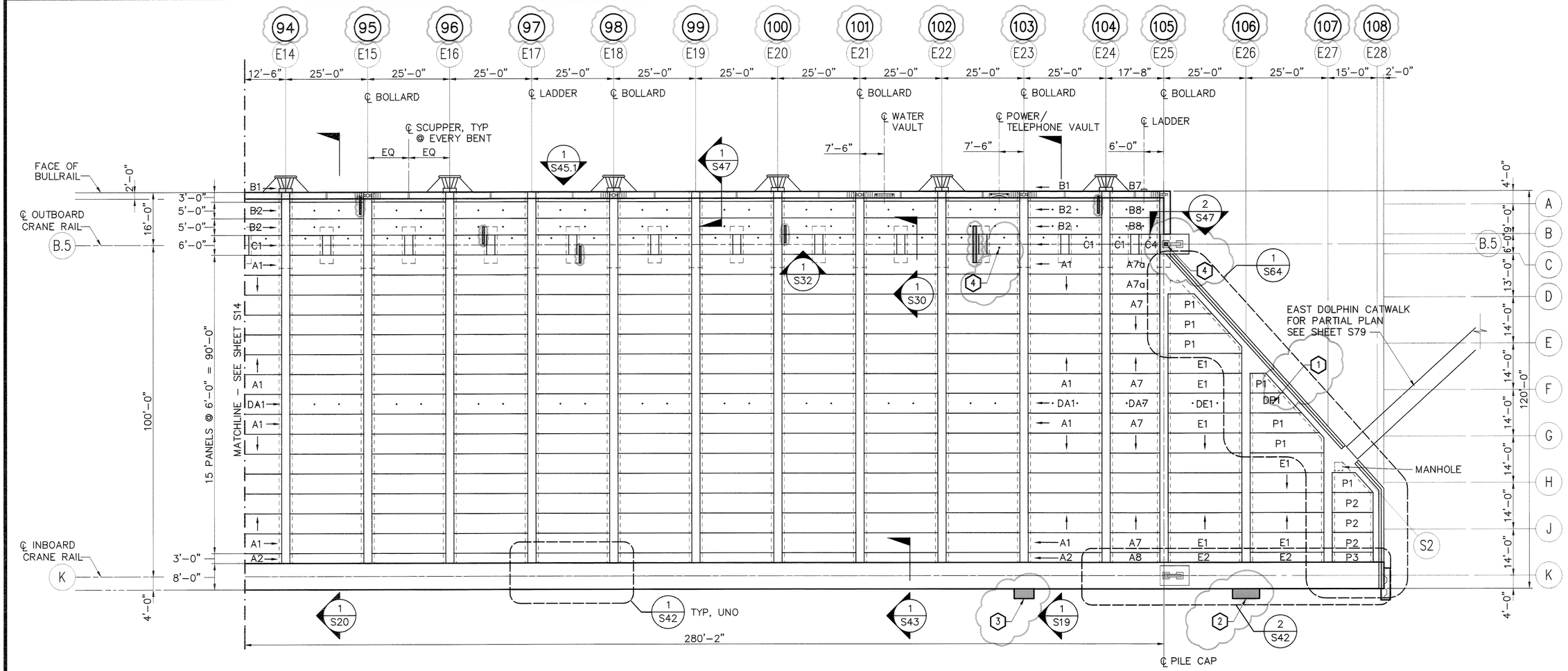
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PLAN
NEW EAST WHARF

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

EP-~~5551-17~~
S14
SHEET 49 OF 164
CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S14.DWG
JOB # 102349.10
JOB NAME: Pierce County Terminal
XREFS: PCTXTEXT, PCTXLEGEND-2, PCTXKEYPLAN, PCTXMSP1, P0122x34TB-KPFF,
PLOTTED DATE & TIME: JAN. 26, 2005 7:47:42 AM
UPDATED BY: RICKT
PLOT SCALE: 1=1
'PCP' FILE:
PLOT VIEW:



NOTES

1. FOR DECK PANEL DETAILS, SEE DWG S53 THRU S60.
2. FOR DRAIN DETAILS, SEE DWG C24–C26.
3. FOR UTILITY VAULT DETAILS, SEE DWG S71.
4. FOR BULLRAIL AND BOLLARD DETAILS, SEE DWGS S45 THRU S49 AND S74.
5. FOR PIN SOCKET DETAILS, SEE DWG S70.
6. FOR SPLICE BOX AND CABLE FUNNEL DETAILS, SEE DWG S69.
7. FOR SCUPPER DETAILS SEE DWG C28 AND 1/S47

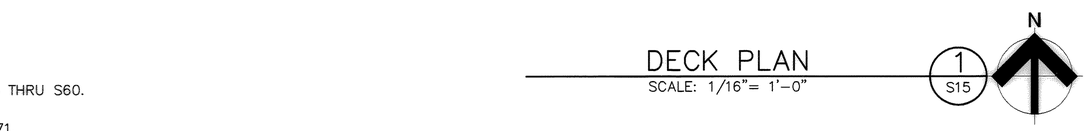
LEGEND

A/B/C/D/P/W/E	DECK PANEL DESIGNATION
	CRANE PIN SOCKETS WITH DRAINS, SEE DWG S70
	CRANE STOP, SEE DWG S75.
	LADDER, FOR DETAILS SEE DWG S77.
	FENDER, FOR DETAILS SEE DWG S76.
	PIER BOLLARD
	POWER/TELEPHONE VAULT WITH DRAINS, SEE DWG S71.
	WATER VAULT WITH DRAINS, SEE DWG S71.
	DRAIN
	EXISTING DRAIN RESTORED
	SCUPPER
	LOCATION OF SPECIAL PANELS FOR BOLLARD SEE DWG S55.

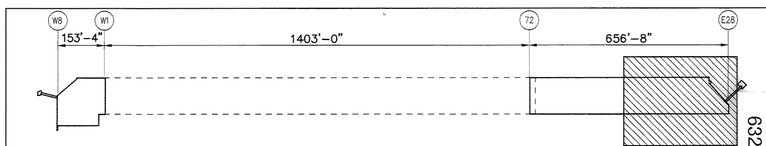
DECK PLAN

SCALE: 1/16"= 1'-0"

1/S15



1. RFI 245, ELIMINATE DECK DRAINS.
2. CRANE STOP PLATES, RFP 006 SEE BACK OF S14.
3. FLEX CONDUIT PAD, 8'–2"x3'x8", BULLETIN 18A, SEE BACK OF S10.
4. FLEX CONDUIT PAD, 6'x3'x8", BULLETIN 18A, SEE BACK OF S10.



KEY PLAN

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK | REVISION | BY: | APPROVED | DATE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PLAN
NEW EAST WHARF

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
AB/ML 06/11/03
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

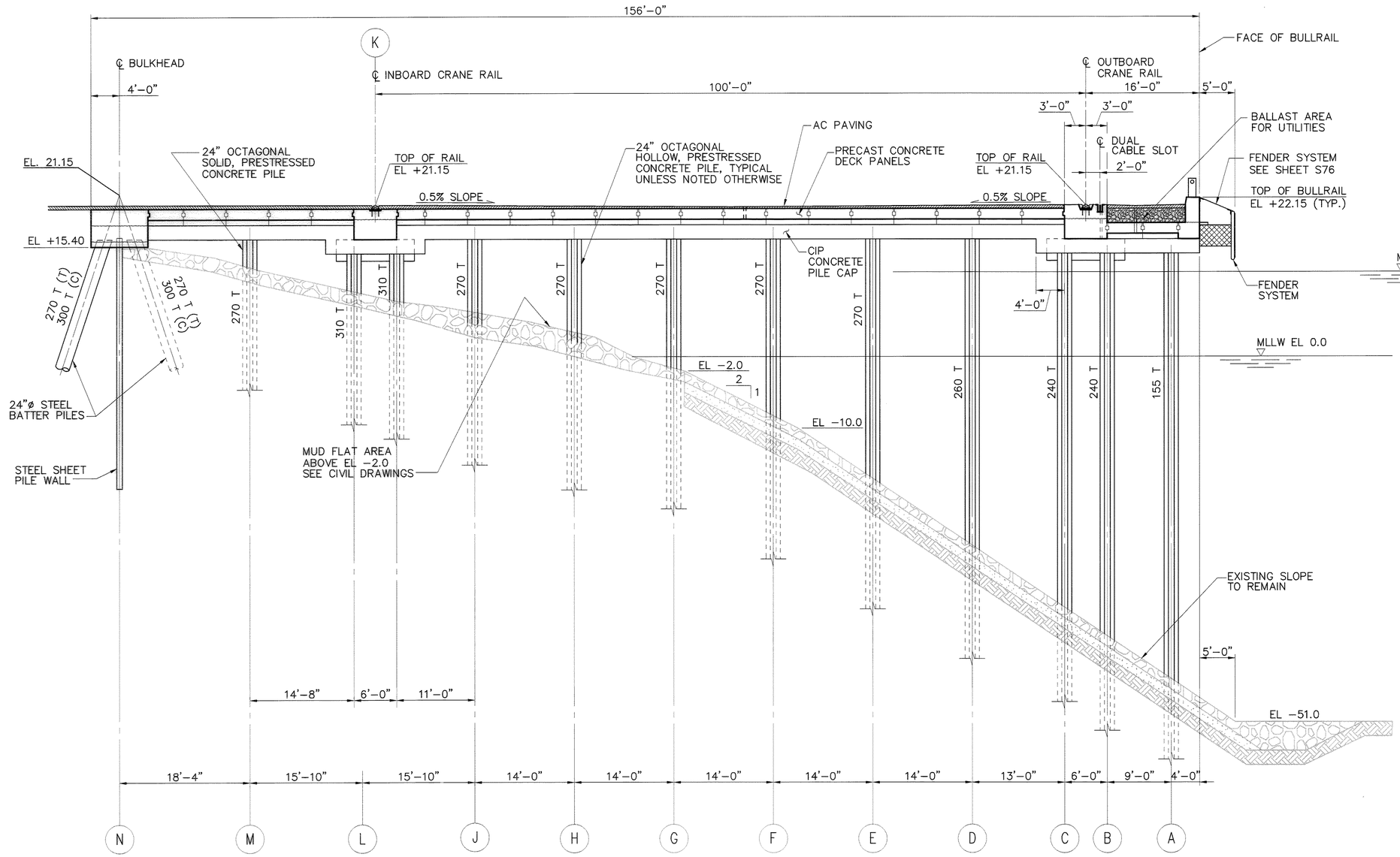
EP-~~5561-17~~

SHEET 50 OF 164

S15

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S15.DWG
JOB # 102349.10
JOB NAME Pierce County Terminal
XREFS: PCTXTEXT, PCTXLEGEND-2, PCTXKEYPLAN, PCTXMSP1, POT22x34TB-KPFF,
PLOTTED DATE & TIME JAN. 26, 2005 7:53:21 AM
UPDATED BY RICKT
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW



NOTE:

1. ULTIMATE CAPACITIES ARE SHOWN FOR BATTERED PILES.
2. SERVICE LOAD CAPACITIES ARE SHOWN FOR VERTICAL PILES.
3. CONTRACTOR SHALL NOT DAMAGE THE EXISTING SLOPE.

WEST WHARF SECTION (1/S4)
SCALE: 1/8"= 1'-0"

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW WEST WHARF SECTION

EP-~~6561-17~~
S16
SHEET 51 OF 164

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

APPROVED
CHIEF ENGINEER – DATE

RKJ 06/11/03 CHECKED BY – DATE
KN 06/11/03 PROJECT ENGR.– DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

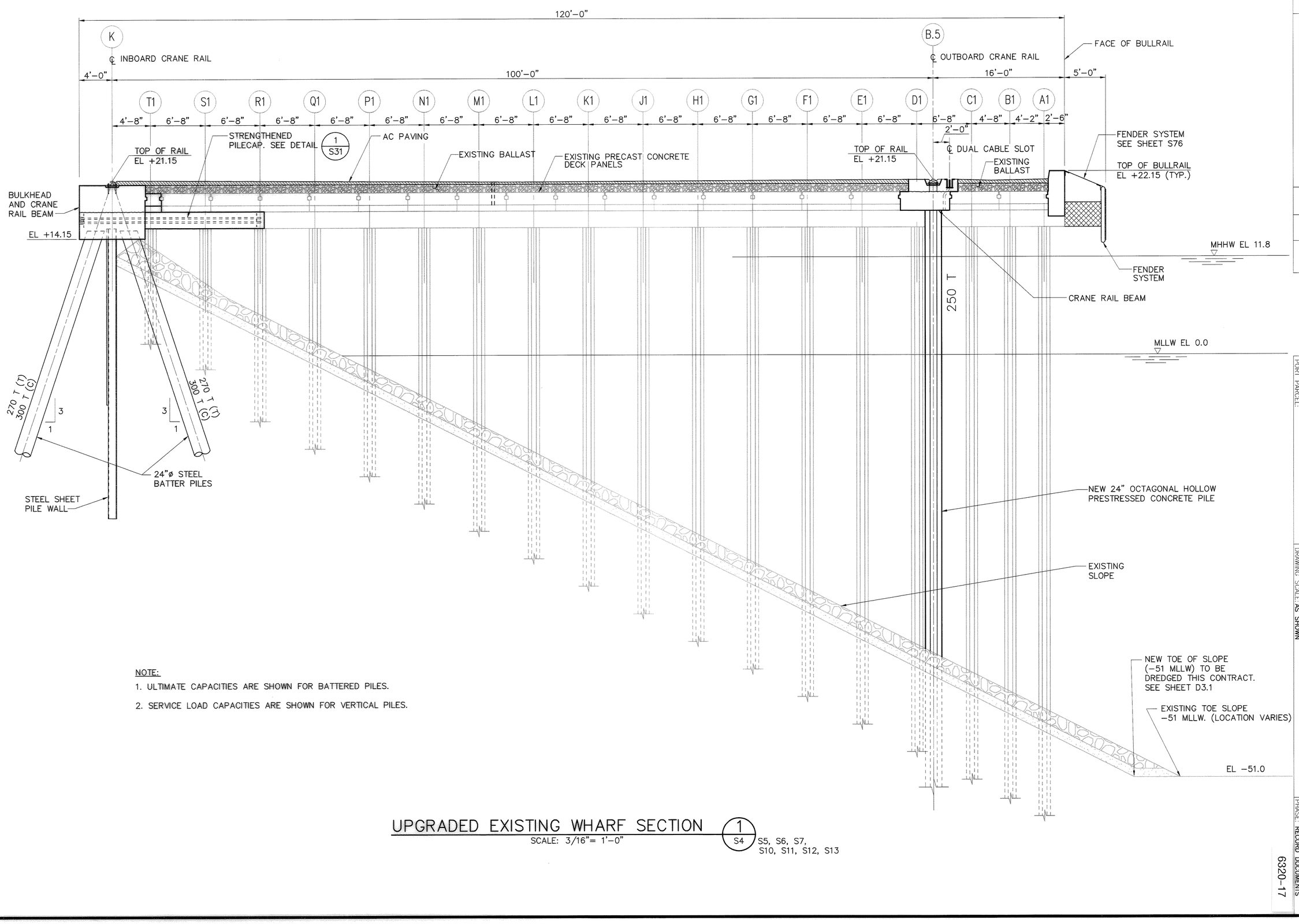
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DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

MARK	REVISION	BY:	APPROVED:	DATE:

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XREFS: P0122x341B-KPFF,

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102349.10	Pierce County Terminal	JAN. 26, 2005 8:11:04 AM

UPDATED BY	PLOT SCALE	'PCP' FILE	PLOT VIEW
RICKT	1=1	---	---



NOTE:

1. ULTIMATE CAPACITIES ARE SHOWN FOR BATTERED PILES.
2. SERVICE LOAD CAPACITIES ARE SHOWN FOR VERTICAL PILES.

UPGRADED EXISTING WHARF SECTION

SCALE: 3/16"= 1'-0"

1/S4 — S5, S6, S7, S10, S11, S12, S13

PORT OF TACOMA P.O. BOX 1837
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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK | REVISION | BY: | APPROVED | DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ — CHECKED BY – DATE 06/11/03
KN — PROJECT ENGR – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: E1972
E. NUMBER: 998149
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF SECTION

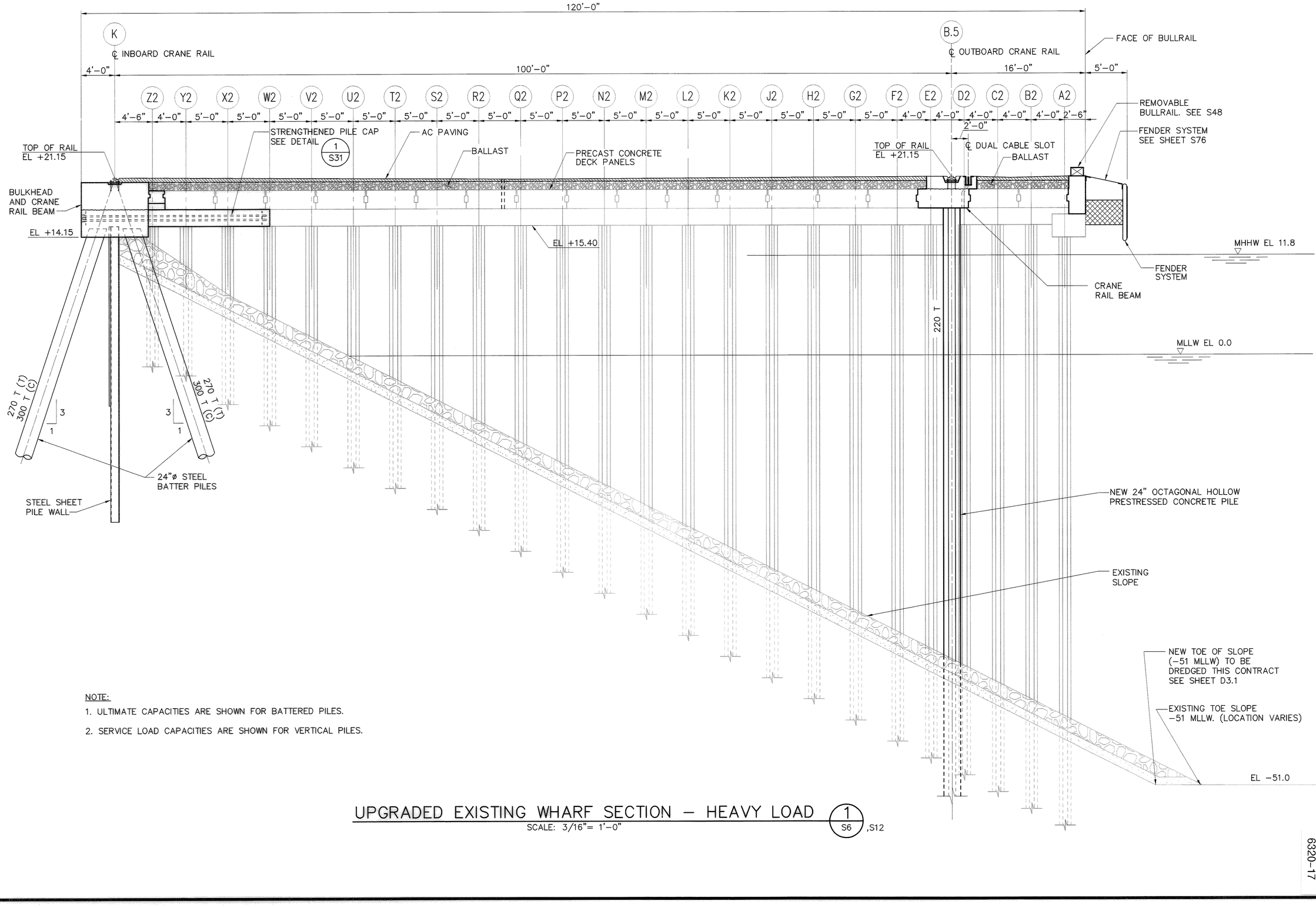
EP-5551-17
S17
SHEET 52 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S17.DWG			
JOB #	JOB NAME		PLOTTED DATE & TIME
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XREFS: P0122x34B-XPFF,			

UPDATED BY	PLOT SCALE	'POP' FILE	PLOT VIEW
RICKT	1=1	---	



NOTE:

1. ULTIMATE CAPACITIES ARE SHOWN FOR BATTERED PILES.
2. SERVICE LOAD CAPACITIES ARE SHOWN FOR VERTICAL PILES.

UPGRADED EXISTING WHARF SECTION – HEAVY LOAD (1 / S6, S12)

SCALE: 3/16"= 1'-0"

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98104
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF SECTION
HEAVY LOAD

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
KN PROJECT ENGR – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

EP-~~5551-17~~

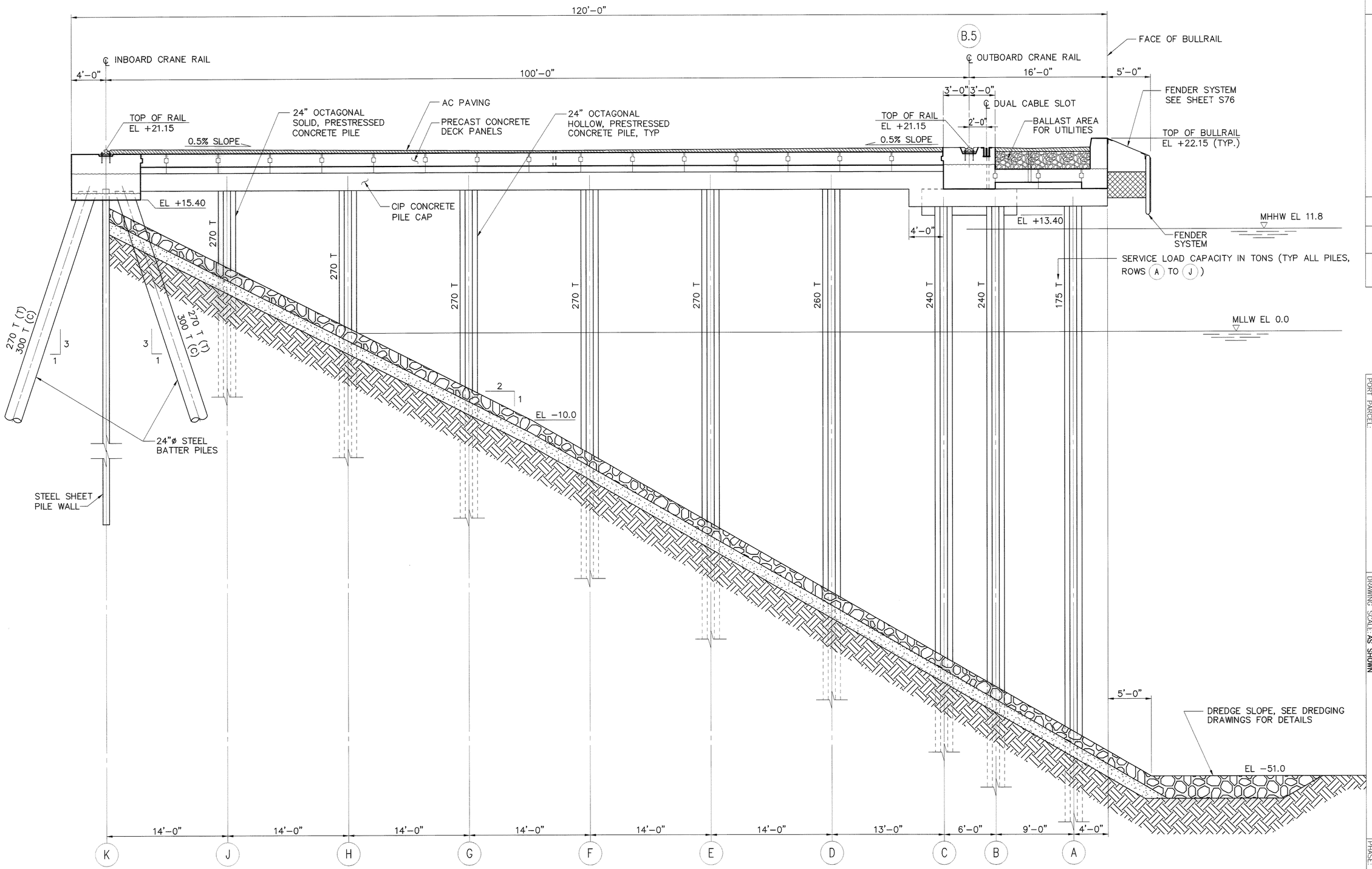
S18

SHEET 53 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

FILE PATH & NAME: L:\102349 (PIERCE COUNTY TERMINAL)\RECORD DRAWINGS\E1972S18.DWG
JOB # 102349.10 | JOB NAME Pierce County Terminal | PLOTTED DATE & TIME SEP. 16, 2004 2:47:18 PM | UPDATED BY BRUCEA
XREFS: P0122x34TB-KPFF,
'PCP' FILE ---
PLOT SCALE 1=1
PLOT VIEW



NOTE:

1. ULTIMATE CAPACITIES ARE SHOWN FOR BATTERED PILES.
2. SERVICE LOAD CAPACITIES ARE SHOWN FOR VERTICAL PILES.

EAST WHARF SECTION

SCALE: 3/16"=1'-0"

1 / S8

PORT OF TACOMA
TACOMA, USA

kpff
Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax: (206) 622-8130

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

MARK | REVISION | BY: | APPROVED: | DATE:

APPROVED

CHIEF ENGINEER – DATE

RKJ CHECKED BY – DATE 06/11/03

AB PROJECT ENGR. – DATE 06/11/03

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

6320-17

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW EAST WHARF SECTION

EP-~~5661-17~~

S19

SHEET 54 OF 164

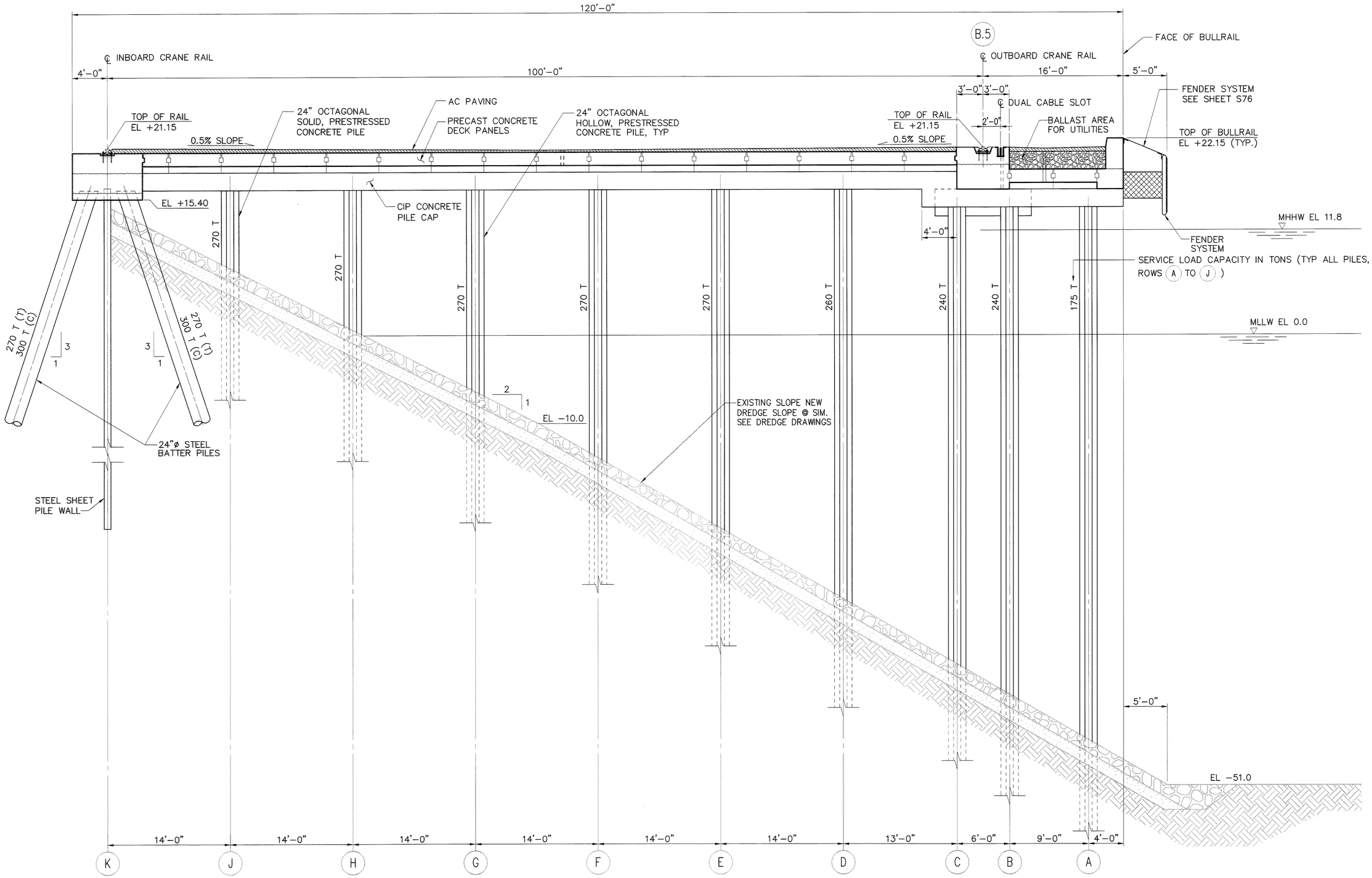
RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S19.DWG

JOB #	JOB NAME	PLOTTED DATE & TIME	UPDATED BY
102349.10	Pierce County Terminal	JAN. 26, 2005 8:13:37 AM	RICK1

XREFS: P0122x34TD-KPFF,

PLOT SCALE	'POP' FILE	PLOT VIEW
1=1	---	



NOTE:

1. ULTIMATE CAPACITIES ARE SHOWN FOR BATTERED PILES.
2. SERVICE LOAD CAPACITIES ARE SHOWN FOR VERTICAL PILES.

EAST WHARF SECTION (1 / S9) S15
SCALE: 3/16"=1'-0"

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW EAST WHARF SECTION

EP-~~5561-17~~
S20
SHEET 55 OF 164

CONTRACT NUMBER: 998149
F. NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
AB 06/11/03
PROJECT ENGR – DATE

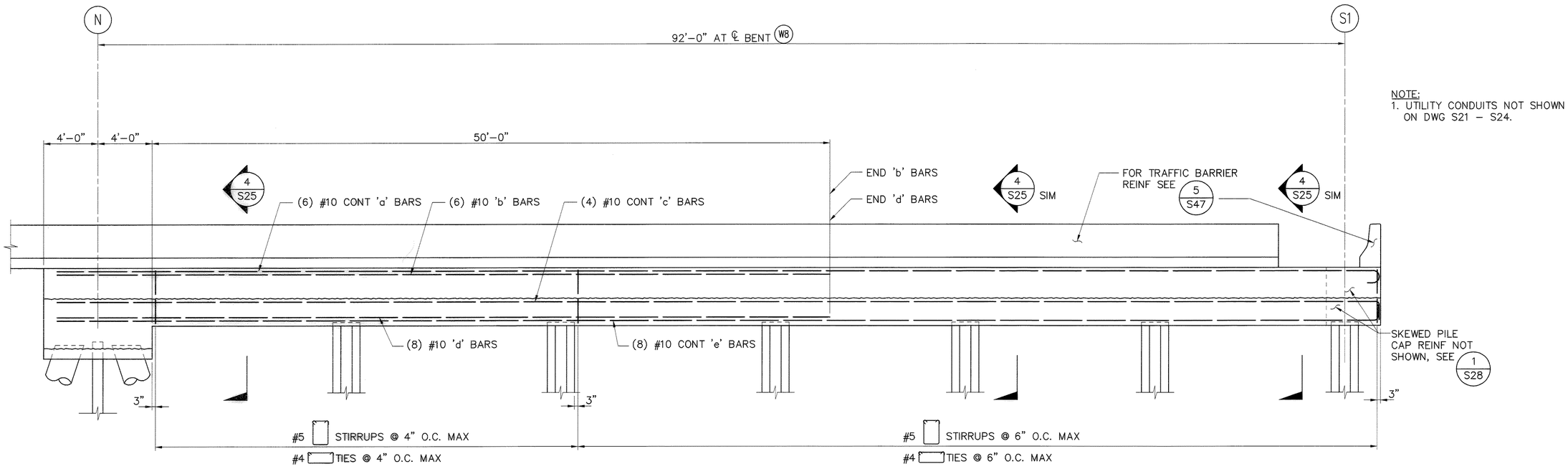
TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

MARK	REVISION	BY:	APPROVED	DATE:

PLOT VIEW	'POP' FILE	PLOT SCALE	UPDATED BY
	---	1=1	RICKT

JOB #	JOB NAME	PLOTED DATE & TIME
102349.10	Pierce County Terminal	JAN. 26, 2005 8:14:25 AM

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S20.DWG
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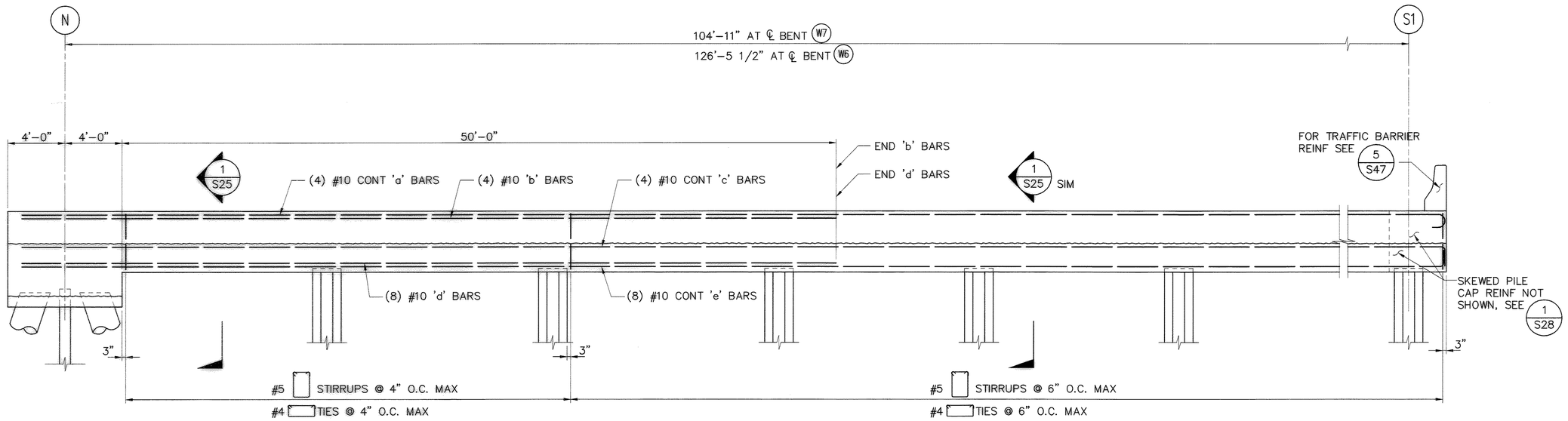


ELEVATION – PILE CAP AT WEST WHARF – BENT W8

SCALE: 1/4" = 1'-0"

1 / –

NOTE:
1. UTILITY CONDUITS NOT SHOWN ON DWG S21 – S24.



ELEVATION – PILE CAP AT WEST WHARF – BENTS W7 AND W6

SCALE: 1/4" = 1'-0"

2 / –

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW WEST WHARF
PILE CAP ELEVATIONS - SHEET 1

EP-~~5551-17~~
S21
SHEET 56 OF 164

CONTRACT NUMBER: E1972
E NUMBER: 998149
PHASE: RECORD DOCUMENTS

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
MHE 06/11/03
PROJECT ENGR. – DATE

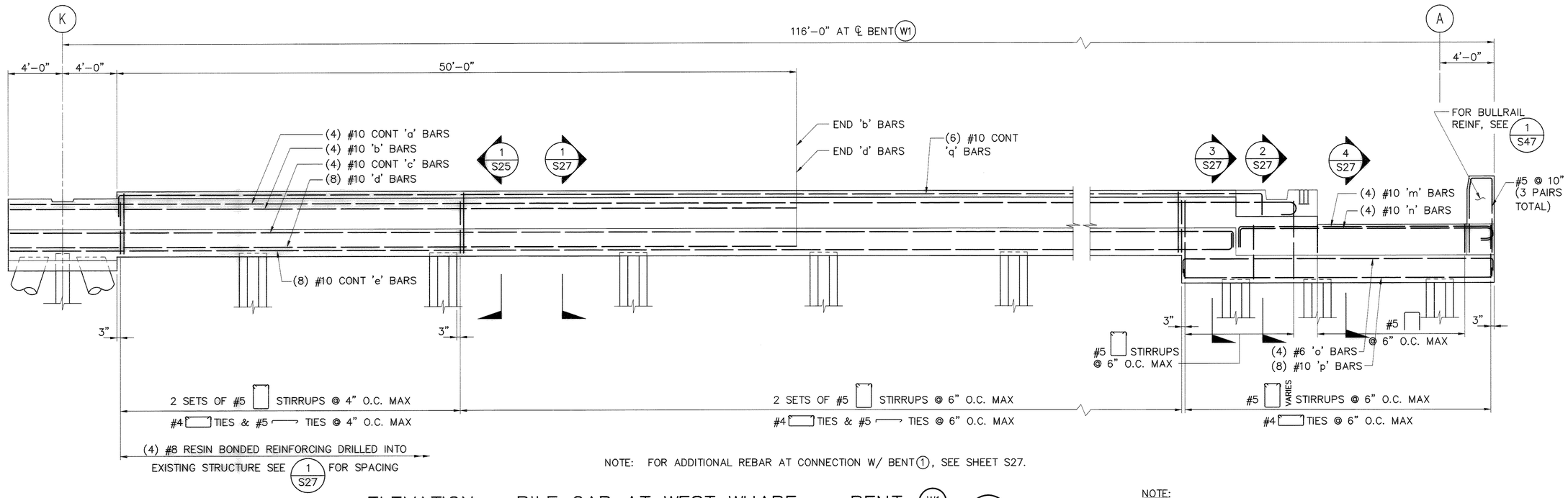
TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

MARK | REVISION | BY: | APPROVED: | DATE:

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

6320-17

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S21.DWG
JOB # 102349.10
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 26, 2005 12:11:36 PM
UPDATED BY RICKT
XREFS: P0122x34TB-KPFF,
'PCP' FILE ---
PLOT SCALE 1=1
PLOT VIEW



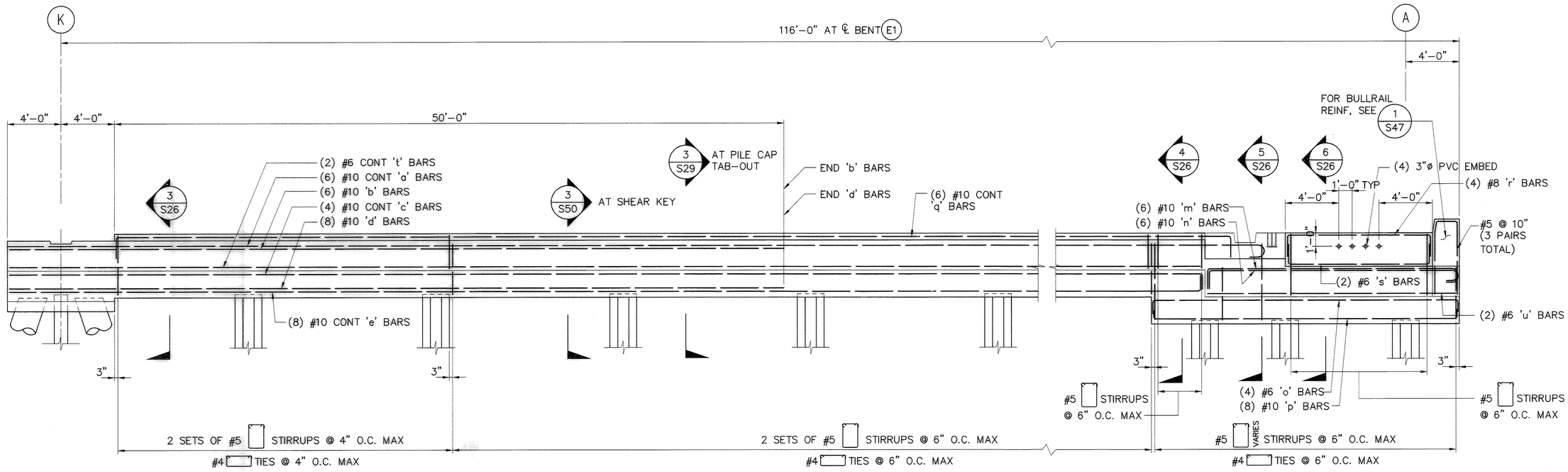
NOTE: FOR ADDITIONAL REBAR AT CONNECTION W/ BENT (1), SEE SHEET S27.

ELEVATION – PILE CAP AT WEST WHARF – BENT (W1)

SCALE: 1/4" = 1'-0"

1 / –

NOTE:
1. UTILITY CONDUITS NOT SHOWN ON DWG S21 – S24.



ELEVATION – PILE CAP AT EAST WHARF – BENT (E1)

SCALE: 1/4" = 1'-0"

2 / –

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
MHE PROJECT ENGR. – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
CONTRACTOR: E1972
PHASE: RECORD DOCUMENTS

EP-~~556-17~~

S22.1

SHEET 58 OF 164

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW EAST AND WEST WHARF
PILE CAP ELEVATIONS

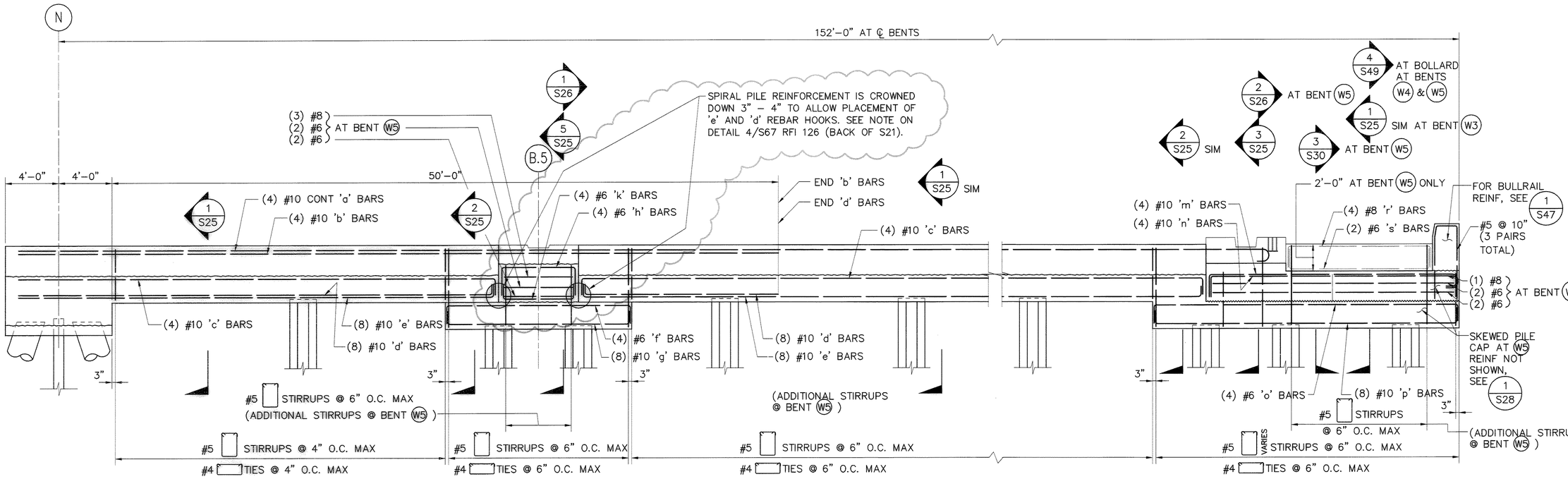
6320-17

MARK | REVISION | BY: | APPROVED: | DATE:

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

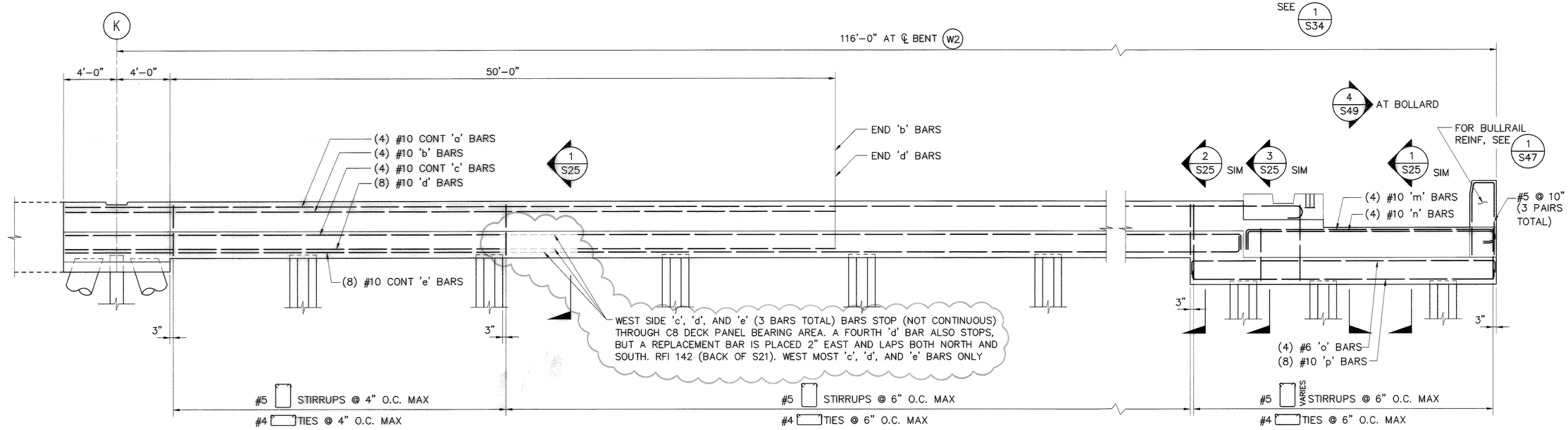
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JOB # 102349.10
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 26, 2005 12:14:22 PM
XREFS: P0T22x34TB-KPFF.
UPDATED BY RICKT
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW



ELEVATION – PILE CAP AT WEST WHARF – BENTS W3 AND W4, W5 SIM 1/–

SCALE: 1/4" = 1'-0"

NOTE:
1. UTILITY CONDUITS NOT SHOWN ON DWG S21 – S24.
2. CRANE STOP REINF. NOT SHOWN. SEE 1 S34



ELEVATION – PILE CAP AT WEST WHARF – BENT W2 2/–

SCALE: 1/4" = 1'-0"

PORT OF TACOMA U.S.A.
PORT OF TACOMA P.O. BOX 1837
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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK | REVISION | BY: | APPROVED: | DATE:

APPROVED
CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:
RKJ CHECKED BY – DATE 06/11/03
MHE PROJECT ENGR. – DATE 06/11/03
TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN
CONTRACT NUMBER: 998149
E-NUMBER: E1972
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

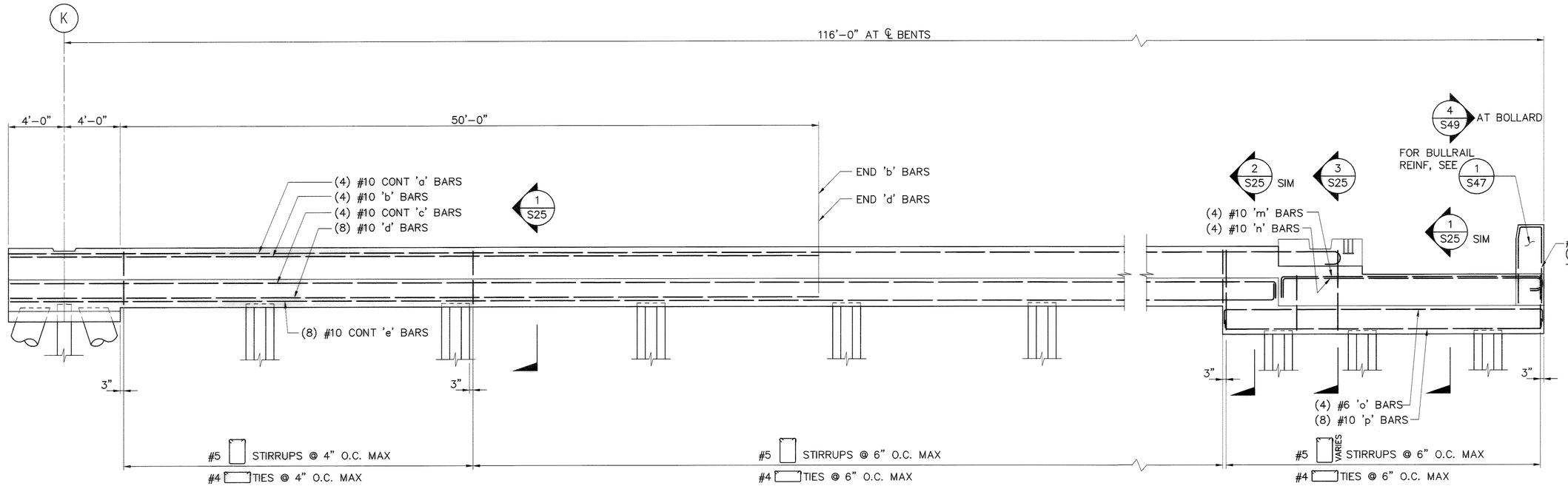
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW WEST WHARF
PILE CAP ELEVATIONS - SHEET 2

EP-~~556117~~

SHEET 57 OF 164
S22

6320-17

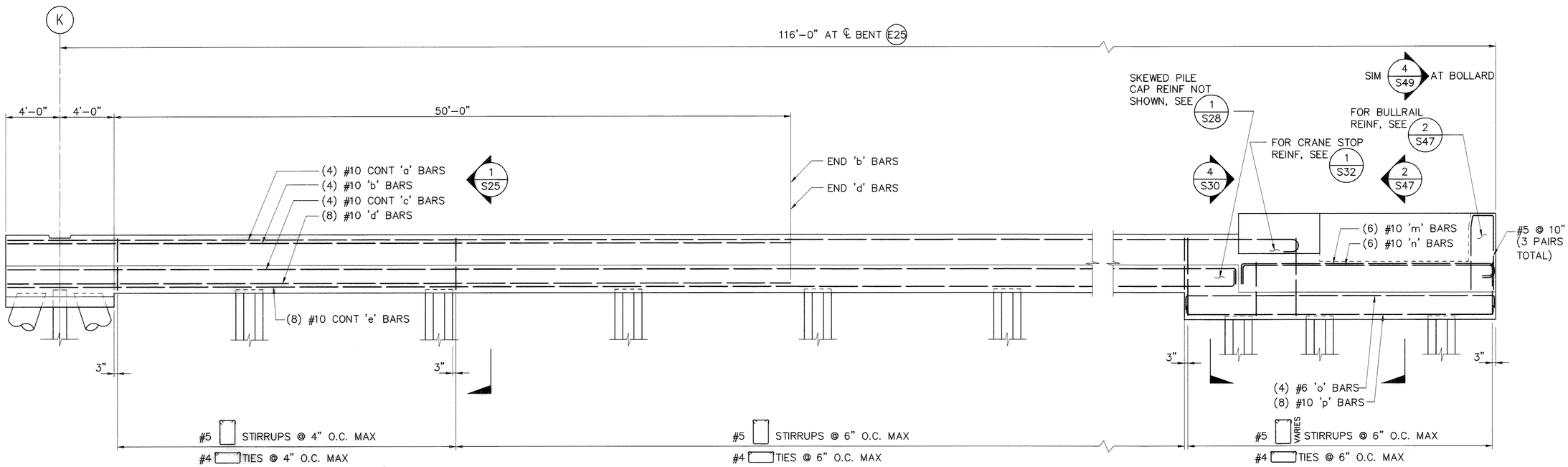
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UPDATED BY RICKT
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW
XREFS: P0722x34TB-XPFF,



ELEVATION – PILE CAP AT EAST WHARF – BENTS (E2) THRU (E24) 1/–

SCALE: 1/4" = 1'-0"

NOTE:
1. UTILITY CONDUITS NOT SHOWN ON DWG S21 – S24.



ELEVATION – PILE CAP AT EAST WHARF – BENT (E25) 2/–

SCALE: 1/4" = 1'-0"

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

PORT OF TACOMA P.O. BOX 1837
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1601 Fifth Avenue, Suite 1600
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(206) 622-5822 Fax: (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
DRAWING ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
MHE PROJECT ENGR. – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DOMAIN: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

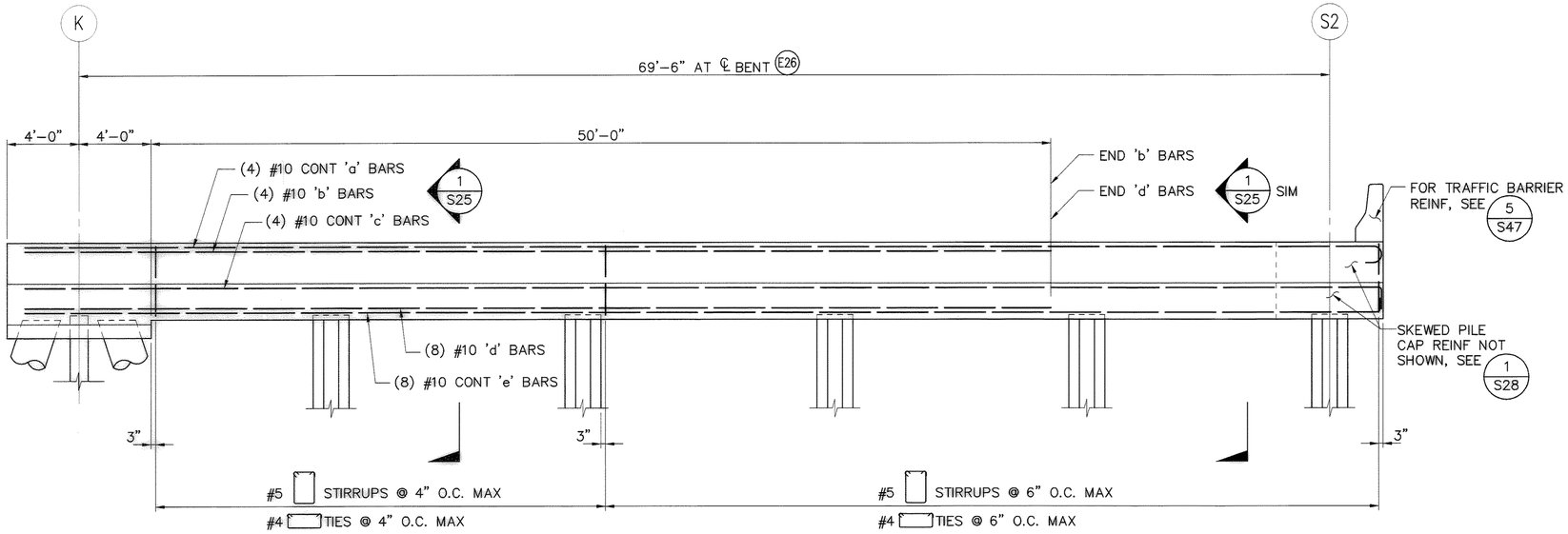
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW EAST WHARF
PILE CAP ELEVATIONS - SHEET 1

CONTRACT NUMBER: 998149
PHASE: RECORD DOCUMENTS

EP-~~5561-17~~
S23
SHEET 59 OF 164

6320-17

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E197252S23.DWG
JOB # 102349.10
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 26, 2005 12:15:37 PM
UPDATED BY RICKT
PLOT SCALE 1=1
'PCP' FILE ----
PLOT VIEW
XREFS: P0122x34TB-KPFF,

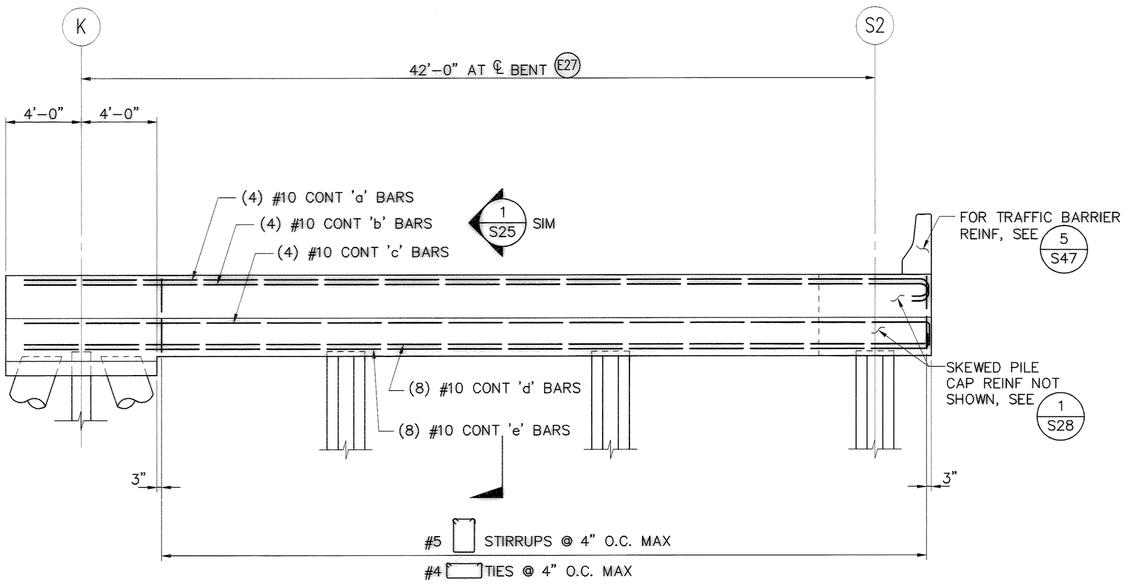


ELEVATION – PILE CAP AT EAST WHARF – BENT E26

1 / –

SCALE: 1/4" = 1'-0"

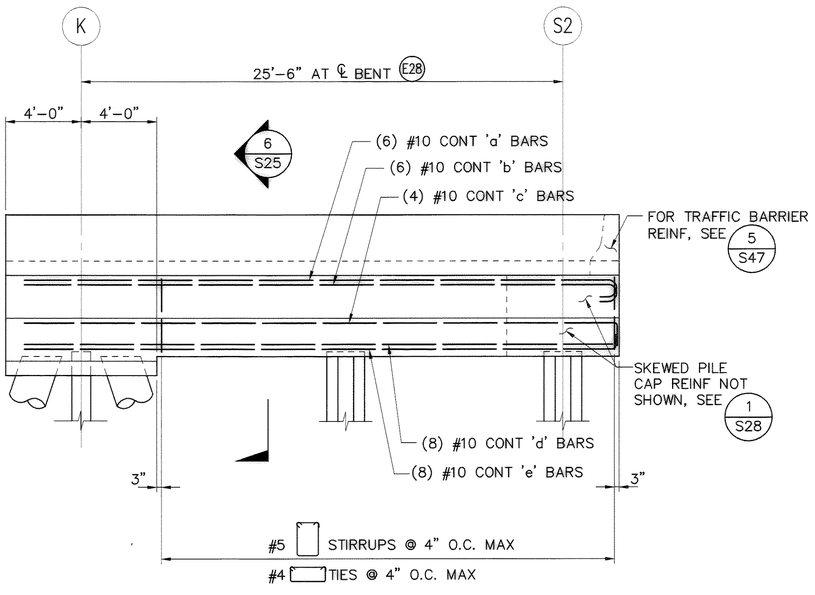
NOTE:
1. UTILITY CONDUITS NOT SHOWN ON DWG S21 – S24.



ELEVATION – PILE CAP AT EAST WHARF – BENT E27

2 / –

SCALE: 1/4" = 1'-0"



ELEVATION – PILE CAP AT EAST WHARF – BENT E28

3 / –

SCALE: 1/4" = 1'-0"

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MARK	REVISION	BY:	APPROVED	DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS: 2001 MILWAUKEE WAY
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE

MHE 06/11/03
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORZ. VERT.
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1977
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING
NEW EAST WHARF
PILE CAP ELEVATIONS - SHEET 2

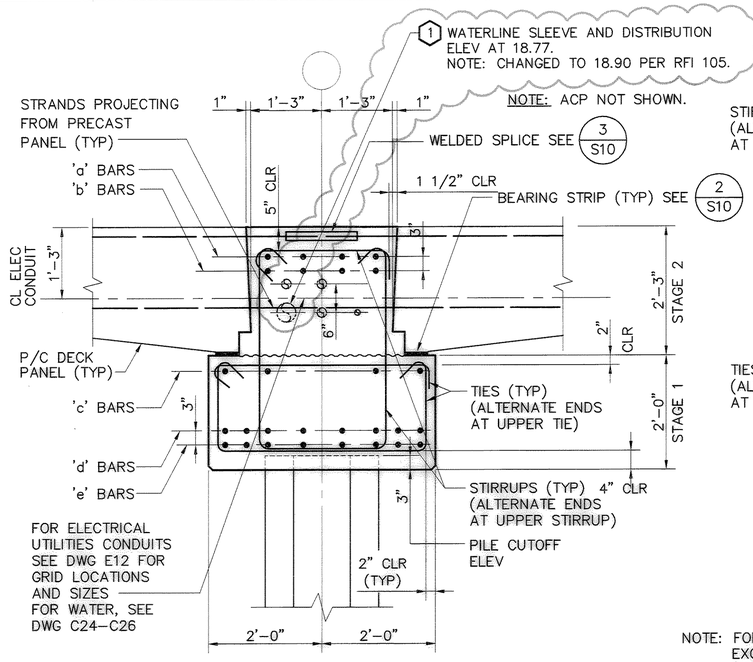
EP-~~5551-17~~

S24

SHEET 60 OF 164

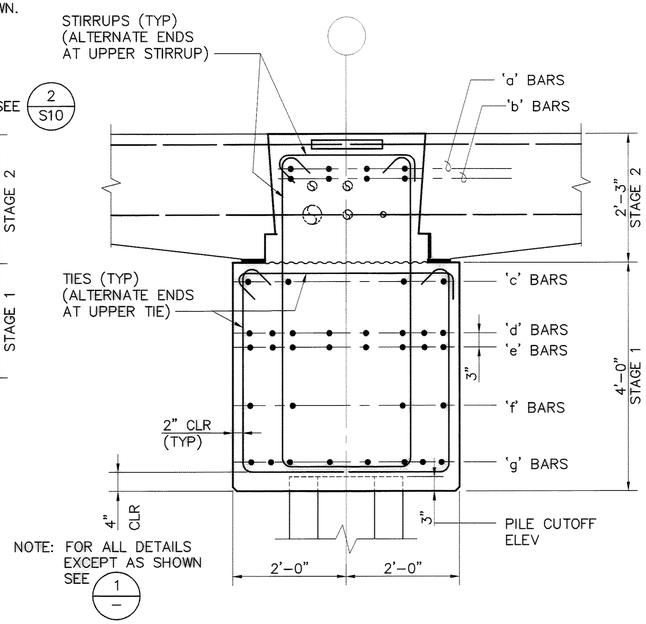
6320-17

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UPDATED BY RICKT
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PLOT SCALE 1=1
PLOT VIEW
XREFS: P0122x34TB-KPFF,



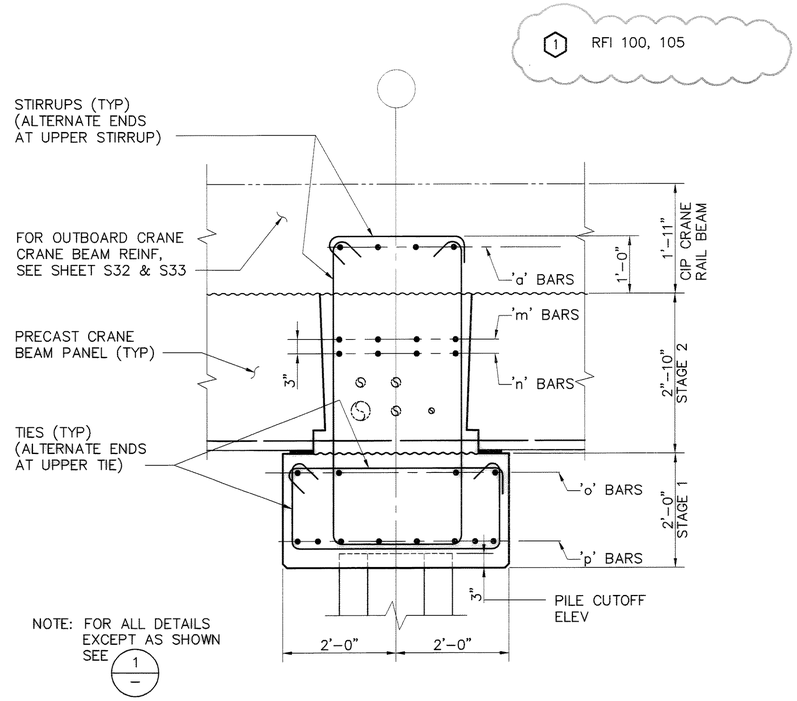
SECTION – TYPICAL PILE CAP 1/S21

SCALE: 3/4"= 1'-0"



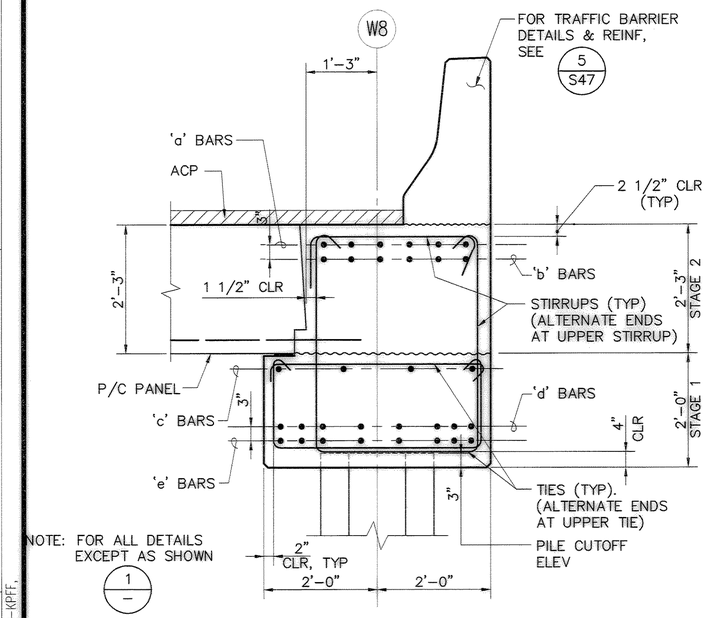
SECTION – PILE CAP AT DEEP SECTION 2/S22

SCALE: 3/4"= 1'-0"



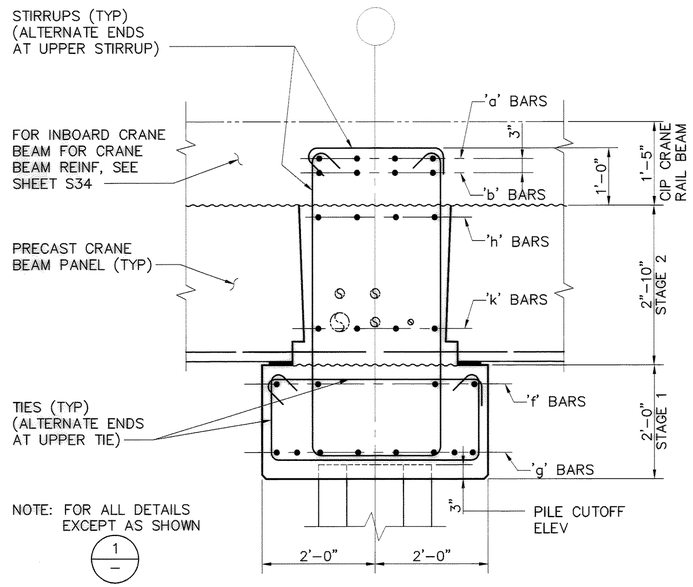
SECTION – PILE CAP AT OUTBOARD CRANE BEAM 3/S22

SCALE: 3/4"= 1'-0"



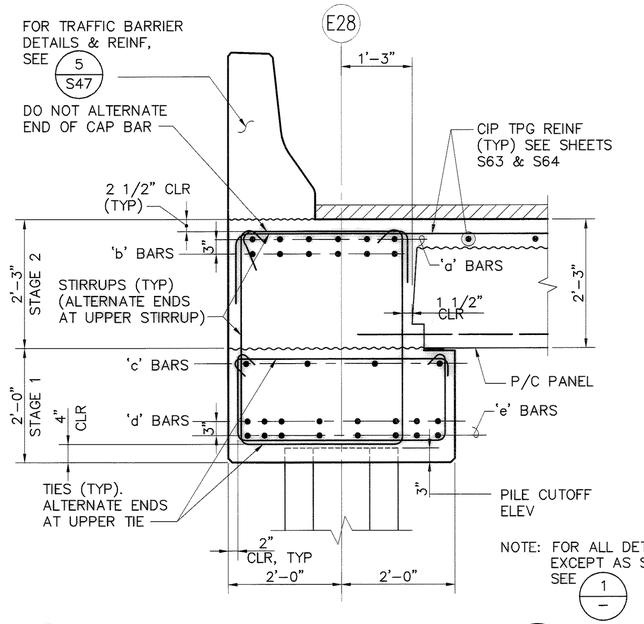
SECTION – PILE CAP 4/S10 & S21

SCALE: 3/4"= 1'-0"



SECTION – PILE CAP AT INBOARD CRANE BEAM 5/S22

SCALE: 3/4"= 1'-0"



SECTION – PILE CAP 6/S24

SCALE: 3/4"= 1'-0"

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972525.DWG
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JOB NAME Pierce County Terminal
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UPDATED BY RICKT
'POP' FILE ---
PLOT SCALE 1=1
PLOT VIEW ---
XREFS: P0122x34TB-KPFF,

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TACOMA, WA 98401 253-383-5841

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601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

APPROVED
CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
MHE PROJECT ENGR. – DATE 06/11/03
TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

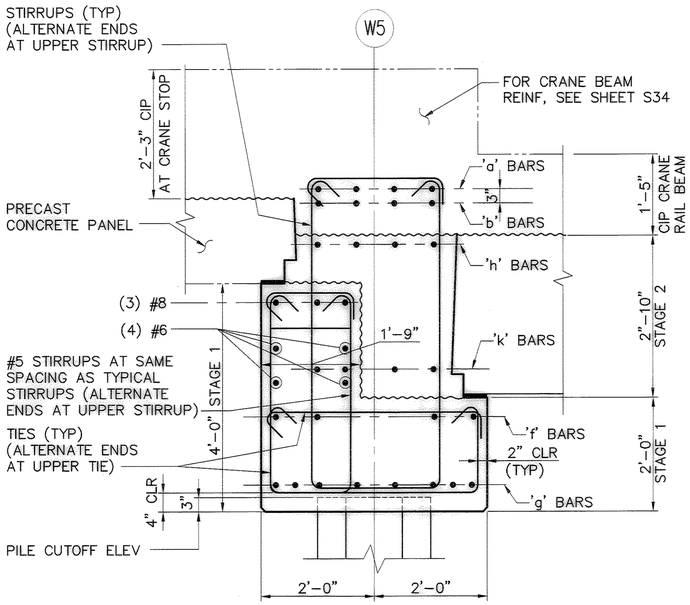
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW WEST AND EAST WHARF
PILE CAP SECTIONS AND DETAILS SHEET 1

CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

SHEET 61 OF 164
EP ~~E03117~~
S25

6320-17

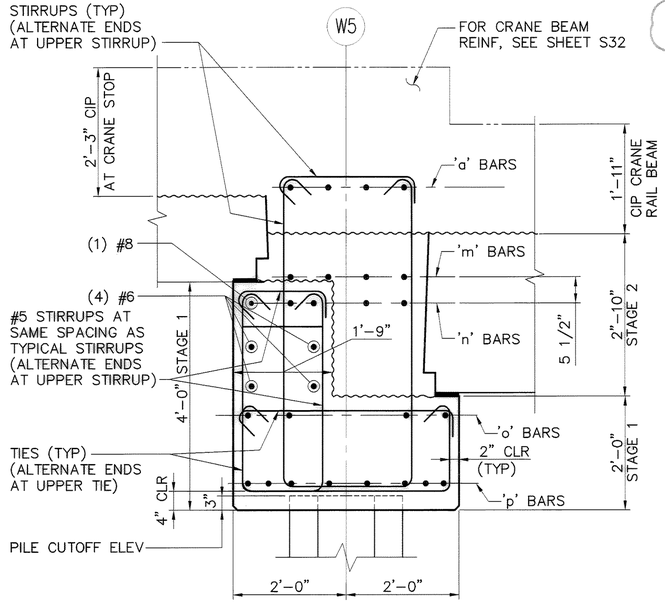
RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)



SECTION – (W5) PILE CAP
AT INBOARD CRANE BEAM

SCALE: 3/4"= 1'-0"

1 S22

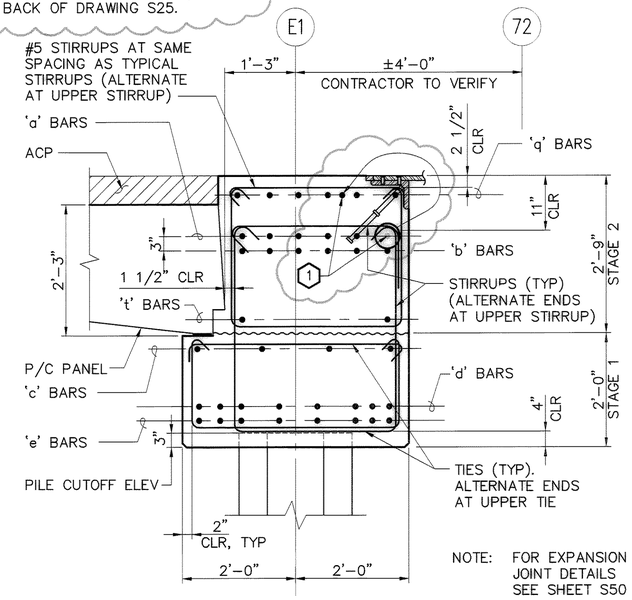


SECTION – (W5) PILE CAP
AT OUTBOARD CRANE BEAM

SCALE: 3/4"= 1'-0"

2 S22

1 EFC 45, MOVE "a" BAR TO "q" LAYER.
SEE BACK OF DRAWING S25.

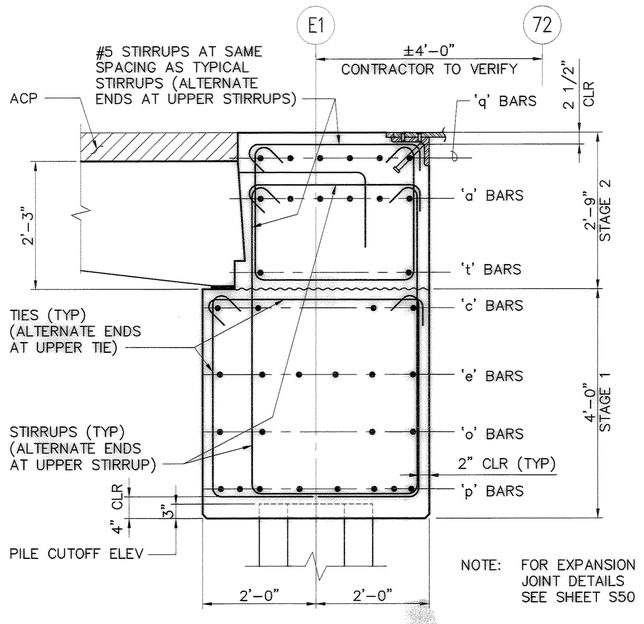


NOTE: FOR EXPANSION
JOINT DETAILS
SEE SHEET S50

SECTION – (E1) PILE CAP

SCALE: 3/4"= 1'-0"

3 S22.1

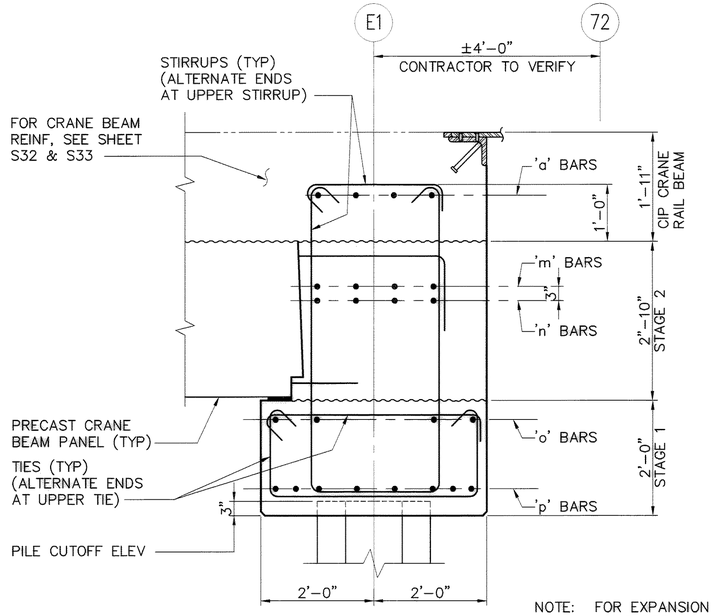


NOTE: FOR EXPANSION
JOINT DETAILS
SEE SHEET S50

SECTION – (E1) PILE CAP AT DEEP SECTION

SCALE: 3/4"= 1'-0"

4 S22.1

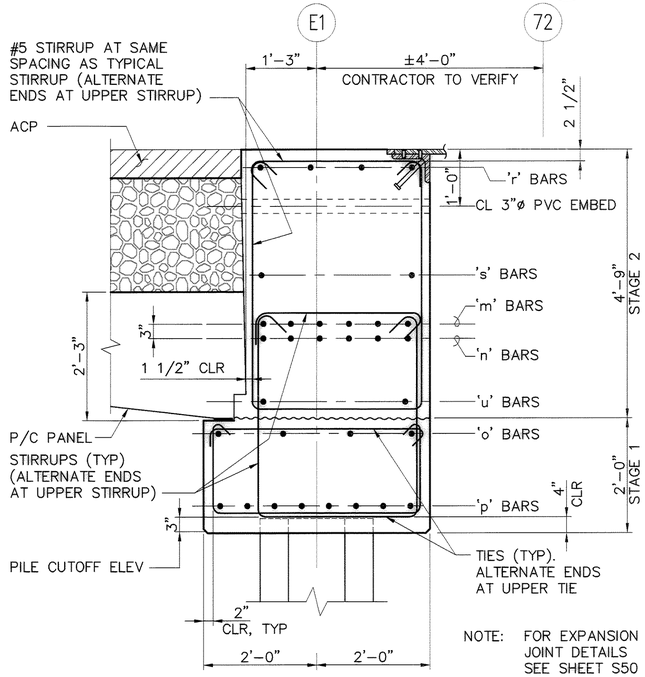


NOTE: FOR EXPANSION
JOINT DETAILS
SEE SHEET S50

SECTION – (E1) PILE CAP AT
OUTBOARD CRANE BEAM

SCALE: 3/4"= 1'-0"

