PORT OF TACOMA

TERMINAL 3 & 4 PAVING IMPROVEMENTS
PROJECT NO. 091593
CONTRACT NO. 070326

PORT COMMISSIONERS:

CONSTANCE T. BACON
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DRAWING LIST		
SHEET NO.	DRAWING NO.	DRAWING TITLE
		GENERAL
1	G1.0	COVER SHEET, AREA MAP, VICINITY MAP, & DRAWING LIST
2	G2.0	SYMBOLS, ABBREVIATIONS, & GENERAL NOTES
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15	C3.3	PIER 3 - GRADING/PAVING PLAN - SHEET 3
16	C3.4	PIER 3 - GRADING/PAVING PLAN - SHEET 4
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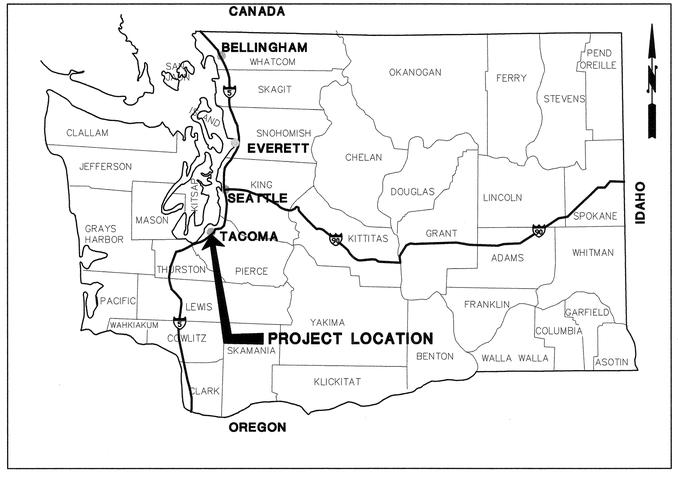
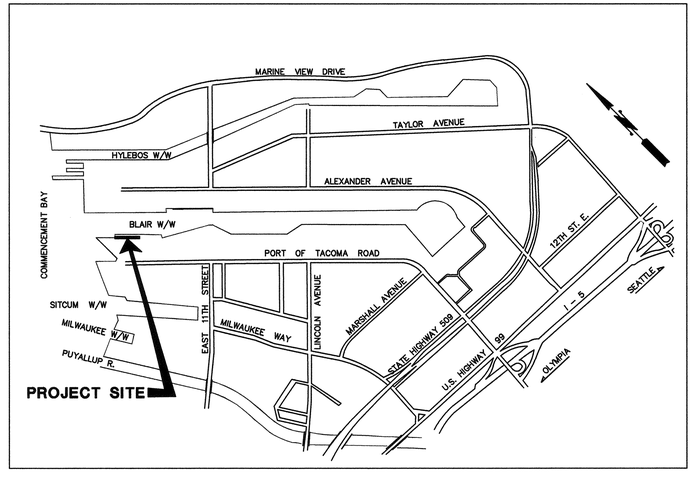
18	C4.1	PIER 3 - WHARF STRIPING PLAN - SHEET 1 (NIC)
19	C4.2	PIER 3 - WHARF STRIPING PLAN - SHEET 2 (NIC)
20	C5.0	SECTIONS - SHEET 1
21	C6.0	PROFILES - WHARF VALLEY LINES
22	C7.0	DETAILS - SHEET 1
23	C7.1	DETAILS - SHEET 2
24	C7.2	DETAILS - SHEET 3 (NIC)
		REFERENCE
25	R1.0	REFERENCE DRAWING - ELEC VAULT



AREA MAP **WASHINGTON**

NO SCALE



VICINITY MAP **PORT OF TACOMA**

NO SCALE

BID SET

BINDING EDGE

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MARK:	REVISION:	BY:	APPR:	DATE:

JVV 4/18/16 CHECKED BY DATE
VHN 4/18/16 PROJ. ENGR DATE
APPROVED: 4-20-16 DIR OF ENG DATE

TERMINAL 3 & 4 PAVING IMPROVEMENTS
COVER SHEET, AREA MAP, VICINITY MAP, & DRAWING LIST

PRINTED BY: bollinger
PORT ADDRESS: ONE SITCUM WAY TACOMA, WA 98421-2300
DRAWING SCALE: AS SHOWN

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT-HRZ: WA83	VERT: MLLW	
PHASE: BID SET	PARCEL: 27		

6557
G1.0
SHEET 1 OF 25

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BINDING EDGE

GENERAL NOTES:

1. THESE NOTES CONTAIN GENERAL INFORMATION AND ARE NOT NECESSARILY COMPLETE FOR CONSTRUCTION PURPOSES. THE CONTRACTOR SHALL VERIFY INFORMATION SHOWN ON THE DRAWINGS, IN THE SPECIFICATIONS AND OTHER DOCUMENTS, AND BRING ANY CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE BEGINNING THE AFFECTED WORK. THE ENGINEER WILL RESOLVE ANY SUCH CONFLICTS.

2. THE TERMINAL WILL BE OPERATIONAL 24 HOURS, 7 DAYS A WEEK. THE CONTRACTOR SHALL KEEP ITS WORKERS, MATERIAL, AND EQUIPMENT CLEAR OF ALL SHIPPING AND CONTAINER HANDLING OPERATIONS AND SHALL NOT IN ANY WAY HINDER OR DISRUPT TERMINAL OPERATIONS. CONTRACTOR SHALL HAVE CONTINUOUS COORDINATION WITH THE PORT. SEE SPECIFICATION SECTION 01 14 00 FOR WORK RESTRICTIONS.

3. PROJECT DATUM AND SURVEY CONTROL: REFER TO DWG C1.0 FOR ESTABLISHED PROJECT CONTROL POINTS. THE CONTRACTOR SHALL PERFORM ALL SURVEYING AND STAKING REQUIRED DURING CONSTRUCTION.

4. ANY DAMAGE INCURRED TO ANY PART OF THE SITE OR BOUNDARY NOT SPECIFICALLY DESIGNATED FOR DEMOLITION SHALL BE REPAIRED REPLACED, AND/OR RECONSTRUCTED BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE, TO THE PREDISTURBED CONDITION AS DIRECTED BY THE ENGINEER.

5. CONTRACTOR AREAS FOR STAGING, LAYDOWN, STORAGE OF MATERIALS AND EQUIPMENT SHALL BE COORDINATED WITH THE ENGINEER. REFER TO SECTION 01 14 00 WORK RESTRICTIONS IN THE SPECIFICATIONS FOR ADDITIONAL SITE ACCESS INFORMATION..

6. ALL DEVIATIONS FROM THESE PLANS SHALL BE RECORDED ON A SET OF "AS-BUILT" OR RECORD DRAWINGS. THE CONTRACTOR SHALL SUBMIT "AS-BUILT" DRAWINGS TO THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS, SEE SECTION 01 70 00, EXECUTION AND CLOSEOUT REQUIREMENTS.

7. THE WASHINGTON STATE 2014 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, AS PREPARED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT), SHALL APPLY TO WORK AS IDENTIFIED IN THE SPECIFICATIONS.

8. ALL DEMOLITION MATERIAL, INCLUDING PAVEMENT, EXCEPT AS NOTED AND/OR SPECIFIED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR. AS SPECIFIED IN THE CONTRACT DOCUMENTS.

SYMBOLS:

NORTH ARROW

X / XX.X — SECTION, DETAIL, OR ELEVATION CALLOUT

X / XX.X — DRAWING WHERE SECTION, DETAIL OR ELEVATION IS SHOWN OR CALLED FROM

X / XX.X — SECTION OR ELEVATION CUT

X / XX.X TITLE SCALE: X' = X'-XX" — PLAN, SECTION, DETAIL, OR ELEVATION

N XXXXX.XX / E XXXXX.XX — COORDINATES

XX — BENT NUMBER

ABBREVIATIONS:

&	AND
±	APPROXIMATELY
@	AT
℄	CENTERLINE
ø	DIAMETER
°	DEGREES
=	EQUALS
"	INCHES, SECONDS
'	FEET, MINUTES
ACI	AMERICAN CONCRETE INSTITUTE
ACP	ASPHALT CONCRETE PAVEMENT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AMP	AMPLITUDE
APPROX	APPROXIMAT (-E, -LY)
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION
BMP	BEST MANAGEMENT PRACTICE
BOT	BOTTOM
CBC	CALIFORNIA BUILDING CODE
CIP	CAST IN PLACE
CJ	CONSTRUCTION JOINT
CJP	COMPETE JOINT PENETRATION
CLR	CLEAR (-ANCE)
CONC	CONCRETE
CONT	CONTINUOUS
COMM	COMMUNICATION(S)
DEMO	DEMOLISH OR DEMOLITION
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWG(S)	DRAWING (-S)
E	EAST OR EASTING
EA	EACH
EG	EXISTING GRADE ELEVATION
EHW	EXTREME HIGH WATER
EL, ELEV	ELEVATION
ELW	EXTREME LOW WATER
EMBED	EMBEDMENT
EQ	EQUAL (-LY)
EW	EACH WAY
EXIST, EX	EXISTING
EXP JT	EXPANSION JOINT
FB	FLAT BAR
f'c	COMPRESSIVE STRENGTH
FT	FEET, FOOT
FW	FIRE WATER
fy	YIELD STRENGTH
GALV	GALVANIZE (-D)
GPS	GLOBAL POSITIONING SYSTEM
GR	GRADE
HAS	HEADED ANCHOR STUD (-S)
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
HSS	HOLLOW STRUCTURAL SECTION
HORIZ	HORIZONTAL
IBC	INTERNATIONAL BUILDING CODE
IE	INVERT ELEVATION
IEBC	INTERNATIONAL EXISTING BUILDING CODE
IN.	INCH (-ES)
JT	JOINT
KIP,KIPS	KILOPOUND(-S)
LB, LBS	POUND(-S)
LOC	LOCATION
LF	LOAD FACTOR
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LT	LONG-TON
MAX	MAXIMUM
MECH	MECHANICAL
MH	MANHOLE
MHHW	MEAN HIGHER HIGH WATER
MIN	MINIMUM
MJ	MECHANICAL JOINT
MLLW	MEAN LOWER LOW WATER
MSL	MEAN SEA LEVEL
N	NORTH OR NORTHING
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
NCD	NEARSHORE CONFINED DISPOSAL
NIC	NOT IN CONTRACT
NIM	NORTH INTERMODAL
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NOM	NOMINAL
NO	NUMBER
NSF	NATIONAL SANITATION FOUNDATION
NW	NORTHWEST
OC	ON CENTER
OCT	OCTAGONAL
OD	OUTSIDE DIAMETER
OHW	ORDINARY HIGH WATER
OPP	OPPOSITE
P	POINT LOAD
P/C, PC	PRECAST
PC/PS	PRECAST/PRESTRESSED
PDA	PILE DRIVING ANALYZER
PERP	PERPENDICULAR
PL	PLATE
PS	PRESTRESSED
PSF	POUNDS PER SQUARE FEET
PSI	POUNDS PER SQUARE INCH
PT	POINT
PVC	POLY VINYL CHLORIDE
R, RAD	RADIUS
R/C	REINFORCED CONCRETE
REINF	REINFORC (-E,-ED,-ING,-MENT)
REQ'D	REQUIRED
RPM	RADIATION PORTAL MONITOR
S	SECONDS, SOUTH
SCHED	SCHEDULE
SD	STORM DRAIN
SE	SOUTHEAST
SHT	SHEET
SIM	SIMILAR
SPA	SPACE
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	SANITARY SEWER/STAINLESS STEEL
SSP	SHIP SHORE POWER
STIFF	STIFFENER
STRUC	STRUCTURE
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
SYMM	SYMMETRICAL
T&B	TOP & BOTTOM
TEMP	TEMPORARY
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
THRU	THROUGH
TMC	TACOMA MUNICIPAL CODE
TOPO	TOPOGRAPHY
TPU	TACOMA PUBLIC UTILITIES
TWIC	TRANSPORTATION WORKER IDENTIFICATION CREDENTIAL
TYP	TYPICAL
UHMW-PE	ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE
UNC	UNIFIED NATIONAL COARSE
UNO	UNLESS NOTED OTHERWISE
V	VOLT
W/	WITH
W/O	WITHOUT
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

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JUV 4/18/16 CHECKED BY DATE
VHN 4/18/16 PROJ. ENGR DATE

APPROVED: 4-20-16 DIR OF ENG DATE

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TACOMA, WA 98421-2300

TERMINAL 3 & 4 PAVING IMPROVEMENTS

SYMBOLS, ABBREVIATIONS, & GENERAL NOTES

6557
G2.0
SHEET 2 OF 25

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT-HRZ: WA83	VERT: MLLW	
PHASE: BID SET	PARCEL: 27	DRAWING SCALE: AS SHOWN	

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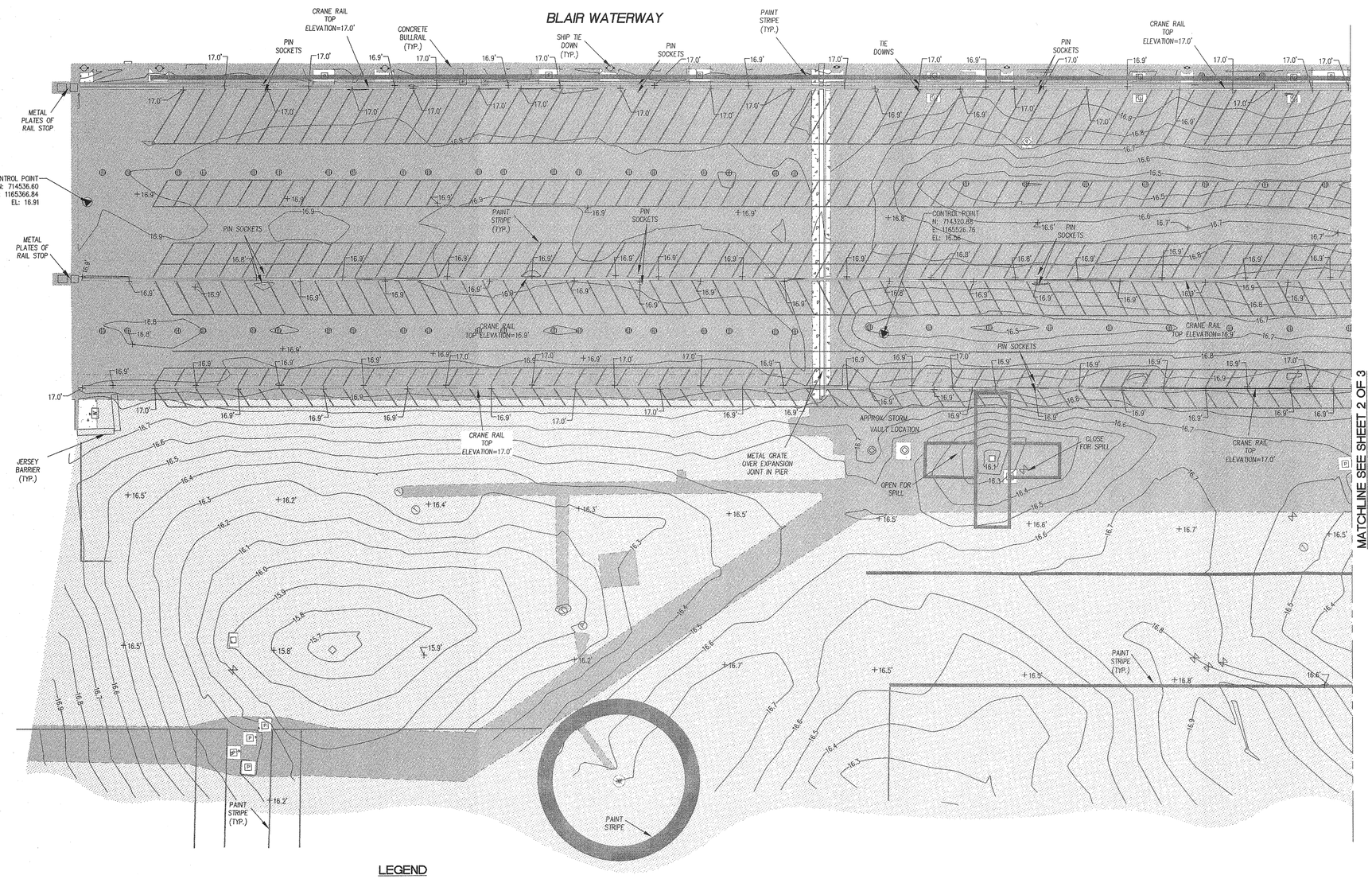

1" = 20' scale 20 0 20 40 feet

HORIZONTAL DATUM

WASHINGTON STATE PLANE COORDINATE SYSTEM,
SOUTH ZONE, NAD 83/07.

AS DERIVED FROM GLOBAL POSITIONING SYSTEM (GPS) TIES TO PORT OF TACOMA SURVEY CONTROL MONUMENTS AS SHOWN ON PORT OF TACOMA (POT) 2007 SURVEY CONTROL MAP TITLED "BLAIR-HYLEBOS PENINSULA SURVEY CONTROL MAP", PREPARED BY PARAMETRIX, DATED JANUARY 7, 2008

POT MONUMENT	175	N 708849.50, E 1176475.70
POT MONUMENT	178	N 709882.72, E 1175404.91
POT MONUMENT	180	N 712318.76, E 1172704.06
POT MONUMENT	184	N 713842.60, E 1169390.14
POT MONUMENT	307	N 715756.83, E 1171246.19
POT MONUMENT	330	N 709147.15, E 1179422.44
POT MONUMENT	846	N 703885.67, E 1168411.67
POT MONUMENT	923	N 708568.72, E 1166224.52
POT MONUMENT	925	N 710501.70, E 1166151.91
POT MONUMENT	1503	N 713080.62, E 1165436.92

NOTE:
1. ALL DISTANCES SHOWN ARE GROUND DISTANCE VALUES.
2. UTILIZING THE LOCALIZATION OF THE POT MONUMENTS LISTED ABOVE CORRESPONDS TO COORDINATES LISTED ON MONUMENT #10 & #1503 WHICH WERE TIED AND HELD FOR SITE CONTROL.

