PORT OF TACOMA

TACOMA, WASHINGTON
PIER 3 UPGRADE
CONTRACT NO. 069458

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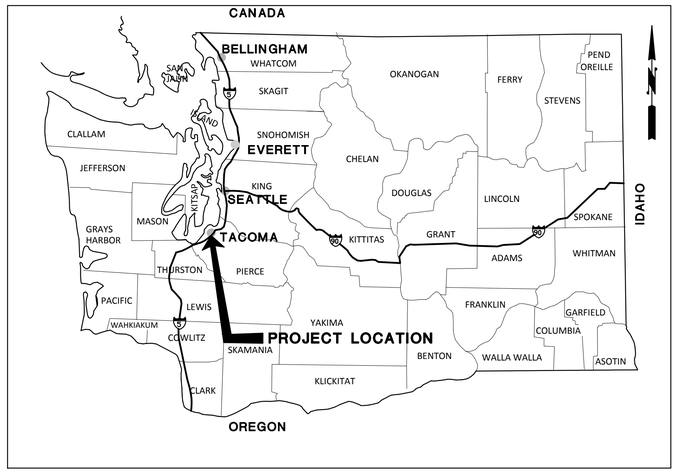
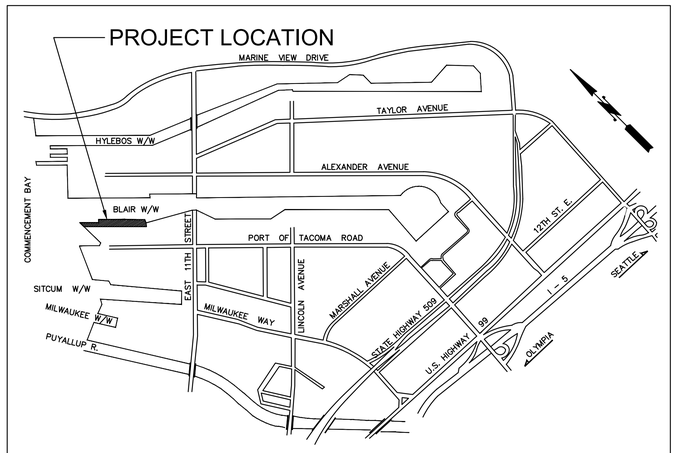


AREA MAP **WASHINGTON**

NO SCALE



VICINITY MAP **PORT OF TACOMA**

NO SCALE

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			TACOMA, WA 98421-2300

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PIER 3 UPGRADE

COVER SHEET

6502
G1.0
SHEET 1 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN
		SECTION: 27	

BINDING EDGE

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BINDING EDGE

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SYMBOLS:

PROJECT NORTH / NORTH — NORTH ARROW

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

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

W — WATER

W — EXIST WATER

FW — FIRE WATER

FW — EXIST FIRE WATER

SS — SANITARY SEWER

SS — EXIST SANITARY SEWER

X X — NEW/TEMPORARY SECURITY FENCE

X X — EXIST SECURITY FENCE

SD — STORM DRAIN

SD — EXIST STORM DRAIN

E — ELECTRICAL

E — EXIST ELECTRICAL

BP — EXIST ELECTRICAL CONDUIT

E(G) — EXIST CRANE RAIL GROUNDING

N XXXXX.XX / E XXXXX.XX — COORDINATES

XX — BENT OR GRID NO.

SURVEY CONTROL MONUMENT, SURVEY CONTROL POINT

WORK POINT

PROJECT CONTROL POINT

PROJECT CONTROL POINT

EXIST HIGH MAST LIGHTPOLE

EXIST STORM DRAIN INLET

EXIST STORM WATER VAULT

EXIST THRUST BLOCK

EXIST OUTFALL

EXIST FIRE HYDRANT

EXIST ELECTRICAL VAULT

TREATED TIMBER FENDER PILE

EXIST 24" OCT PC/PS CONC PILE

EXIST 24"Ø STEEL PIPE PILE, PLUMB

EXIST 24"Ø STEEL PIPE PILE, BATTERED

EXIST 16 1/2" OCT PC/PS CONC PILE, PLUMB

EXIST 16 1/2" OCT PC/PS CONC PILE, BATTERED

EXIST CRANE STOP

EXIST CRANE POWER VAULT

EXIST FENDER

EXIST BOLLARD

EXIST PIN SOCKETS

EXIST WATER VAULT

EXIST POWER VAULT

EXIST ELECTRICAL PULL BOX

EXIST CRANE TIE DOWN

24" OCT PC/PS CONC PILE, PLUMB

CRANE POWER VAULT

SHORE POWER VAULT

CRANE STOP

FENDER ASSEMBLY

200-TON BOLLARD

100-TON BOLLARD

LADDER

WATER VAULT

480V VAULT

PIN SOCKET

CRANE TIE DOWNS

XX.XX / -XX.X — PILE CUT-OFF ELEVATION / MIN PILE TIP ELEVATION

INLET PROTECTION

SILT FENCE

FLOATING DEBRIS BOOM

CONTRACTOR INGRESS/EGRESS ROUTE

TEMP FENCE W/ JERSEY BARRIERS

HIGH MAST LIGHT POLE

DEMOLITION LIMITS

EPOXY COATED REINFROCEMENT

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)
EA	EACH
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
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
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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NOTES:

GENERAL

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. SEE THE SPECIFICATIONS FOR AVAILABLE RECORD DRAWINGS AND REFERENCE DOCUMENTS.

2. THE ADJACENT TERMINAL (PIER 4) WILL BE IN OPERATION DURING ALL PHASES OF CONSTRUCTION. 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.