5 S22.1



NOTE: FOR EXPANSION
JOINT DETAILS
SEE SHEET S50

SECTION – (E1) PILE CAP
AT BALLASTED AREA

SCALE: 3/4"= 1'-0"

6 S22.1

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PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW WEST AND EAST WHARF
PILE CAP SECTIONS AND DETAILS SHEET 2

APPROVED
CHIEF ENGINEER – DATE

RKJ 06/11/03
CHECKED BY – DATE
MHE 06/11/03
PROJECT ENGR. – DATE

DRAWING DATE: 06/11/03
AS-BUILT DATE:
PORT PARCEL:
TOWNSHIP: RANGE: SECTION:
DRAWING SCALE: AS SHOWN HORIZ: VERT:
CONTRACT NUMBER: 998149
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

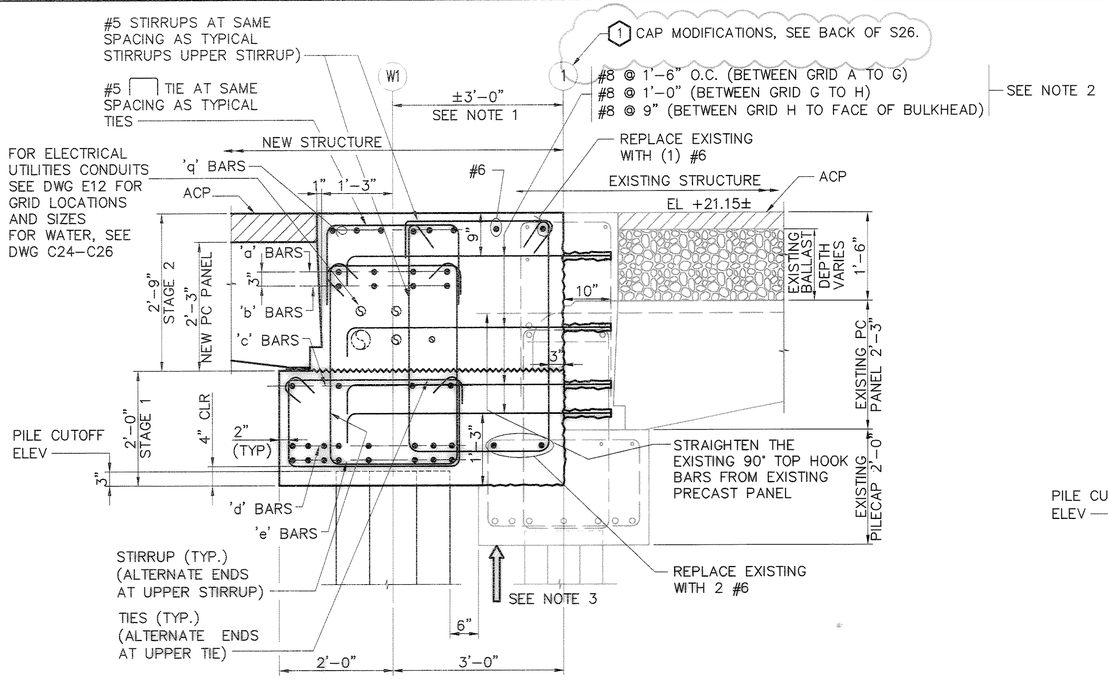
EP-5554-17

SHEET 62 OF 164
S26

6320-17

MARK	REVISION	BY:	APPROVED	DATE:

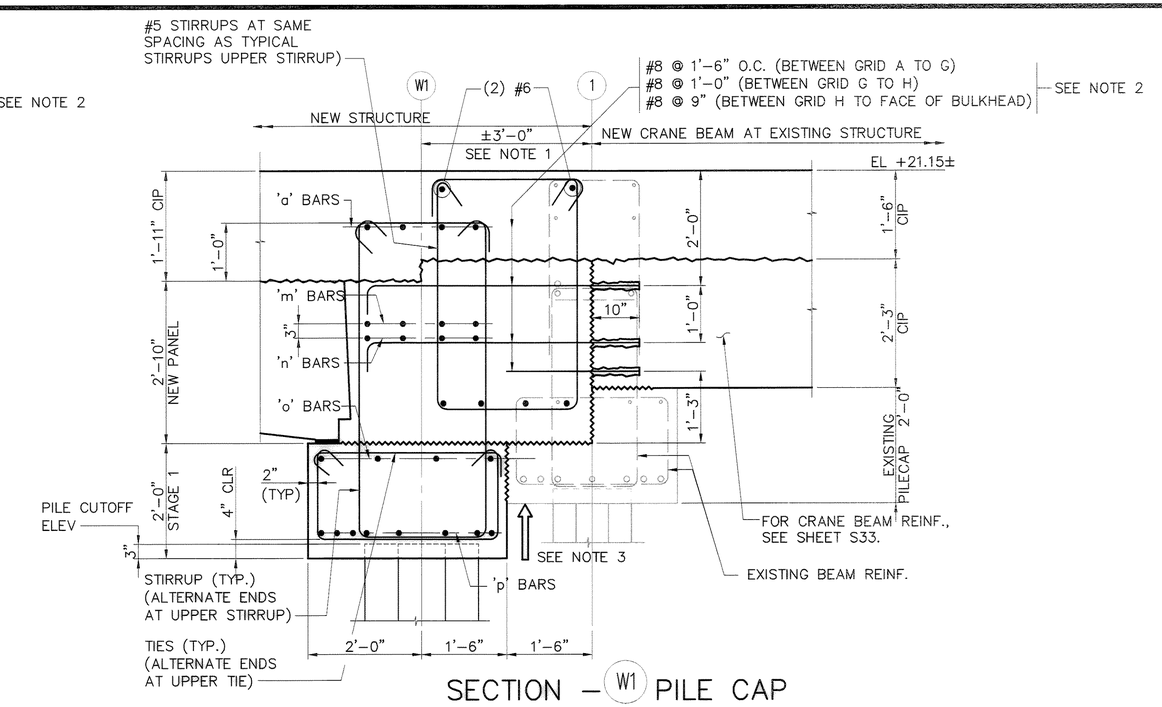
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JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 26, 2005 12:22:19 PM
UPDATED BY RICKT
XREFS: P0122x34TB-KPFF,
PLOT SCALE 1=1
'POP' FILE ---
PLOT VIEW



SECTION – W1 PILE CAP

SCALE: 3/4"= 1'–0"

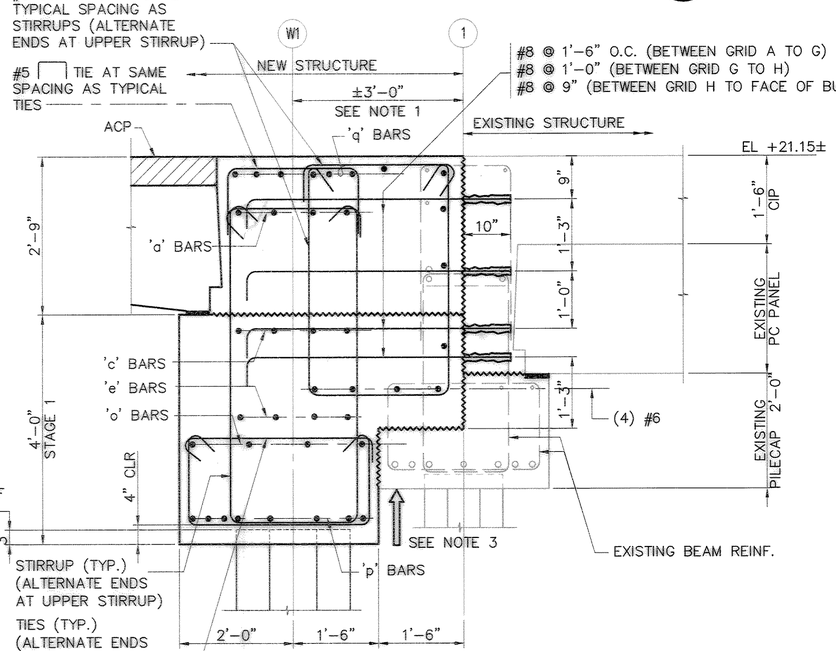
1 / S22.1 & S4



SECTION – W1 PILE CAP AT OUTBOARD CRANE BEAM

SCALE: 3/4"= 1'–0"

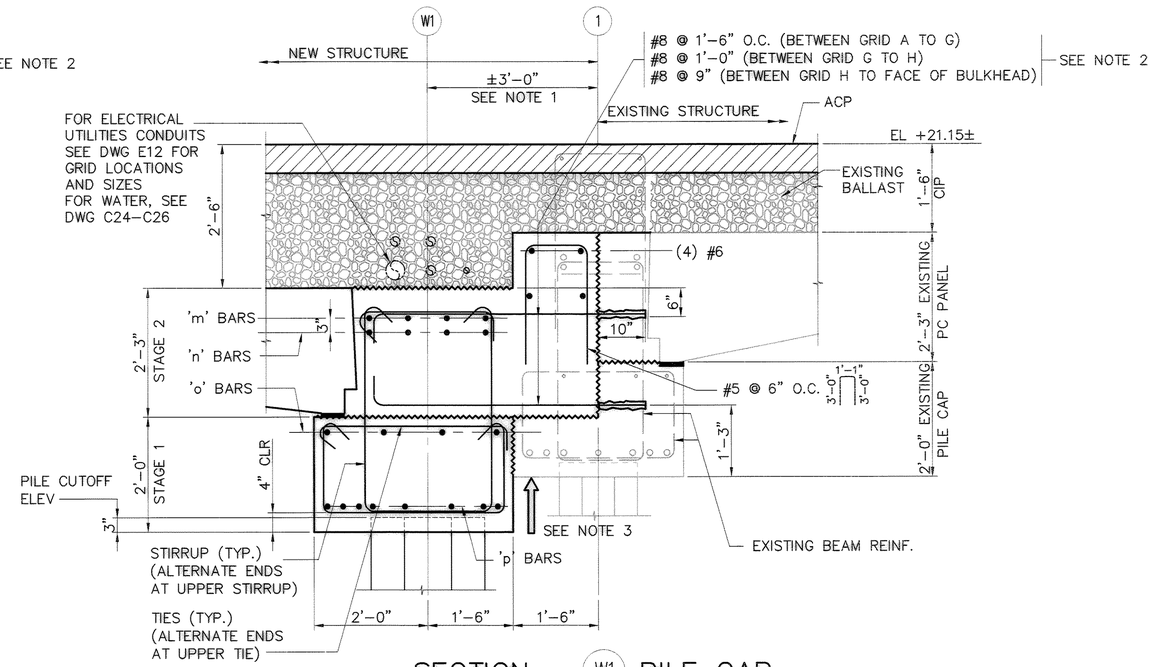
2 / S22.1 & S4



SECTION – W1 PILE CAP AT DEEP SECTION

SCALE: 3/4"= 1'–0"

3 / S22.1



SECTION – W1 PILE CAP AT BALLASTED AREA

SCALE: 3/4"= 1'–0"

4 / S22.1

NOTES:

1. CONTRACTOR TO VERIFY DIMENSION PRIOR TO FABRICATION OF ALL REINF.
2. ADJUST RESIN BONDED REINFORCING VERTICALLY TO MISS EXISTING REINF.
3. CONTRACTOR SHALL USE SHORING AT LOCATION SHOWN TO SUPPORT THE WEIGHT OF WET CONCRETE.

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TACOMA, WA 98401 253-383-5841

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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE

WHE 06/11/03
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E-NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW WEST AND EAST WHARF
PILE CAP SECTIONS AND DETAILS SHEET 3

EP-~~555~~-17

S27

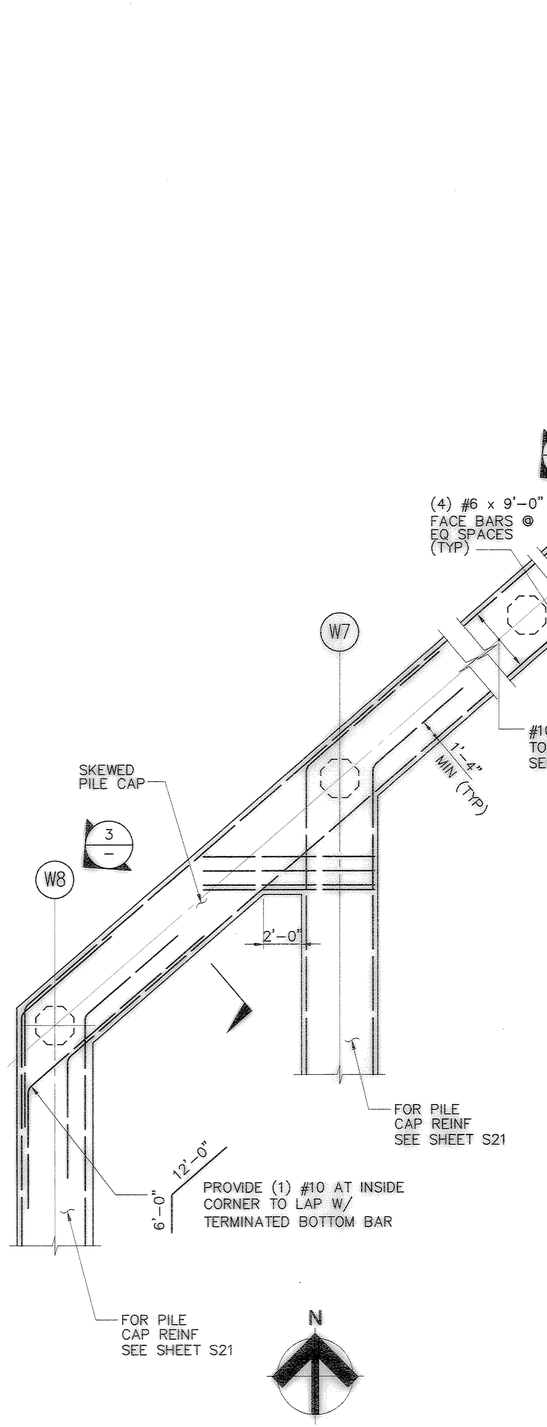
SHEET 63 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

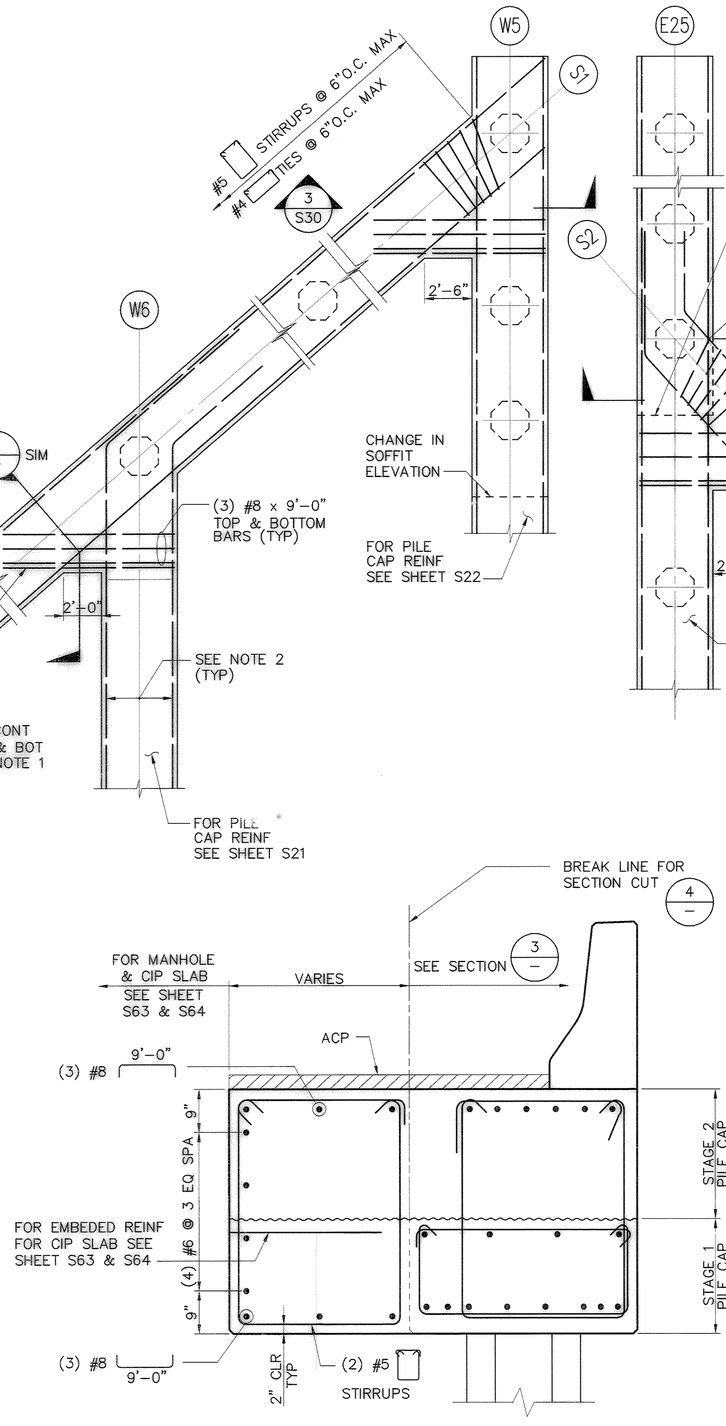
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JOB #	JOB NAME	PLOT SCALE	'PCP' FILE	PLOT VIEW
102349.10	Pierce County Terminal	1=1	---	---
		JAN. 26, 2005 12:23:43 PM	RICK1	

XREF'S: P0122x34TB-KPFF.



PLAN – SKEWED PILE CAP 1 / S4

SCALE: 1/4"= 1'-0"

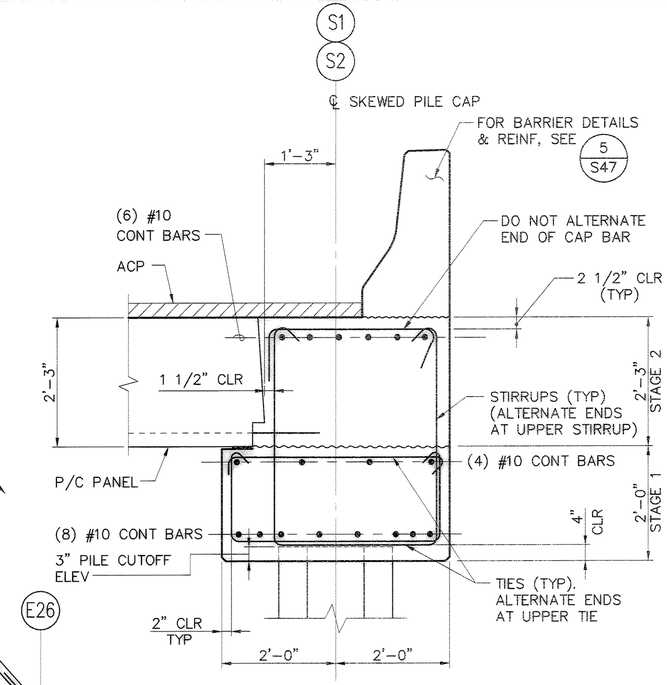


PLAN – SKEWED PILE CAP 2 / S9

SCALE: 1/4"= 1'-0"

SECTION – PILE CAP 4 / –

SCALE: 3/4"= 1'-0"



SECTION – SKEWED PILE CAP 3 / –

SCALE: 3/4"= 1'-0"

NOTES:

1. TERMINATE BOTTOM BARS FROM SKEWED PILE CAP WITH VERTICAL 90° HOOK.
2. PROVIDE LAP LENGTH EMBEDMENT FOR PILE CAP REINFORCEMENT INTO SKEWED PILE CAP OR PROVIDE SEPARATE CORNER BARS.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE

MHE 06/11/03
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ. VERT.
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW WEST AND EAST WHARF
PILE CAP MISCELLANEOUS DEAILS SHEET 1

SHEET 64 OF 164

S28

EP-~~5561-17~~

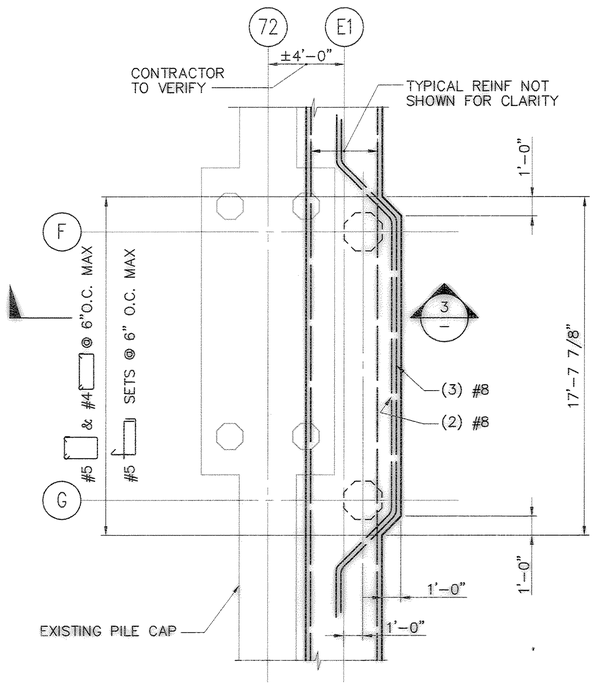
6320-17

RECORD DRAWING FOR BASIS OF RECORD DRAWINGS SEE G1

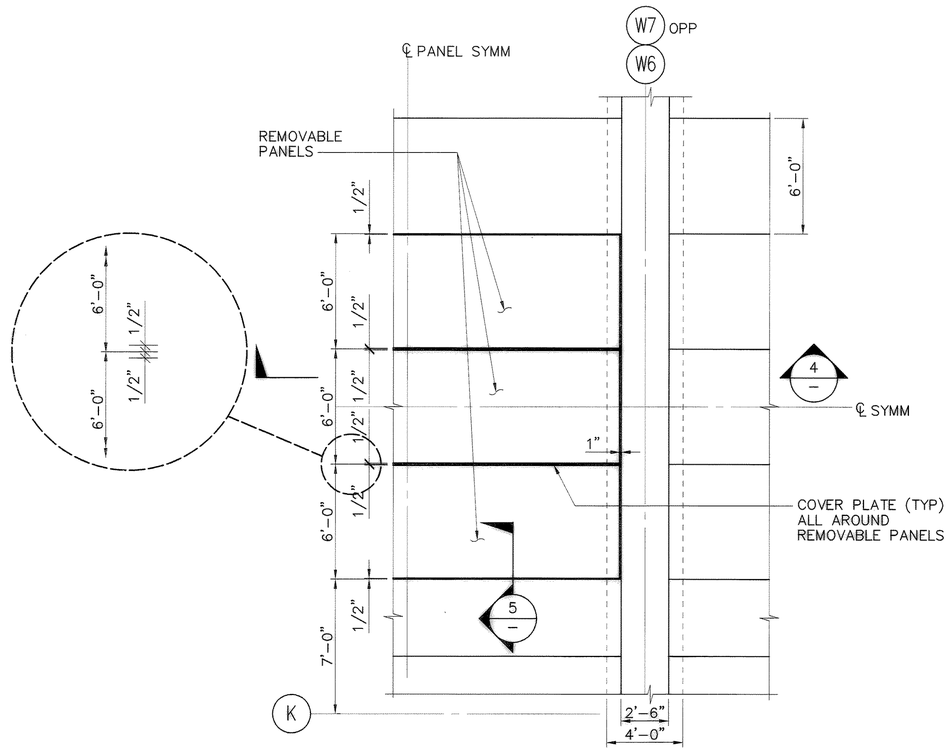
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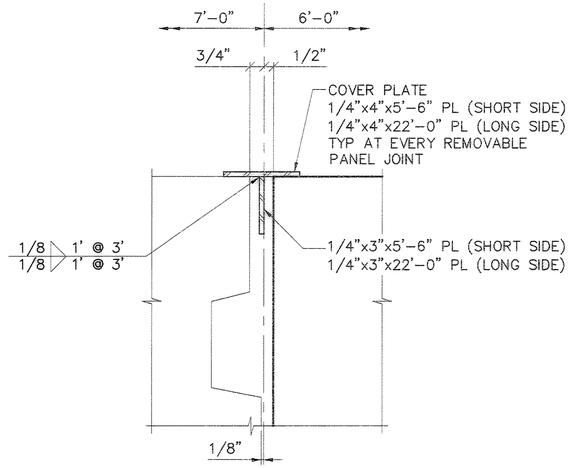
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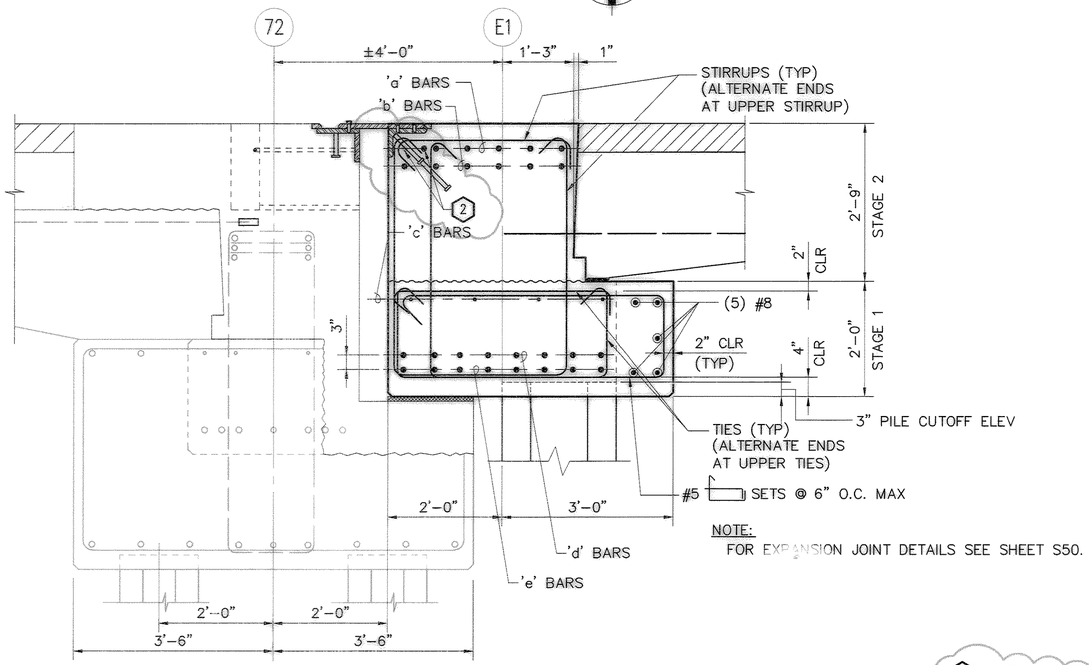
PILE CAP DETAIL 1 / S8
SCALE: 1/4"= 1'-0"



PILE CAP AT REMOVABLE PANEL DETAIL 2 / –
SCALE: 1/4"= 1'-0"



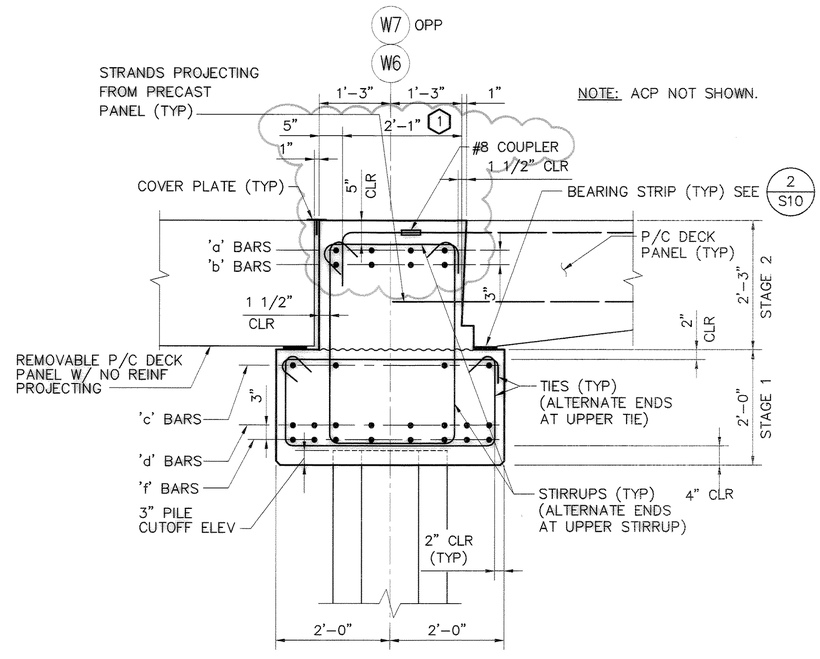
SECTION 5 / –
SCALE: 3"= 1'-0"



NOTE:
FOR EXPANSION JOINT DETAILS SEE SHEET S50.

SECTION – (E1) PILE CAP AT TAB-OUT 3 / S22.1 & S29
SCALE: 3/4"= 1'-0"

1. RFI 170.
2. RELOCATED REBAR DUE TO CONFLICT WITH NELSON STUDS ON EXPANSION JOINT



SECTION – PILE CAP AT REMOVABLE PANELS 4 / –
SCALE: 3/4"= 1'-0"

PORT OF TACOMA
TACOMA, U.S.A.
PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841
kpff Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED
CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
MHE 06/11/03 PROJECT ENGR.– DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW WEST AND EAST WHARF
PILE CAP MISCELLANEOUS DEAILS SHEET 2

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE AS SHOWN

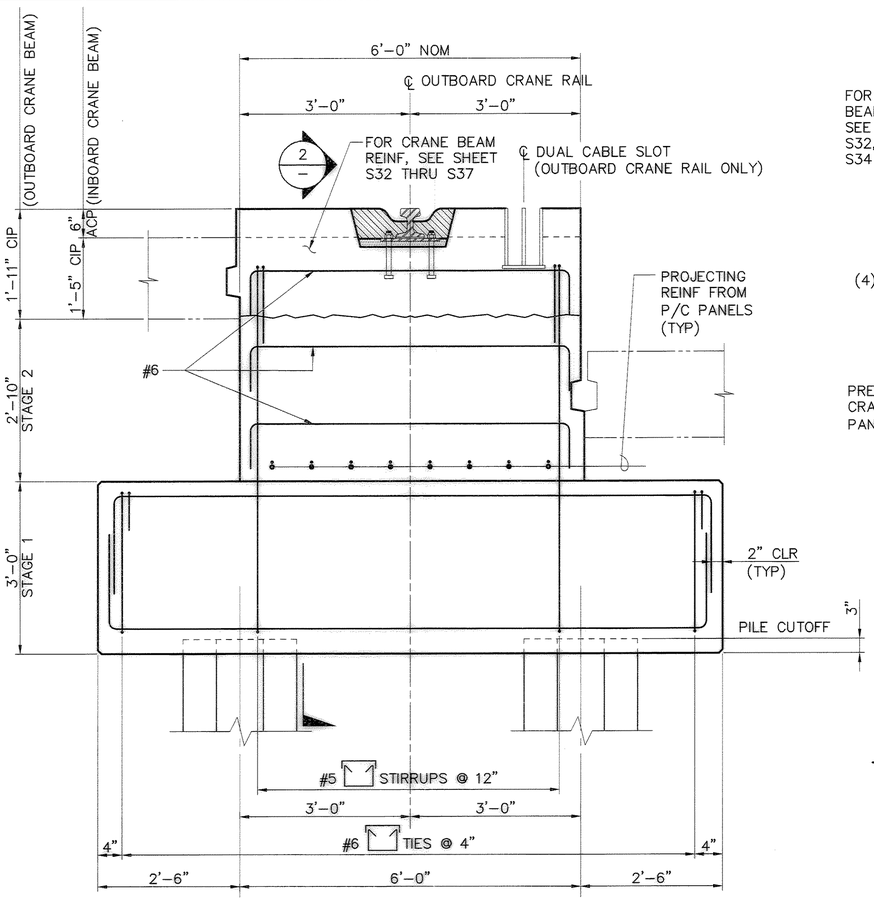
CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

SHEET 65 OF 164
EP ~~E551-17~~
S29

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

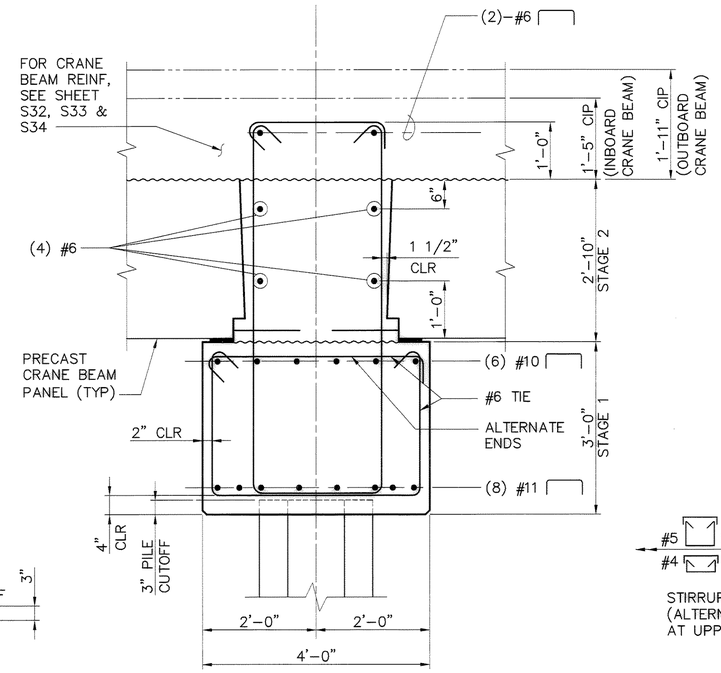
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JOB # 102349.10 | JOB NAME Pierce County Terminal | PLOTTED DATE & TIME JAN. 26, 2005 12:25:53 PM | UPDATED BY RICKT
XREFS: POT22x34TB-KPFF
PLOT SCALE 1=1 | "PCP" FILE --- | PLOT VIEW



ELEVATION – OUTBOARD PONY BENT PILE CAP (INBOARD PONY BENT PILE CAP SIM)

1 / S4, S8

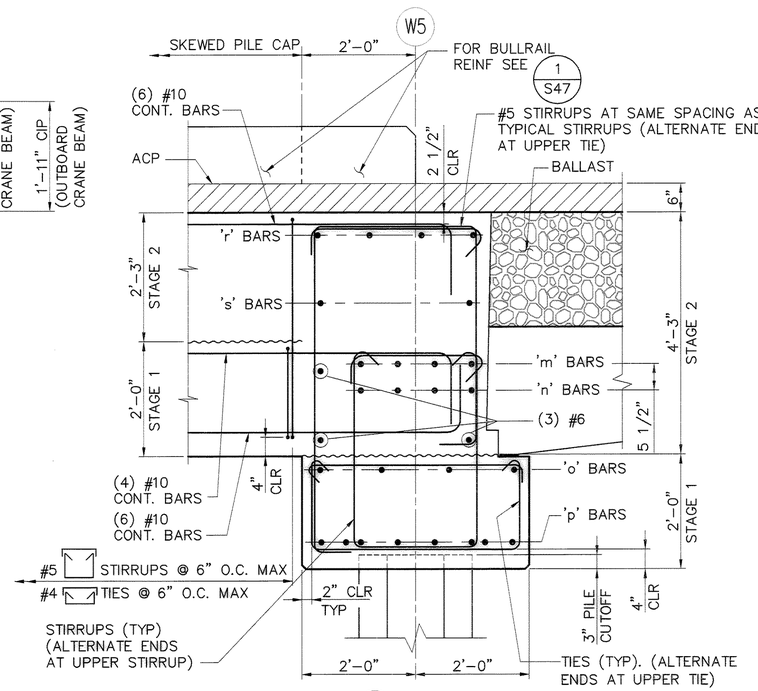
SCALE: 3/4"= 1'-0"



SECTION – PONY BENT PILE CAP

2 / –

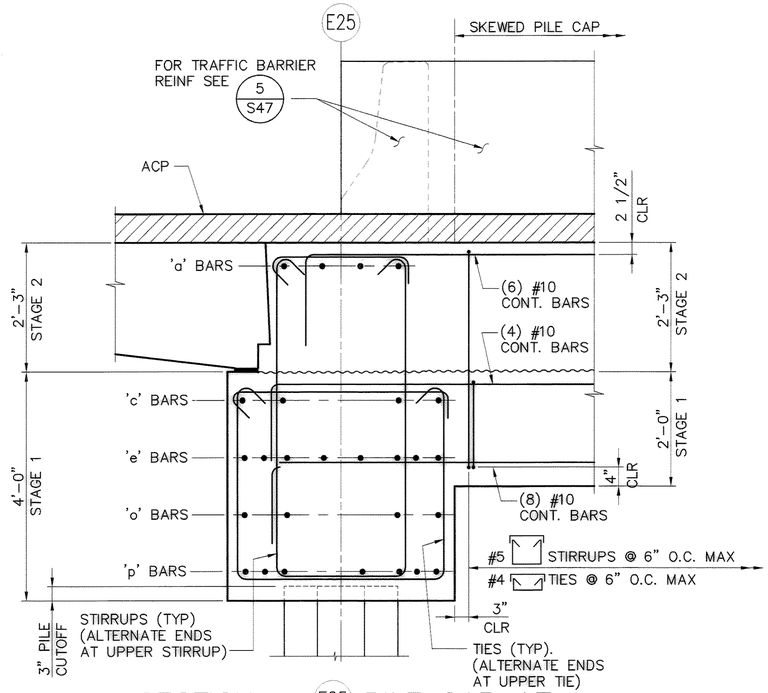
SCALE: 3/4"= 1'-0"



SECTION – W5 PILE CAP AT SKEWED PILE CAP CONNECTION

3 / S22 & S28

SCALE: 3/4"= 1'-0"



SECTION – E25 PILE CAP AT SKEWED PILE CAP CONNECTION

4 / S23 & S28

SCALE: 3/4"= 1'-0"

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PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
NEW WEST AND EAST WHARF
PILE CAP MISCELLANEOUS DETAILS SHEET 3

SHEET 66 OF 164

S30

EP-~~5514-17~~

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
MHE 06/11/03 PROJECT ENGR.– DATE

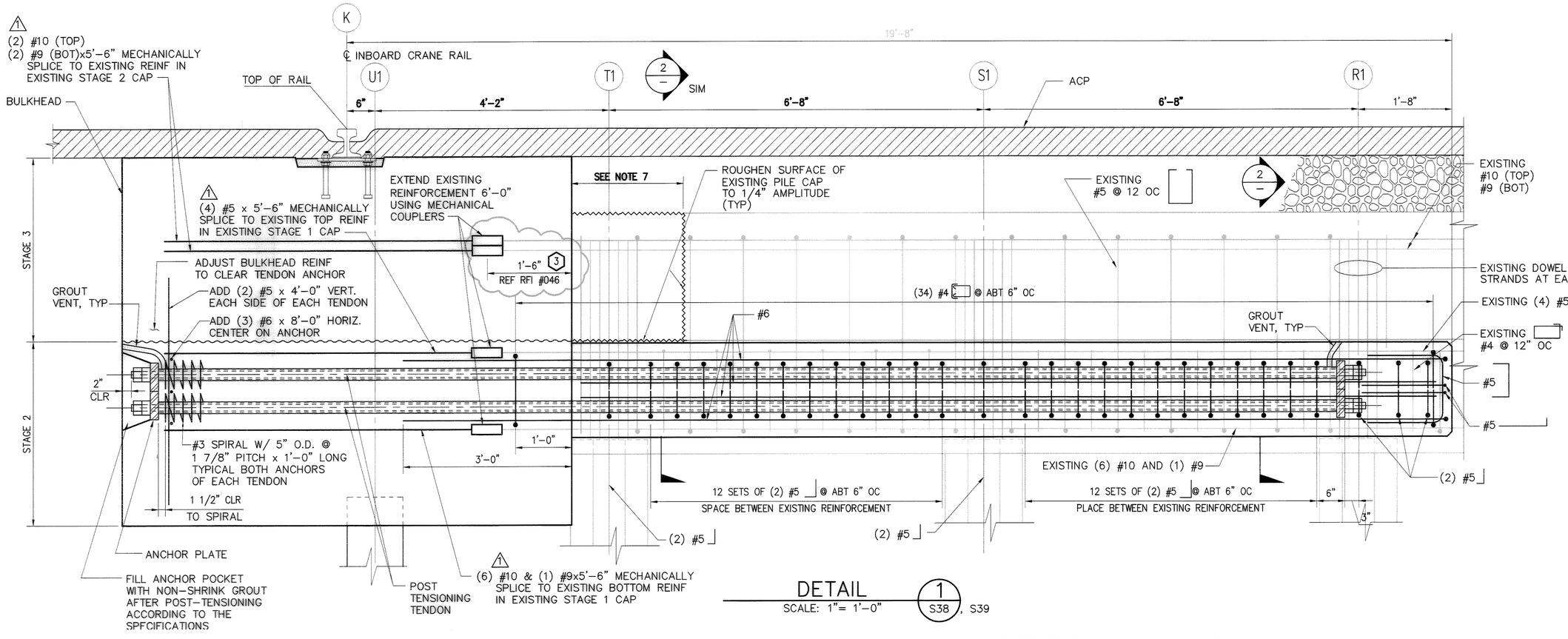
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DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

MARK	REVISION	BY:	APPROVED	DATE:

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S30.DWG
JOB # 102349.10 | JOB NAME Pierce County Terminal | PLOTTED DATE & TIME JAN. 26, 2005 12:26:36 PM | UPDATED BY RICKT | PLOT SCALE 1=1 | 'PCP' FILE | PLOT VIEW
XREFS: POT22x34TB-KPFF,



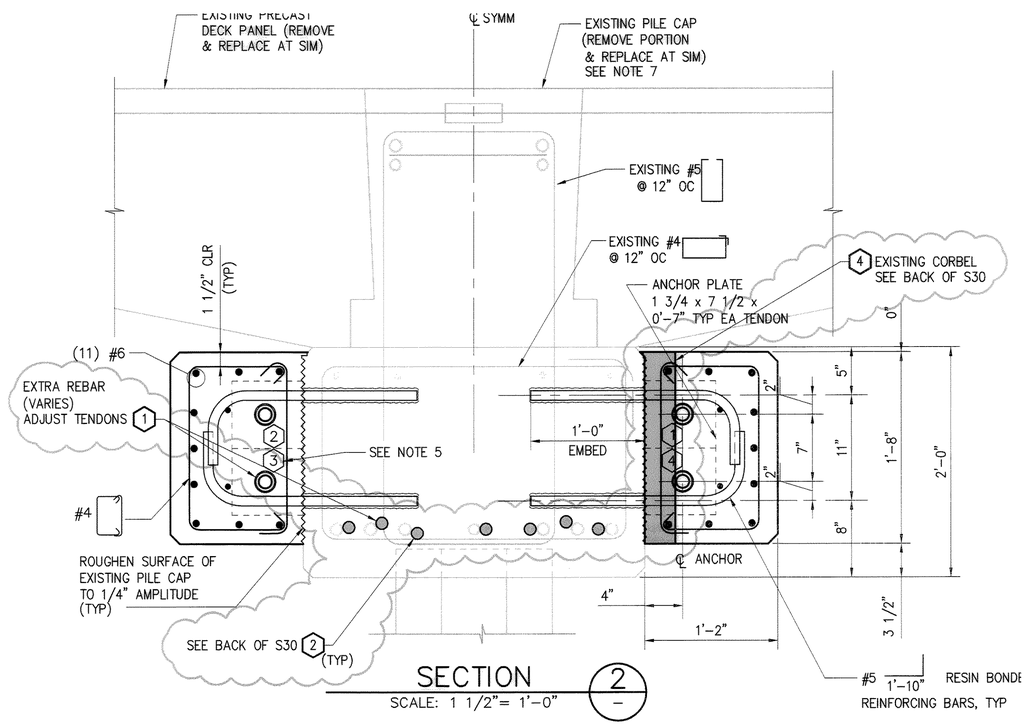
DETAIL 1 / S38, S39

SCALE: 1"= 1'-0"

NOTES:

1. SECTION SHOWN AT TYPICAL BENT SECTION. HEAVY LOAD AREA IS SIMILAR.
2. EXISTING REINFORCEMENT SHOWN IS APPROXIMATE. CONTRACTOR SHALL DETERMINE LOCATION OF EXISTING REINFORCEMENT IN FIELD BEFORE DRILLING. EXISTING REINFORCING SHALL NOT BE DAMAGED BY DRILLING.
3. POST TENSIONING SHALL BE 1-3/8"ø DYWIDAG THREADBAR AND SHALL CONFORM TO ASTM A 722, 150 KSI, ULTIMATE STRENGTH. MAXIMUM JACKING FORCE SHALL NOT EXCEED 0.75 fpu Aps.
4. POST-TENSION THREADBAR AFTER STAGE 2 AND STAGE 3 BULKHEAD CONCRETE POURS, AND WHEN PILECAP CONCRETE HAS ATTAINED ITS SPECIFIED 28-DAY STRENGTH.
5. POST-TENSION THREADBARS IN SEQUENCE SHOWN (1 2 3 4) TO A FINAL PRESTRESS FORCE OF 150 KIPS, EACH BAR AFTER ANCHORAGE SEATING LOSSES ARE ACCOUNTED FOR. TENSION TENDONS IN INCREMENTS OF 25% OF THE MAXIMUM JACKING FORCE AND REPEAT IN THE SEQUENCE SHOWN UNTIL THE FINAL PRESTRESS FORCE IS ACHIEVED.
6. SHEATH POST TENSIONING TENDONS IN 2" DIAMETER CORRUGATED POLYETHYLENE DUCTS. EACH END OF DUCT SHALL HAVE GROUT VENTS. GROUT TENDONS AFTER APPLYING PRESTRESS.
7. REMOVE & REPLACE PORTION OF EXISTING PILE CAP AND PRECAST DECK PANEL. FOR DEMOLITION SEE 2 / C16

1. RFI 98, SEE BACK OF S30.
2. RFI 103, SEE BACK OF S30.
3. RFI 46.
4. RFI 140, SEE BACK OF S30.



SECTION 2 / —

SCALE: 1 1/2"= 1'-0"

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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MARK	REVISION	BY:	APPROVD:	DATE:
1	ADDENDUM 1: REVISED CALLOUTS	MB	RKJ	8/17/03

APPROVED
CHIEF ENGINEER - DATE

RKJ 06/11/03
CHECKED BY - DATE
AB 06/11/03
PROJECT ENGR. - DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING
EXISTING PILE CAP UPGRADE
EXISTING WHARF

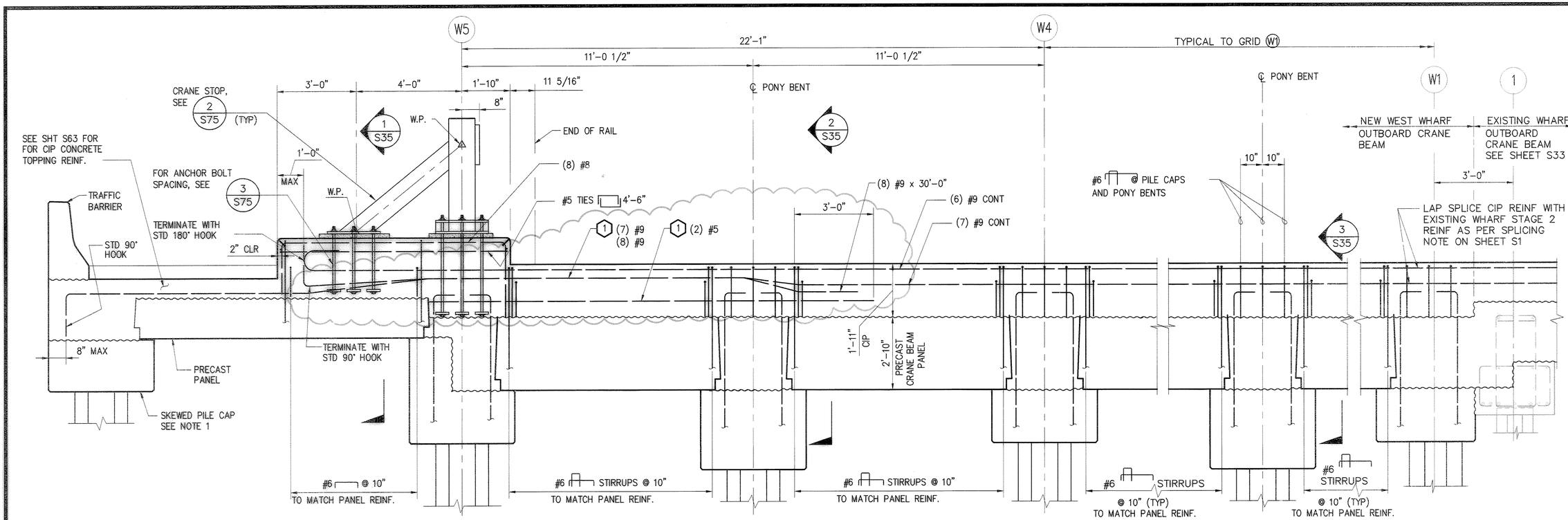
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E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~5551-17~~

SHEET 67 OF 164

S31

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JOB NAME PCT WHARF
PLOTTED DATE & TIME JAN. 26, 2005 12:30:38 PM
UPDATED BY RICKT
PLOT SCALE 1=1
'POP' FILE ---
PLOT VIEW



NOTES:

1. PILE CAP REINFORCEMENT NOT SHOWN FOR CLARITY, SEE SHEETS S21 – S30.

ELEVATION – OUTBOARD CRANE BEAM AND CRANE STOP SUPPORT

SCALE: 1/2"= 1'-0"

1 S10, S15, S14

MARK	REVISION	BY:	APPROVED	DATE:

PORT of TACOMA USA

kpff Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	06/11/03	CHECKED BY – DATE
GH	06/11/03	PROJECT ENGR.– DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER 99814 9
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
OUTBOARD CRANE BEAM ELEVATION
NEW WHARF

EP-~~555-17~~

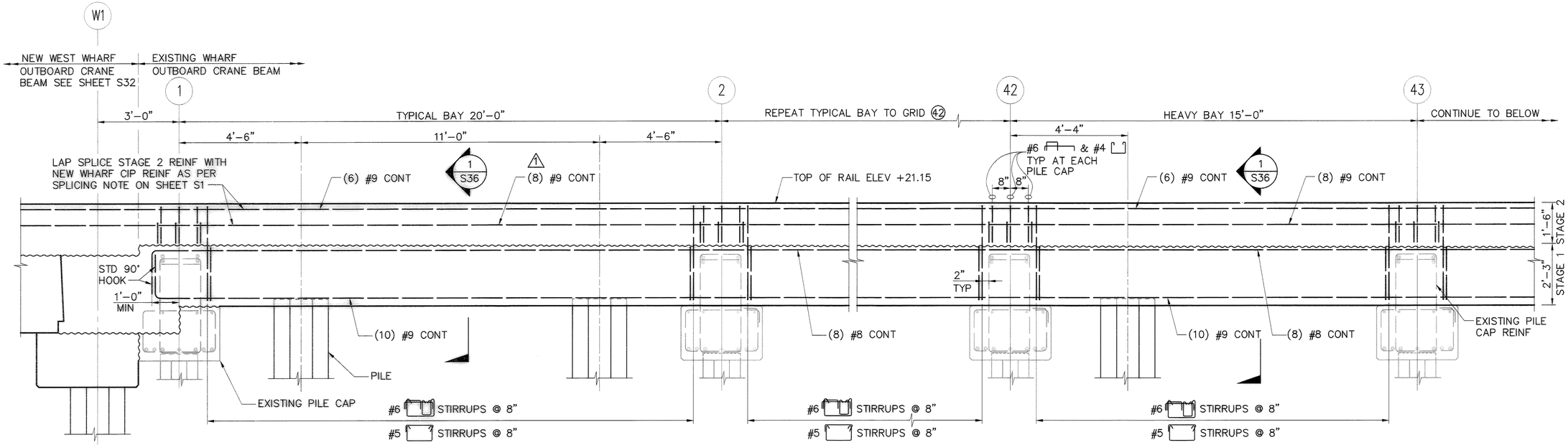
S32

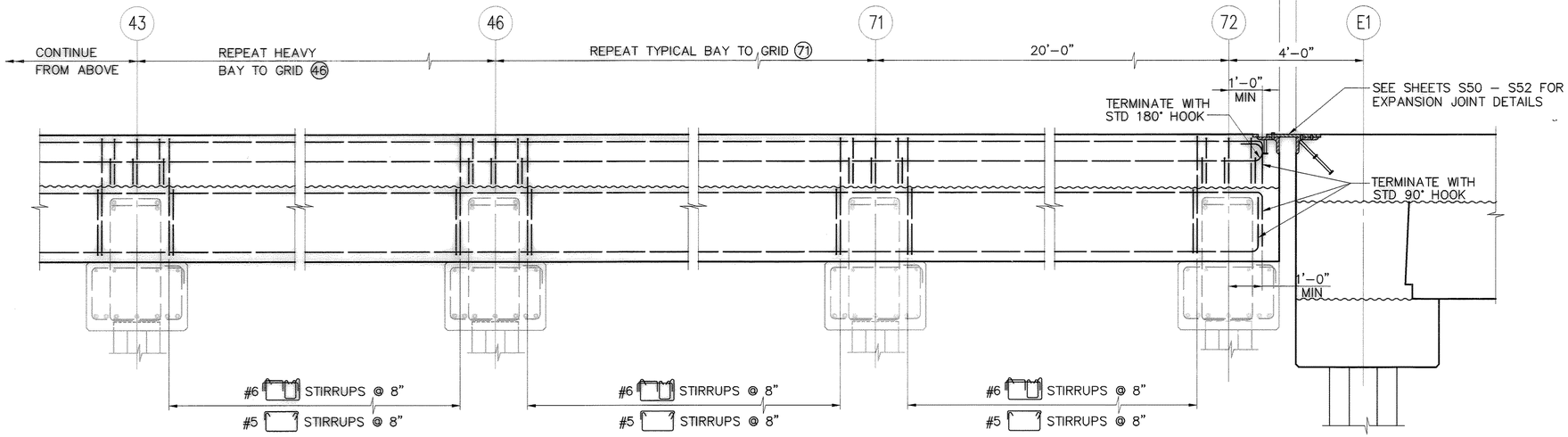
SHEET 68 OF 164

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

6320-17

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XREFS: POT22x34TB-KPFF
PLOT SCALE 1=1 | 'PCP' FILE | PLOT VIEW





ELEVATION – OUTBOARD CRANE BEAM

SCALE: 1/2"= 1'–0"

1 / S10 THRU S13

NOTES:

1. SHEAR KEY REINFORCEMENT AT GRID (72) NOT SHOWN FOR CLARITY, SEE SHEET S50.

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MARK	REVISION	BY:	APPROVED:	DATE:
1	ADDENDUM 1: REVISED CALLOUTS	MB	RKJ	8/1/03

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
GH PROJECT ENGR – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
OUTBOARD CRANE BEAM ELEVATION
EXISTING WHARF

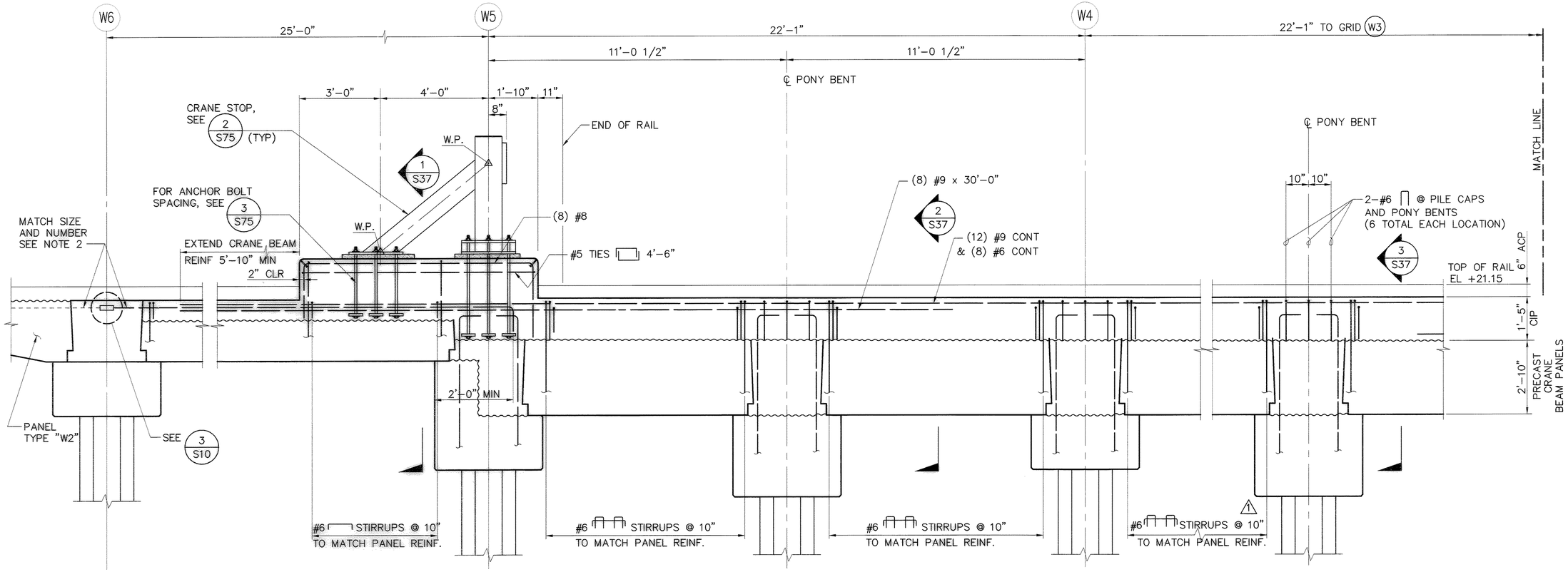
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PHASE: RECORD DOCUMENTS

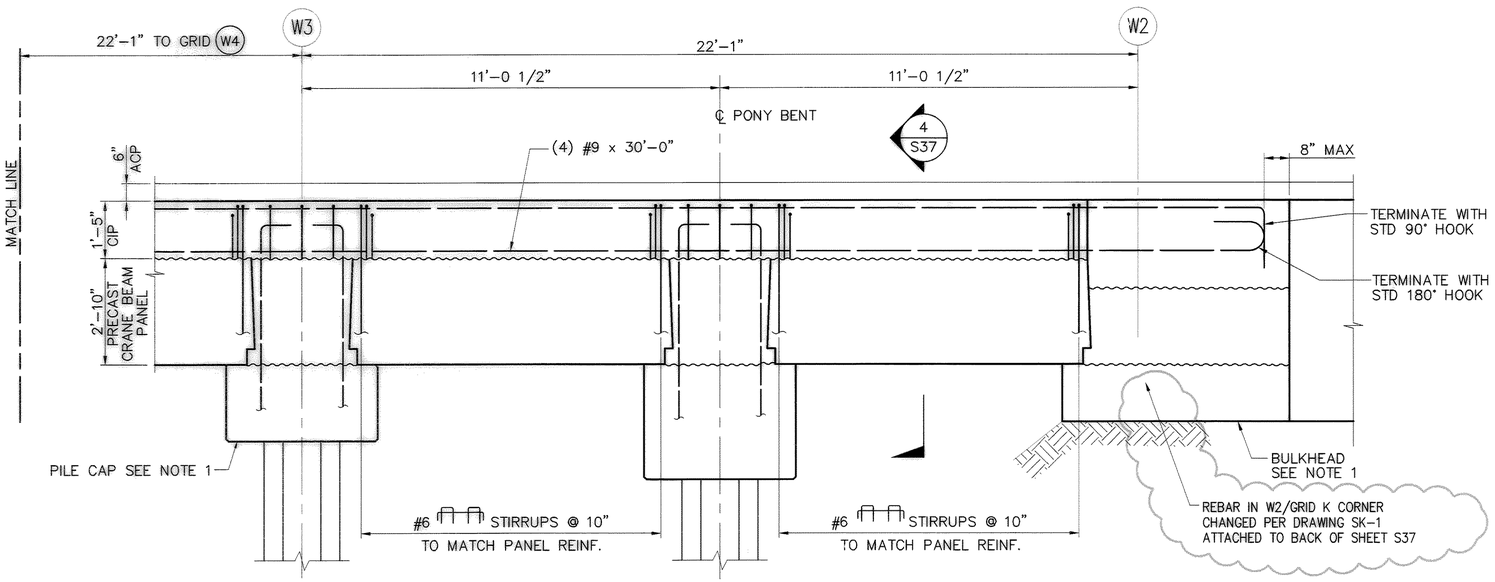
EP-~~5551-17~~
S33
SHEET 69 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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PLOTTED DATE & TIME JAN. 26, 2005 12:47:31 PM
UPDATED BY RICKT
'PCP' FILE ---
PLOT SCALE 1=1
PLOT VIEW
XREFS: PO122x34TB-KPFF,





ELEVATION – INBOARD CRANE BEAM AND STOP SUPPORT

SCALE: 1/2"= 1'-0"

1/S10

NOTES:

1. PILE CAP AND BULKHEAD REINFORCEMENT NOT SHOWN FOR CLARITY, SEE SHEETS S21–S30 FOR PILE CAP REINF AND SHEET S38 FOR BULKHEAD REINF.
2. FOR REINFORCEMENT SCHEDULE OF DECK PANEL TYPE "W2" SEE SHEET S61.
3. CRANE STOP AT EAST END NOT SHOWN. SEE 4/S75 FOR DETAILS.

MARK	REVISION	BY:	APPROVD:	DATE:
A	ADDENDUM 1: REVISED CALLOUT	MB	RKJ	8/1/03

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1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE

GH 06/11/03
PROJECT ENGR. – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING INBOARD CRANE BEAM ELEVATION NEW WHARF

EP-~~5551-17~~

S34

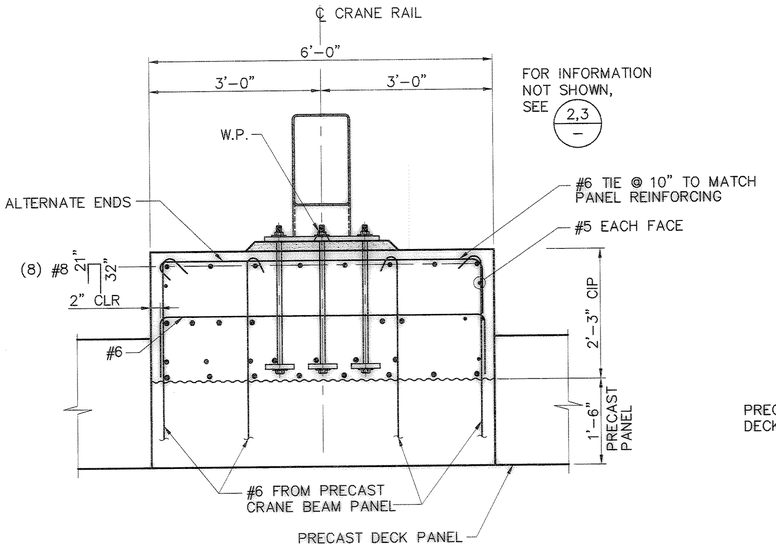
SHEET 70 OF 164

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

FILE PATH & NAME:	JOB #	JOB NAME	PLOTTED DATE & TIME
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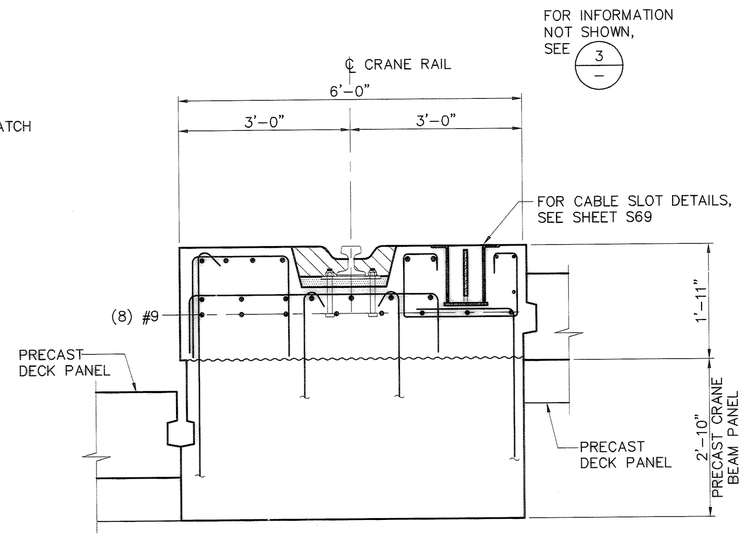
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RICKT	1=1		



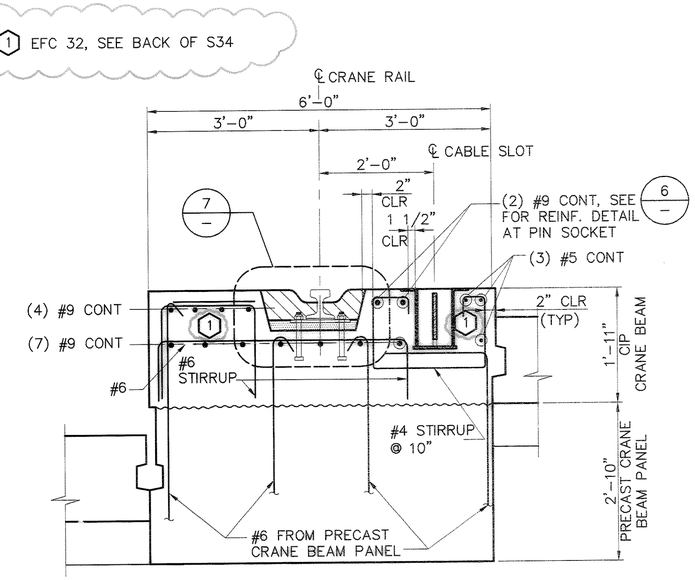
SECTION – OUTBOARD CRANE STOP SUPPORT AT WEST END 1 S32

SCALE: 3/4"= 1'–0"



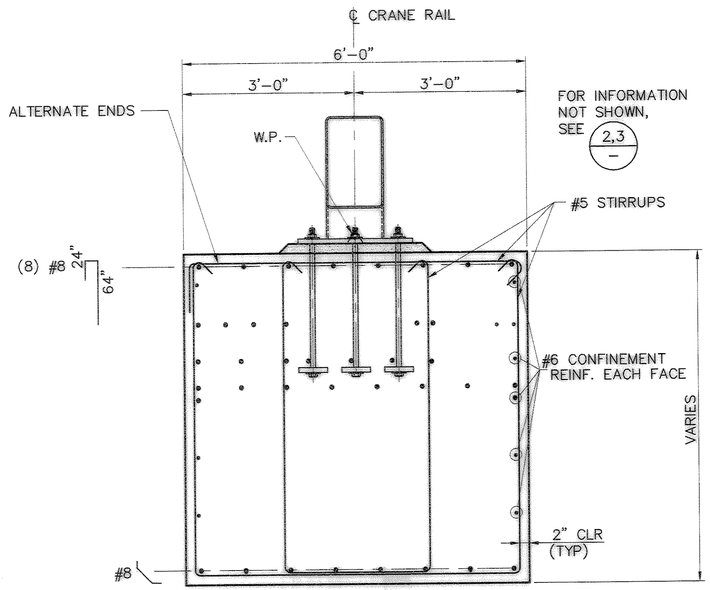
SECTION – OUTBOARD CRANE BEAM NEAR CRANE STOP 2 S32

SCALE: 3/4"= 1'–0"



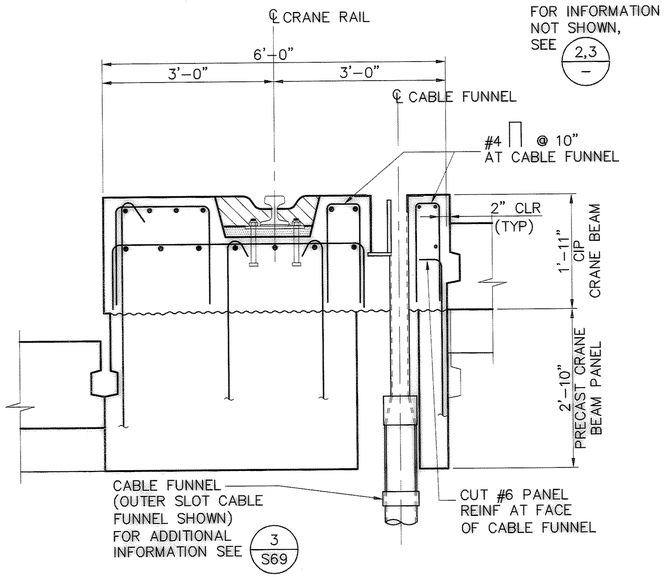
SECTION – OUTBOARD CRANE BEAM 3 S32

SCALE: 3/4"= 1'–0"



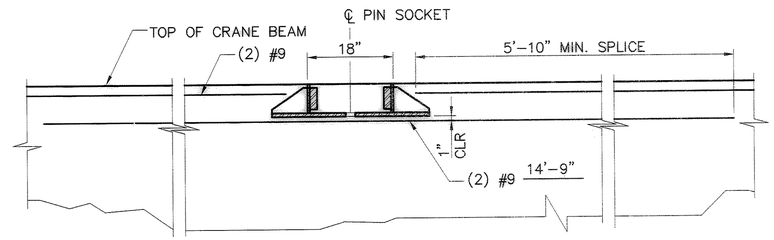
SECTION – OUTBOARD CRANE STOP SUPPORT AT EAST END 4 S32

SCALE: 3/4"= 1'–0"



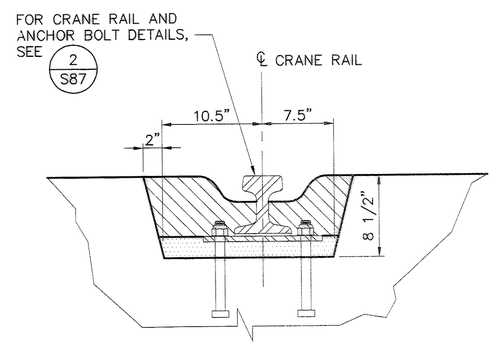
SECTION – OUTBOARD CRANE BEAM AT CABLE FUNNEL 5 –

SCALE: 3/4"= 1'–0"



DETAIL – CRANE BEAM LAP AT PIN SOCKET 6 –

SCALE: 3/8"= 1'–0"



DETAIL – OUTBOARD CRANE RAIL POCKET 7 –

SCALE: 1–1/2"= 1'–0"

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-6305

MARK | REVISION | BY: | APPROVED: | DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS: 2001 MILWAUKEE WAY
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
GH PROJECT ENGR. DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

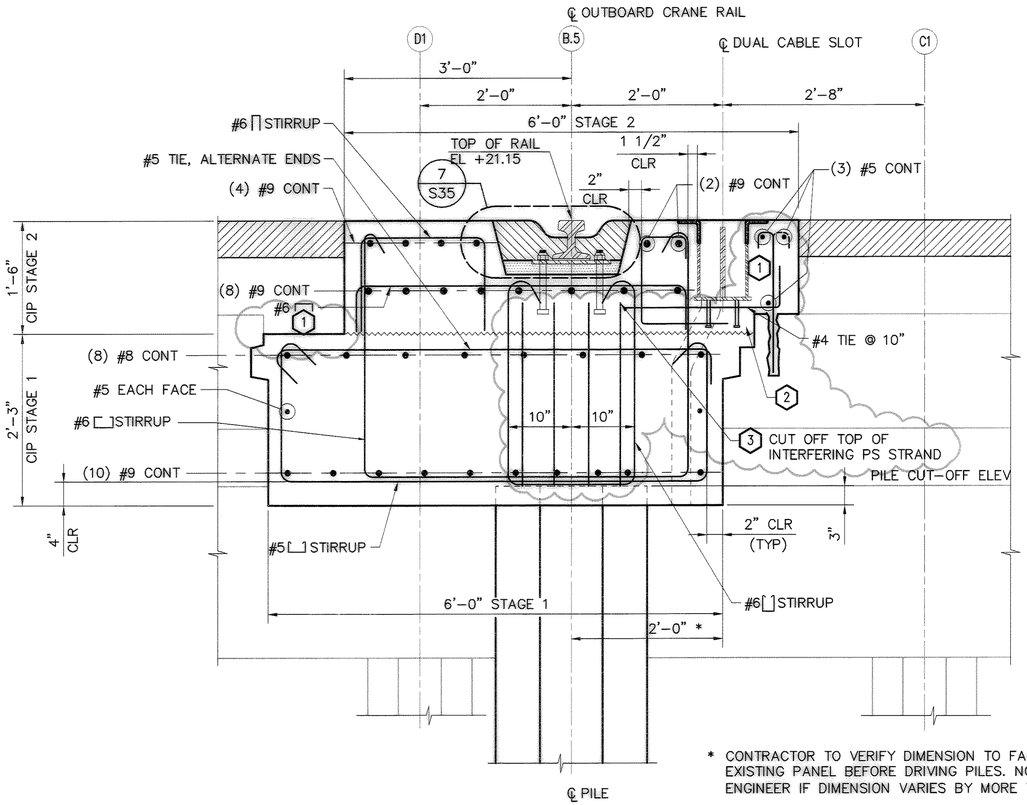
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E NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
CRANE BEAM SECTIONS
AND DETAILS - SHEET 1

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

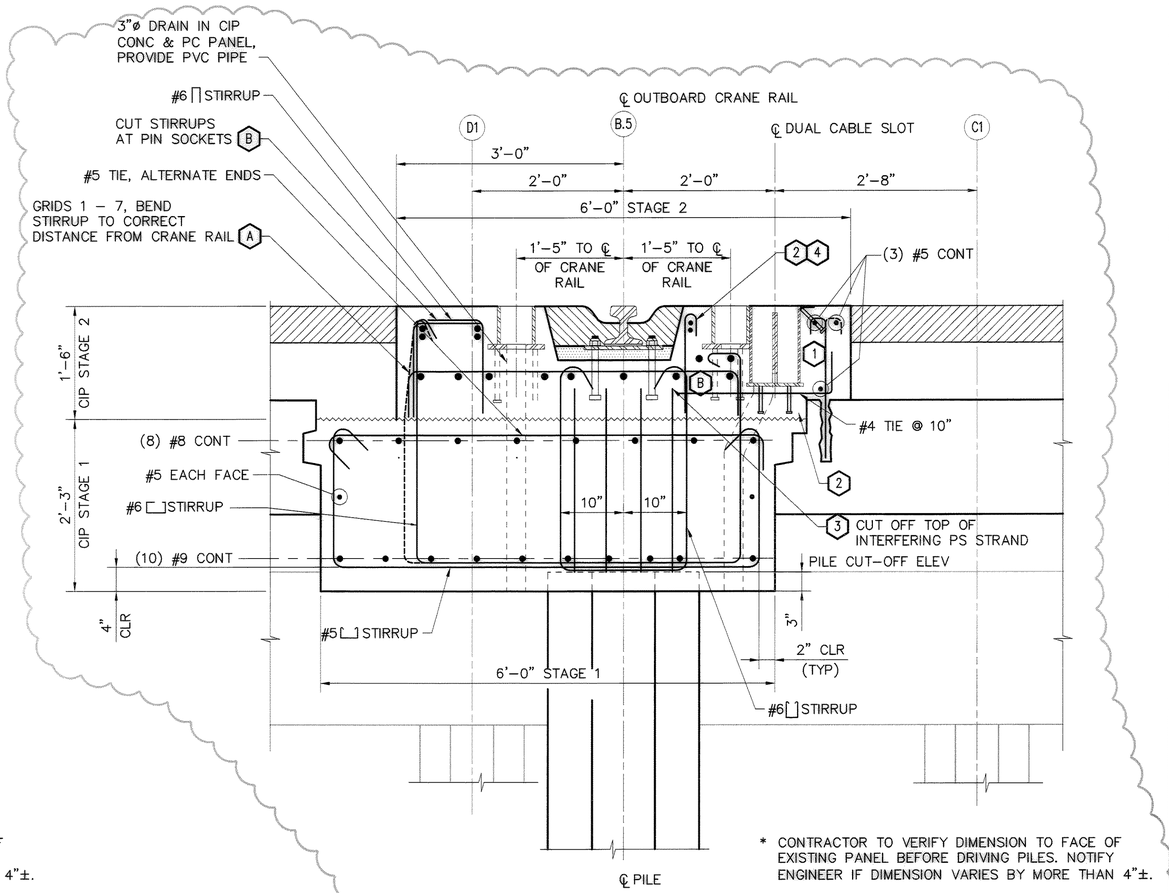
SHEET 71 OF 164
S35
EP-~~555-17~~
6320-17

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JOB # 102349.10
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 26, 2005 12:38:44 PM
UPDATED BY RICK1
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW
XREFS: P0722x34TB-KPFF,



* CONTRACTOR TO VERIFY DIMENSION TO FACE OF EXISTING PANEL BEFORE DRIVING PILES. NOTIFY ENGINEER IF DIMENSION VARIES BY MORE THAN 4"±.

SECTION
SCALE: 1" = 1'-0" — 1 / S33



* CONTRACTOR TO VERIFY DIMENSION TO FACE OF EXISTING PANEL BEFORE DRIVING PILES. NOTIFY ENGINEER IF DIMENSION VARIES BY MORE THAN 4"±.

SECTION AT PIN SOCKETS
SCALE: 1" = 1'-0" — 1 / S33

- A EFC 10, SEE BACK OF S35.
- B EFC 32 STIRRUP INTERFERENCE AT PIN SOCKETS, SEE BACK OF DRAWING S35.
- 1 RFI 139, SEE BACK OF S35.
- 2 RFI 184, SEE BACK OF S35.
- 3 RFI 36, SEE BACK OF S35.
- 4 EFC 35, RELOCATE #9 BAR, SEE BACK OF S35.