VERTICAL DATUM

PORT OF TACOMA – MLLW

BENCHMARK 102

DESC: 2" BRASS DISK IN PORT OF TACOMA ROAD
SOUTH OF 11TH STREET

ELEV: 16.10'

METHODS AND EQUIPMENT

SURVEY PERFORMED WITH A 1" TOTAL STATION, USING TRAVERSE AND RADIAL SURVEY METHODS, AND SUPPLEMENTED USING A TOPCON HYPERLITE GPS RECEIVER UTILIZING RTK METHODS AND THE WASHINGTON STATE REFERENCE NETWORK. SURVEY MEETS OR EXCEEDS ACCURACY REQUIREMENTS CONTAINED IN W.A.C. 332.130.090.

SURVEYOR'S NOTES

1. DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION ON 10-31-15 THRU 11-06-155.
2. CONTOUR INTERVALS ARE 0.1 FOOT AND ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SURVEY UTILIZING ELECTRONIC DATA COLLECTION.
3. APEX ENGINEERING PLLC, ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST THAT ARE UNDETECTABLE AND/OR NOT VISIBLE.
4. THE PURPOSE OF THIS SURVEY IS TO PROVIDE A TOPOGRAPHIC BASE MAP OF THE EXISTING CONDITIONS WITHIN THE PIER 3 EXPANSION AREA FOR PLANNING, DESIGN AND CONSTRUCTION.
5. UTILITIES OTHER THAN SHOWN MAY EXIST ON THE SITE. ONLY THOSE UTILITIES VISIBLE AT GROUND SURFACE ARE SHOWN HEREON. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITY LINES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR DOES CERTIFY THAT THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM FIELD SURVEY INFORMATION AND PAINTED UTILITY LOCATE LINES.
6. ALL SURFACES ARE ASPHALT UNLESS OTHERWISE SHOWN OR NOTED.

LEGEND

- PROJECT CONTROL POINT
- STORMWATER MANHOLE
- STORMWATER CATCH BASIN
- STORMWATER YARD DRAIN
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- WATER VAULT
- WATER METER
- WATER VALVE
- LIGHT POLE
- POWER MANHOLE
- POWER VAULT
- PAD MOUNTED TRANSFORMER
- POWER JUNCTION BOX
- CABLE MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE VAULT
- UNKNOWN UTILITY VAULT
- BOLLARD

- ASPHALT PATCH
- ASPHALT
- CONCRETE
- 17.0 — 0.10' INTERVAL CONTOUR
- × 20.2' TOP OF ASPHALT SPOT ELEVATION
- PAVEMENT PATCH LINES

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS MAP CORRECTLY REPRESENTS A TOPOGRAPHIC SURVEY MADE BY ME OR UNDER MY DIRECTION AND TO THE BEST OF MY KNOWLEDGE REPRESENTS THE TOPOGRAPHIC FEATURES AS THEY EXIST ON THE GROUND AS OF 11/04/15.

AARON B. BLAISDELL P.L.S. #41278 — 4/20/16 DATE

AARON B. BLAISDELL STATE OF WASHINGTON #41278 REGISTERED PROFESSIONAL LAND SURVEYOR

BID SET

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(253) 473-4489 FAX: (253) 473-0599

APPROVED: 4-20-16
DIRECTOR, ENG. DATE

TERMINAL 3 & 4 PAVING IMPROVEMENTS
TOPOGRAPHIC SURVEY

CONT/CONS: PSA #069738	TOWNSHIP: 21N	RANGE: 3E	SECTION: 27
M. ID:	DAT-HRZ: NAD83	VERT: MLLW	
BID SET PHASE:	PARCEL: 27	DRAWING SCALE: 1"=20'	

CHECKED BY	DATE
TJM	4-7-16
ABB	4-7-16

PROJ. ENGR DATE
Swarthout Apr 20, 2016
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SHT 3 OF 25

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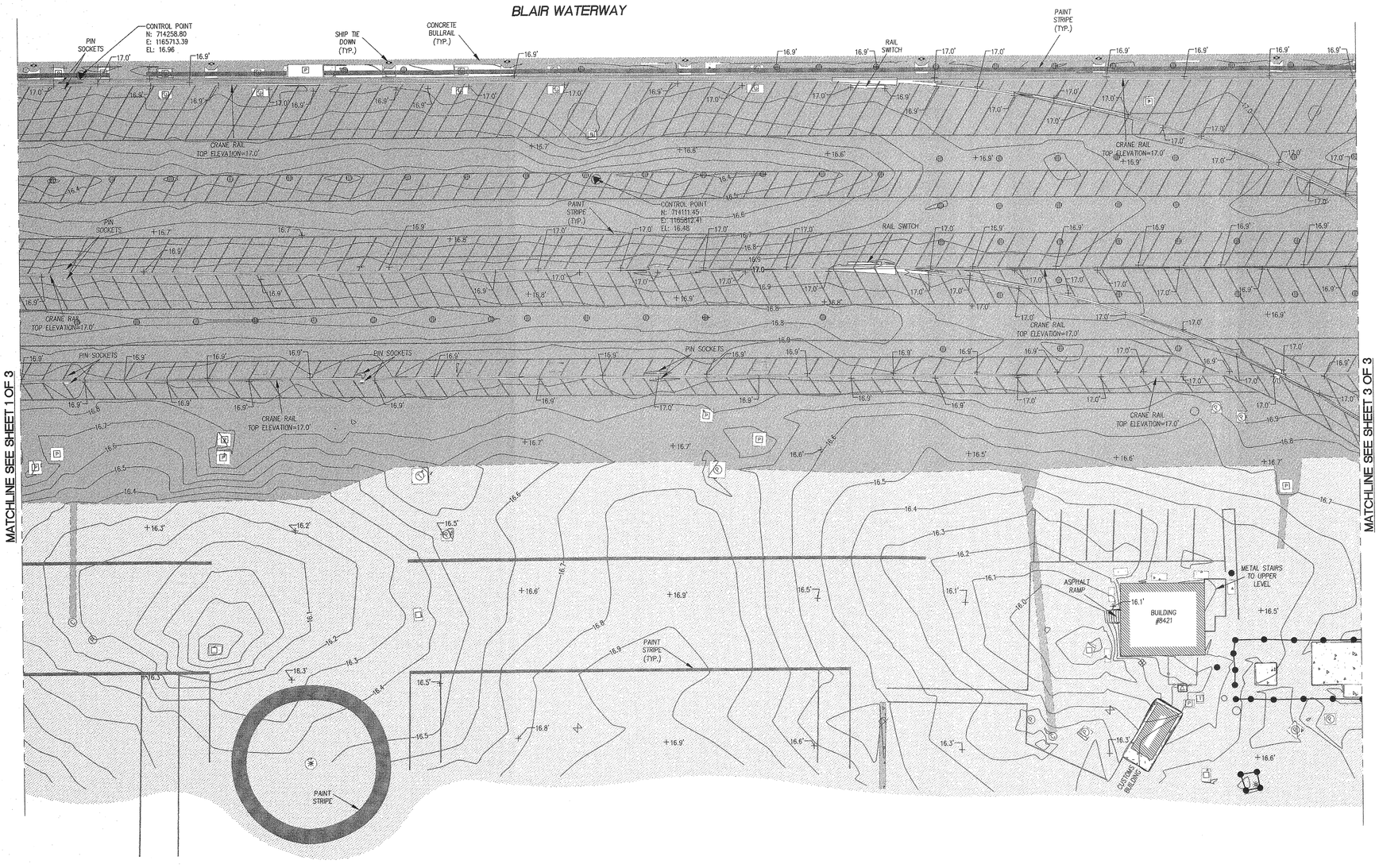

1" = 20' scale: 20 0 20 40 feet

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4/20/16

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APPROVED: Director Eng. 4-20-16

CHECKED BY	TJM 4-7-16 DATE
PROJ. ENGR	ABB 4-7-16 DATE
DIRECTOR ENG. DATE	Swarthout Apr 20, 2016
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TOPOGRAPHIC SURVEY

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PARCEL: 27	DRAWING SCALE: 1"=20'
SECTION: 27	

CONT/CONS: PSA #069738
M. ID:
BID SET PHASE:

6557
C1.1
SHT 4 OF 25

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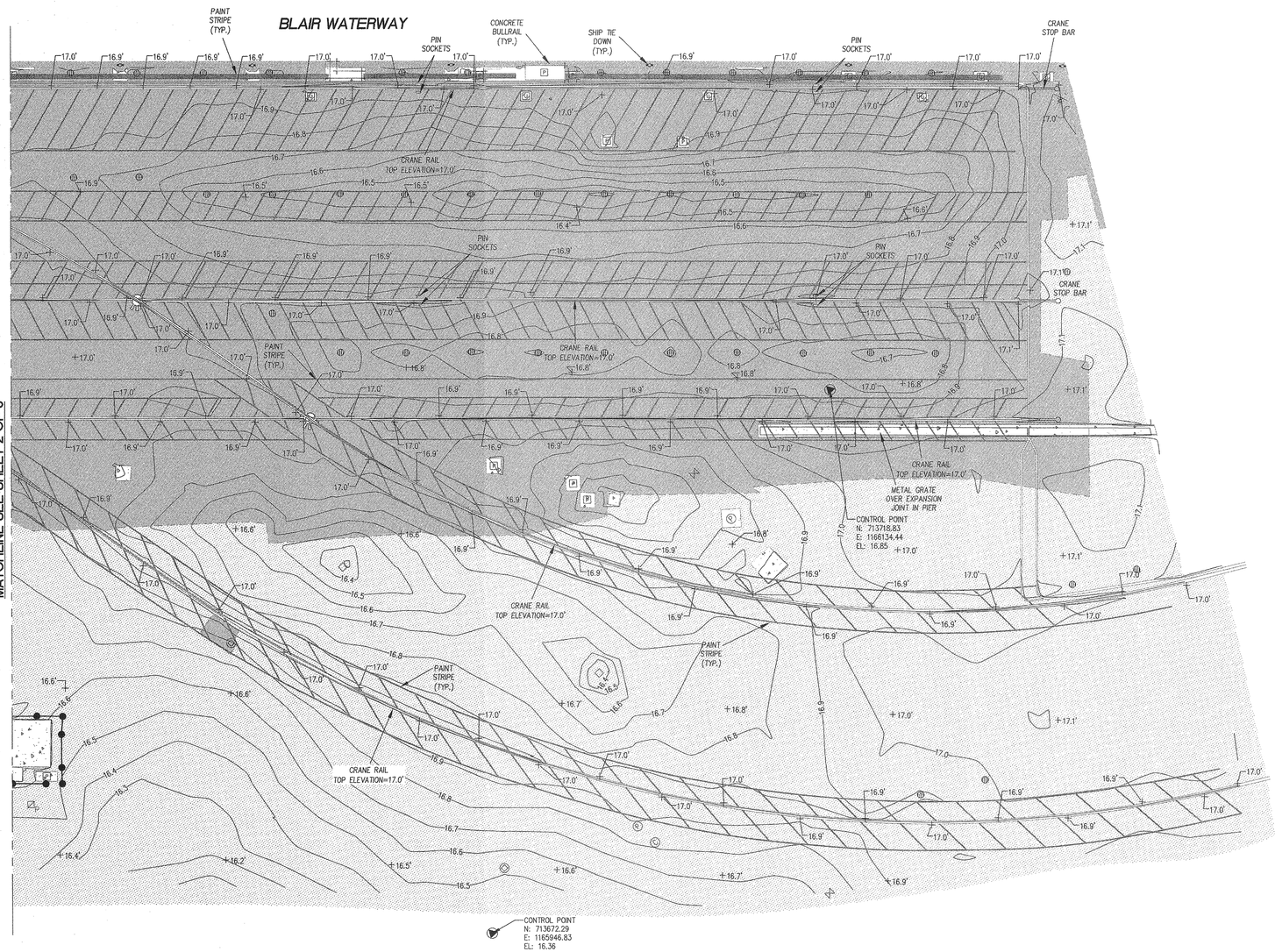

MATCHLINE SEE SHEET 2 OF 3

1" = 20' scale

20 0 20 40 feet

LEGEND

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AARON B. BLAISDELL STATE OF WASHINGTON 41278 REGISTERED PROFESSIONAL LAND SURVEYOR 4/20/16

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6557
C1.2
SHT 5 OF 25

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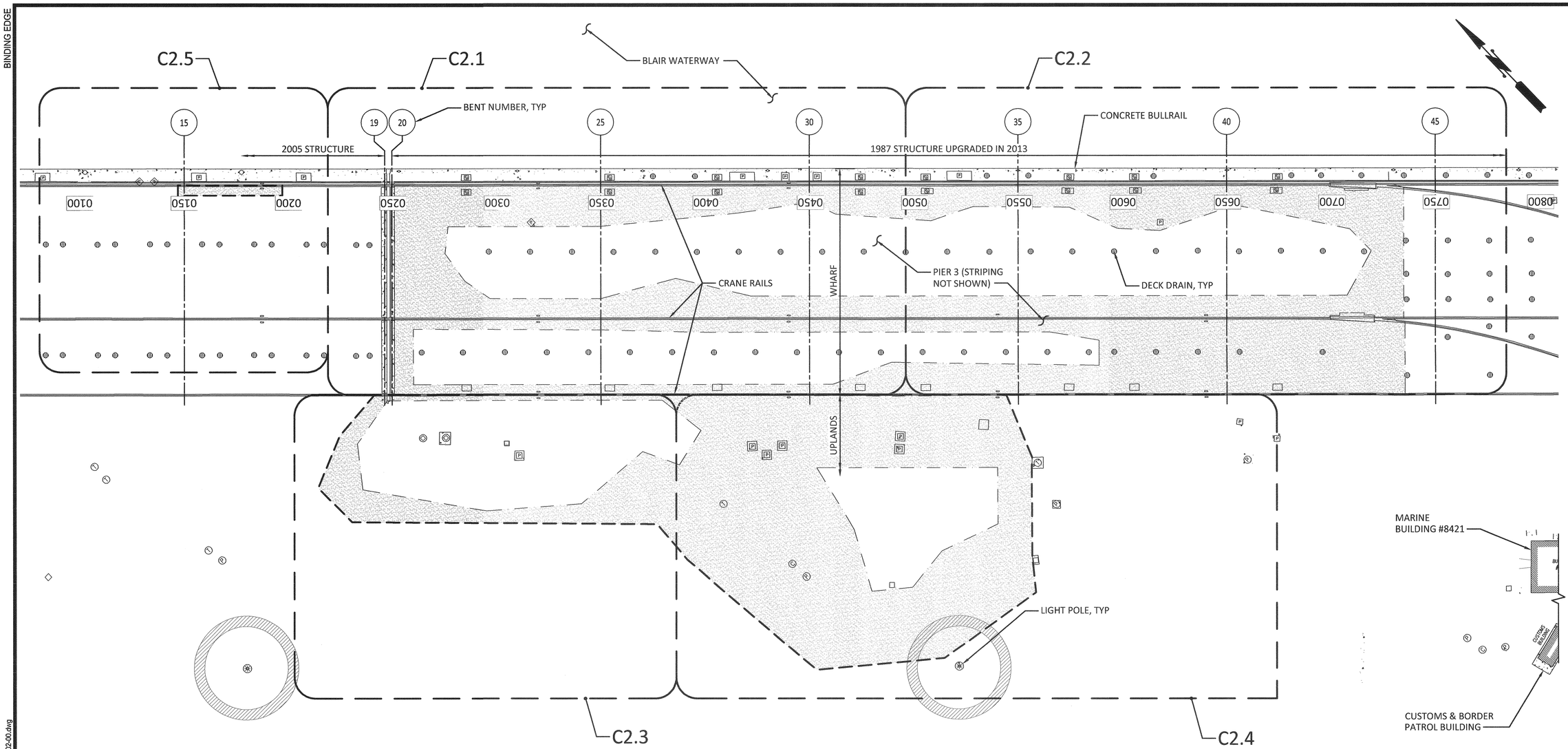

PIER 3 - ASPHALT MILLING/GRINDING KEY PLAN

SCALE: 1"=25'-0"

LEGEND:

MILLING AREA

1" = 25' scale 25 0 25 50 feet

BID SET

BINDING EDGE

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H. NIELSEN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

APPROVED: 4-20-16
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JJV	4/18/16		
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VHN	4/18/16		
PROJ. ENGR	DATE		

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TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - ASPHALT MILLING/GRINDING KEY PLAN

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT-HRZ: WA83	VERT: MLLW	DRAWING SCALE: AS SHOWN
PHASE: BID SET	PARCEL: 27		

6557
C2.0
SHEET 6 OF 25

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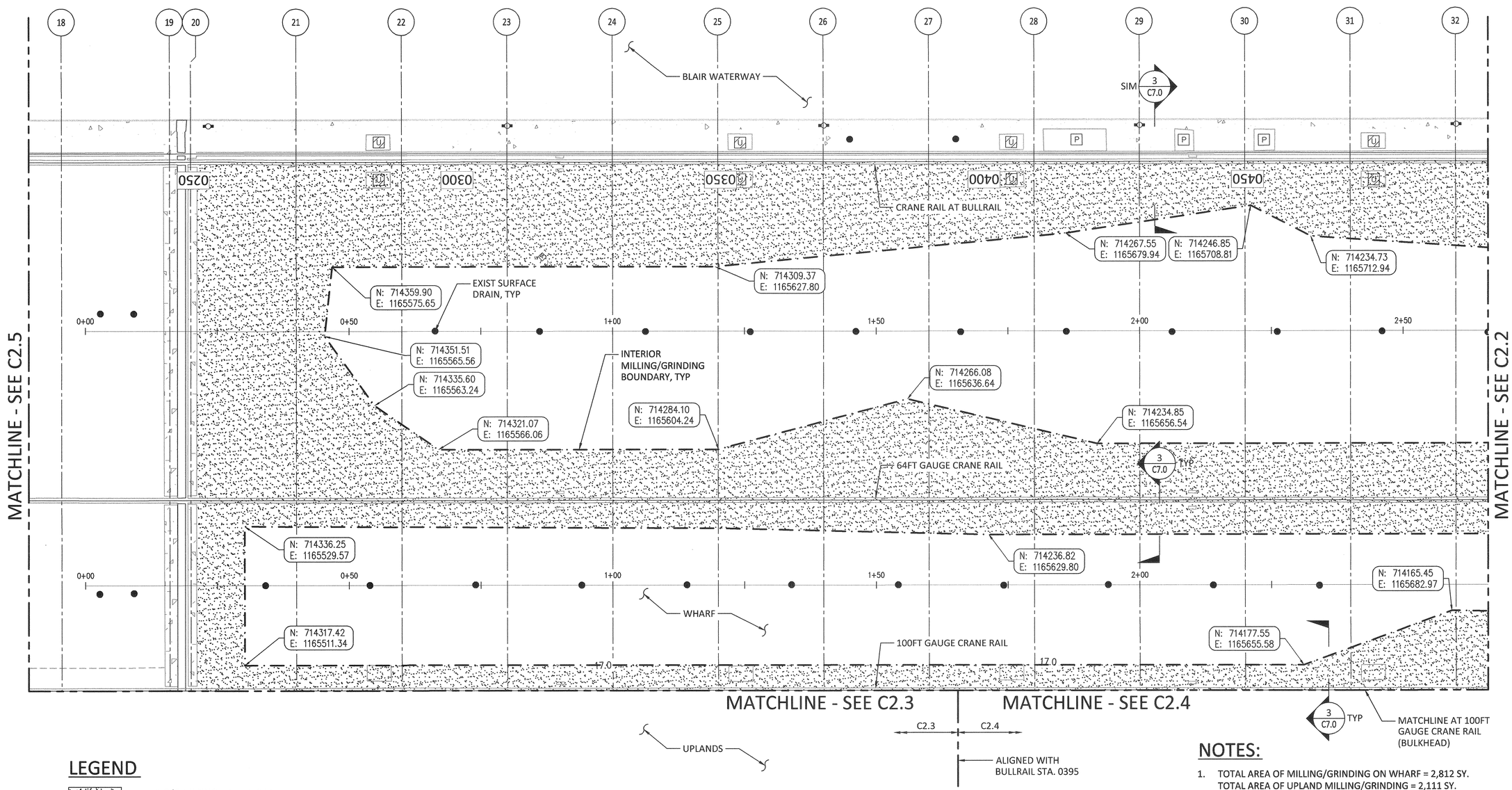