   THE PROJECT SITE IS LOCATED ALONG AN ACTIVE SHIPPING CHANNEL. AT NO TIME SHALL THE CONTRACTOR OBSTRUCT OR HINDER SHIPPING ACTIVITIES WITHIN THE CHANNEL. ALL WATER BORNE CONSTRUCTION EQUIPMENT SHALL BE MOORED OUT OF THE SHIPPING CHANNEL. NO MOORING LINES OR ANCHORS SHALL BE PLACED WITHIN THE CHANNEL.

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, SEE SPECIFICATIONS ALSO.

4. LOCATIONS OF EXISTING UTILITIES SHOWN HEREIN HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN, AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THESE PLANS. SEE THE SPECIFICATIONS FOR AVAILABLE RECORD DRAWINGS AND REFERENCE DOCUMENTS.

5. THE CONTRACTOR SHALL USE A UTILITY LOCATION SERVICE FAMILIAR WITH THE SITE. DOCUMENTATION OF ALL LOCATES SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION. INFORM THE ENGINEER OF ANY POTENTIAL CONFLICTS OR INTERFERENCES FOR RESOLUTION PRIOR TO PERFORMING EXCAVATIONS.

6. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY SEDIMENTATION AND EROSION CONTROL (TESC) FACILITIES TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE NATURAL OR PIPED DRAINAGE SYSTEM. REFER TO THE APPLICABLE DRAWINGS AND THE SPECIFICATIONS FOR PLANS AND DETAILS THAT DESCRIBE THE MINIMUM TESC FEATURES REQUIRED.

   AS CONSTRUCTION PROGRESSES AND SEASONAL CONDITIONS DICTATE, THE CONTRACTOR SHALL REVISE TESC FACILITIES AND CONFIGURATIONS AS NECESSARY TO ENSURE COMPLETE SILTATION CONTROL AND THAT NO SEDIMENT LADEN WATER ENTERS THE NATURAL OR PIPED DRAINAGE SYSTEM.

   DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY ITS ACTIVITIES AND TO PROVIDE ADDITIONAL TESC FACILITIES THAT MAY BE NEEDED TO PROTECT THE SITE, ADJACENT LAND AND EXISTING DRAINAGE FEATURES. REMOVE TESC FACILITIES AT COMPLETION OF THE PROJECT.

7. THE CONTRACTOR SHALL ENSURE NO DEMOLITION, CONSTRUCTION, OR OTHER DEBRIS FALLS TO THE SLOPE OR IN THE WATER. THE CONTRACTOR SHALL IMMEDIATELY REMOVE ALL DEBRIS THAT INADVERTENTLY FALLS ON THE SLOPE OR IN THE WATER ON AN ONGOING BASIS. SEE ADDITIONAL NOTES UNDER DEMOLITION AND THE SPECIFICATIONS.

8. PIER BENT NUMBERING SYSTEM SHALL BE AS SHOWN ON DWGS S3.0 TO S3.4. BENT CENTERLINES SHALL BE DEFINED BY THE CENTER OF THE EXIST STAGE I PILECAP AT FACE OF PIER

GENERAL CONT.

8. THE CONTRACTOR SHALL SUPPLY, INSTALL, AND MAINTAIN AT ALL TIMES FLOATING DEBRIS BOOMS AROUND ALL ACTIVE WORK AREAS OVER THE SLOPE AND IN OR OVER THE WATER.

9. THE CONTRACTOR SHALL KEEP ALL ON-SITE PROJECT AREAS CLEAN AT ALL TIMES BY SWEEPING. WASHING AND/OR USE OF A WATER TRUCK TO CLEAN PAVED AREAS ARE/IS NOT ALLOWED.

10. ALL EXISTING FEATURES AND PAVED SURFACES, INCLUDING TERMINAL YARDS, ROADWAYS, SIDEWALKS, FENCES, AND CURBS DESIGNATED TO REMAIN THAT ARE DAMAGED, AS DETERMINED BY THE ENGINEER, DURING CONSTRUCTION, SHALL BE REPAIRED BY THE CONTRACTOR AT ITS OWN EXPENSE.

11. THE CONTRACTOR SHALL DISPOSE OF EXCESS OR UNSUITABLE MATERIALS AS INDICATED IN THE SPECIFICATIONS. SEE SPECIFICATIONS FOR ITEMS TO BE SALVAGED.

12. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS ASSOCIATED WITH NOTIFICATIONS OF UTILITY OUTAGES. THE CONTRACTOR SHALL COORDINATE AND ARRANGE FOR ALL UTILITY CONNECTIONS, UTILITY RELOCATIONS AND/OR SERVICE INTERRUPTIONS WITH ENGINEER, APPROPRIATE UTILITY OWNER AND WITH THE CITY OF TACOMA. CONNECTIONS TO EXISTING PUBLIC UTILITIES SHALL BE MADE PER CITY OR TACOMA POWER REQUIREMENTS. EXISTING UTILITY LINES IN SERVICE WHICH ARE DAMAGED DUE TO CONSTRUCTION WORK SHALL BE REPAIRED AT CONTRACTORS'S EXPENSE AND INSPECTED AND ACCEPTED BY UTILITY OWNER'S REPRESENTATIVE PRIOR TO BACKFILLING.

13. CONTRACTOR AREAS FOR STAGING, LAYDOWN, STORAGE OF MATERIALS AND EQUIPMENT SHALL BE CONFINED TO THE PROJECT SITE, AS SHOWN ON DWG G5.0. REFER TO SECTION 01 14 00 WORK RESTRICTIONS IN THE SPECIFICATIONS FOR ADDITIONAL SITE ACCESS INFORMATION. AT NO TIME SHALL CONTRACTOR EQUIPMENT, MATERIAL OR PERSONNEL ENTER THE SLIP 5 MITIGATION AREA.

14. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THE ADEQUACY OF EXISTING STRUCTURES AND UTILITIES TO SUPPORT CONSTRUCTION EQUIPMENT AND LOADS.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL INSTALL AND MAINTAIN SHORING AND BRACING NECESSARY TO PROTECT WORKERS, UTILITIES AND OTHER IMPROVEMENTS AND EXCAVATIONS AGAINST LOSS OF GROUND, ROCKS, RIPRAP, GRAVELS, OR CAVING EMBANKMENTS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVAL OF TEMPORARY SHORING AND BRACING.

    EXISTING CONCRETE PILES THAT ARE TO BE REINCORPORATED INTO STRUCTURE SHALL BE LATERALLY BRACED PRIOR TO SAW CUTTING AND RELEASE AT TOP OF PILE. BRACING SHALL REMAIN IN PLACE UNTIL STAGE II CONCRETE ABOVE PILE HAS CURED FOR 14 DAYS.

16. A GEOTECHNICAL REPORT PREPARED BY GEOENGINEERS, DATED JANUARY 25, 2013, IS INCLUDED IN THE SPECIFICATIONS. THE CONTRACTOR SHALL READ AND BE THOROUGHLY FAMILIAR WITH THE CONTENTS THEREOF.

17. 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.

CIVIL

1. THE WASHINGTON STATE 2012 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.

2. ALL PIPING, FITTINGS & SUPPORTS SHALL CONFORM TO AMERICAN WATER WORKS ASSOCIATION (AWWA) GUIDELINES, AND SHALL BE NSF APPROVED.

3. FILL MATERIAL SHALL COMPLY WITH CONTRACT DOCUMENTS AND SHALL BE APPROVED BY THE ENGINEER.

4. SOILS IN THE SLIP 1 NCD BOUNDARY, AS DEPICTED ON DWG G5.0, MAY BE CONTAMINATED. THE CONTRACTOR SHALL COMPLY WITH APPLICABLE SECTIONS OF THE SPECIFICATIONS DURING DEMOLITION AND EXCAVATION OPERATIONS.

5. THERE SHALL BE NO CHANGE IN TOPO FOR THIS PROJECT. TOP OF FINISH GRADE SHALL EQUAL EXISTING GRADE. PAVEMENT PATCH WORK IS DISTURBED AREAS THAT IS REMOVED SHALL LATER BE REPLACED WITH SAME SURFACE ELEVATIONS. PERFORM SURVEYS AS REQ'D TO ENSURE TOPO REMAINS THE SAME. SURFACE IS FLUSH WITH TOP OF CRANE RAILS AND SLOPES DOWN TO DECK DRAINS THAT CREATE A VALLEY BETWEEN THE RAILS ALONG THE ALIGNMENT OF THE DRAINS. PAVEMENT DEMO ON THE PIER AND ADJACENT AREAS IS SHOWN ON THE STRUCTURAL DRAWINGS. LANDSIDE PAVEMENT DEMO FOR ELECTRICAL WORK IS NOT SHOWN. REFER TO TRENCH CROSS-SECTIONS.

6. PAVEMENT SECTIONS TO BE USED FOR ALL LANDSIDE REPLACEMENT PAVEMENT (AREAS WEST OF THE BULKHEAD STRUCTURE) SHALL BE 10 INCHES OF COMPACTED HMA OVER 12 INCHES OF COMPACTED BASE COURSE AGGREGATE OVER COMPACTED SELECT BACKFILL MATERIAL.

7. PAVEMENT SECTION TO BE USED FOR ALL PIER REPLACEMENT PAVEMENT SHALL BE 6 INCHES OF COMPACTED HMA OVER COMPACTED BALLAST (BASE COURSE AGGREGATE). ONLY BALLAST MATERIAL SHALL BE USED BETWEEN TOP OF CONCRETE AND HMA PAVEMENT UNLESS OTHERWISE SHOWN ON DRAWINGS.

DEMOLITION

1. DEMOLITION DRAWINGS ARE INTENDED TO SHOW OVERALL SCOPE AND COMPLEXITY OF DEMOLITION. IN ADDITION, THE CONTRACTOR SHALL PERFORM ALL OTHER INCIDENTAL DEMOLITION REQUIRED TO COMPLETE THE WORK.

2. PRIOR TO COMMENCING DEMOLITION OPERATIONS, IMPLEMENT EROSION AND SEDIMENT CONTROL PLAN.

3. PRIOR TO DEMOLITION, THE CONTRACTOR SHALL SAWCUT WHERE NOTED OR OTHERWISE PROVIDE A SMOOTH CLEAN CUT FROM ALL CONNECTING LINKS TO THE REMAINING STRUCTURES OR ADJACENT YARD AREAS.

4. THE CONTRACTOR SHALL CONTAIN THE DEMOLITION WITHIN THE LIMITS DESIGNATED, TO PREVENT DAMAGE TO EXISTING STRUCTURES, UTILITIES, OR FACILITIES, AND KEEP ALL DEBRIS FROM FALLING INTO THE WATER OR ON THE SLOPE. THE CONTRACTOR SHALL PROVIDE FLOATS AND FALSEWORK TO CATCH ALL FALLING DEBRIS IN OVER-WATER AREAS.

5. 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 IT'S OWN EXPENSE, TO THE PREDISTURBED CONDITION AS DIRECTED BY THE ENGINEER.