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

PORT OF TACOMA U.S.A.

kpff
Consulting Engineers
801 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	CHECKED BY – DATE	06/11/03
GH	PROJECT ENGR – DATE	06/11/03

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
CRANE BEAM
SECTIONS AND DETAILS - SHEET 2

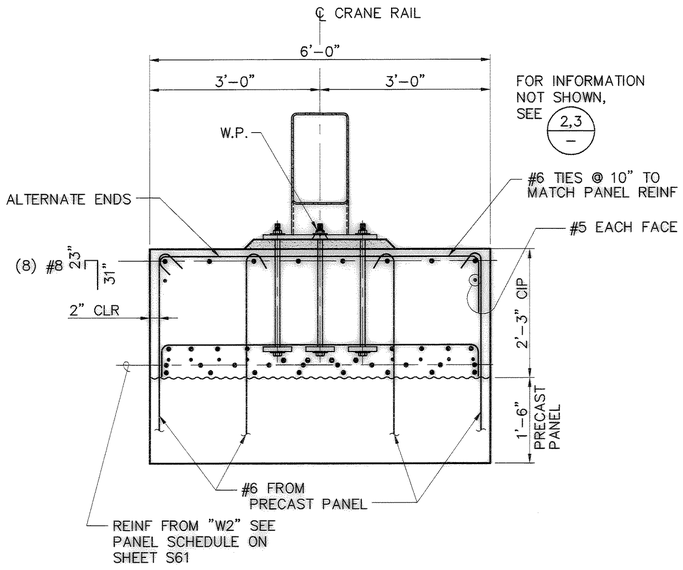
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DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~556-17~~
S36
SHEET 72 OF 164

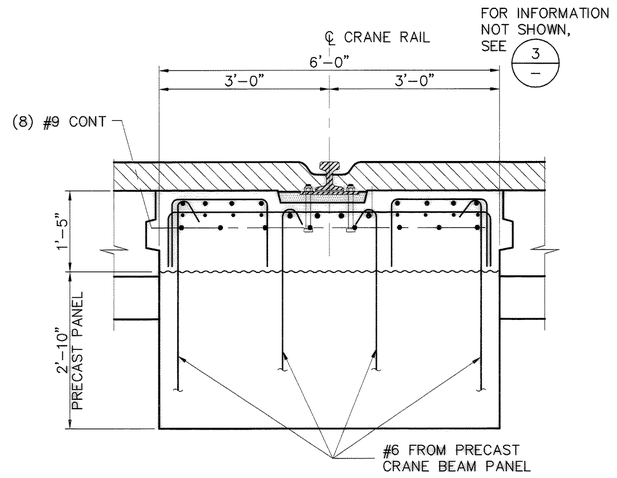
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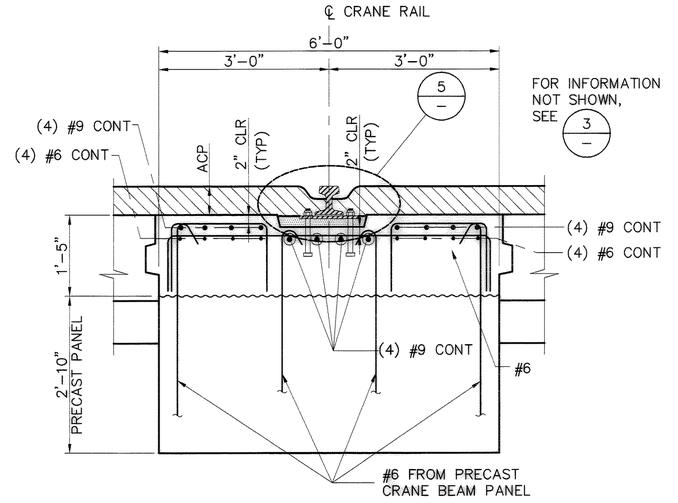
SECTION – INBOARD CRANE STOP SUPPORT AT WEST END 1 S34

SCALE: 3/4"= 1'–0"



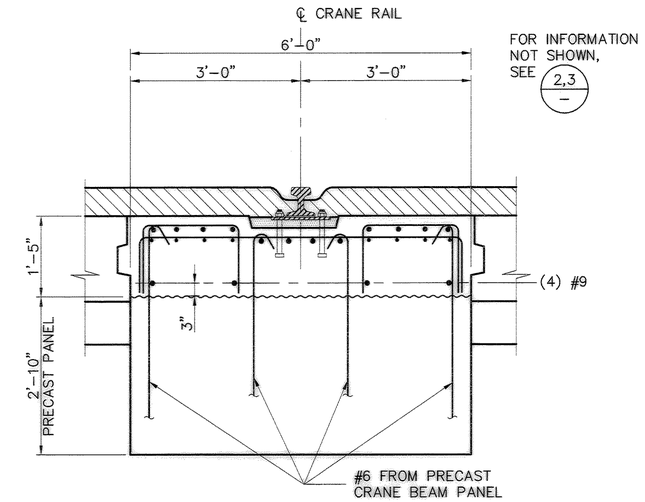
SECTION – INBOARD CRANE BEAM 2 S34

SCALE: 3/4"= 1'–0"



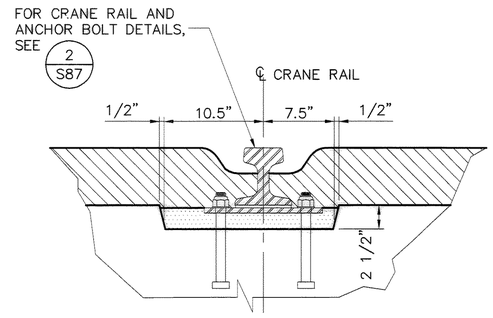
SECTION – INBOARD CRANE BEAM 3 S34

SCALE: 3/4"= 1'–0"



SECTION – INBOARD CRANE BEAM 4 S34

SCALE: 3/4"= 1'–0"



DETAIL – INBOARD CRANE RAIL POCKET 5 S37

SCALE: 1–1/2"= 1'–0"

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S37.DWG
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UPDATED BY RICKT
XREFS: P0122x34TB-KPFF,
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'PCP' FILE ---
PLOT VIEW

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PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
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Seattle, Washington 98101
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APPROVED
CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
GH 06/11/03
PROJECT ENGR. – DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
CRANE BEAM SECTIONS
AND DETAILS - SHEET 3

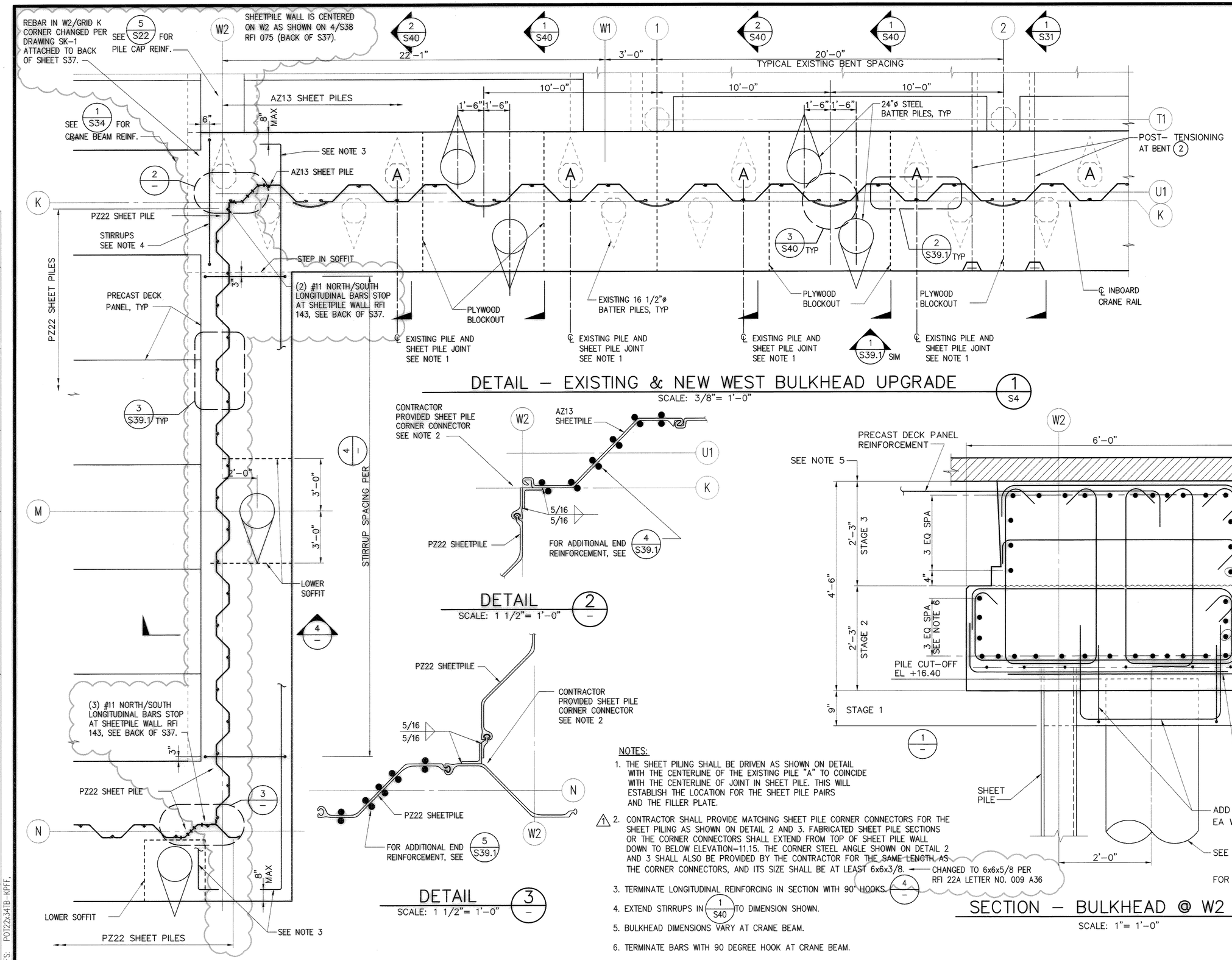
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DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

SHEET 73 OF 164
EP-~~5551-17~~
S37

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)



DETAIL – EXISTING & NEW WEST BULKHEAD UPGRADE

SCALE: 3/8"= 1'-0"

1/S4

DETAIL

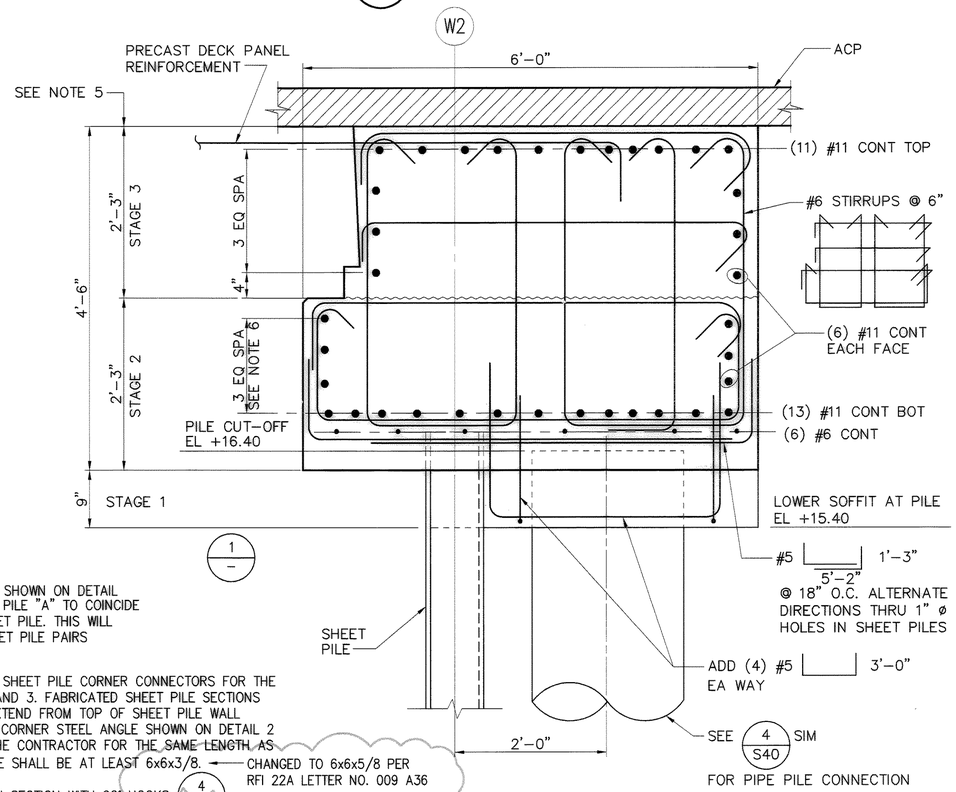
SCALE: 1 1/2"= 1'-0"

2/—

DETAIL

SCALE: 1 1/2"= 1'-0"

3/—



1/—

SECTION – BULKHEAD @ W2

SCALE: 1"= 1'-0"

4/—

NOTES:

1. THE SHEET PILING SHALL BE DRIVEN AS SHOWN ON DETAIL WITH THE CENTERLINE OF THE EXISTING PILE "A" TO COINCIDE WITH THE CENTERLINE OF JOINT IN SHEET PILE. THIS WILL ESTABLISH THE LOCATION FOR THE SHEET PILE PAIRS AND THE FILLER PLATE.
2. CONTRACTOR SHALL PROVIDE MATCHING SHEET PILE CORNER CONNECTORS FOR THE SHEET PILING AS SHOWN ON DETAIL 2 AND 3. FABRICATED SHEET PILE SECTIONS OR THE CORNER CONNECTORS SHALL EXTEND FROM TOP OF SHEET PILE WALL DOWN TO BELOW ELEVATION–11.15. THE CORNER STEEL ANGLE SHOWN ON DETAIL 2 AND 3 SHALL ALSO BE PROVIDED BY THE CONTRACTOR FOR THE SAME LENGTH AS THE CORNER CONNECTORS, AND ITS SIZE SHALL BE AT LEAST 6x6x3/8. ← CHANGED TO 6x6x5/8 PER RFI 22A LETTER NO. 009 A36
3. TERMINATE LONGITUDINAL REINFORCING IN SECTION WITH 90° HOOKS.
4. EXTEND STIRRUPS IN 1/S40 TO DIMENSION SHOWN.
5. BULKHEAD DIMENSIONS VARY AT CRANE BEAM.
6. TERMINATE BARS WITH 90 DEGREE HOOK AT CRANE BEAM.

MARK	REVISION	BY:	APPROVED:	DATE:
Δ	ADDENDUM 1: REVISED NOTE 2	MB	RKJ	8/1/03

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APPROVED

CHIEF ENGINEER – DATE

RKJ 06/11/03
CHECKED BY – DATE

KN 06/11/03
PROJECT ENGR.– DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
BULKHEAD PARTIAL PLANS
EXISTING WHARF - SHEET 1

EP-555147

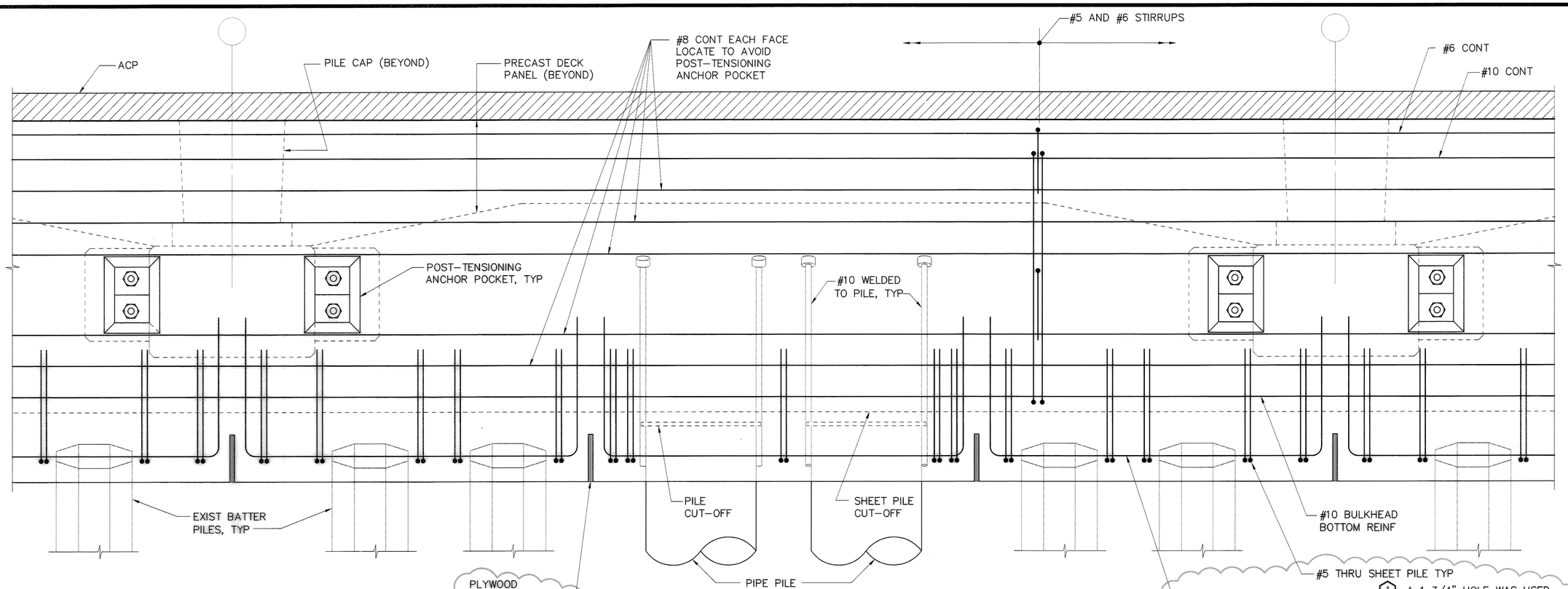
S38

SHEET 74 OF 164

6320-17

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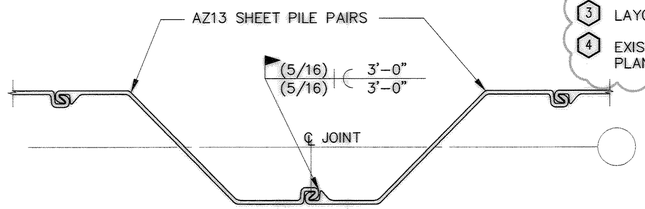
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ELEVATION 1 / S38, S39

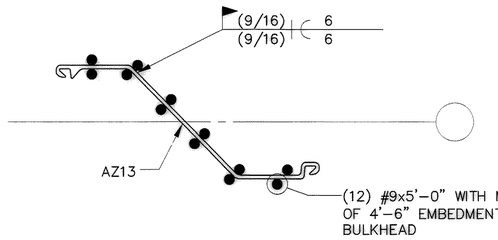
SCALE: 1"= 1'-0"

1. CAN BE MOVED 6" WEST OR EAST
2. LAYOUT FOR B68 TO B72
3. LAYOUT FOR HEAVY LOAD AREA
4. EXISTING CONCRETE BATTER PILE OUT OF PLAN LOCATION



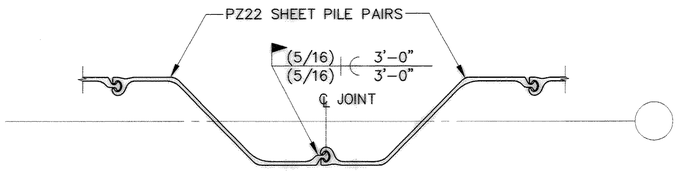
AZ13 PAIR TO PAIR CONNECTION – DETAIL 2 / S38, S39, S41

SCALE: 1 1/2"= 1'-0"



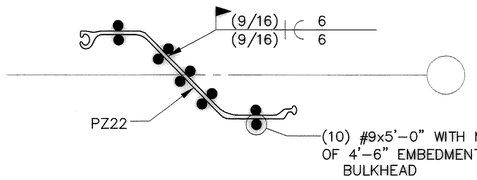
AZ13 WITH WELDED REBAR CONNECTION – DETAIL 4 / S38, S39, S41

SCALE: 1 1/2"= 1'-0"



PZ22 PAIR TO PAIR CONNECTION – DETAIL 3 / S38, S39, S41

SCALE: 1 1/2"= 1'-0"



PZ22 WITH WELDED REBAR CONNECTION – DETAIL 5 / S38, S39, S41

SCALE: 1 1/2"= 1'-0"

1. RFI 085.
2. RFI 162.
3. RFI 180.
4. RFI 122.

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
PB 06/11/03
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: E1972
E NUMBER: 998149
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
BULKHEAD ELEVATION AND DETAILS
EXISTING WHARF

EP-~~5551-17~~
S39.1
SHEET 76 OF 164

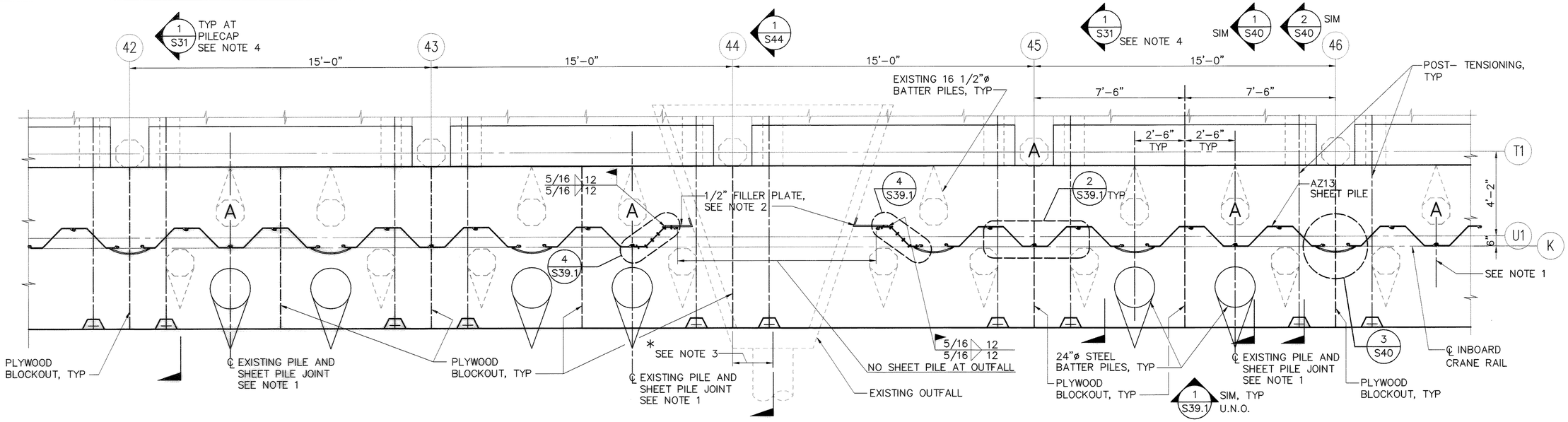
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MARK	REVISION	BY:	APPRVD:	DATE:

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TACOMA, WA 98401 253-383-5841

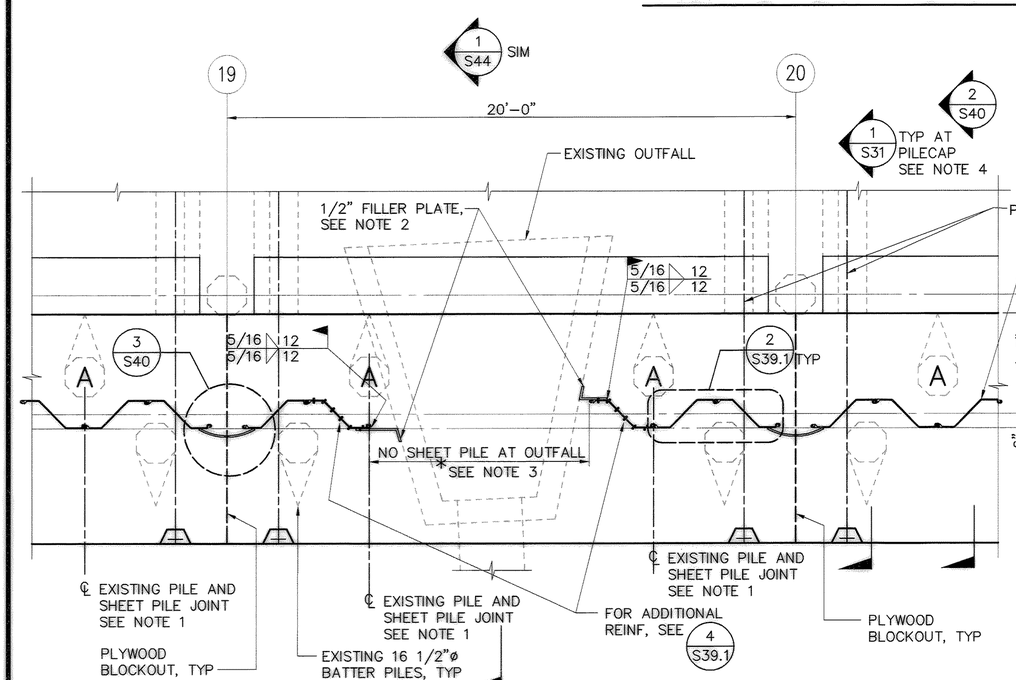
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FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E(1972539.1.DWG
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XREFS: POT22x34TB-KPFF, | PLOT SCALE 1=1 | 'PCP' FILE --- | PLOT VIEW



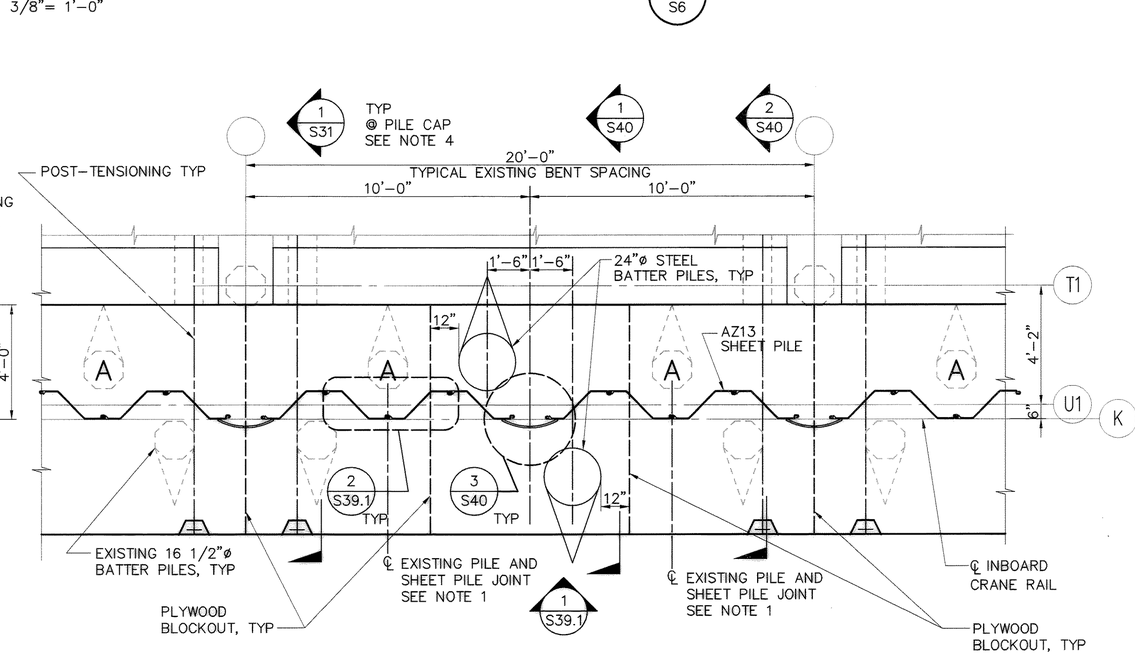
PARTIAL PLAN – EXISTING BULKHEAD AT HEAVY LOAD AREA AND OUTFALL (1 / S6)

SCALE: 3/8"= 1'-0"



PARTIAL PLAN – EXISTING BULKHEAD AT OUTFALL (2 / S5)

SCALE: 3/8"= 1'-0"



PARTIAL PLAN – EXISTING BULKHEAD UPGRADE (3 / S4, S5, S6, S7)

SCALE: 3/8"= 1'-0"

(1) RFI 162, SEE BACK OF S38 FOR B68 TO 72 REBAR LAYOUT.

NOTES:

1. THE SHEET PILING SHALL BE DRIVEN AS SHOWN ON PARTIAL PLANS (1) (2) & (3) WITH THE CENTERLINE OF THE EXISTING PILE "A" TO COINCIDE WITH THE CENTERLINE OF JOINT IN SHEET PILE. THIS WILL ESTABLISH THE LOCATION FOR THE SHEET PILE PAIRS AND THE FILLER PLATE.
2. 1/2" FILLER PLATE SHALL OVERLAP SHEET PILE 4" MINIMUM. EMBED FILLER PLATE 3" INTO THE PILE CAP AND 3'-0" BELOW THE INVERT OF THE EXISTING OUTFALL. WHERE FILLER PLATE IS EXPOSED AND ABOVE GRADE, PLACE 1/2" EXPANSION JOINT FILLER BETWEEN EXISTING OUTFALL AND FILLER PLATE.
3. DIMENSIONS AND LOCATIONS OF EXISTING OUTFALLS SHALL BE FIELD MEASURED AND VERIFIED BY THE CONTRACTOR.
4. POST TENSIONING APPLIED TO EXISTING PILE CAPS FROM BENT (2) TO BENT (71)

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MARK | REVISION | BY: | APPROVED | DATE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
BULKHEAD PARTIAL PLANS
EXISTING WHARF - SHEET 2

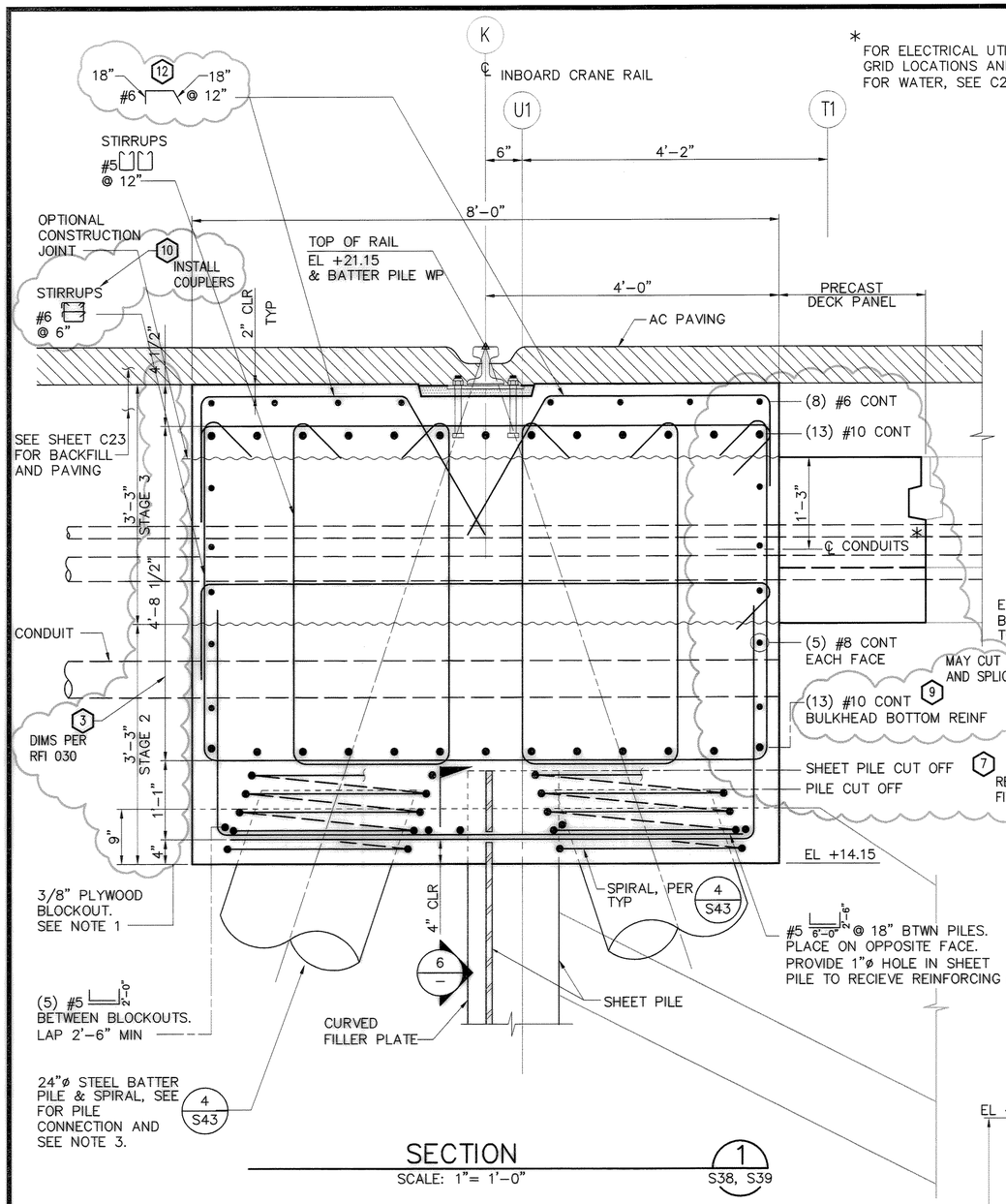
EP-~~5551-17~~
S39
SHEET 75 OF 164

APPROVED
CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
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KN 06/11/03 PROJECT ENGR – DATE
TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN
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E NUMBER: E1972
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

6320-17

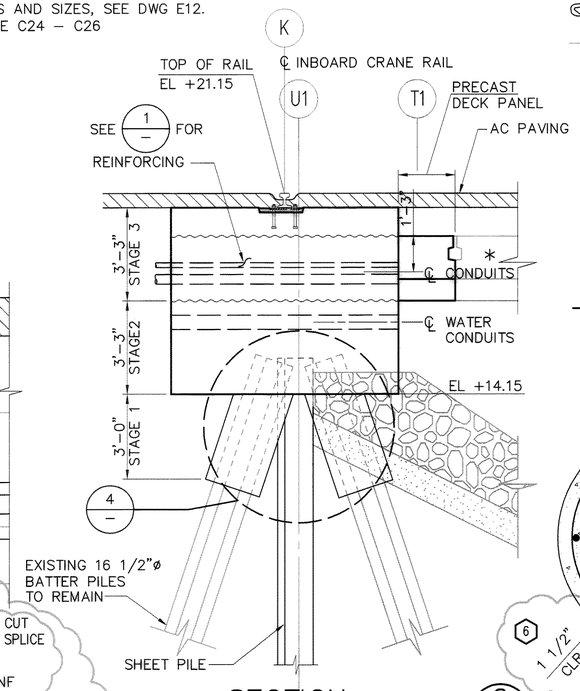
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PLOT VIEW



SECTION

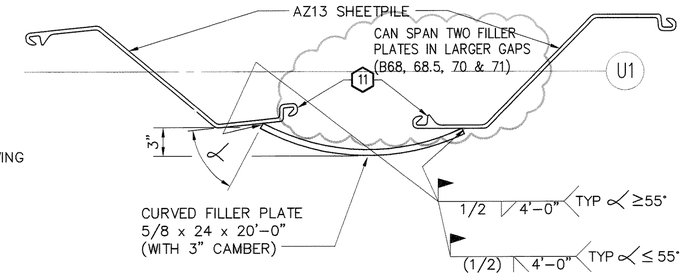
SCALE: 1"= 1'–0" — 1 S38, S39

* FOR ELECTRICAL UTILITY CONDUITS' GRID LOCATIONS AND SIZES, SEE DWG E12. FOR WATER, SEE C24 – C26



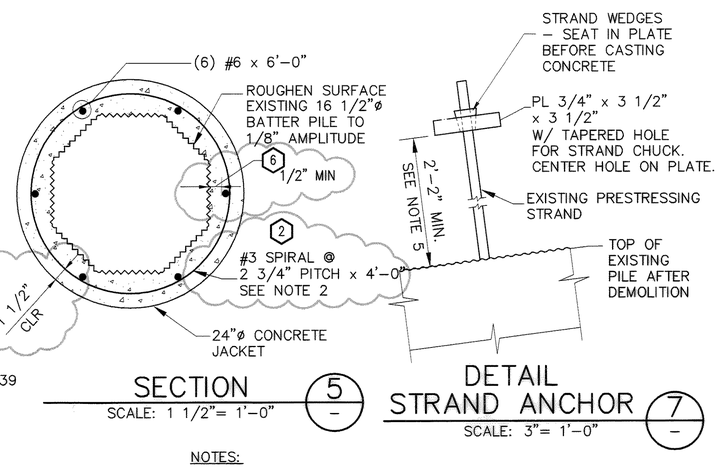
SECTION

SCALE: 3/8"= 1'–0" — 2 S38, S39



SHEET PILE FILLER PLATE – DETAIL

SCALE: 1 1/2"= 1'–0" — 3 S38, S39, S41

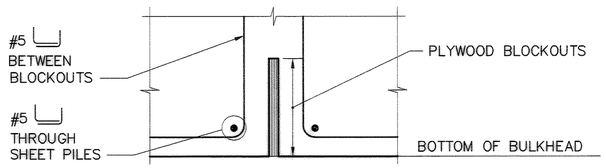


SECTION

SCALE: 1 1/2"= 1'–0" — 5 —

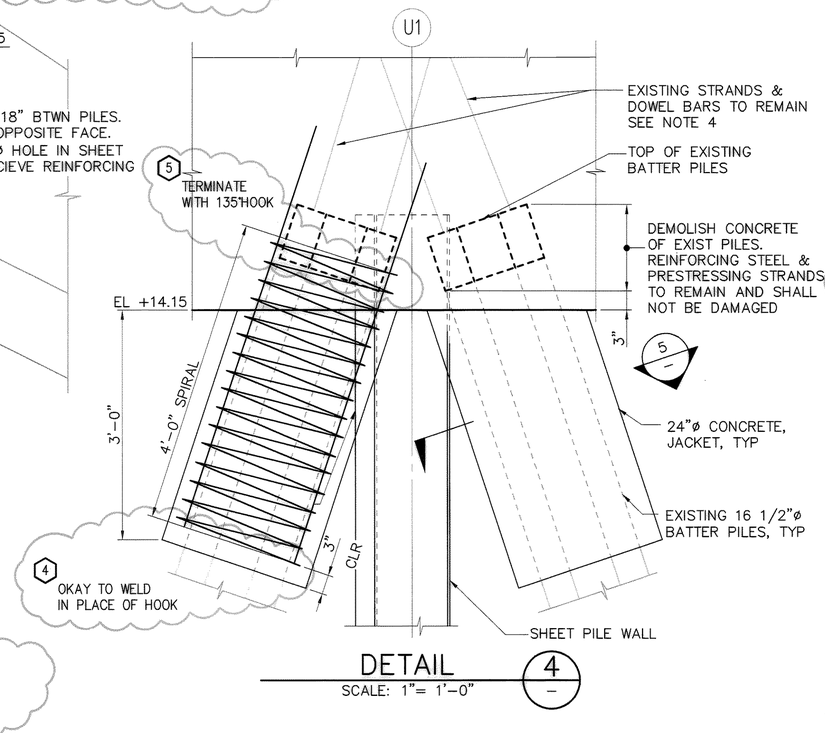
DETAIL STRAND ANCHOR

SCALE: 3"= 1'–0" — 7 —



SECTION

NTS — 6 —



DETAIL

SCALE: 1"= 1'–0" — 4 —

NOTES:

1. PLYWOOD BLOCKOUT LOCATED AS SHOWN IN PLANS. LONGITUDINAL REINFORCING IS NOT CONTINUOUS THROUGH BLOCKOUT.
2. TERMINATE SPIRAL WITH 1 1/2 FULL TURNS AND 135° HOOK TOP AND BOTTOM.
3. PROVIDE CONCRETE FILL AND CONCRETE DAM IN STEEL BATTER PILES PER 1 S43
4. THREE CASES ARE ANTICIPATED FOR THE EXISTING BATTER PILE CONNECTIONS:

   1 CASE 1: EXISTING STRANDS EXTEND FROM THE PILE. FOR THIS CASE STRANDS SHALL EXTEND A MINIMUM OF 45" INTO THE BULKHEAD.

   8 CASE 2: EXISTING STRAND AND EXISTING 6–#10 DOWELS EXTEND FROM PILE. FOR THIS CASE, STRANDS SHALL ALSO EXTEND A MINIMUM OF 45" INTO THE BULKHEAD.

   FOR CASES 1 AND 2, 3/4" STRAND ANCHOR PLATES AND WEDGES SHALL BE SUPPLIED AND INSTALLED PER DETAIL 7 ON SHEET S–40, WHERE EXISTING STRANDS EXTEND LESS THAN 45" INTO THE BULKHEAD BUT GREATER THAN 2'–2". FOR BIDDING PURPOSES, THE CONTRACTOR SHALL ASSUME A TOTAL OF 400 STRAND ANCHORS PLATES ARE REQUIRED. FOR THE CASE WHERE THE EXISTING STRAND EXTENSION IS LESS THAN 2'–2", THE CONTRACTOR SHALL SUPPLY AND INSTALL STRAND COUPLERS AND STRAND, AS SHOWN ON DETAIL 7 ON SHEET 67, AS REQUIRED TO EXTEND THE STRAND 45 INCHES. FOR BIDDING PURPOSES, THE CONTRACTOR SHALL ASSUME A TOTAL OF 300 STRAND COUPLERS AND ADDED STRAND ARE REQUIRED.

   CASE 3: EXISTING 6–#10 DOWELS EXTENDING FROM PILE. FOR THIS CASE, DOWELS SHALL EXTEND MINIMUM OF 60" INTO THE BULKHEAD. WHERE THE EXISTING #10 BAR EXTENSION IS LESS THAN 60 INCHES, ADDITIONAL #10 BARS SHALL BE MECHANICALLY SPLICED TO THE EXISTING BARS AS REQUIRED TO PROVIDE A 60 INCH EXTENSION. FOR BIDDING PURPOSES, THE CONTRACTOR SHALL ASSUME 300 MECHANICAL SPLICES AND ADDITIONAL BAR LENGTHS WILL BE REQUIRED.

1 5. ANY EXISTING STRANDS DAMAGED DURING DEMOLITION, SHALL BE REPAIRED BY THE CONTRACTOR PER DETAIL 7 SHOWN ON DRAWING S67 AT NO COST TO PORT.

2 RFI 027
3 RFI 030, SEE BACK OF S39.1
4 RFI 064
5 RFI 066
6 RFI 071A
7 RFI 086
8 RFI 107
9 RFI 108
10 RFI 115, SEE BACK OF S39.1
11 RFI 131
12 RFI 207, SEE BACK OF S39.1

MARK	REVISION	BY:	APPROVED:	DATE:
A	ADDENDUM 1: REVISED NOTES	MB	RKJ	8/1/03

PORT OF TACOMA P.O. BOX 1837
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APPROVED

CHIEF ENGINEER – DATE

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DRAWING DATE: 06/11/03
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CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING
BULKHEAD SECTIONS AND DETAILS EXISTING WHARF

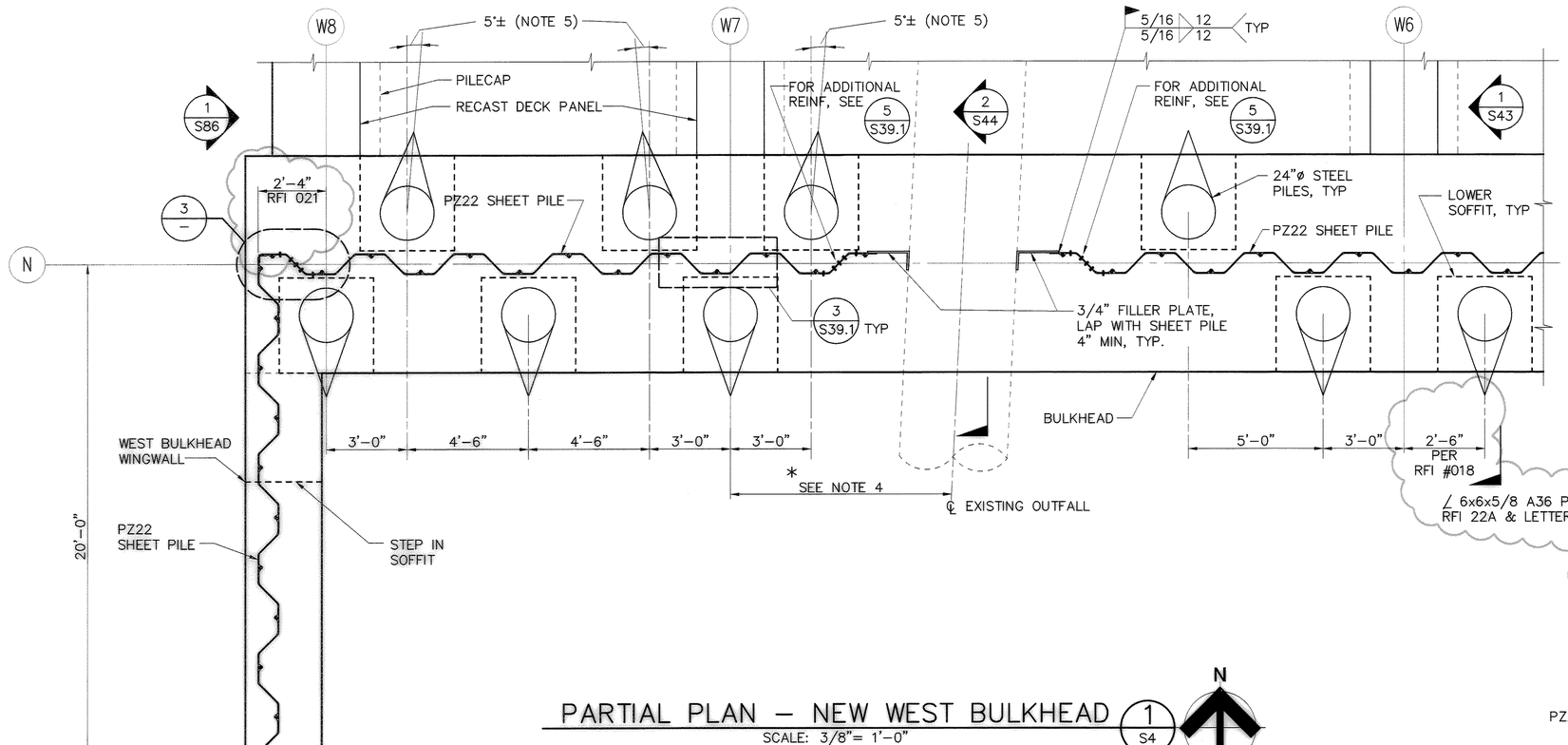
EP-~~5554-17~~

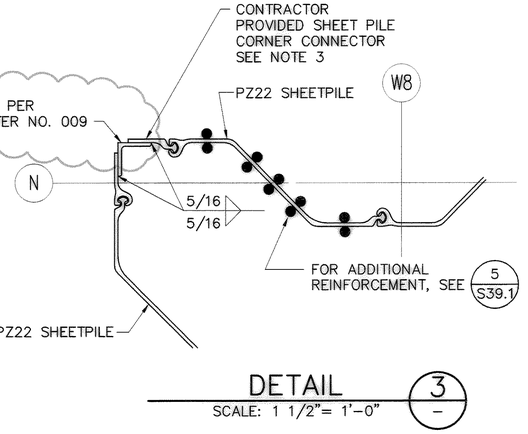
SHEET 77 OF 164

S40

6320-17

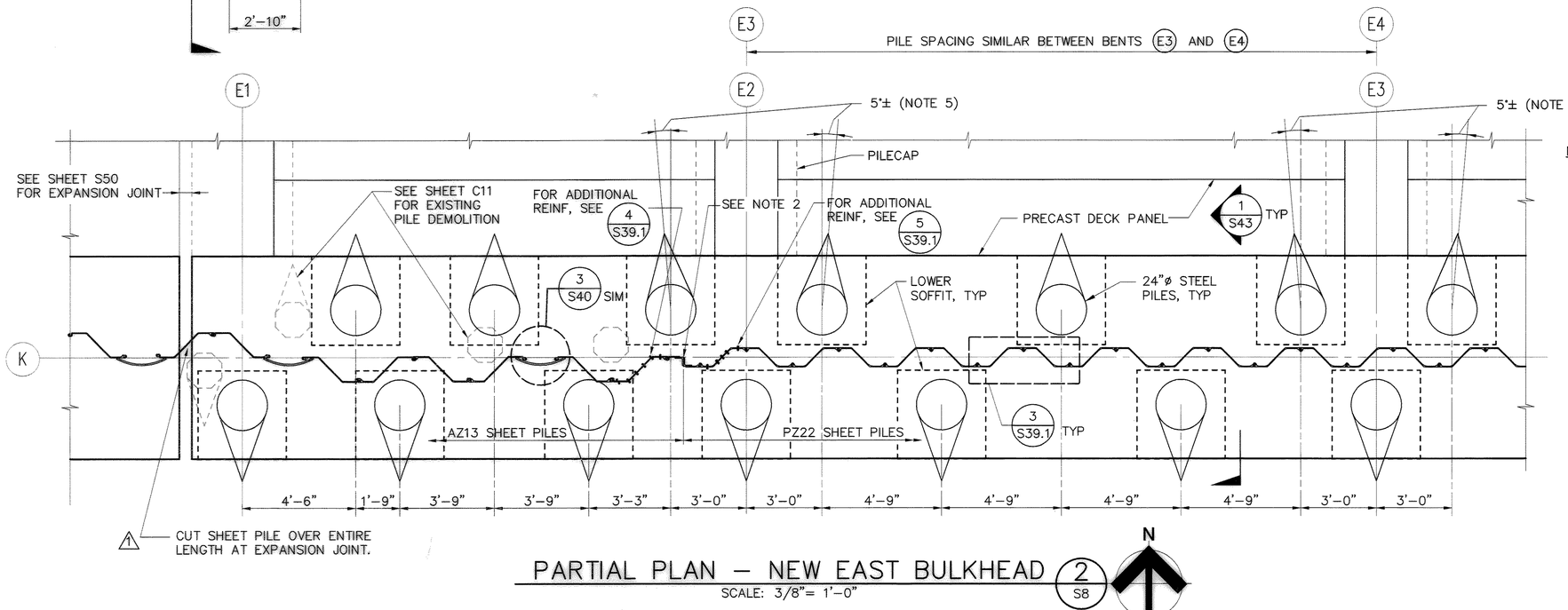
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PLOT SCALE 1=1
'PCP' FILE
PLOT VIEW
UPDATED BY RICKT
XREFS: P0122x34TB-KPFF,





PARTIAL PLAN – NEW WEST BULKHEAD (1 / S4)
SCALE: 3/8"= 1'-0"

DETAIL (3 / –)
SCALE: 1 1/2"= 1'-0"



PARTIAL PLAN – NEW EAST BULKHEAD (2 / S8)
SCALE: 3/8"= 1'-0"

NOTES:

1. SHEET PILING AT EXISTING PILING SHALL BE DRIVEN TO AVOID CONFLICTS WITH EXISTING PILING.
2. CONTRACTOR SHALL FABRICATE CONTINUOUSLY CONNECTED TRANSITION BETWEEN AZ AND PZ TYPE SHEET PILING.
3. SHEET PILE CORNER CONNECTORS SHALL BE PROVIDED. FABRICATED SHEET PILE SECTION OR CORNER CONNECTOR SHALL EXTEND FROM THE TOP OF THE SHEET PILE WALL DOWN TO BELOW ELEVATION –11.15.
4. DIMENSIONS AND LOCATION OF EXISTING OUTFALL SHALL BE FIELD MEASURED AND VERIFIED BY THE CONTRACTOR.
5. CONTRACTOR SHALL ALIGN PILES HORIZONTALLY AS REQUIRED TO AVOID INTERFERENCE WITH ALL PLUMB PILE AND BATTER PILE LOCATIONS.

MARK	REVISION	BY:	APPROVED:	DATE:
A	ADDENDUM 1: ADDED CALLOUT	MB	RKJ	8/1/03

PORT OF TACOMA U.S.A.

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Consulting Engineers
1601 Fifth Avenue, Suite 1600
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PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
PB 06/11/03 PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

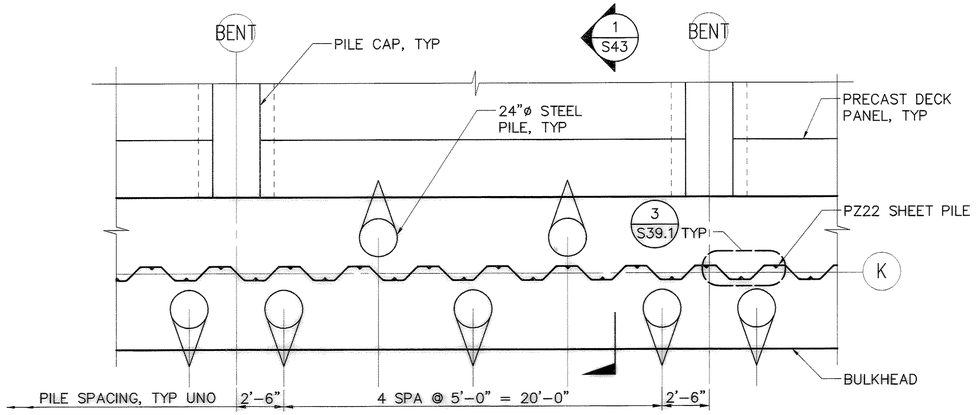
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
BULKHEAD PARTIAL PLANS
NEW WHARF - SHEET 1

SHEET 78 OF 164
S41
EP-~~5551-17~~

6320-17

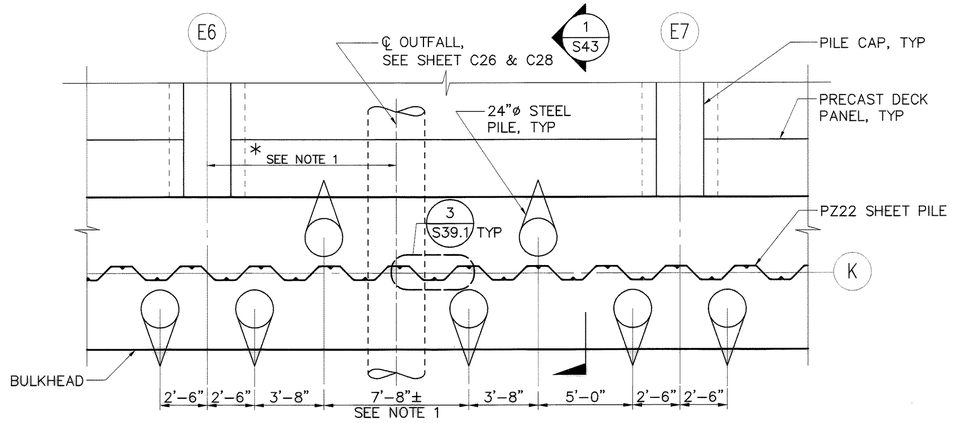
RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW
UPDATED BY RICKT



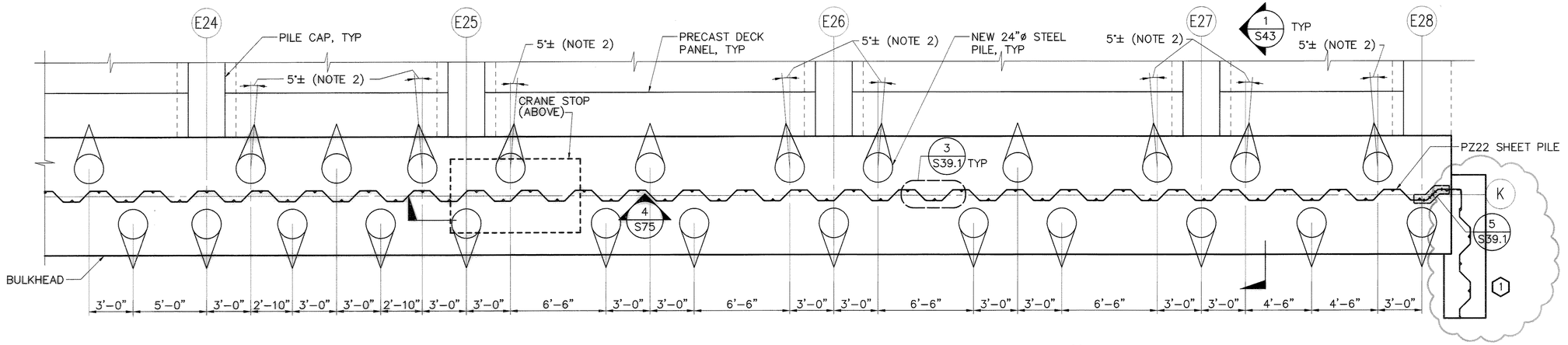
PARTIAL PLAN – TYPICAL NEW EAST BULKHEAD (1 / S8, S9)

SCALE: 1/4"= 1'-0"



PARTIAL PLAN – NEW EAST BULKHEAD AT OUTFALL (3 / S8)

SCALE: 1/4"= 1'-0"



PARTIAL PLAN – NEW EAST BULKHEAD (2 / S9)

SCALE: 1/4"= 1'-0"

NOTES:

1. LOCATE PILES TO CLEAR OUTFALL PIPE AND CONCRETE AROUND THE PIPE. CONTRACTOR SHALL FIELD MEASURE AND LOCATE OUTFALL. CONTRACTOR SHALL PROVIDE ALL SHORING AND DEWATERING AS REQUIRED TO CONSTRUCT THE OUTFALL.
2. CONTRACTOR SHALL ALIGN PILES HORIZONTALLY AS REQUIRED TO AVOID INTERFERENCE WITH ALL PLUMB PILE AND BATTER PILE LOCATIONS.

(1) RFP 13/CO #6: EAST RETURN WALL, SEE THE BACK OF S8.

MARK | REVISION | BY: | APPROVED: | DATE:

PORT OF TACOMA U.S.A.

kpff Consulting Engineers
601 Fifth Avenue, Suite 1600
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(206) 622-5822 Fax (206) 622-9301

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TACOMA, WA 98401 253-383-5841

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
BULKHEAD PARTIAL PLANS
NEW WHARF - SHEET 2

EP-~~5664-17~~

SHEET 79 OF 164

S42

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
KN 06/11/03
PROJECT ENGR – DATE

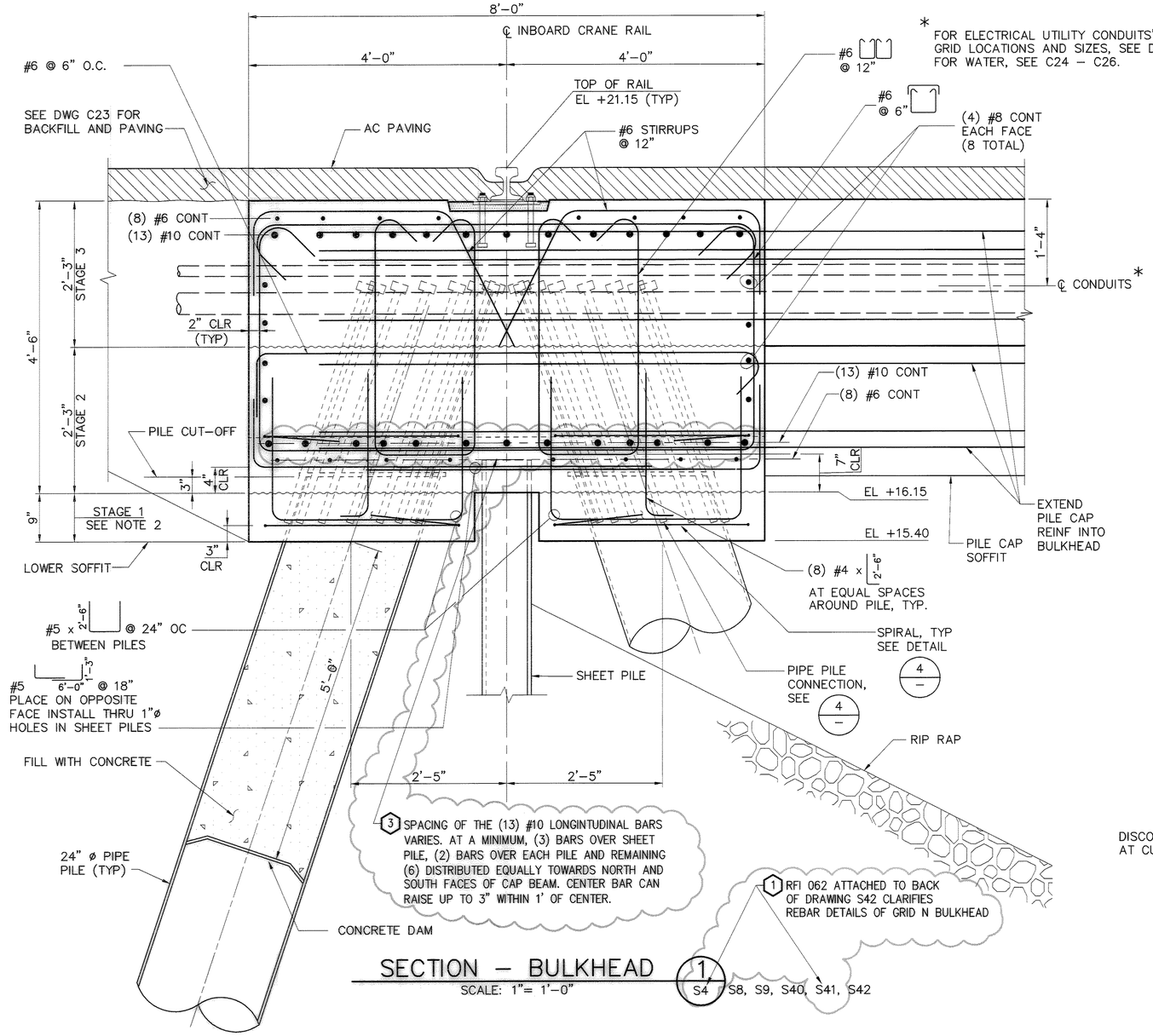
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DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

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UPDATED BY RICKT
XREFS: P0T22x341B-KPFF,
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW



* FOR ELECTRICAL UTILITY CONDUITS' GRID LOCATIONS AND SIZES, SEE DWG E12. FOR WATER, SEE C24 – C26.

SECTION – BULKHEAD 1/S4

SCALE: 1"= 1'-0"

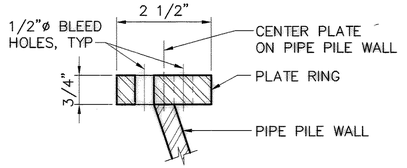
S8, S9, S40, S41, S42

NOTES:

1. ALIGN PIPE PILE REINFORCING TO ALLOW FOR PLACEMENT OF BULKHEAD REINFORCING.
2. STAGE 1 CONCRETE SHALL BE 3'-6" LONG x 3'-6" WIDE AT EACH PILE. STAGE 1 MAY BE CAST AT SAME TIME AS STAGE 2 WITHOUT A CONSTRUCTION JOINT. STAGE 1 MAY BE CAST AGAINST SHEET PILE AT CONTRACTORS OPTION.
3. SPIRAL SHALL BE W10 x 3'-0"ø @ 3" PITCH. EXTEND SPIRAL ABOVE BULKHEAD BOTTOM LONGITUDINAL REINFORCEMENT. TERMINATE SPIRAL AT TOP AND BOTTOM WITH 1 1/2 FULL TURNS.

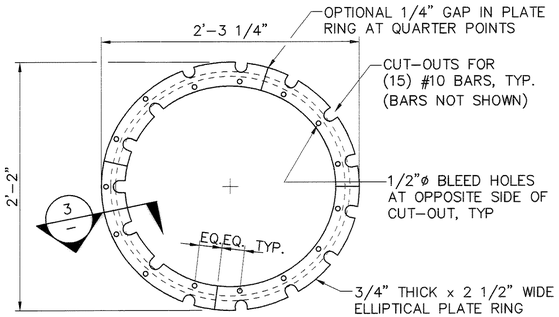
2 SPIRAL REPLACED WITH #3 REBAR @ 2 3/4" PITCH. SPIRAL INSTALLED AS (2) PIECES SEPARARTED BY CAP BOTTOM LONGITUDINAL REBAR

1 RFI 062
2 RFI 087
RFI 111, BACK OF S42.
3 RFI 086
RFI 129, SEE BACK S42.
4 RFI 114



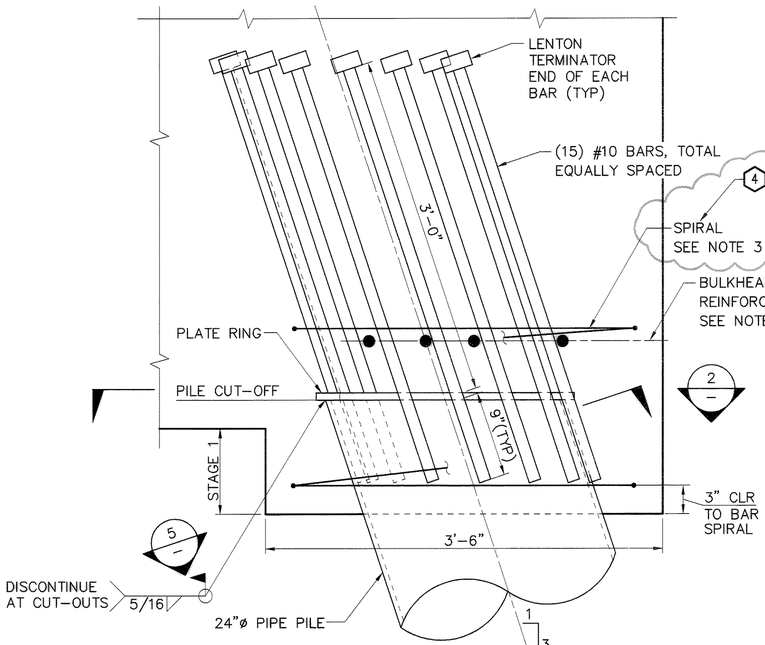
SECTION 3/-

SCALE: 1"= 2"



SECTION 2/-

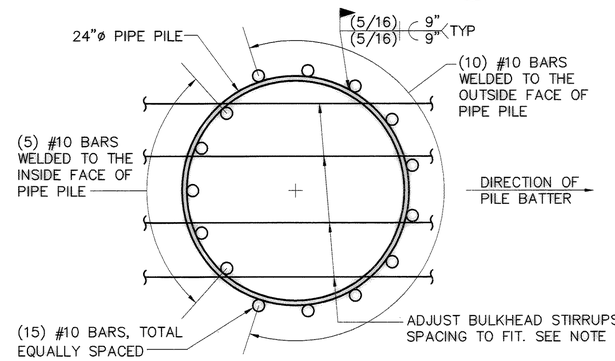
SCALE: 1 1/2"= 1'-0"



DETAIL 4/-

SCALE: 1 1/2"= 1'-0"

S38, S40



SECTION 5/-

SCALE: 1 1/2"= 1'-0"

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

PORT OF TACOMA U.S.A.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	CHECKED BY – DATE	06/11/03
KN	PROJECT ENGR – DATE	06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
BULKHEAD SECTIONS AND DETAILS
SHEET 1

EP-5551-17

CONTRACT NUMBER: 9981-49

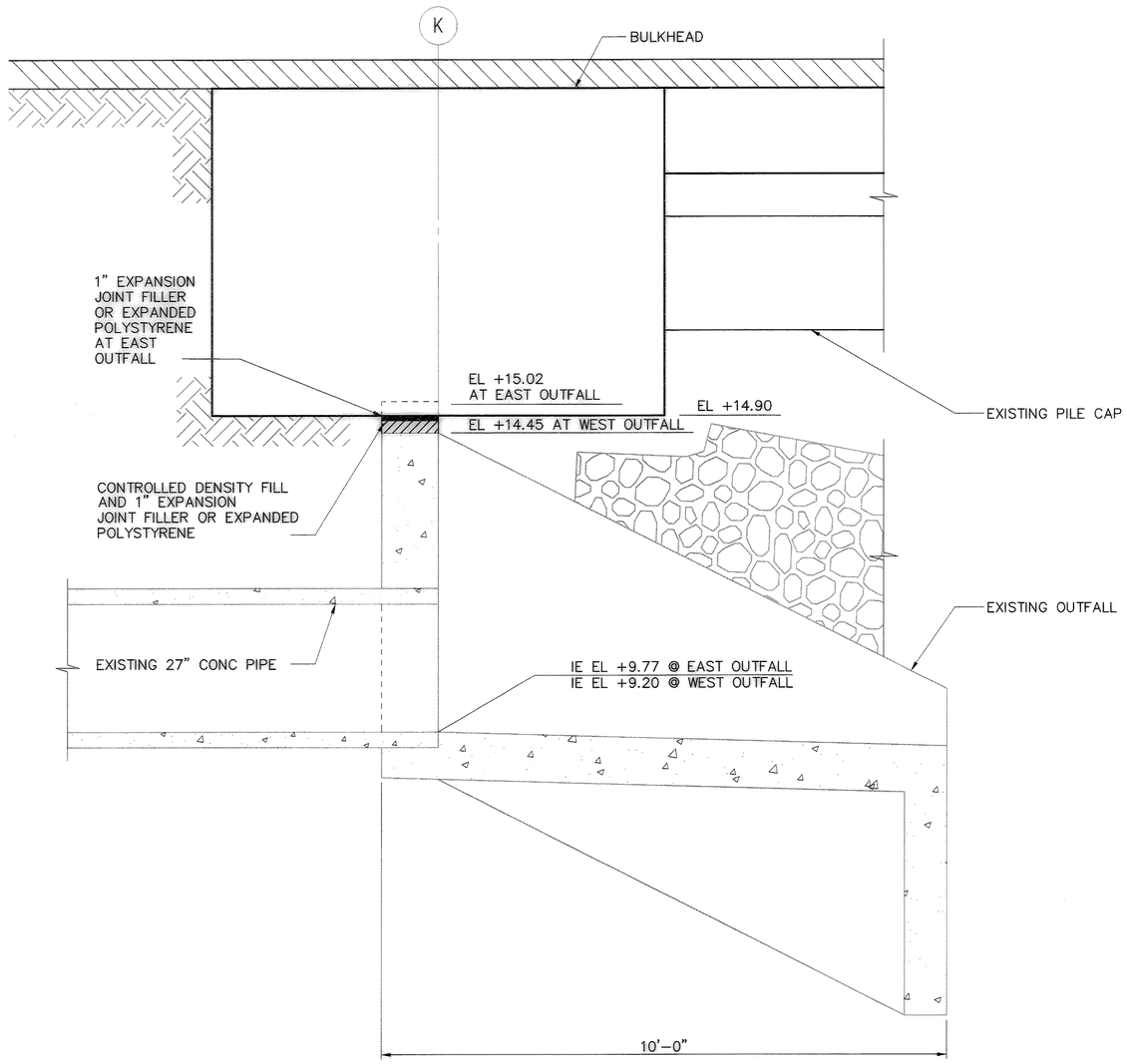
E NUMBER: E1972

S43

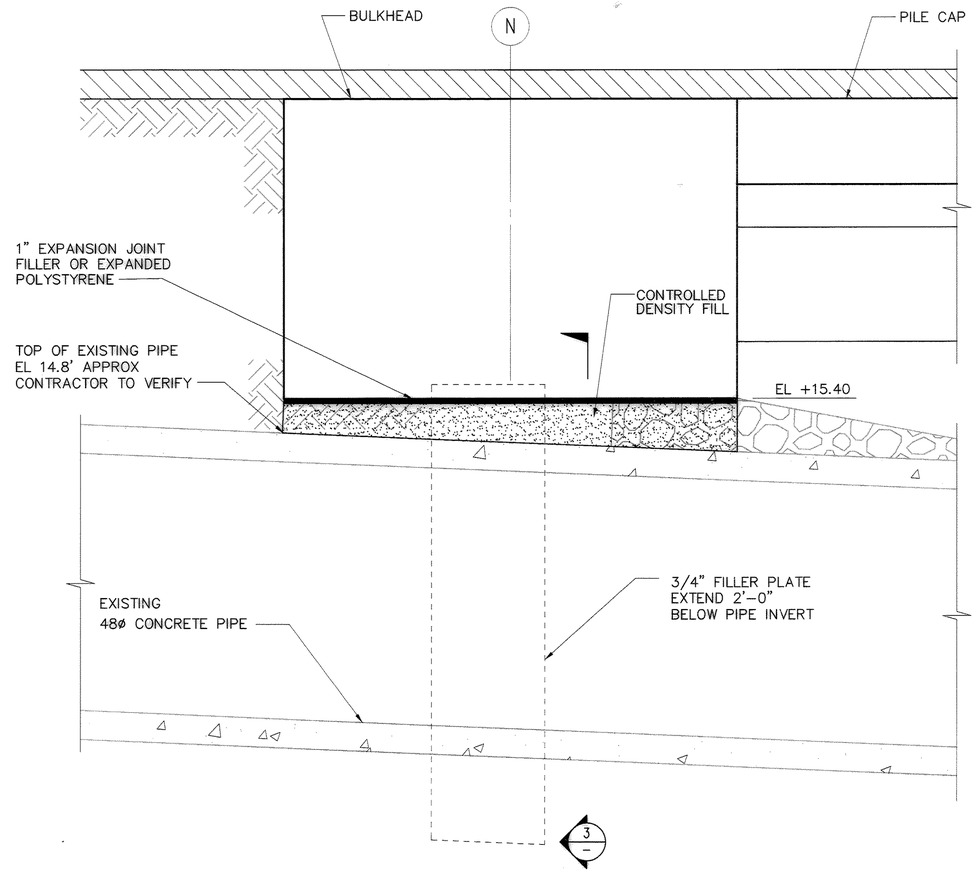
SHEET 80 OF 164

6320-17

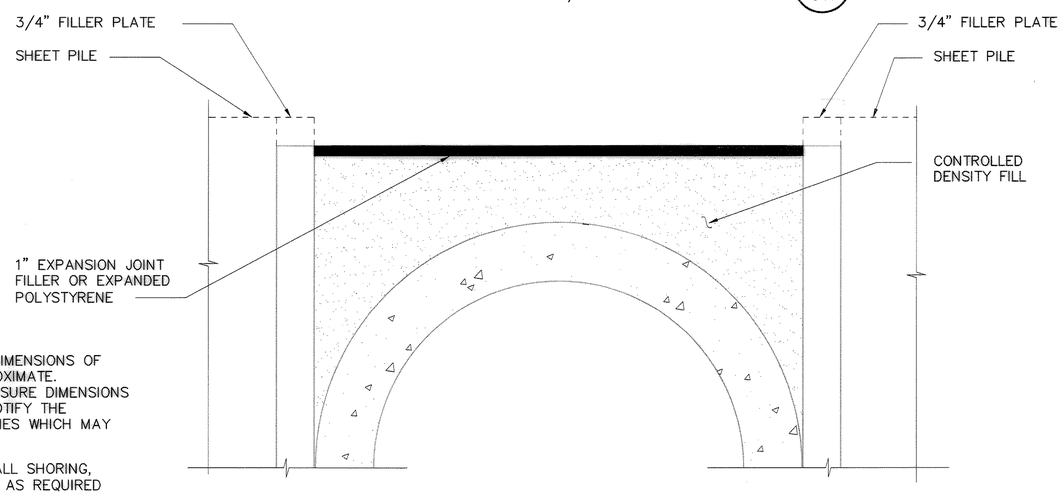
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UPDATED BY RICKT
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW
XREFS: POT22x34TB-KPFF.