LEGEND

- MILLING/GRINDING AREA BASED ON TOPOGRAPHY AND DETAILS (3 / C7.0)
- INTERIOR MILLING/GRINDING BOUNDARY
- EXISTING SURFACE DRAIN

NOTES:

1. TOTAL AREA OF MILLING/GRINDING ON WHARF = 2,812 SY.
   TOTAL AREA OF UPLAND MILLING/GRINDING = 2,111 SY.
   TYPICAL MILL THICKNESS RANGES FROM 1-1/2" TO 0".
2. INTERIOR BOUNDARY OF MILLING BASED ON SURVEY OF EXIST PAVEMENT ELEVATIONS, WHERE EXIST ELEVATION PLUS 1-1/2" (MIN) EQUALS FINISH GRADE ELEVATION. MILLING AREA IS WHERE THERE IS LESS THAN 1-1/2" BETWEEN FINISHED GRADE AND EXIST PAVEMENT ELEVATION. AT CONTRACTORS OPTION AND EXPERENCE, MILLING AREA & DEPTH MAY BE INCREASED TO FACILITATE CONSTRUCTION.

1" = 10' scale: 10 0 10 20 feet

PIER 3 - ASPHALT MILLING/GRINDING PLAN

SCALE: 1"=10'

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STATE OF WASHINGTON VERN H. NIELSEN 15615 REGISTERED PROFESSIONAL ENGINEER

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TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - ASPHALT MILLING/GRINDING PLAN - SHEET 1

CONT/CONS:	070326	TOWNSHIP: 21N	RANGE: 03E
MASTER ID NO:	91593	DAT–HRZ: WA83	VERT: MLLW
PHASE:	BID SET	PARCEL: 27	DRAWING SCALE: AS SHOWN

6557

C2.1

SHEET 7 OF 25

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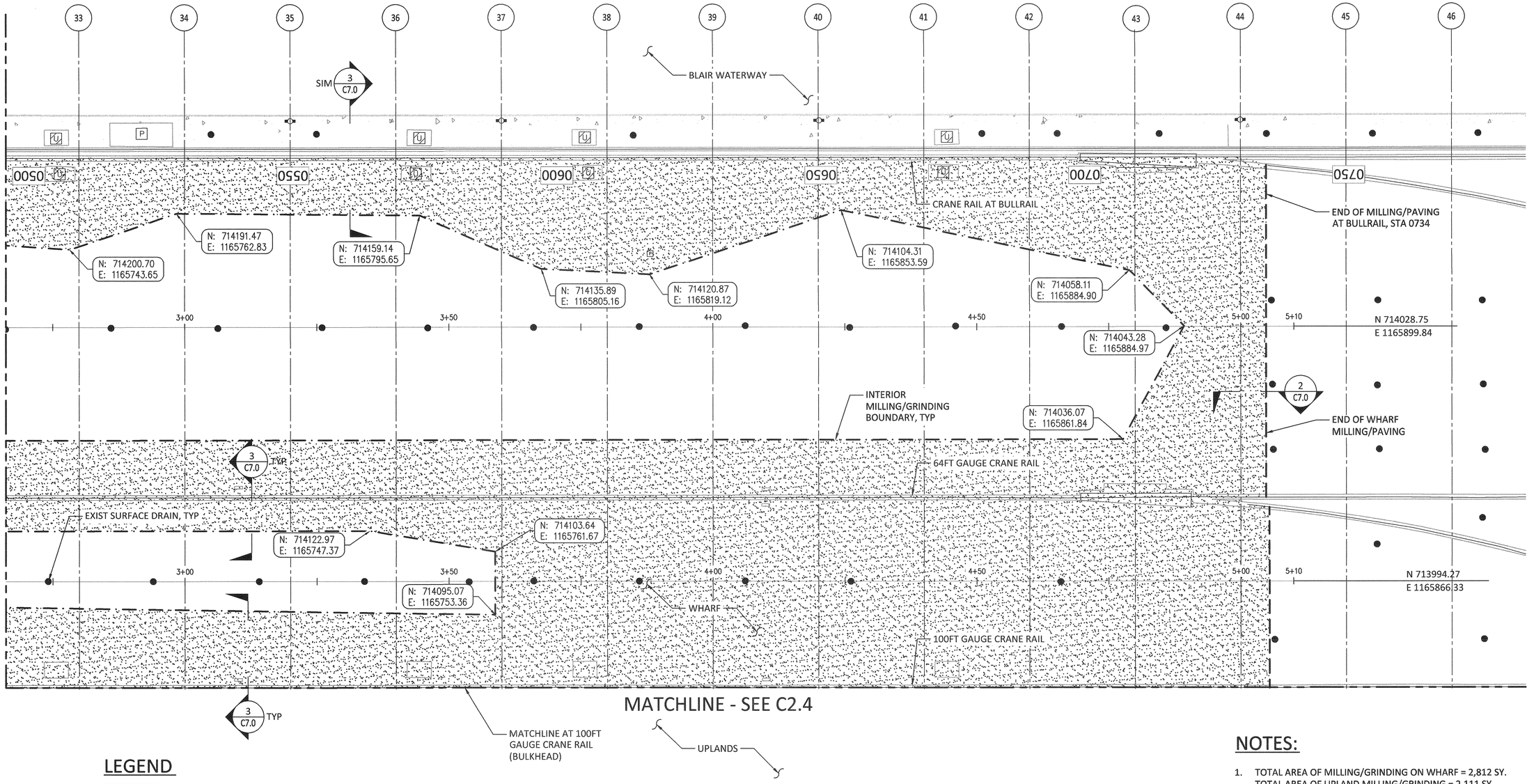

LEGEND

- MILLING/GRINDING AREA BASED ON TOPOGRAPHY AND DETAILS 3 C7.0
- OUTER MILLING/PAVING BOUNDARY
- INTERIOR MILLING/GRINDING BOUNDARY
- EXISTING SURFACE DRAIN

NOTES:

1. TOTAL AREA OF MILLING/GRINDING ON WHARF = 2,812 SY.
   TOTAL AREA OF UPLAND MILLING/GRINDING = 2,111 SY.
   TYPICAL MILL THICKNESS RANGES FROM 1-1/2" TO 0".
2. INTERIOR BOUNDARY OF MILLING BASED ON SURVEY OF EXIST PAVEMENT ELEVATIONS, WHERE EXIST ELEVATION PLUS 1-1/2" (MIN) EQUALS FINISH GRADE ELEVATION. MILLING AREA IS WHERE THERE IS LESS THAN 1-1/2" BETWEEN FINISHED GRADE AND EXIST PAVEMENT ELEVATION. AT CONTRACTORS OPTION AND EXPERENCE, MILLING AREA & DEPTH MAY BE INCREASED TO FACILITATE CONSTRUCTION.

1" = 10' scale 10 0 10 20 feet

PIER 3 - ASPHALT MILLING/GRINDING PLAN

SCALE: 1"=10'

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VERN H. NIELSEN — STATE OF WASHINGTON — 19161 — REGISTERED PROFESSIONAL ENGINEER

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APPROVED: Vern Nielsen 4-20-16
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TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - ASPHALT MILLING/GRINDING PLAN - SHEET 2

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT–HRZ: WA83	VERT: MLLW	
PHASE: BID SET	PARCEL: 27	DRAWING SCALE: AS SHOWN	

6557
C2.2
SHEET 8 OF 25

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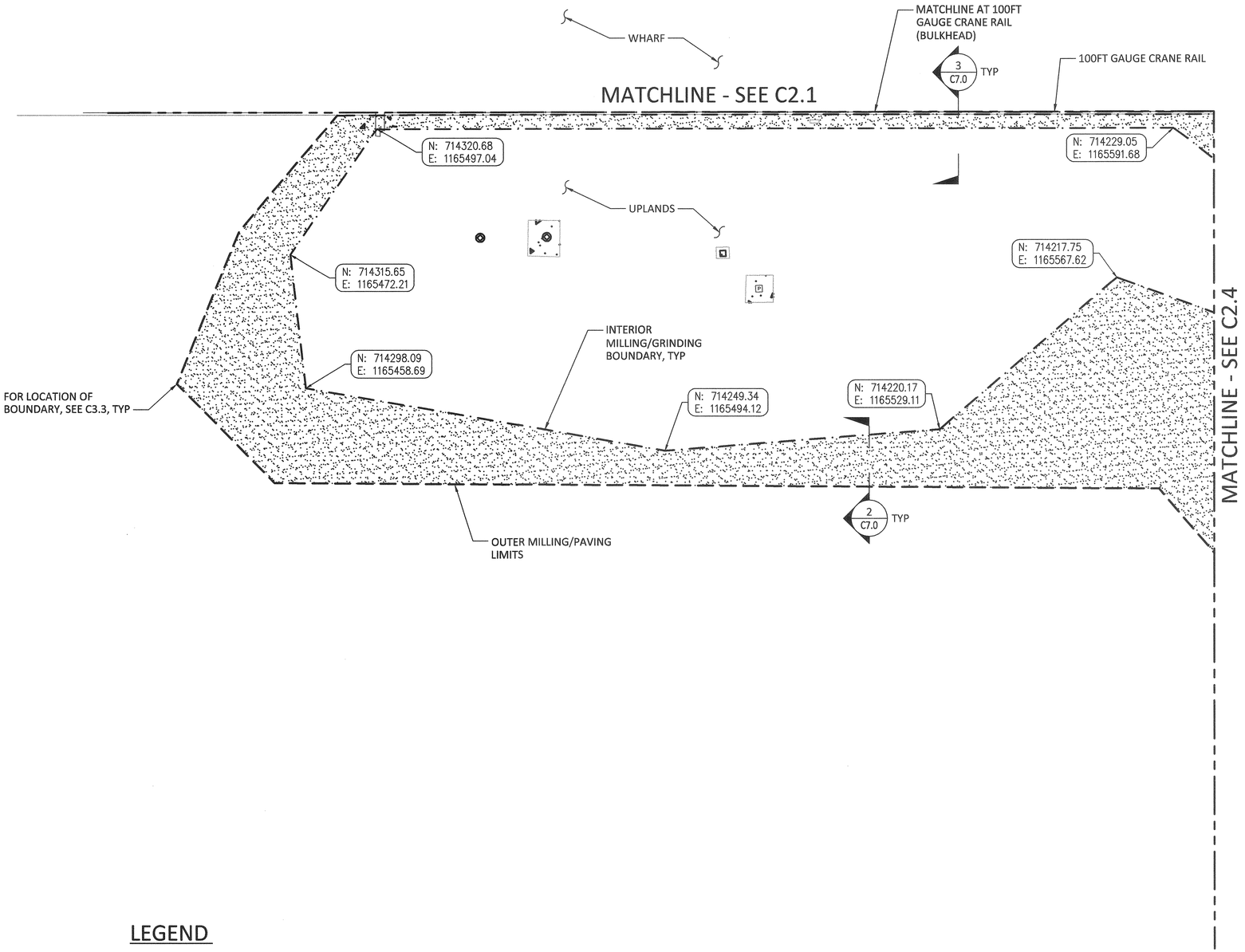

LEGEND

MILLING/GRINDING AREA BASED ON TOPOGRAPHY AND DETAILS 3/C7.0 & 2/C7.0 .

OUTER MILLING/PAVING BOUNDARY

INTERIOR MILLING/GRINDING BOUNDARY

PIER 3 - ASPHALT MILLING/GRINDING PLAN

SCALE: 1"=10'

NOTES:

1. TOTAL AREA OF MILLING/GRINDING ON WHARF = 2,812 SY.
   TOTAL AREA OF UPLAND MILLING/GRINDING = 2,111 SY. TYPICAL MILL THICKNESS RANGES FROM 1-1/2" TO 0". ASSUME NOMINAL MILLING/GRINDING THICKNESS = 1" FOR BIDDING PURPOSES.
2. INTERIOR BOUNDARY OF MILLING BASED ON SURVEY OF EXIST PAVEMENT ELEVATIONS, WHERE EXIST ELEVATION PLUS 1-1/2" (MIN) EQUALS FINISH GRADE ELEVATION. MILLING AREA IS WHERE THERE IS LESS THAN 1-1/2" BETWEEN FINISHED GRADE AND EXIST PAVEMENT ELEVATION. AT CONTRACTORS OPTION AND EXPERENCE, MILLING AREA & DEPTH MAY BE INCREASED TO FACILITATE CONSTRUCTION.

1" = 10' scale: 10 0 10 20 feet

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H. NIELSEN — STATE OF WASHINGTON — 11749 — REGISTERED PROFESSIONAL ENGINEER — 4/18/16

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APPROVED: Jesse Hanson 4-20-16
DIR OF ENG DATE

TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - ASPHALT MILLING/GRINDING PLAN - SHEET 3

TOWNSHIP: 21N	RANGE: 03E	SECTION: 27	
DAT-HRZ: WA83	VERT: MLLW		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

6557

C2.3

SHEET 9 OF 25

CONT/CONS:	070326
MASTER ID NO:	91593
PHASE:	BID SET

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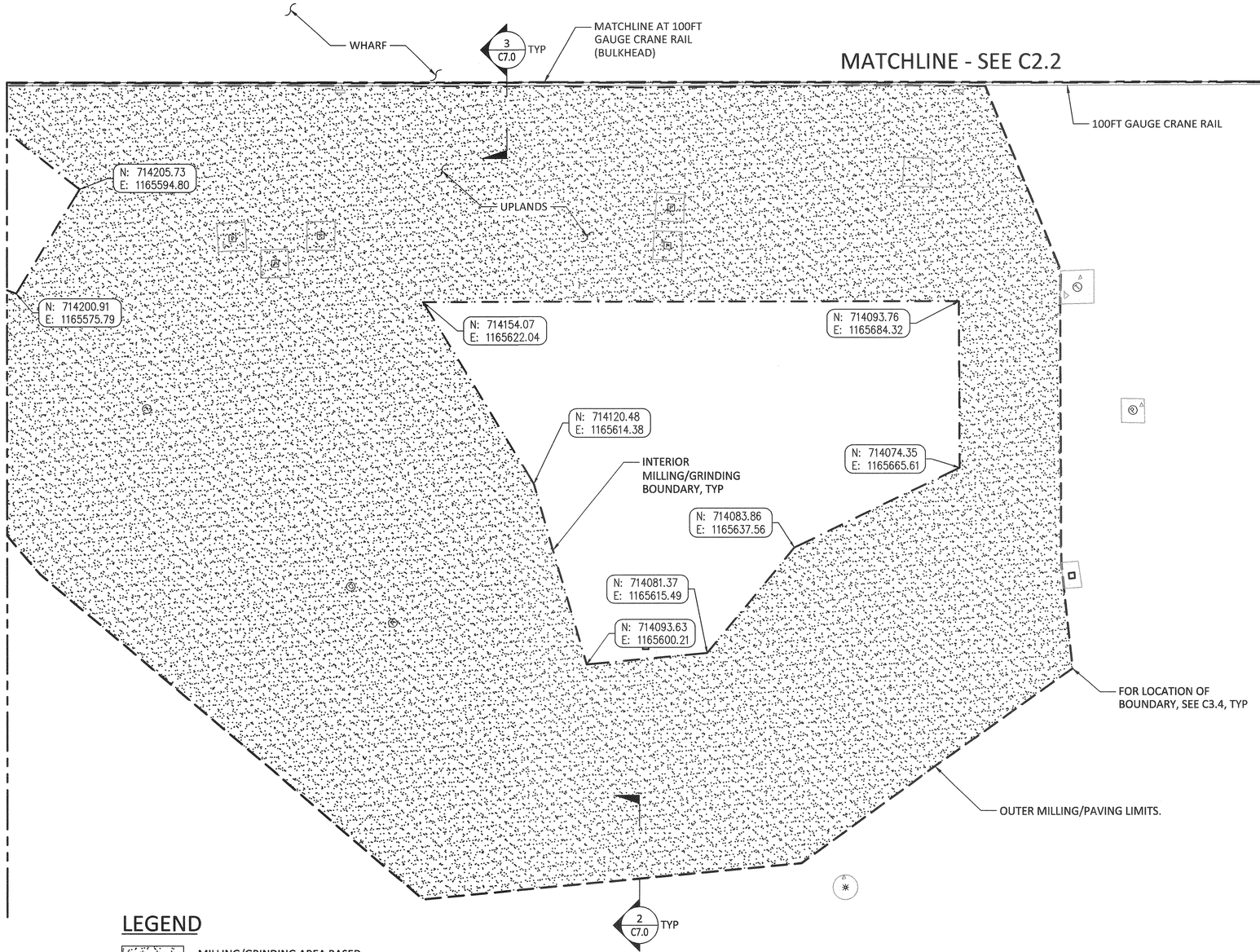

LEGEND

MILLING/GRINDING AREA BASED ON TOPOGRAPHY AND DETAILS 3/C7.0 & 2/C7.0

OUTER MILLING/PAVING BOUNDARY

INTERIOR MILLING/PAVING BOUNADRY

PIER 3 - ASPHALT MILLING/GRINDING PLAN

SCALE: 1"=10'

NOTES:

1. TOTAL AREA OF MILLING/GRINDING ON WHARF = 2,812 SY. TOTAL AREA OF UPLAND MILLING/GRINDING = 2,111 SY. TYPICALLY IS MAX 1-1/2" TO 0". ASSUME NOMINAL GRINDING THICKNESS = 1" FOR BIDDING PURPOSES.
2. INTERIOR BOUNDARY OF MILLING BASED ON SURVEY OF EXIST PAVEMENT ELEVATIONS, WHERE EXIST ELEVATION PLUS 1-1/2" (MIN) EQUALS FINISH GRADE ELEVATION. MILLING AREA IS WHERE THERE IS LESS THAN 1-1/2" BETWEEN FINISHED GRADE AND EXIST PAVEMENT ELEVATION. AT CONTRACTORS OPTION AND EXPERENCE, MILLING AREA & DEPTH MAY BE INCREASED TO FACILITATE CONSTRUCTION.