6. ALL DEMOLITION MATERIAL, EXCEPT AS NOTED AND/OR SPECIFIED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR.

7. FOR BASIS OF BID FOR SAW-CUTTING AND FOR PAVEMENT DEMO, CONTRACTOR SHALL ASSUME EXISTING ASPHALT PAVEMENT THICKNESS ON PIER IS NOMINALLY 4-INCHES THICK, 6-INCHES WHERE THERE IS CONCRETE STRUCTURE DIRECTLY BELOW PAVEMENT, AND ASSUME EXISTING ASPHALT PAVEMENT THICKNESS LANDSIDE IS 10 INCHES.

8. SEE ELECTRICAL PLANS FOR DEMOLITION OF ELECTRICAL UTILITIES.

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TOWNSHIP:	21 N	RANGE:	3 E
DAT-HRZ:	NAD 83-07	VERT:	NOS TIDAL (MLLW = 0.0)
PARCEL:	27	DRAWING SCALE:	AS SHOWN
SECTION:	27		

PIER 3 UPGRADE

GENERAL NOTES

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SHEET 4 OF 129

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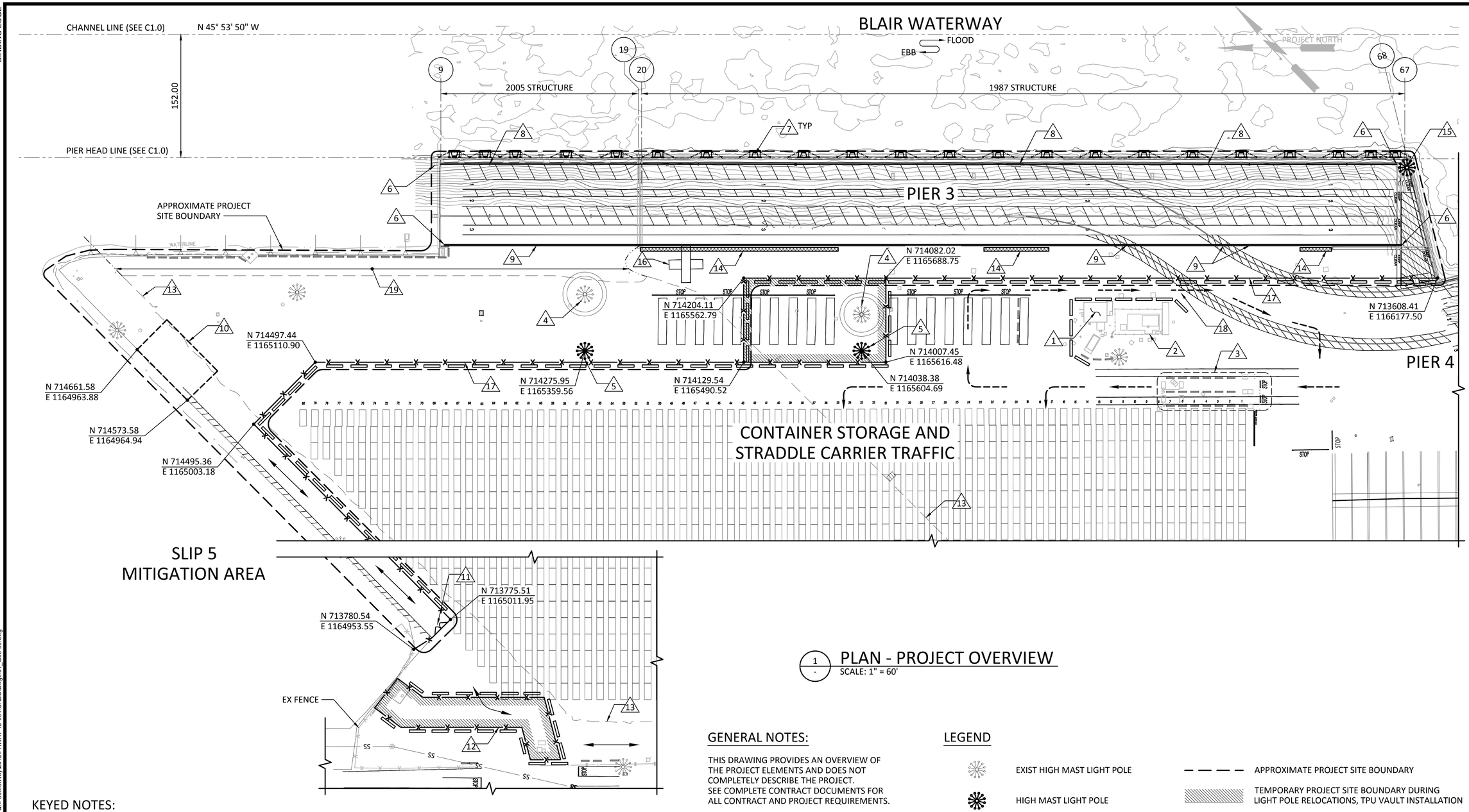
BINDING EDGE



1 PLAN - PROJECT OVERVIEW
SCALE: 1" = 60'

KEYED NOTES:

1. EXIST MARINE BUILDING, TO BE REMOVED BY OTHERS AFTER THIS CONTRACT
2. TACOMA POWER WILL DE-ENERGIZE EXIST SUBSTATION PRIOR TO NTP. CONTRACTOR TO REMOVE SUBSTATION, SEE ELEC DWGS.
3. EXIST RADIATION PORTAL MONITOR (RPM), TO REMAIN IN OPERATION
4. EXIST HIGH MAST LIGHT POLE, TO BE RELOCATED
5. RELOCATED HIGH MAST LIGHT POLE WITH COORDINATES
6. CRANE STOP
7. FENDER ASSEMBLY
8. WATERSIDE CRANE RAIL, CRANE RAIL PAD, SWITCH, CRANE BEAM, APPURTENANCES, AND PRESTRESSED PILES. PRESTRESSED PILES IN 1987 STRUCTURE ONLY
9. LANDSIDE CRANE RAIL, CRANE RAIL PAD, SWITCH, AND FROGS
10. NEW SUBSTATION, SEE ELECTRICAL DRAWINGS
11. CONTRACTOR GATE, OPENS INWARDS, OR USE ROLL GATE.
12. TPU VAULT AREA, SEE ELECTRICAL DRAWINGS. SIZE AND ACCESS TO THIS WORK AREA SHALL BE LIMITED DURATION DETERMINED BY COORDINATION WITH THE ENGINEER AND TENANT.
13. APPROXIMATE EXIST SLIP 1 NCD FACILITY BOUNDARY AT OHW
14. BULKHEAD SUPPORT BEAM AND PRESTRESSED CONCRETE PILES, TYP
15. EXIST HIGH MAST LIGHT POLE, TO BE REMOVED AND REINSTALLED
16. SPILL CONTAINMENT AREA AND UNDERGROUND VAULT
17. TEMPORARY FENCE WITH JERSEY BARRIERS OR ECOLOGY BLOCKS
18. PROVIDE AND MAINTAIN 20-FOOT WIDE LANE FOR TERMINAL TRAFFIC
19. APPROXIMATE EXIST SLIP 1 NCD FACILITY BERM

GENERAL NOTES:

THIS DRAWING PROVIDES AN OVERVIEW OF THE PROJECT ELEMENTS AND DOES NOT COMPLETELY DESCRIBE THE PROJECT. SEE COMPLETE CONTRACT DOCUMENTS FOR ALL CONTRACT AND PROJECT REQUIREMENTS.

LEGEND

- EXIST HIGH MAST LIGHT POLE
- HIGH MAST LIGHT POLE
- FENDER ASSEMBLY
- TEMPORARY FENCE WITH JERSEY BARRIERS OR ECOLOGY BLOCKS
- SLIP 1 NCD BOUNDARY, SEE SPECIFICATIONS FOR EARTHWORK REQUIREMENTS
- APPROXIMATE EDGE OF SLIP 1 NCD FACILITY BERM
- APPROXIMATE PROJECT SITE BOUNDARY
- TEMPORARY PROJECT SITE BOUNDARY DURING LIGHT POLE RELOCATIONS, TPU VAULT INSTALLATION
- TYPICAL TERMINAL TRAFFIC NEAR RPM STATION
- CONTRACTOR INGRESS/EGRESS
- JERSEY BARRIERS OR ECOLOGY BLOCKS (SPACE WITH 6-FT GAP, MAX)
- XX EXISTING BENT NUMBER

1" = 60' scale: 60 0 60 120 feet

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PIER 3 UPGRADE

PROJECT OVERVIEW PLAN

6502
G5.0
SHEET 5 OF 129

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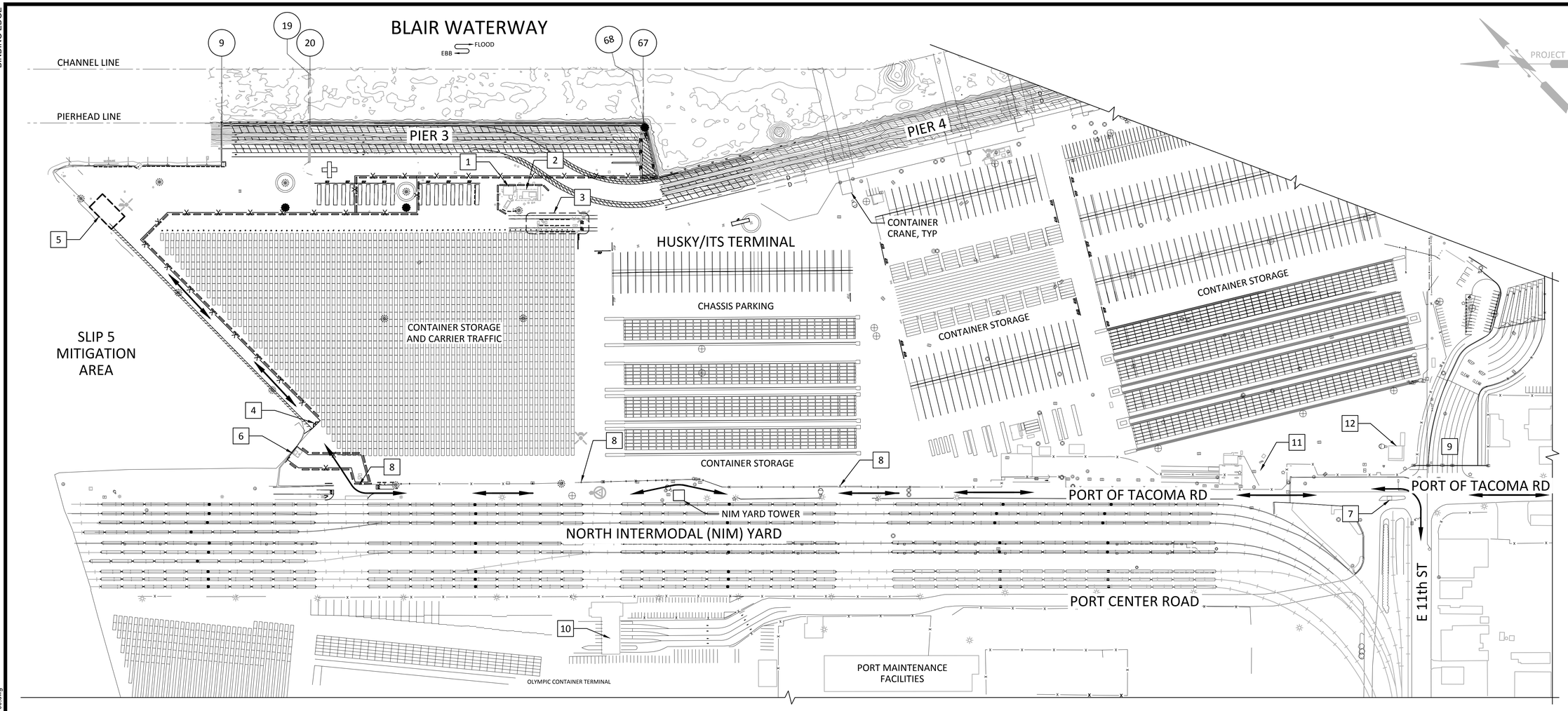