SECTION – STORM OUTFALL (1 / S39)
SCALE: 3/4"= 1'-0"



SECTION – ERDAHL DITCH OUTFALL (2 / S41)
SCALE: 3/4"= 1'-0"



SECTION (3 / –)
SCALE: 1 1/2"= 1'-0"

NOTES:

1. ELEVATIONS, LOCATIONS AND DIMENSIONS OF EXISTING OUTFALLS ARE APPROXIMATE. CONTRACTOR SHALL FIELD MEASURE DIMENSIONS OF EXISTING OUTFALLS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES WHICH MAY AFFECT THE CONSTRUCTION.
2. CONTRACTOR SHALL PROVIDE ALL SHORING, COFFERDAMS AND DEWATERING AS REQUIRED TO COMPLETE THE WORK.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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MARK	REVISION	BY:	APPROVED	DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE

KN 06/11/03
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
BULKHEAD SECTIONS AND DETAILS
SHEET 2

EP-~~5591-17~~

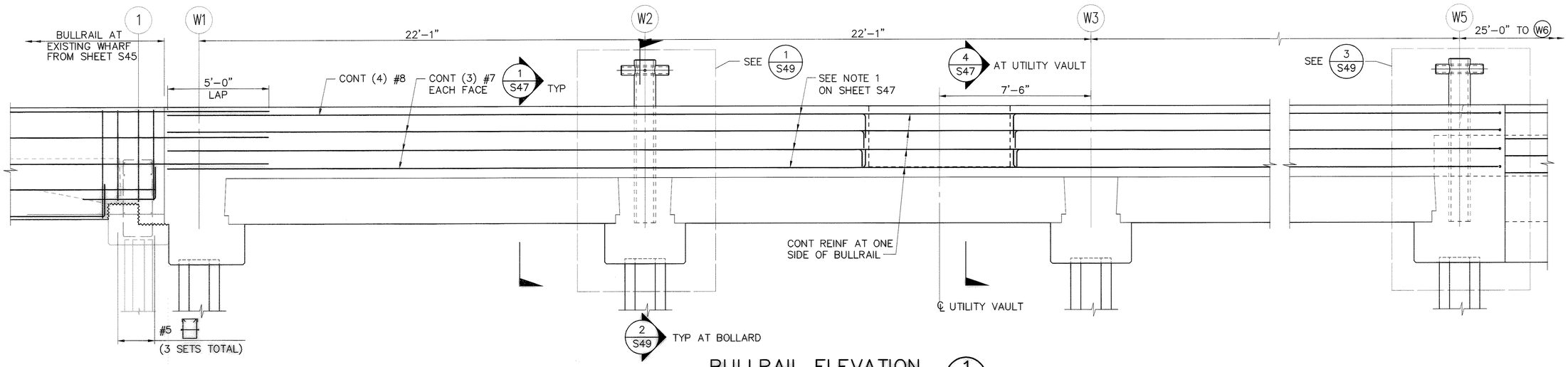
S44

SHEET 81 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

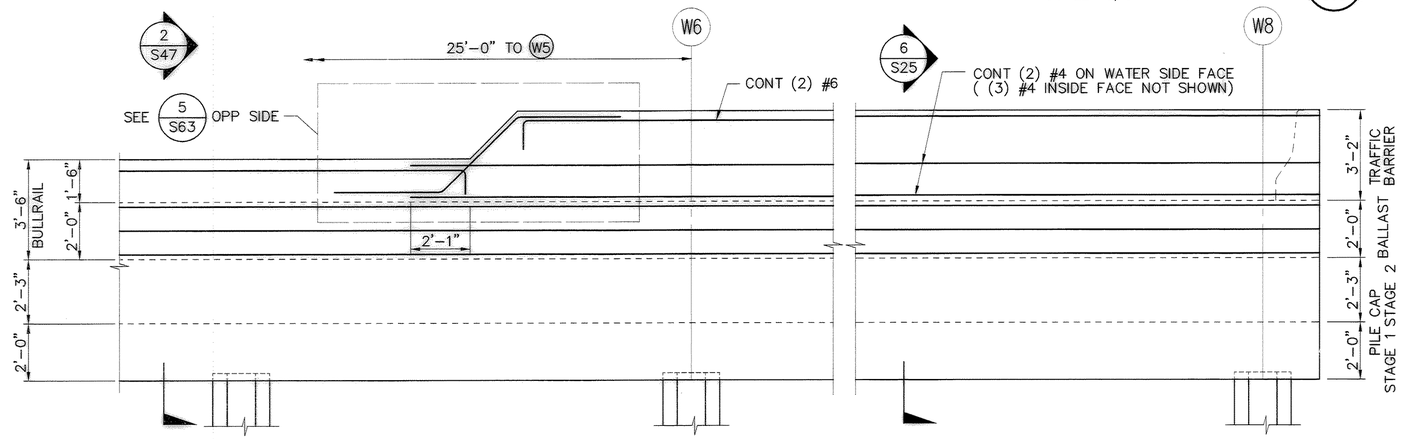
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UPDATED BY RICKI
PLOT SCALE 1=1
'PCP' FILE
PLOT VIEW
XREFS: P0122x34TB-KPFF,



BULLRAIL ELEVATION

SCALE: 3/8"= 1'-0"

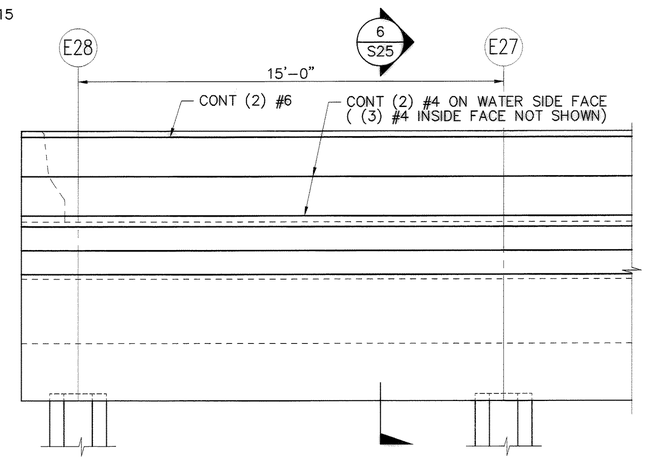
1 S10, S14 & S15



BULLRAIL & TRAFFIC BARRIER ELEVATION

SCALE: 3/8"= 1'-0"

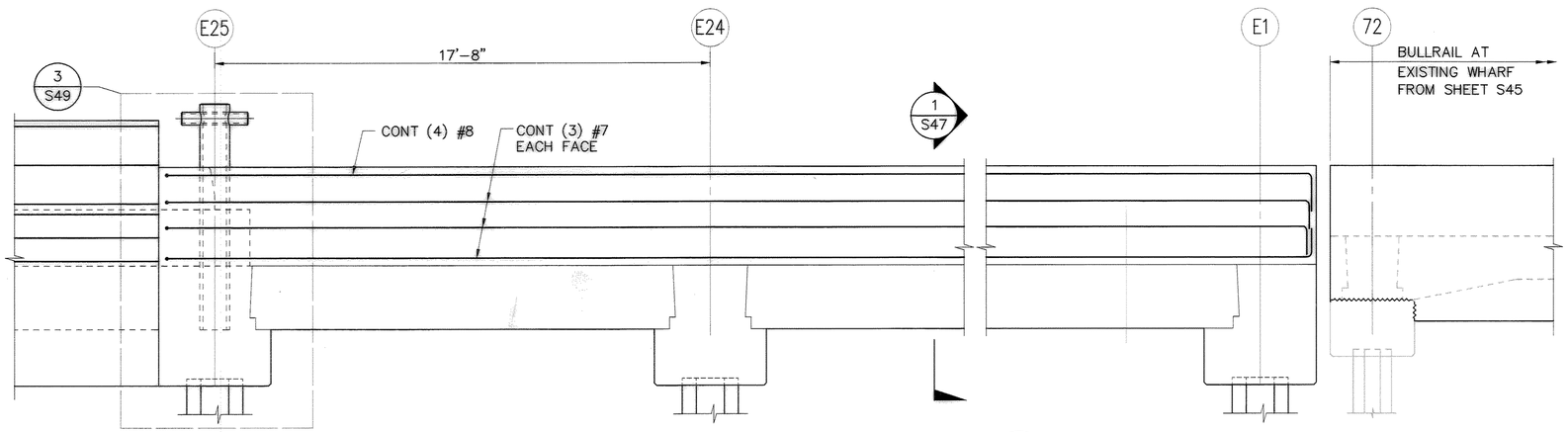
1 S10, S14 & S15



TRAFFIC BARRIER ELEVATION

SCALE: 3/8"= 1'-0"

1 S10, S14 & S15



BULLRAIL & TRAFFIC BARRIER ELEVATION

SCALE: 3/8"= 1'-0"

1 S10, S14 & S15

NOTES:

1. FOR STIRRUP REINFORCING SEE 1 S47

PORT OF TACOMA U.S.A.

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(206) 622-5822 Fax (206) 622-8130

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	CHECKED BY – DATE	06/11/03
KN/ML	PROJECT ENGR.– DATE	06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ.: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
BULLRAIL ELEVATION
NEW WHARF

CONTRACT NUMBER: 9981-49
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~5531-17~~

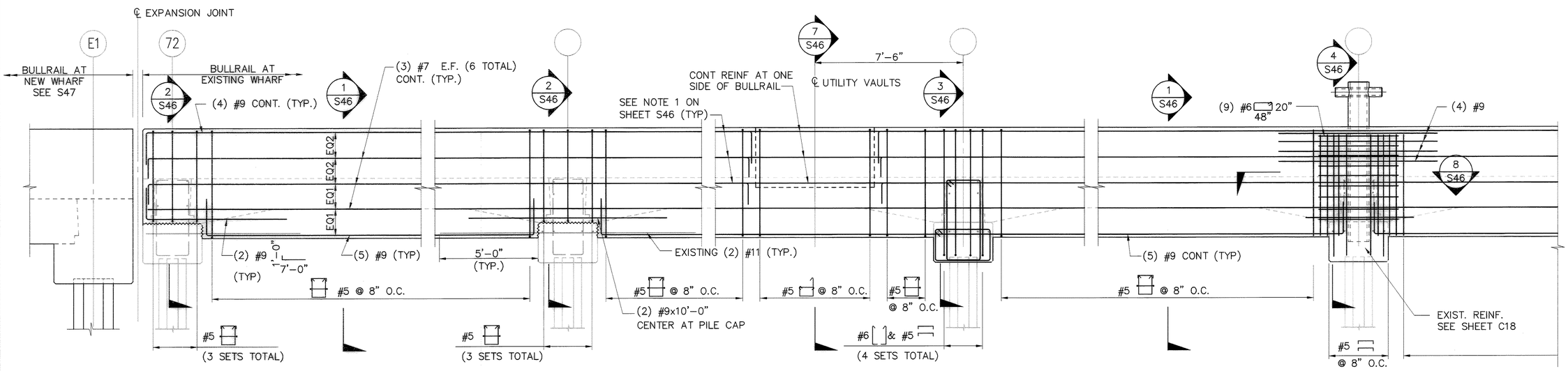
S45.1

SHEET 83 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

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UPDATED BY RICKT
PLOT SCALE 1=1
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PLOT VIEW
XREFS: POT22x34TB-KPFF,

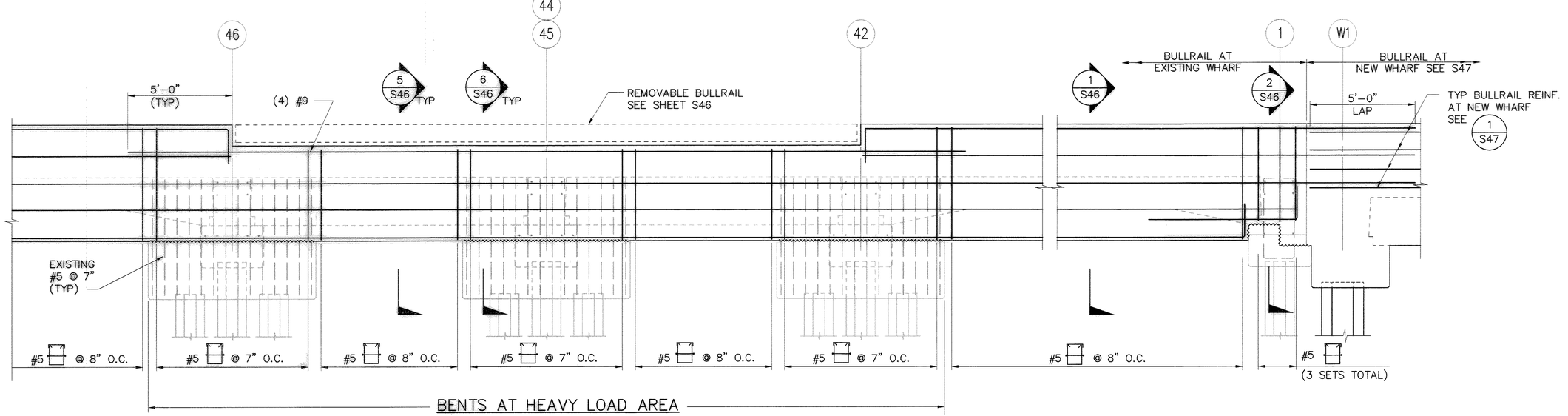


END BENT — TYPICAL BENT — TYPICAL BENT WITH NEW PILE CAP — TYPICAL BENT WITH NEW BOLLARD

BULLRAIL ELEVATION

SCALE: 3/8"= 1'-0"

1 / S10 THRU S14



BULLRAIL ELEVATION

SCALE: 3/8"= 1'-0"

1 / S10 THRU S14

FILE PATH & NAME: L:\102349 (PIERCE COUNTY TERMINAL)\RECORD DRAWINGS\E1972S45.DWG
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XREFS: POT22x34TB-KPFF.
UPDATED BY: BRUCEA
PLOT SCALE: 1=1
'PCP' FILE: ---
PLOT VIEW: ---

MARK | REVISION | BY: | APPROVED | DATE:

PORT OF TACOMA
USA

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TACOMA, WA 98401 253-383-5841

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
KN/ML PROJECT ENGR – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
BULLRAIL ELEVATION
EXISTING WHARF

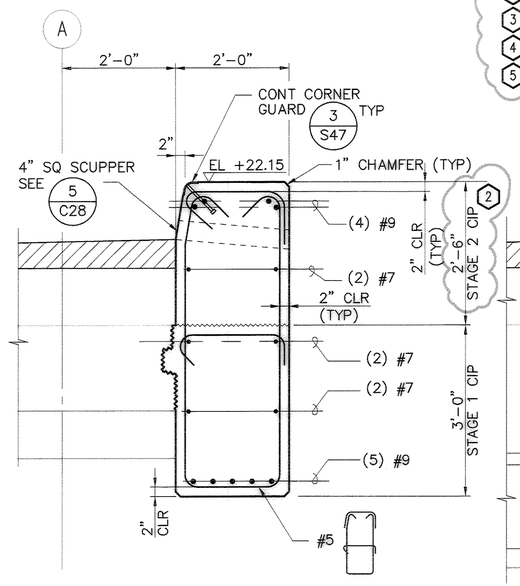
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E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~5551-17~~
SHEET 82 OF 164
S45

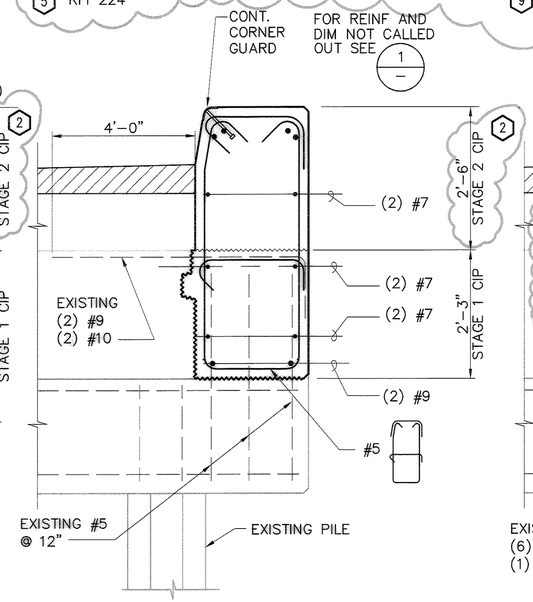
6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

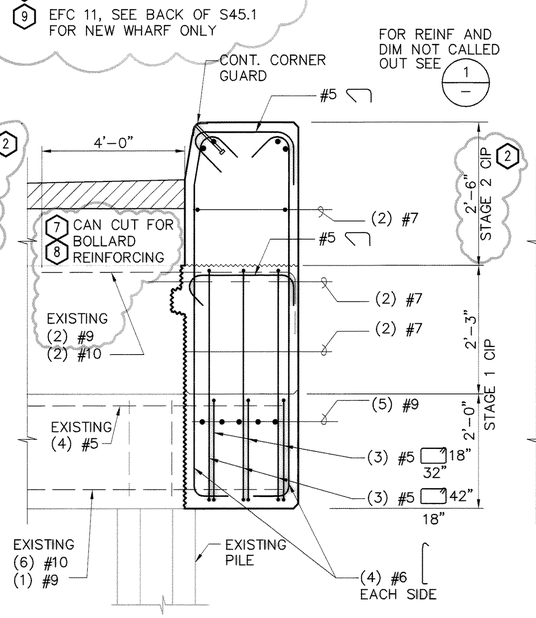
2 RFI 060
3 RFI 116, SEE BACK OF S46 FOR BOLLARD REINFORCING
4 RFI 138, SEE BACK OF S45.1
5 RFI 224
6 RFI 141–A, SEE BACK OF S45.1
7 EFC 5
8 EFC 6
9 EFC 11, SEE BACK OF S45.1 FOR NEW WHARF ONLY



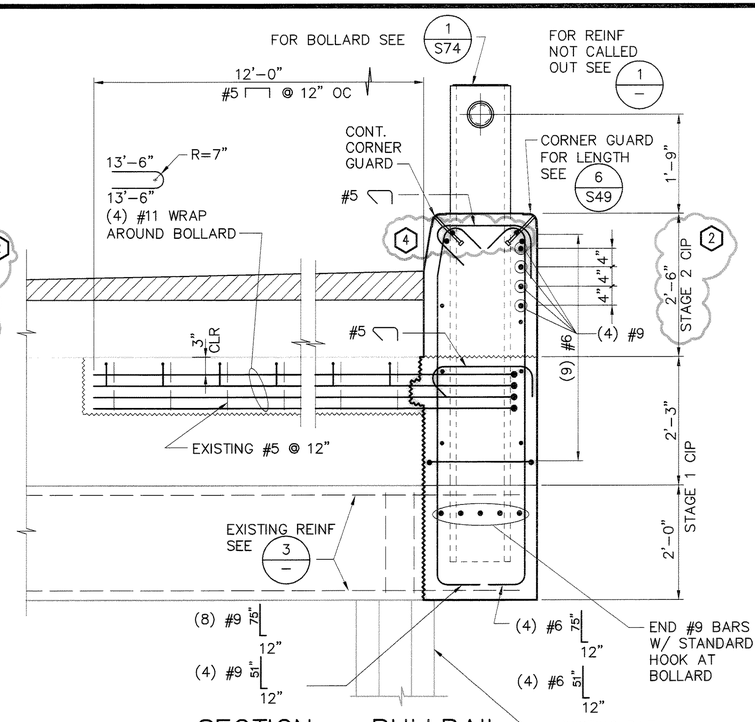
SECTION – TYPICAL BULLRAIL
SCALE: 3/4"= 1'–0"
1 S45



SECTION – BULLRAIL AT TYPICAL BENT
SCALE: 3/4"= 1'–0"
2 S45

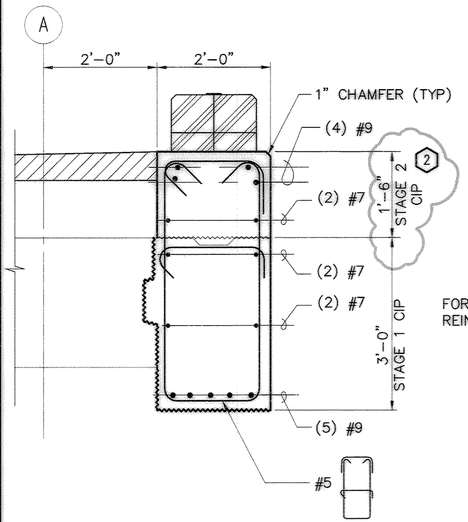


SECTION – BULLRAIL AT BENT WITH DEMOLISHED PILE CAP
SCALE: 3/4"= 1'–0"
3 S45

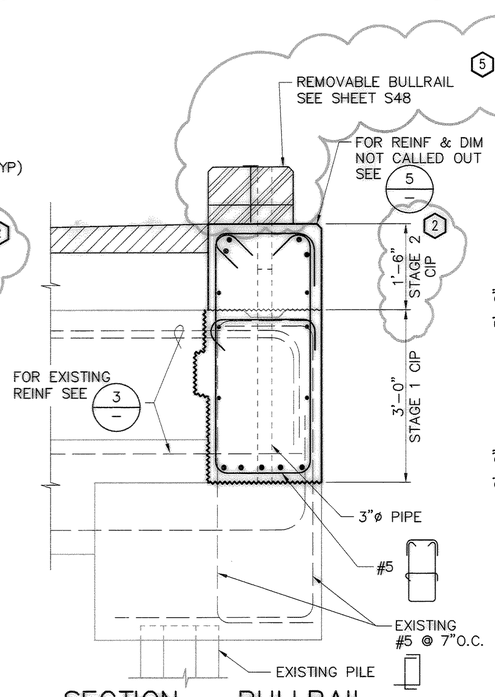


SECTION – BULLRAIL WITH BOLLARD
SCALE: 3/4"= 1'–0"
4 S45

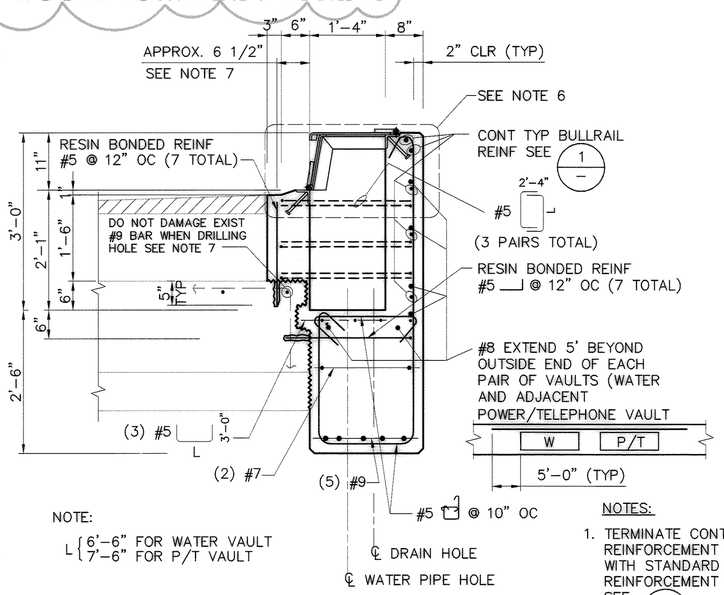
7 BOLLARD AT BENT 65, SEE BACK OF S45.1



SECTION – BULLRAIL AT HEAVY LOAD ZONE
SCALE: 3/4"= 1'–0"
5 S45

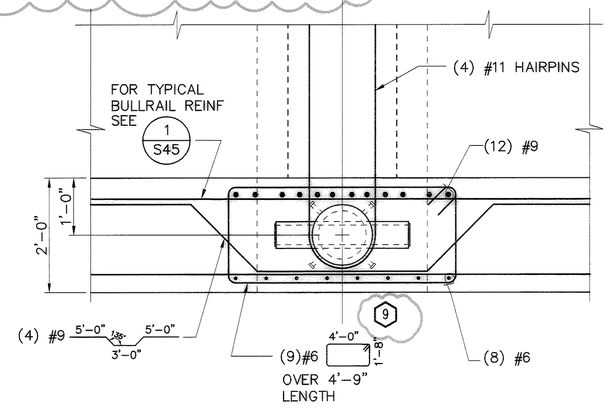


SECTION – BULLRAIL AT HEAVY LOAD ZONE
SCALE: 3/4"= 1'–0"
6 S45



NOTE:
L { 6'–6" FOR WATER VAULT
7'–6" FOR P/T VAULT

SECTION – BULLRAIL AT UTILITY VAULT
SCALE: 3/4"= 1'–0"
7 S45



PLAN – BULLRAIL AT BOLLARD
SCALE: 3/4"= 1'–0"
8 S45

NOTES:
1. TERMINATE CONTINUOUS BULLRAIL REINFORCEMENT INTERRUPTED AT VAULTS WITH STANDARD HOOKS. FOR ADDITIONAL REINFORCEMENT AND UTILITY PENETRATION SEE. 7 –
2. SEE ELECTRICAL AND CIVIL DRAWINGS FOR UTILITY PENETRATIONS.
3. DETAILS FOR BOLLARD SEE 1 S74
4. FOR EXISTING REINFORCEMENT NOT SHOWN OR NOT CALLED OUT. SEE SHEETS C15, C16, C17 & C18
5. FOR TYP. CONT. CORNER GUARD SEE 3 S47 UNLESS OTHERWISE CALLED OUT.
6. FOR UTILITY VAULT DETAILS SEE SHEET S71.
7. DETERMINE LOCATION OF EXIST #9 BAR IN P/C PANEL BEFORE DRILLING.

PORT OF TACOMA U.S.A.
kpff Consulting Engineers 601 Fifth Avenue, Suite 600 Seattle, Washington 98101 (206) 622-3822 Fax (206) 622-9130
PORT OF TACOMA P.O. BOX 1837 TACOMA, WA 98401 253-383-5841

MARK | REVISION | BY: | APPROVED | DATE:

APPROVED
CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:
RKJ 06/11/03 CHECKED BY – DATE
KN/ML 06/11/03 PROJECT ENGR.– DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
BULLRAIL SECTIONS AND DETAILS
EXISTING WHARF

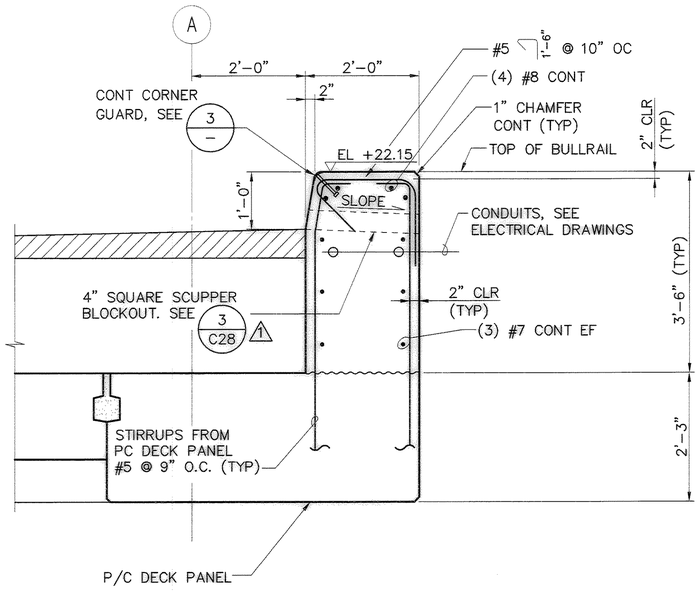
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DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

EP-~~551-17~~
SHEET 84 OF 164
S46
6320-17

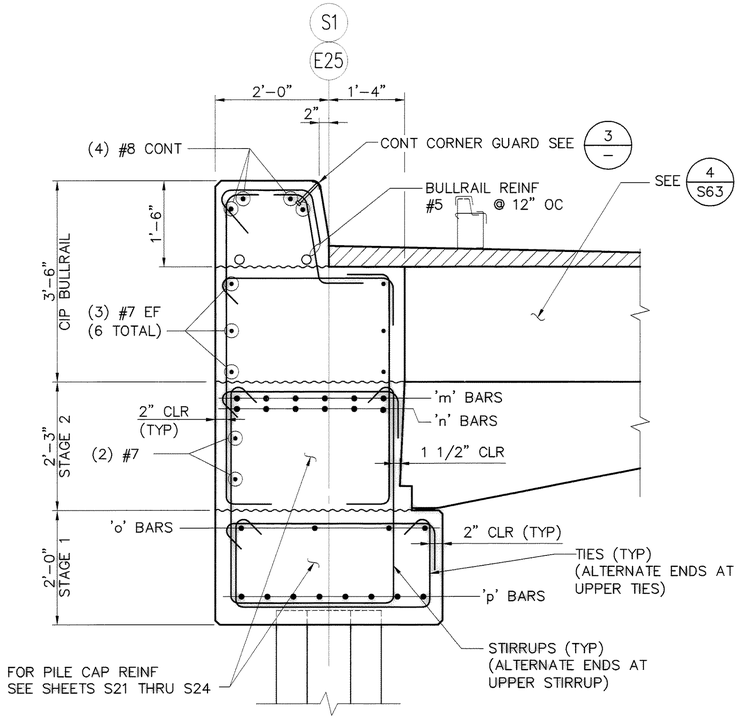
RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G0

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UPDATED BY RICKT | PLOT SCALE 1=1 | 'PCP' FILE --- | PLOT VIEW
XREFS: POT22X34TB-KPFF,



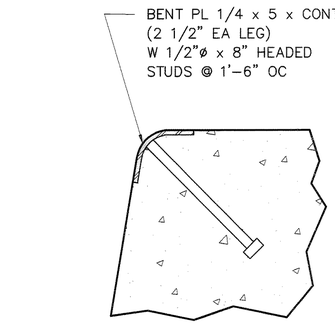
SECTION – TYPICAL BULLRAIL 1/S10

SCALE: 3/4"= 1'-0"



SECTION – BULLRAIL AT BENT S1 & E25 2/S10, S15

SCALE: 3/4"= 1'-0"

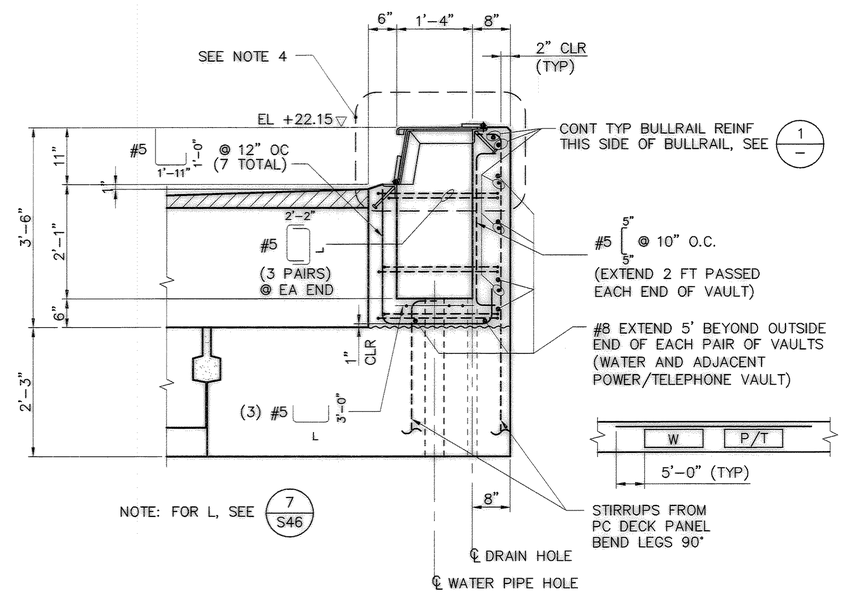


CORNER GUARD DETAIL 3/—

SCALE: 3"= 1'-0"

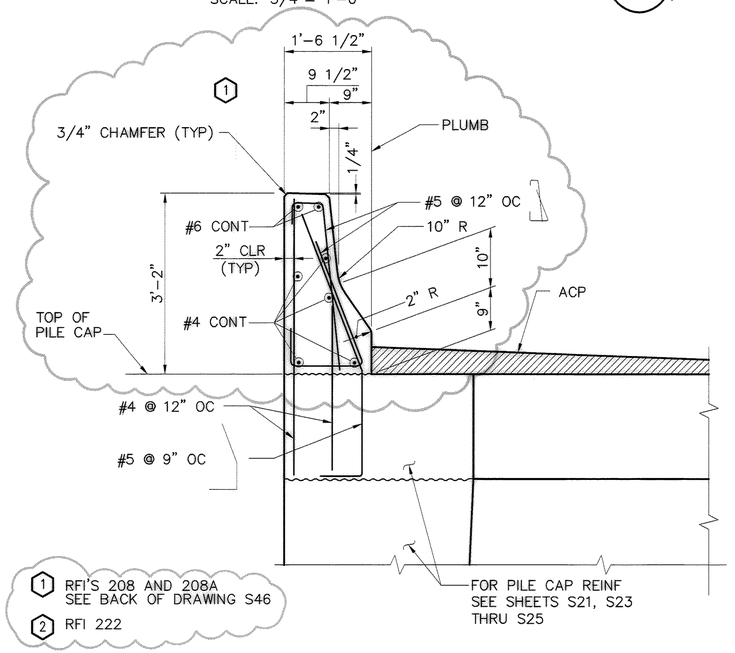
NOTES:

1. TERMINATE CONTINUOUS BULLRAIL REINFORCEMENT INTERRUPTED AT VAULTS AND END OF BULLRAIL WITH STANDARD HOOKS. FOR ADDITIONAL REINFORCEMENT AT VAULT , SEE 4/—
2. SEE ELECTRICAL AND CIVIL DRAWINGS FOR UTILITY PENETRATIONS.
3. FOR ADDITIONAL REINF AT BOLLARDS SEE SHEET S49.
4. FOR UTILITY VAULT DETAILS SEE SHEET S71.



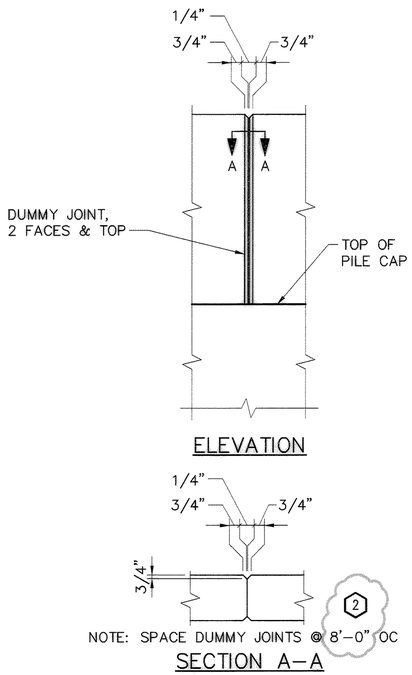
SECTION – BULLRAIL AT UTILITY VAULTS 4/—

SCALE: 3/4"= 1'-0"



SECTION – TRAFFIC BARRIER 5/—

SCALE: 3/4"= 1'-0"



DETAIL – TRAFFIC BARRIER JOINT 6/—

SCALE: 3/4"= 1'-0"

6320-17

PORT OF TACOMA U.S.A.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff
Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
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MARK	REVISION	BY:	APPROVED:	DATE:
1	ADDENDUM 1: REVISED CALLOUT	MB	RKJ	8/1/03

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	06/11/03	CHECKED BY – DATE
ML	06/11/03	PROJECT ENGR.– DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ.: VERT.:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
BULLRAIL SECTIONS AND DETAILS
NEW WHARF

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

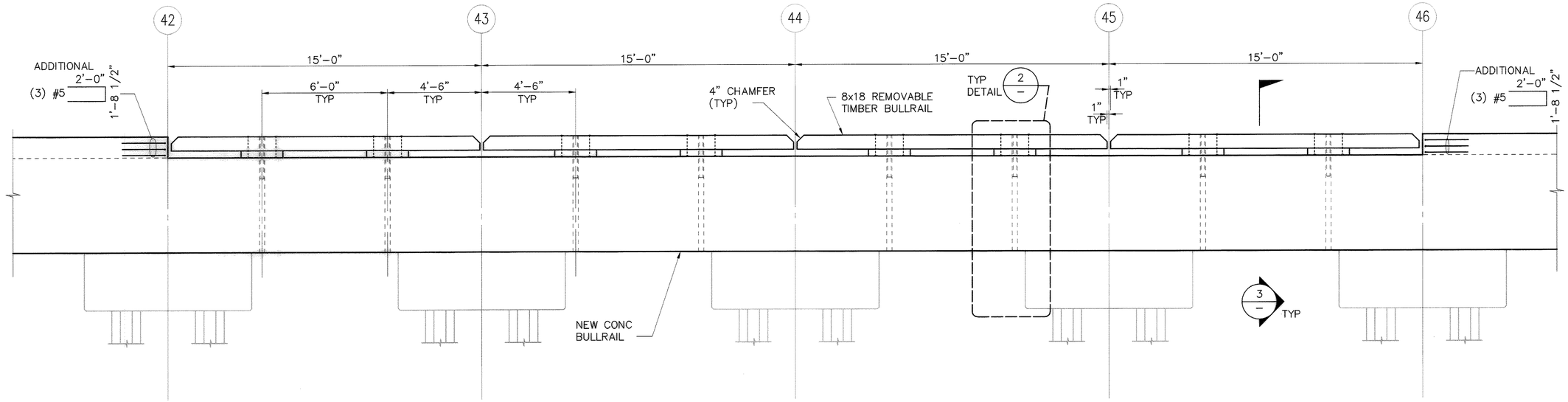
EP-553147

S47

SHEET 85 OF 164

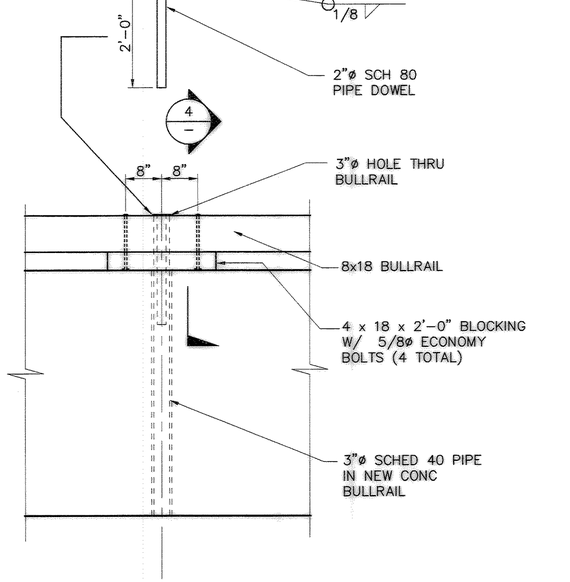
RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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PLOT SCALE 1=1 | 'PCP' FILE --- | PLOT VIEW
XREFS: P0122x34TB-KPFF.



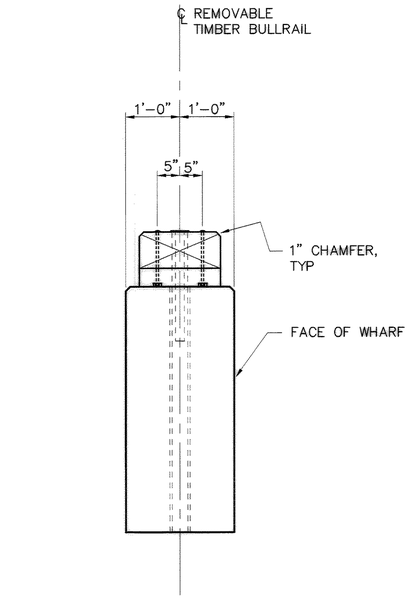
ELEVATION – REMOVABLE BULLRAIL AT HEAVY LOAD AREA 1

SCALE: 3/8"= 1'-0"



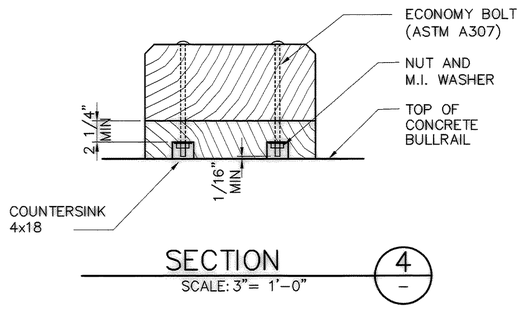
TYP DETAIL 2

SCALE: 1-1/2"= 1'-0"



SECTION – TIMBER 3

SCALE: 1-1/2"= 1'-0"



SECTION 4

SCALE: 3"= 1'-0"

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
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MARK	REVISION	BY:	APPROVED	DATE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
REMOVABLE BULLRAIL DETAILS
EXISTING WHARF

EP-~~5551.17~~

S48

SHEET 86 OF 164

APPROVED

CHIEF ENGINEER – DATE

RKJ	CHECKED BY –	06/11/03 DATE
KN/ML	PROJECT ENGR –	06/11/03 DATE

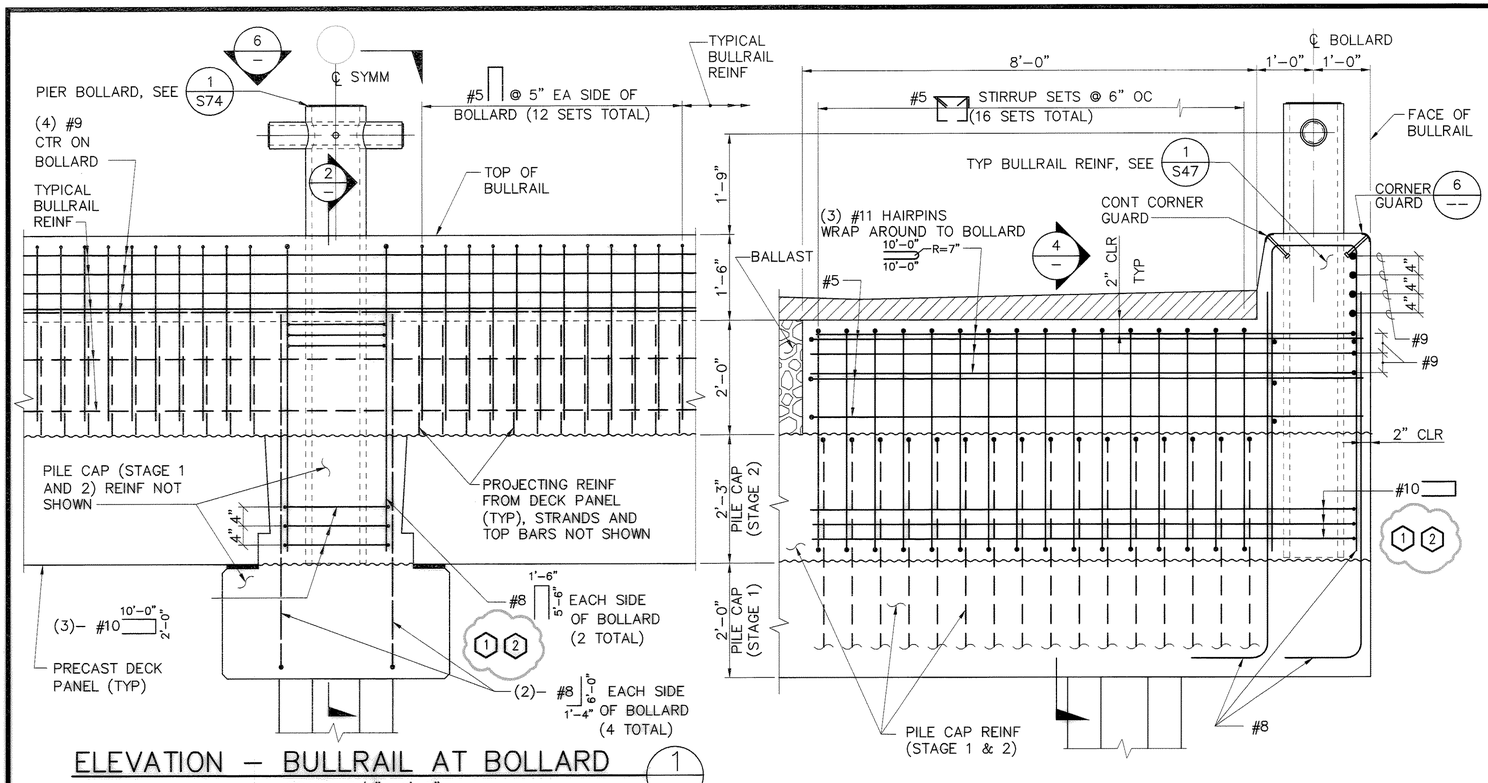
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

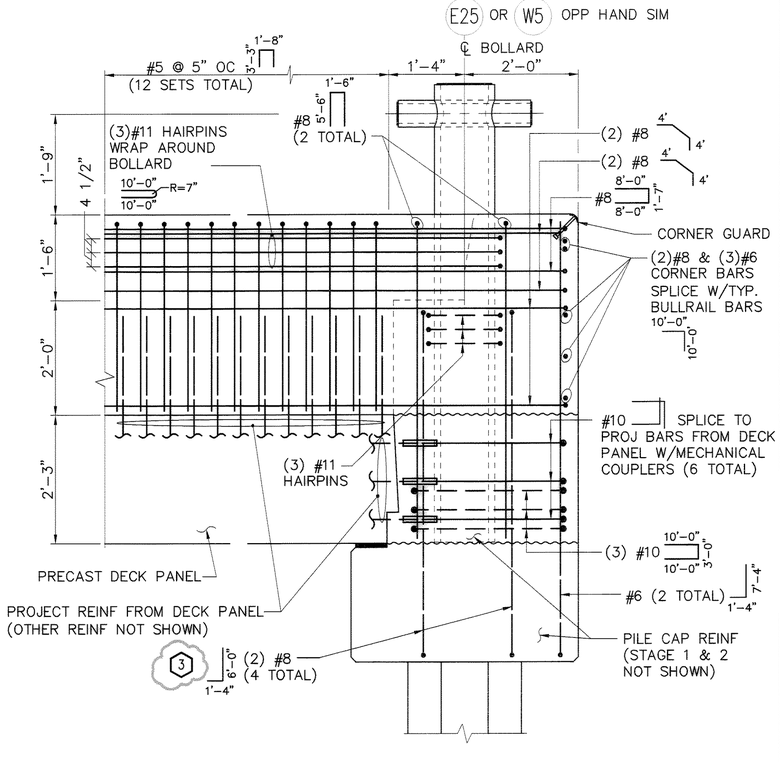
6320-17

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XREFS: PO122x34TB-KPFF,
PLOT SCALE 1=1 | 'PCP' FILE --- | PLOT VIEW



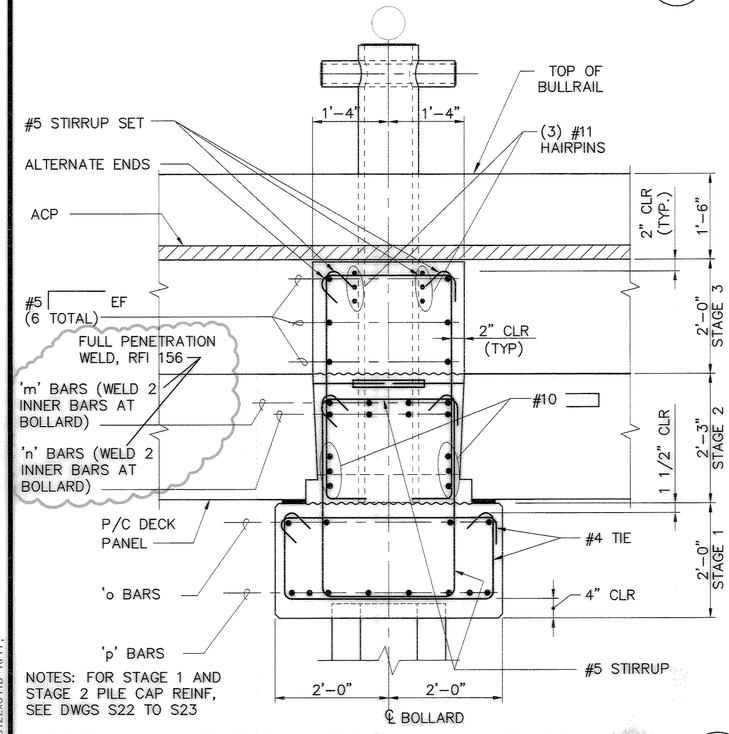
ELEVATION – BULLRAIL AT BOLLARD 1 —

SCALE: 3/4"= 1'–0"



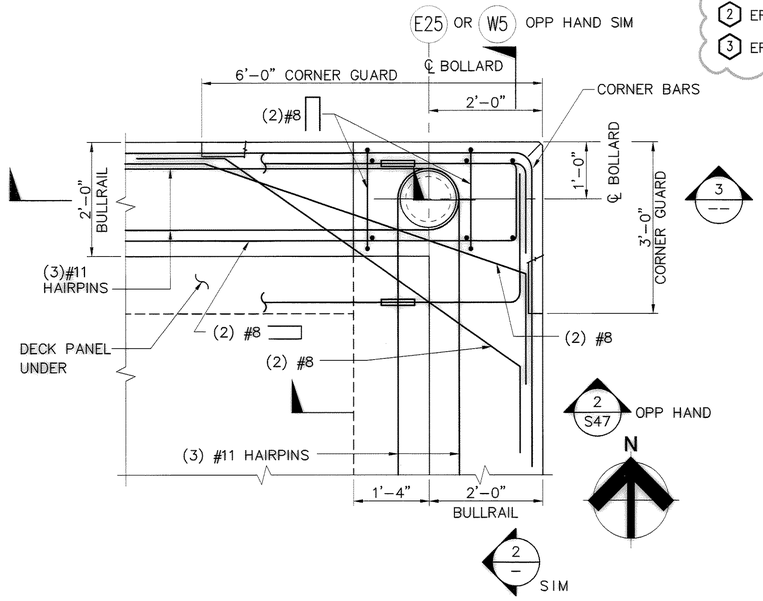
SECTION – BULLRAIL AT CORNER 3 —

SCALE: 3/4"= 1'–0"



SECTION – TYPICAL PILE CAP AT BOLLARD 4 —

SCALE: 3/4"= 1'–0"



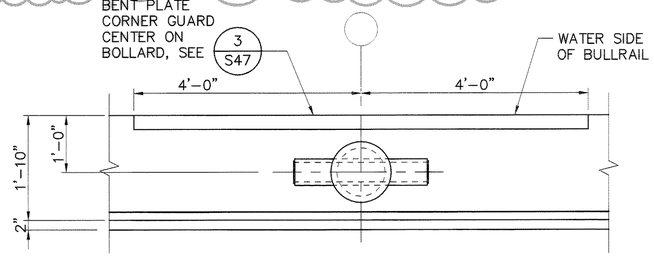
SECTION 2 —

SCALE: 3/4"= 1'–0"

PLAN – BULLRAIL REINFORCEMENT AT CORNER 5 —

SCALE: 3/4"= 1'–0"

1. SEE DRAWING ATTACHED TO REAR OF SHEET S48. RFI 197, W2 & W4 BOLLARDS #8 "U" BARS CUT & BEVEL "V" GROOVE WELD (ONE SIDE)
2. EFC 8 BOLLARD REBAR CONFLICT, SEE BACK OF S48
3. EFC 9 DECK PANEL/BOLLARD REBAR CONFLICT AT BENT W5, SEE BACK OF S48



PLAN – BULLRAIL AT BOLLARD 6 —

SCALE: 3/4"= 1'–0"

NOTES:

1. REINFORCEMENT SHOWN ON THIS SHEET IS TYPICAL AT BOLLARDS AND IS ADDITIONAL TO THE BULLRAIL, PILE CAP AND PRECAST PANEL REINFORCEMENT.
2. FOR REINF IN BULLRAIL (NOT SHOWN), SEE SHEET S47.
3. FOR BOLLARD DETAILS, SEE SHEET S74.
4. CONT CORNER GUARD NOT SHOWN.
5. FOR CORNER GUARD DETAILS, SEE 3 S47
6. REINF SHALL USE STANDARD HOOKS UNLESS OTHERWISE NOTED.

6320-17

PORT OF TACOMA U.S.A.

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PORT OF TACOMA P.O. BOX 1837 TACOMA, WA 98401 253-383-5841

MARK	REVISION	BY:	APPROVED	DATE:

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CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
ML 06/11/03 PROJECT ENGR.– DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ.: VERT.:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING MISCELLANEOUS BULLRAIL DETAILS

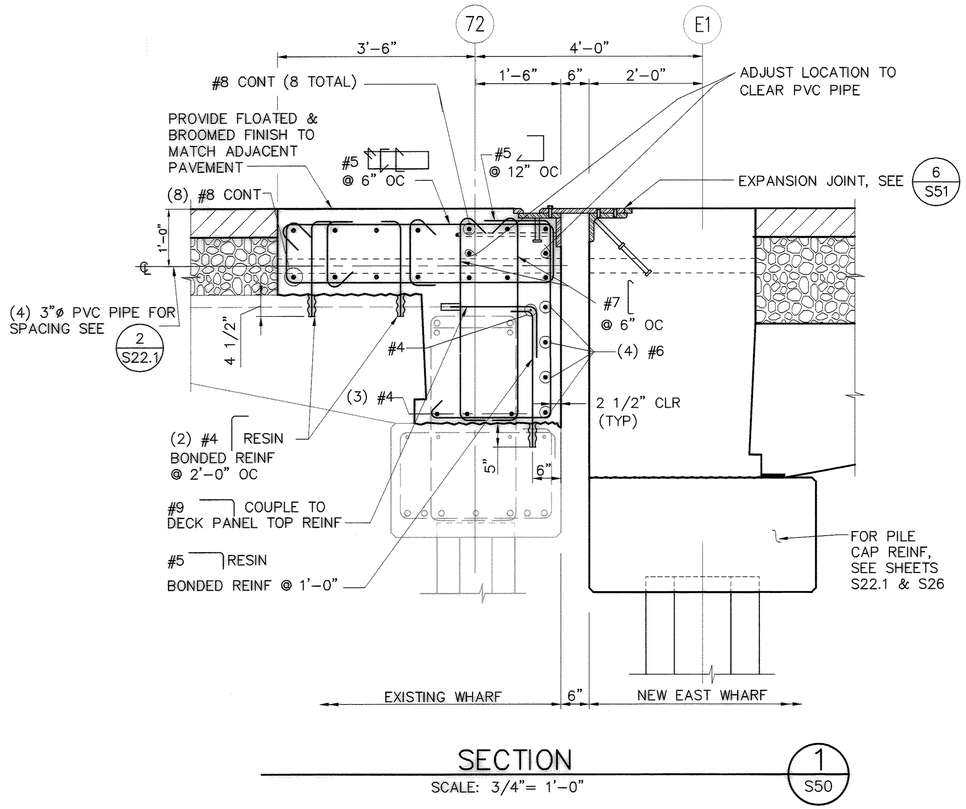
EP-551-17

SHEET 87 OF 164

S49

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

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PLOT SCALE 1=1 | 'PCP' FILE --- | PLOT VIEW
XREFS: POT22x34TB-KPFF.



SECTION 1/S50
SCALE: 3/4"= 1'–0"

NOTES:
SEE SHEET S50 FOR NOTES.

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G0)

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TACOMA, WA 98401 253-383-5841

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601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-3822 Fax (206) 622-6600

MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED
CHIEF ENGINEER – DATE

RKJ 06/11/03 CHECKED BY – DATE
KN 06/11/03 PROJECT ENGR. – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXPANSION JOINT DETAILS
SHEET 2

EP ~~E551-17~~
S50.1
SHEET 89 OF 164

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

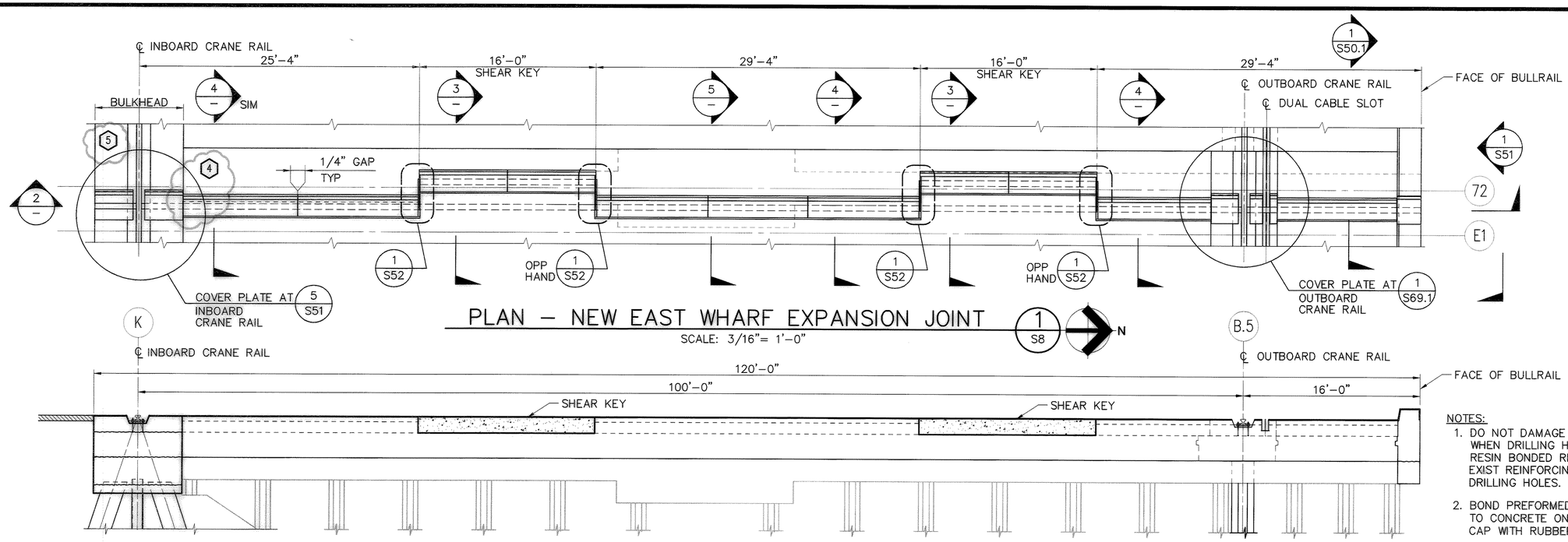
6320-17

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XREFS: PO122x34TB-KPFF.

PLOT SCALE	'pcp' FILE	PLOT VIEW
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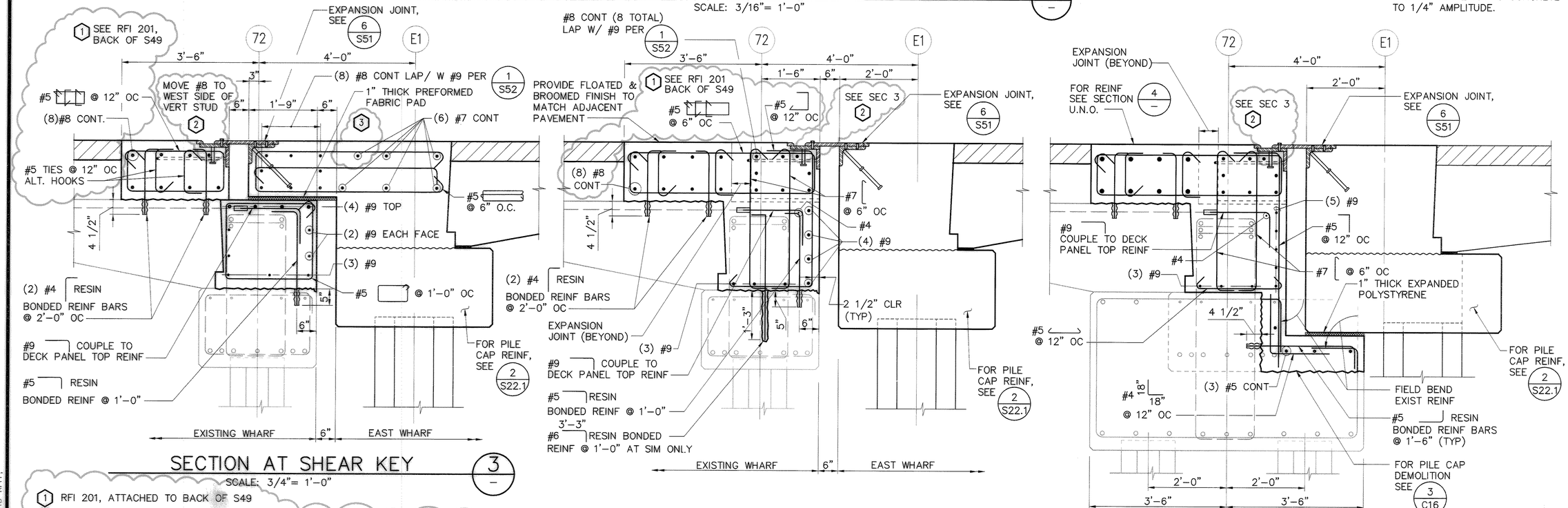


PLAN – NEW EAST WHARF EXPANSION JOINT

SCALE: 3/16"= 1'–0"

SECTION – PILE CAP MODIFICATIONS AT EXISTING BENT

SCALE: 3/16"= 1'–0"



SECTION AT SHEAR KEY

SCALE: 3/4"= 1'–0"

SECTION

SCALE: 3/4"= 1'–0"

SECTION

SCALE: 3/4"= 1'–0"

NOTES:

1. DO NOT DAMAGE EXISTING REINF WHEN DRILLING HOLES FOR RESIN BONDED REINF. LOCATE EXIST REINFORCING PRIOR TO DRILLING HOLES.
2. BOND PREFORMED FABRIC PAD TO CONCRETE ON BENT 72 PILE CAP WITH RUBBER CEMENT.
3. WHEN CASTING CONCRETE AGAINST EXISTING CONCRETE ROUGHEN SURFACE OF EXISTING CONCRETE TO 1/4" AMPLITUDE.

1. RFI 201, ATTACHED TO BACK OF S49
2. RFI 204, SEE BACK OF S51
3. RELOCATED REBAR, MOVED BECAUSE CONFLICT WITH EXPANSION JOINT NELSON STUDS.
4. RFI 215 JOINT BETWEEN PLATES IS AT 4'–1" NORTH OF K–LINE INSTEAD OF DESIGNED 4'–0".
5. EFC 55, EXP. JOINT CONCRETE & ADDITIONAL REBAR AT INBOARD CRANE RAIL SEE BACK OF S49

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TACOMA, WA 98401 253-383-5841
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MARK	REVISION	BY:	APPROVD.	DATE:

RKJ 06/11/03 CHECKED BY – DATE
AB 06/11/03 PROJECT ENGR. – DATE

CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

APPROVED

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ. VERT.
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXPANSION JOINT DETAILS
SHEET 1

EP-~~5551.17~~

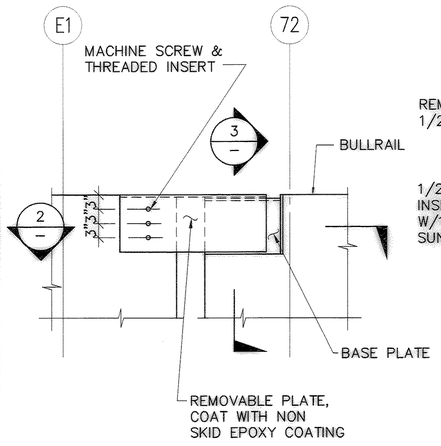
S50

SHEET 88 OF 164

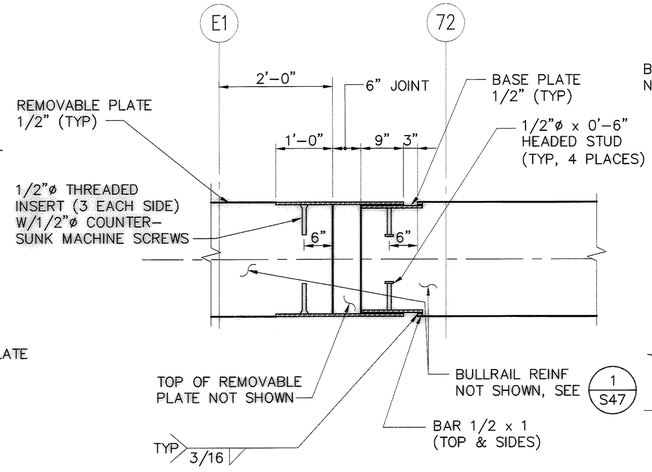
6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

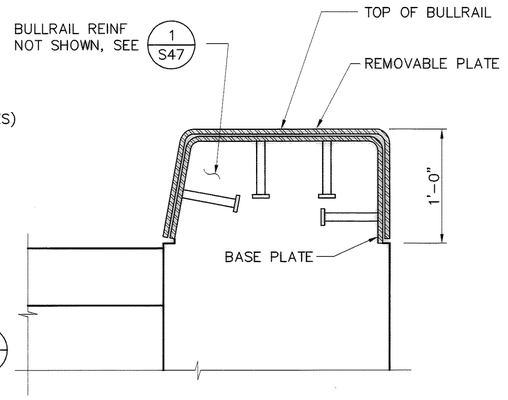
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XREFS: P0122x34TB-KPFF, | PLOT SCALE 1=1 | 'POP' FILE | PLOT VIEW



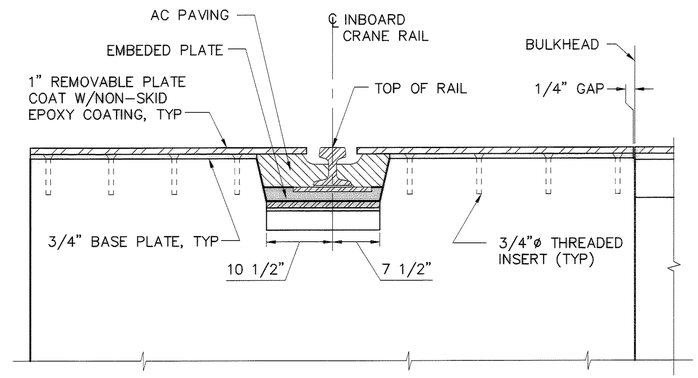
ELEVATION 1/S50
SCALE: 3/4"= 1'-0"



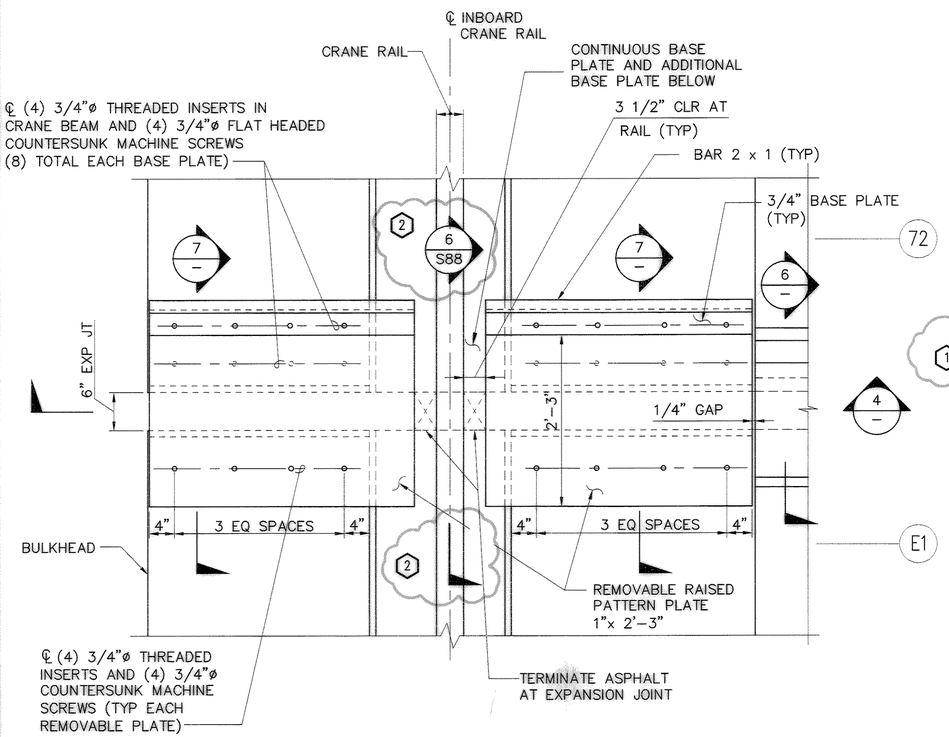
SECTION 2/–
SCALE: 3/4"= 1'-0"



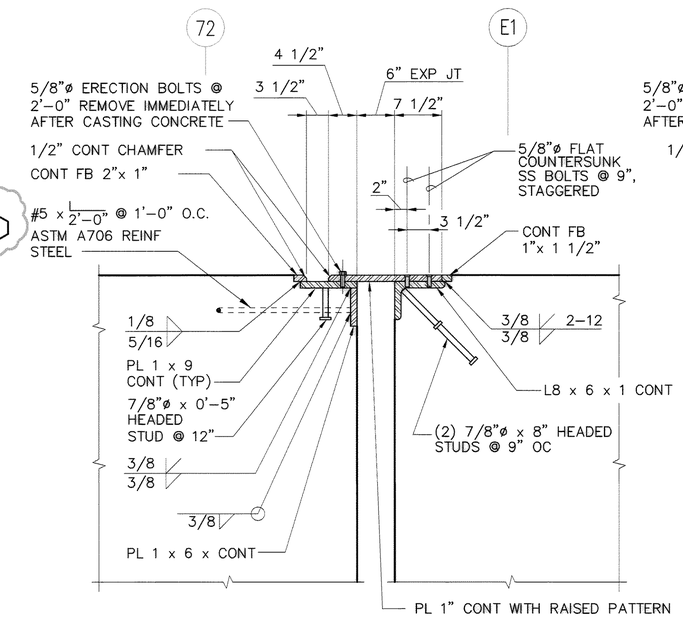
SECTION 3/–
SCALE: 1 1/2"= 1'-0"



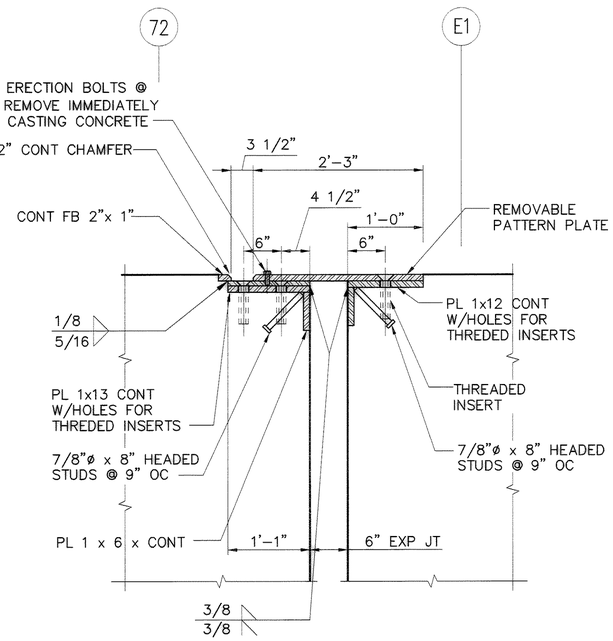
SECTION 4/–
SCALE: 1"= 1'-0"



PLAN – INBOARD CRANE RAIL AT EXPANSION JOINT 5/S50
SCALE: 1"= 1'-0"



SECTION – EXPANSION JOINT 6/–, S50, S52
SCALE: 1"= 1'-0"



SECTION 7/–, S69.1
SCALE: 1"= 1'-0"

1 RFI 204, SEE BACK OF DRAWING S51
2 RFI 211

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841
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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED
CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	06/11/03
CHECKED BY – DATE	
KN	06/11/03
PROJECT ENGR – DATE	

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

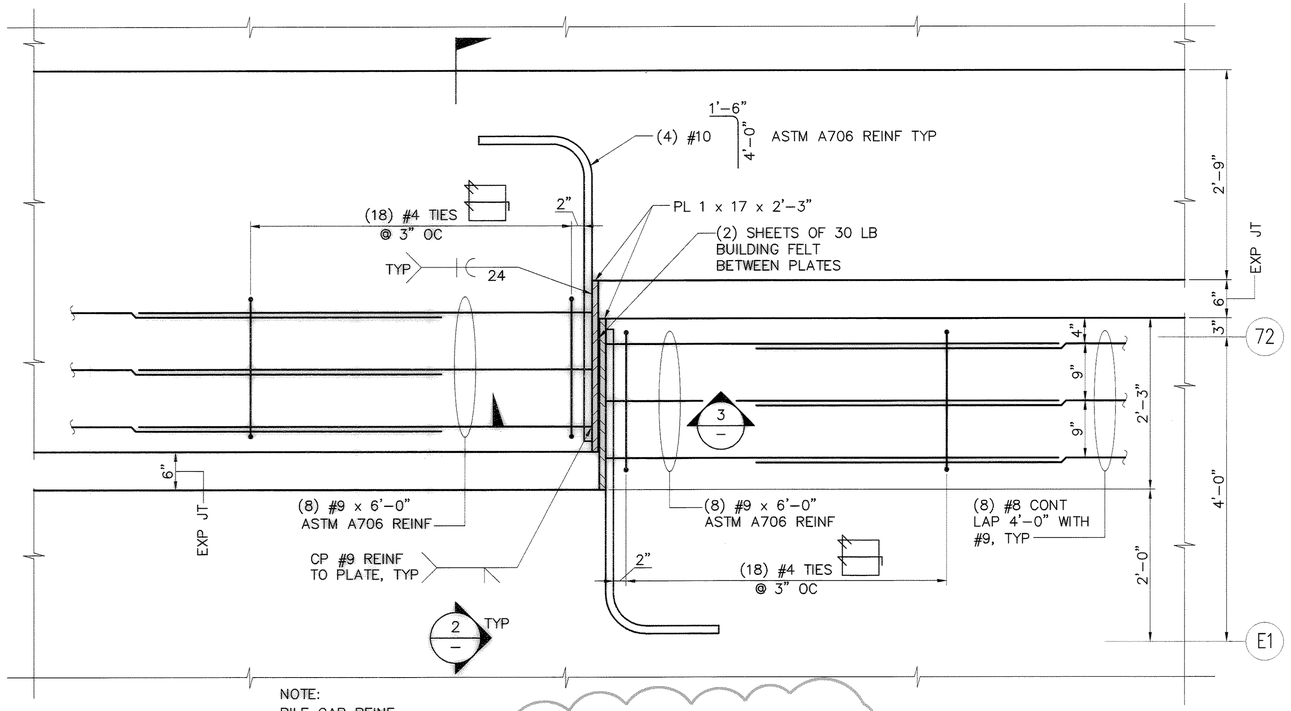
PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING EXPANSION JOINT DETAILS SHEET 3

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~5551-17~~
SHEET 90 OF 164
S51
6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

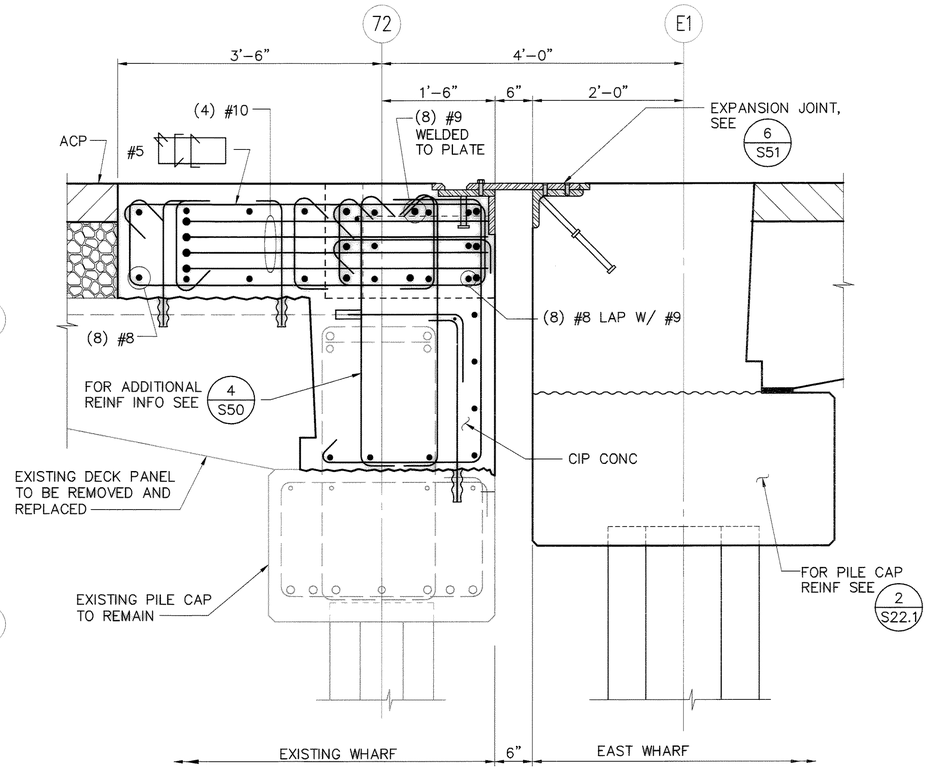
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JOB #: 102349.10
JOB NAME: Pierce County Terminal
PLOTTED DATE & TIME: SEP. 30, 2004 3:03:54 PM
UPDATED BY: BRUCEA
PLOT SCALE: 1=1
'PCP' FILE: ---
PLOT VIEW:
XREFS: P0172x34TB-KPFF,



NOTE:
PILE CAP REINF.
AND COVER PL
NOT SHOWN

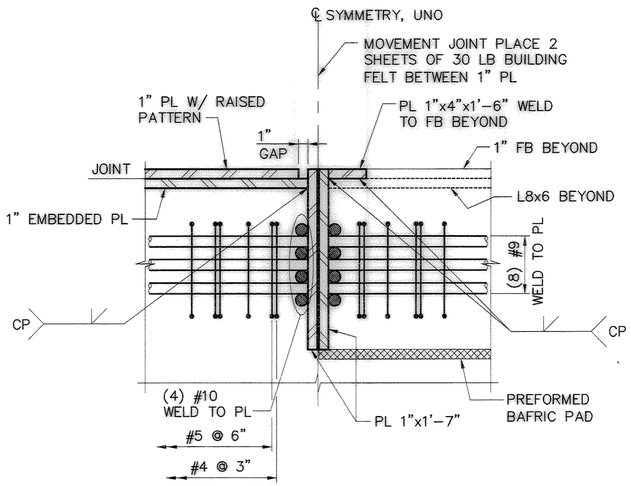
DETAIL 1/S50
SCALE: 1"= 1'-0"

1



SECTION 2/–
SCALE: 1"= 1'-0"

1 RFI 204, SEE ATTACHED ON BACK OF S51



SECTION 3/–
SCALE: 1 1/2"= 1'-0"

MARK	REVISION	BY:	APPROVED	DATE:

PORT of TACOMA U.S.A.

kpff Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
KN PROJECT ENGR – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXPANSION JOINT DETAILS
SHEET 4

CONTRACT NUMBER 998149
CONTRACT NUMBER 618722
PHASE RECORD DOCUMENTS

EP-5564-17
S52
SHEET 91 OF 164

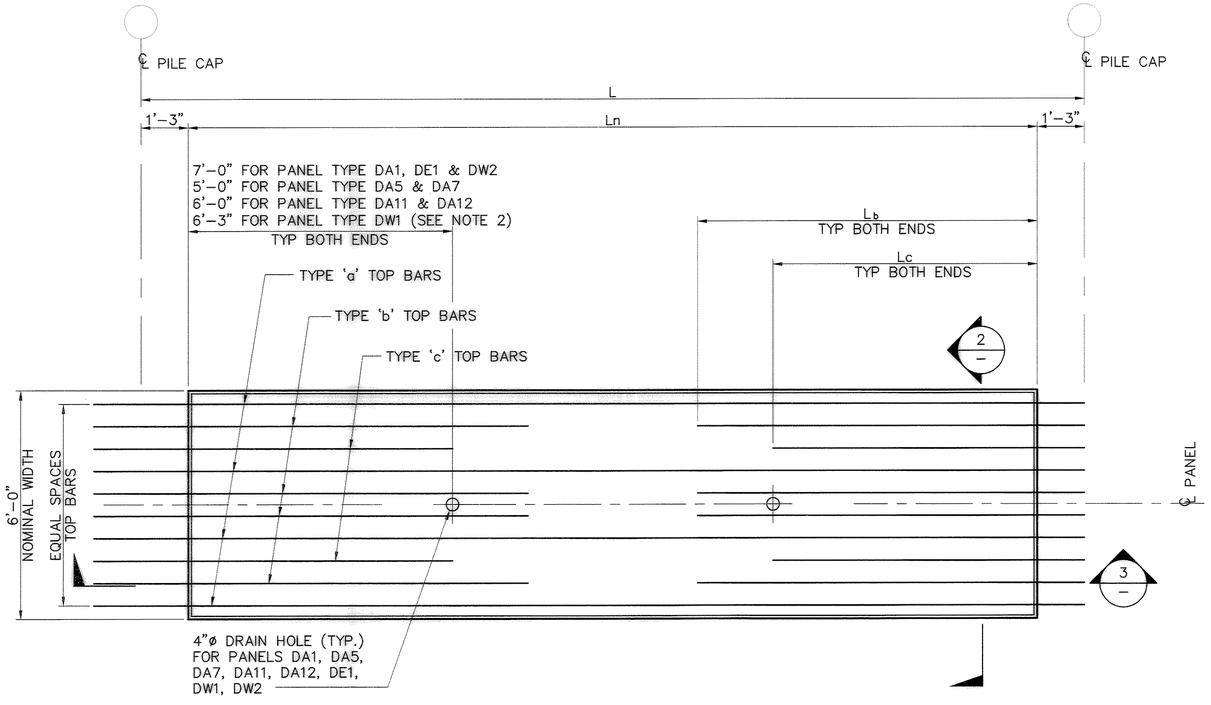
6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

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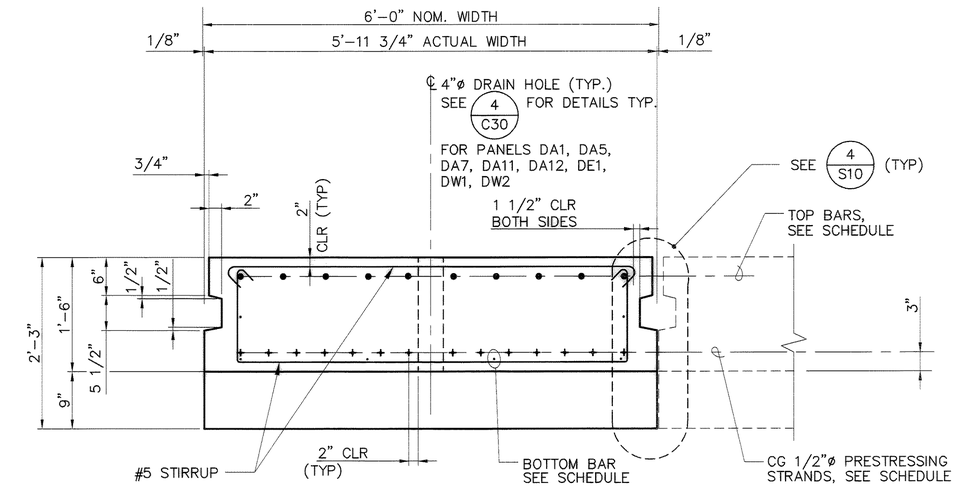
XREFS: P0122x341B-KPFF.