1" = 10' scale: 10 0 10 20 feet

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VERN H. NIELSEN — STATE OF WASHINGTON — 19981 — REGISTERED PROFESSIONAL ENGINEER

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VHN	4/18/16		
PROJ. ENGR	DATE		

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TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - ASPHALT MILLING/GRINDING PLAN - SHEET 4

TOWNSHIP: 21N	RANGE: 03E	SECTION: 27	
DAT–HRZ: WA83	VERT: MLLW		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

6557

C2.4

SHEET 10 OF 25

CONT/CONS:	070326
MASTER ID NO:	91593
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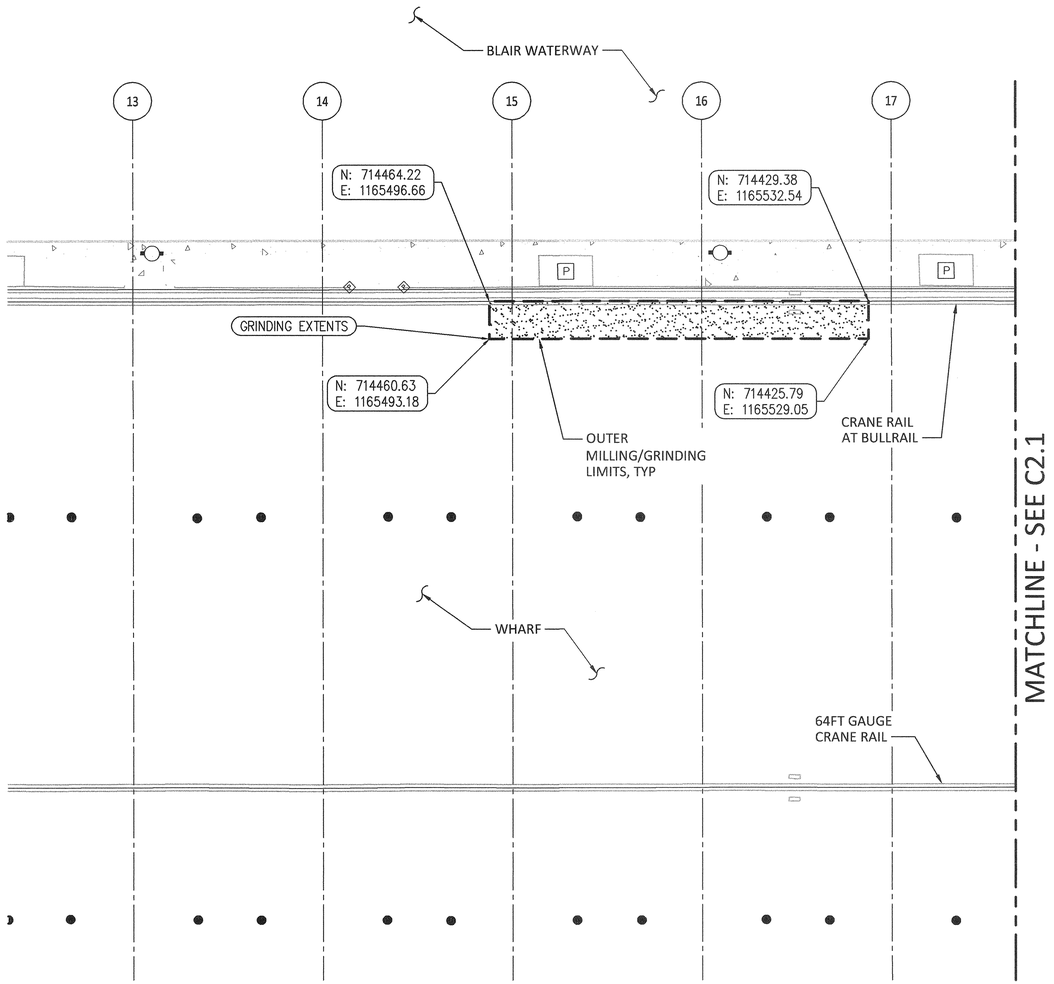

LEGEND

MILLING/GRINDING AREA BASED ON TOPOGRAPHY AND DETAILS 3/C7.0 & 2/C7.0.

OUTER MILLING/PAVING BOUNDARY

NOTES:

1. TOTAL AREA OF MILLING/GRINDING ON WHARF = 2,812 SY. TOTAL AREA OF UPLAND MILLING/GRINDING = 2,111 SY. TYPICALLY IS MAX 1-1/2" TO 0". ASSUME NOMINAL GRINDING THICKNESS = 1" FOR BIDDING PURPOSES.
2. WITHIN THE REGION SHOWN ON PLAN, PORTIONS OF THE EXISTING ASPHALT PAVEMENT IS HIGHER IN ELEVATION THAN TOP OF CRANE RAIL. WHERE PAVEMENT IS HIGHER THAN TOP OF CRANE RAIL, MILL/GRIND EXISTING ASPHALT PAVEMENT UNTIL LEVEL WITH TOP OF CRANE RAIL. ONLY MILL/GRIND PAVEMENT IN REGION SHOWN ON PLAN THAT IS HIGHER THAN TOP OF CRANE RAIL.

PIER 3 - ASPHALT MILLING/GRINDING PLAN

SCALE: 1"=10'

1" = 10' scale 10 0 10 20 feet

BID SET

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STATE OF WASHINGTON VENN H. NIELSEN 19815 REGISTERED PROFESSIONAL ENGINEER

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PROJ. ENGR	DATE		

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TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - ASPHALT MILLING/GRINDING PLAN - SHEET 5

TOWNSHIP: 21N	RANGE: 03E	SECTION: 27	
DAT–HRZ: WA83	VERT: MLLW		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

6557
C2.5
SHEET 11 OF 25

CONT/CONS:	070326
MASTER ID NO:	91593
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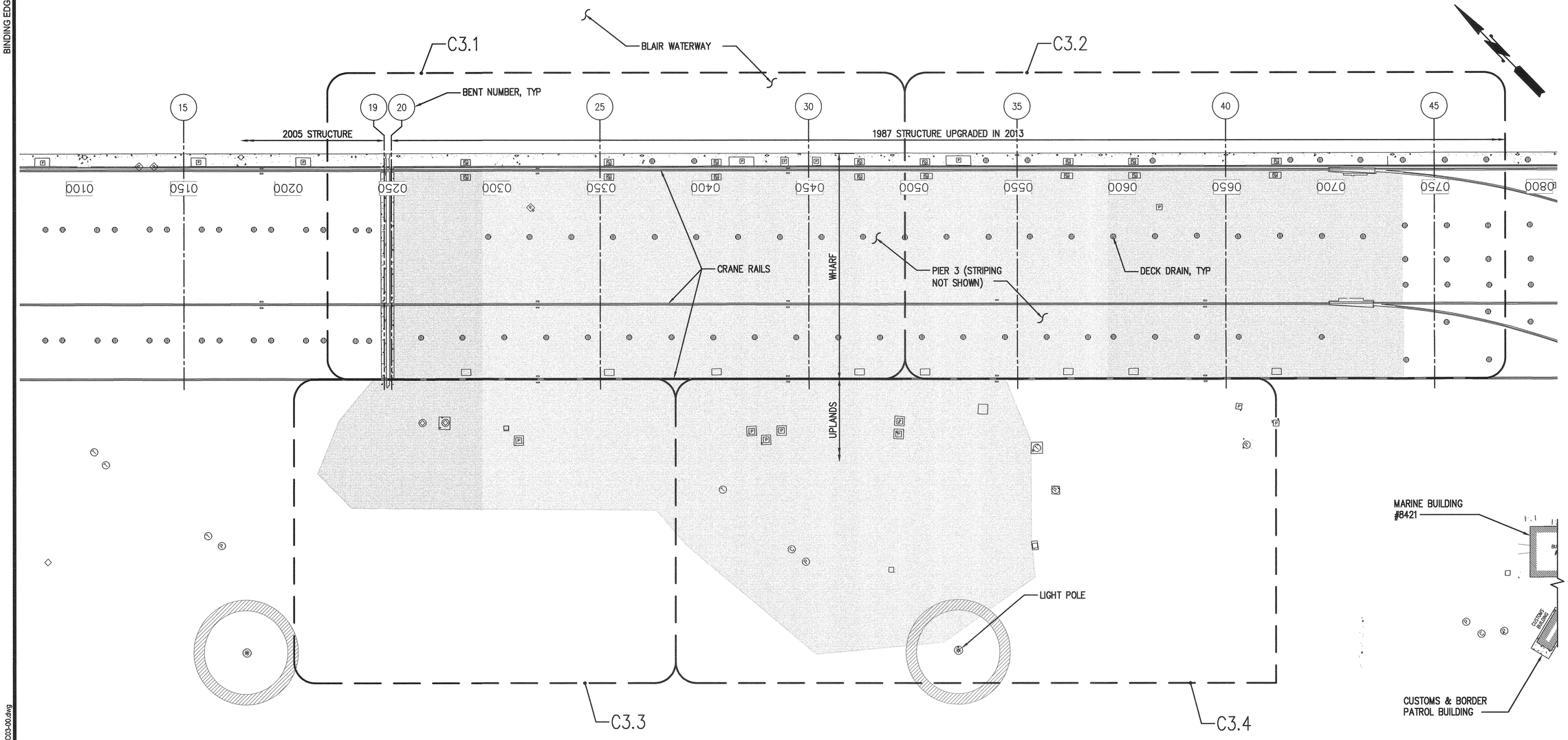

PIER 3 - GRADING/PAVING KEYPLAN

SCALE: 1"=25'-0"

LEGEND:

PAVING AREA

1" = 25' (25 0 25 50 scale feet)

BID SET

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PROJ. ENGR	DATE	PRINTED BY: bollinger	

TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - GRADING/PAVING KEY PLAN

PORT ADDRESS: ONE SITCUM WAY
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CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT-HRZ: WA83	VERT: MLLW	DRAWING SCALE: AS SHOWN
PHASE: BID SET	PARCEL: 27		

6557

C3.0

SHEET 12 OF 25

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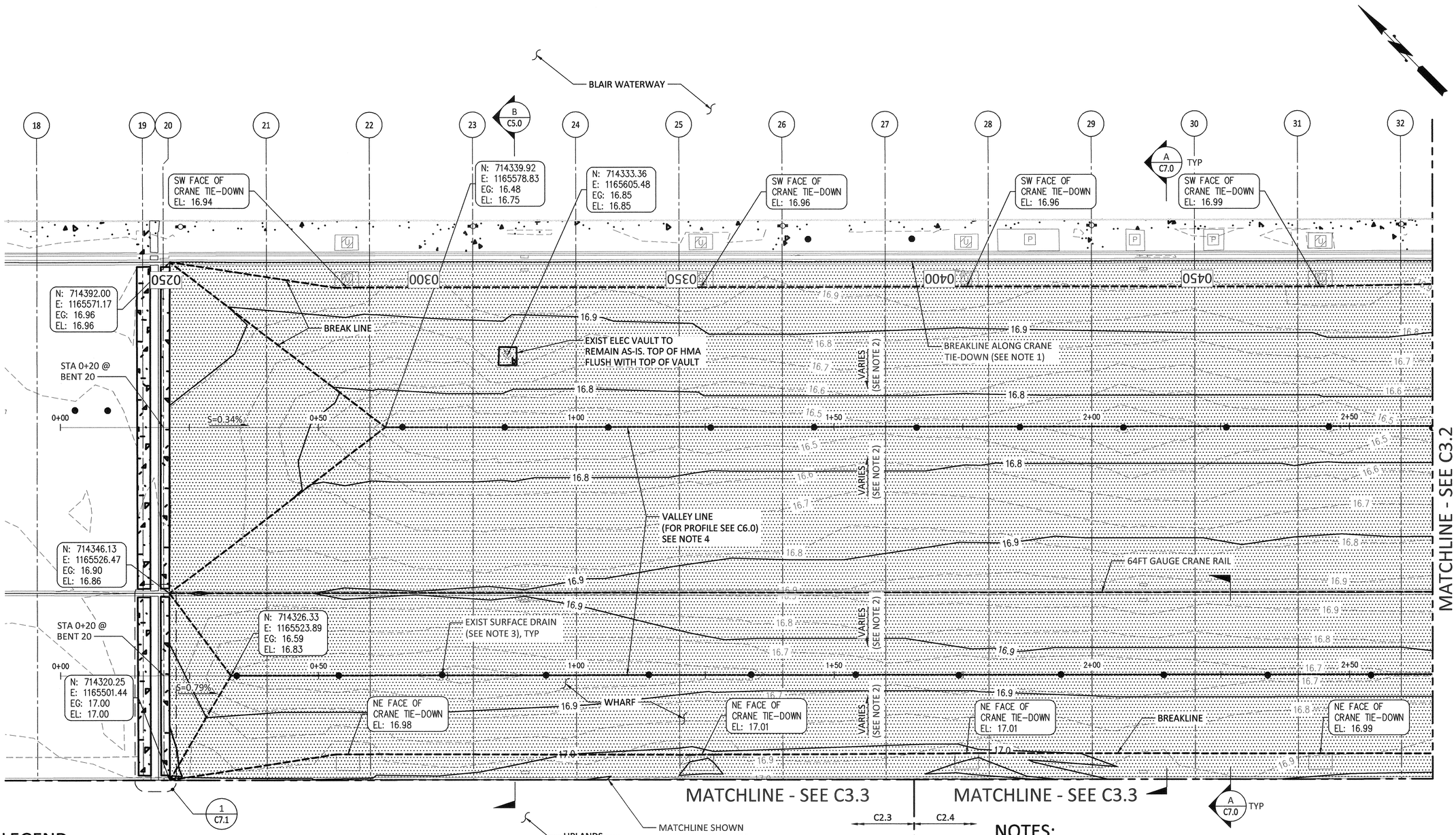

LEGEND

- HMA OVERLAY
- RIDGE LINE (NOT SHOWN AT CRANE RAILS)
- BREAKLINE
- VALLEY LINE
- 16.4 FINISH GRADE CONTOUR LINE
- 16.4 EXIST GRADE CONTOUR LINE
- (21) BENT NUMBER

NOTES:

1. BREAKLINES ARE SHOWN ON PLAN RUNNING BETWEEN CRANE TIE-DOWN LOCATIONS. NEAR BULLRAIL, BREAKLINES ARE LOCATED ON THE SOUTHWEST SIDE OF CONC TIE-DOWNS. NEAR LANDSIDE 100 GAUGE CRANE RAIL, BREAKLINES ARE LOCATED ON THE NORTHEAST SIDE OF CONC TIE-DOWNS. UNIFORMLY SLOPE HMA FROM TOP OF CRANE RAIL TO BREAKLINES DESCRIBED ABOVE. LOCALLY ADJUST TOP OF ASPHALT (FINISH GRADE) AROUND CONC CRANE TIE-DOWNS TO ENSURE TOP OF ASPHALT IS FLUSH WITH TOP OF CONC AT TIE-DOWN LOCATIONS. UNIFORMLY SLOPE TOP OF HMA FROM BREAKLINES DOWN TO VALLEY LINES WHERE SURFACE DRAINS ARE LOCATED.
2. TRANSVERSE SLOPE BETWEEN BREAKLINES AND VALLEY LINES VARY. SLOPE RANGES BETWEEN 0.40% AND 1.0%. SLOPE DICTATED BY ELEVATION OF BREAKLINES, VALLEY LINES SHOWN ON C6.0 AND EXISTING 64' GAUGE CRANE RAIL.
3. EXTEND/RAISE EXISTING SURFACE DRAINS BY HEIGHT SHOWN ON PROFILES ON C6.0. MODIFICATIONS SHALL BE PERFORMED PER DETAIL 1 C7.0.
4. ALIGNMENT FOLLOWS VALLEY LINES.