1 - SITE ACCESS
SCALE: 1" = 150'

KEYED NOTES:

1. EXIST MARINE BUILDING
2. EXIST SUBSTATION
3. EXIST RADIATION PORTAL MONITOR (RPM)
4. CONTRACTOR GATE
5. NEW SUBSTATION
6. TPU VAULT AREA
7. EXIST PORT SECURITY CHECKPOINT AND GATE (TWIC REQ'D)
8. EXIST NIM YARD ACCESS GATES, SEE NOTE 5
9. HUSKY/ITS TERMINAL ACCESS AND SECURITY CHECKPOINT
10. EXISTING TERMINAL 7 GATE
11. TPU CONDUIT REPAIR
12. TPU POLE AND SWITCH

GENERAL NOTES:

1. SEE G-SERIES DWGS FOR GENERAL NOTES, AND OTHER INFORMATION SUCH AS PROJECT OVERVIEW, SITE ACCESS, CONSTRUCTION STAGING, SURVEY CONTROL, ETC.
2. SEE C-SERIES DWGS FOR CIVIL WORK.
3. SEE S-SERIES DWGS FOR DEMOLITION AND STRUCTURAL WORK.
4. SEE E-SERIES DWGS FOR ELECTRICAL WORK.
5. PROVIDE FLAGGERS WHERE CONTRACTOR INGRESS/EGRESS ROUTE CROSSES NIM YARD OR OTHER ACCESS GATES. STRADDLE CARRIERS AND/OR TERMINAL TRAFFIC SHALL HAVE RIGHT-OF-WAY AT ALL TIMES. REFER TO THE TRAFFIC CONTROL REQUIREMENTS IN SPECIFICATION SECTION 01 10 00 SUMMARY.

LEGEND

- TEMPORARY FENCE WITH JERSEY BARRIERS OR ECOLOGY BLOCKS
- JERSEY BARRIERS OR ECOLOGY BLOCKS
- CONTRACTOR INGRESS/EGRESS
- XX — EXISTING BENT NUMBER
- EXISTING FENCE

1" = 150' scale: 150 0 150 300 feet

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PIER 3 UPGRADE
ACCESS PLAN

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G6.0
SHEET 6 OF 129

STRUCTURAL NOTES

CODES AND STANDARDS

1. ALL METHODS AND MATERIALS SHALL CONFORM TO BOTH THE INTERNATIONAL BUILDING CODE (IBC) (2009 EDITION) AND THE INTERNATIONAL EXISTING BUILDING CODE (IEBC) (2009 EDITION) AS AMENDED AND ADOPTED BY THE CITY OF TACOMA (TMC).
2. REINFORCED CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301) AND "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318).
3. STRUCTURAL AND MISCELLANEOUS STEEL FABRICATION AND ERECTION THEREOF SHALL CONFORM TO THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (AISC 303) AND "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS" (AISC 360).
4. WELDING OF STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO "STRUCTURAL WELDING CODE - STEEL" (AWS D1.1).
5. WELDING OF REINFORCING STEEL SHALL CONFORM TO "STRUCTURAL WELDING CODE - REINFORCING STEEL" (AWS D1.4).
6. ALL METHODS AND MATERIALS SHALL CONFORM TO THE WASHINGTON STATE 2012 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PREPARED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) AND THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA) WASHINGTON STATE CHAPTER.