PLOT SCALE	'POP' FILE	PLOT VIEW
1=1	---	



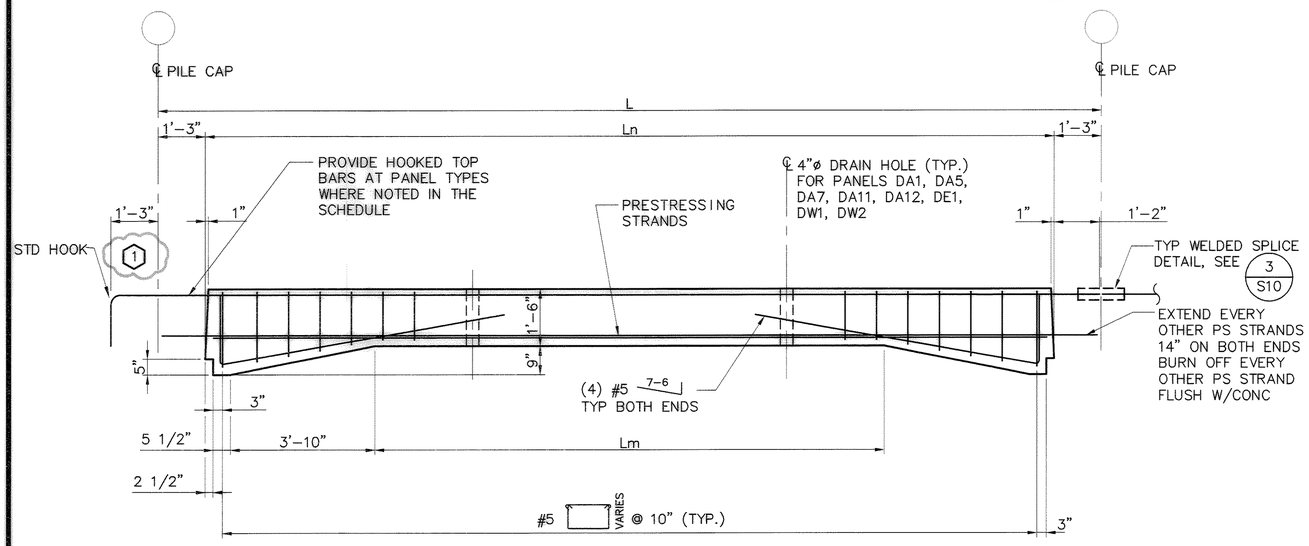
PLAN – TYPE A1, A5, A7, A11, A12, E1, W1, W1a, W2, W2a, DA1, DA5, DA7, DA11, DA12, DE1, DW1 & DW2 PANELS (1 / S10) S14, S15

SCALE: 1/2"= 1'–0"



SECTION – TYPE A1, A5, A7, A11, A12, E1, W1, W1a, W2, W2a, DA1, DA5, DA7, DA11, DA12, DE1, DW1 & DW2 PANELS (2 / –)

SCALE: 1"= 1'–0"



ELEVATION – TYPE A1, A5, A7, A11, A12, E1, W1, W1a, W2, W2a, DA1, DA5, DA7, DA11, DA12, DE1, DW1 & DW2 PANELS (3 / –)

SCALE: 1/2"= 1'–0"

1 RFI 170, SEE DRAWING 4/S29 FOR HOOK BAR COUPLER DETAILS

NOTE:
1. FOR REINF SCHEDULE, SEE SHEETS S61 AND S62.
2. PANEL TYPE DW1 HAS ONLY ONE DRAIN HOLE.

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MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

RKJ	CHECKED BY – DATE	06/11/03
ML	PROJECT ENGR – DATE	06/11/03

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PANEL DETAILS
SHEET 1

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E-NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~5564-17~~

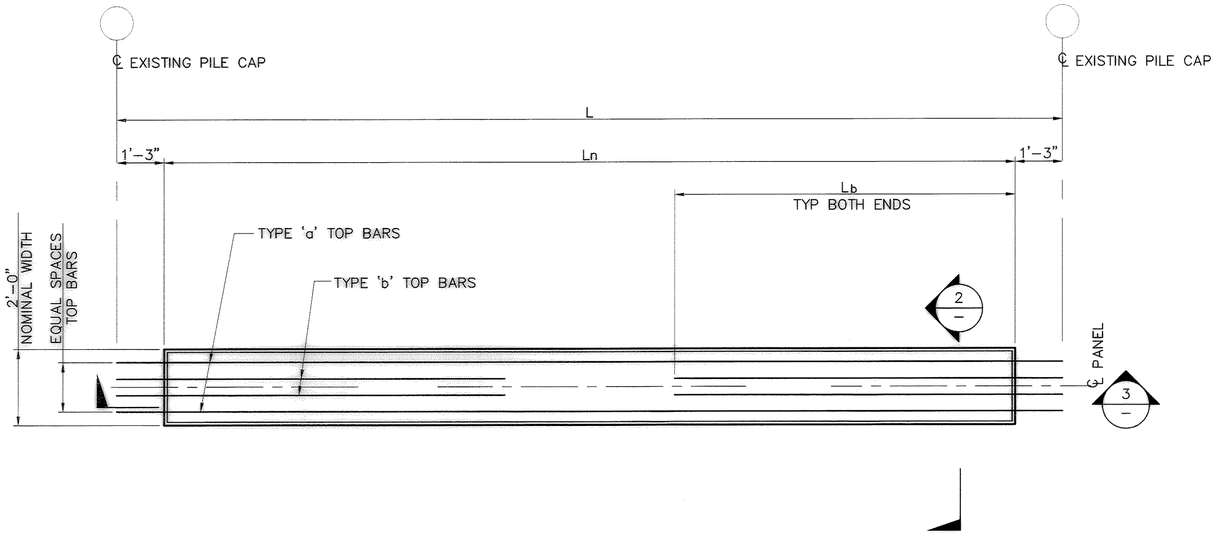
S53

SHEET 92 OF 164

6320-17

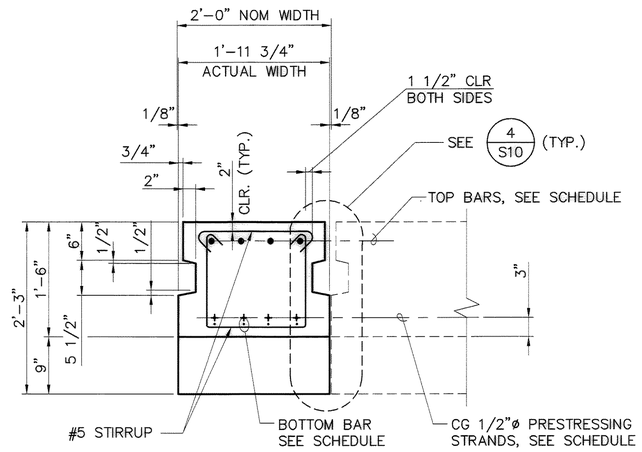
RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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XREFS: P0T22x34TB-KPFF.	JOB NAME Pierce County Terminal		PLOT VIEW



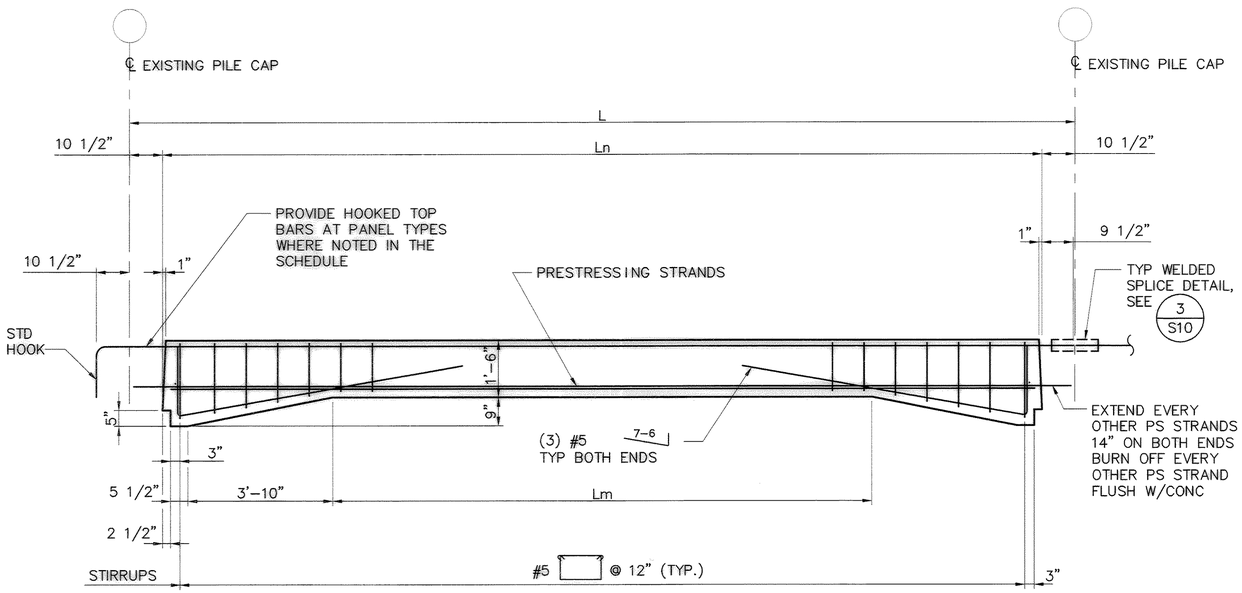
PLAN – TYPE A18, A19 & A20 PANELS (1 / S10) S14, S15

SCALE: 1/2"= 1'–0"



SECTION – TYPE A18, A19 & A20 PANELS (2 / –)

SCALE: 1"= 1'–0"



ELEVATION – TYPE A18, A19 & A20 PANELS (3 / –)

SCALE: 1/2"= 1'–0"

NOTE:
1. FOR REINF SCHEDULE, SEE SHEETS S61 AND S62.

PORT OF TACOMA P.O. BOX 1837
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MARK | REVISION | BY: | APPROVED | DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
ML 06/11/03
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

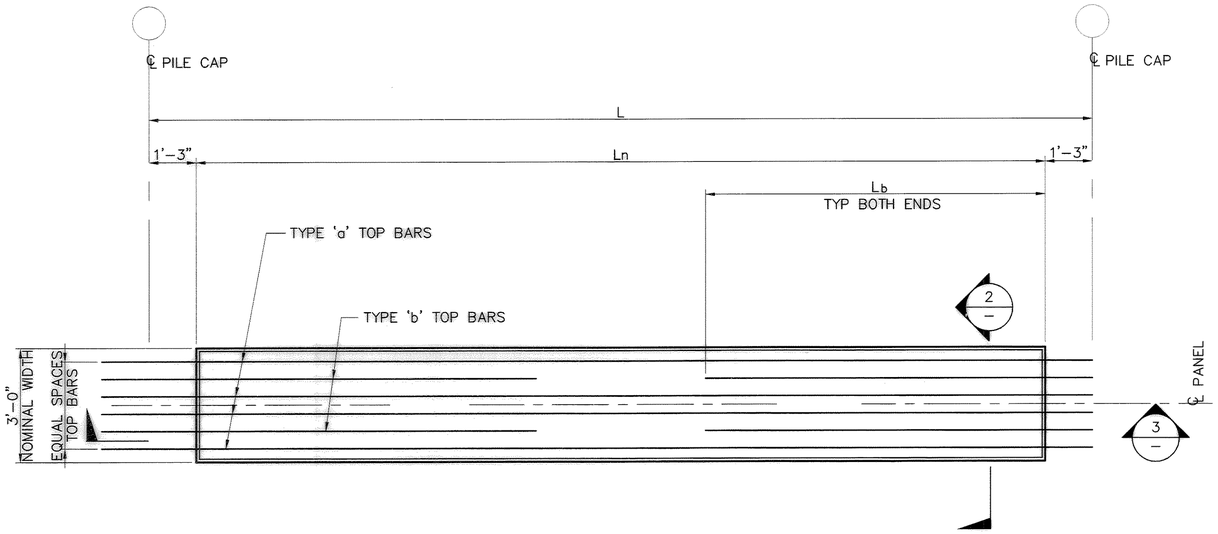
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PANEL DETAILS
SHEET 3

EP-~~5551-17~~
S54.1
SHEET 94 OF 164

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

6320-17

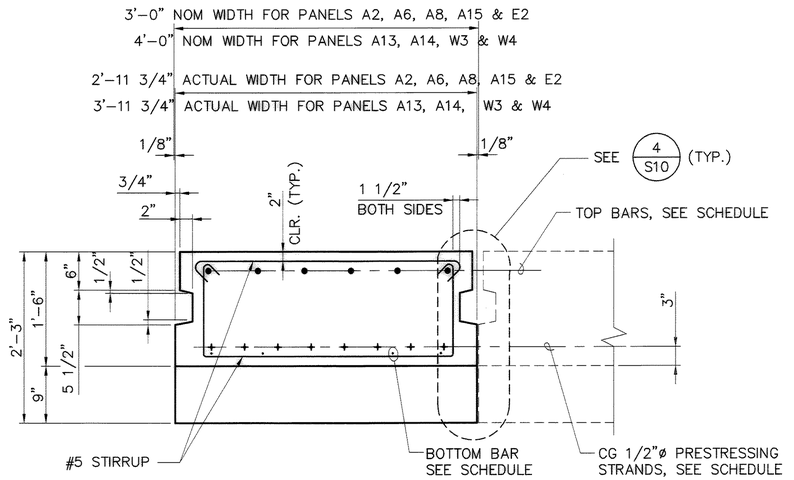
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XREFS: POT22x34TB-KPFF, | "PCP" FILE --- | PLOT SCALE 1=1 | PLOT VIEW



PLAN – TYPE A2, A6, A8, A15 & E2 PANELS

SCALE: 1/2"= 1'-0"

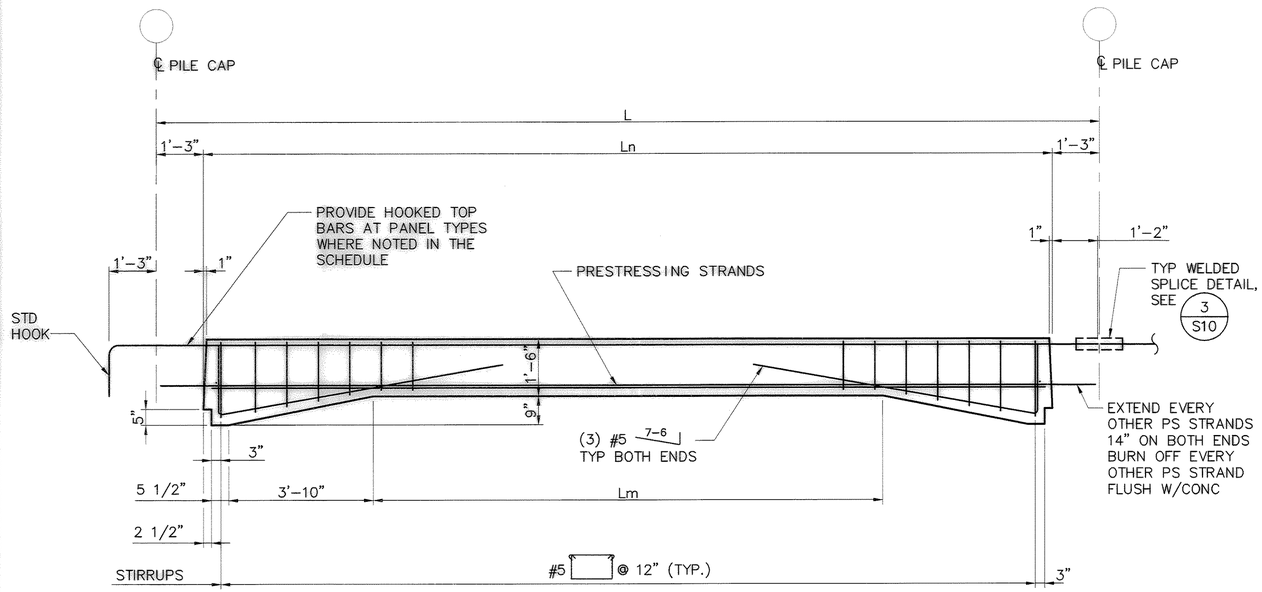
1 / S10 S14, S15



SECTION – TYPE A2, A6, A8, A13, A14, A15, W3, W4 & E2 PANELS

SCALE: 1"= 1'-0"

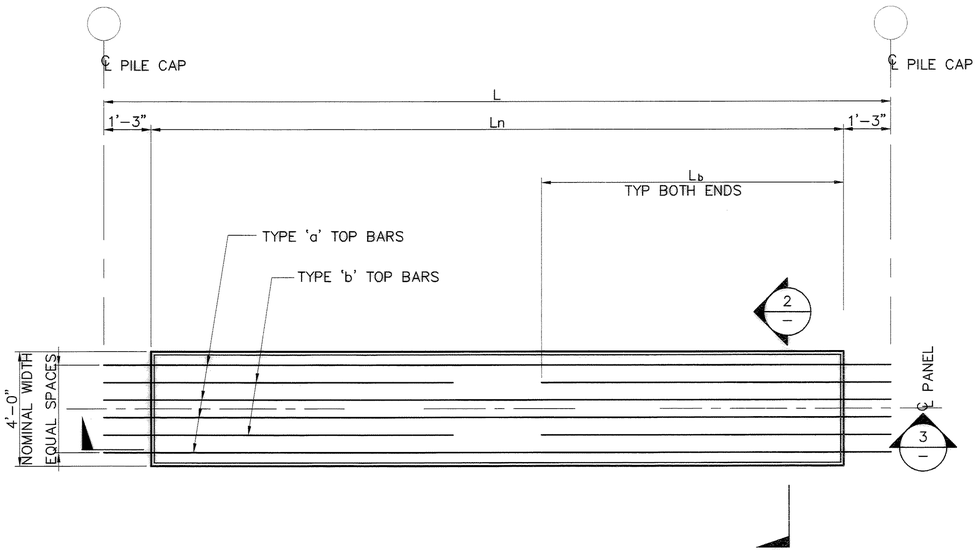
2 / —



ELEVATION – TYPE A2, A6, A8, A13, A14, A15, W3, W4 & E2 PANELS

SCALE: 1/2"= 1'-0"

3 / —



PLAN – TYPE A13, A14, W3 & W4 PANELS

SCALE: 1/2"= 1'-0"

4 / S11

NOTE:
1. FOR REINF SCHEDULE, SEE SHEETS S61 AND S62.

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MARK	REVISION	BY:	APPROVD.	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
ML PROJECT ENGR – DATE 06/11/03

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PANEL DETAILS
SHEET 2

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: E1972
E NUMBER: 998149
PHASE: RECORD DOCUMENTS

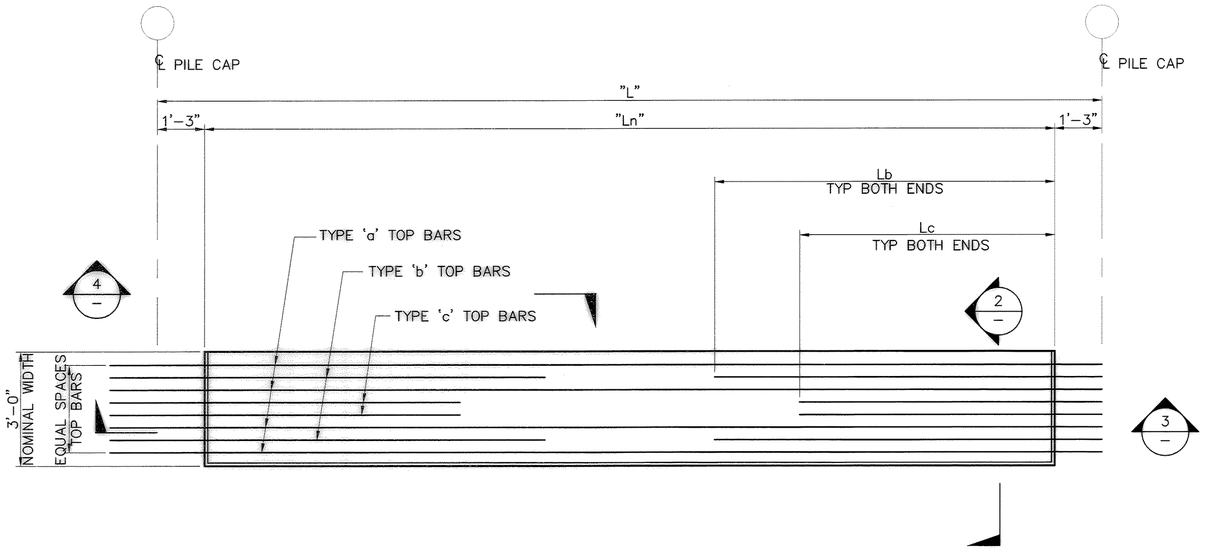
EP-~~5561-17~~
S54
SHEET 93 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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XREFS: P0T22x34TB-KPFF.			

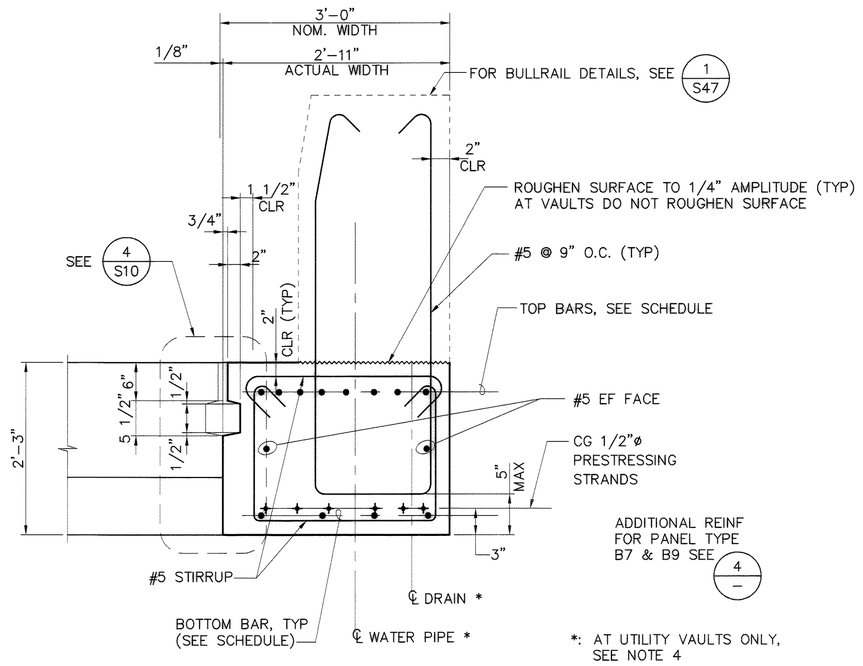
PLOT SCALE	'PCP' FILE	PLOT VIEW
1=1	---	



PLAN – TYPE B1, B5, B7, B9 & B10 PANELS (1 / S10)

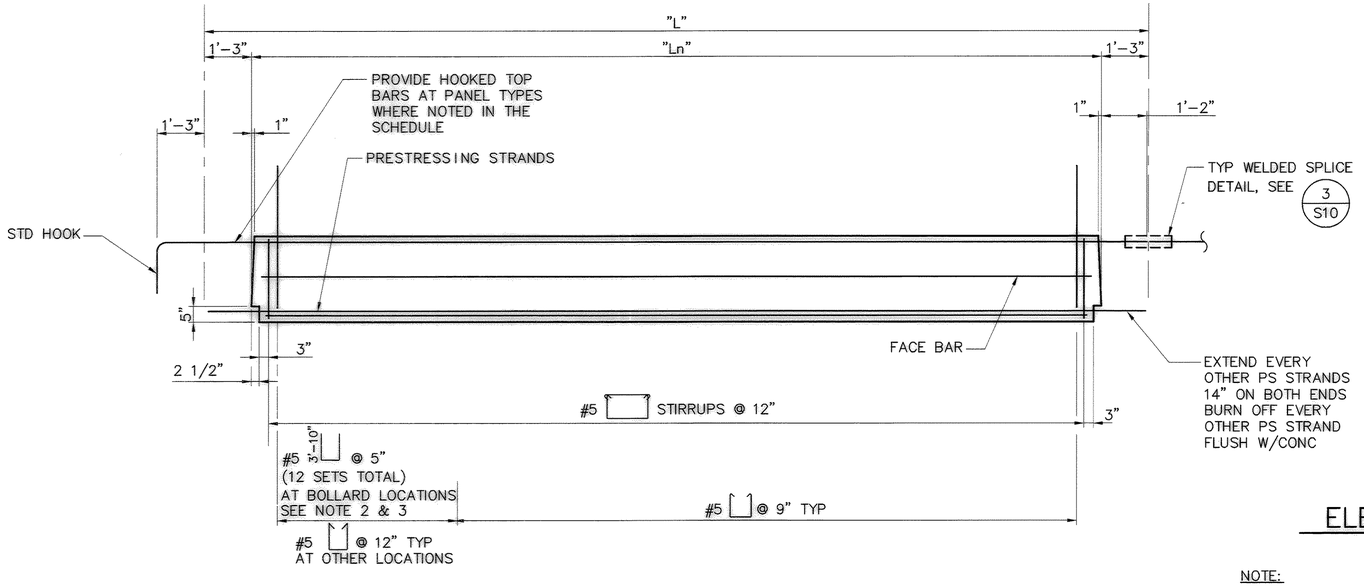
SCALE: 1/2"= 1'-0"

S14, S15



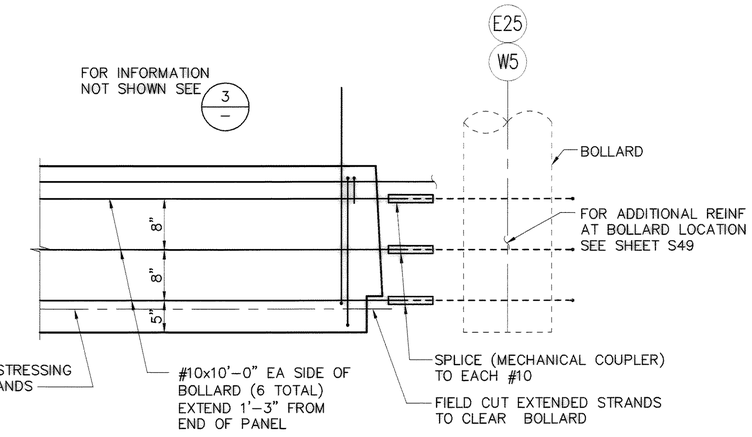
SECTION – TYPE B1, B5, B7, B9 & B10 PANELS (2 / —)

SCALE: 1"= 1'-0"



ELEVATION – TYPE B1, B5, B7, B9 & B10 PANELS (3 / —)

SCALE: 1/2"= 1'-0"



ELEVATION – TYPE B7 & B9 PANELS AT BENT W5 & E25 (4 / —)

SCALE: 1"= 1'-0"

NOTE:

1. FOR REINF SCHEDULE, SEE SHEETS S61 AND S62.
2. THESE BOLLARD LOCATIONS ARE AT BENTS W5, W4, W2, E3, E6, E9, E12, E15, E18, E21, E23 & E25. ALSO SEE SHEETS S10, S14 & S15, 1 / S49 & 3 / S49
3. FOR PANEL TYPE B9 BETWEEN BENT W5 AND W4, BOTH ENDS HAVE 12 SETS #5 @ 5"
4. FOR LOCATION OF UTILITY VAULTS AND SIZE OF DRAIN HOLES, SEE SHEET S71 AND ELECTRICAL DRAWINGS.

PORT of TACOMA U.S.A.

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PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03

ML PROJECT ENGR – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ. VERT.
DRAWING SCALE: AS SHOWN

PHASE: RECORD DOCUMENTS

CONTRACT NUMBER: 998149
E NUMBER: E1972

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PANEL DETAILS
SHEET 4

EP-~~556-1~~47

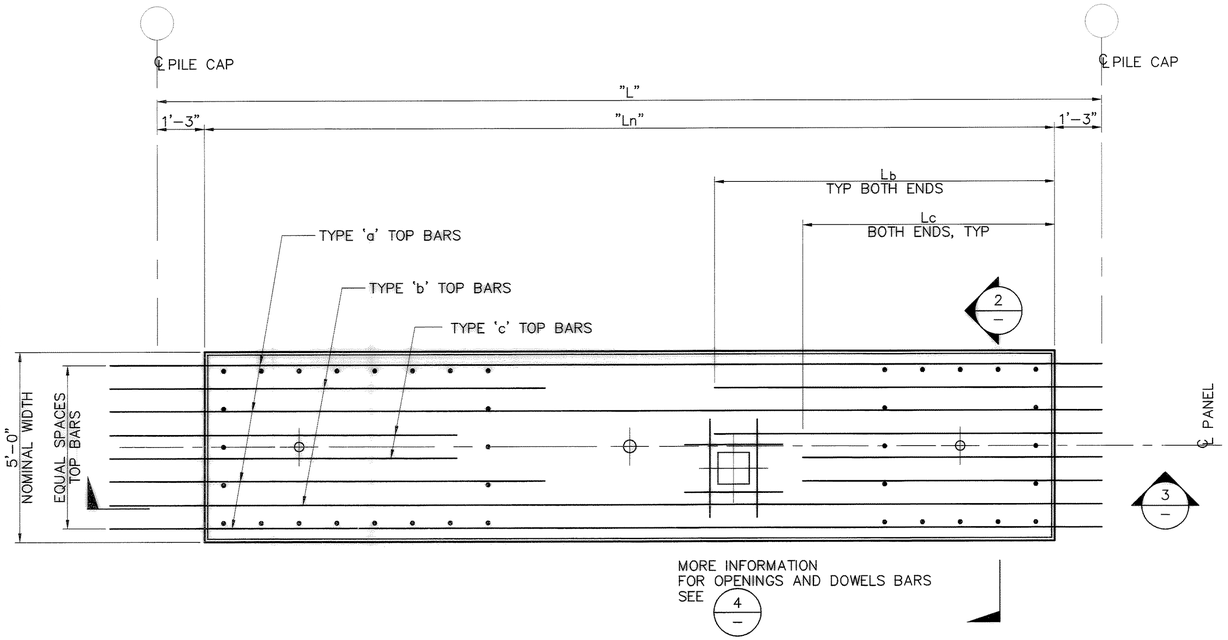
SHEET 95 OF 164

S55

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

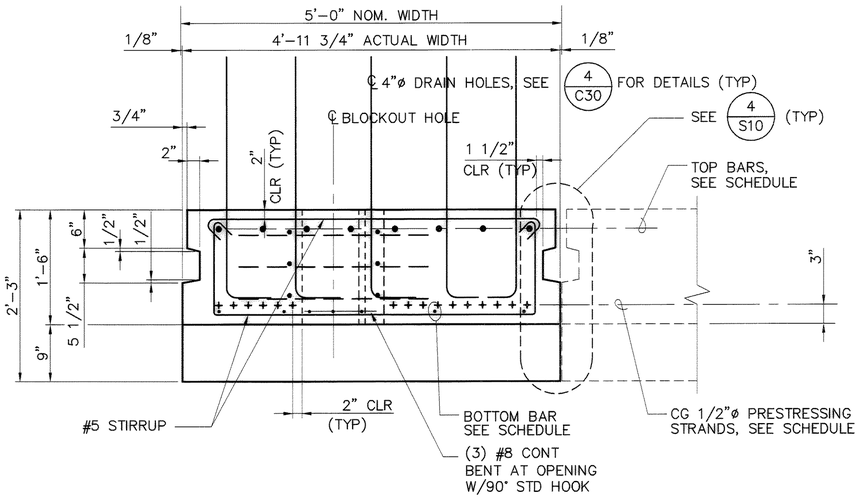
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JOB # 102349.10
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 27, 2005 9:03:24 AM
XREFS: P0122x341B-KPFF,
UPDATED BY RICKT
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW ---



PLAN – TYPE B2a, B2b & B6a PANELS

SCALE: 1/2"= 1'–0"

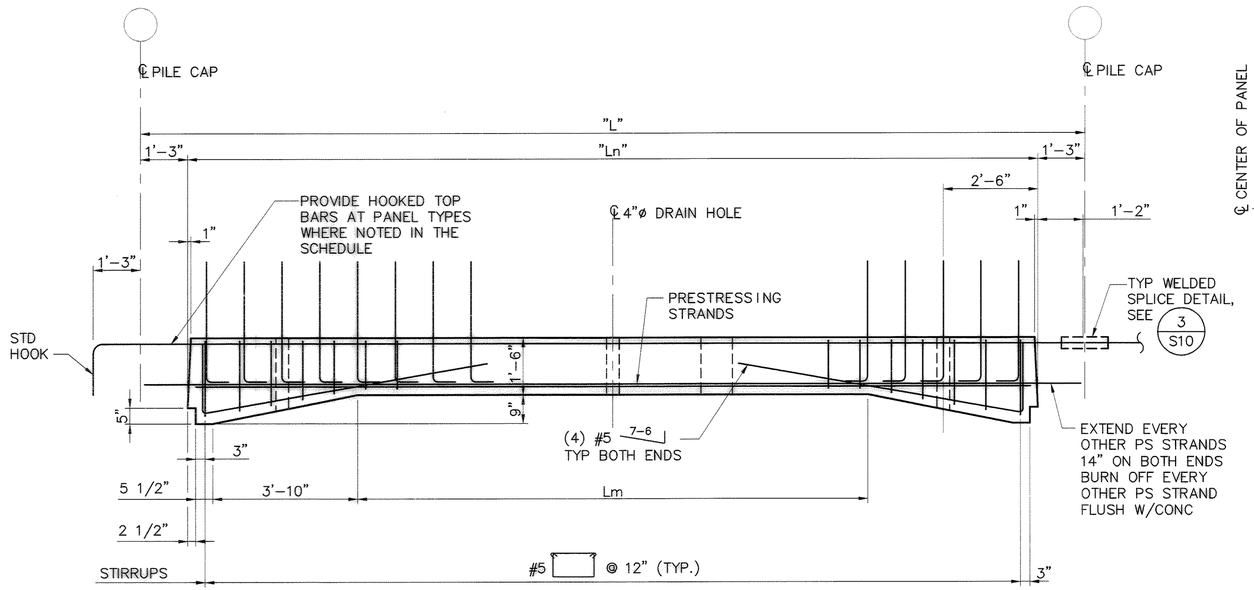
1 / S10 S14, S15



SECTION – TYPE B2a, B2b & B6a PANELS

SCALE: 1"= 1'–0"

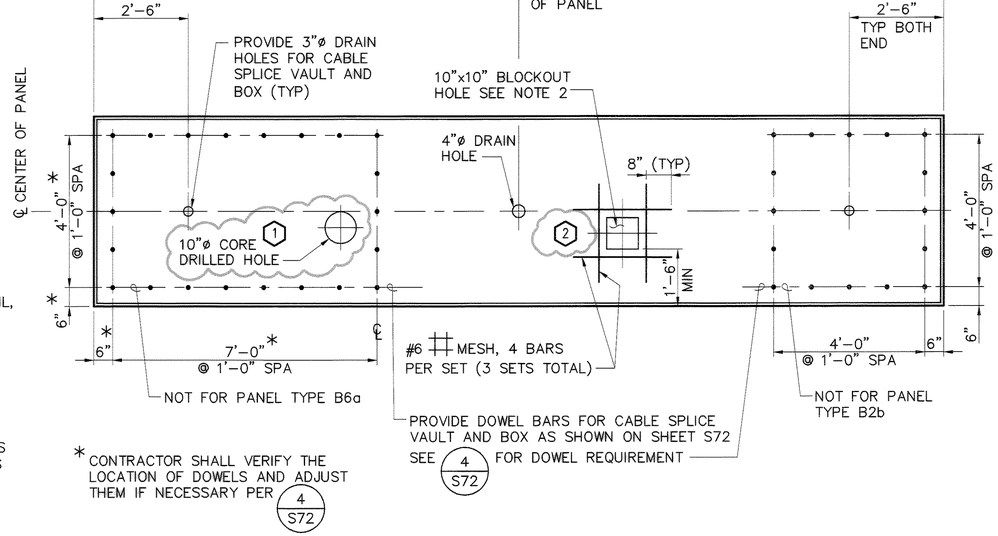
2 / –



ELEVATION – TYPE B2a, B2b & B6a PANELS

SCALE: 1/2"= 1'–0"

3 / –



PLAN – OPENINGS AND DOWEL BARS FOR TYPE B2a, B2b & B6a PANELS

SCALE: 1/2"= 1'–0"

4 / –

1. RFI 209 SEE BACK OF S56.
2. PLUG 10"x 10" BLOCKOUT PER RFI 209 SEE BACK OF S56.

NOTE:
1. FOR REINF SCHEDULE, SEE SHEETS S61 AND S62.
2. THE CONTRACTOR SHALL COORDINATE WITH ELECTRICAL DRAWINGS TO DETERMINE THE LOCATION.

6320-17

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Seattle, Washington 98101
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MARK	REVISION	BY:	APPROVD.	DATE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PANEL DETAILS
SHEET 6

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
ML PROJECT ENGR – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ. VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER E1972
F. NUMBER 998149
PHASE: RECORD DOCUMENTS

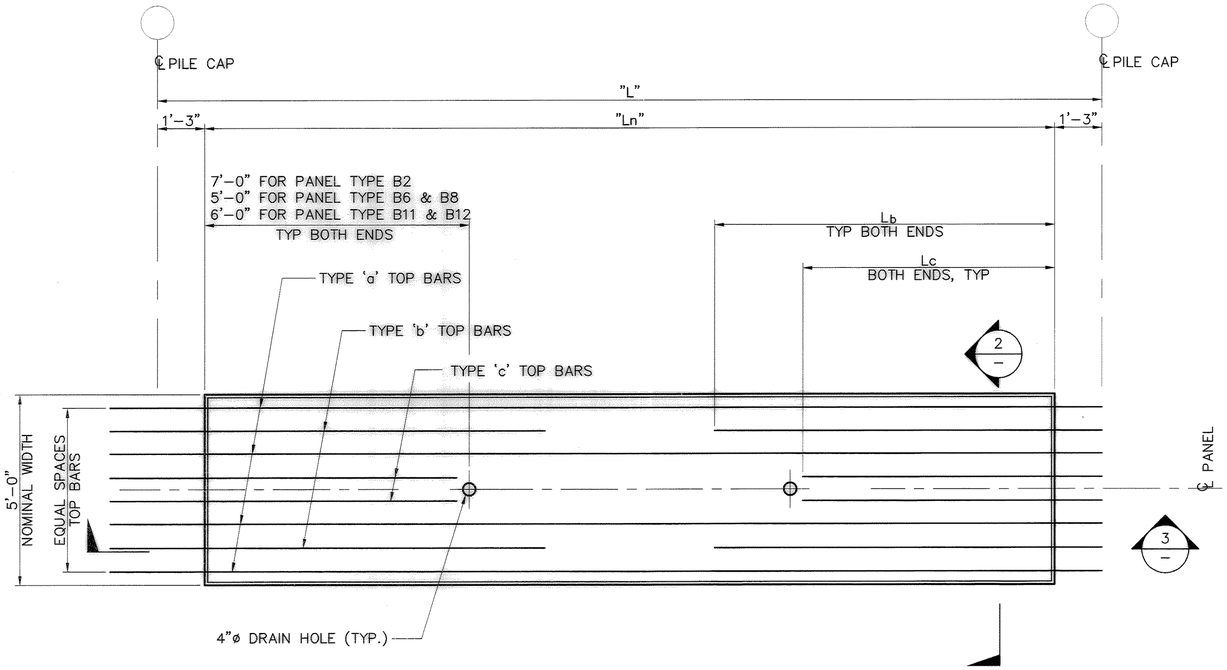
EP ~~5561-17~~

S56.1

SHEET 97 OF 164

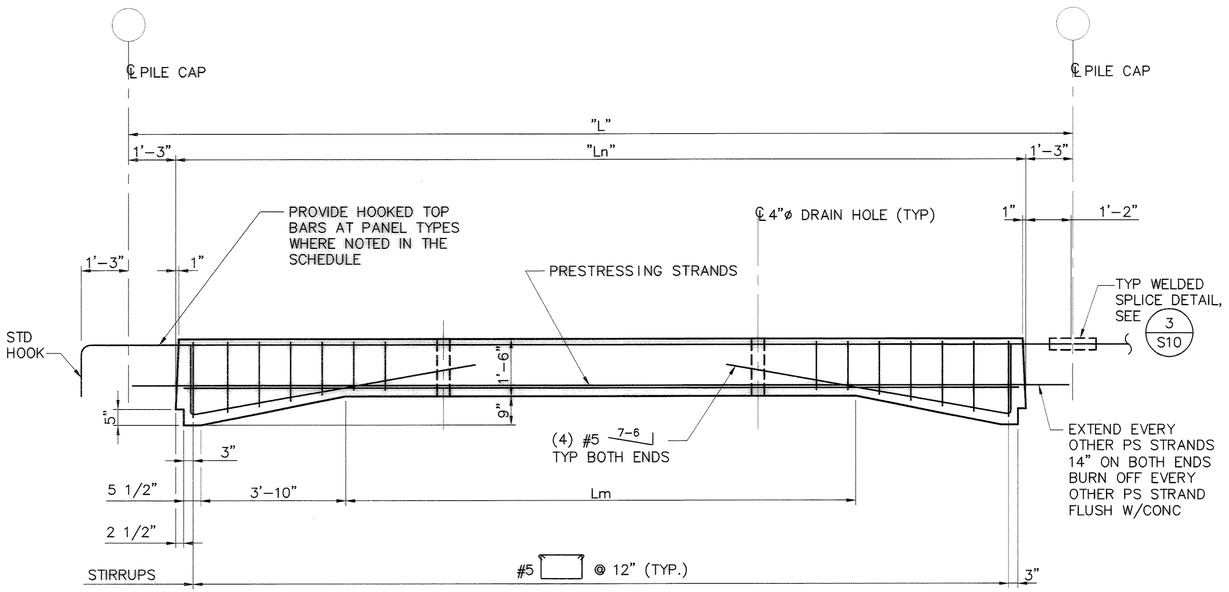
RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S56.1.DWG
JOB # 102349.10
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 27, 2005 9:24:11 AM
UPDATED BY RICKT
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW
XREFS: P0T22x34TB-KPFF,



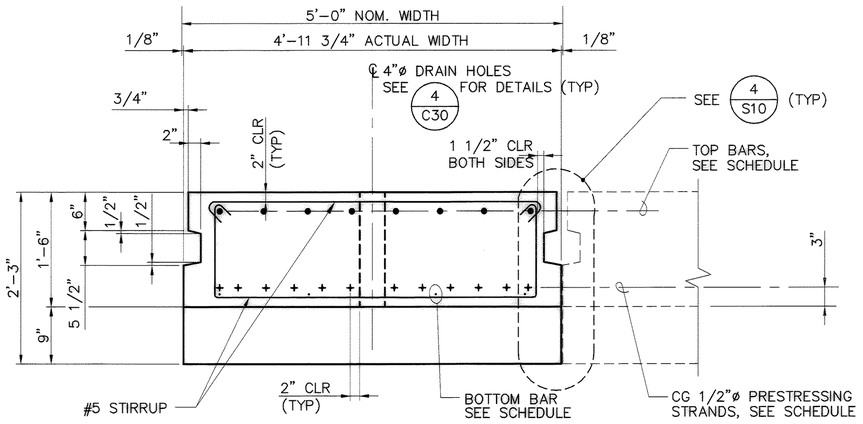
PLAN – TYPE B2, B6, B8, B11 & B12 PANELS (1 / S10)

SCALE: 1/2"= 1'-0"



ELEVATION – TYPE B2, B6, B8, B11 & B12 PANELS (3 / –)

SCALE: 1/2"= 1'-0"



SECTION – TYPE B2, B6, B8, B11 & B12 PANELS (2 / –)

SCALE: 1"= 1'-0"

NOTE:
1. FOR REINF SCHEDULE, SEE SHEETS S61 AND S62.

MARK	REVISION	BY:	APPROVED:	DATE:

PORT OF TACOMA U.S.A.

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
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(206) 622-5822 Fax (206) 622-8130

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
ML 06/11/03
PROJECT ENGR. – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: E1972
E NUMBER: 998149
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PANEL DETAILS
SHEET 5

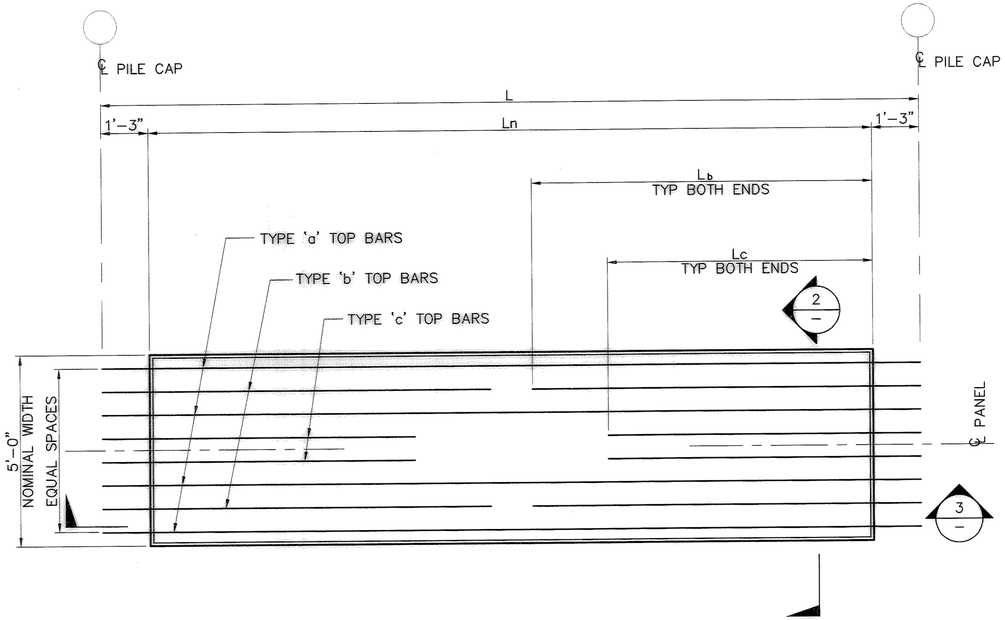
EP ~~555+47~~
S56
SHEET 96 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

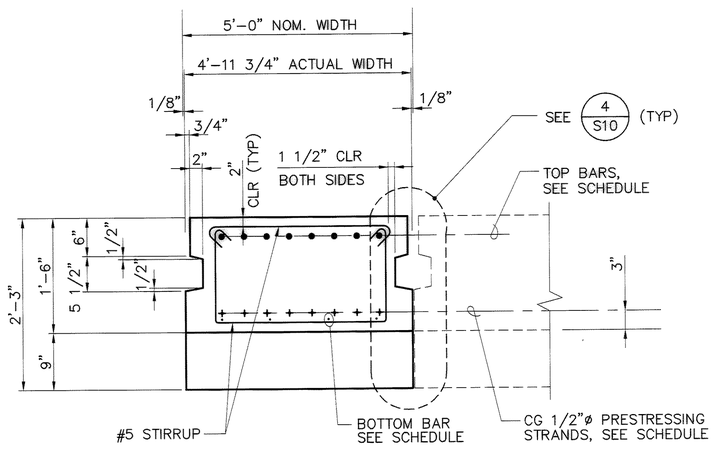
FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972556.DWG			
JOB #	JOB NAME	PLOTTED DATE & TIME	UPDATED BY
102349.10	Pierce County Terminal	JAN. 27, 2005 9:25:17 AM	RICKT
XREFS: P0T22x34TB-KPFF.			

PLOT SCALE	'PCP' FILE	PLOT VIEW
1=1	---	



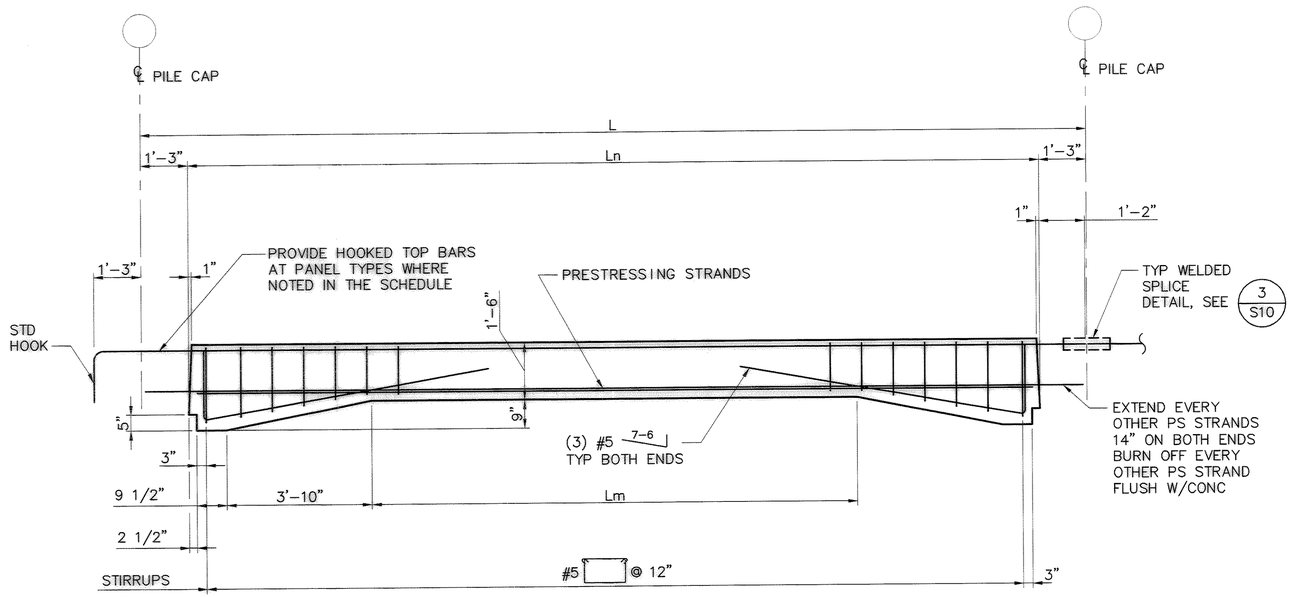
PLAN – TYPE W5, W6, A16 & A17 PANELS 4/S10

SCALE: 1/2"= 1'-0"



SECTION – TYPE W5, W6, A16 & A17 PANELS 2/—

SCALE: 1"= 1'-0"



ELEVATION – TYPE W5, W6, A16 & A17 PANELS 3/—

SCALE: 1/2"= 1'-0"

NOTE:
1. FOR REINF SCHEDULE, SEE SHEETS S61 AND S62.

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PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PANEL DETAILS
SHEET 7

SHEET 98 OF 164
CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP ~~5561-17~~
S57

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

APPROVED
CHIEF ENGINEER – DATE

RKJ CHECKED BY – DATE 06/11/03
ML PROJECT ENGR.– DATE 06/11/03

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ. VERT:
DRAWING SCALE: AS SHOWN

6320-17

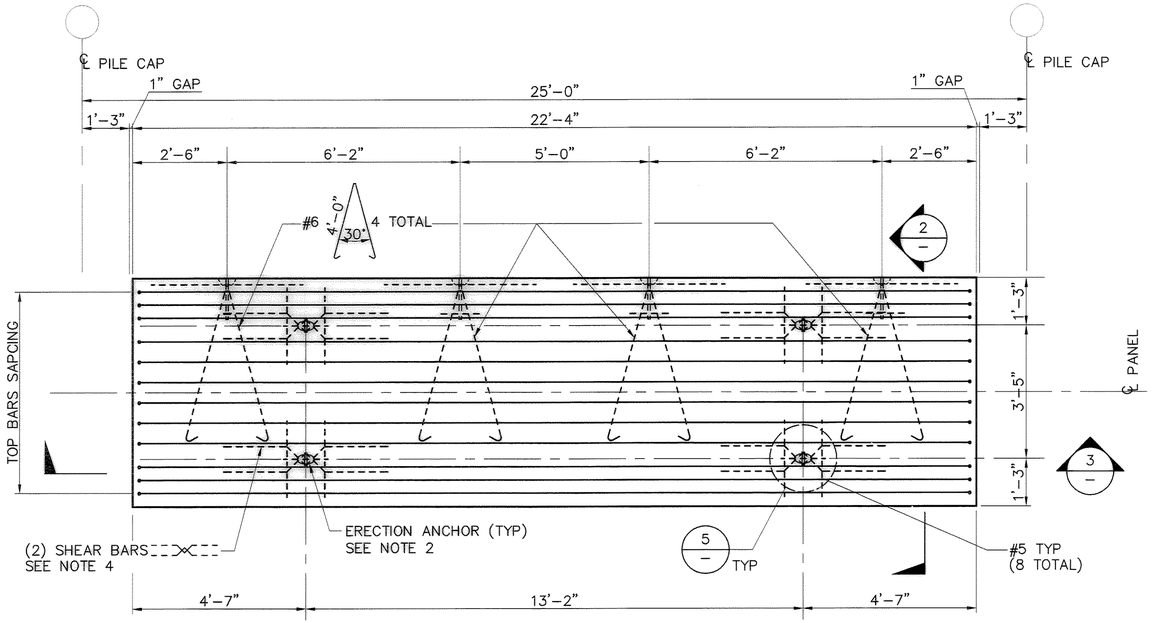
MARK	REVISION	BY:	APPRVD	DATE:

FILE PATH & NAME: L:\102349 (PIERCE COUNTY TERMINAL)\RECORD DRAWINGS\E1972S57.DWG

JOB #	JOB NAME	PLOTTED DATE & TIME
102349.10	Pierce County Terminal	SEP. 27, 2004 3:47:03 PM

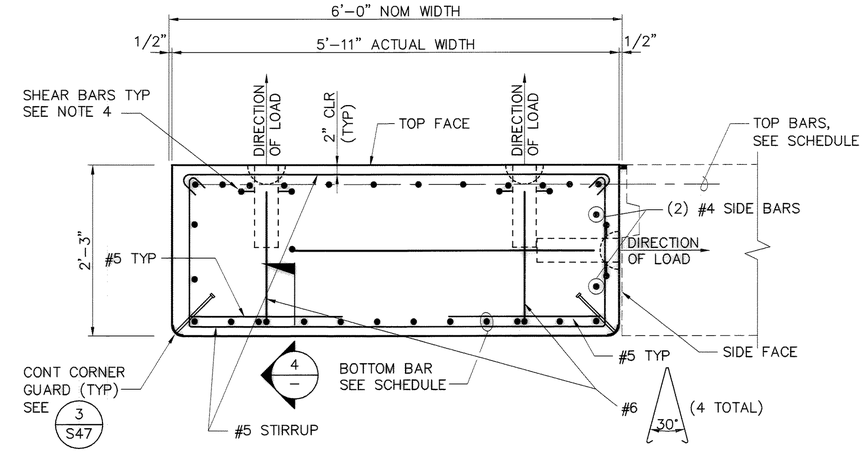
XREFS: POT22x34TB-KPFF,

UPDATED BY	PLOT SCALE	'POP' FILE	PLOT VIEW
BRUCEA	1=1	---	



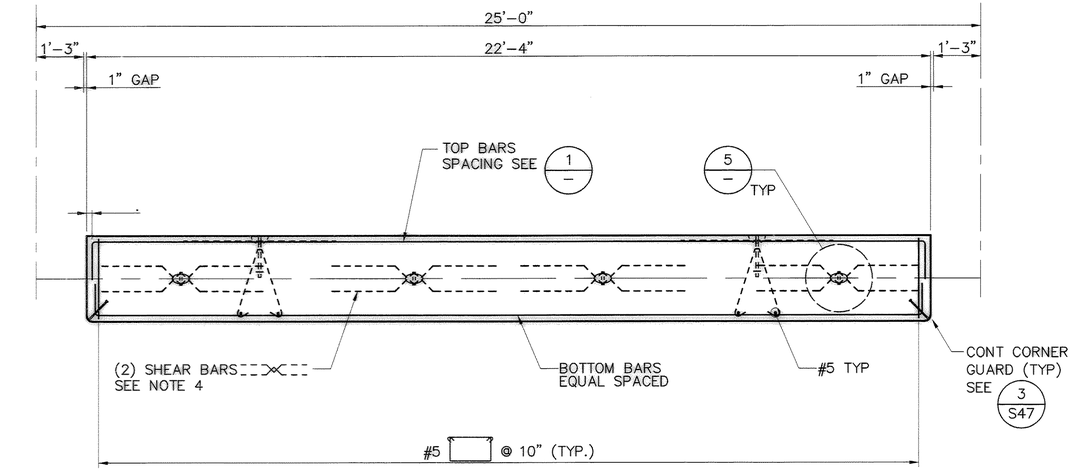
PLAN – TYPE W7 REMOVEABLE PANEL 1/S10

SCALE: 1/2"= 1'-0"



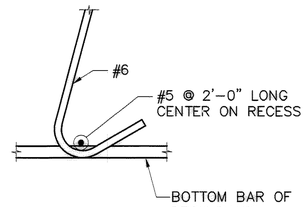
SECTION – TYPE W7 REMOVABLE PANEL 2/–

SCALE: 1"= 1'-0"



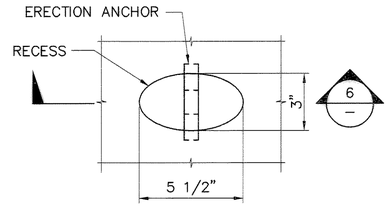
ELEVATION – TYPE W7 REMOVABLE PANEL 3/–

SCALE: 1/2"= 1'-0"



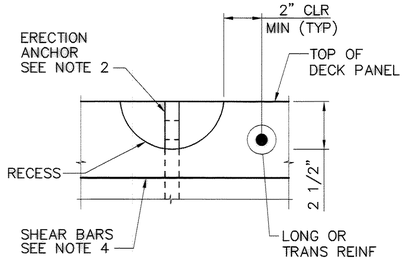
DETAIL 4/–

SCALE: 1 1/2"= 1'-0"



DETAIL 5/–

SCALE: 3"= 1'-0"



DETAIL 6/–

SCALE: 3"= 1'-0"

1 RFI 59, BACK OF S57

NOTE:

1. THE WEIGHT OF PANEL W7 IS 50 KIPS.
2. ERECTION ANCHOR SHALL BE MEADOW–BURKE 8–TON ERECTION ANCHORS. INSTALLMENT OF ERECTION ANCHOR SHALL FOLLOW THE MANUFACTURER'S SPECIFICATIONS.
3. FOR REINF SCHEDULE SEE SHEETS S61 AND S62.
4. SHEAR BARS SHALL BE AS SPECIFIED BY ANCHOR MANUFACTURER FOR 8 TON NOMINAL CLUTCH SYSTEM.
5. PANEL SHALL BE LIFTED FROM EITHER THE TOP FACE OR THE SIDE FACE USING ALL AVAILABLE ANCHORS ON THE FACE. THE PANEL TO BE LIFTED FROM ONE FACE AT A TIME.

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TACOMA, WA 98401 253-383-5841
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600 Fifth Avenue, Suite 600
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(206) 622-5822 Fax: (206) 622-8130

MARK | REVISION | BY: | APPROVED: | DATE:

APPROVED
CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ | 06/11/03
CHECKED BY – DATE
ML | 06/11/03
PROJECT ENGR.– DATE

TOWNSHIP:
DATUM: HORIZ: | RANGE: | SECTION:
DRAWING SCALE AS SHOWN | VERT:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PANEL DETAILS
SHEET 8

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

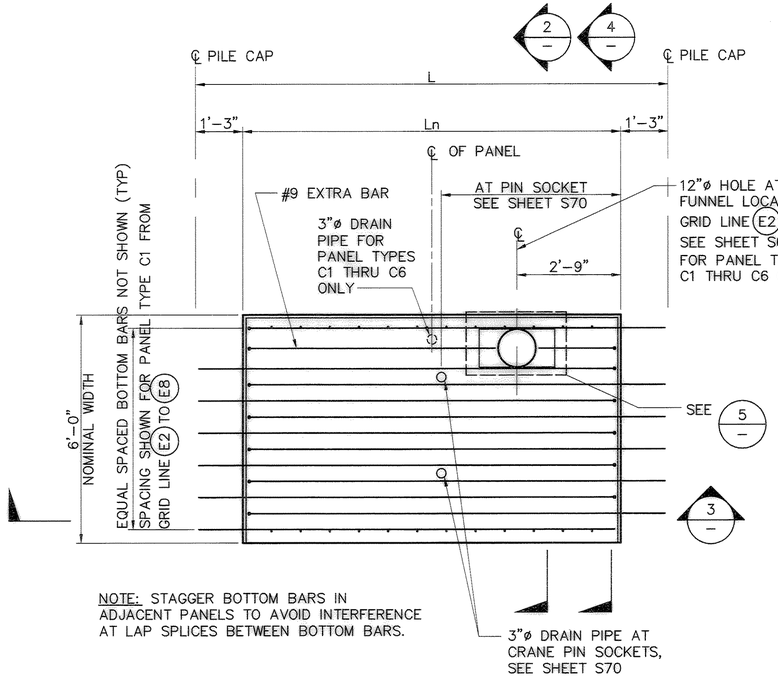
SHEET 99 OF 164

EP-~~556-17~~
S58

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

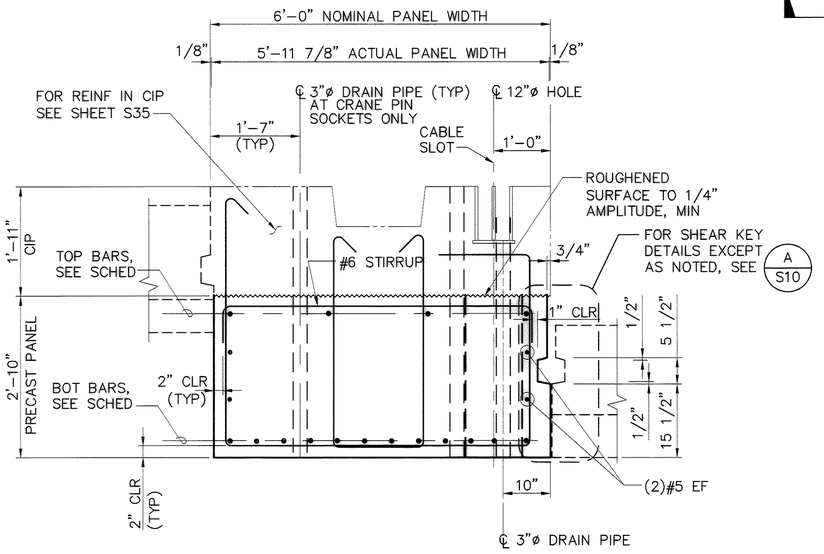
FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S58.DWG
JOB # 102349.10 | JOB NAME Pierce County Terminal | PLOTTED DATE & TIME JAN. 27, 2005 9:26:27 AM
XREFS: POT22x34TB-KPFF.
UPDATED BY RICKT | PLOT SCALE 1=1 | 'PCP' FILE --- | PLOT VIEW



PLAN – TYPE 'C' PANELS (1/–)

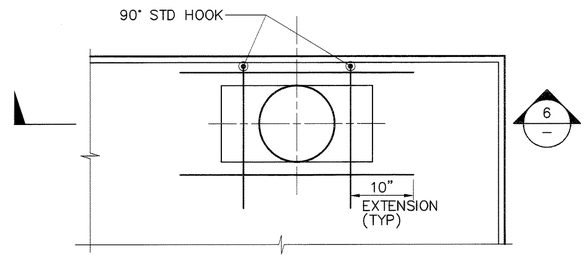
SCALE: 1/2"= 1'–0"

S10 S14, S15



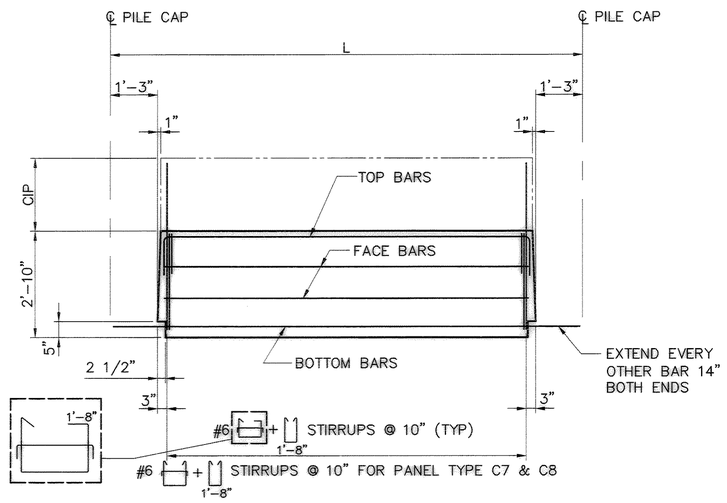
SECTION – TYPE C1, C2, C3, C4, C5 & C6 PANELS (2/–)

SCALE: 3/4"= 1'–0"



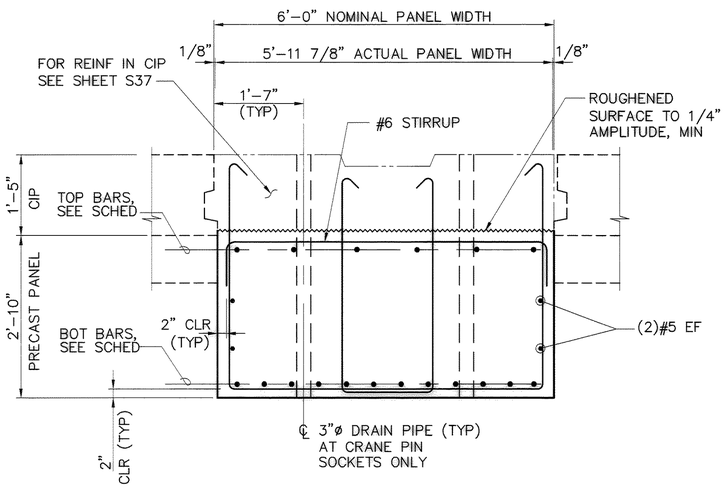
DETAIL – ADDITIONAL REINF AT 8"ø HOLE FOR DECK PANEL TYPE C1 AT CABLE FUNNEL LOCATIONS GRID LINE (E2) TO (E8) (5/–)

SCALE: 1"= 1'–0"



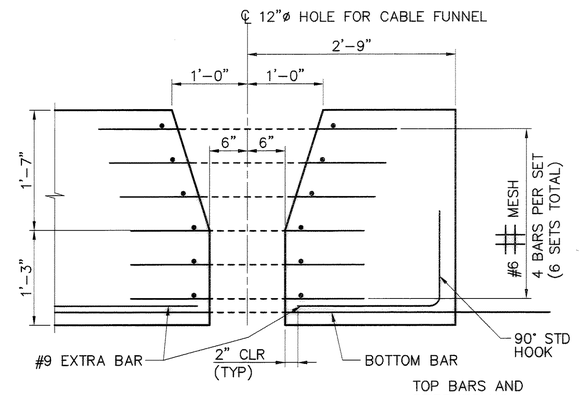
ELEVATION – TYPE 'C' PANELS (3/–)

SCALE: 1/2"= 1'–0"



SECTION – TYPE C7 & C8 PANELS (4/–)

SCALE: 3/4"= 1'–0"



ELEVATION (6/–)

SCALE: 1"= 1'–0"

NOTE:
1. FOR REINF SCHEDULE, SEE SHEETS S61 AND S62.
2. SEE SHEETS S10 THROUGH S15 FOR THE LOCATION OF CRANE PIN SOCKETS.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

	CHECKED BY – DATE
RKJ	06/11/03
ML	06/11/03

PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING
DECK PANEL DETAILS
SHEET 9

CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~555-11~~

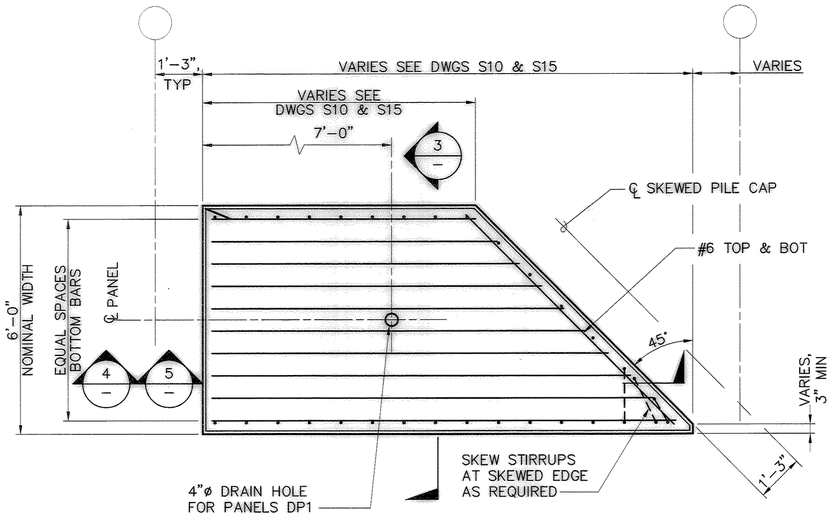
S59
SHEET 100 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

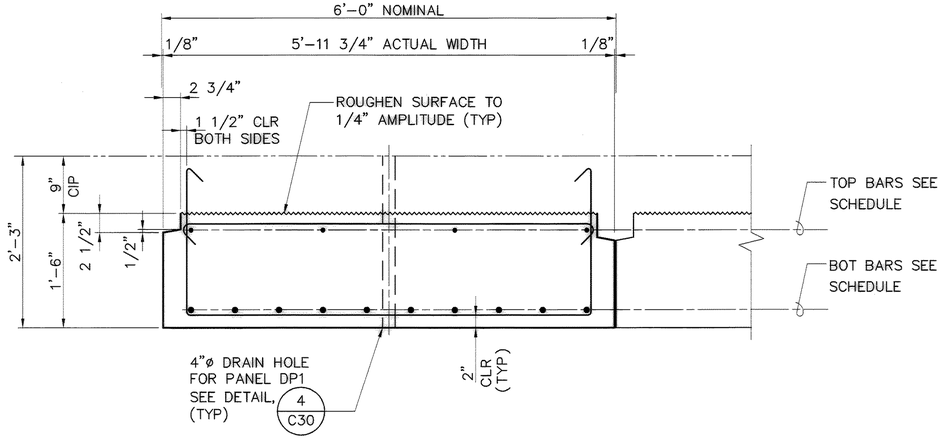
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JOB #	JOB NAME		JAN. 27, 2005 9:27:10 AM
102349.10	Pierce County Terminal		
XREFS:	P0122x34TB-KPFF,		

UPDATED BY	PLOT SCALE	'PCP' FILE	PLOT VIEW
RICKT	1=1	---	



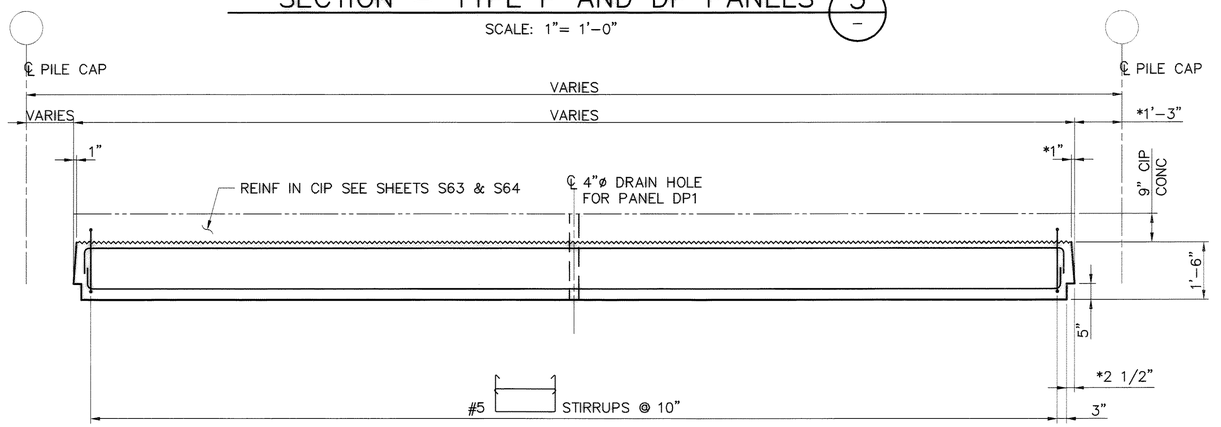
PLAN – TYPE P1, P5 & DP1 PANELS (1/S10/S15)

SCALE: 1/2"= 1'-0"



SECTION – TYPE P AND DP PANELS (3)

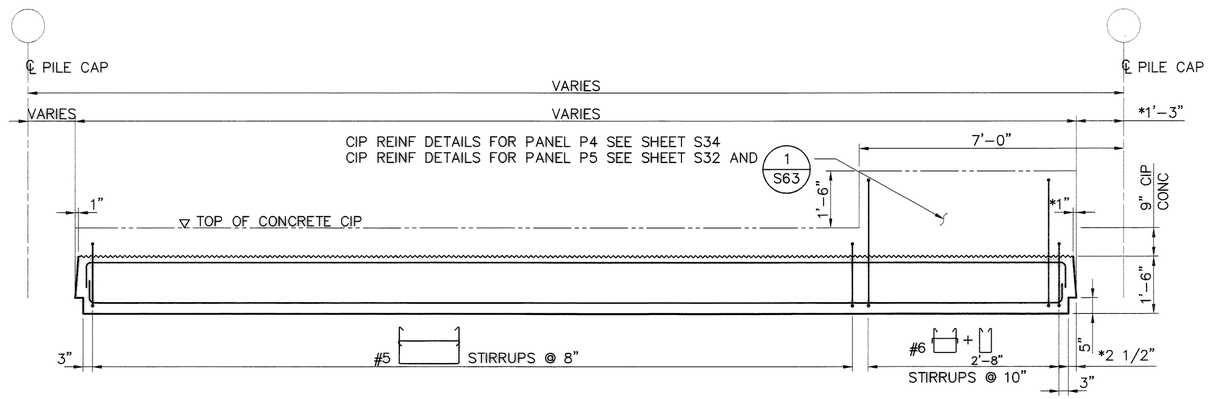
SCALE: 1"= 1'-0"



* DIMENSION SHOWN IS PERPENDICULAR TO SKEWED EDGE OF PANEL.

ELEVATION – TYPE P1, P2, P3 & DP1 PANELS (4)

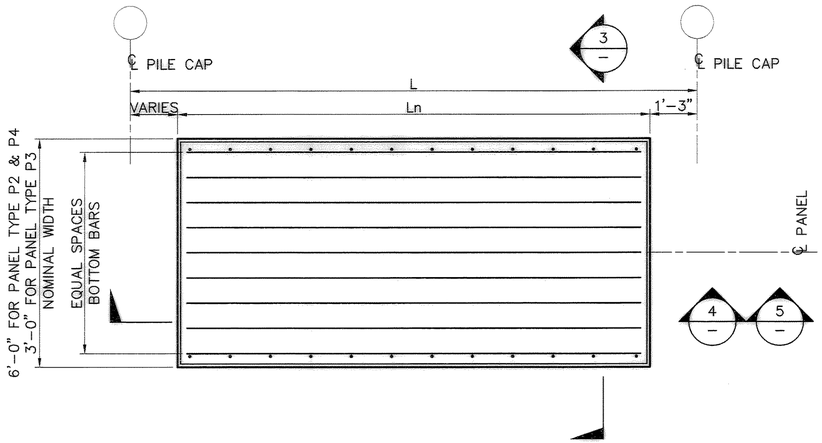
SCALE: 1/2"= 1'-0"



ELEVATION – TYPE P4 & P5 PANEL (5)

SCALE: 1/2"= 1'-0"

* DIMENSION SHOWN IS PERPENDICULAR TO SKEWED EDGE OF PANEL.



PLAN – TYPE P2, P3 & P4 PANELS (2)

SCALE: 1/2"= 1'-0"

NOTE:
1. FOR REINF SCHEDULE, SEE SHEETS S61 AND S62.

PORT OF TACOMA U.S.A.

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TACOMA, WA 98401 253-383-5841

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(206) 622-5822 Fax: (206) 622-6180

MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	CHECKED BY – DATE	06/11/03
ML	PROJECT ENGR – DATE	06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: E1972
E NUMBER: 998149
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PANEL DETAILS
SHEET 10

EP-~~5661-17~~
S60
SHEET 101 OF 164

6320-17

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S60.DWG			
UPDATED BY	JOB #	JOB NAME	PLOTTED DATE & TIME
RICKT	102349.10	Pierce County Terminal	JAN. 27, 2005 9:28:00 AM

XREFS: P0122x34TB-KPFF.