PIER 3 - GRADING/PAVING PLAN

SCALE: 1"=10'-0"

1" = 10' scale 10 0 10 20 feet

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JJV 4/18/16
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VHN 4/18/16
PROJ. ENGR DATE

APPROVED: Brian Henry
DIR OF ENG DATE

PRINTED BY: bollinger
PORT ADDRESS: ONE SITCUM WAY
TACOMA, WA 98421-2300

TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - GRADING/PAVING PLAN - SHEET 1

TOWNSHIP: 21N	RANGE: 03E	SECTION: 27	
DAT-HRZ: WA83	VERT: MLLW	DRAWING SCALE: AS SHOWN	
PARCEL: 27			

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6557
C3.1
SHEET 13 OF 25

CONT./CONS: 070326
MASTER ID NO: 91593
PHASE: BID SET

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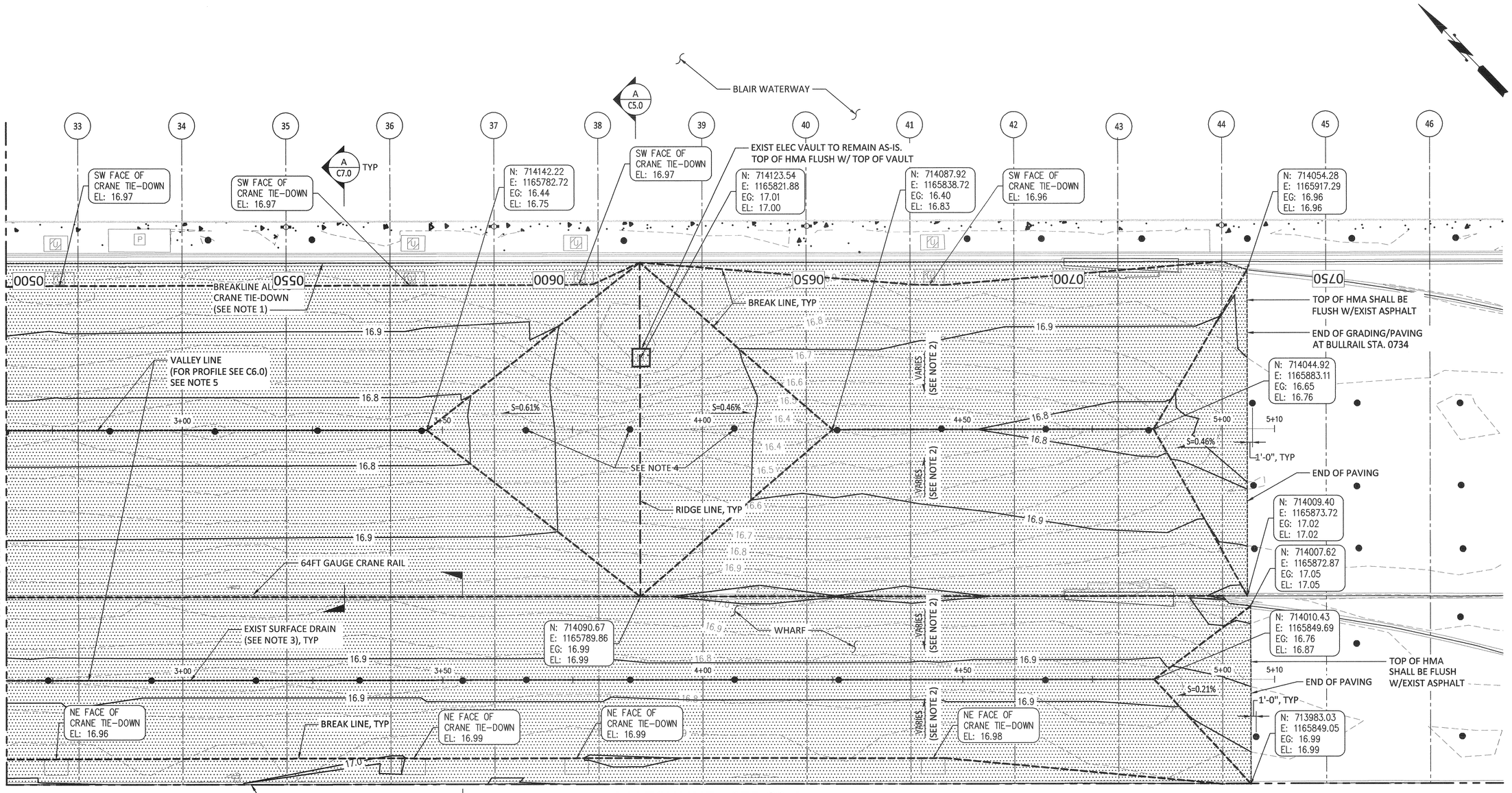

MATCHLINE - SEE C3.1

LEGEND

- HMA OVERLAY
- RIDGE LINE (NOT SHOWN AT CRANE RAILS)
- BREAKLINE
- VALLEY LINE
- 16.4 FINISH GRADE CONTOUR LINE
- 16.4 EXIST GRADE CONTOUR LINE

PIER 3 - GRADING/PAVING PLAN

SCALE: 1" = 10' (10 0 10 20 scale feet)

NOTES:

1. BREAKLINES ARE SHOWN ON PLAN RUNNING BETWEEN CRANE TIE-DOWN LOCATIONS. NEAR BULLRAIL, BREAKLINES ARE LOCATED ON THE SOUTH SIDE OF CONC TIE-DOWNS. NEAR LANDSIDE 100 GAUGE CRANE RAIL, BREAKLINES ARE LOCATED ON THE NORTH SIDE OF CONC TIE-DOWNS. UNIFORMLY SLOPE HMA FROM TOP OF CRANE RAIL TO BREAKLINES DESCRIBED ABOVE. LOCALLY ADJUST TOP OF ASPHALT (FINISH GRADE) AROUND CONC TIE-DOWNS TO ENSURE TOP OF ASPHALT IS FLUSH WITH TOP OF CONC AT TIE-DOWN LOCATIONS. UNIFORMLY SLOPE TOP OF HMA FROM BREAKLINES DOWN TO VALLEY LINES WHERE SURFACE DRAINS ARE LOCATED.
2. TRANSVERSE SLOPE BETWEEN BREAKLINES AND VALLEY LINES VARY. SLOPE RANGES BETWEEN 0.40% AND 1.0%. SLOPE DICTATED BY ELEVATION OF BREAKLINES, VALLEY LINES SHOWN ON C6.0 AND EXISTING 64' GAUGE CRANE RAIL.
3. EXTEND/RAISE EXISTING SURFACE DRAINS BY HEIGHT SHOWN ON PROFILES ON C6.0. MODIFICATIONS SHALL BE PERFORMED PER DETAIL 1 C7.0 .
4. WHERE NOTED ON PLAN (3 PLACES), CAP EXISTING SURFACE DRAIN PRIOR TO PAVING BY TACK WELDING 1/4" THICK STEEL PLATE TO TOP OF STEEL DRAIN PIPE.
5. ALIGNMENTS FOLLOW VALLEY LINES.

BID SET

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33301 9th Avenue South, Suite 300
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MARK:	REVISION:	BY:	APPR:	DATE:

APPROVED: Lisa Hanson 4-20-16
DIR OF ENG DATE

JJV	4/18/16		
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VHN	4/18/16		
PROJ. ENGR	DATE		

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TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - GRADING/PAVING PLAN - SHEET 2

TOWNSHIP: 21N	RANGE: 03E	SECTION: 27	
DAT-HRZ: WA83	VERT: MLLW	DRAWING SCALE: AS SHOWN	
PARCEL: 27			

6557

C3.2

SHEET 14 OF 25

CONT./CONS:	070326
MASTER ID NO:	91593
PHASE:	BID SET

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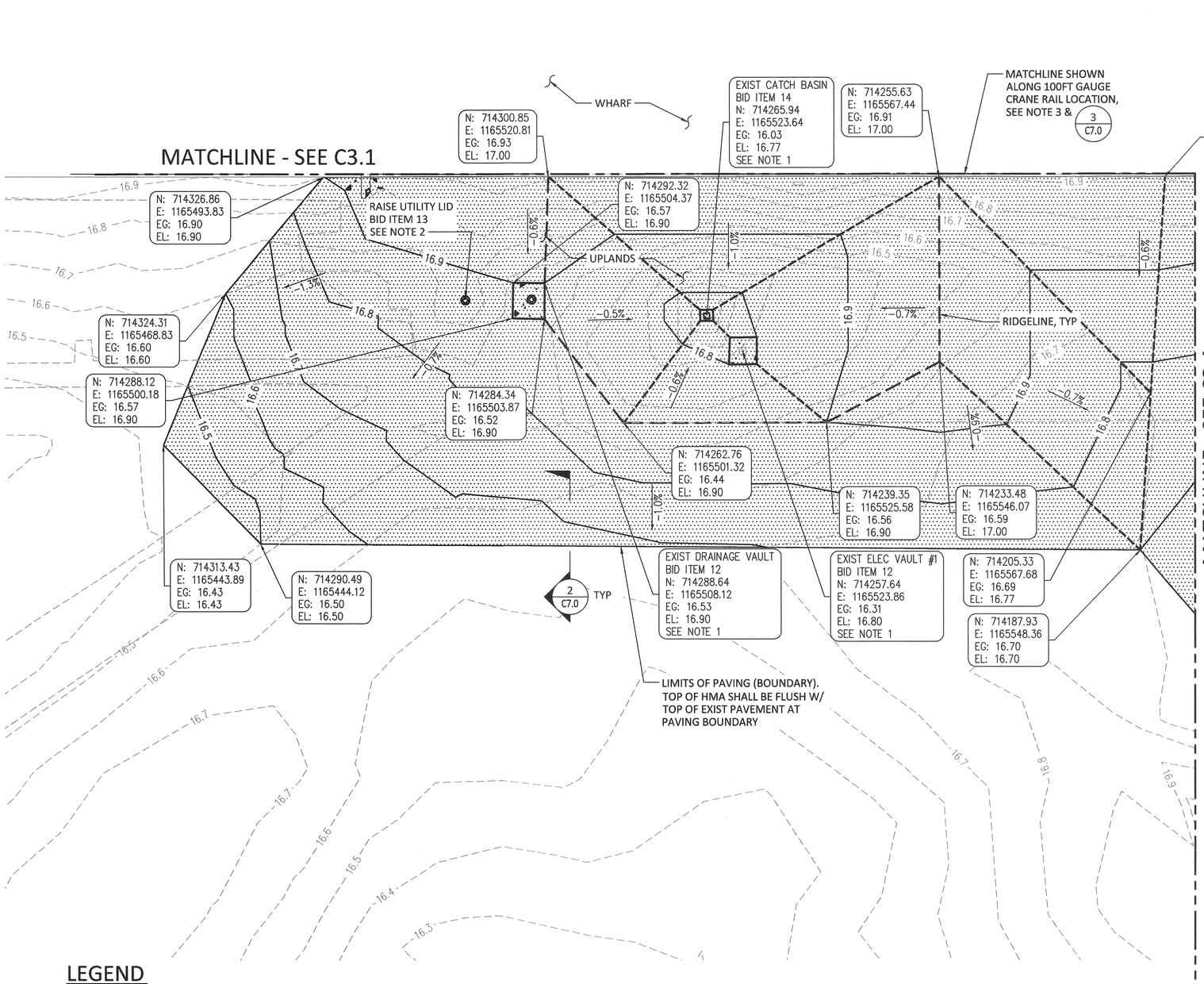

NOTES:

1. TOP OF EXISTING ELECTRICAL VAULT #1, EXISTING CATCHBASIN AND EXISTING DRAINAGE VAULT SHOWN ON PLAN SHALL BE RAISED TO FINISH GRADE ELEVATION SHOWN. FOR CATCHBASIN AND ELECTRICAL VAULT, REMOVE CONCRETE TOP AND EXTEND WALL HEIGHT OF STRUCTURE AS REQUIRED TO MEET FINISH GRADE ON DRAWING AFTER EXISTING CONCRETE TOP IS REINSTALLED. CONTRACTOR SHALL SUBMIT PROPOSED METHOD OF INCREASING WALL HEIGHT USING EITHER REINFORCED CAST-IN-PLACE OR PRECAST CONCRETE THAT MEETS 125,000 LB WHEEL LOAD AT THE SURFACE. SUBMITTAL SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN WASHINGTON STATE. AFTER MODIFICATIONS ARE COMPLETE, REPLACE EXISITNG PAVEMENT THAT IS REMOVED DURING WORK. RECORD DRAWING FOR CATCHBASIN ARE NOT AVAILABLE. EXISTING ELECTRICAL VAULT IS SHOWN ON REFERENECE DRAWING R1.0.
2. RAISE EXISTING LID / CASTING OF DRAINAGE STRUCTURE TO FINISH GRADE. CONTRACTOR SHALL SUBMIT PROPOSED METHOD OF INCREASING HEIGHT OF FRAME AND LID USING EITHER REINFORCED CAST-IN-PLACE OR PRECAST CONCRETE ADJUSTING RINGS THAT MEET 125,000 LB WHEEL LOAD CAPACITY. SUBMITTAL SHALL BE STAMPED BY A PROFESSIONAL ENGINEER IN WASHINGTON STATE. AFTER MODIFICATIONS ARE COMPLETE, REPLACE EXISTING PAVEMENT THAT IS REMOVED DURING WORK ON THE CATCHBASIN.
3. EXIST GRADE (EG) ELEVATIONS SHOWN ALONG CRANE RAIL IS TOP OF EXIST ASPHALT ON UPLAND SIDE OF CRANE RAIL, NOT TOP OF CRANE RAIL. TOP OF HMA SHALL MATCH TOP OF CRANE RAIL EL = 17.00±, SEE 3 C7.0
4. FOR CLARIFICATION:

   - BID ITEM 12: ADJUST UTILITY STRUCTURE LID ELEVATION.

   - BID ITEM 13: RAISE UTILITY LID TO FINISH GRADE.

   - BID ITEM 14: RAISE DRAINAGE STRUCTURE CASTING TO FINISH GRADE.

LEGEND

- HMA OVERLAY
- RIDGE LINE
- BREAKLINE
- VALLEY LINE
- 16.4 FINISH GRADE CONTOUR LINE
- 16.4 EXIST GRADE CONTOUR LINE

PIER 3 - GRADING/PAVING PLAN

SCALE: 1"=10'

1" = 10' 10 0 10 20 scale feet

BID SET

BergerABAM
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Federal Way, Washington 98003-2600
(206) 431-2300 Fax: (206) 431-2250

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

MARK:	REVISION:	BY:	APPR:	DATE:

VERN H. NIELSEN — STATE OF WASHINGTON — 21548 — REGISTERED PROFESSIONAL ENGINEER

JJV	4/18/16		
CHECKED BY	DATE		
VHN	4/18/16		
PROJ. ENGR	DATE		

APPROVED: 4-20-16
DIR OF ENG DATE

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PORT ADDRESS: ONE SITCUM WAY
TACOMA, WA 98421-2300

TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - GRADING/PAVING PLAN - SHEET 3

TOWNSHIP: 21N	RANGE: 03E	SECTION: 27	
DAT–HRZ: WA83	VERT: MLLW		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

6557
C3.3
SHEET 15 OF 25

CONT/CONS:	070326
MASTER ID NO:	91593
PHASE:	BID SET

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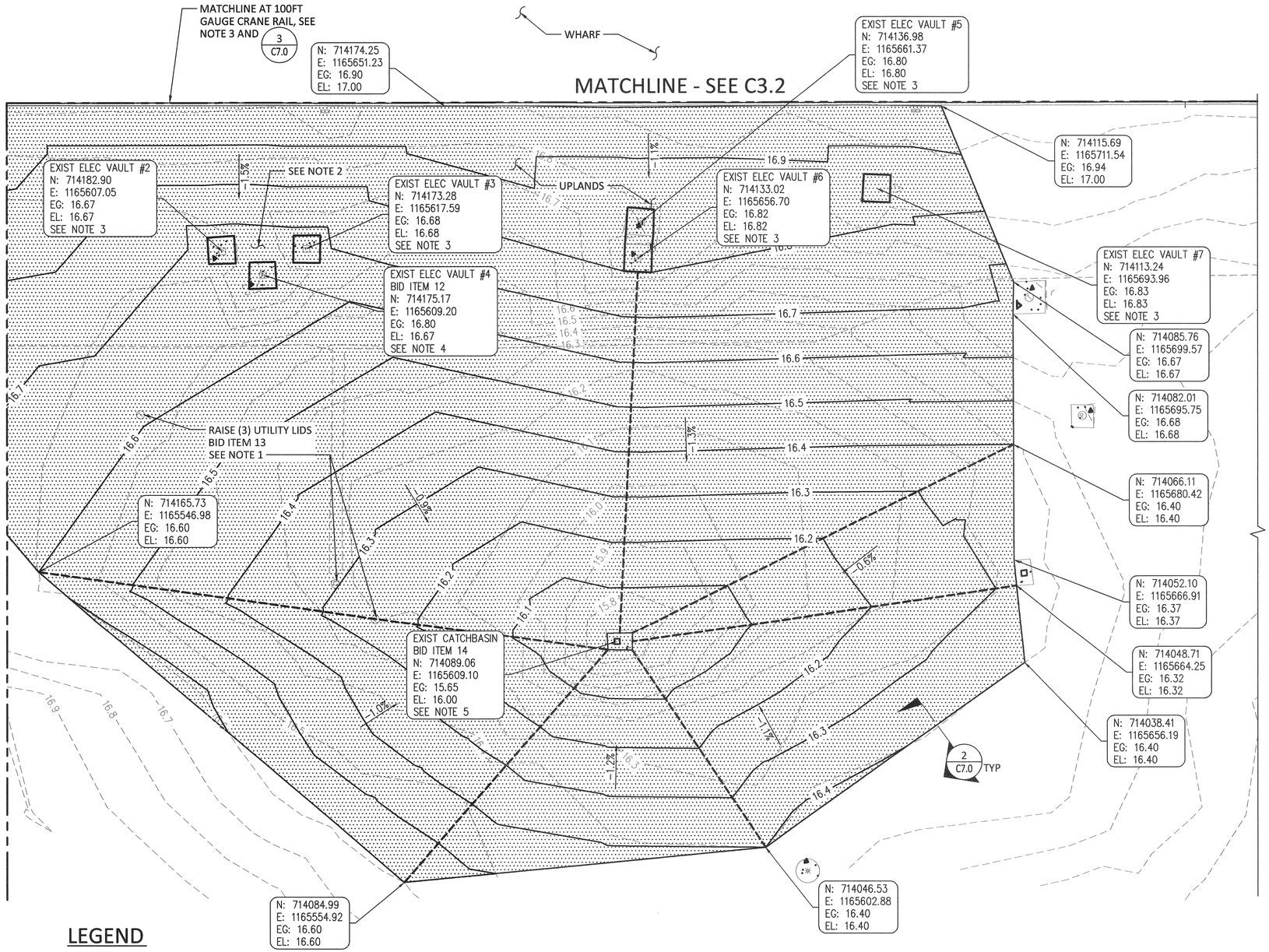

NOTES:

1. RAISE MISCELLANEOUS UTILITY LIDS TO FINISH GRADE SHOWN ON PLANS. REFER TO NOTE 2 ON DRAWING C3.3.
2. UNIFORMLY GRADE HMA BETWEEN ELECTRICAL VAULTS #2, #3, AND #4. TOP OF HMA AROUND VAULTS SHALL BE FLUSH WITH TOP OF CONCRETE TOP OF VAULTS.
3. EXISTING ELEC VAULTS ARE NOT LEVEL AND HAVE DIFFERING ELEVATIONS AT THE FOUR CORNERS OF THE CONCRETE TOP. EXIST GRADE ELEVATION SHOWN ON DRAWING FOR TOP OF VAULT IS AN APPROXIMATE AVERAGE OF THE FOUR CORNERS. VAULTS SHOWN WITH A FINISH GRADE (FG) ELEVATION THAT MATCHES EXISTING GRADE (EG) ARE TO REMAIN AS-IS (NOT MODIFIED), WITH TOP OF HMA AROUND VAULT INSTALLED FLUSH WITH TOP OF CONCRETE TOP OF VAULTS. THIS NOTE APPLIES TO VAULTS #2, #3, #5, AND #6. SEE NOTE 4 FOR VAULT #4 MODIFICATIONS.
4. TOP OF EXISTING ELECTRICAL VAULT #4 SHALL BE LOWERED TO FINISH GRADE ELEVATION SHOWN ON PLAN. REMOVE EXISTING CONCRETE TOP AND CUT OR GRIND APPROX 1-1/2 INCHES OF CONCRETE WALL HEIGHT OF STRUCTURE AS REQUIRED TO MEET FINISH GRADE SHOWN ON DRAWING AFTER EXIST CONCRETE TOP IS REINSTALLED. CONTRACTOR SHALL SUBMIT PROPOSED METHOD OF CUTTING OR GRINDING EXISTING CONCRETE WALL OF VAULT SO AS NOT TO REDUCE THE VAULTS SURFACE LOAD CAPACITY OF 125,000 LB. SUBMITTAL SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN WASHINGTON STATE. AFTER MODIFICATIONS ARE COMPLETE, REPLACE EXISTING PAVEMENT THAT IS REMOVED DURING WORK. EXISTING ELEC VAULT IS SHOWN ON REFERENCE DRAWING R1.0.
5. RAISE TOP OF EXISTING CATCHBASIN. SEE NOTE 1 ON DRAWING C3.3
6. EXIST GRADE (EG) ELEVATIONS SHOWN ALONG CRANE RAIL IS TOP OF EXIST ASPHALT ON UPLAND SIDE OF CRANE RAIL, NOT TOP OF CRANE RAIL. TOP OF HMA SHALL MATCH TOP OF CRANE RAIL EL = 17.00±, SEE 3 C7.0
7. FOR CLARIFICATION:
   - BID ITEM 12: ADJUST UTILITY STRUCTURE LID ELEVATION.
   - BID ITEM 13: RAISE UTILITY LID TO FINISH GRADE.
   - BID ITEM 14: RAISE DRAINAGE STRUCTURE CASTING TO FINISH GRADE.