GENERAL

1. THESE NOTES CONTAIN GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL VERIFY INFORMATION PROVIDED WITH THE SPECIFICATIONS AND OTHER DOCUMENTS AND BRING ANY CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE BEGINNING AFFECTED WORK. THE ENGINEER WILL RESOLVE ANY SUCH CONFLICT.
2. ALL DIMENSIONS AND DETAILS SHALL 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 THE ENGINEER AND WILL BE REVIEWED BY THE ENGINEER PRIOR TO FABRICATION.
4. ALL ELEVATIONS REFER TO MEAN LOWER LOW WATER (MLLW) EL 0.00 FT AS DEFINED BY THE U.S. ARMY CORPS OF ENGINEERS. SEE DRAWING C1.0 FOR HORIZONTAL AND VERTICAL SURVEY CONTROL.
5. EXISTING FEATURES SHOWN ON THESE DRAWINGS ARE BASED ON AS-BUILT DATA AND RECENT SURVEYS. THE LOCATIONS OF EXISTING UTILITIES AND OTHER FEATURES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO PERFORMING THE ASSOCIATED WORK. USE A LOCATOR SERVICE AND EXCAVATE TO EXPOSE UTILITY LINES.
6. THE CONTRACTOR SHALL BRING ANY CONFLICTS BETWEEN EXISTING UTILITIES AND THE WORK TO THE ENGINEER'S ATTENTION PRIOR TO START OF CONSTRUCTION ON THE AFFECTED WORK.
7. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS TO EXISTING FEATURES, STRUCTURES, AND UTILITIES THAT ARE TO REMAIN, SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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 SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A 615, GRADE 60, UNLESS NOTED OTHERWISE. SEE SPECIFICATIONS.
   - C. ALL DOWELS FOR PILING SHALL BE OF WELDABLE QUALITY AND SHALL CONFORM TO ASTM A 706, GRADE 60.
   - D. EPOXY COATED REINFORCEMENT SHALL CONFORM TO ASTM A 934.
   - E. WIRE FOR SPIRAL REINFORCEMENT SHALL CONFORM TO ASTM A 82.
   - F. SEE SPECIFICATIONS FOR HIGH-STRENGTH BAR, WELDED HEADED STUD, MECHANICAL COUPLER, AND HEADED REINFORCEMENT REQUIREMENTS.
   - G. SPLICING OF LONGITUDINAL REINFORCEMENT OVER 40 FT IN LENGTH, EXCEPT AS SPECIFICALLY NOTED ON THE DRAWINGS, WILL BE PERMITTED UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" (ACI 318) STAGGERED THREE LAP LENGTHS WITH NO MORE THAN 50% OF THE BARS BEING SPLICED AT ANY ONE LOCATION.
   - H. PROVIDE CORNER BARS AT ALL CORNERS. CORNER BARS SHALL MATCH THE NUMBER/SPACING AND DIAMETER OF ALL HORIZONTAL REINFORCEMENT AT THE CORNER. TERMINATED STRAIGHT BARS SHALL EXTEND THE FULL AVAILABLE LENGTH INTO ADJOINING MEMBERS. SPLICE CORNER BAR TO TERMINATED STRAIGHT BAR WITH MINIMUM SPLICE LENGTH BELOW.
   - I. SPLICES SHALL CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED

SCHEDULE OF LAP SPLICE LENGTHS (f'c = 5000 PSI)		
BAR SIZE	TOP BARS	BOTTOM BARS
4	2'-5"	1'-10"
5	3'-0"	2'-4"
6	3'-7"	2'-9"
7	5'-3"	4'-0"
8	6'-0"	4'-7"
9	6'-9"	5'-2"
10	7'-6"	5'-9"
11	8'-3"	6'-4"

NOTES:

1. VALUES ARE BASED ON CLASS "B" SPLICES (MAX OF 50% BAR SPLICED AT ONE LOCATION).
2. TOP BARS ARE DEFINED AS ANY HORIZONTAL BAR PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR.
3. INCREASE LAP SPLICE LENGTH OF EPOXY COATED REINFORCEMENT BY 50%.

   - J. DETAIL ALL REINFORCING STEEL IN ACCORDANCE WITH ACI 315, LATEST EDITION. ALL REINFORCING STEEL BENDS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. USE SEISMIC HOOK DETAILS FOR ALL TIES AND STIRRUPS UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
   - K. ALTERNATE ENDS OF HORIZONTAL TIES (CROSS TIES WITH 135 DEGREE HOOK AND 90 DEGREE HOOK) EXCEPT WHEN PLACED AGAINST HARDENED CONCRETE WHERE THE 90 DEGREE HOOK SHALL BE PLACED AT THE HARDENED CONCRETE FACE.

2. PRECAST CONCRETE — MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS
   - PRECAST PRESTRESSED CONCRETE PILES — 8000 PSI
3. CAST-IN-PLACE CONCRETE — MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS
   - A. UNLESS NOTED OTHERWISE — 5000 PSI
   - B. CONCRETE IN PILE BUILDUP — 6000 PSI
   - C. DRILLED SHAFTS — CLASS 4000W PER WSDOT
4. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4", UNLESS OTHERWISE NOTED.
5. CONSTRUCTION JOINTS SHALL BE PROVIDED ONLY AS NOTED ON THE DRAWINGS AND AS SPECIFICALLY PERMITTED BY THE ENGINEER. ROUGHEN EXISTING CONCRETE RECEIVING NEW CONCRETE TO A MINIMUM 1/4" AMPLITUDE IN ACCORDANCE WITH THE SPECIFICATIONS. CLEAN AND REMOVE LAITANCE, THEN DAMPEN FOR AT LEAST 12 HOURS BEFORE PLACING NEXT POUR.

GROUT, MORTAR, DOWEL ADHESIVE, AND CRACK REPAIRS

1. SEE SPECIFICATIONS.

MISCELLANEOUS STEEL

1. MISCELLANEOUS AND STRUCTURAL STEEL SHAPES AND PLATES, EXCEPT AS NOTED OTHERWISE, SHALL CONFORM TO THE SPECIFICATIONS.
2. BOLTS AND NUTS SHALL CONFORM TO ASTM A 307, UNLESS NOTED OTHERWISE.
3. ANCHOR BOLT OR ANCHOR RODS SHALL CONFORM TO ASTM F 1554, GRADE 55, UNLESS NOTED OTHERWISE.
4. FOR ITEMS TO BE COATED, GALVANIZED, OR GALVANIZED AND COATED, REFER TO THE SPECIFICATIONS. REPAIR DAMAGE TO COATINGS AND GALVANIZING IN ACCORDANCE WITH THE SPECIFICATIONS.
5. PROVIDE BLEED HOLES IN EMBEDDED PLATES AND SHAPES AT 24-IN. ON CENTER MAXIMUM.
6. ALL MISCELLANEOUS PIPE SHALL CONFORM TO ASTM A 53 GRADE B OR ASTM A 106 GRADE B OR C UNLESS NOTED OTHERWISE. PIPE BOLLARDS SHALL CONFORM TO ASTM A 106 GRADE C.