PLOT SCALE	'PCP' FILE	PLOT VIEW
1=1	---	

PRECAST DECK PANEL SCHEDULE

PANEL TYPE	PANEL WIDTH (NOMINAL)	NORMINAL LENGTH "L"	ACTUAL LENGTH "Ln"	NON-HAUNCH LENGTH "Lm"	REBAR LENGTH "Lb"	REBAR LENGTH "Lc"	ONE END HOOKED TOP BAR	REF. PLAN	REF. ELEV.	TRANSV. SECTION	CONCRETE STRENGTH	FINAL PRESTRESS (KIPS)	BOTTOM REINF.	TOP REINFORCEMENT		
														BAR 'a'	BAR 'b' EA END	BAR 'c' EA END
A1, DA1	6'-0"	25'-0"	22'-6"	13'-6"	9'-0"	7'-0"	–	1/S53	3/S53	2/S53	f'c @ 28 DAYS = 6000 PSI MIN	392	4-#4	4-#8	4-#8	2-#8
A5, DA5	6'-0"	20'-0"	17'-6"	8'-6"	7'-0"	5'-6"	YES	1/S53	3/S53	2/S53		343	4-#4	4-#8	4-#8	2-#8
A7, DA7	6'-0"	17'-8"	15'-2"	6'-2"	6'-0"	5'-0"	–	1/S53	3/S53	2/S53		294	4-#4	4-#8	4-#8	2-#8
A7A	6'-0"	17'-8"	15'-2"	6'-2"	6'-0"	5'-0"	YES	1/S53	3/S53	2/S53		294	4-#4	4-#8	4-#8	2-#8
A2	3'-0"	25'-0"	22'-6"	13'-6"	9'-0"	–	–	1/S54	3/S54	2/S54		196	4-#4	4-#8	2-#8	–
A6	3'-0"	20'-0"	17'-6"	8'-6"	7'-0"	–	YES	1/S54	3/S54	2/S54		196	4-#4	4-#8	2-#8	–
A8	3'-0"	17'-8"	15'-2"	6'-2"	6'-0"	–	–	1/S54	3/S54	2/S54		147	4-#4	4-#8	2-#8	–
A11, DA11	6'-0"	22'-1"	19'-7"	10'-7"	8'-0"	6'-0"	–	1/S53	3/S53	2/S53		294	4-#4	4-#8	4-#8	2-#8
A12, DA12	6'-0"	22'-1"	19'-7"	10'-7"	8'-0"	6'-0"	YES	1/S53	3/S53	2/S53		392	4-#4	4-#8	4-#8	2-#8
A13	4'-0"	22'-1"	19'-7"	10'-7"	8'-0"	–	–	4/S54	3/S54	2/S54		196	4-#4	4-#8	2-#8	–
A14	4'-0"	22'-1"	19'-7"	10'-7"	8'-0"	–	YES	4/S54	3/S54	2/S54		294	4-#4	4-#8	2-#8	–
A15	3'-0"	22'-1"	19'-7"	10'-7"	8'-0"	–	YES	1/S54	3/S54	2/S54		196	4-#4	4-#8	2-#8	–
A16	5'-0"	22'-1"	19'-7"	10'-7"	8'-0"	6'-0"	YES	1/S57	3/S57	2/S57		343	4-#4	4-#8	2-#8	2-#8
A17	5'-0"	22'-1"	19'-7"	10'-7"	8'-0"	6'-0"	–	1/S57	3/S57	2/S57		245	4-#4	4-#8	2-#8	2-#8
A18	2'-0"	20'-0"	18'-3"	9'-3"	7'-6"	–	–	1/S54.1	3/S54.1	2/S54.1		98	4-#4	2-#8	2-#8	–
A19	2'-0"	15'-0"	13'-3"	4'-3"	6'-0"	–	–	1/S54.1	3/S54.1	2/S54.1		98	4-#4	2-#8	2-#8	–
A20	2'-0"	20'-0"	18'-3"	9'-3"	7'-6"	–	YES	1/S54.1	3/S54.1	2/S54.1		147	4-#4	2-#8	2-#8	–
B1	3'-0"	25'-0"	22'-6"	–	9'-0"	7'-0"	–	1/S55	3/S55	2/S55		196	4-#4	4-#9	2-#9	2-#9
B5	3'-0"	20'-0"	17'-6"	–	7'-0"	5'-6"	YES	1/S55	3/S55	2/S55		147	4-#4	4-#9	2-#9	2-#9
B7	3'-0"	17'-8"	15'-2"	–	6'-0"	5'-0"	YES	1/S55	3/S55	2/S55		147	4-#4	4-#9	2-#9	2-#9
B2	5'-0"	25'-0"	22'-6"	13'-6"	9'-0"	7'-0"	–	1/S56	3/S56	2/S56		392	4-#4	4-#9	2-#9	2-#9
B2a	5'-0"	25'-0"	22'-6"	13'-6"	9'-0"	7'-0"	–	1/S56.1	3/S56.1	2/S56.1		392	4-#4 3-#8	4-#9	2-#9	2-#9
B2b	5'-0"	25'-0"	22'-6"	13'-6"	9'-0"	7'-0"	–	1/S56.1	3/S56.1	2/S56.1		392	4-#4 3-#8	4-#9	2-#9	2-#9
B6	5'-0"	20'-0"	17'-6"	8'-6"	7'-0"	5'-6"	YES	1/S56	3/S56	2/S56		294	4-#4	4-#9	2-#9	2-#9
B6a	5'-0"	20'-0"	17'-6"	8'-6"	7'-0"	5'-6"	YES	1/S56.1	3/S56.1	2/S56.1		294	4-#4 3-#8	4-#9	2-#9	2-#9
B8	5'-0"	17'-8"	15'-2"	6'-2"	6'-0"	5'-0"	YES	1/S56	3/S56	2/S56		294	4-#4	4-#9	2-#9	2-#9
B9	3'-0"	22'-1"	19'-7"	–	8'-0"	6'-0"	YES	1/S55	3/S55	2/S55		196	4-#4	4-#8	2-#8	2-#8
B10	3'-0"	22'-1"	19'-7"	–	8'-0"	6'-0"	–	1/S55	3/S55	2/S55		147	4-#4	4-#8	2-#8	2-#8
B11	5'-0"	22'-1"	19'-7"	10'-7"	8'-0"	6'-0"	YES	1/S56	3/S56	2/S56		392	4-#4	4-#8	2-#8	2-#8
B12	5'-0"	22'-1"	19'-7"	10'-7"	8'-0"	6'-0"	–	1/S56	3/S56	2/S56		294	4-#4	4-#8	2-#8	2-#8
E1, DE1	6'-0"	25'-0"	22'-6"	13'-6"	9'-0"	7'-0"	–	1/S53	3/S53	2/S53		294	4-#4	4-#8	4-#8	2-#8
E2	3'-0"	25'-0"	22'-6"	13'-6"	9'-0"	–	–	1/S54	3/S54	2/S54		147	4-#4	4-#8	2-#8	–
W1, DW1	6'-0"	15'-0"	12'-6"	3'-6"	5'-0"	4'-0"	YES	1/S53	3/S53	2/S53		245	4-#4	4-#8	4-#8	2-#8
W1a	6'-0"	15'-0"	12'-6"	3'-6"	5'-0"	4'-0"	NOTE 2	1/S53	3/S53	2/S53		343	8-#4	4-#8	2-#8	2-#8
W2, DW2	6'-0"	25'-0"	22'-6"	13'-6"	9'-0"	7'-0"	–	1/S53	3/S53	2/S53		294	4-#4	4-#8	4-#8	2-#8
W2a	6'-0"	25'-0"	22'-6"	13'-6"	9'-0"	7'-0"	YES	1/S53	3/S53	2/S53		343	4-#4	4-#8	4-#8	2-#8
W3	4'-0"	15'-0"	12'-6"	3'-6"	5'-0"	–	YES	4/S54	3/S54	2/S54		196	4-#4	4-#8	2-#8	–
W4	4'-0"	25'-0"	22'-6"	13'-6"	9'-0"	–	–	4/S54	3/S54	2/S54		196	4-#4	4-#8	2-#8	–
W5	5'-0"	15'-0"	12'-6"	3'-6"	5'-0"	4'-0"	YES	1/S57	3/S57	2/S57		245	4-#4	4-#8	2-#8	2-#8
W6	5'-0"	25'-0"	22'-6"	13'-6"	9'-0"	7'-0"	–	1/S57	3/S57	2/S57		245	4-#4	4-#8	2-#8	2-#8
W7	6'-0"	25'-0"	22'-4"	–	–	–	NOTE 3	1/S58	3/S58	2/S58		–	12-#9	12-#9	–	–

NOTE

1. PROVIDE WELDABLE GR 60 REINFORCEMENT FOR ALL TOP BARS
2. HOOK TOP BARS AT BOTH ENDS.
3. THIS PANEL IS REMOVABLE PANEL, TOP BARS ARE HOOKED INSIDE PANEL AT BOTH ENDS.
4. PANEL TYPES STARTING W/ DESIGNATION "D" HAVE DRAINS EMBEDDED.

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

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PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PANEL SCHEDULE
SHEET 1

EP-~~5551-47~~
S61
SHEET 102 OF 164

MARK | REVISION | BY: | APPROVED: | DATE:

APPROVED
CHIEF ENGINEER – DATE

RKJ 06/11/03
CHECKED BY – DATE
ML 06/11/03
PROJECT ENGR – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S61.DWG
JOB # 102349.10
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 27, 2005 9:44:06 AM
UPDATED BY RICKT
PLOT SCALE 1=1
'PCP' FILE
PLOT VIEW
XREFS: P01272x34TB-KPFF,

PRECAST DECK PANEL SCHEDULE

PANEL TYPE	PANEL WIDTH (NOMINAL)	LENGTH "L"	LENGTH "Ln"	LENGTH "Lm"	LENGTH "Lb"	LENGTH "Lc"	ONE END HOOKED TOP BAR	REF. PLAN	REF. ELEV.	TRANSV. SECTION	CONCRETE STRENGTH	FINAL PRESTRESS (KIPS)	BOTTOM REINF.	TOP REINFORCEMENT		
														BAR 'a'	BAR 'b' EA END	BAR 'c' EA END
C1	6'–0"	12'–6"	10'–0"	–	–	–	NOTE 2	1/S59	3/S59	2/S59	f'c @ 28 DAYS = 6000 PSI MIN	–	12–#9	6–#8	–	–
C2	6'–0"	10'–0"	7'–6"	–	–	–	NOTE 2	1/S59	3/S59	2/S59		–	12–#9	6–#8	–	–
C3	6'–0"	10'–0"	7'–6"	–	–	–	NOTE 2	1/S59	3/S59	2/S59		–	12–#9	6–#8	–	–
C4	6'–0"	8'–10"	6'–4"	–	–	–	NOTE 2	1/S59	3/S59	2/S59		–	12–#9	6–#8	–	–
C5	6'–0"	11'–0 1/2"	8'–6 1/2"	–	–	–	NOTE 2	1/S59	3/S59	2/S59		–	12–#9	6–#8	–	–
C6	6'–0"	11'–0 1/2"	8'–6 1/2"	–	–	–	NOTE 2	1/S59	3/S59	2/S59		–	12–#9	6–#8	–	–
C7	6'–0"	11'–0 1/2"	8'–6 1/2"	–	–	–	NOTE 2	1/S59	3/S59	4/S59		–	12–#9	6–#8	–	–
C8	6'–0"	11'–0 1/2"	8'–6 1/2"	–	–	–	NOTE 2	1/S59	3/S59	4/S59		–	12–#9	6–#8	–	–
P1, DP1	6'–0"	VARIES	VARIES	–	–	–	NOTE 2	1/S60	4/S60	3/S60		–	10–#8	4–#8	–	–
P2	6'–0"	15'–0"	12'–6"	–	–	–	NOTE 2	2/S60	4/S60	3/S60		–	10–#8	4–#8	–	–
P3	3'–0"	15'–0"	12'–6"	–	–	–	NOTE 2	2/S60	4/S60	3/S80		–	6–#8	4–#6	–	–
P4	6'–0"	25'–0"	22'–6"	–	–	–	NOTE 2	2/S60	5/S60	3/S60		–	10–#8	4–#8	–	–
P5	6'–0"	VARIES	VARIES	–	–	–	NOTE 2	1/S60	5/S60	3/S60		–	10–#8	4–#8	–	–

NOTES:

1. PROVIDE WELDABLE GR 60 REINFORCEMENT FOR ALL TOP BARS.
2. TOP BARS ARE HOOKED INSIDE PANEL AT BOTH ENDS.

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

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ML 06/11/03
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PORT PARCEL:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
DECK PANEL SCHEDULE
SHEET 2

TOWNSHIP: RANGE: SECTION:
DATUM- HORIZ: VERT:
DRAWING SCALE: AS SHOWN

EP-~~5551-17~~
S62
SHEET 103 OF 164

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972562.DWG

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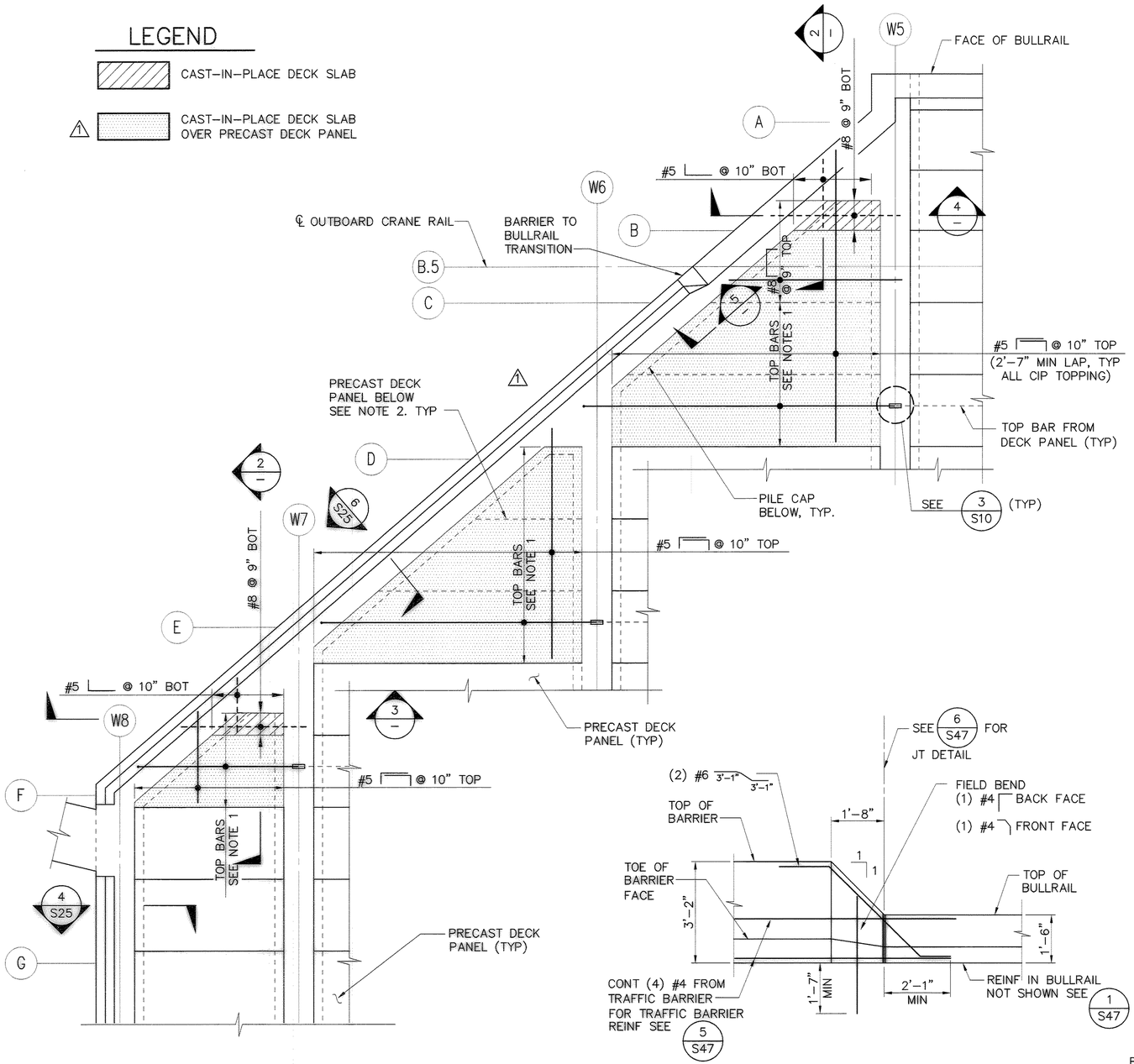
XREFS: P01722x341B-KPFF.

UPDATED BY	PLOT SCALE	'PCP' FILE	PLOT VIEW
RKJKT	1=1	---	

LEGEND

CAST-IN-PLACE DECK SLAB

1 CAST-IN-PLACE DECK SLAB OVER PRECAST DECK PANEL



DETAIIL – WEST WHARF END CAST-IN-PLACE CONCRETE TOPPING 1/S10

SCALE: 3/16"= 1'-0"

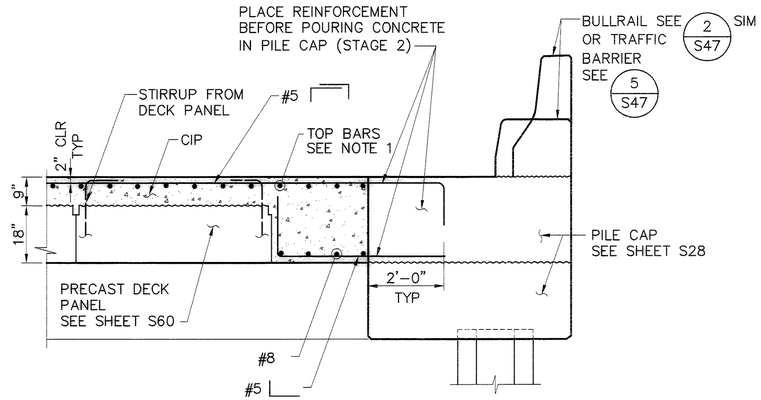
BARRIER TO BULLRAIL TRANSITION SECTION 5

SCALE: 1/2"= 1'-0"

N

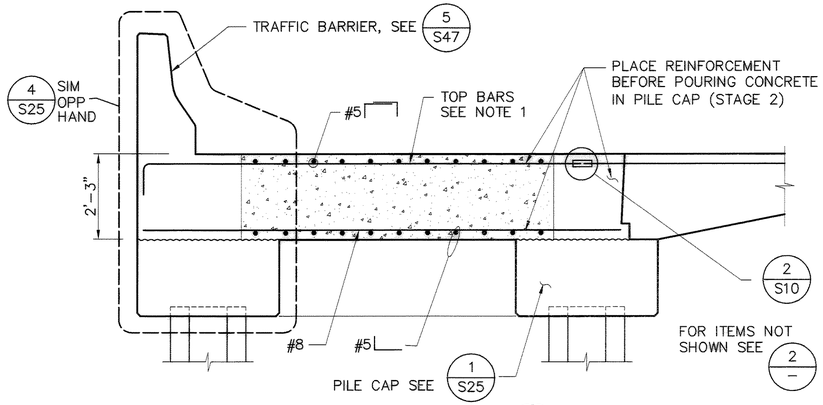
NOTES:

1. BARS TO BE WELDABLE (GR 60), THE SIZE AND NUMBER TO MATCH THE ADJACENT DECK PANEL'S TOP BARS.
2. FOR DECK PANEL TYPE SEE SHEET S10.
3. FOR DECK PANEL SCHEDULE SEE SHEETS S61 AND S62.



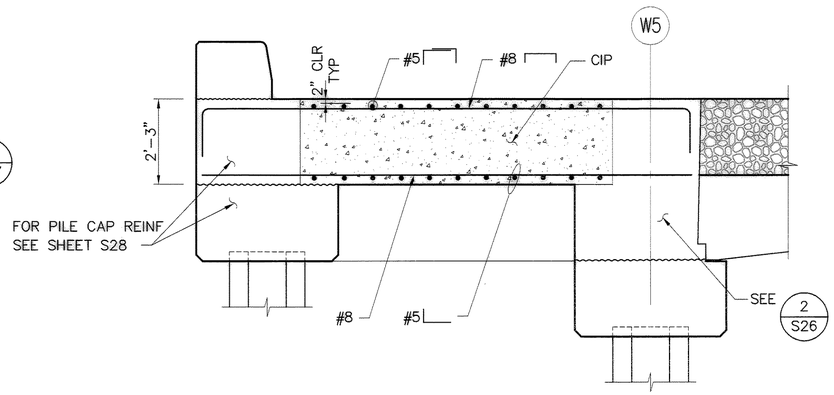
SECTION 2

SCALE: 1/2"= 1'-0"



SECTION 3

SCALE: 1/2"= 1'-0"



SECTION 4

SCALE: 1/2"= 1'-0"

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Δ	ADDENDUM 1: REVISED GRAPHICS	MB	RKJ	8/1/03

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DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
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ML 06/11/03
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
F. NUMBER: E1972
PHASE: RECORD DOCUMENTS

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING

MISCELLANEOUS DECK PANEL DETAILS SHEET 1

EP-~~5551-17~~

S63

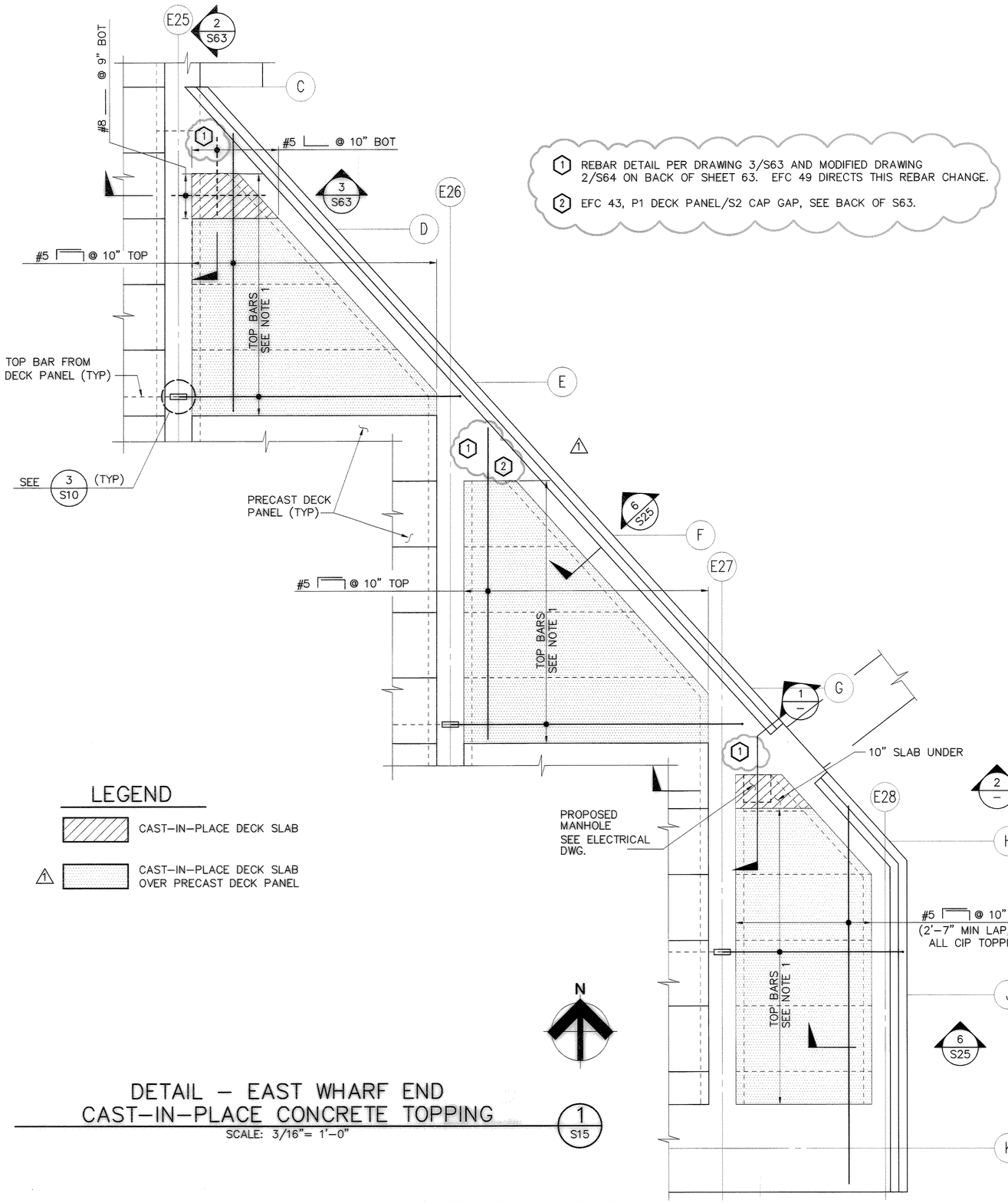
SHEET 104 OF 164

6320-17

UPDATED BY	PLOT SCALE	'PCP' FILE	PLOT VIEW
RKJ	1=1	---	

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FILE PATH & NAME: v:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S63.DWG
XREFS: P0122x341B-KPFF.



1 REBAR DETAIL PER DRAWING 3/S63 AND MODIFIED DRAWING 2/S64 ON BACK OF SHEET 63. EFC 49 DIRECTS THIS REBAR CHANGE.

2 EFC 43, P1 DECK PANEL/S2 CAP GAP, SEE BACK OF S63.

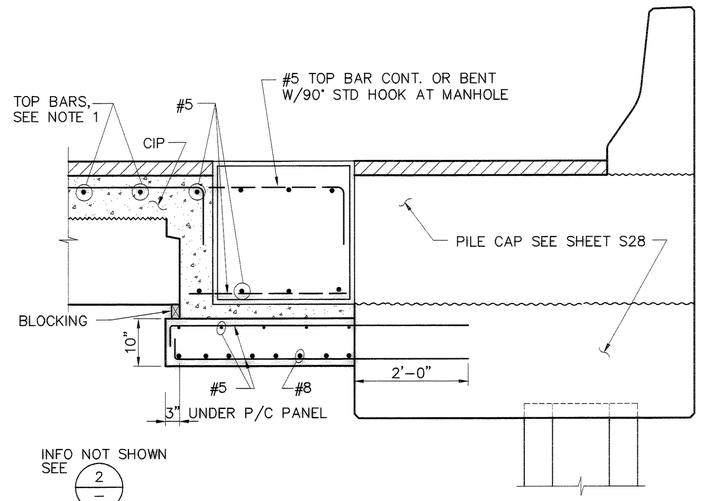
LEGEND

CAST-IN-PLACE DECK SLAB

1 CAST-IN-PLACE DECK SLAB OVER PRECAST DECK PANEL

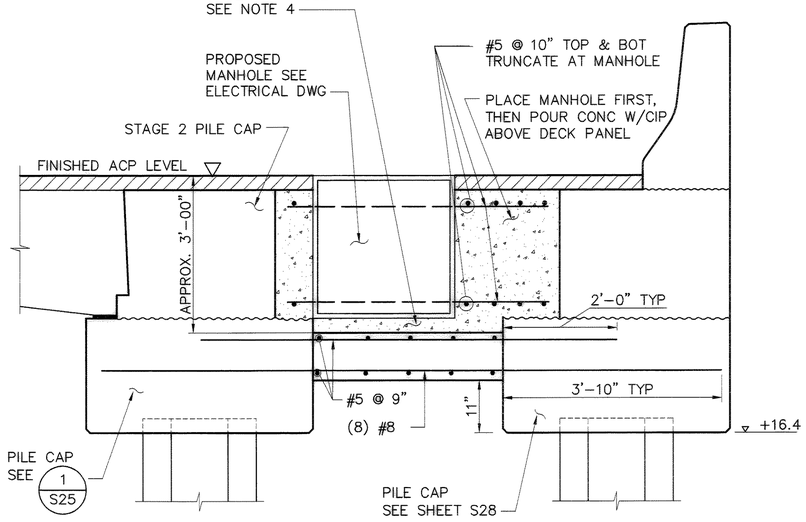
DETAIL – EAST WHARF END CAST-IN-PLACE CONCRETE TOPPING

SCALE: 3/16"= 1'-0" — 1 / S15



SECTION

SCALE: 3/4"= 1'-0" — 1 / –



SECTION

SCALE: 3/4"= 1'-0" — 2 / –

NOTES:

1. BARS TO BE WELDABLE (GR 60), THE SIZE AND NUMBER TO MATCH THE ADJACENT DECK PANEL'S TOP BARS.
2. FOR DECK PANEL TYPE SEE SHEET S15.
3. FOR DECK PANEL SCHEDULE SEE SHEETS S61 AND S62.
4. CONTRACTOR TO MEASURE ONSITE, SO THE TOP LEVEL OF MANHOLE WILL MATCH TOP LEVEL OF FINISHED ACP LEVEL ON THE WHARF

MARK | REVISION | BY | APPROVED | DATE
1 | ADDENDUM 1: REVISED GRAPHICS | MB | RKJ | 8/1/03

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PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
MISCELLANEOUS DECK PANEL DETAILS
SHEET 2

APPROVED

CHIEF ENGINEER – DATE

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ML 06/11/03 PROJECT ENGR – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM: HORZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: E1972
E NUMBER: 998149
PHASE: RECORD DOCUMENTS

SHEET 105 OF 164 SHEETS

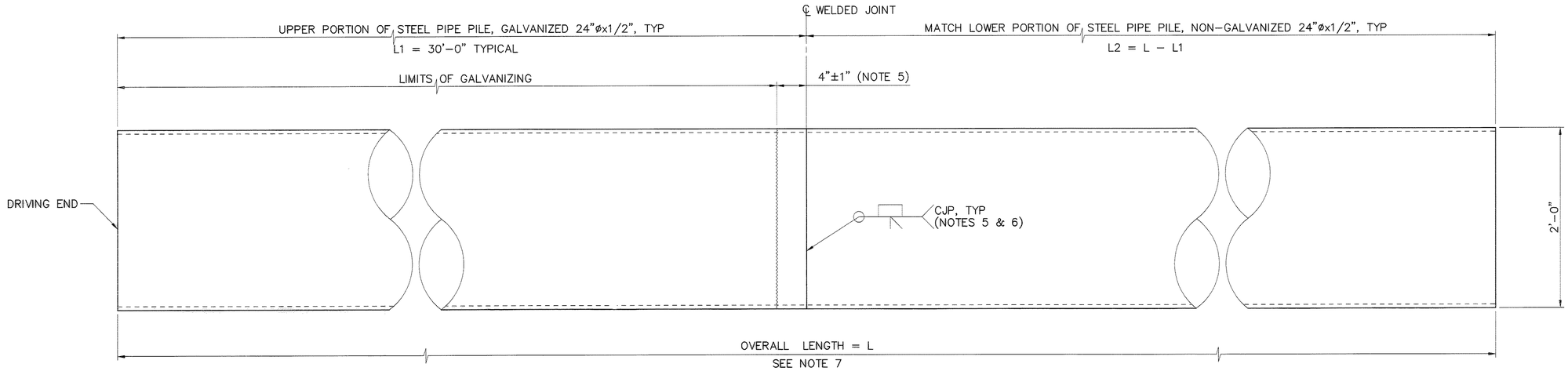
S64

EP-~~5551-17~~

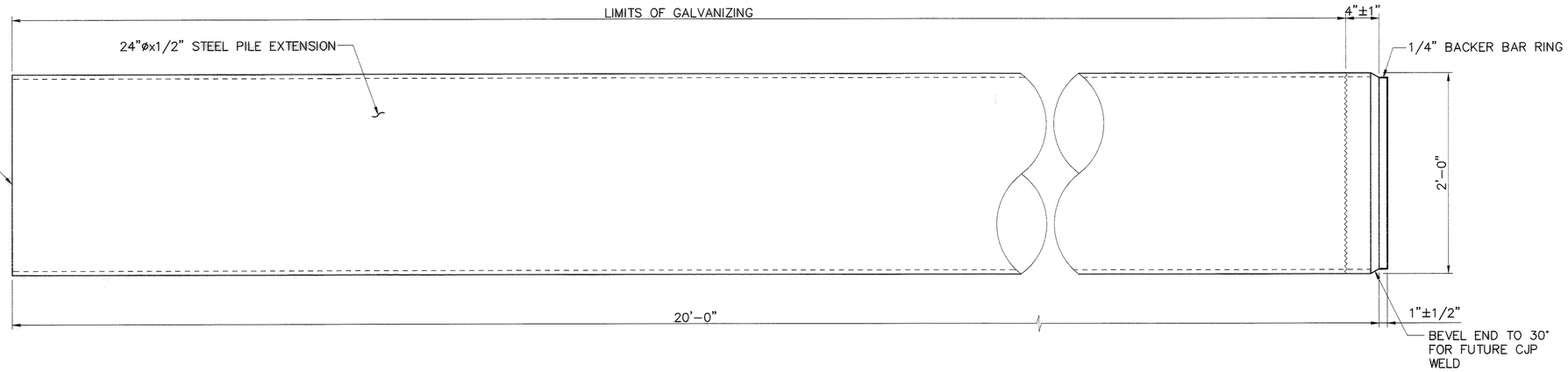
6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

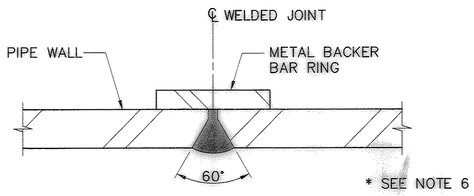
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JOB # 102349.10 | JOB NAME Pierce County Terminal | PLOTTED DATE & TIME JAN. 27, 2005 9:46:00 AM | UPDATED BY RICKT
XREFS: P0122x34TB-KPFF,
PLOT SCALE 1=1 | 'PCP' FILE | PLOT VIEW



STEEL PIPE PILE DETAIL (1)
SCALE: 1 1/2"= 1'-0"



STEEL PILE EXTENSION (2)
SCALE: 1 1/2"= 1'-0"



ALTERNATE CJP TUBULAR BUTT JOINT
SCALE: 12"= 1'-0"

NOTES:

1. ALL STEEL PIPE PILES SHALL CONFORM TO ASTM A252, GRADE 3, WITH MODIFICATIONS AS INDICATED IN THE ATTACHED TECHNICAL SPECIFICATIONS.
2. STEEL PIPE PILING SHALL BE MANUFACTURED IN CONFORMANCE WITH THE DIMENSIONAL AND FABRICATION TOLERANCES INDICATED IN API 5L CHAPTER 7.
3. UPPER PORTION OF STEEL PIPE PILE TO BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 THICKNESS GRADE 100.
4. WELDING SHALL CONFORM TO "STRUCTURAL WELDING CODE - STEEL", AWS D1.1
5. HOLD BACK OR REMOVE GALVANIZED COATING FROM ℄ WELDED JOINT ON INSIDE AND OUTSIDE OF PIPE BEFORE WELDING.
6. MANUFACTURER MAY USE THE ALTERNATE CJP TUBULAR BUTT JOINT. ALL CJP TUBULAR BUTT JOINTS SHALL HAVE A WPS QUALIFIED IN ACCORDANCE WITH AWS D1.1 SECTION 4.
7. OVERALL LENGTH SHALL BE THE LENGTH FROM TIP TO CUT-OFF +5 FEET, OVERDRIVE ALLOWANCE.

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PORT PARCEL:

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DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
STEEL PIPE PILE DETAILS

EP-~~555147~~
CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

SHEET 106 OF 164
S65

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S65.DWG
JOB # 102349.10
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 27, 2005 9:46:33 AM
UPDATED BY RICKT
XREFS: P0722x34TB-KPFF.
'PCP' FILE ---
PLOT SCALE 1=1
PLOT VIEW

TABLE 1 – PRECAST PRESTRESSED CONCRETE PILES – NEW EAST WHARF EXTENSION

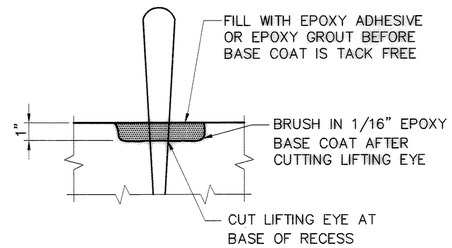
DESIGNATION	DETAIL	SECTION AREA	WEIGHT	SECTION MODULOUS	PRESTRESS INFORMATION			LONGITUDINAL (GRADE 60) REINF. STEEL	BUILD UP OR DOWELLED CONNECTION	OVERDRIVE ALLOWANCE SEE NOTE 4
					# OF STRANDS	DESIGN FORCE	PRESTRESS IN CONCRETE			
24" CONC. HOLLOW OCT – TYPE 1	1/S66	300 IN^2	330 LBS/FT	1306 IN^3	15	376 KIPS	1252 PSI	NONE	2/S67, 3/S68	5 FT
24" CONC. HOLLOW OCT – TYPE 2	1/S66	300 IN^2	330 LBS/FT	1306 IN^3	15	376 KIPS	1252 PSI	(15) #6	3/S68	5 FT
24" CONC. SOLID OCT – TYPE 1	2/S66	477 IN^2	524 LBS/FT	1513 IN^3	22	578 KIPS	1211 PSI	NONE	2/S68	5 FT
24" CONC. SOLID OCT – TYPE 2	2/S66	477 IN^2	524 LBS/FT	1513 IN^3	22	578 KIPS	1211 PSI	(11) #8	3/S68	5 FT

TABLE 2 – PRECAST PRESTRESSED CONCRETE PILE SPIRAL REINFORCING – NEW EAST WHARF EXTENSION

DESIGNATION	SPIRAL REGION 1			SPIRAL REGION 2			SPIRAL REGION 3			SPIRAL REGION 4		
	WIRE SIZE	PITCH	LENGTH	WIRE SIZE	PITCH	LENGTH	WIRE SIZE	PITCH	LENGTH	WIRE SIZE	PITCH	LENGTH
24" CONC. HOLLOW OCT – TYPE 1	W5.5	2 IN	4'–6"	W5.5	3 IN	70'–0"	W5.5	4 IN	REMAINDER	W5.5	2 IN	4'–6"
1 24" CONC. HOLLOW OCT – TYPE 2	W20	2 IN	25'–0"	W18	3 IN	30'–0"	W5.5	4 IN	REMAINDER	W5.5	2 IN	4'–6"
24" CONC. SOLID OCT – TYPE 1	W18	3 IN	25'–0"	W18	3 IN	20'–0"	W5.5	4 IN	REMAINDER	W5.5	2 IN	4'–6"
1 24" CONC. SOLID OCT – TYPE 2	W20	2 IN	25'–0"	W18	3 IN	20'–0"	W5.5	4 IN	REMAINDER	W5.5	2 IN	4'–6"

NOTES:

1. MINIMUM CONCRETE STRENGTHS ARE AS FOLLOW:
   - @ RELEASE F'c = 4800 PSI
   - @ DRIVING F'c = 8000 PSI
   - @ 28 DAYS F'c = 8000 PSI
2. PRESTRESSING STEEL SHALL BE 270 KSI – 1/2"ø – 7 WIRE, LOW RELAXATION, STRAND
3. FOR PILE TIP AND CUTOFF ELEVATIONS SEE SHEETS S4 THRU S9.
4. PILE ORDER LENGTH SHALL EQUAL PILE CUTOFF ELEVATION MINUS PILE TIP ELEVATION PLUS OVERDRIVE AND STRAND EXPOSURE ALLOWANCES.
5. PILE DETAILS INDICATE MINIMUM ACCEPTABLE REINFORCING. ADDITIONAL STRENGTH MAY BE REQUIRED FOR HANDLING OR DRIVING. SEE SPECIFICATIONS.
6. SPIRAL REINFORCING MAY BE SPLICED IN REGIONS 2, 3 & 4 BY WRAPPING TWO FULL TURNS OF SPIRAL.
7. SPIRAL REINFORCING SPLICED IN REGION 1 SHALL HAVE TWO FULL TURNS AND A 135° SEISMIC HOOK, OR SHALL BE WELDED TO DEVELOP THE STRENGTH OF THE WIRE.



NOTE:
LIFTING DEVICE AND LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR CONSIDERING ALL LOADS IMPARTED TO THE PILE (NORMAL AND PARALLEL TO THE LONGITUDINAL AXIS) BY THE RIGGING BEING USED. ALL MODES OF LIFTING (FABRICATION AND FIELD) SHALL BE CONSIDERED.

DETAIL – LIFTING EYE 1
SCALE: NONE

MARK	REVISION	BY:	APPROVED:	DATE:
1	ADDENDUM 1: MODIFIED TABLE	MB	RKJ	8/1/03

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TACOMA, WA 98401 253-383-5841

APPROVED
CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
KN 06/11/03 PROJECT ENGR – DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PRECAST PILE DETAILS
SHEET 2

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~5554-17~~
S66.1
SHEET 108 OF 164

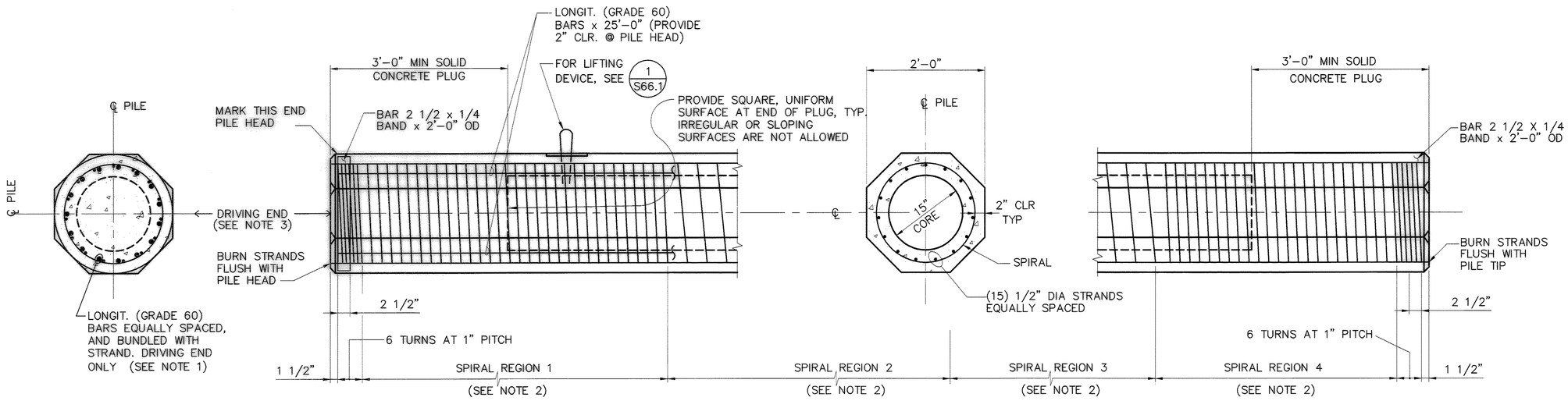
6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

PLOT VIEW	
'PCP' FILE	---
PLOT SCALE	1=1
UPDATED BY	RICK1
PLOTTED DATE & TIME	JAN. 27, 2005 9:47:26 AM

JOB #	JOB NAME
102349.10	Pierce County Terminal

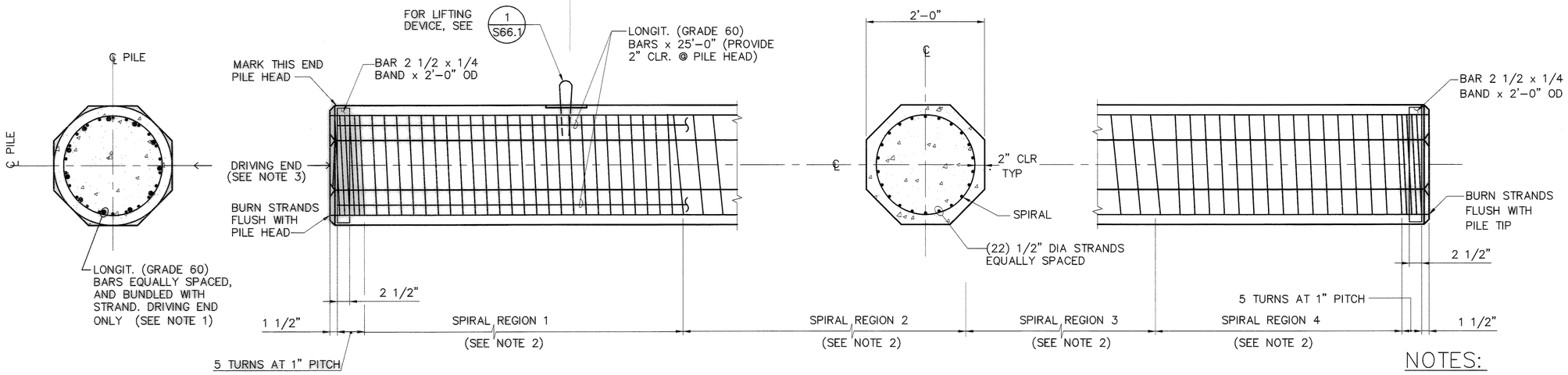
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XREFS: P0722x34TB-KPFF,



TYPE 1 & 2

24" HOLLOW OCTAGONAL PRECAST PRESTRESSED CONCRETE PILE 1/–

SCALE: 1"=1'–0"



TYPE 1 & 2

24" SOLID OCTAGONAL PRECAST PRESTRESSED CONCRETE PILE 2/–

SCALE: 1"=1'–0"

NOTES:

1. SEE TABLE 1 ON SHEET S66.1.
2. SEE TABLE 2 ON SHEET S66.1.
3. MARK DRIVING END OF ALL PILES CLEARLY IN PRECAST PLANT.
4. PILES SHALL HAVE MARKS DESIGNATING THE SIZE, LENGTH, RESPECTIVE ROW LOCATION, PILE TYPE AND STRUCTURE PORTION PAINTED CLEARLY ON THE PILE.

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MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	06/11/03
CHECKED BY –	DATE
AB	06/11/03
PROJECT ENGR.–	DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PRECAST PILE DETAILS
SHEET 1

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~555-17~~
S66
SHEET 107 OF 164

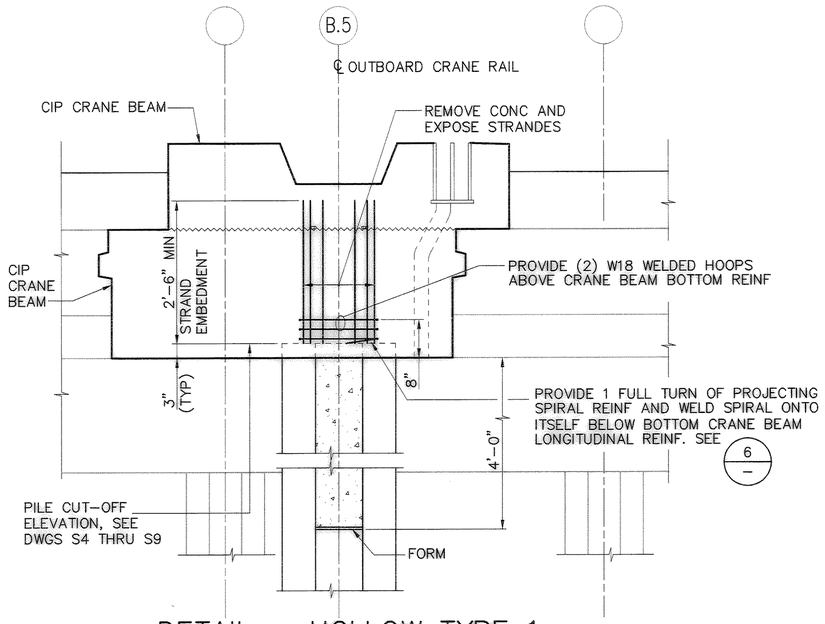
6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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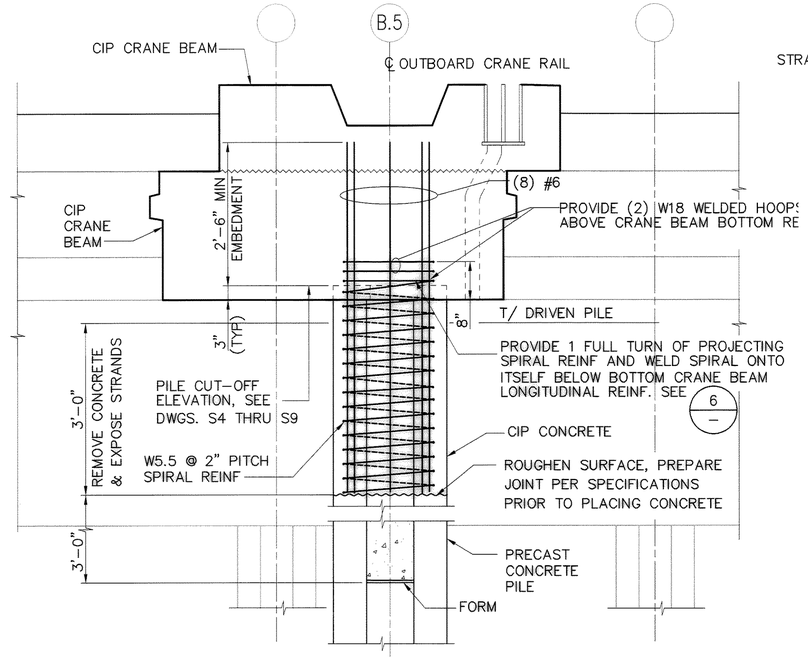
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XREFS: P0122x34TB-KPFT.



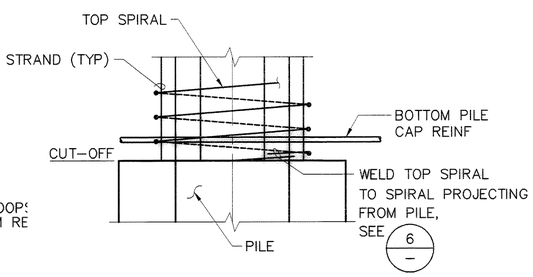
DETAIL – HOLLOW TYPE 1 PILE CUT-OFF AT EXISTING WHARF 1/—

SCALE: 3/4"= 1'-0"



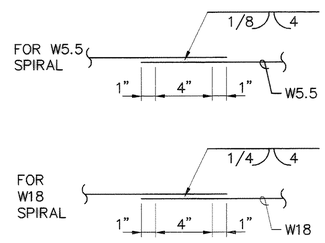
DETAIL – HOLLOW TYPE 1 PILE BUILD-UP AT EXISTING WHARF 2/—

SCALE: 3/4"= 1'-0"
(PILE TOP BELOW CUTOFF)



SPIRAL DETAIL 5/—

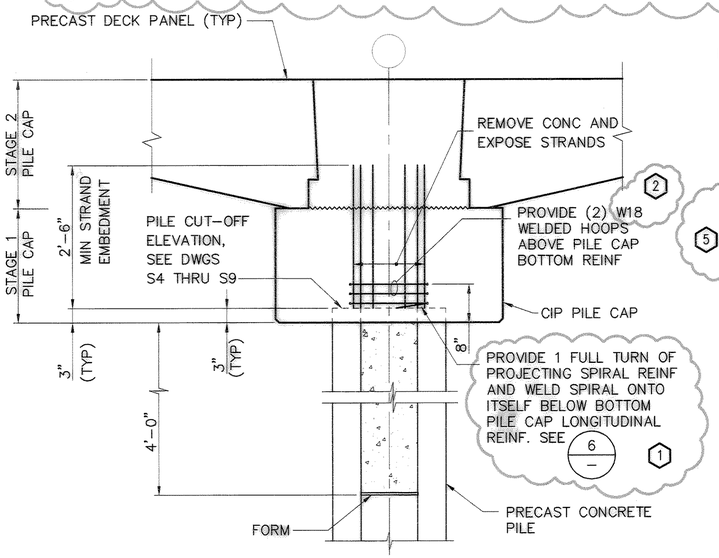
SCALE: 1 1/2"=1'-0"



WELD DETAIL 6/—

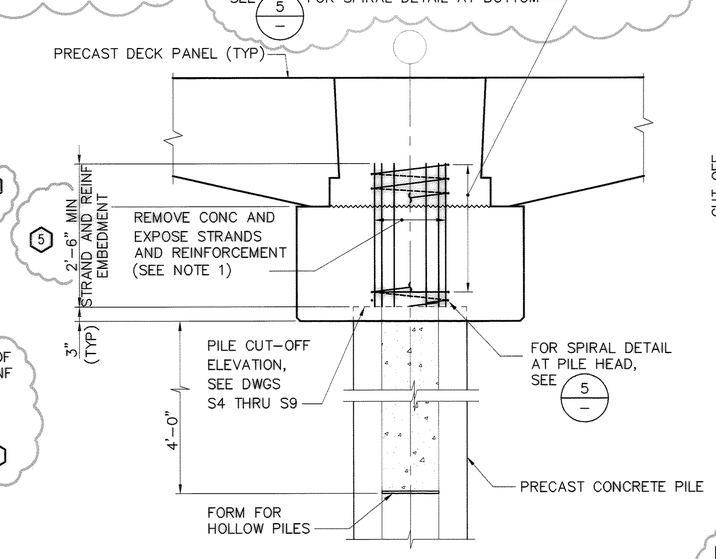
SCALE: NTS

1. RFI 112, BACK OF DRAWING S66.1, SPIRAL TERMINATED WITH 1 1/2 TURNS AND 135° HOOK.
2. RFI 102, W18 WELDED HOOPS REPLACED WITH WELDED A706 #4 REBAR HOOPS.
3. RFI 102, W18 SPIRAL REPLACED WITH A706 #4 REBAR SPIRAL.
4. RFI 113, BACK OF DRAWING S66.1, SPIRALS INSTALLED AS 2 PIECES SEPARATED BY CAP BOTTOM LONGITUDINAL REBAR. SPIRALS TOP AND BOTTOM TERMINATED WITH 135° HOOK.
5. NOTE FROM S22: SPIRAL CROWDED DOWN 3" – 4" FOR PLACEMENT OF "d" AND "e" BAR HOOKS.



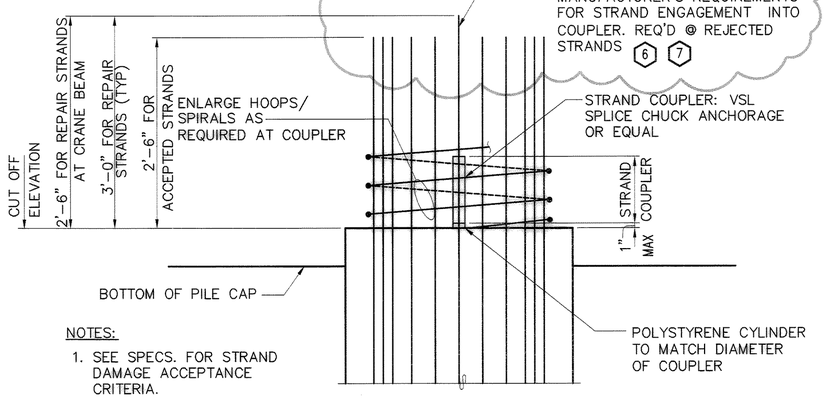
DETAIL – HOLLOW TYPE 1 PILE CUT-OFF 3/—

SCALE: 3/4"= 1'-0"



DETAIL – HOLLOW AND SOLID TYPE 2 PILE CUT-OFF 4/—

SCALE: 3/4"= 1'-0"



NOTES:

1. SEE SPECS. FOR STRAND DAMAGE ACCEPTANCE CRITERIA.

PILE STRAND REPAIR DETAIL 7/—

SCALE: 1"= 1'-0"

6. POT LETTER 42, SEAT STRAND COUPLER WITH 5000 # LOAD FOR O/B CRANE BEAM PILES, SEE BACK OF S66.1.
7. EFC 15, SEAT ALL OTHER STRAND COUPLERS WITH 15,000 # LOAD, SEE BACK OF S66.1.

NOTE:

1. FOR TYPE 2 HOLLOW AND SOLID PILES, THE CONTRACTOR SHALL NOT REMOVE MORE THAN 20' OF PILE WITHOUT ENGINEER'S APPROVAL.

6320-17

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GH/GN 06/11/03 PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

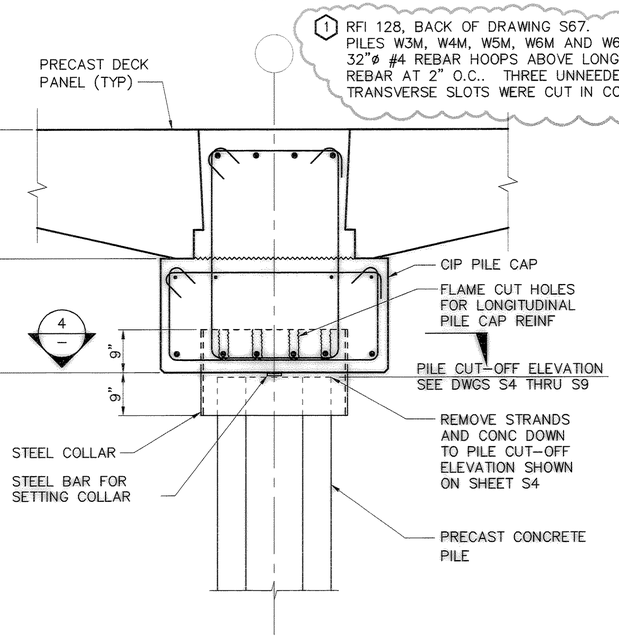
CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PILING TO PILE CAP CONNECTION DETAILS
SHEET 1

SHEET 109 OF 164
S67
EP-5551-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972567.DWG
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PLOT SCALE 1=1 | 'POP' FILE --- | PLOT VIEW
XREFS: POT22x34TB-KPFF.

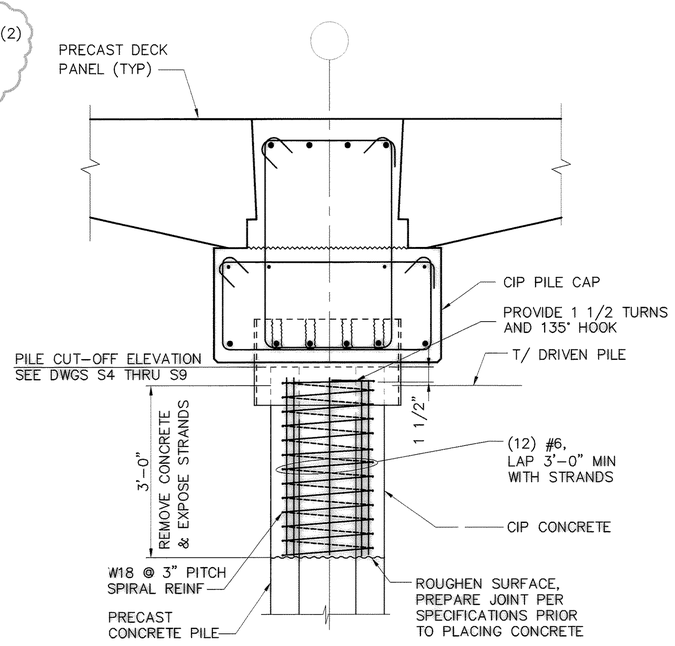


1 RFI 128, BACK OF DRAWING S67. PILES W3M, W4M, W5M, W6M AND W6L HAVE (2) 32"ø #4 REBAR HOOPS ABOVE LONGITUDINAL REBAR AT 2" O.C.. THREE UNNEEDED TRANSVERSE SLOTS WERE CUT IN COLLARS.

DETAIL – SOLID TYPE 1 PILE CUT-OFF

1 –

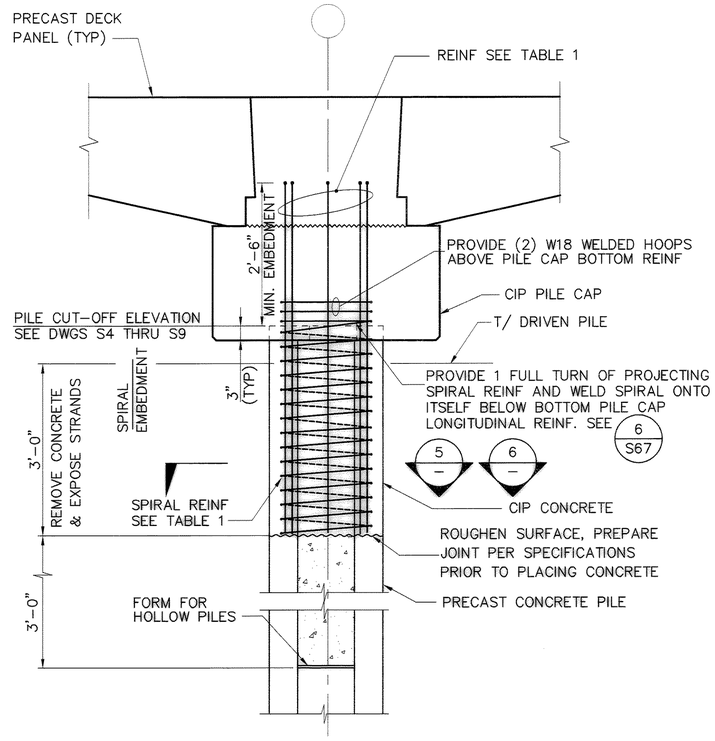
SCALE: 3/4"= 1'-0"



DETAIL – SOLID TYPE 1 PILE BUILD-UP

2 –

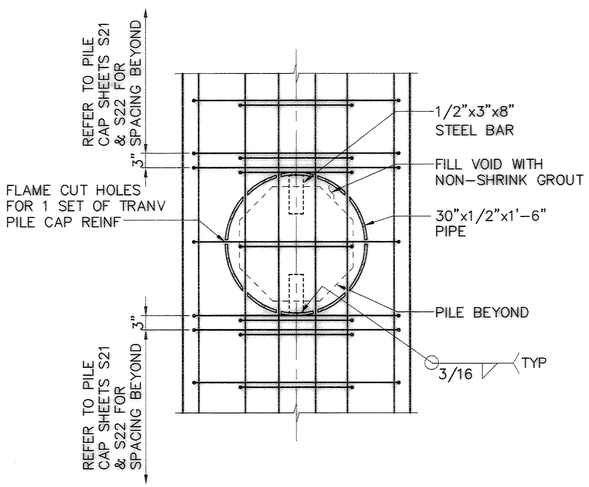
SCALE: 3/4"= 1'-0"
(PILE TOP BELOW CUT-OFF)



DETAIL – HOLLOW TYPE 1 & 2 AND SOLID TYPE 2 PILE BUILD-UP

3 –

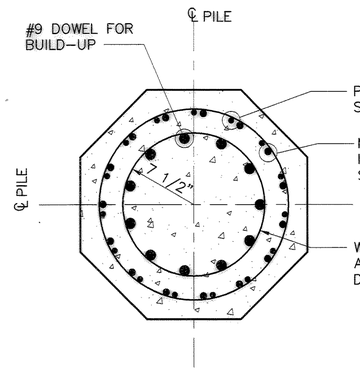
SCALE: 3/4"= 1'-0"
(PILE TOP BELOW CUT-OFF)



SECTION

4 –

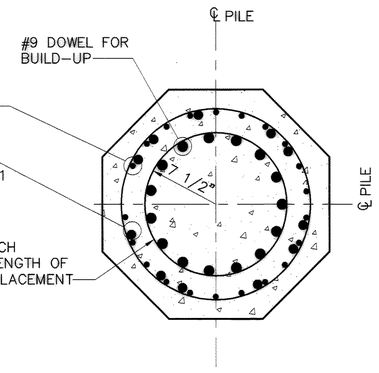
SCALE: 3/4"= 1'-0"



SECTION – TYPE 2 HOLLOW AT BUILD-UP

5 –

SCALE: 1 1/2"= 1'-0"



SECTION – TYPE 2 SOLID AT BUILD-UP

6 –

SCALE: 1 1/2"= 1'-0"

TABLE 1 – HOLLOW TYPE 1 & 2 AND SOLID TYPE 2 PILE BUILD UP		
DESIGNATION	SPIRALS	REINFORCING
24" CONC. HOLLOW – TYPE 1	W5.5 @ 2" PITCH	(8) #6 STRAIGHT
24" CONC. HOLLOW – TYPE 2	W18 @ 1 1/2" PITCH	(11) #9 DOWELS
24" CONC. SOLID – TYPE 2	W18 @ 1 1/2" PITCH	(15) #9 DOWELS

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PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
GH/GN 06/11/03 PROJECT ENGR. – DATE

TOWNSHIP: RANGE: SECTION:
DATUM- HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

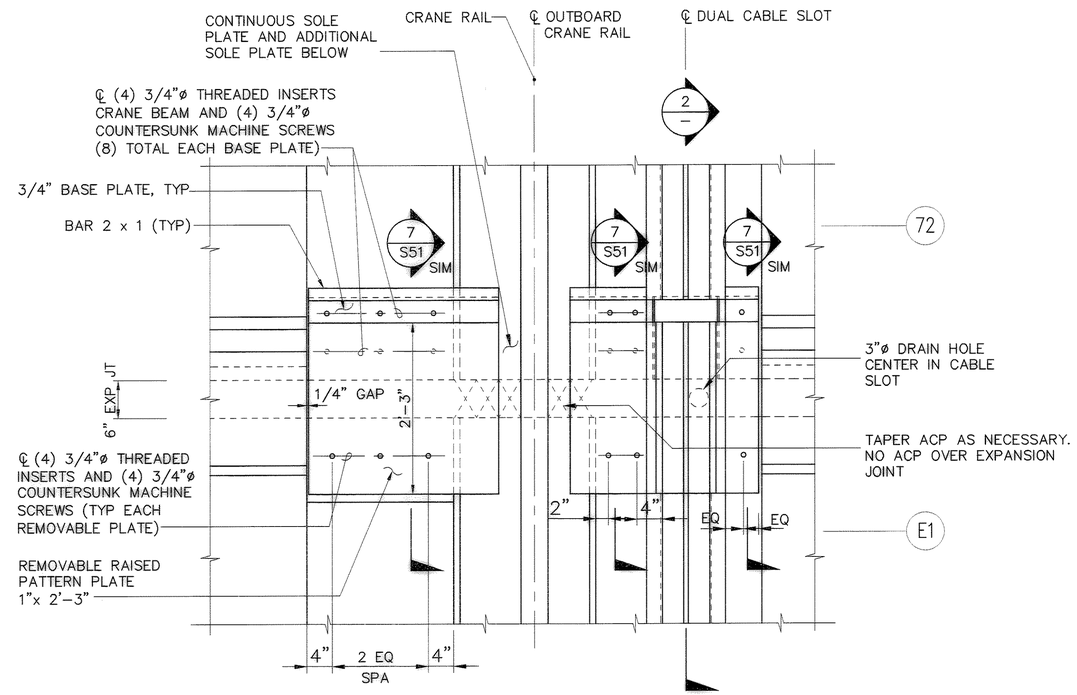
RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PILING TO PILE CAP CONNECTION DETAILS
SHEET 2

EP-~~5551-17~~
SHEET 110 OF 164
S68

6320-17

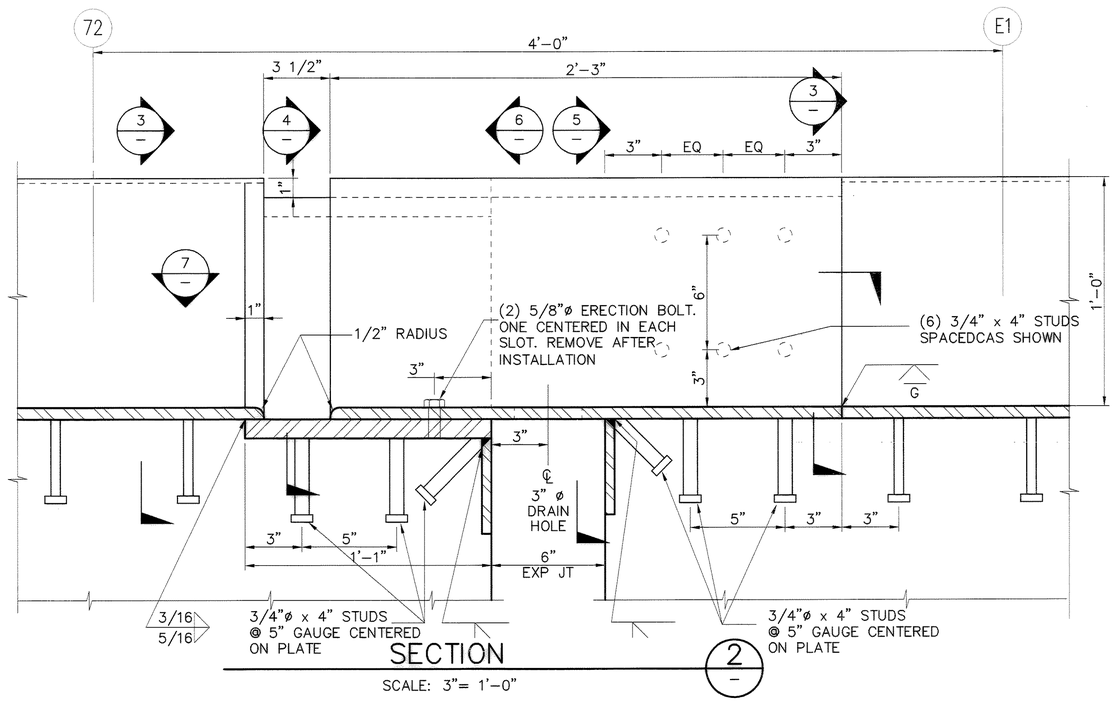
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XREFS: P0122x34TB-KPFF,
UPDATED BY R(O)KT | PLOT SCALE 1=1 | 'PCP' FILE | PLOT VIEW



PLAN – OUTBOARD CRANE RAIL AND DUAL CABLE SLOT AT EXPANSION JOINT

SCALE: 1"= 1'-0"

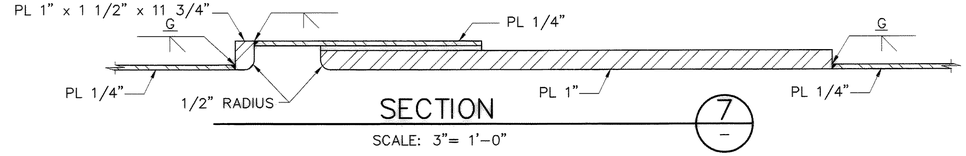
1 / S50



SECTION

SCALE: 3"= 1'-0"

2 / –

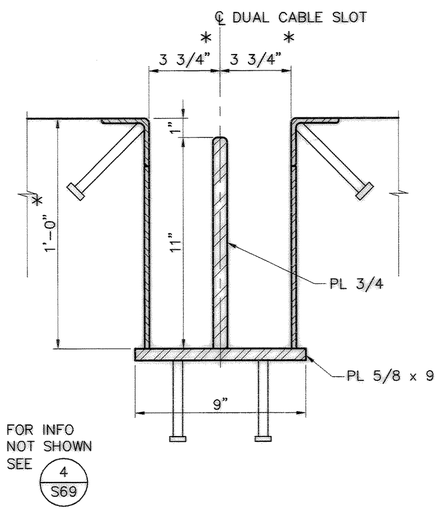


SECTION

SCALE: 3"= 1'-0"

7 / –

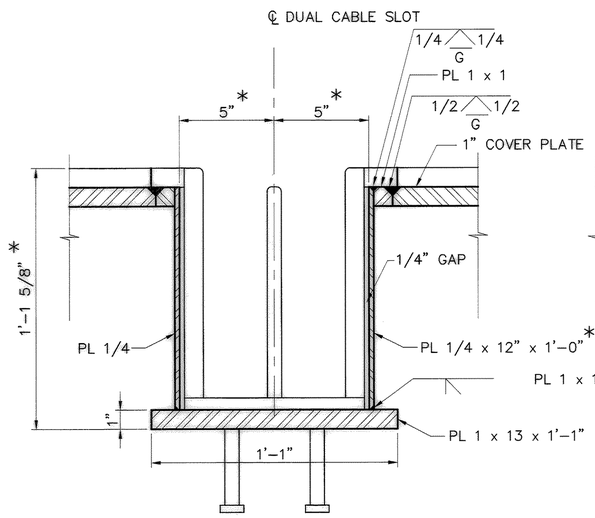
* SEE NOTES ON S69



SECTION

SCALE: 3"= 1'-0"

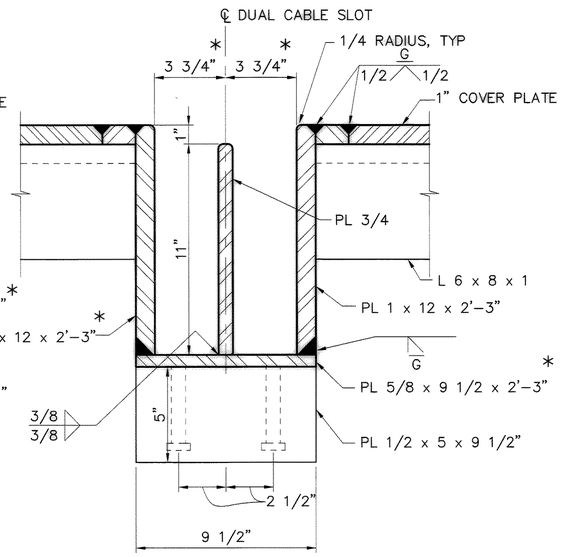
3 / –



SECTION

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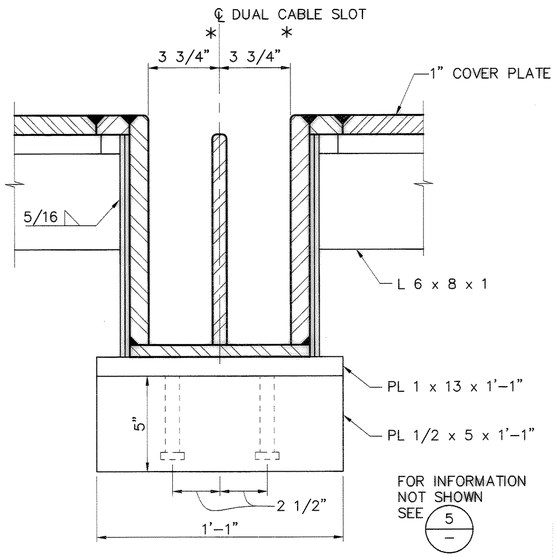
4 / –



SECTION

SCALE: 3"= 1'-0"

5 / –



SECTION

SCALE: 3"= 1'-0"

6 / –

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E19725691.DWG
JOB # 102349.10
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 28, 2005 8:26:12 AM
UPDATED BY RICKT
PLOT SCALE 1=1
'PGP' FILE ---
PLOT VIEW ---
XREFS: P0122x34TB-KPFF,

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APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
PB/MB 06/11/03 PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING EXPANSION JOINT & CABLE SLOT DETAILS

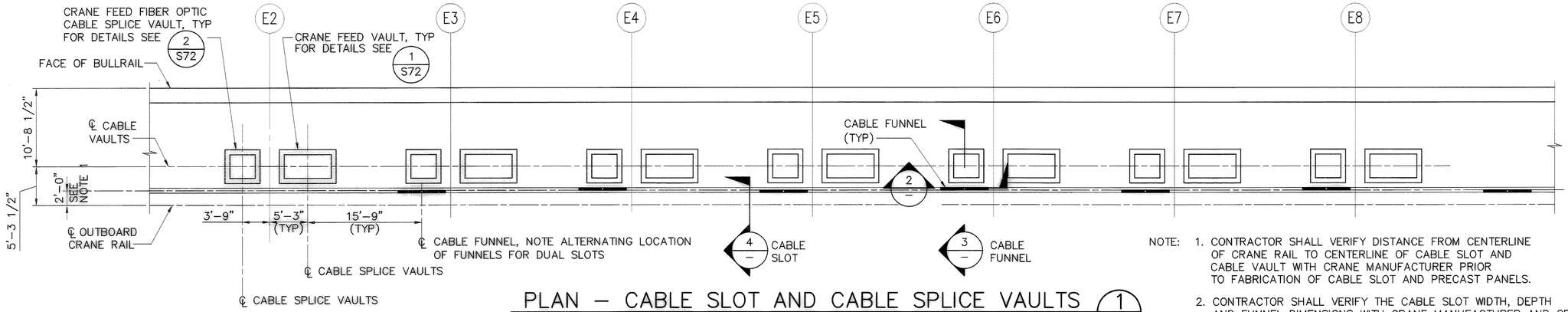
EP-~~5551.12~~

SHEET 112 OF 164

S69.1

6320-17

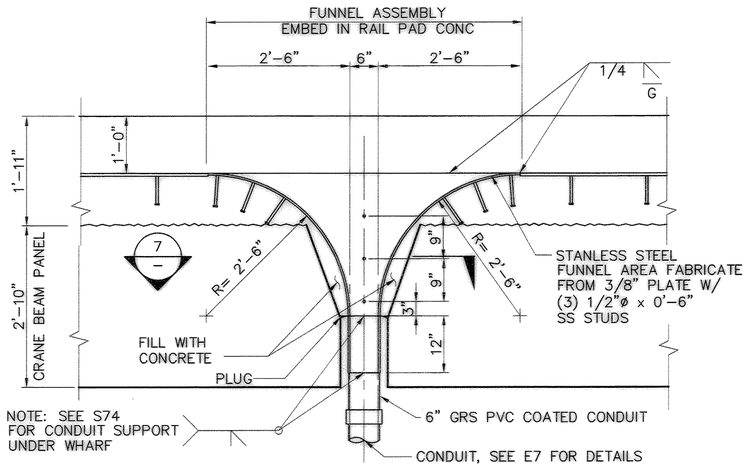
RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)



PLAN – CABLE SLOT AND CABLE SPLICE VAULTS 1/S14

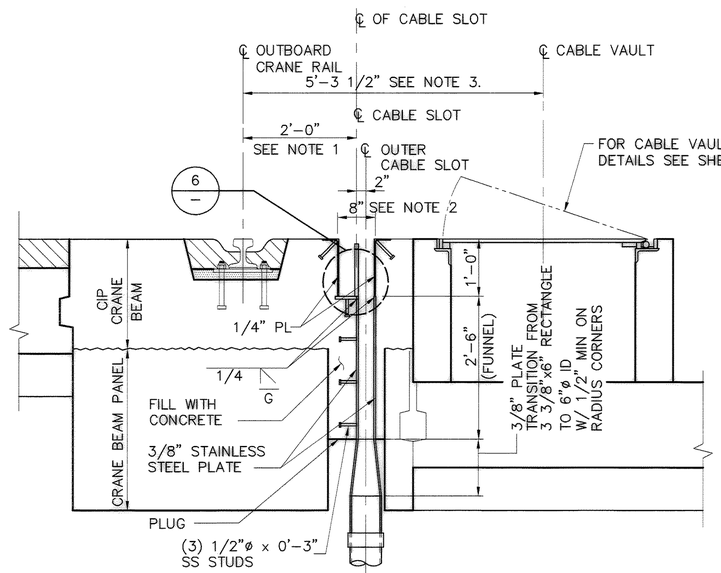
SCALE: 1/8"= 1'-0"

NOTE:
1. CONTRACTOR SHALL VERIFY DISTANCE FROM CENTERLINE OF CRANE RAIL TO CENTERLINE OF CABLE SLOT AND CABLE VAULT WITH CRANE MANUFACTURER PRIOR TO FABRICATION OF CABLE SLOT AND PRECAST PANELS.
2. CONTRACTOR SHALL VERIFY THE CABLE SLOT WIDTH, DEPTH AND FUNNEL DIMENSIONS WITH CRANE MANUFACTURER AND CRANE CABLE SUPPLIER PRIOR TO FABRICATION OF CABLE SLOT AND PRECAST PANELS.
3. CONTRACTOR TO COORDINATE ALL PENETRATIONS AND VAULT LOCATION AND SIZE. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.