LEGEND

- HMA OVERLAY
- RIDGE LINE
- BREAKLINE
- VALLEY LINE
- 16.4 FINISH GRADE CONTOUR LINE
- 16.4 EXIST GRADE CONTOUR LINE

PIER 3 - GRADING/PAVING PLAN

SCALE: 1"=10'

1" = 10' scale 10 0 10 20 feet

BID SET

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Federal Way, Washington 98003-2600
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MARK:	REVISION:	BY:	APPR:	DATE:

H. NIELSEN — STATE OF WASHINGTON — 13744 — REGISTERED PROFESSIONAL ENGINEER

JJV	4/18/16		
CHECKED BY	DATE		
VHN	4/18/16		
PROJ. ENGR	DATE		

APPROVED: [signature] 4-20-16
DIR OF ENG DATE

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TACOMA, WA 98421-2300

TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - GRADING/PAVING PLAN - SHEET 4

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT-HRZ: WA83	VERT: MLLW	
PHASE: BID SET	PARCEL: 27	DRAWING SCALE: AS SHOWN	

6557
C3.4
SHEET 16 OF 25

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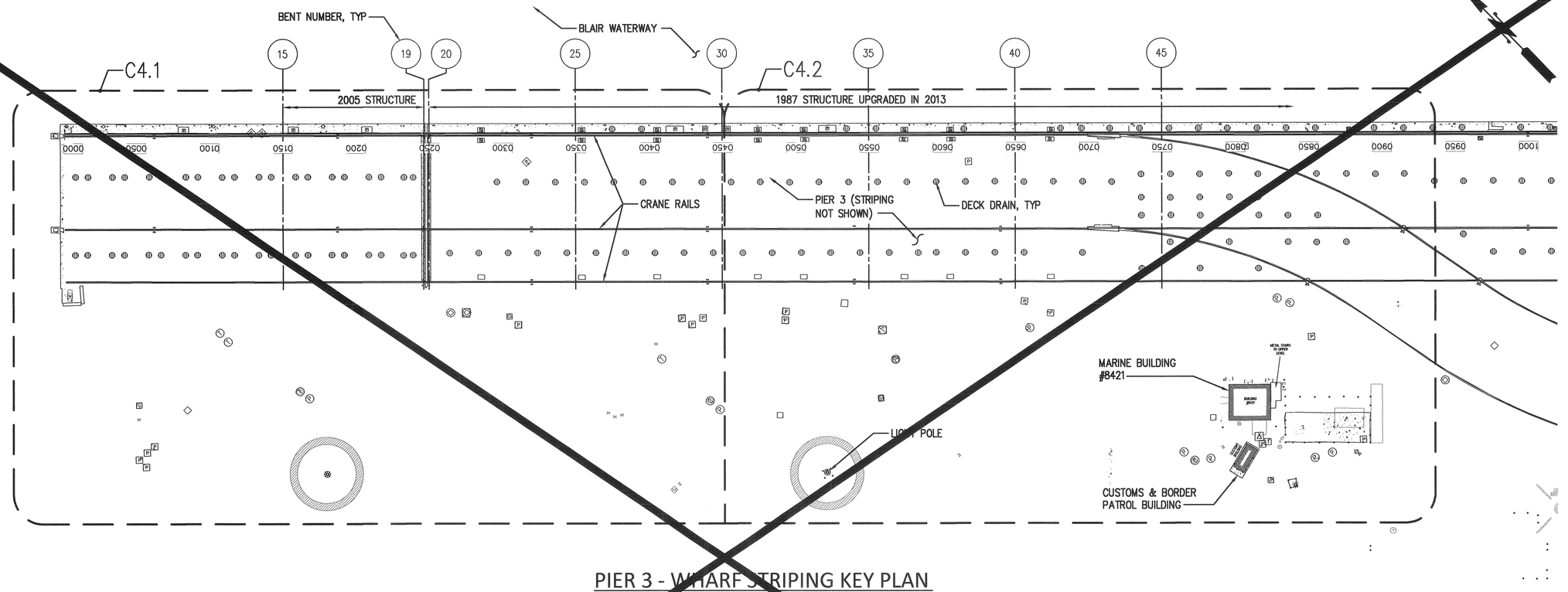

PIER 3 - WHARF STRIPING KEY PLAN

SCALE: 1"=40'

NOT IN CONTRACT

1" = 25' scale 25 0 25 50 feet

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Federal Way, Washington 98003-2600
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H. NIELSEN — STATE OF WASHINGTON — 19454 — REGISTERED PROFESSIONAL ENGINEER

	BY	DATE
CHECKED BY	JJV	4/18/16
PROJ. ENGR	VHN	4/18/16
PRINTED BY:	bollinger	DATE

APPROVED: Diane Howard 4-20-16
DIR OF ENG DATE

PORT ADDRESS: ONE SITCUM WAY
TACOMA, WA 98421-2300

TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - WHARF STRIPING KEY PLAN

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT-HRZ: WA83	VERT: MLLW	
PHASE: BID SET	PARCEL: 27	DRAWING SCALE: AS SHOWN	

6557

C4.0

SHEET 17 OF 25

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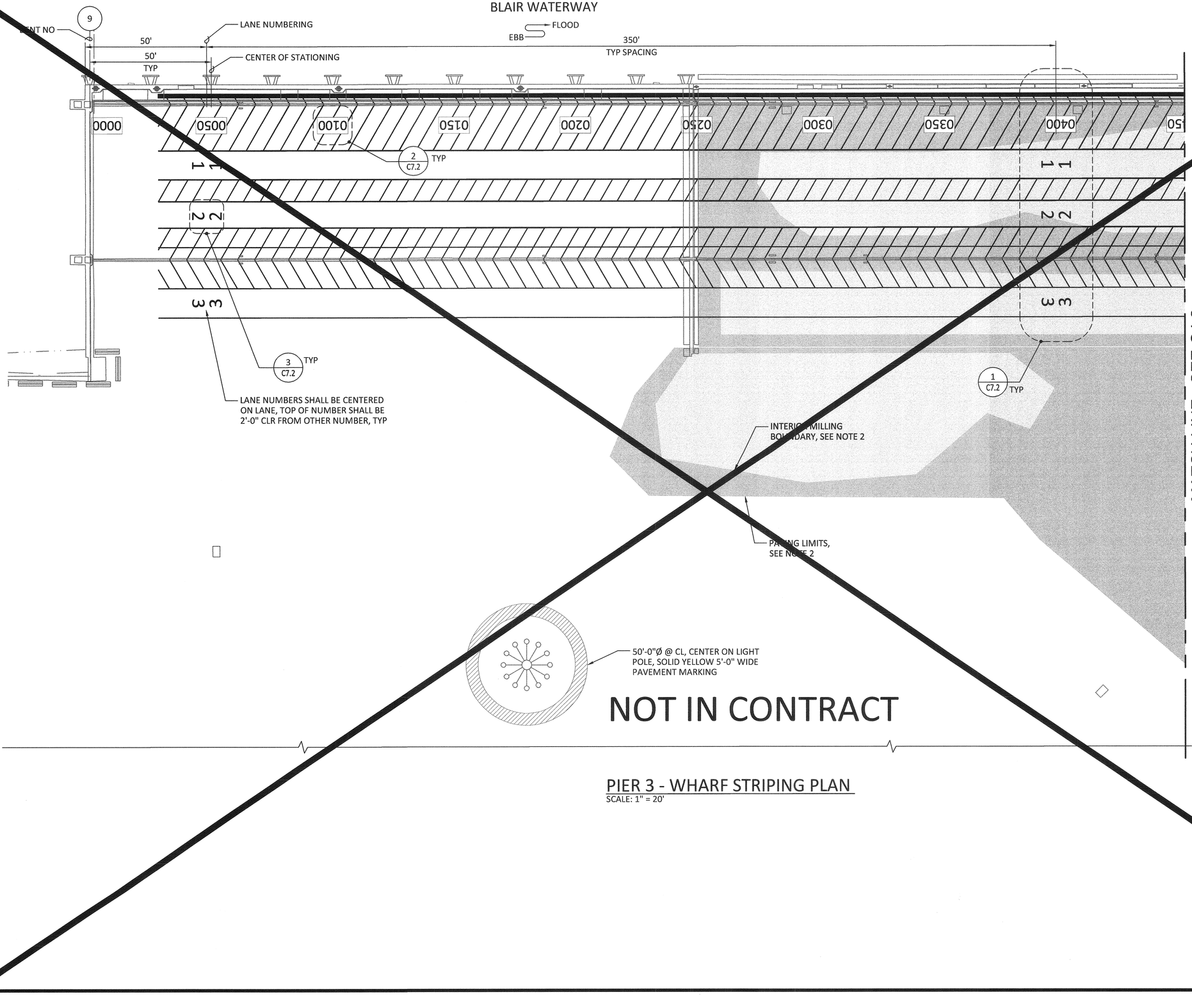
BLAIR WATERWAY



NOTE:

1. BEGIN STATIONING WITH NUMBER 1000, LOCATED AT BENT 9. STATION NUMBERS SHALL BE IN 50' INCREMENTS. THEREFORE, SECOND STATION NUMBER SHALL BE 1050 AND LOCATED 50' FROM BENT 9.
2. REMOVE EXIST STRIPING WHERE HMA OVERLAY SHALL BE PLACE, BUT NO MILLING IS REQD. PLACE STRIPING IN AREAS TO BE PAVED TO MATCH EXIST. STRIPING PLANS, C4.1, C4.2 AND ASSOCIATED DETAILS ARE PROVIDED TO FACILITATE RESTRIPING EFFORT.
3. LOAD RATING STRIPING NOT SHOWN ON PLAN, SEE 1/C7.2 TYP.

LEGEND:

HMA FILL AREA. REMOVE EXIST PAVEMENT MARKINGS PRIOR TO PLACING HMA. RESTRIPE TO MATCH EXISTING AFTER PAVING.

ARE TO BE MILLED PRIOR TO PAVING. EXIST PAVEMENT MARKINGS REMOVED DURING MILLING. RESTRIPE TO MATCH EXISTING AFTER PAVING.

NOT IN CONTRACT

PIER 3 - WHARF STRIPING PLAN

SCALE: 1" = 20'

1" = 20' scale 20 0 20 40 feet

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Seattle, WA 98134-2488
(206) 431-2300 Fax: (206) 431-2259

Port of Tacoma
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H. NIELSEN — STATE OF WASHINGTON — 19415 — REGISTERED PROFESSIONAL ENGINEER

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VHN	4/18/16	DIR OF ENG	DATE
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		PORT ADDRESS:	ONE SITCUM WAY
			TACOMA, WA 98421-2300

TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - WHARF STRIPING PLAN - SHEET 1

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT–HRZ: WA83	VERT: MLLW	DRAWING SCALE: AS SHOWN
PHASE: BID SET	PARCEL: 27		

6557

C4.1

SHEET 18 OF 25

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BINDING EDGE

BLAIR WATERWAY

FLOOD

EBB

0500 0550 0600 0650 0700 0750 0800 0850 0900

1 2 3

MATCH LINE - SEE C4.1

INTERIOR MILLING BOUNDARY, SEE NOTE 2

OUTER PAVING LIMITS, SEE NOTE 2

50'-0"Ø @ CL, CENTER ON LIGHT POLE, SOLID YELLOW 5'-0" WIDE PAVEMENT MARKING

4" YELLOW

7'-0"

6" YELLOW

EXIST PAINT

NOT IN CONTRACT

NOTE:

1. BEGIN STATIONING WITH NUMBER 1000, LOCATED AT BENT 9. STATION NUMBERS SHALL BE IN 50' INCREMENTS. THEREFORE, SECOND STATION NUMBER SHALL BE 1050 AND LOCATED 50' FROM BENT 9.
2. REMOVE EXIST STRIPING WHERE HMA OVERLAY SHALL BE PLACE, BUT NO MILLING IS REQD. PLACE STRIPING IN AREAS TO BE PAVED TO MATCH EXIST. STRIPING PLANS, C4.1, C4.2 AND ASSOCIATED DETAILS ARE PROVIDED TO FACILITATE RESTRIPING EFFORT.
3. LOAD RATING STRIPING NOT SHOWN ON PLAN, SEE 1/C7.2 TYP.

LEGEND:

HMA FILL AREA. REMOVE EXIST PAVEMENT MARKINGS PRIOR TO PLACING HMA. RESTRIPE TO MATCH EXISTING AFTER PAVING.

ARE TO BE MILLED PRIOR TO PAVING. EXIST PAVEMENT MARKINGS REMOVED DURING MILLING. RESTRIPE TO MATCH EXISTING AFTER PAVING.

PIER 3 - WHARF STRIPING PLAN

SCALE: 1" = 20'

1" = 20' scale 20 0 20 40 feet

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PROJ. ENGR	DATE		
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TERMINAL 3 & 4 PAVING IMPROVEMENTS

PIER 3 - WHARF STRIPING PLAN - SHEET 2

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT-HRZ: WA83	VERT: MLLW	
PHASE: BID SET	PARCEL: 27	DRAWING SCALE: AS SHOWN	

6557
C4.2
SHEET 19 OF 25

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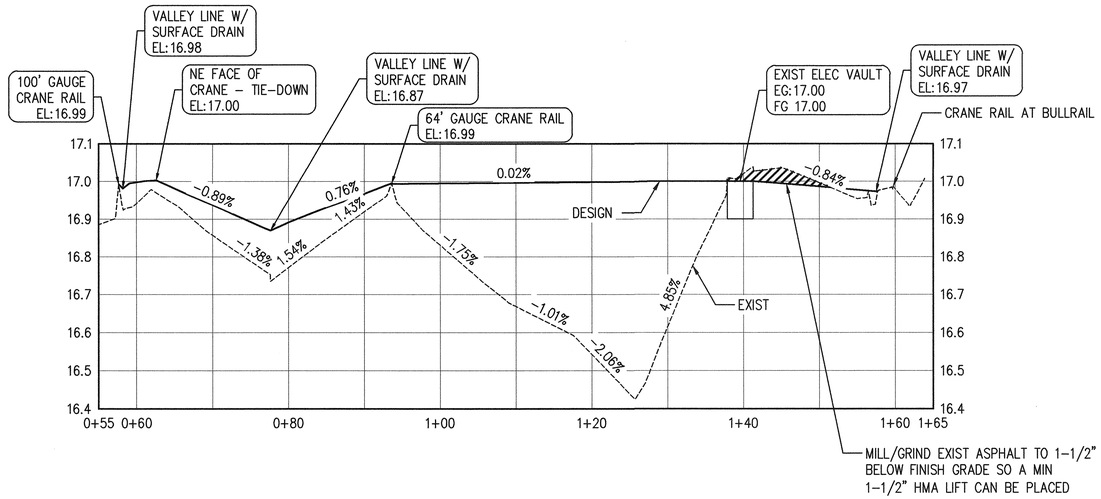
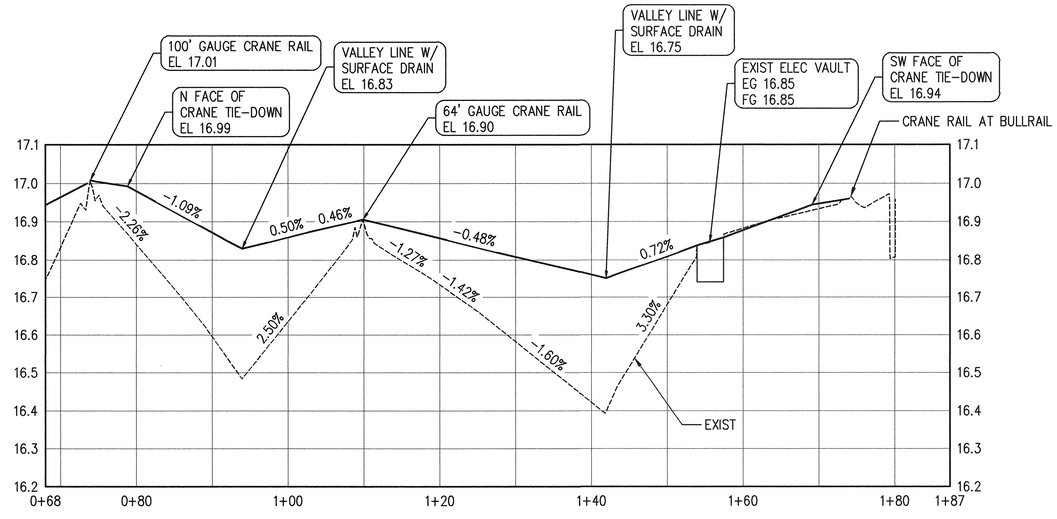