SECTION – CABLE FUNNEL 2/–

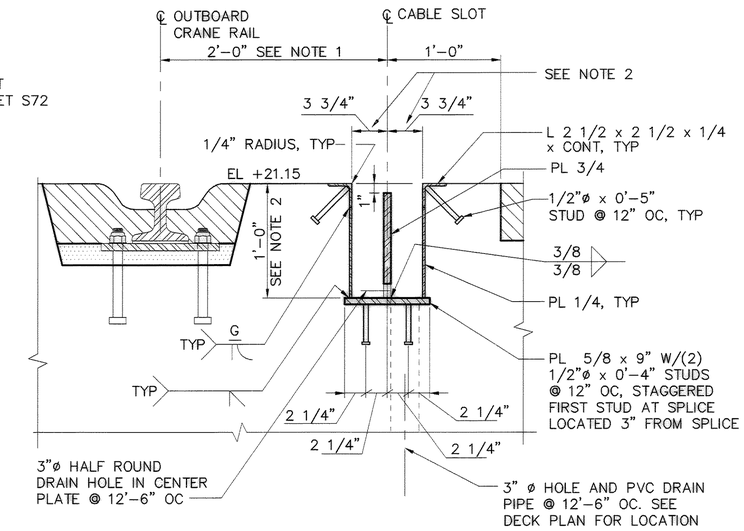
SCALE: 3/4"= 1'-0"



NOTE: OUTER CABLE FUNNEL SHOWN, INNER CABLE SIMILAR.

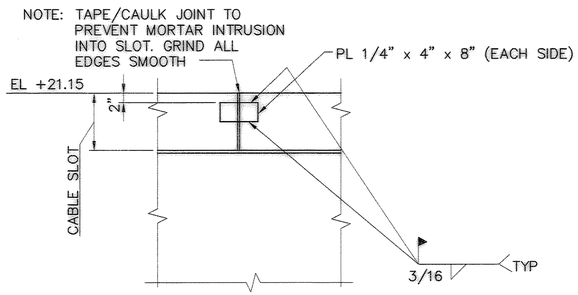
SECTION – CABLE FUNNEL 3/–

SCALE: 3/4"= 1'-0"



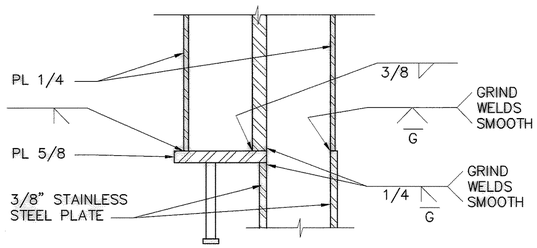
SECTION – DUAL CABLE SLOT 4/–

SCALE: 1 1/2"= 1'-0"



ELEVATION – CABLE SLOT @ SPLICE 5/–

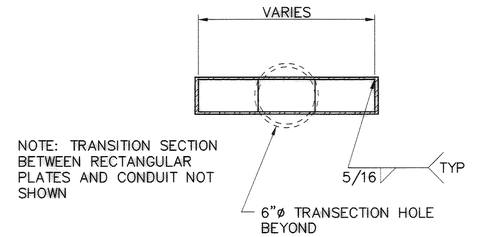
SCALE: 3/4"= 1'-0"



INNER CABLE FUNNEL SIMILAR

DETAIL 6/–

SCALE: 3"= 1'-0"



SECTION – CABLE FUNNEL 7/–

SCALE: 1 1/2"= 1'-0"

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
1601 Fifth Avenue, Suite 1500
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(206) 622-5822 Fax (206) 622-8130

MARK | REVISION | BY: | APPROVED: | DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
MB PROJECT ENGR – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING CABLE SLOT DETAILS

EP-~~5551.17~~

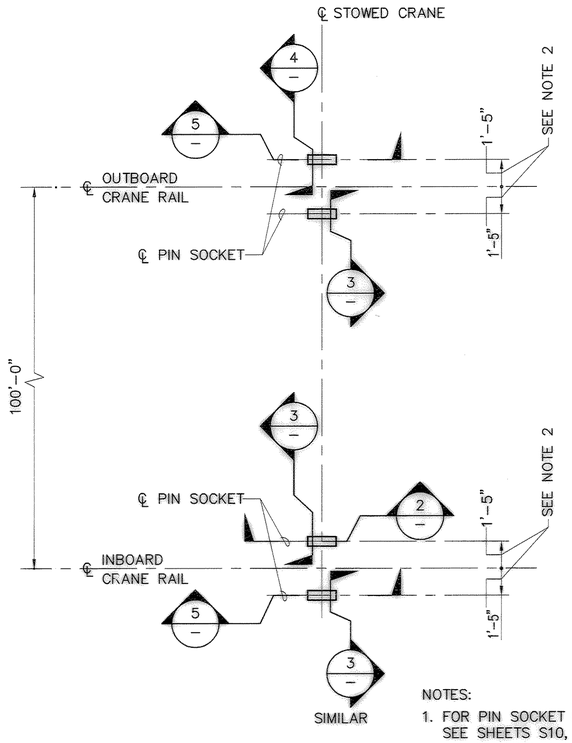
S69

SHEET 111 OF 164

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

FILE PATH & NAME: L:\102349 (PIERCE COUNTY TERMINAL)\RECORD DRAWINGS\E1972S69.DWG
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XREFS: PO122x34TB-KPFF,



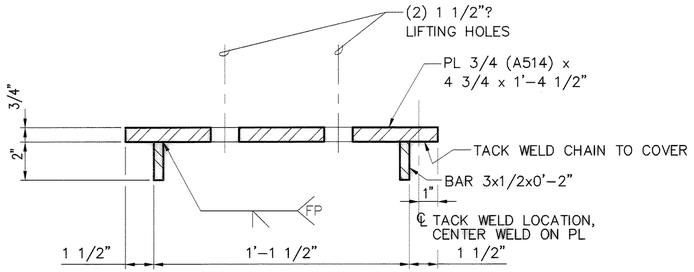
NOTES:

1. FOR PIN SOCKET LOCATIONS SEE SHEETS S10, S11, S14 AND S15.
2. CONTRACTOR SHALL VERIFY DISTANCE FROM CENTERLINE OF CRANE RAIL TO PIN SOCKET LOCATION WITH CRANE MANUFACTURER PRIOR TO FABRICATION.
3. CONTRACTOR SHALL VERIFY DIMENSION OF PIN SOCKET WITH CRANE MANUFACTURER PRIOR TO FABRICATION OF SHOP DRAWING

PLAN – PIN SOCKET AT STOWED CRANE LOCATIONS (1)

SCALE: 1/4"= 1'-0"

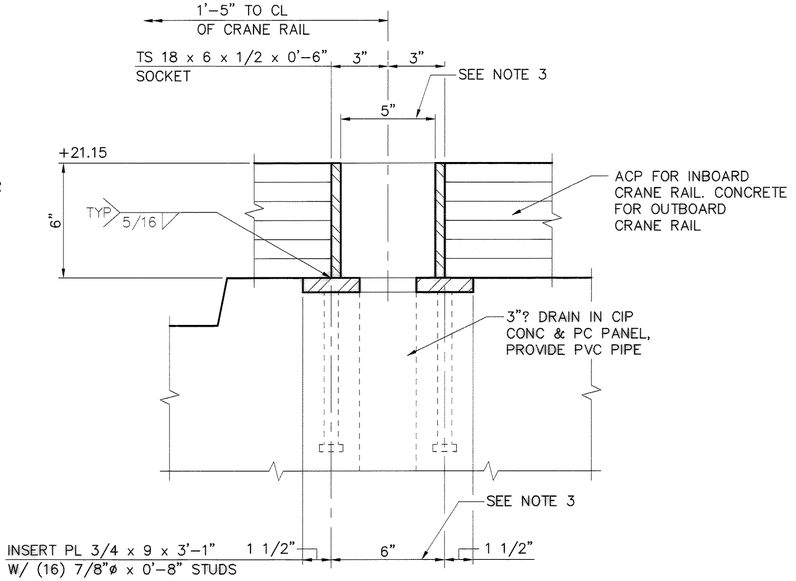
S10, S11, S13, S14



NOTE:
CONTRACTOR SHALL PROVIDE A GALVANIZED RESTRAINING CHAIN WITH A MINIMUM WORKING LOAD OF 200 POUNDS BETWEEN THE PIN SOCKET COVER AND PIN SOCKET EMBED. COORDINATE CHAIN LOCATIONWITH CRANE MANUFACTURER PRIOR TO FABRICATION TO ENSURE COVER FITS AND CRANE PIN FITS WITHOUT INTERFERENCE.

DETAIL – PIN SOCKET COVER (2)

SCALE: 3"= 1'-0"

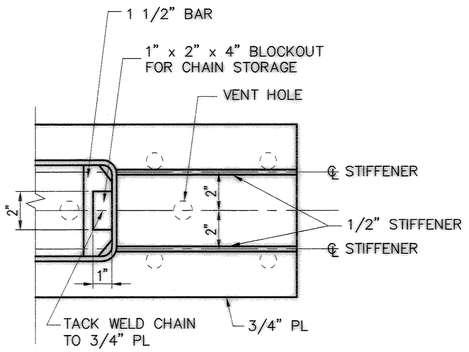


SECTION – PIN SOCKETS: INBOARD CRANE RAIL & LANDSIDE OF OUTBOARD CRANE RAIL SIMILAR (3)

SCALE: 3"= 1'-0"

SECTION – PIN SOCKETS: WATERSIDE OF OUTBOARD CRANE RAIL (4)

SCALE: 3"= 1'-0"



DETAIL (6)

SCALE: 3"= 1'-0"

1 RFI 163, SEE S40A & S40B ON BACK OF DRAWING S69.1

SECTION – TYPICAL PIN SOCKET (5)

SCALE: 3"= 1'-0"

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TACOMA, WA 98401 253-383-5841

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MARK	REVISION	BY:	APPROVED	DATE

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	CHECKED BY – DATE	06/11/03
MB	PROJECT ENGR – DATE	06/11/03

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
CRANE PIN SOCKET DETAILS

EP-~~5551-17~~
S70
SHEET 113 OF 164

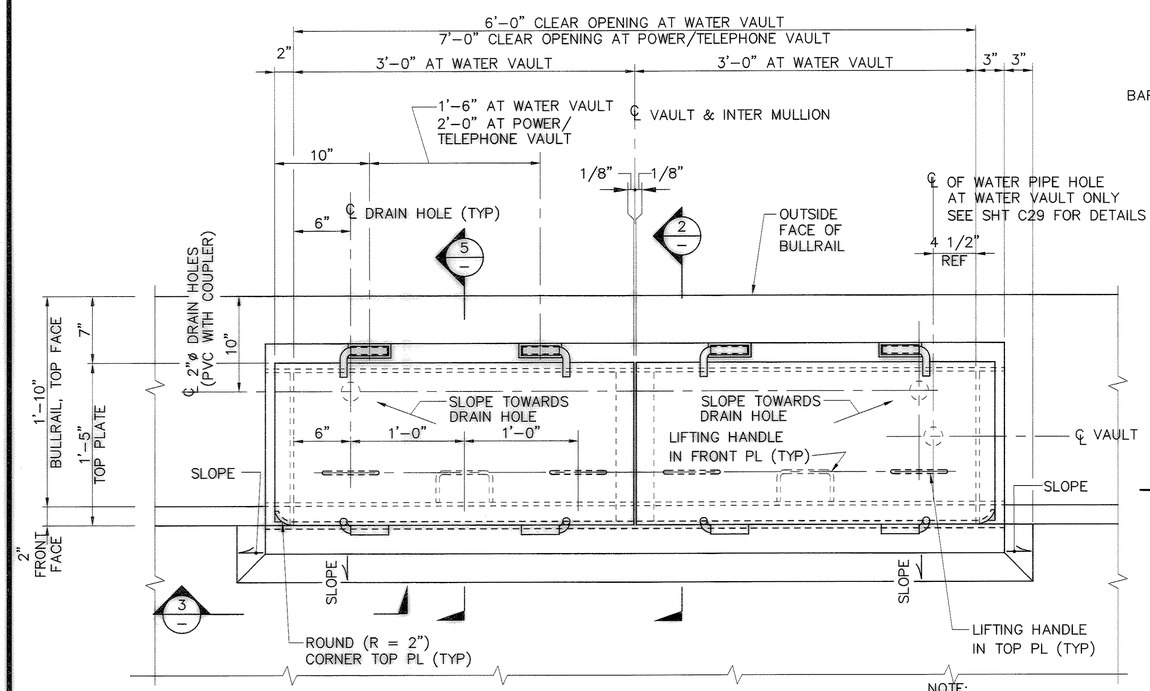
CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S70.DWG
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JOB #: 102349.10
XREFS: P0122x34TB-KPFF,
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UPDATED BY: RICKT
PLOT SCALE: 1=1
'PCP' FILE: ---
PLOT VIEW:

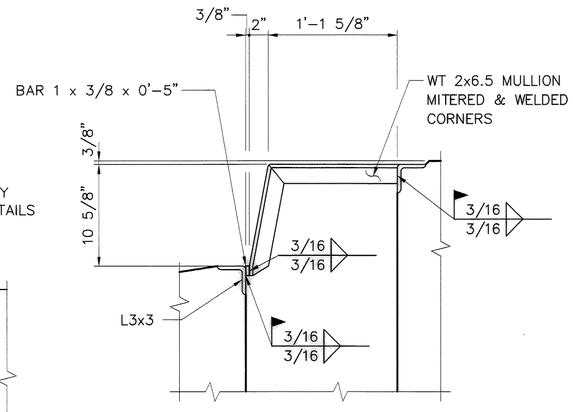


PLAN – POWER/TELEPHONE OR WATER UTILITY VAULT (1)

SCALE: 1 1/2"= 1'-0"

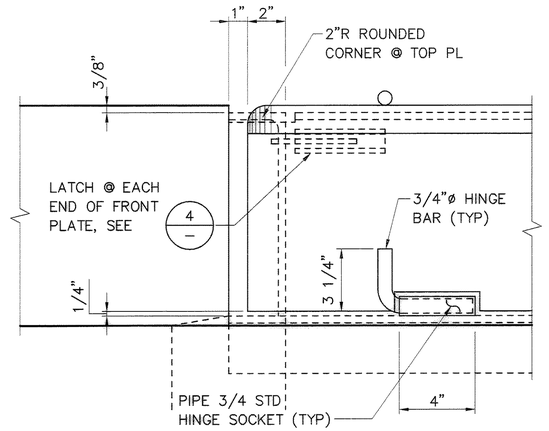
(1/S10, S11, S12, S13, S14, S15)

NOTE:
1. WELD DESIGNATOR SIGNS – "WATER" OR "DANGER HIGH VOLTAGE" ON TOP OF RESPECTIVE VAULTS. USE 4" LETTER HEIGHT. SEE DETAIL (1/S72)
2. CONTRACTOR SHALL VERIFY AND COORDINATE ALL PENETRATIONS PRIOR TO FABRICATION OF SHOP DRAWINGS.



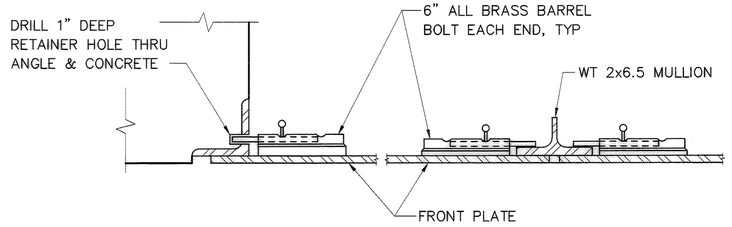
DETAIL – INTERMEDIATE MULLION (2)

SCALE: 1 1/2"= 1'-0"



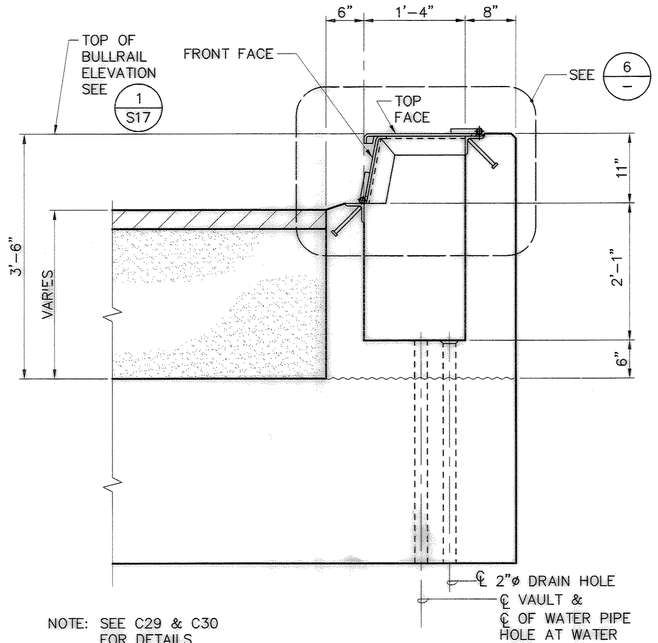
ELEVATION – FRONT PLATE (3)

SCALE: 3"= 1'-0"



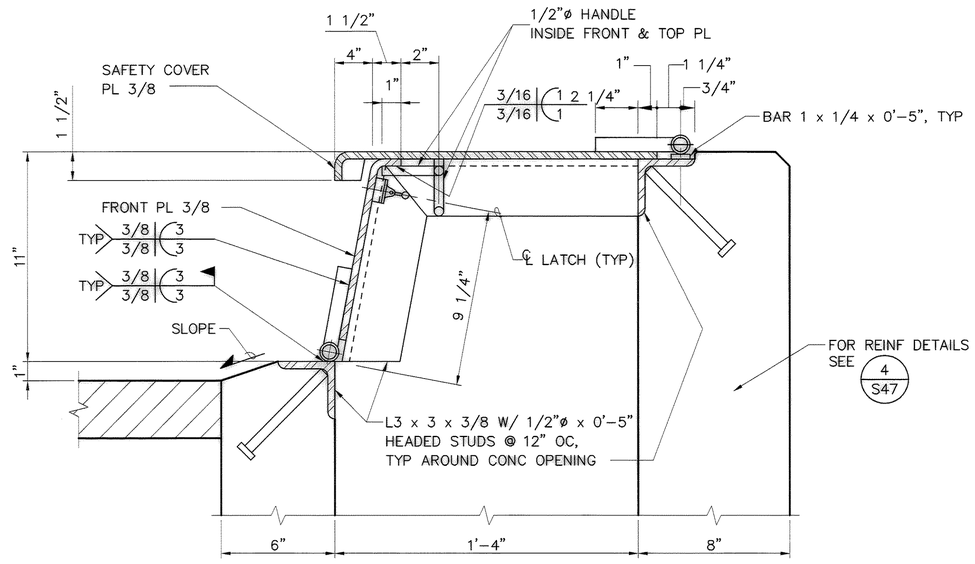
PLAN – LATCH DETAIL (4)

SCALE: 3"= 1'-0"



SECTION – UTILITY VAULT (5)

SCALE: 1"= 1'-0"



DETAIL – VAULT COVER (6)

SCALE: 3"= 1'-0"

FILE PATH & NAME: L:\102349 (PIERCE COUNTY TERMINAL)\RECORD DRAWINGS\E197251.DWG
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PLOT SCALE 1=1 | 'PCP' FILE --- | PLOT VIEW
XREFS: P0T22X3ATB-KPFF.

MARK | REVISION | BY: | APPRVD: | DATE:

PORT of TACOMA U.S.A.

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1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

CHIEF ENGINEER – DATE

APPROVED

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
MB 06/11/03 PROJECT ENGR. – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER 998149
E_NUMBER E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING

UTILITY VAULT PLAN, SECTIONS AND DETAILS

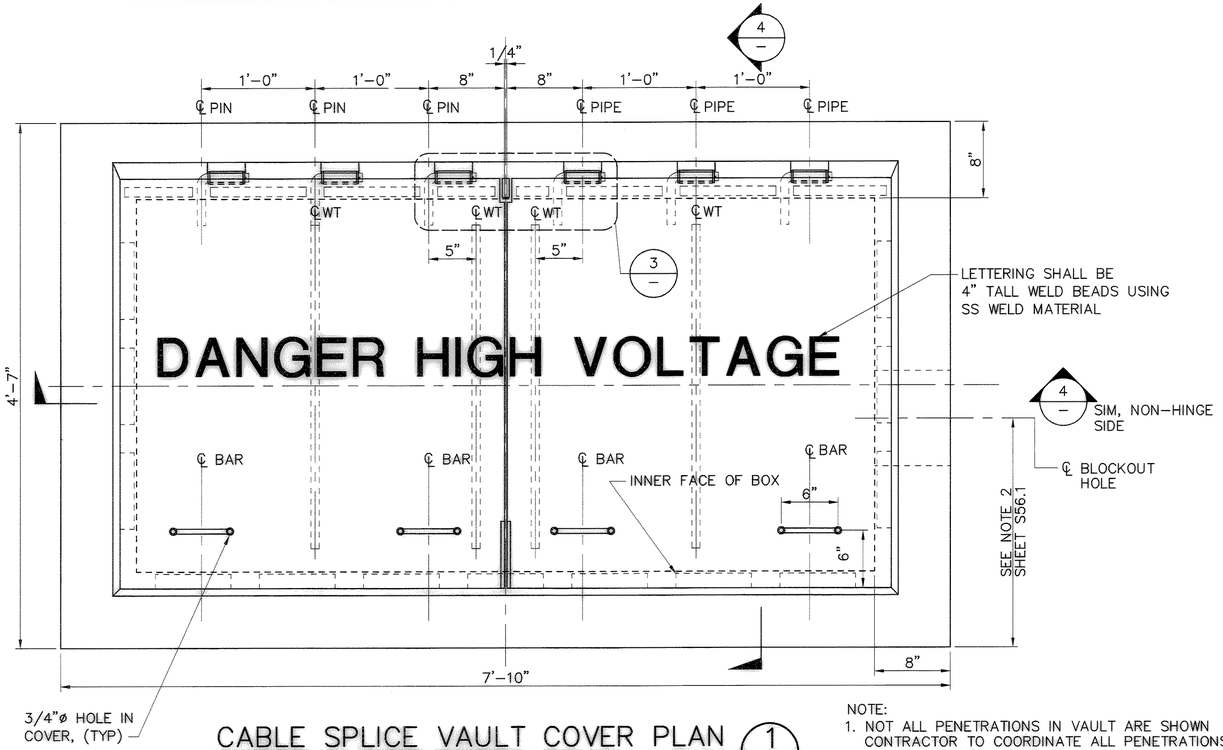
EP-~~555447~~

SHEET 114 OF 164

S71

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

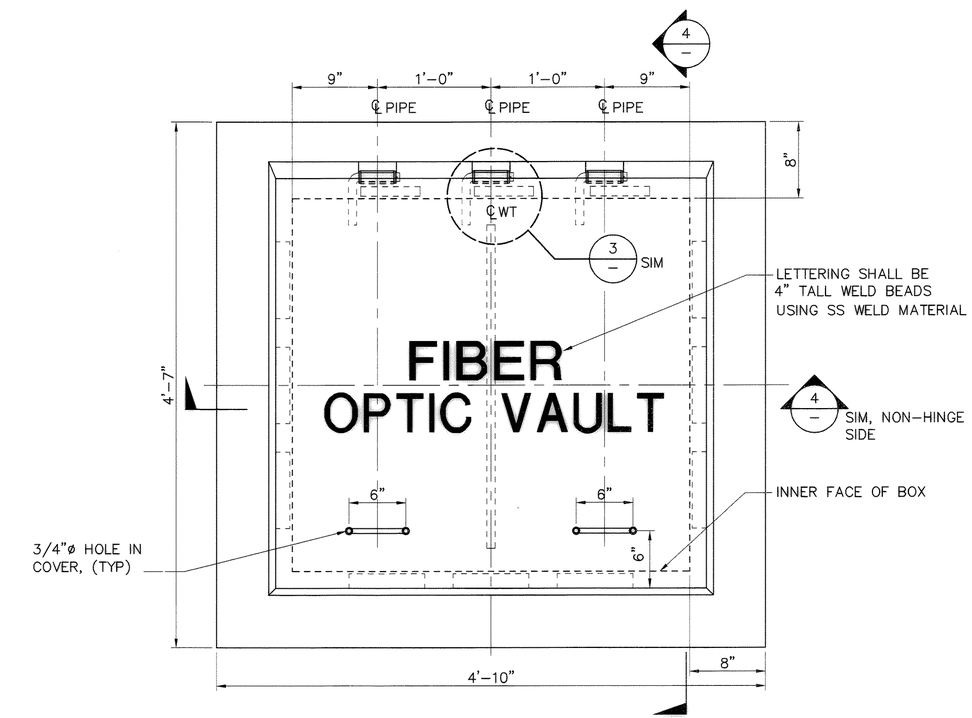


CABLE SPLICE VAULT COVER PLAN 1 / S69

SCALE: 1 1/2"= 1'–0"

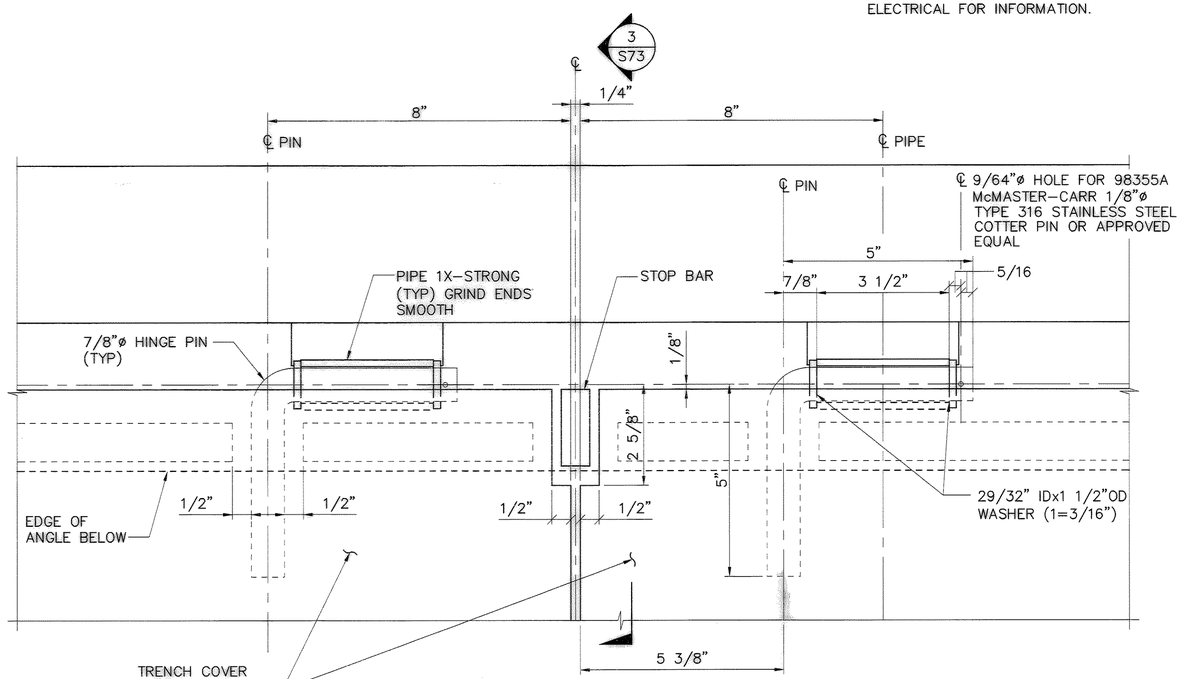
NOTE:

1. NOT ALL PENETRATIONS IN VAULT ARE SHOWN CONTRACTOR TO COORDINATE ALL PENETRATIONS IN VAULTS. SEE ELECTRICAL FOR INFORMATION.
2. VAULTS MAY BE LOCATED AWAY FROM CRANE BEAM. CONTRACTOR SHALL COORDINATE VAULT LOCATIONS PRIOR TO FABRICATION OF SHOP DRAWINGS. SEE ELECTRICAL FOR INFORMATION.



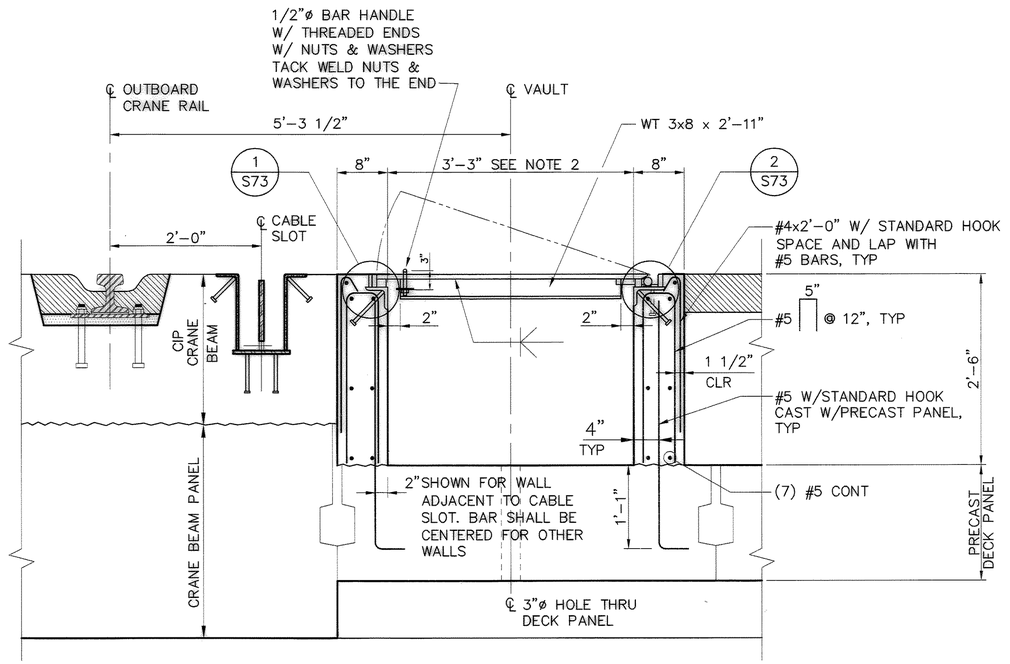
CABLE SPLICE VAULT COVER PLAN 2 / S69

SCALE: 1 1/2"= 1'–0"



DETAIL 3 / –

SCALE: 6"= 1'–0"



SECTION – CABLE SPLICE BOX 4 / –

SCALE: 1"= 1'–0"

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE

MB 06/11/03 PROJECT ENGR – DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
CRANE FEED VAULT
PLAN, SECTIONS AND DETAILS - SHEET 1

TOWNSHIP: RANGE: SECTION:
DATUM- HORIZ: VERT:
DRAWING SCALE: AS SHOWN

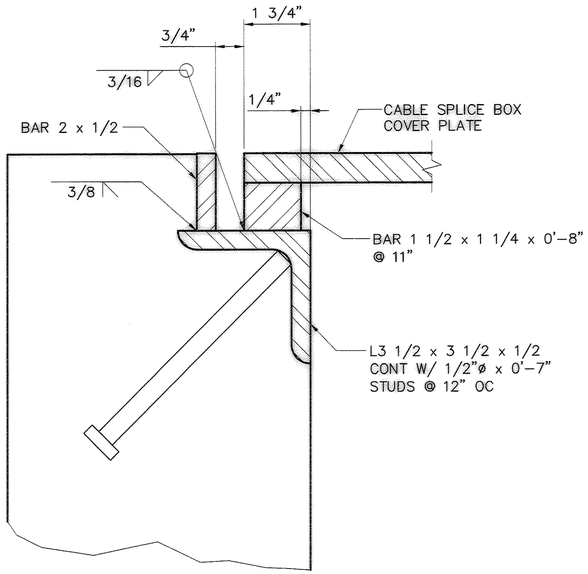
EP-~~5551-17~~
S72
SHEET 115 OF 164

CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

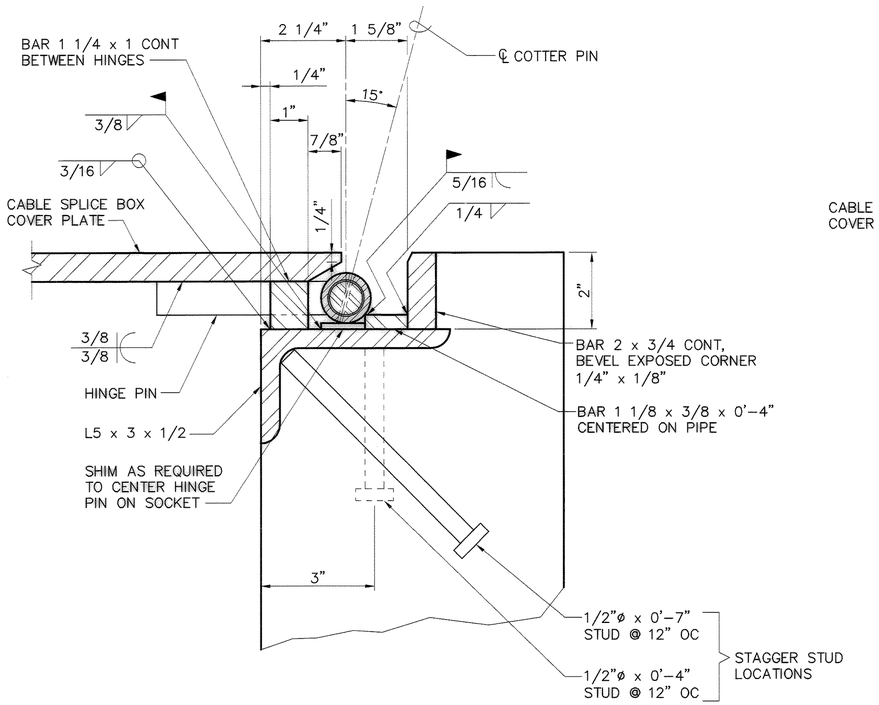
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RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

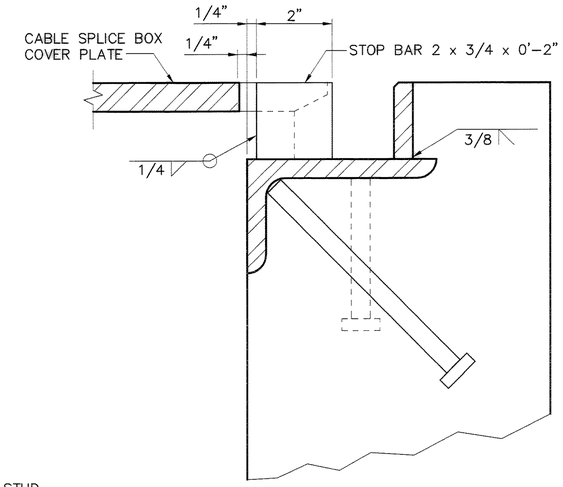
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JOB NAME Pierce County Terminal
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UPDATED BY RICKT
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW ---
XREFS: P0122x341B–KPFF,



DETAIL 1 / S72
SCALE: 6"= 1'-0"



DETAIL 2 / S72
SCALE: 6"= 1'-0"



NOTE: FOR INFO NOT SHOWN, SEE 2 / —

SECTION 3 / S72
SCALE: 6"= 1'-0"

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
JMB 06/11/03
PROJECT ENGR – DATE

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
CRANE FEED VAULT
PLAN, SECTIONS AND DETAILS - SHEET 2

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

EP-~~5671-7~~
S73
SHEET 116 OF 164
CONTRACT NUMBER 998149
E NUMBER E1972
PHASE RECORD DOCUMENTS

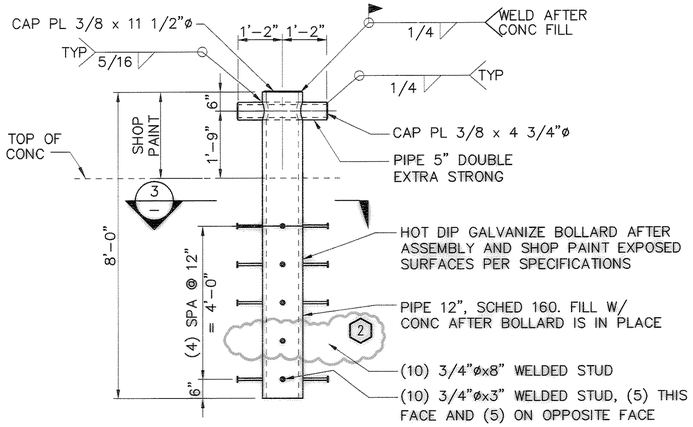
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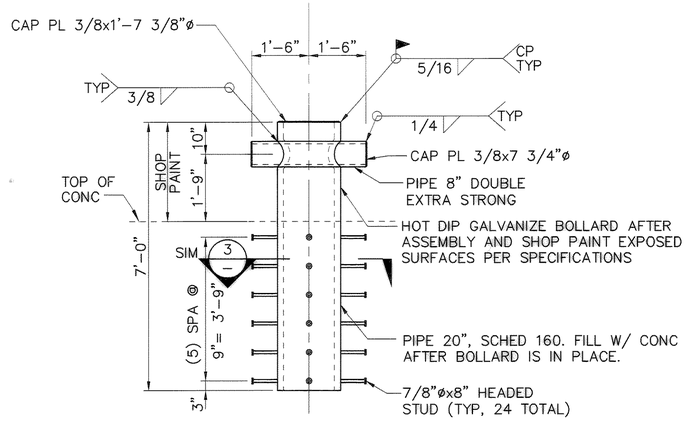
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PLOT VIEW	'PCP' FILE	PLOT SCALE	UPDATED BY
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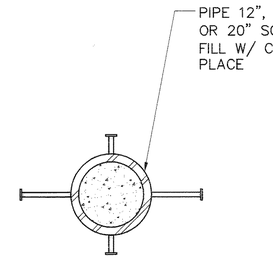
DETAIL – PIER BOLLARD 1/S46,S49

SCALE: 1/2"= 1'-0"



DETAIL – DOLPHIN BOLLARD 2/S80

SCALE: 1/2"= 1'-0"



SECTION 3/–

SCALE: 1"= 1'-0"

SECTION 4/S88

SCALE: 1 1/2"= 1'-0"

SECTION 5/–

SCALE: 1 1/2"= 1'-0"

DETAIL – UNDER WHARF BRACING AT CRANE POWER/FIBER FEED VAULTS 6/–

SCALE: 1"= 1'-0"

1. CONDUIT BRACING PER RFP 0018, SEE BACK OF DRAWING S73. NOTE: CONDUIT ROUTING SHOWN ON E1.
2. EFC 11, SEE BACK OF DRAWING S45.1 (NEW WHARF ONLY)

NOTES:

1. CONTRACTOR SHALL COORDINATE EMBED LOCATIONS W/CIP PILE CAPS.
2. ALTERNATIVE BRACING DETAILS ALLOWED WITH ENGINEERS APPROVAL.
3. CENTER ANGLES ON PLATES ± 1"
4. SEE ELECTRICAL SHEETS FOR INFORMATION AND COORDINATION

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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MARK	REVISION	BY:	APPROVED:	DATE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
MISCELLANEOUS STEEL DETAILS
SHEET 1

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
MB/GH 06/11/03 PROJECT ENGR. – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

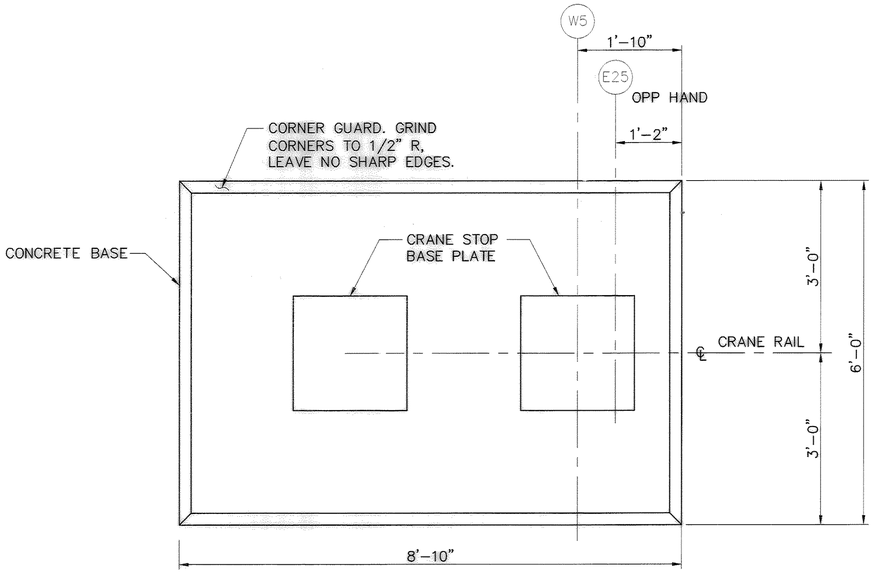
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E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP ~~6551-17~~
S74
SHEET 117 OF 164

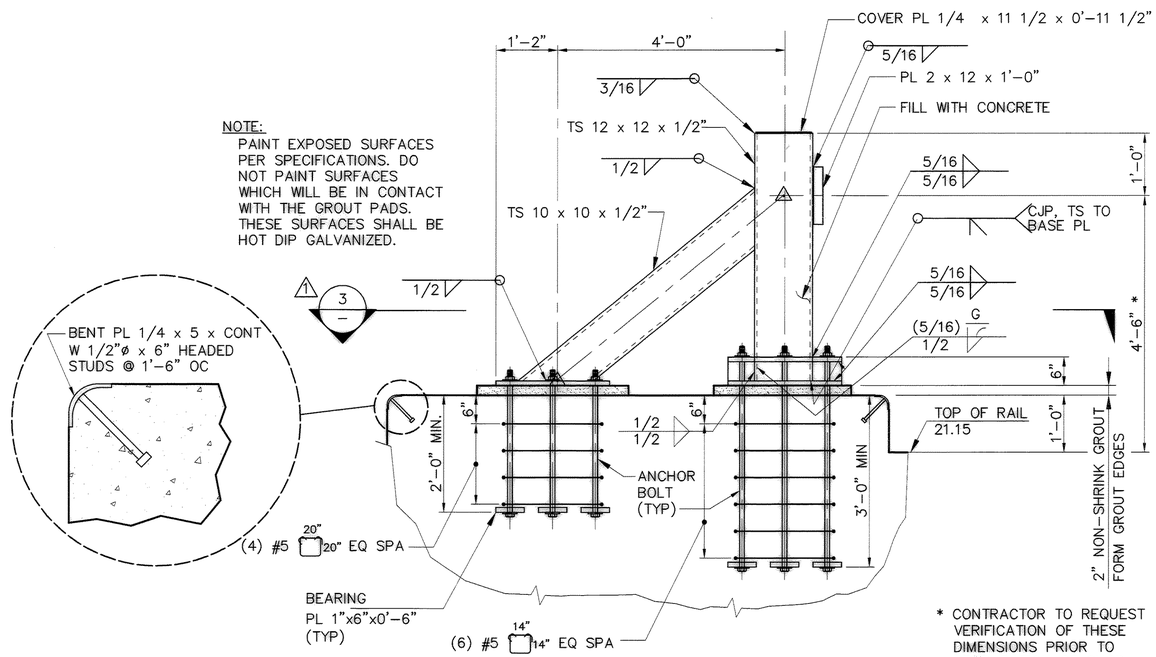
6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

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XREFS: P01T22x34TB-KPFF.
PLOT SCALE 1=1 | "PCP" FILE --- | PLOT VIEW

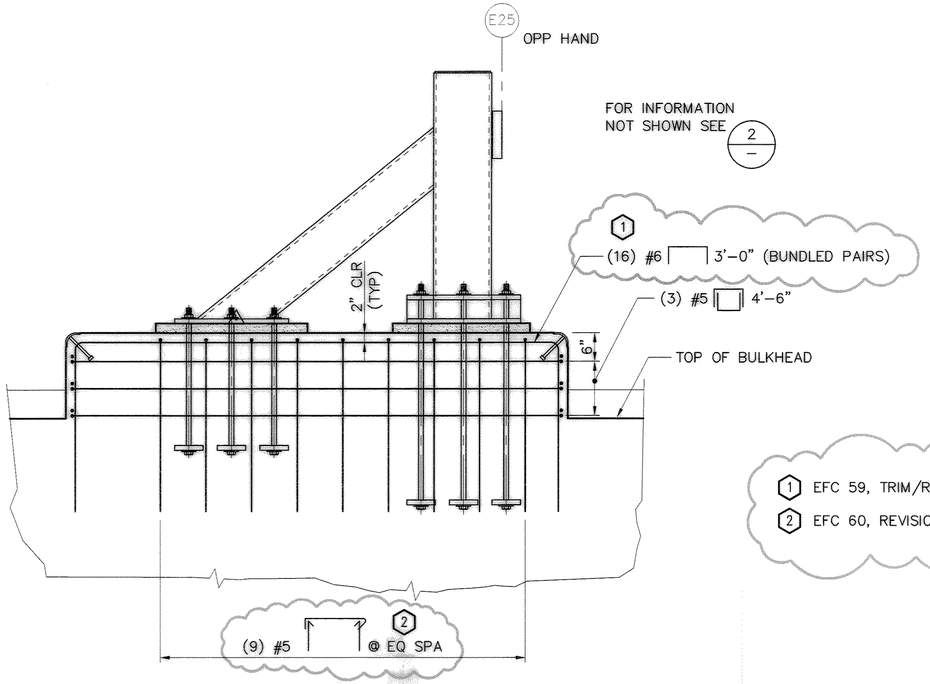


PLAN – CRANE STOP BASE (1)
SCALE: 3/4"= 1'–0"



* CONTRACTOR TO REQUEST VERIFICATION OF THESE DIMENSIONS PRIOR TO PREPARATION OF SHOP DRAWINGS.

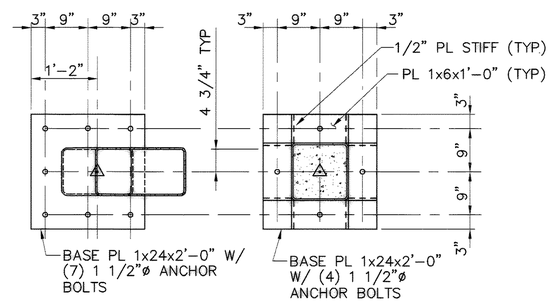
ELEVATION – CRANE STOP (2)
SCALE: 3/4"= 1'–0"



SECTION – INBOARD CRANE STOP BASE AT BULKHEAD (4)
SCALE: 3/4"= 1'–0"
S42

1 EFC 59, TRIM/REPLACE REBAR, SEE BACK OF DRAWING S74.

2 EFC 60, REVISION TO REBAR, SEE BACK OF DRAWING S74.



SECTION – CRANE STOP BASE PLATES (3)
SCALE: 3/4"= 1'–0"

MARK	REVISION	BY:	APPROVED:	DATE:
1	ADDENDUM 1: CALLOUT REVISED	MB	RKJ	8/1/03

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
GH 06/11/03
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: E1972
E. NUMBER: 998149
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING
CRANE STOP DETAILS

EP-~~5661-17~~

SHEET 118 OF 164

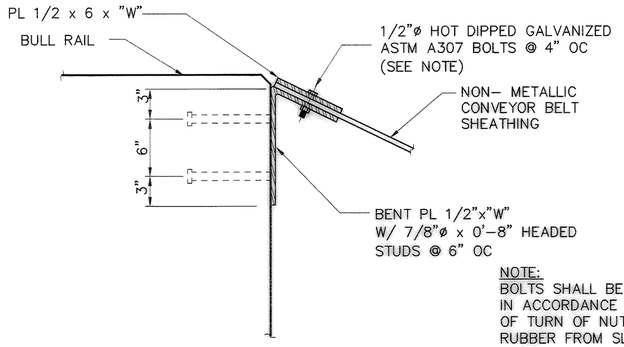
S75

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

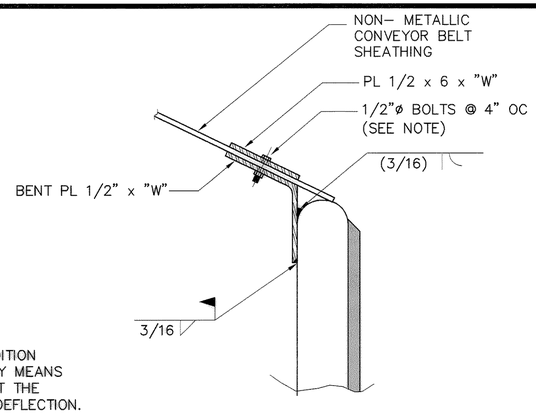
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JOB #	JOB NAME	PLOTTED DATE & TIME	UPDATED BY
102349.10	Pierce County Terminal	JAN. 28, 2005 8:44:01 AM	RJCKT
XREFS: POT22x34TB-KPFF,			

PLOT SCALE	'PCP' FILE	PLOT VIEW
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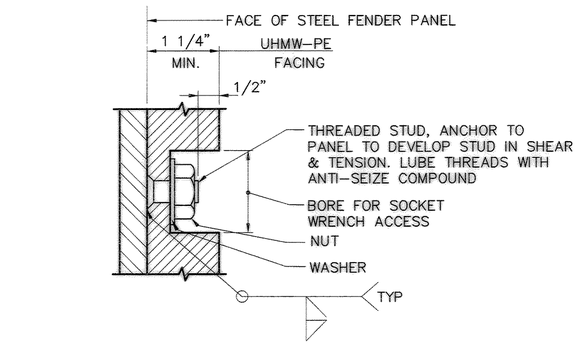


NOTE:
BOLTS SHALL BE IN SNUG TIGHT CONDITION IN ACCORDANCE WITH AASHTO MI64 BY MEANS OF TURN OF NUT METHOD TO PREVENT THE RUBBER FROM SLIPPING UNDER FULL DEFLECTION.

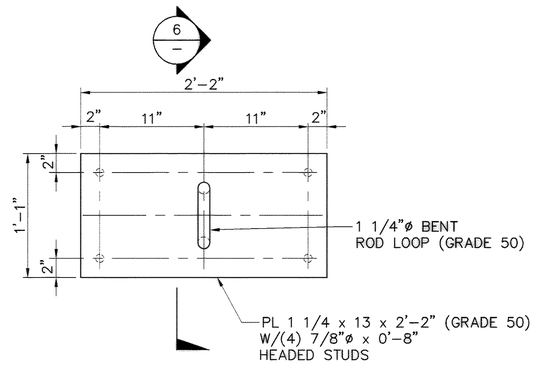
DETAIL – TOP FOULING CLAMP (1)
SCALE: 1 1/2"= 1'–0"



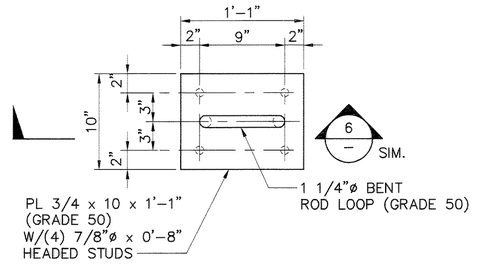
DETAIL – BOTTOM FOULING CLAMP (2)
SCALE: 1 1/2"= 1'–0"



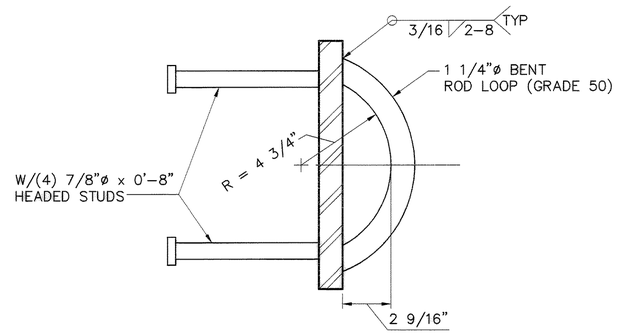
DETAIL – ATTACHMENT OF FACING (4)
SCALE: NONE



DETAIL – WEIGHT CHAIN PLATE (5)
SCALE: 1 1/2"= 1'–0"

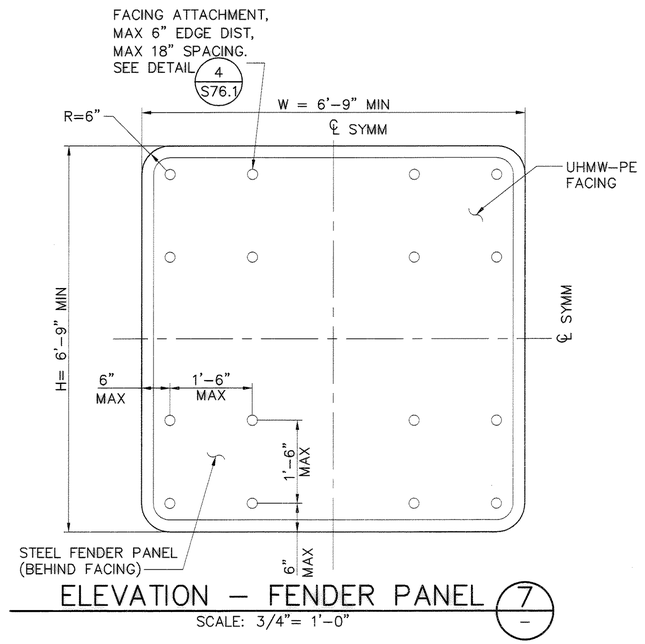


DETAIL – SHEAR CHAIN PLATE (3)
SCALE: 1 1/2"= 1'–0"



NOTE: WEIGHT CHAIN PLATE SHOWN SHEAR CHAIN PLATE SIMILAR.

SECTION (6)
SCALE: 3"= 1'–0"



ELEVATION – FENDER PANEL (7)
SCALE: 3/4"= 1'–0"

6320-17

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
600 First Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
KN 06/11/03 PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
FENDER SYSTEM DETAILS - SHEET 2

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

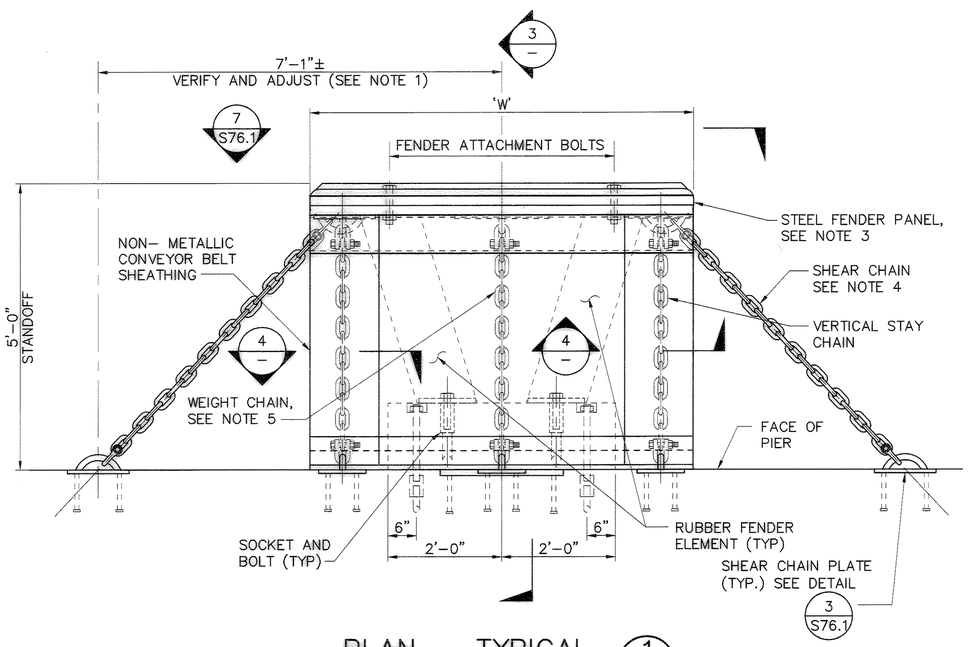
EP-~~5551-17~~

SHEET 20 OF 164

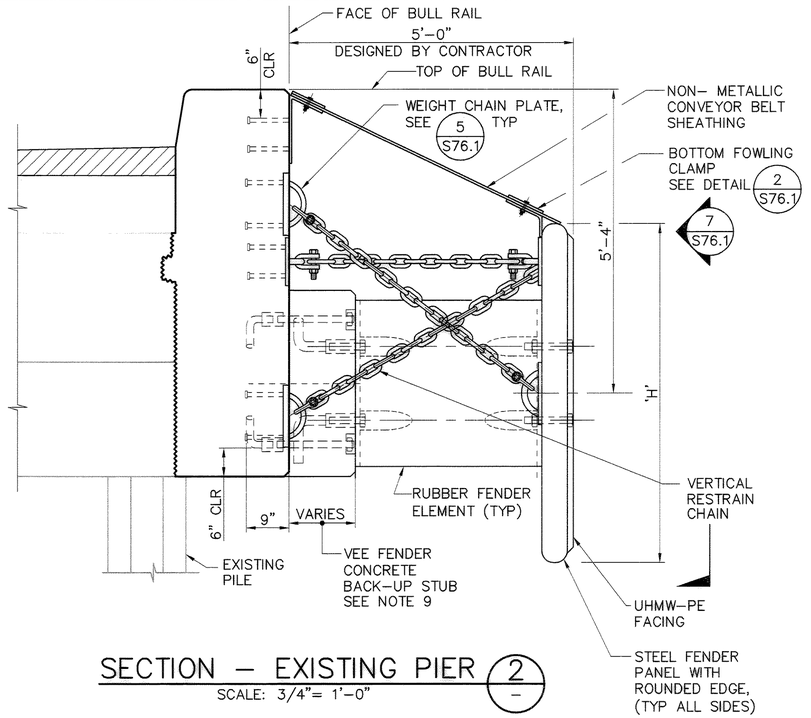
S76.1

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

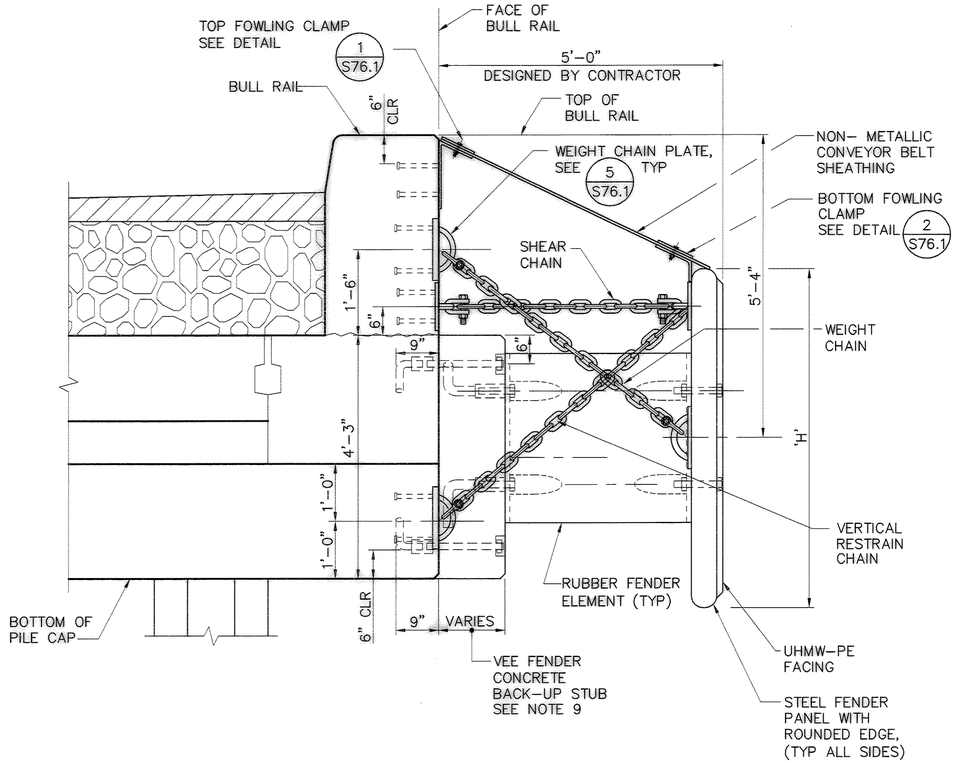
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JOB # 102349.10
JOB NAME Pierce County Terminal
XREFS: PGT22x34TB-KPFF,
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UPDATED BY RJCKT
PLOT SCALE 1=1
'PCP' FILE
PLOT VIEW



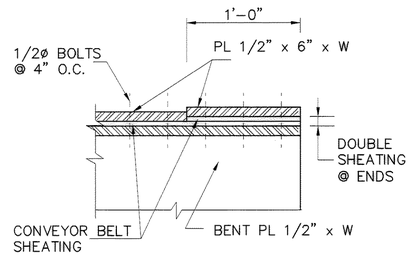
PLAN – TYPICAL (1/—)
SCALE: 3/4"= 1'-0"



SECTION – EXISTING PIER (2/—)
SCALE: 3/4"= 1'-0"



SECTION – NEW PIER (3/—)
SCALE: 3/4"= 1'-0"



SECTION DOUBLE SHEATING AT ENDS (4/—)
SCALE: 1 1/2"= 1'-0"

NOTES:

1. PRIOR TO ORDERING ANY MATERIALS FOR THE FENDER SYSTEM, VERIFY SIZE AND DIMENSIONS OF ALL ITEMS, SUCH AS SHACKLES, COUPLING LINKS, CHAINS, AND OTHER COMPONENTS, SO THAT ALL COMPONENTS ARE COMPATIBLE, SNUG, AND TIGHT CONNECTIONS CAN BE MADE.
2. RUBBER FENDERS SHALL BE COMPRESSION BUCKLING TYPE VEE FENDERS WITH A MAXIMUM RATED REACTION FOR TWO ELEMENTS OF 168 KIPS AND A MINIMUM RATED ENERGY FOR TWO ELEMENTS OF 252 FOOT-KIPS ENERGY. THE MAXIMUM DEFLECTION AT THE RATED VALUES SHALL NOT EXCEED 1-FOOT 10-1/2 INCHES AND ALL RATED VALUES SHALL BE DETERMINED BASED ON A LOADING VELOCITY OF ONE FOOT PER SECOND. VELOCITY CORRECTION FACTORS SHALL BE APPLIED TO TEST REST RESULT USING DIFFERENT LOADING VELOCITIES OTHER THAN ONE FOOT PER SECOND. TWO TRELLEX MV 1000X1000 (B) FENDERS MEET THESE REQUIREMENTS. THE ENGINEER MAY CONSIDER OTHER FENDERS OF EQUAL PERFORMANCE AND MATERIAL CHARACTERISTICS.
3. MINIMUM SIZE OF FENDER PANELS SHALL BE AS SHOWN SIZE CHAIN CONNECTIONS AND FENDER PANELS TO ACCOMMODATE LOADS IMPARTED BY SHEAR CHAINS.
4. PROVIDE ALLOY CHAIN AND OTHER ITEMS (SHACKLES, COUPLING LINKS, ETC) WITH A MINIMUM PROOF LOAD OF 85 KIPS.
5. SIZE WEIGHT CHAIN(S) TO SUPPORT THE STEEL PANEL, UHMW FACING, FILLER PLATES, AND ALL HARDWARE. SELECT CHAIN MATERIAL AND LOCATE CHAIN(S) TO AVOID DAMAGE TO THE FENDER SYSTEM UNDER FULL COMPRESSION.
6. ALL METALLIC HARDWARE, CHAINS ETC. USED SHALL BE HOT DIPPED GALVANIZED ACCORDING TO SPECIFICATIONS.
7. USE A COEFFICIENT OF FRICTION BETWEEN RUBBING SURFACE OF FRONTAL FRAME AND DRY STEEL OF μ= 0.3 HORIZONTALLY AND μ= 0.5 VERTICALLY AS A MINIMUM FOR DESIGN.
8. SIZE VERTICAL RESTRAIN CHAINS TO RESIST THE TIDAL EFFECT FORCES ON THE FENDER SYSTEM USING THE COEFFICIENT OF FRICTION VALUES GIVEN ABOVE. SELECT CHAIN SIZE AND MATERIAL AND ITS LOCATION TO AVOID DAMAGE TO THE FENDER SYSTEM UNDER FULL DESIGN MOVEMENTS.
9. A TOTAL OF 5'-0" STAND OFF, FROM FACE OF BULL RAIL TO OUTSIDE FACE OF FENDER SYSTEM IS REQUIRED. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE BACK UP STUB FOR VEE FENDERS AS SHOWN ON SECTION 3 OR COULD SUBMIT ALTERNATIVES TO ELIMINATE OR REDUCE THE STUB DIMENSION, PROVIDED IT MEETS THE ENERGY ABSORPTION CRITERIA AND DESIGN REQUIREMENTS OF THE FENDER SYSTEM AND APPROVED BY THE ENGINEER.
10. SEE SECTION 2399 OF SPECIFICATION FOR ADDITIONAL INFORMATION AND REQUIREMENTS .
11. FLEXIBLE NON-METALLIC CONVEYOR BELT SHEATHING SHALL BE PER SPECIFICATION SECTION 2399.

MARK	REVISION	BY:	APPROVED	DATE:
1	ADDENDUM 1: REVISED NOTE 2	MB	RKJ	8/1/03

PORT OF TACOMA
USA
kpff
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PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
FENDER SYSTEM DETAILS - SHEET 1

APPROVED
CHIEF ENGINEER – DATE

RKJ	06/11/03	
CHECKED BY –	DATE	
KN	06/11/03	
PROJECT ENGR –	DATE	

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:
TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN
CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~555-11~~

S76

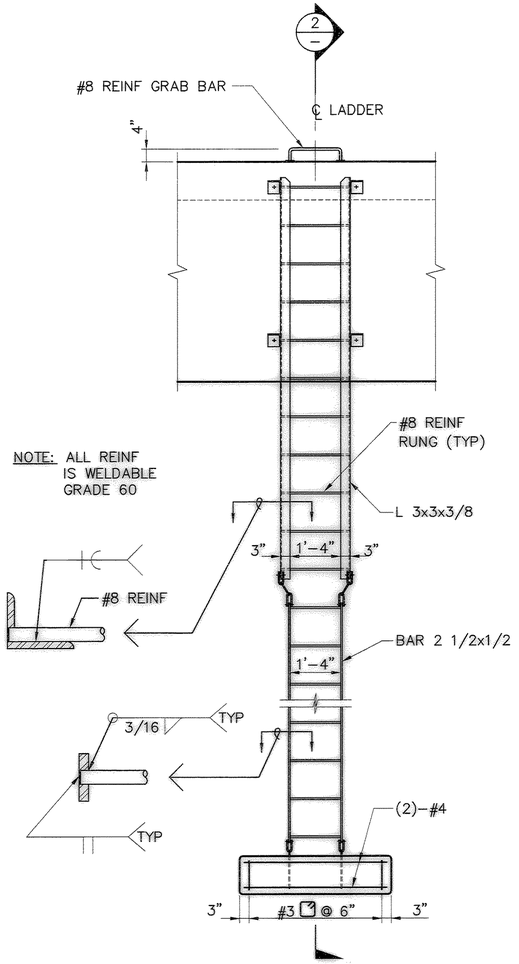
SHEET 119 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

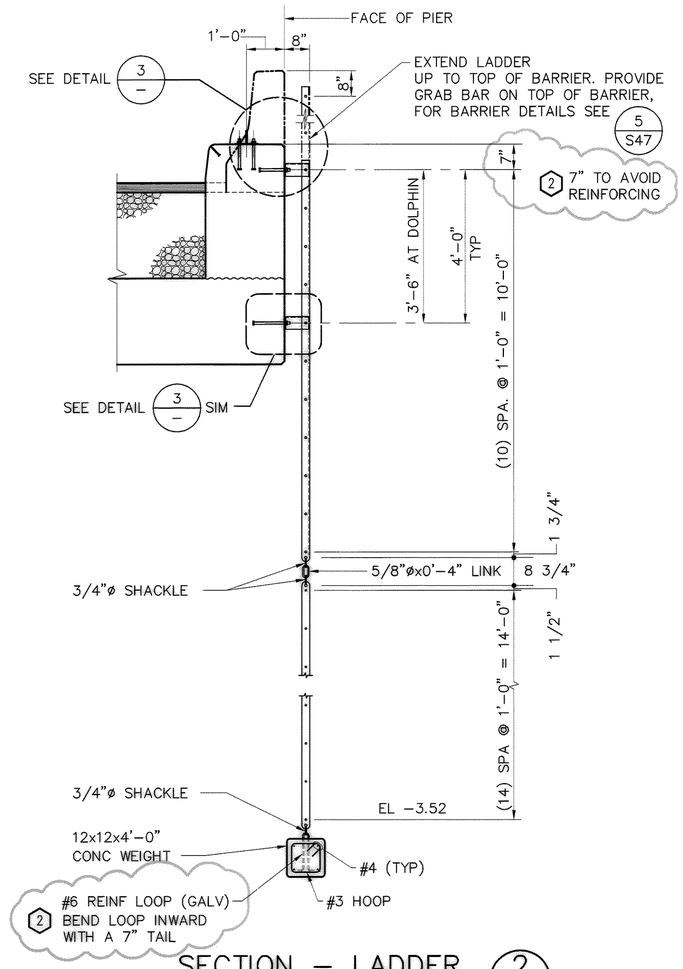
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XREFS: POT22x34TB-KPFF.			

PLOT SCALE	1=1
'POP' FILE	
PLOT VIEW	



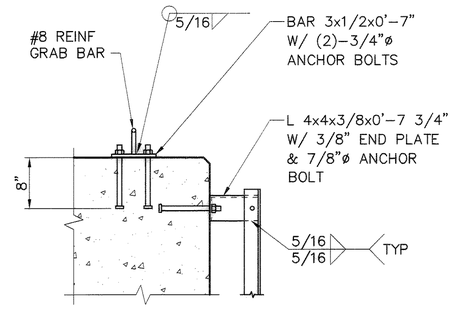
ELEVATION – LADDER 1 / S10 ,S11,S12,S13,S14,S15,S80

SCALE: 1/2"= 1'–0"



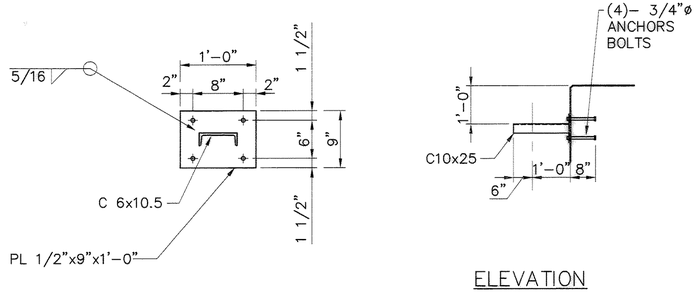
SECTION – LADDER 2 / —

SCALE: 1/2"= 1'–0"



DETAIL 3 / —

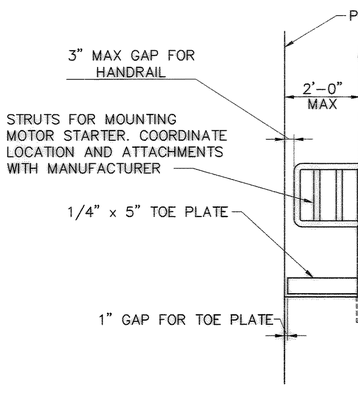
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ELEVATION

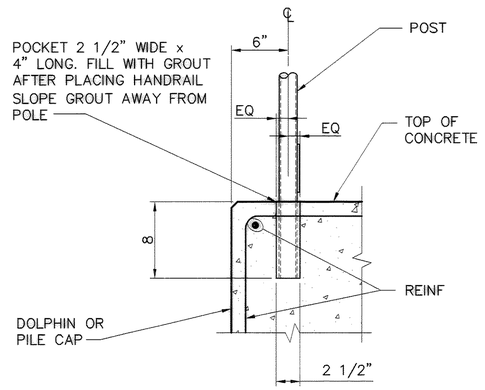
DETAIL – WARNING LIGHT 6 / S80

SCALE: NTS



DETAIL – HANDRAIL 4 / —

SCALE: 1/2"= 1'–0"



DETAIL – CONCRETE CONNECTION 5 / —

SCALE: 1 1/2"= 1'–0"

1 RFI 210
2 EFC 56
3 EAST DOLPHIN HANDRAIL, SEE BACK OF DRAWING S79.

NOTES:

1. MATERIALS:
   A. HANDRAIL AND POSTS: ASTM A 53, 1 1/2"ø SCHEDULE 40 STEEL PIPE.
   B. PLATES AND BARS: ASTM A 36
2. USE ALL–WELDED CONSTRUCTION PER AWS D1.1.
3. GRIND SMOOTH ALL SHARP CORNERS AND ROUGH EDGES AFTER FABRICATION.
4. HOT–DIP GALVANIZE AFTER FABRICATION.
5. EXPANSION BOLT ANCHORS ARE NOT ALLOWED.
6. PAINT GRAB BARS PER SPECIFICATIONS.

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI

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MARK | REVISION | BY: | APPROVED | DATE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
MISCELLANEOUS STEEL DETAILS
SHEET 2

APPROVED
CHIEF ENGINEER – DATE
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03 CHECKED BY – DATE
KN 06/11/03 PROJECT ENGR. – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: E1972
E. NUMBER: 998149
PHASE: RECORD DOCUMENTS

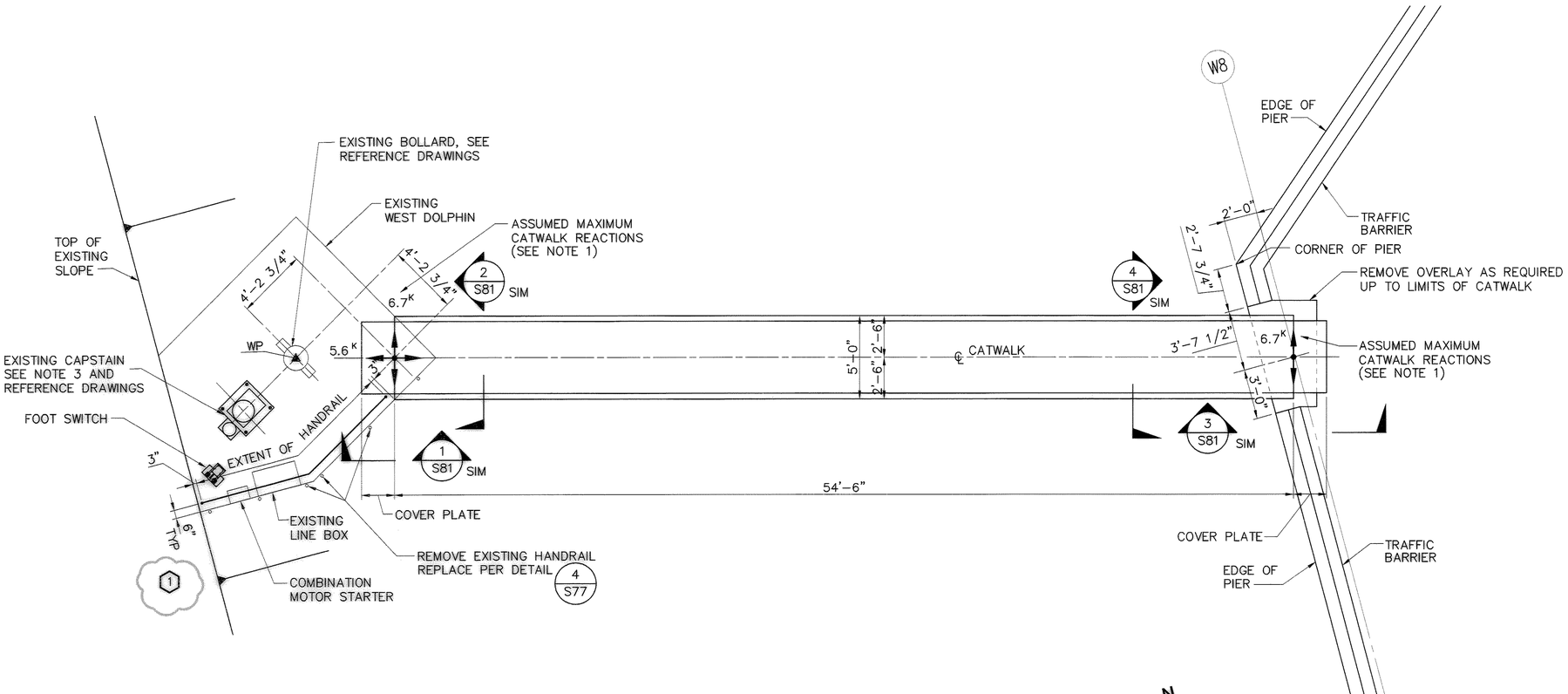
EP-~~555-17~~

S77

SHEET 121 OF 164

6320-17

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S77.DWG
JOB # 102349.10 | JOB NAME Pierce County Terminal | PLOTTED DATE & TIME JAN. 28, 2005 8:53:11 AM | UPDATED BY RICKT
XREFS: PGT22x34TB-KPFF, | PLOT SCALE 1=1 | 'POP' FILE --- | PLOT VIEW



PLAN – WEST CATWALK

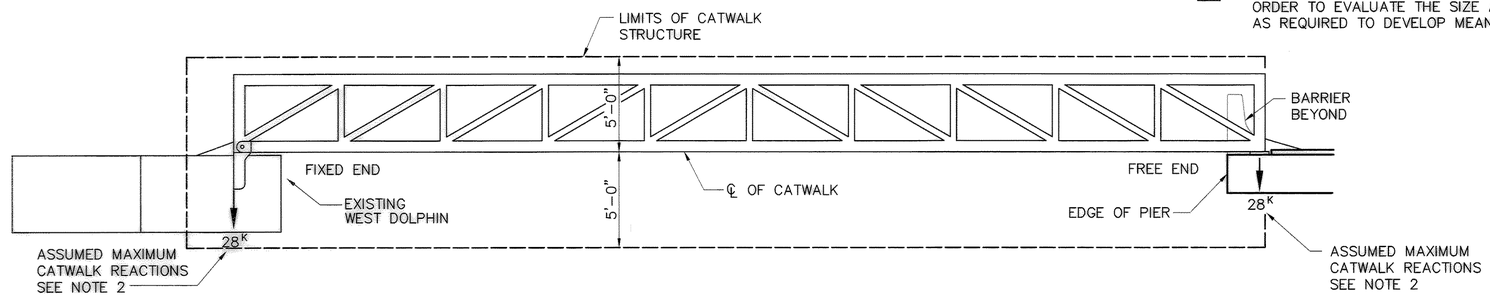
SCALE: 1/4"= 1'-0"

1

1 WEST DOLPHIN HANDRAIL AS–BUILT, SEE BACK OF DRAWING S77.

NOTES:

1. HORIZONTAL LOAD REACTIONS SHOWN ARE ASSUMED MAXIMUM ULTIMATE LATERAL LOADS FOR WHARF AND DOLPHIN.
2. VERTICAL LOAD REACTIONS SHOWN ARE ASSUMED MAXIMUM SERVICE DL+LL REACTIONS FOR WHARF AND DOLPHIN.
3. REMOVE AND SALVAGE EXISTING CAPSTAN. GRIND ANCHOR BOLTS TO 1/2" BELOW CONCRETE AND PATCH WITH EPOXY GROUT. CORE HOLE PER MANUFACTURER'S RECOMMENDATIONS FOR CAPSTAN ANCHOR BOLTS. LOCATE AND AVOID DOLPHIN REINFORCING PRIOR TO CORE DRILLING. SEE SPECIFICATIONS FOR MORE INFORMATION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE IN ORDER TO EVALUATE THE SIZE AND WEIGHT OF THE EXISTING CAPSTAN AS REQUIRED TO DEVELOP MEANS AND METHODS TO ACCOMPLISH THE WORK.