A / C3.2 **SECTION - WHARF BETWEEN BENTS 38 & 39 THRU ELEC VAULT**

SCALE: VERT: 5" = 1' HORZ: 1" = 20'



B / C3.1 **SECTION - WHARF BETWEEN BENTS 23 & 24 THRU ELEC VAULT**

SCALE: VERT: 5" = 1' HORZ: 1" = 20'

5" = 1' scale 2.5 0 2.5 5 inches

1" = 20' scale 20 0 20 40 feet

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H. NIELSEN — STATE OF WASHINGTON — 13744 — REGISTERED PROFESSIONAL ENGINEER

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APPROVED: Dave Bollinger 4-20-16
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TERMINAL 3 & 4 PAVING IMPROVEMENTS

SECTIONS - SHEET 1

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT–HRZ: WA83	VERT: MLLW	DRAWING SCALE: AS SHOWN
PHASE: BID SET	PARCEL: 27		

6557
C5.0
SHEET 20 OF 25

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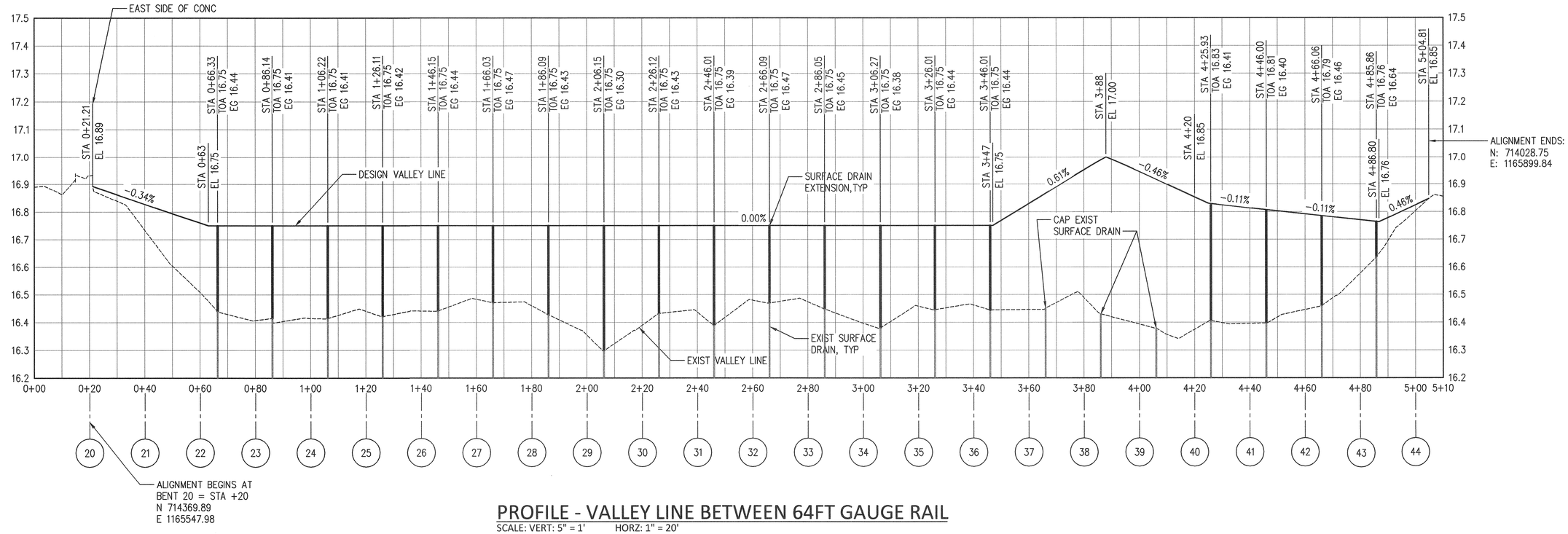
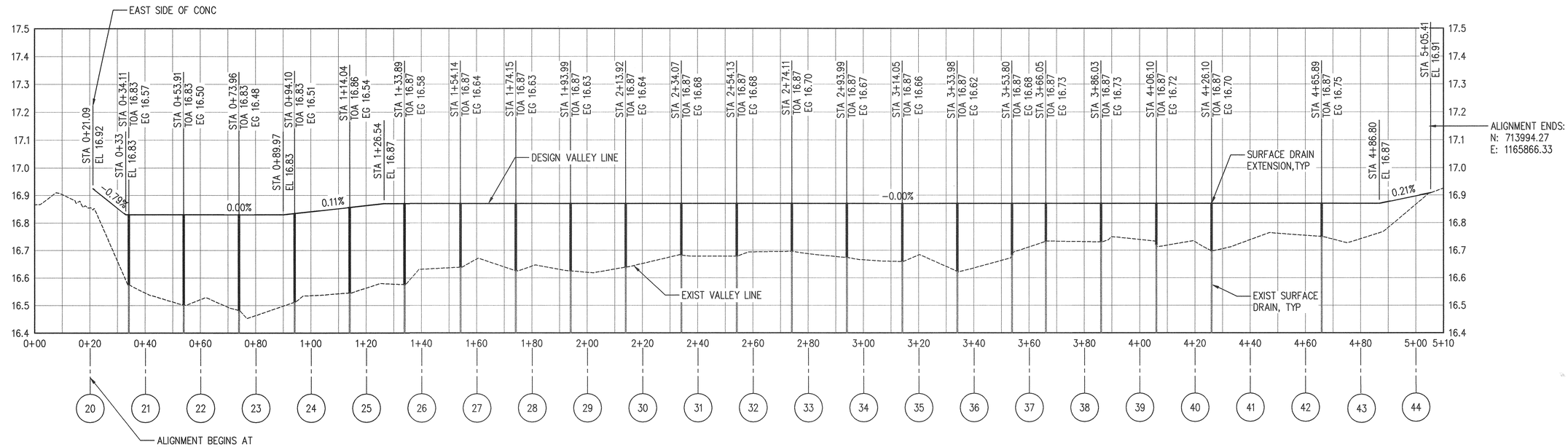


PROFILE - VALLEY LINE BETWEEN 64FT GAUGE RAIL

SCALE: VERT: 5" = 1' HORZ: 1" = 20'



PROFILE - VALLEY LINE BETWEEN 64 & 100 FT GAUGE RAIL

SCALE: VERT: 5" = 1' HORZ: 1" = 20'

5" = 1' 2.5 0 2.5 5 scale inches

1" = 20' 20 0 20 40 scale feet

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VERN H. NIELSEN — STATE OF WASHINGTON — 21615 — REGISTERED PROFESSIONAL ENGINEER

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DRAWING SCALE: AS SHOWN

6557
C6.0
SHEET 21 OF 25

TERMINAL 3 & 4 PAVING IMPROVEMENTS
PROFILES - WHARF VALLEY LINES

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT-HRZ: WA83	VERT: MLLW	
PHASE: BID SET	PARCEL: 27		

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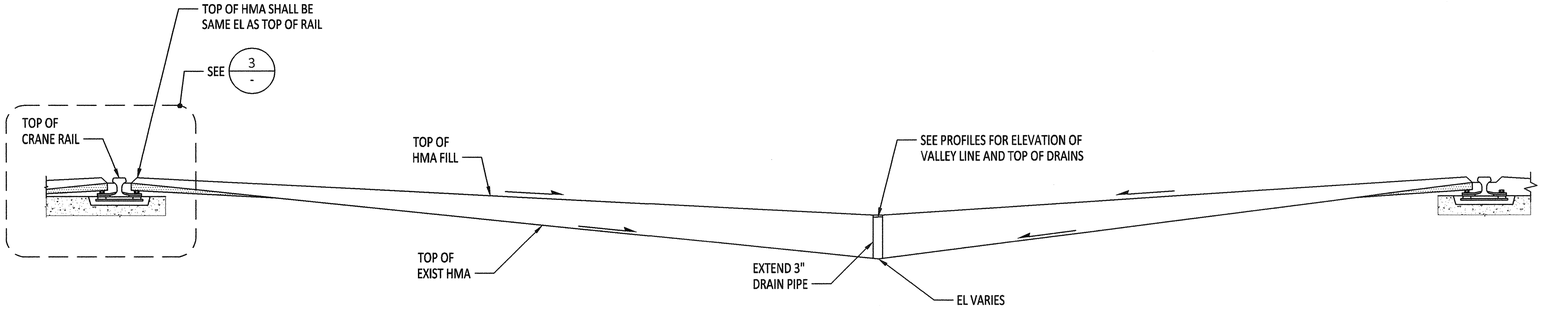
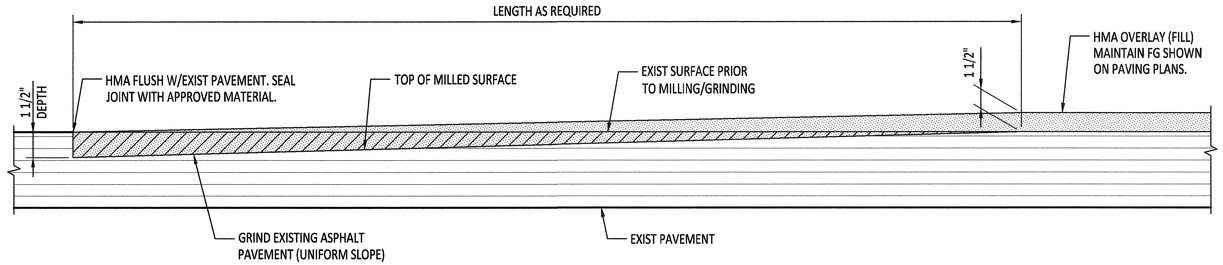
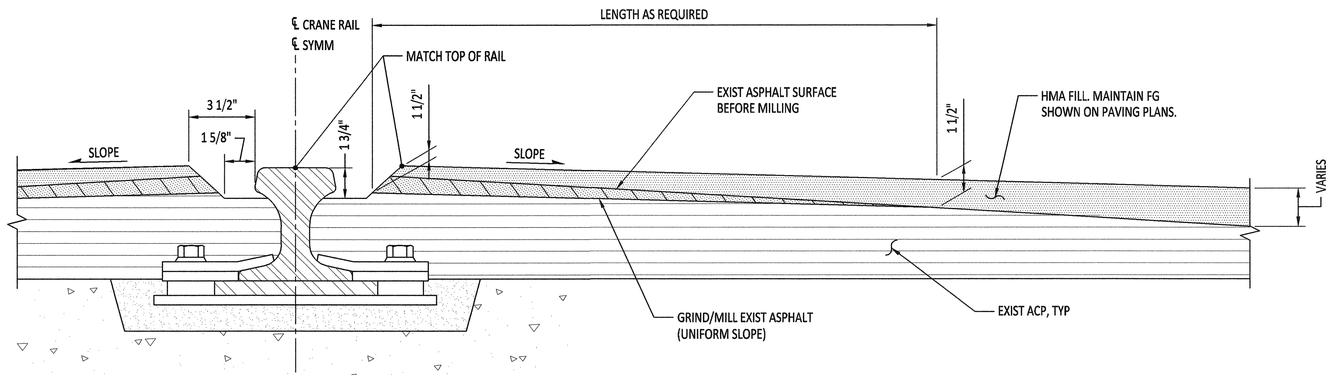


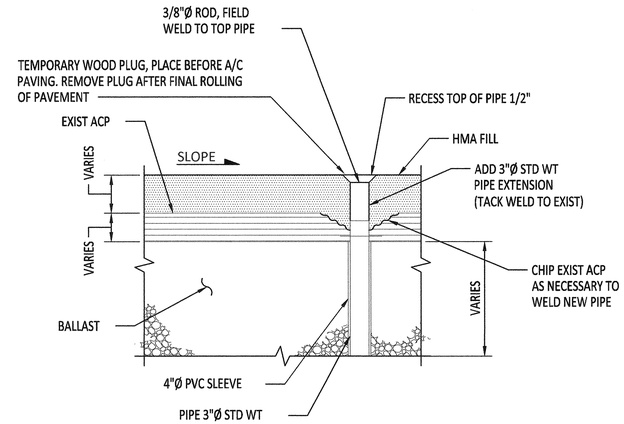
A C3.1 C3.2 SECTION - TYP WHARF SCHEMATIC
SCALE: NTS



2 C3.3 C3.4 DETAIL - TYP HMA BUTT JOINT
SCALE: NTS



3 C3.1 C3.2, C3.3, C3.4 DETAIL - PAVEMENT AT CRANE RAIL
SCALE: NTS



1 C3.1 C3.2 DETAIL - TYP SURFACE DRAIN AT BALLASTED AREA
SCALE: NTS

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Federal Way, Washington 98003-2600
(206) 431-2300 Fax: (206) 431-2250

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P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

VERN H. NIELSEN — STATE OF WASHINGTON — 31547 — REGISTERED PROFESSIONAL ENGINEER

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PROJ. ENGR	DATE		

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TERMINAL 3 & 4 PAVING IMPROVEMENTS
DETAILS - SHEET 1

TOWNSHIP: 21N	RANGE: 03E	SECTION: 27	
DAT–HRZ: WA83	VERT: MLLW		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

6557
C7.0
SHEET 22 OF 25

CONT/CONS:	070326
MASTER ID NO:	91593
PHASE:	BID SET

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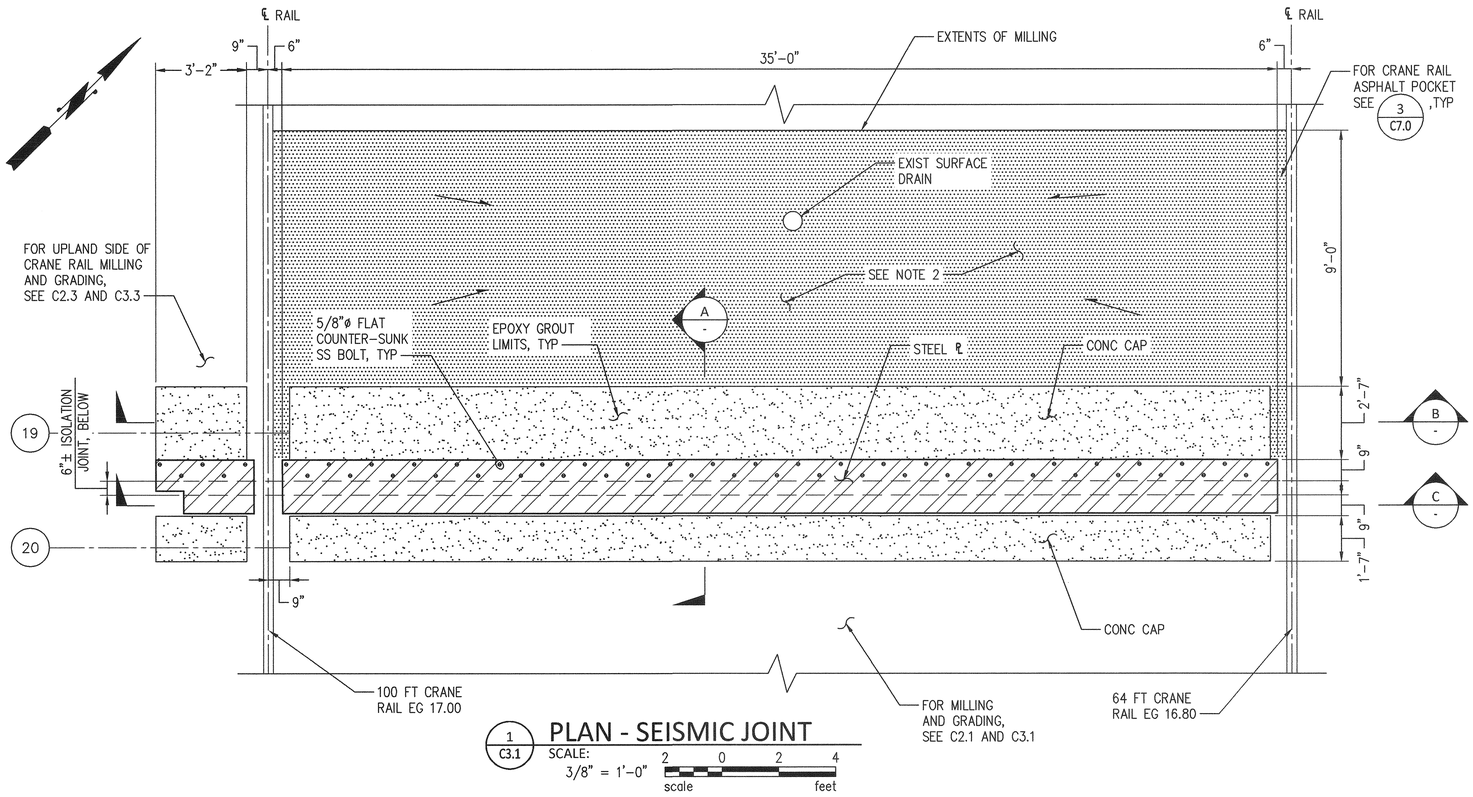
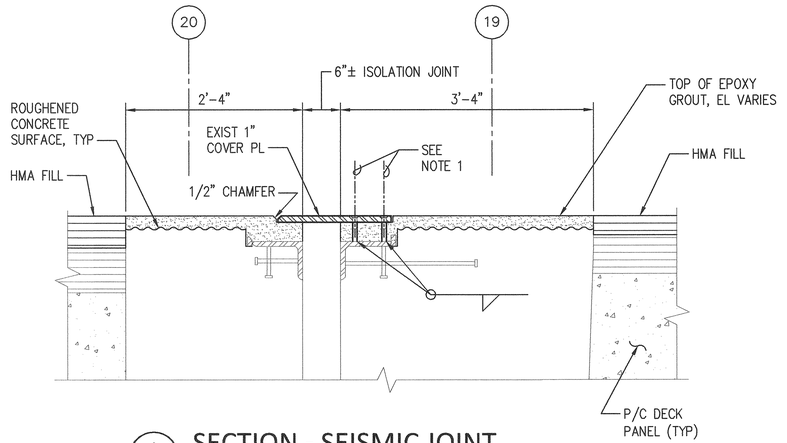


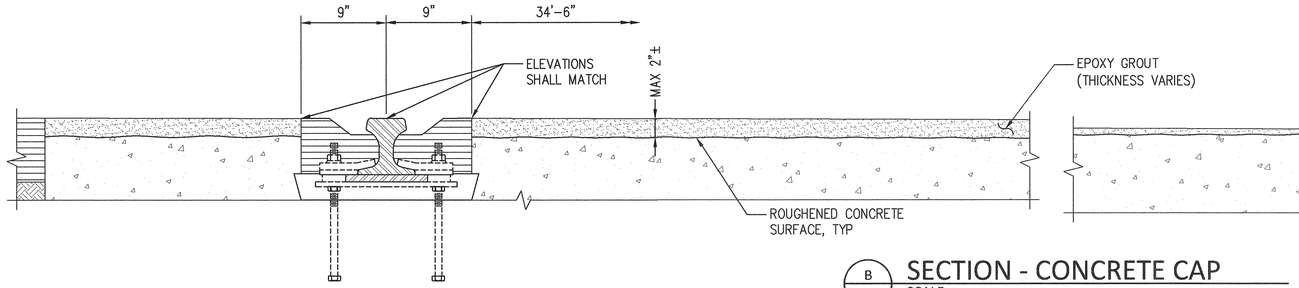
1/C3.1 **PLAN - SEISMIC JOINT**
SCALE: 3/8" = 1'-0"
2 0 2 4
scale feet

NOTES
1. WELD THREADED SLEEVES TO L8x6 BASE PLATE AT BOLT LOCATIONS. BOLTS ARE 5/8"ø FLAT COUNTER-SUNK SS AT 9" OC STAGGERED. APPROXIMATELY 52 TOTAL.
2. MILL ASPHALT TO PROVIDE 1 1/2" DEPTH FOR HMA FILL. SLOPE HMA TO EXISTING SURFACE DRAIN. HMA FILL SHALL BE FLUSH WITH EXISTING ASPHALT, CRANE RAILS, AND EPOXY GROUT.

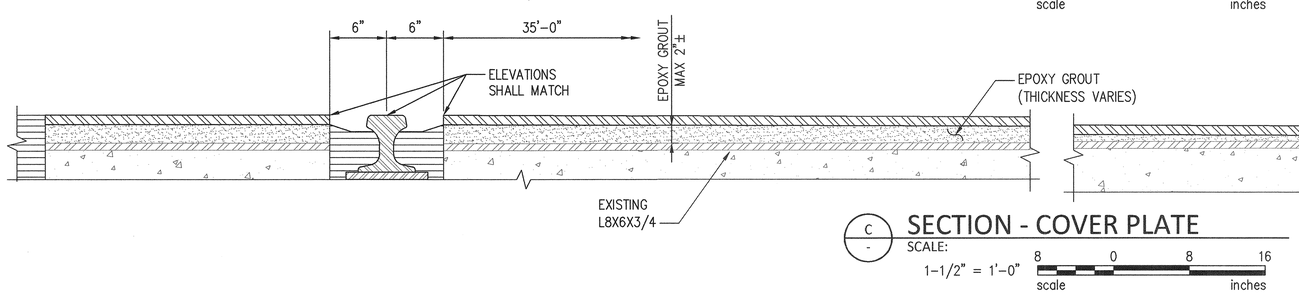
CONSTRUCTION SEQUENCE
1. REMOVE EXIST COVER PLATE.
2. ROUGHEN CONCRETE SURFACES SUPPORTING GROUT.
3. SET FORMS AND WELD THREADED SLEEVES.
4. CAST GROUT TO FINISH GRADES.
5. RE-INSTALL EXIST COVER PLATE.
6. APPROXIMATE EPOXY GROUT VOLUME = 24 FT³



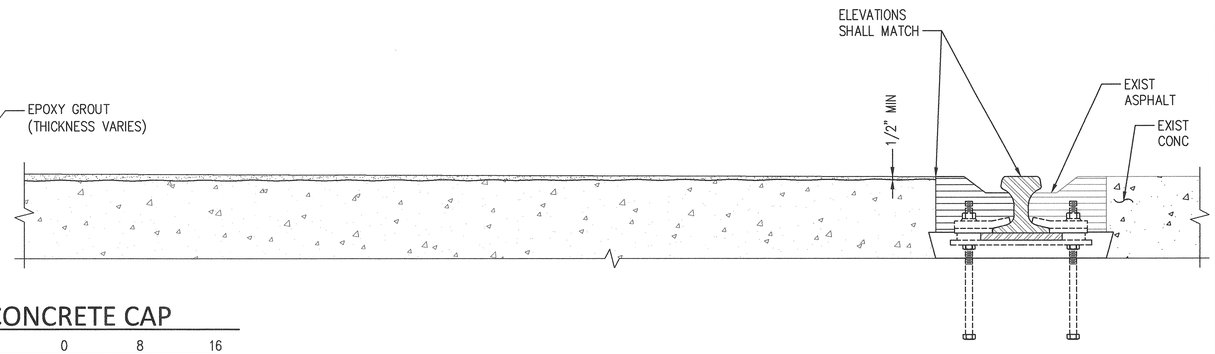
A/- **SECTION - SEISMIC JOINT**
SCALE: 1" = 1'-0"
1 0 1 2
scale feet

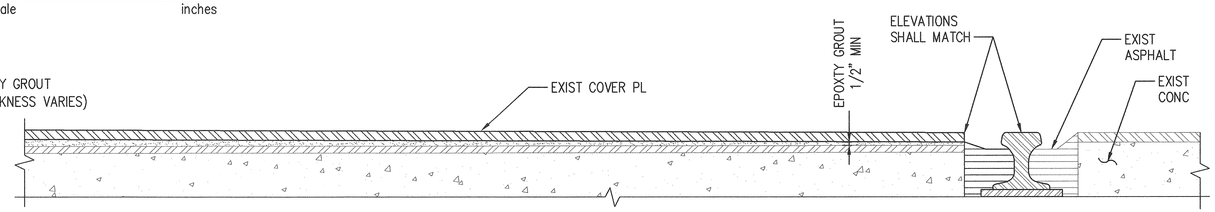


B/- **SECTION - CONCRETE CAP**
SCALE: 1-1/2" = 1'-0"
8 0 8 16
scale inches



C/- **SECTION - COVER PLATE**
SCALE: 1-1/2" = 1'-0"
8 0 8 16
scale inches





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Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

MARK:	REVISION:	BY:	APPR:	DATE:

JJV 4/18/16 CHECKED BY DATE
VHN 4/18/16 PROJ. ENGR DATE

APPROVED: 4-20-16
DIR OF ENG DATE
PRINTED BY: bollinger
PORT ADDRESS: ONE SITCUM WAY
TACOMA, WA 98421-2300

TERMINAL 3 & 4 PAVING IMPROVEMENTS
DETAILS - SHEET 2

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT-HRZ: WA83	VERT: MLLW	DRAWING SCALE: AS SHOWN
PHASE: BID SET	PARCEL: 27		

6557
C7.1
SHEET 23 OF 25

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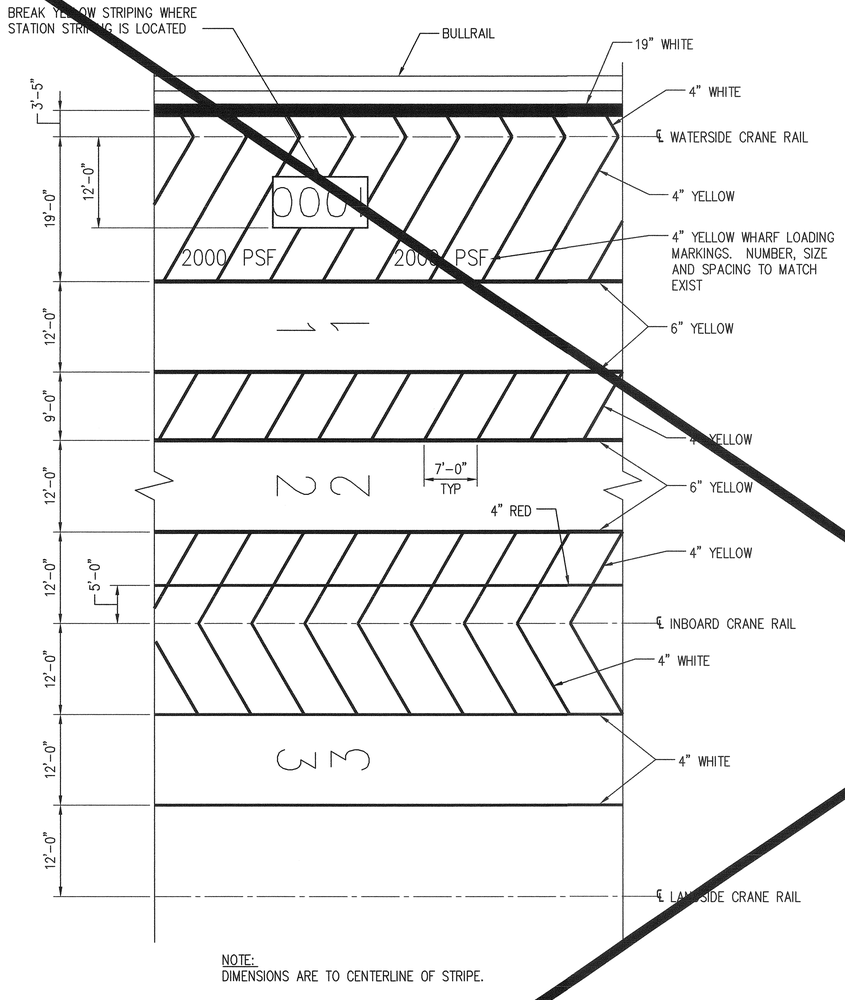
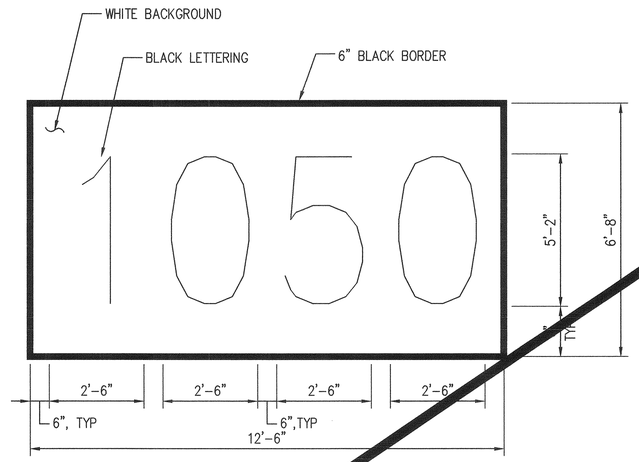


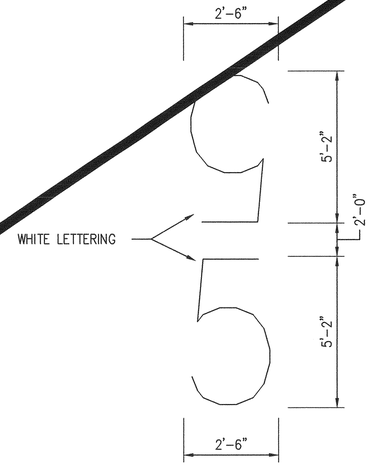
NOTE:
DIMENSIONS ARE TO CENTERLINE OF STRIPE.

1 / C4.1 TYPICAL STRIPING PATTERN
SCALE: 1" = 10'-0"



NOTES:
1. CENTER NUMBER AT 50' INCREMENTS.
2. BEGIN WITH NUMBER 0000, LOCATED AT BENT 9 (NORTH END)

2 / C4.1 STATION STRIPING DETAIL
SCALE: NTS



3 / C4.1 LANE NUMBER DETAIL
SCALE: NTS

NOT IN CONTRACT

1" = 10' scale 10 0 20 feet

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Federal Way, Washington 98003-2600
(206) 431-2300 Fax: (206) 431-2359

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

MARK:	REVISION:	BY:	APPR:	DATE:

VERN H. NIELSEN — STATE OF WASHINGTON — 31547 — REGISTERED PROFESSIONAL ENGINEER

JJV	4/18/16		
CHECKED BY	DATE		
VHN	4/18/16		
PROJ. ENGR	DATE		

APPROVED: 4-20-16
DIR OF ENG DATE

PRINTED BY: bollinger
PORT ADDRESS: ONE SITCUM WAY
TACOMA, WA 98421-2300

DRAWING SCALE: AS SHOWN

TERMINAL 3 & 4 PAVING IMPROVEMENTS
DETAILS - SHEET 3

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT-HRZ: WA83	VERT: MLLW	
PHASE: BID SET	PARCEL: 27		

6557
C7.2
SHEET 24 OF 25

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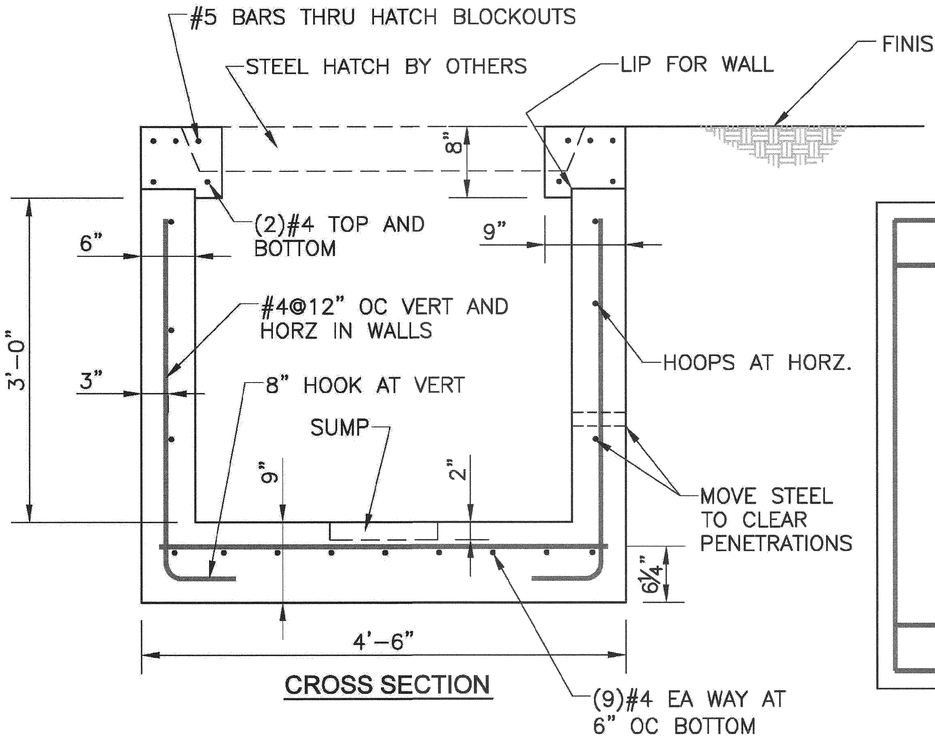
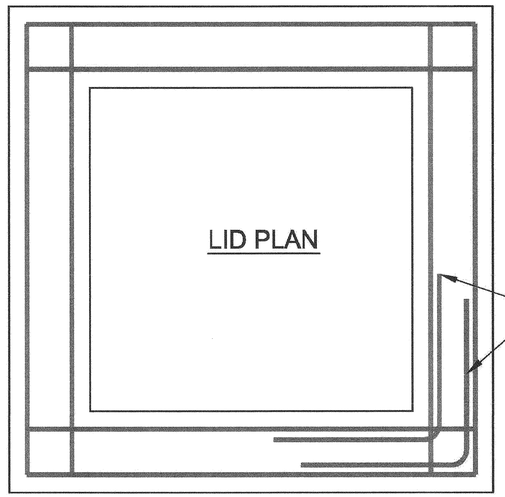


CROSS SECTION



GENERAL NOTES

1. F'c=4000 PSI MIN AT 28 DAYS
2. REINFORCING BAR ASTM A615, GRADE 60
3. MINIMUM REINF COVER 1.5" UNO
4. 125,000 LB WHEEL LOAD CAPACITY
5. BACKFILL TO BE COMPACTED GRAVEL
7. 3000 PSI MINIMUM STRENGTH BEFORE STRIPPING
8. NO SPLICE EXCEPT AT LOCATIONS SHOWN

GERARD G. NAVARRA — STATE OF WASHINGTON — 28243 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

9/18/13

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- ☐ APPROVED AS SUBMITTED
- ☐ APPROVED AS CORRECTED
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SIGNED_____

TITLE_____ DATE_____

DESIGN: GGN	DATE:9/18/13	**PORT OF TACOMA**	
DRAWN: GGN			
CHECKED: JP	SCALE: 3/4"=1'-0"	HEAVY 444 VAULT	SHEET: 1 of 1
PROJECT NO. 12H2-6	THIS DRAWING IS INTENDED FOR THE USE OF THE INDIVIDUAL TO WHICH IT IS ADDRESSED AND CONTAINS INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL AND EXEMPT FROM DISCLOSURE. IF YOU ARE NOT THE INTENDED RECIPIENT, PLEASE DO NOT DISSEMINATE, DISTRIBUTE OR COPY THIS BY E-MAIL OR OTHERWISE.	H² PRE-CAST INC. CONCRETE PRODUCTS (509) 884-6644 Phone (509) 884-4567 Fax	
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MARK:	REVISION:	BY:	APPR:	DATE:

APPROVED:

JJV	4/18/16		
CHECKED BY	DATE		
VHN	4/18/16		
DIR OF ENG	DATE	PROJ. ENGR	DATE

PRINTED BY: bollinger

PORT ADDRESS: ONE SITCUM WAY TACOMA, WA 98421-2300

DRAWING SCALE: AS SHOWN

TERMINAL 3 & 4 PAVING IMPROVEMENTS

REFERENCE DRAWING - ELEC VAULT

CONT/CONS: 070326	TOWNSHIP: 21N	RANGE: 03E	SECTION: 27
MASTER ID NO: 91593	DAT-HRZ: WA83	VERT: MLLW	
PHASE: BID SET	PARCEL: 27		

6557

R1.0

SHEET 25 OF 25

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