ELEVATION – WEST CATWALK

SCALE: 1/4"= 1'-0"

2

MARK	REVISION	BY:	APPROVED:	DATE:
A	ADDENDUM 1: ADDED NOTE 4	MB	RKJ	8/1/03

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TACOMA, WA 98401 253-383-5841

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE

MB/GH 06/11/03
PROJECT ENGR.– DATE

TOWNSHIP:
RANGE:
SECTION:
DATUM: HORIZ:
VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WEST MOORING DOLPHIN
CATWALK PLAN AND ELEVATION

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

SHEET 122 OF 164

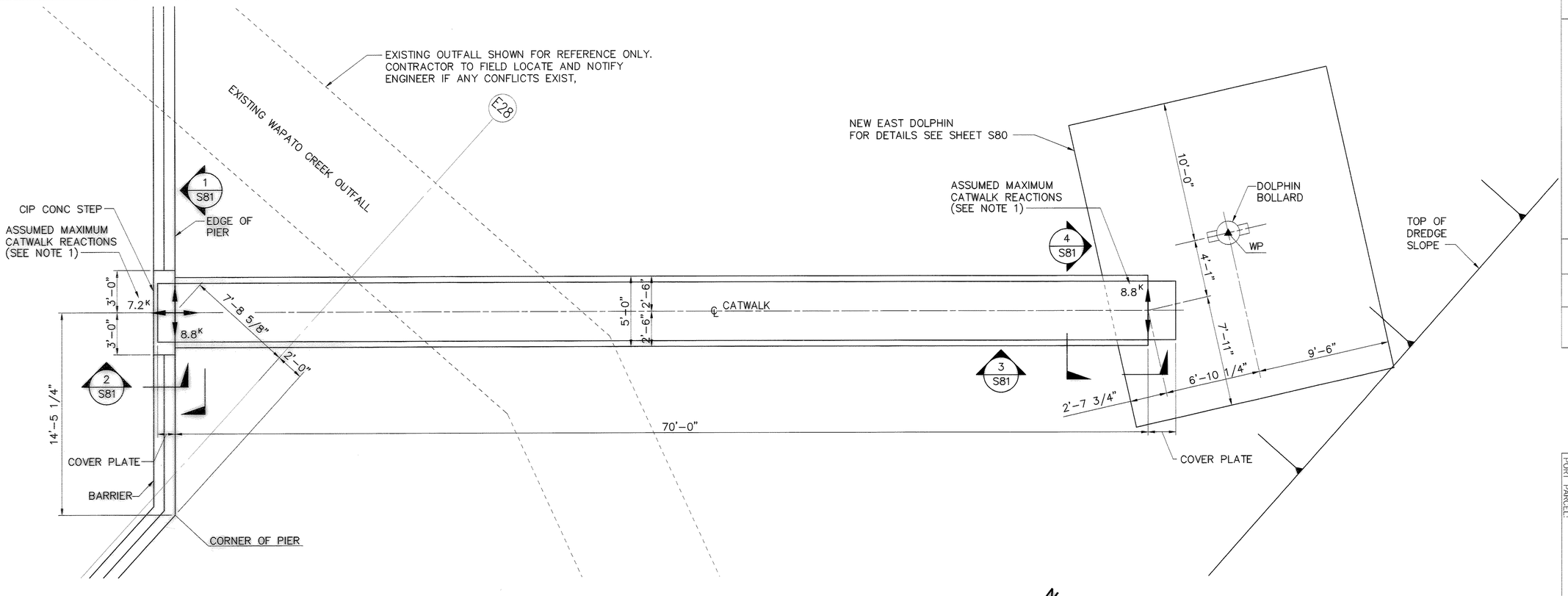
EP ~~655-147~~

S78

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

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XREFS: PCTXMSP1, P0T22x34TB-KPFF,



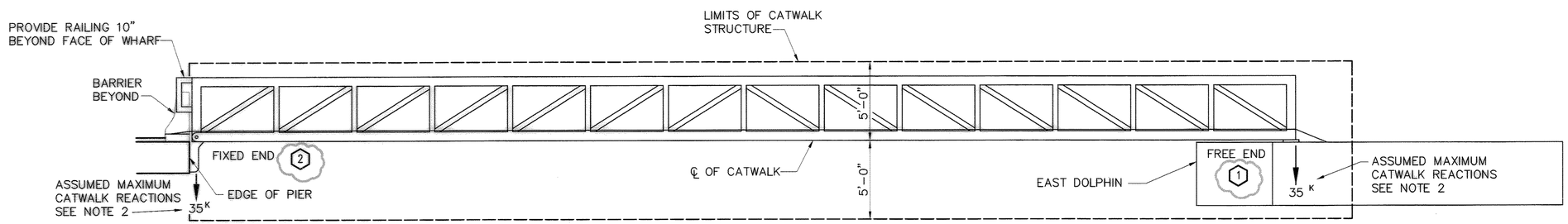
PLAN – EAST CATWALK

SCALE: 1/4"= 1'-0"

1

NOTES:

1. HORIZONTAL LOAD REACTIONS SHOWN ARE ASSUMED MAXIMUM ULTIMATE LATERAL LOADS FOR WHARF AND DOLPHIN.
2. VERTICAL LOAD REACTIONS SHOWN ARE ASSUMED MAXIMUM SERVICE DL+LL REACTIONS FOR WHARF AND DOLPHIN.



ELEVATION – EAST CATWALK

SCALE: 1/4"= 1'-0"

2

1. RFI 244, CATWALK BEARING PAD, SEE BACK OF DRAWING S78.
2. DRILLED & EPOXIED ANCHOR BOLTS, SEE SUBMITTAL 05510-03 REV. 1.

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Seattle, Washington 98101
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MARK | REVISION | BY: | APPROVED | DATE:

APPROVED
CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE
MB/GH 06/11/03
PROJECT ENGR.– DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

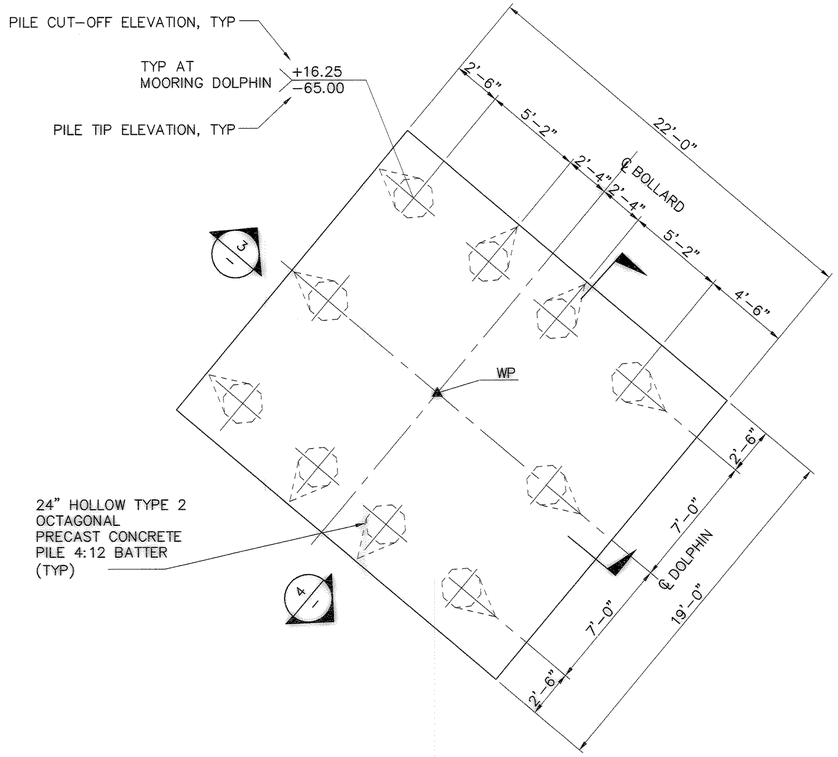
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EAST MOORING DOLPHIN
CATWALK PLAN AND ELEVATION

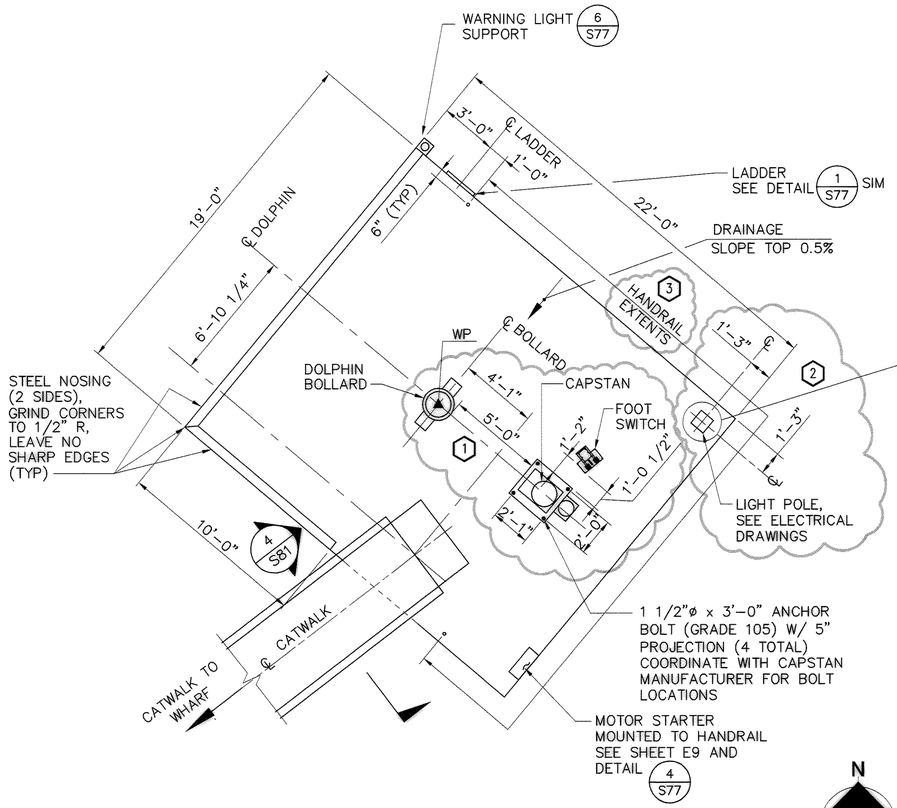
EP-~~556-17~~
S79
SHEET 123 OF 164

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S79.DWG
JOB # 102349.10 | JOB NAME Pierce County Terminal | PLOTTED DATE & TIME JAN. 28, 2005 8:54:51 AM | UPDATED BY RICKT
XREFS: PCTXMSP1, P0122x341B-KPFF, | PLOT SCALE 1=1 | 'PCP' FILE --- | PLOT VIEW

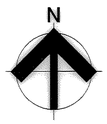




NOTE:
MINIMUM CAPSTAN REQ'S: EXPLOSION PROOF, REVERSING MOTOR FOOT SWITCH, 15 HP, 75 FPM LINE SPEED, 5000 LB LINE PULL. SEE SPECIFICATIONS FOR DETAILS.

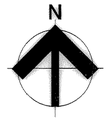
PILING PLAN – EAST MOORING DOLPHIN 1 / S79

SCALE: 1/4"= 1'-0"

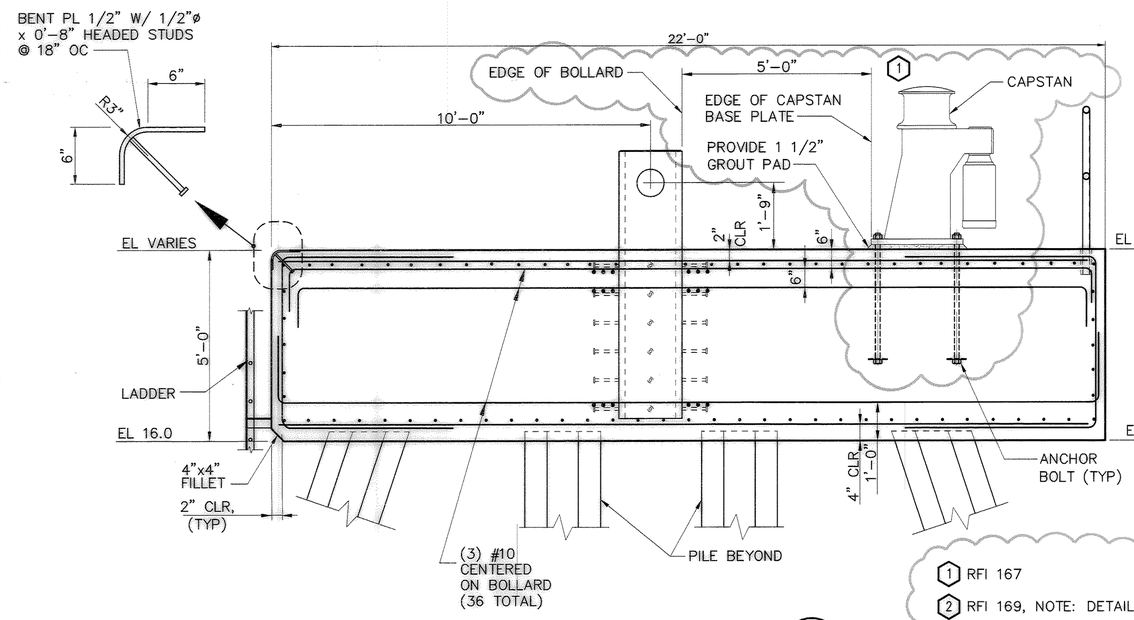


PLAN – EAST MOORING DOLPHIN 2 / S79

SCALE: 1/4"= 1'-0"



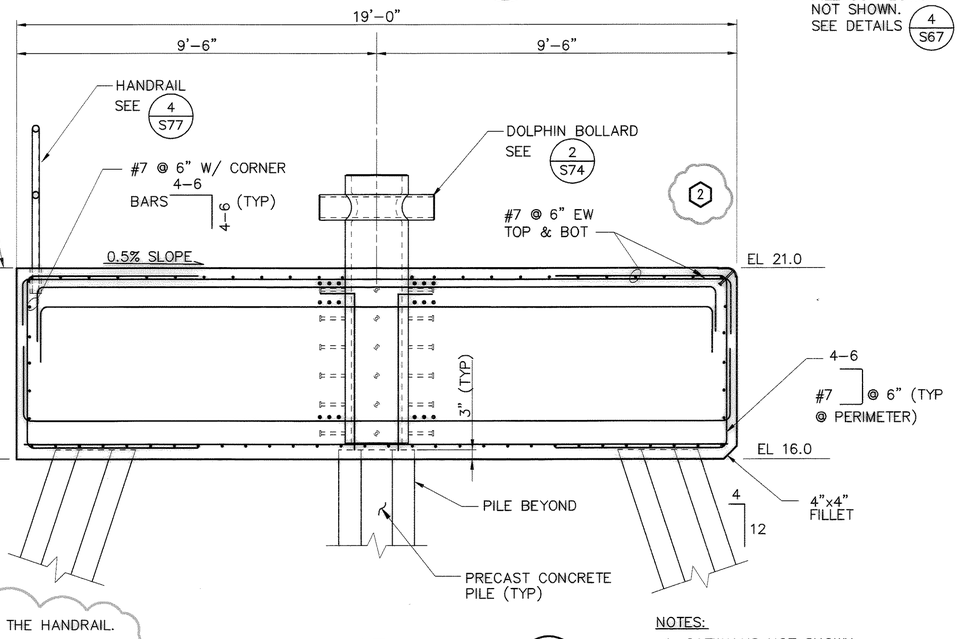
NOTE:
PILE CONNECTION NOT SHOWN. SEE DETAILS 4 S67 & 3 S68



SECTION 3 / –

SCALE: 1/2"= 1'-0"

1. RFI 167
2. RFI 169, NOTE: DETAIL 4 OMITTED THE HANDRAIL.
3. EAST DOLPHIN HANDRAIL AS-BUILT, SEE BACK OF DRAWING S79.



SECTION 4 / –

SCALE: 1/2"= 1'-0"

NOTES:
1. CATWALKS NOT SHOWN.

6320-17

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

	CHECKED BY – DATE	PROJECT ENGR.– DATE
RKJ	06/11/03	
MB, GH		06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EAST MOORING DOLPHIN
PLAN AND SECTIONS

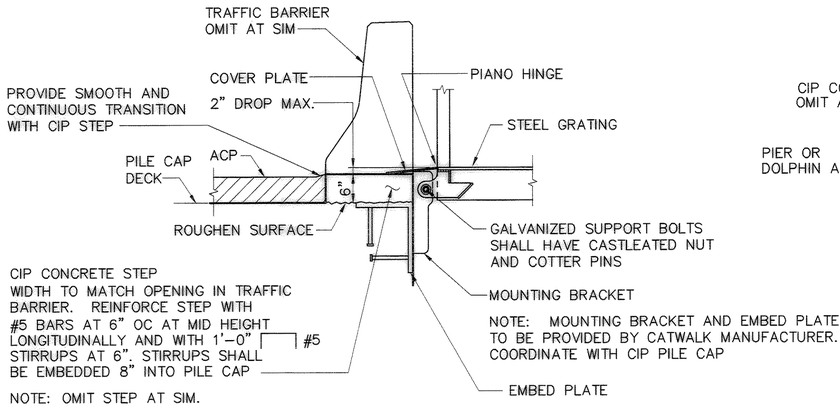
EP-~~5561-17~~

S80

SHEET 124 OF 164

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S80.DWG
JOB # 102349.10
XREFS: P0722x341B-KPFF,
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 28, 2005 8:55:27 AM
UPDATED BY RICKT
'PCP' FILE ---
PLOT SCALE 1=1
PLOT VIEW

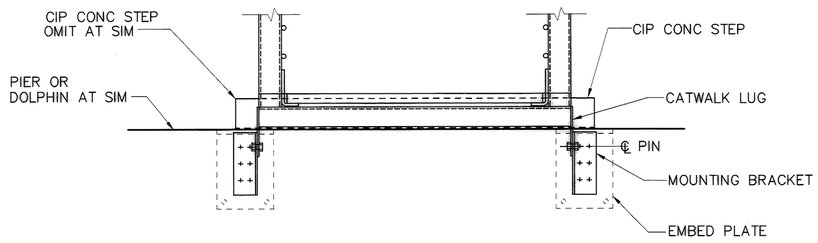


NOTE: OMIT STEP AT SIM.

FIXED END

SECTION – CATWALK (1) S78, S79

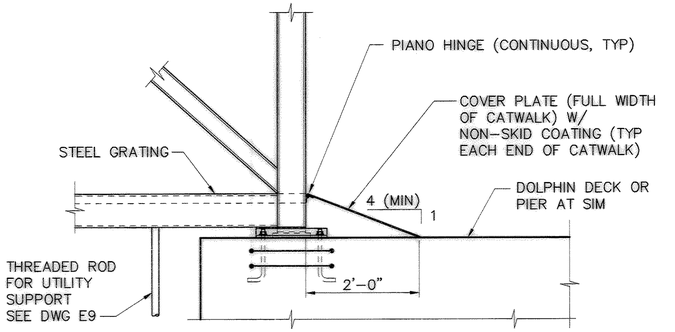
SCALE: 3/4"= 1'-0"



FIXED END

SECTION – CATWALK (2) S78, S79

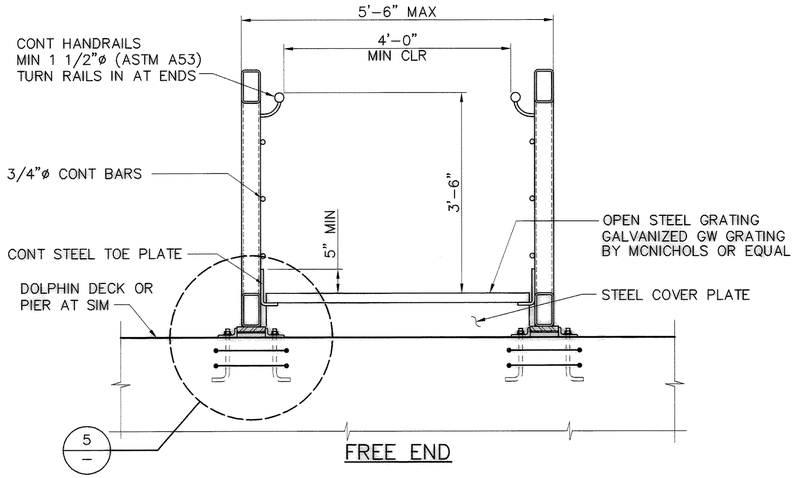
SCALE: 3/4"= 1'-0"



FREE END

SECTION – CATWALK (3) S78, S79

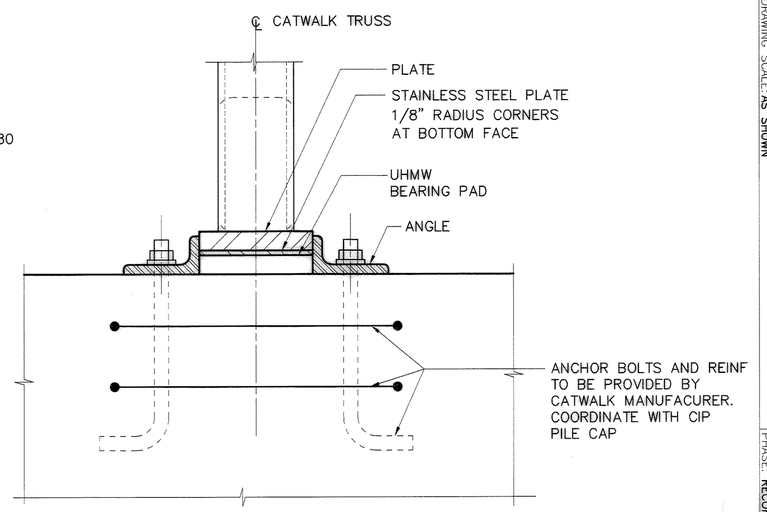
SCALE: 3/4"= 1'-0"



FREE END

SECTION – CATWALK (4) S78, S79, S80

SCALE: 3/4"= 1'-0"



DETAIL (5) –

SCALE: 3"= 1'-0"

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S81.DWG
JOB #: 102349.10 | JOB NAME: Pierce County Terminal | PLOTTED DATE & TIME: JAN. 28, 2005 8:55:56 AM | UPDATED BY: RICKT
XREFS: P01122x34TB-KPFF,
PLOT SCALE: 1=1 | 'PCP' FILE: ---- | PLOT VIEW:

PORT OF TACOMA U.S.A.

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

MARK	REVISION	BY:	APPROVD.	DATE:

APPROVED

CHIEF ENGINEER – DATE

RKJ	06/11/03	CHECKED BY – DATE
MB/GH	06/11/03	PROJECT ENGR.– DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
CATWALK DETAILS

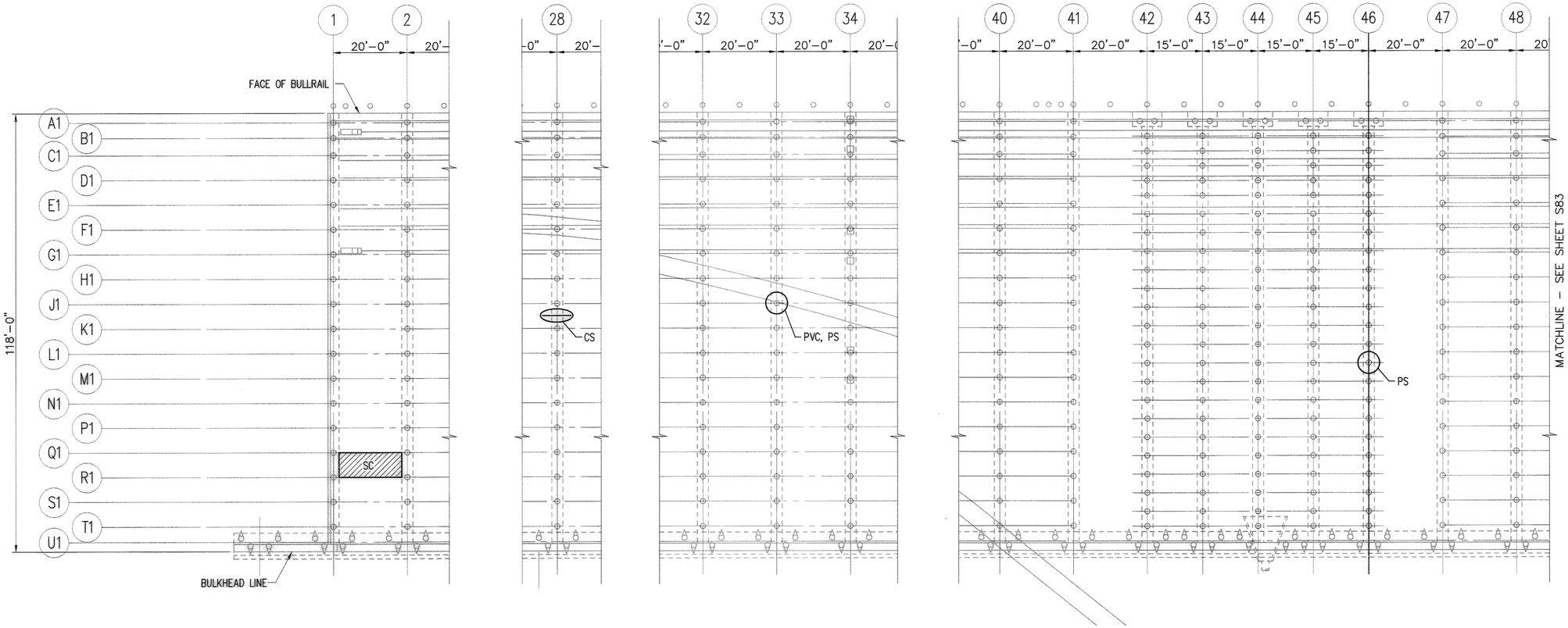
SHEET 125 OF 164
S81

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~5551-17~~

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

6320-17



EXISTING WHARF STRUCTURAL REPAIR PLAN

SCALE: 1/16"= 1'-0"

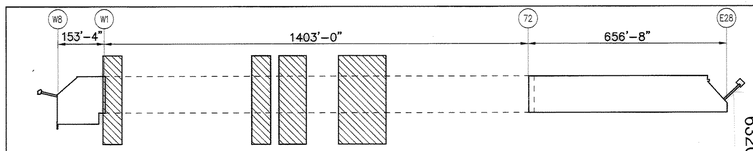
N

LEGEND

- EXISTING 16 1/2" OCTAGONAL PILE, BATTER
- EXISTING 16 1/2" OCTAGONAL PILE, PLUMB
- SC — DECK PANEL SOFFIT SPALL, REINFORCEMENT CORROSION. SEE (2/S84) FOR REPAIR.
- CRC — PILECAP CRACK, REINFORCING CORROSION. SEE SPECIFICATIONS FOR REPAIR.
- PS — PILE SPALL. SEE (1/S84) FOR REPAIR.
- PVC — PILE WITH VERTICAL CRACK. SEE SPECIFICATIONS FOR REPAIR.
- PVC, PS — PILE WITH VERTICAL CRACK AND A SPALL. SEE (1/S85) FOR REPAIR.

NOTES:

1. ALL PILE DAMAGE TO BE REPAIRED (CRACKS, SPALLS) IS LOCATED IMMEDIATELY BELOW THE PILECAP SOFFIT. CONTRACTOR SHALL DETERMINE EXTENT OF EACH REPAIR PER THE SPECIFICATIONS.
2. SEE SPECIFICATIONS FOR REPAIR REQUIREMENTS.



KEY PLAN

6320-17

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ CHECKED BY – DATE 06/11/03
KN PROJECT ENGR – DATE 06/11/03

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

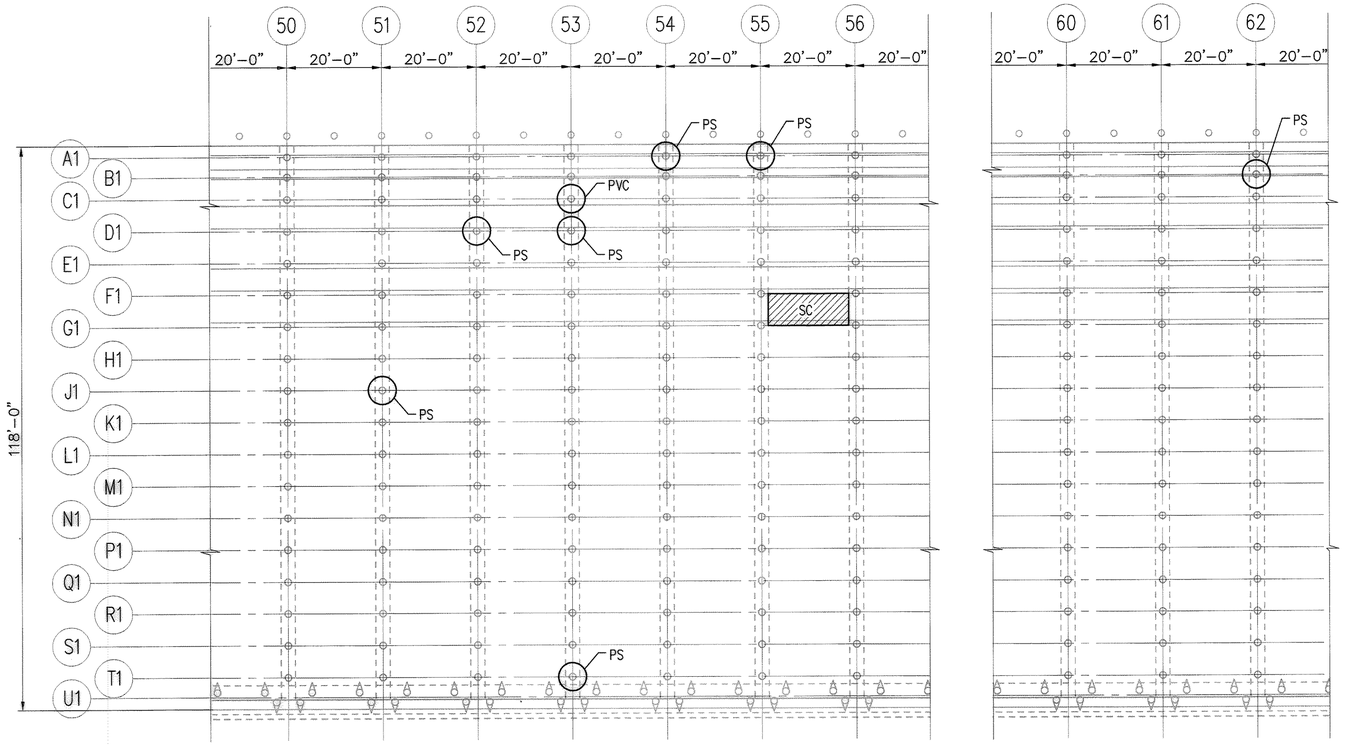
PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF STRUCTURAL REPAIR
PLAN - SHEET 1

CONTRACT NUMBER: 98149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-5564-47
SHEET 126 OF 164
S82

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S82.DWG
JOB # 102349.21 | JOB NAME Pierce County Terminal | PLOTTED DATE & TIME JAN. 28, 2005 8:56:37 AM | UPDATED BY RICKT
XREFS: PCTXKEYPLAN, PCTXLEGEND-REPAIR, PCT-XWHARF-REPAIR, POT22x34TB-KPFF,
PLOT SCALE 1=1 | 'POP' FILE --- | PLOT VIEW



EXISTING WHARF STRUCTURAL REPAIR PLAN

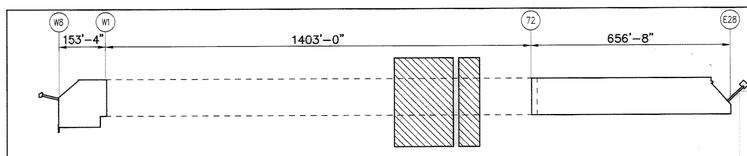
SCALE: 1/16"= 1'–0"

LEGEND

- EXISTING 16 1/2" OCTAGONAL PILE, BATTER
- EXISTING 16 1/2" OCTAGONAL PILE, PLUMB
- SC — DECK PANEL SOFFIT SPALL, REINFORCEMENT CORROSION. SEE (2/S84) FOR REPAIR.
- CRC — PILECAP CRACK, REINFORCING CORROSION. SEE SPECIFICATIONS FOR REPAIR.
- PS — PILE SPALL. SEE (1/S84) FOR REPAIR.
- PVC — PILE WITH VERTICAL CRACK. SEE SPECIFICATIONS FOR REPAIR.
- PVC, PS — PILE WITH VERTICAL CRACK AND A SPALL. SEE (1/S85) FOR REPAIR.

NOTES:

1. ALL PILE DAMAGE TO BE REPAIRED (CRACKS, SPALLS) IS LOCATED IMMEDIATELY BELOW THE PILECAP SOFFIT. CONTRACTOR SHALL DETERMINE EXTENT OF EACH REPAIR PER THE SPECIFICATIONS.
2. SEE SPECIFICATIONS FOR REPAIR REQUIREMENTS.



KEY PLAN

6320-17

PORT OF TACOMA
U.S.A.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff
Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9130

MARK	REVISION	BY:	APPROVED	DATE:

APPROVED

CHIEF ENGINEER – DATE

RKJ	06/11/03
CHECKED BY	– DATE
KN	06/11/03
PROJECT ENGR.	– DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF STRUCTURAL REPAIR PLAN - SHEET 1

CONTRACT NUMBER: 998149
E. NUMBER: E1972
PHASE: RECORD DOCUMENTS

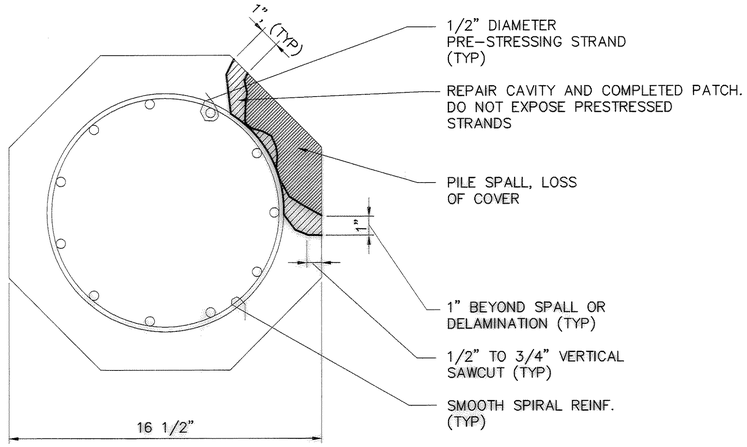
EP-~~556-117~~

S83

SHEET 127 OF 164

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

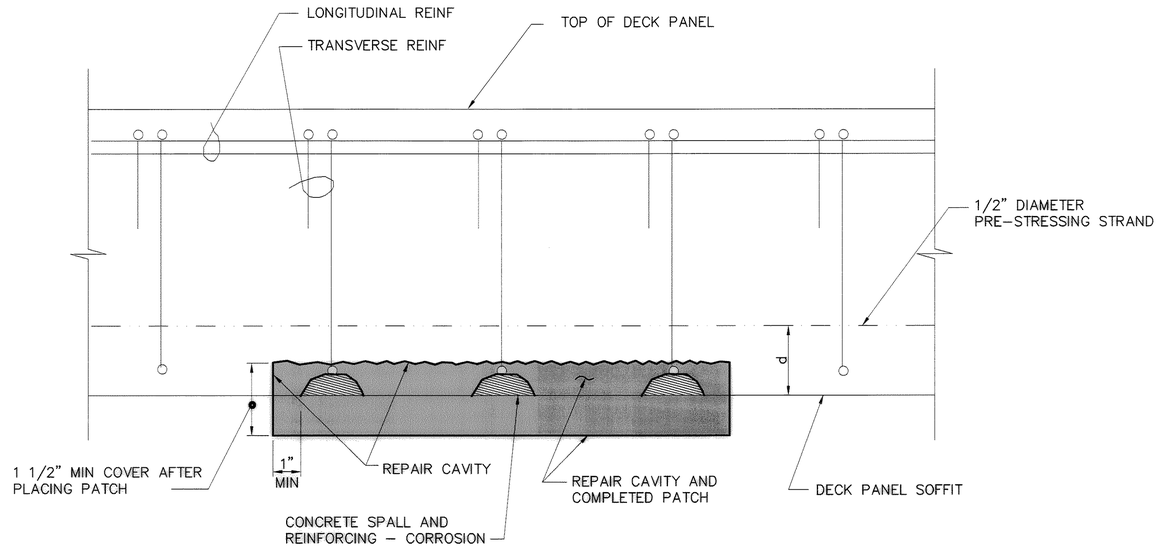
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XREFS: PCTXKEYPLAN, PCTXLEGEND-REPAIR, PCT-XWHARF-REPAIR, POT22x34TB-KPFF,
UPDATED BY RICKT | PLOT SCALE 1=1 | 'PCP' FILE --- | PLOT VIEW



PILE SPALL REPAIR (1)

RECOMMENDED REPAIR SEQUENCE (SEE SPECIFICATIONS)

1. DETERMINE REPAIR CAVITY DIMENSIONS AND SAWCUT LOCATIONS.
2. PREPARE REPAIR CAVITY.
3. PREPARE EXPOSED SPIRAL REINFORCEMENT FOR PLACING REPAIR MATERIAL.
4. PLACE REPAIR MATERIAL AND CURE.



DECK PANEL SOFFIT REPAIR (2)

RECOMMENDED REPAIR SEQUENCE (SEE SPECIFICATIONS)

1. USING NDT METHODS, DETERMINE CONCRETE COVER OVER THE 1/2" DIAMETER PRE-STRESSING STRAND (DIMENSION d). DO NOT EXPOSE PRESTRESSING STRAND AT ANY TIME DURING REPAIR.
2. PREPARE REPAIR CAVITY BY REMOVING SPALLED OR OTHERWISE UNSOUND CONCRETE FROM AROUND TRANSVERSE REINFORCING STEEL. HAMMER SOUND DECK PANEL SOFFIT TO DETERMINE THE BOUNDARY OF THE REPAIR CAVITY. THE REPAIR CAVITY SHALL BE FORMED BY REMOVING CONCRETE 1" BEYOND ALL UNSOUND CONCRETE. THE REPAIR CAVITY SHALL BE FORMED BY STRAIGHT BOUNDARY LINES TO EITHER A SQUARE OR RECTANGULAR PLAN SHAPE. VERTICALLY SAWCUT THE CAVITY BOUNDARY TO A 1/2" TO 3/4" DEPTH. USING CARE TO PREVENT DAMAGE TO REINFORCING STEEL AND PRE-STRESSING STRAND. DAMAGE TO REINF. OR STRAND SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE PORT.
3. PREPARE EXPOSED REINFORCEMENT FOR PLACING REPAIR MATERIAL.
4. PLACE REPAIR MATERIAL AND CURE. COMPLETED PATCH SHALL PROVIDE FOR MINIMUM 1 1/2" OF COVER OVER TRANSVERSE REINF. STEEL.

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY	APPROVED	DATE

APPROVED

CHIEF ENGINEER - DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY - DATE

WJC 06/11/03
PROJECT ENGR - DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF REPAIR DETAILS
SHEET 1

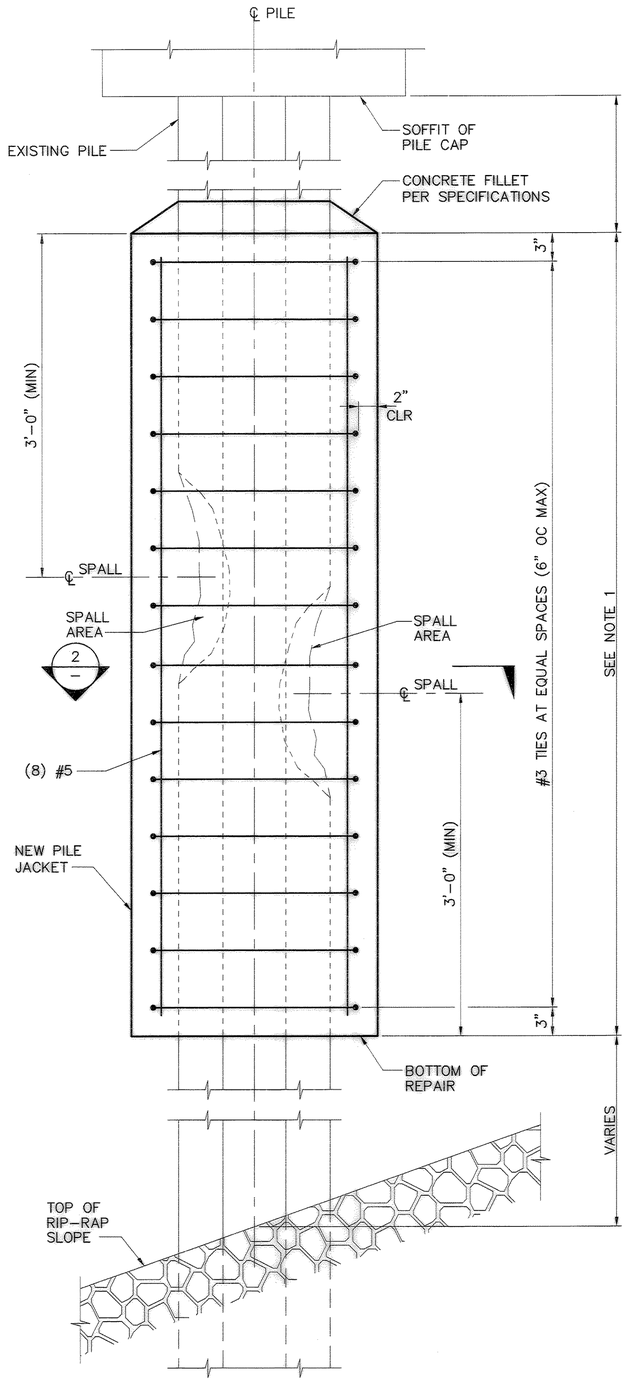
EP-~~55111~~
S84
SHEET 128 OF 164

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S84.DWG			
JOB #	JOB NAME	PLOTTED DATE & TIME	UPDATED BY
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XREFS: P0722x34TB-KPFF,			

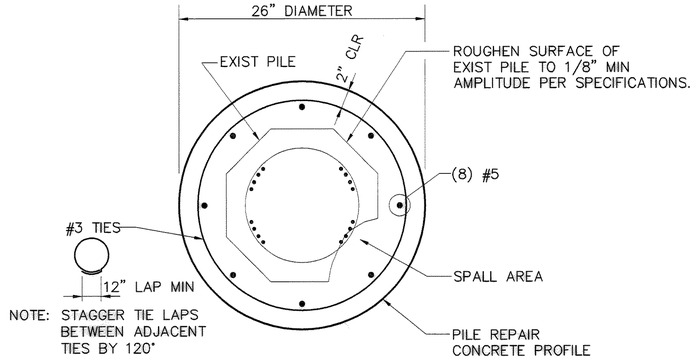
PLOT VIEW	'PCP' FILE	PLOT SCALE	UPDATED BY
	---	1=1	RICKT



PILE STRUCTURAL REPAIR – DETAIL (1)

SCALE: 1 1/2"= 1'-0"

S82, S83



PILE STRUCTURAL REPAIR – SECTION (2)

SCALE: 1 1/2"= 1'-0"

NOTES:

1. REPAIR LENGTH SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS.

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
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Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8300

MARK	REVISION	BY:	APPROVED	DATE:

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
EXISTING WHARF REPAIR DETAILS
SHEET 2

EP-~~555-17~~
S85
SHEET 129 OF 164

RKJ	06/11/03
CHECKED BY –	DATE
WJC	06/11/03
PROJECT ENGR.–	DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER 998149
E NUMBER E1972
PHASE: RECORD DOCUMENTS

APPROVED

CHIEF ENGINEER – DATE

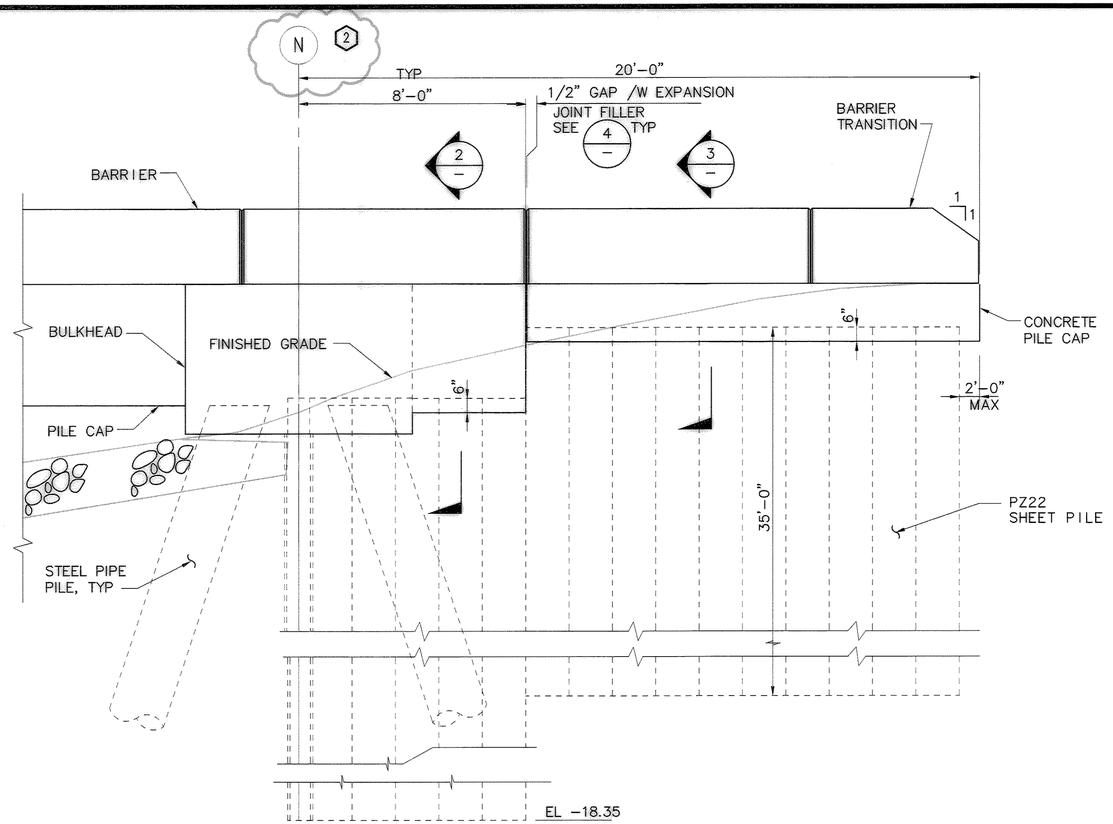
DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

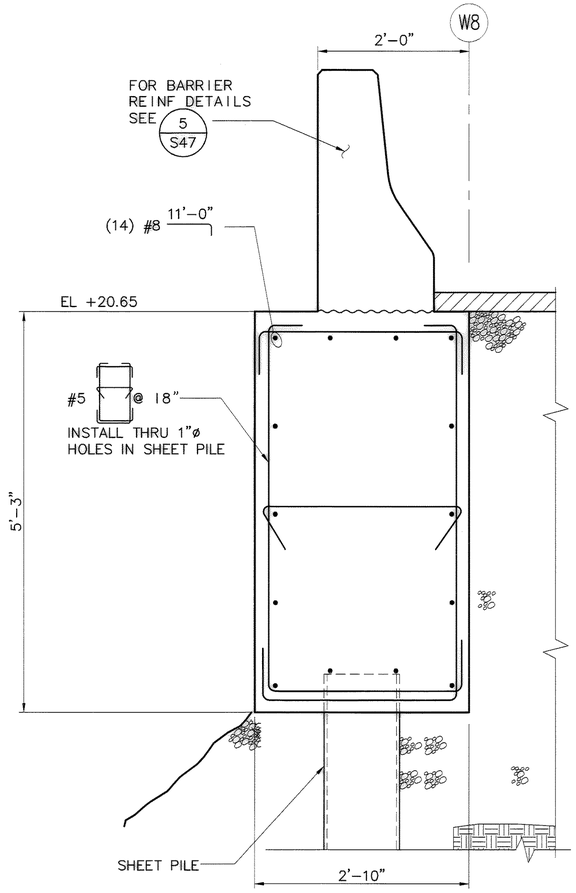
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JOB #	JOB NAME		PLOTTED DATE & TIME
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XREFS: P0122x34TB-KPFF,			

UPDATED BY	PLOT SCALE	'PCP' FILE	PLOT VIEW
RICKT	1=1	---	---



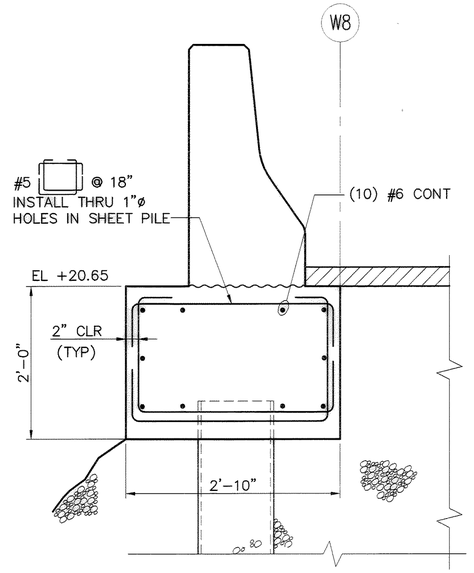
ELEVATION – NEW WEST BULKHEAD WINGWALL (1 / S41)

SCALE: 3/8"= 1'-0"



SECTION (2 / –)

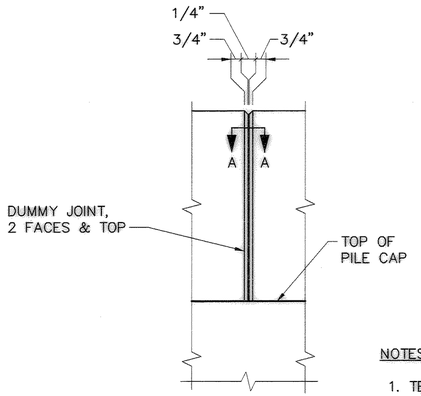
SCALE: 1"= 1'-0"



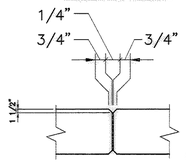
FOR INFORMATION NOT SHOWN, SEE 2 / –

SECTION (3 / –)

SCALE: 1"= 1'-0"



ELEVATION



NOTE: SPACE DUMMY JOINTS @ 8'-0" OC (1)

SECTION A–A

DETAIL – TRAFFIC BARRIER JOINT (4 / –)

SCALE: 3/4"= 1'-0"

NOTES:

1. TERMINATE CONTINUOUS BULLRAIL REINFORCEMENT INTERRUPTED AT VAULTS AND END OF BULLRAIL WITH STANDARD HOOKS. FOR ADDITIONAL REINFORCEMENT AT VAULT , SEE 4 / –
2. SEE ELECTRICAL AND CIVIL DRAWINGS FOR UTILITY PENETRATIONS.
3. FOR ADDITIONAL REINF AT BOLLARDS SEE SHEET S49.
4. FOR UTILITY VAULT DETAILS SEE SHEET S71.

(1) RFI 222
(2) RFI 020

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

kpff Consulting Engineers
601 Fifth Avenue, Suite 600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-8130

MARK	REVISION	BY:	APPROVED:	DATE:

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE

PB 06/11/03
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM- HORIZ: VERT:
DRAWING SCALE: AS SHOWN

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
WEST BULKHEAD WINGWALL
SECTIONS AND DETAILS

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

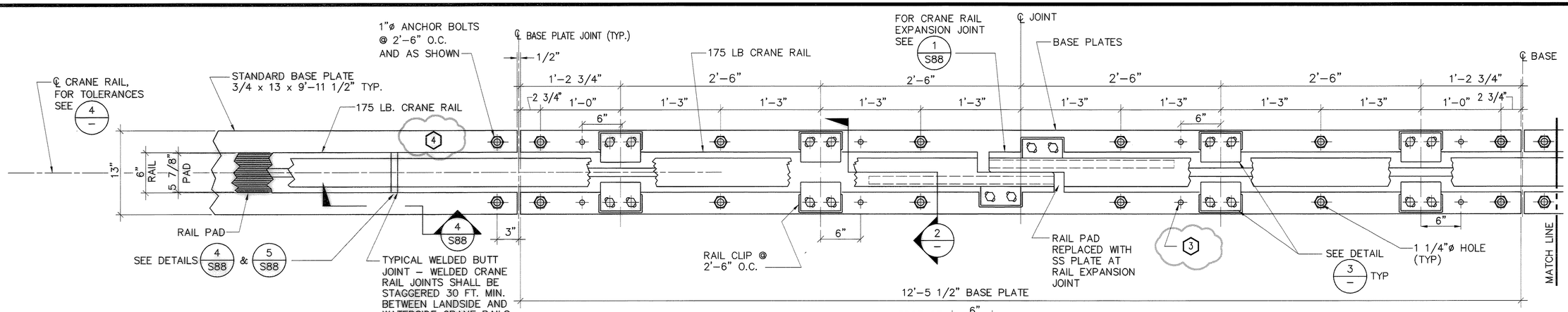
EP-~~5551-17~~

SHEET 130 OF 164

S86

6320-17

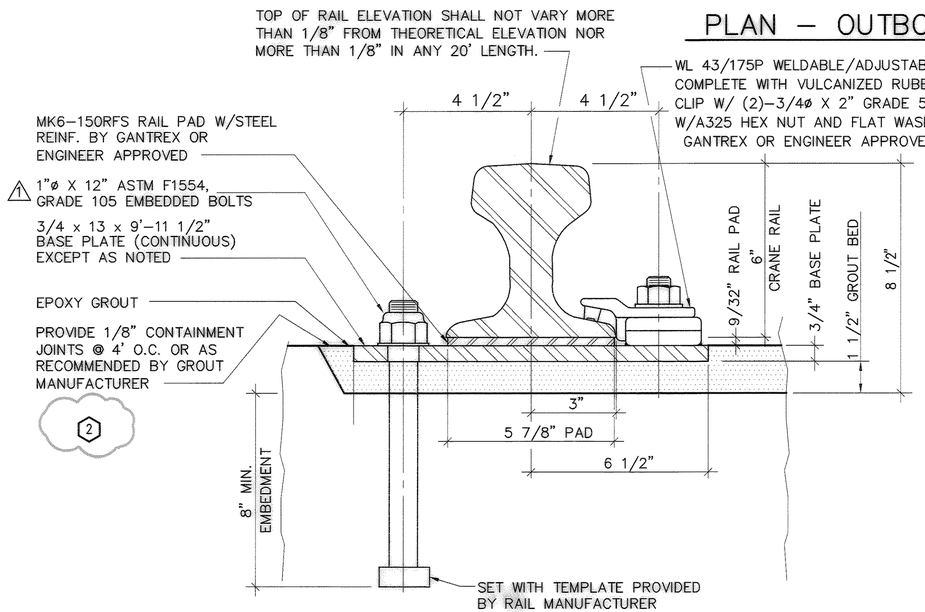
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JOB # 102349.10
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 28, 2005 9:03:07 AM
UPDATED BY RICK1
PLOT SCALE 1=1
'POP' FILE
PLOT VIEW
XREFS: P022x34TB-KPFF,



PLAN – OUTBOARD AND INBOARD CRANE RAIL ASSEMBLY 1/S3

SCALE: 1 1/2"= 1'-0"

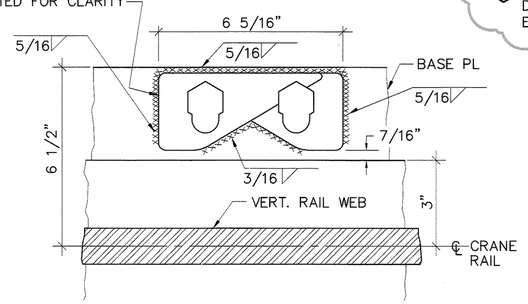
NOTE:
CONTRACTOR SHALL ADJUST BASE PLATE LENGTHS AS NECESSARY AT CRANE RAIL ENDS. MINIMUM NUMBER OF ANCHOR BOLTS PER END SECTION BASE PLATE SHALL BE (4), WITH MAXIMUM SPACING AS SHOWN. MINIMUM NUMBER OF RAIL CLIPS PER END SECTION BASE PLATE SHALL BE (4), WITH MAXIMUM SPACING AS SHOWN.



SECTION – RAIL INSTALLATION 2/S87, S88, S35, S37

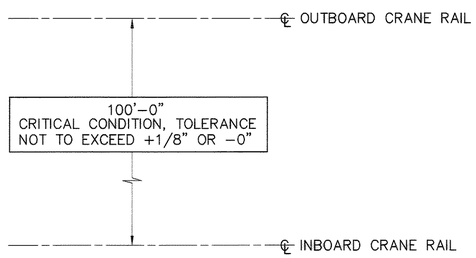
NO SCALE

LOWER COMPONENT OF RAIL CLIP BY GANTREX OR EQUAL UPPER COMPONENT OMITTED FOR CLARITY



PLAN – SECTION (RAIL CLIP) 3/S87, S88

NO SCALE



CRANE RAIL TOLERANCES 4/—

NO SCALE

2 RFI 236A, SEE BACK OF DRAWING S86.

3 RFI 221 & 221A, PLASTIC LEVELING NUTS, SEE BACK OF DRAWING S86.

4 RFI 223 & EFC 53, CUT ENDS OFF ONE SOLE PLATE, (THE SOLE PLATE DIRECTLY WEST OF THE OUTBOARD SOLE PLATE WITH THE CRANE EXPANSION JOINT ON IT), SEE BACK OF DRAWING S86.

MARK	REVISION	BY:	APPROVED	DATE:
A	ADDENDUM 1: REVISED CALLOUT	MB	RKJ	8/1/03

PORT OF TACOMA U.S.A.

kpff

Consulting Engineers
601 Fifth Avenue, Suite 1600
Seattle, Washington 98101
(206) 622-5822 Fax (206) 622-9301

PORT OF TACOMA P.O. BOX 1837
TACOMA, WA 98401 253-383-5841

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ	06/11/03
CHECKED BY –	DATE
MB	06/11/03
PROJECT ENGR –	DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

PIERCE COUNTY TERMINAL WHARF AND PHASE 2 DREDGING
CRANE RAIL DETAILS SHEET 1

EP-~~5551-17~~

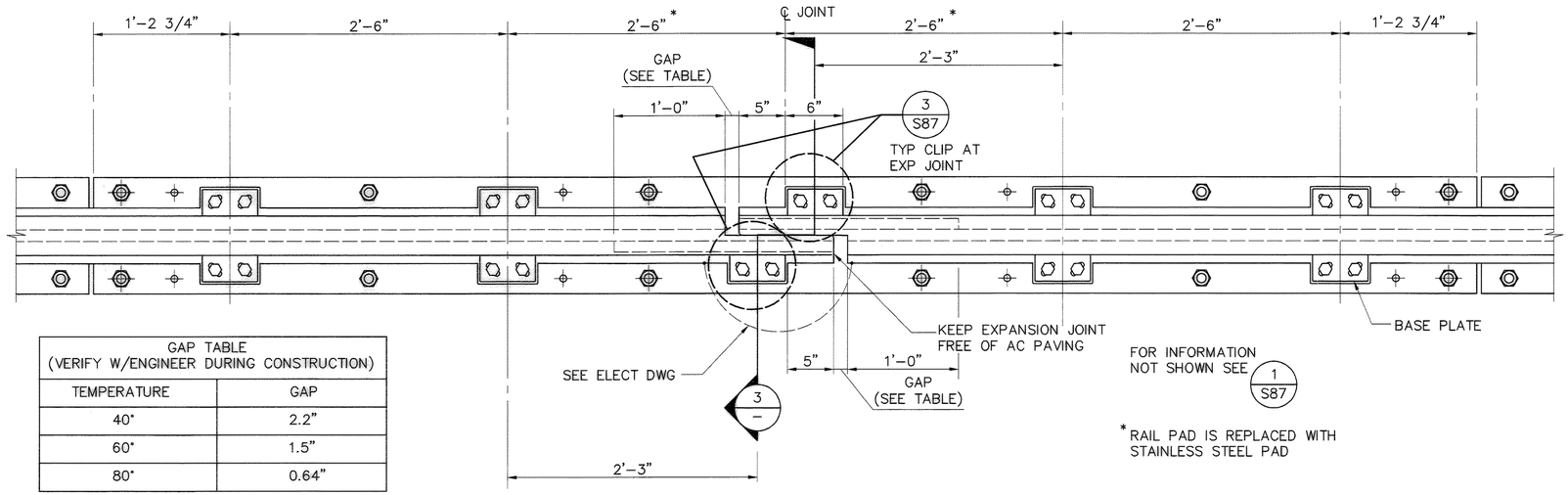
S87

SHEET 131 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE G1)

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972S87.DWG
JOB # 102349.10
JOB NAME Pierce County Terminal
XREFS: P0722x34TB-KPFF,
PLOTTED DATE & TIME JAN. 28, 2005 9:03:41 AM
UPDATED BY RICKT
PLOT SCALE 1=1
'PCP' FILE ---
PLOT VIEW



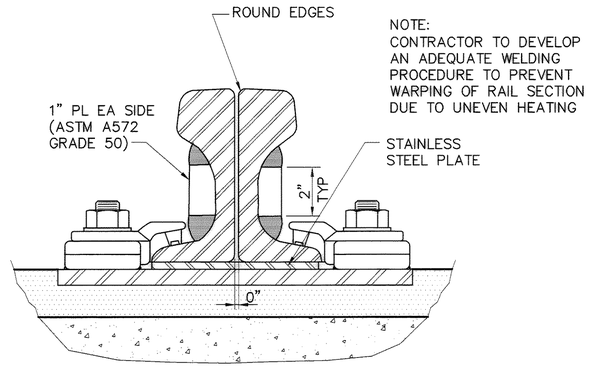
GAP TABLE (VERIFY W/ENGINEER DURING CONSTRUCTION)	
TEMPERATURE	GAP
40°	2.2"
60°	1.5"
80°	0.64"

FOR INFORMATION NOT SHOWN SEE 1 / S87

* RAIL PAD IS REPLACED WITH STAINLESS STEEL PAD

PLAN – CRANE RAIL EXPANSION JOINT 1 / S87

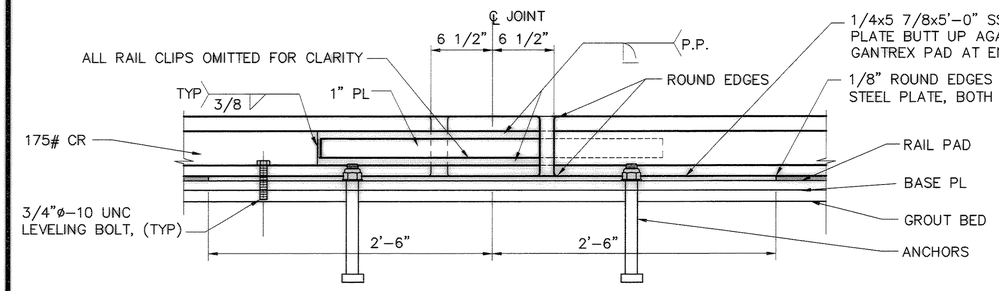
SCALE: 1 1/2"= 1'-0"



NOTE:
CONTRACTOR TO DEVELOP AN ADEQUATE WELDING PROCEDURE TO PREVENT WARPING OF RAIL SECTION DUE TO UNEVEN HEATING

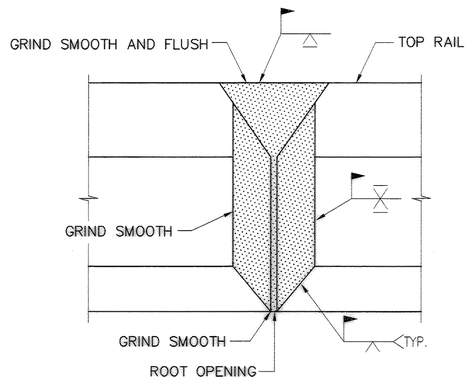
SECTION – THRU CRANE RAIL EXPANSION JOINT 3 / —

NO SCALE



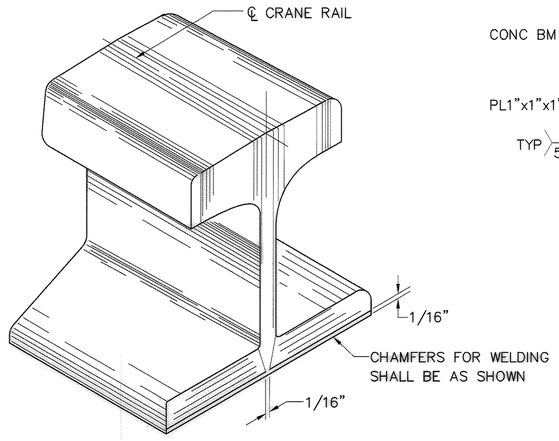
ELEVATION – CRANE RAIL EXPANSION JOINT 2 / —

SCALE: 1 1/2"= 1'-0"



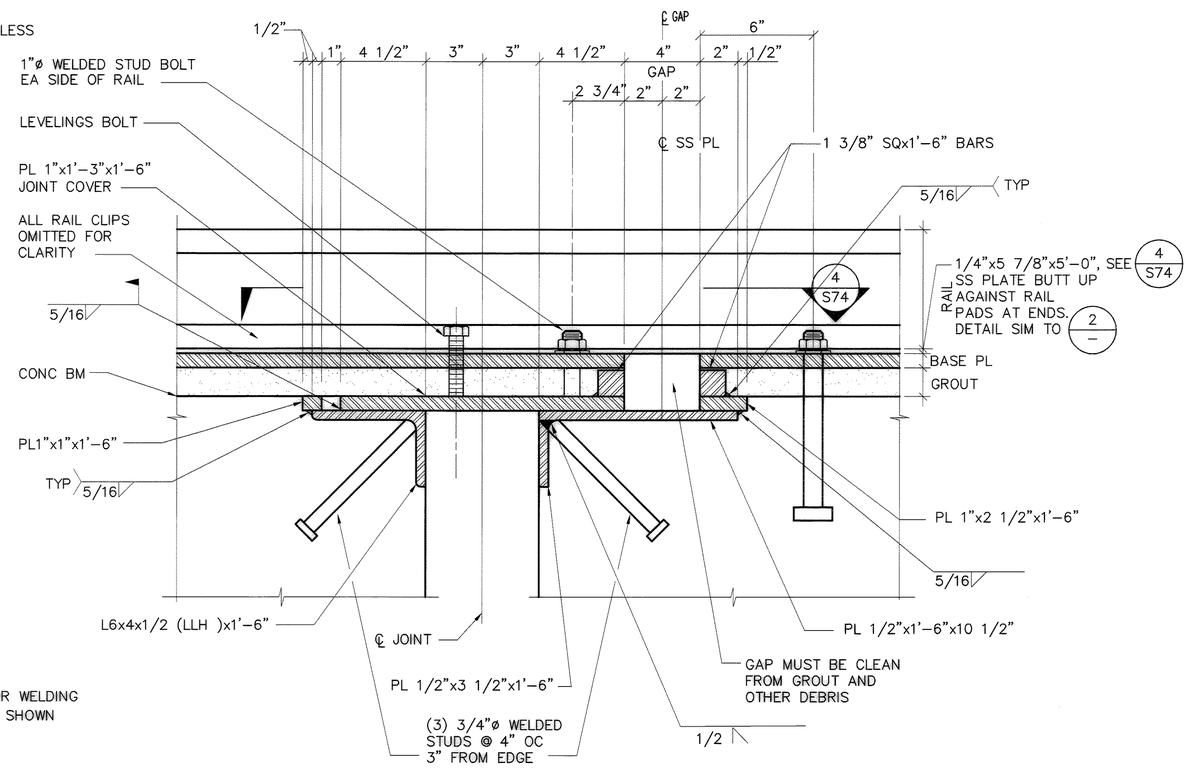
SECTION – RAIL JOINT 4 / S87

NO SCALE



DETAIL – CRANE RAIL 5 / S87

NO SCALE



SECTION – JOINT ASSEMBLY AT CRANE RAIL 6 / S51, S87

SCALE: 3"= 1'-0"

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MARK	REVISION	BY:	APPROVED	DATE

APPROVED

CHIEF ENGINEER – DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

RKJ 06/11/03
CHECKED BY – DATE

MB 06/11/03
PROJECT ENGR – DATE

TOWNSHIP: RANGE: SECTION:
DATUM: HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

6320-17

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
CRANE RAIL DETAILS
SHEET 2

EP ~~6561-17~~

SHEET 132 OF 164

S88

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E19725S8.DWG
JOB # 102349.10
JOB NAME Pierce County Terminal
PLOTTED DATE & TIME JAN. 28, 2005 9:04:16 AM
UPDATED BY RICKT
PLOT SCALE 1=1
'POP' FILE ---
PLOT VIEW
XREFS: P0122x341B-KPFF,

PORT PRE-ORDERED PILING NOTES

THE PORT HAS PRE-ORDERED PILING FOR THE PROJECT AS FOLLOWS:

1. ALL AZ13 SHEET PILES REQUIRED FOR THE PROJECT HAVE BEEN PRE-ORDERED AS SHOWN BELOW AND WILL BE STORED AS SHOWN ON SHEETS C2 AND C3 IN THE "AZ13 SHEET PILE DELIVERY/STORAGE AREA." THESE PILES WILL BE AVAILABLE BETWEEN AUGUST 25 AND SEPTEMBER 6, 2003.

2. ALL PZ22 SHEET PILES REQUIRED FOR THE PROJECT HAVE BEEN PRE-ORDERED AS SHOWN BELOW AND WILL BE STORED AS SHOWN ON SHEETS C2 AND C3 IN THE "STEEL PIPE PILE AND PZ22 DELIVERY/STORAGE AREA." THESE PILES WILL BE AVAILABLE NO LATER THAN AUGUST 1, 2003.

⚠1 3. 24 INCH STEEL PIPE PILES REQUIRED TO CONSTRUCT THE WEST WHARF EXTENSION AND THE EXISTING WHARF UPGRADE FROM GRIDS 1 THROUGH 70 AND 2 OF THE STEEL PIPE PILES REQUIRED BETWEEN BENTS 70 AND 71 HAVE BEEN PRE-ORDERED AS SHOWN BELOW AND WILL BE STORED AS SHOWN ON SHEETS C2 AND C3 IN THE "STEEL PIPE PILE AND PZ22 DELIVERY/STORAGE AREA." THESE PILES WILL BE AVAILABLE NO LATER THAN AUGUST 1, 2003.

4. CONCRETE PILING REQUIRED TO CONSTRUCT THE WEST WHARF EXTENSION, THE EXISTING WHARF UPGRADE FROM GRIDS 1 THROUGH 70 AND TEST PILING FOR THE EAST WHARF EXTENSION HAVE BEEN PRE-ORDERED AS SHOWN BELOW. THESE PILES ARE BEING FABRICATED BY CONCRETE TECHNOLOGY CORP. LOCATED AT 1123 PORT OF TACOMA ROAD. CONCRETE TECHNOLOGY CORP. WILL LOAD THE CONCRETE PILING ON THE WHARF CONTRACTORS BARGE AT CONCRETE TECHNOLOGY'S FACILITY IN TACOMA. THESE PILES WILL BE AVAILABLE NO LATER THAN AUGUST 1, 2003.

PORT PRE-ORDERED STEEL PIPE PILES

PIPE SIZE, MATERIAL SPEC. AND GRADE	STRUCTURE PORTION	OVERALL LENGTH (L)	QUANTITY PROVIDED
24" DIAMETER x 1/2" WALL THICKNESS, STEEL PIPE PILES, ASTM A252 GRADE 3 WITH MODIFICATIONS*	NEW WEST WHARF EXTENSION	82 FT	28 EA
	EXISTING WHARF	84 FT	138 EA
	GALVANIZED PILE EXTENSION	20 FT	6 EA

* SEE CONTRACT SPECIFICATIONS FOR MODIFICATION TO THE MATERIAL SPECIFICATIONS.

PORT PRE-ORDERED CONCRETE PILING

PILE TYPE	PER ATTACHED DETAIL/SHEET	STRUCTURE PORTION	ROW LOCATION	GRID LOCATION	OVERALL LENGTH (L)	QUANTITY PROVIDED
24" HOLLOW OCTAGONAL-TYPE 1	1/S66	EXISTING WHARF	OUTBOARD CRANE BEAM	I-70	145 FT	134 EA
		NEW WEST WHARF EXTENSION	ROWS A, B, C, D, AND E	W1 - W8	135 FT	38 EA
		TEST PILE	SEE SHEETS S8 AND S9		145 FT	2 EA
		TEST PILE	SEE SHEETS S8 AND S9		135 FT	1 EA
24" HOLLOW OCTAGONAL-TYPE 2	1/S66	NEW WEST WHARF EXTENSION	ROWS F, G, AND H	W1 - W8	115 FT	29 EA
			ROW J	W1 - W5		
24" SOLID OCTAGONAL-TYPE 1	2/S66	NEW WEST WHARF EXTENSION	ROW J	W6 - W8	105 FT	12 EA
			ROW L	W6 - W8		
			ROW M	W3 - W8		
		TEST PILE	SEE SHEETS S8 AND S9		105 FT	1 EA
24" SOLID OCTAGONAL-TYPE 2	2/S66	NEW WEST WHARF EXTENSION	(2) ROWS @ K	W2 - W5	120 FT	12 EA

PORT PRE-ORDERED STEEL SHEET PILES

PIPE TYPE, MATERIAL SPEC. AND GRADE	STRUCTURE PORTION	OVERALL LENGTH (L)	QUANTITY PROVIDED**
PZ22 SHEET PILE PAIRS, ASTM A690	NEW WEST WHARF EXTENSION	35 FT	230 LF
PZ22 SHEET PILE PAIRS, ASTM A690	NEW EAST WHARF EXTENSION	35 FT	670 LF
PROFILARBED AZ13 SHEET PILE PAIRS, ASTM A690	NEW WEST WHARF EXTENSION	35 FT	20 LF
PROFILARBED AZ13 SHEET PILE PAIRS, ASTM A690	NEW EAST WHARF EXTENSION	35 FT	20 LF
PROFILARBED AZ13 SHEET PILE PAIRS, ASTM A690	EXISTING WHARF	35 FT	1270 LF

** TOTAL WIDTH OF SHEET PILE PAIRS

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(206) 622-5822 Fax (206) 622-9130

MARK	REVISION	BY:	APPROVD.	DATE:
1	ADDENDUM 1: REVISED NOTE 3	MB	RKJ	8/1/03

PIERCE COUNTY TERMINAL
WHARF AND PHASE 2 DREDGING
PORT PRE-ORDERED PILING

APPROVED
CHIEF ENGINEER - DATE

RKJ 06/11/03
CHECKED BY - DATE
KN 06/11/03
PROJECT ENGR. - DATE

DRAWING DATE: 06/11/03
PORT ADDRESS:
PORT PARCEL:

TOWNSHIP: RANGE: SECTION:
DATUM- HORIZ: VERT:
DRAWING SCALE: AS SHOWN

CONTRACT NUMBER: 998149
E NUMBER: E1972
PHASE: RECORD DOCUMENTS

EP-~~5651-17~~
S89
SHEET 133 OF 164

6320-17

RECORD DRAWING (FOR BASIS OF RECORD DRAWINGS SEE GI)

FILE PATH & NAME: V:\102349 (PCT FINAL RECORD DRAWING MYLARS)\E1972589.DWG
JOB # 102349.10 | JOB NAME Pierce County Terminal | PLOTTED DATE & TIME JAN. 28, 2005 9:04:43 AM | UPDATED BY RICK T
XREFS: POT22x34TB-KPFF.
PLOT SCALE 1=1 | "PCP" FILE --- | PLOT VIEW