PILING

1. PILES SHALL BE DRIVEN TO THE REQUIRED TIP ELEVATIONS AND MINIMUM CAPACITIES INDICATED, SEE SPECIFICATIONS.

LOAD PATH

1. VERTICAL LOADS:
   LOADS ARE DISTRIBUTED THROUGH CONCRETE CRANE BEAMS AND BALLAST, BALLAST TO DECK SYSTEM, DECK SYSTEM TO PILE CAPS, PILE CAPS AND CRANE BEAMS TO PILES, PILES TO SOIL IN FRICTION AND END BEARING.
2. HORIZONTAL LOADS:
   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 SOIL FRICTION AGAINST THE BULKHEAD AND SHEET PILES.

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PIER 3 UPGRADE

STRUCTURAL NOTES
SHEET 1

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S1.0
SHEET 30 OF 129

BINDING EDGE

DESIGN CRITERIA

DESIGN LOADS:

1. UNIFORM LIVE LOAD ON PIER (MATCH EXISTING):

   A. 750 PSF ON ANY COMBINATION OF SPANS

   B. 2000 PSF AT HEAVY LOAD ZONE

2. CONCENTRATED LIVE LOAD (MATCH EXISTING):

   P = 100 KIPS, INCLUDING IMPACT
   WHEEL/OUTRIGGER TRANSVERSE SPACING > 8 FEET
   WHEEL/OUTRIGGER LONGITUDINAL SPACING > 18 FEET
   CONTACT PRESSURE: 100 PSI

3. CONTAINER STORAGE LOAD (MATCH EXISTING):

   100 KIPS ON 8x20 FT FOOTPRINT

4. BERTHING:

   A. VESSELS

      1. CONTAINER SHIP 1

LENGTH OVERALL (LOA):	1380 FEET
BEAM:	195 FEET
DRAFT:	50 FEET
DISPLACEMENT:	230,000 LT
APPROACH ANGLE:	6 DEGREES
PERPENDICULAR VELOCITY:	0.16 KNOTS (0.26 FT/S)

      2. CONTAINER SHIP 2

LENGTH OVERALL (LOA):	1200 FEET
BEAM:	160 FEET
DRAFT:	50 FEET
DISPLACEMENT:	180,000 LT
APPROACH ANGLE:	6 DEGREES
PERPENDICULAR VELOCITY:	0.16 KNOTS (0.26 FT/S)

      3. CONTAINER SHIP 3

LENGTH OVERALL (LOA):	1145 FEET
BEAM:	149 FEET
DRAFT:	45 FEET
DISPLACEMENT:	140,000 LT
APPROACH ANGLE:	6 DEGREES
PERPENDICULAR VELOCITY:	0.16 KNOTS (0.26 FT/S)

      4. CONTAINER SHIP 4

LENGTH OVERALL (LOA):	965 FEET
BEAM:	106 FEET
DRAFT:	40 FEET
DISPLACEMENT:	80,000 LT
APPROACH ANGLE:	10 DEGREES
PERPENDICULAR VELOCITY:	0.24 KNOTS (0.40 FT/S)

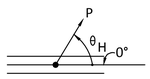
   B. FENDER REQUIREMENTS

      1. MINIMUM BERTHING ENERGY = 600 KIP-FT

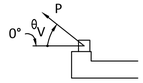
      2. MAXIMUM BERTHING REACTION = 300 KIPS

      3. VESSEL HULL REACTION PRESSURE ≤ 5.0 KSF

5. LINE PULL ON MOORING BOLLARDS:



PLAN



ELEVATION

LOCATION	LINE PULL P	RANGE OF HORIZONTAL ANGLE θ_H	RANGE OF VERTICAL ANGLE θ_V
EXIST BOLLARD (BENT 9 - 19)	150 TONS	0° TO 180°	0° TO 30°
BOLLARD (BENT 20 - 65)	100 TONS	0° TO 180°	0° TO 30°
BOLLARD (BENT 66 & 67)	200 TONS	0° TO 180°	0° TO 60°

6. CONTAINER CRANE LOADS:

   WHEEL LOADS ARE EXPRESSED AS EQUIVALENT UNIFORM DISTRIBUTION LOADS BASED ON EIGHT WHEELS PER CORNER SPACED AT 4'-9" ON CENTER.

   A. OPERATING SERVICE (KIPS/FT):

	WATER SIDE		LAND SIDE
CLop =	50	CLop =	40
Wcr =	1.0	Wcr =	1.0

   B. OVERLOAD SERVICE (KIPS/FT):

	WATER SIDE		LAND SIDE
CLov =	60	CLov =	50
LATG =	0.5	LATG =	0.5

   C. STOWED SERVICE (KIPS/FT):

	WATER SIDE		LAND SIDE
CLst =	50	CLst =	50
W =	2.5	W =	2.5

   D. EXTREME SERVICE (KIPS/FT):

	WATER SIDE		LAND SIDE
CLeq =	65	CLeq =	40
EQ =	5.5	EQ =	5.5

   E. PIN SOCKETS (HORIZONTAL LOAD):

   P = 150 KIPS PER SOCKET (SERVICE, LF = 1.6)

   F. CRANE STOPS (HORIZONTAL LOADS):

   P = 330 KIPS @ 4'-6" ABOVE RAIL (LF = 1.6)

   G. CRANE TIE-DOWNS (UPLIFT LOAD):

   P = 400 KIPS (SERVICE, LF = 1.6)

7. LOAD COMBINATIONS:

   PER TMC, LOAD COMBINATIONS ARE FROM THE 2009 IEBC AND 2009 IBC. VESSEL LOADS (BERTHING, MOORING) HAVE BEEN INCLUDED PER CHAPTER 31F OF 2010 CBC.

   LRFD (STRENGTH DESIGN & STRUCTURAL CAPACITY CHECK)

   U1 = 1.2D + 1.6L + 1.5CLop + 1.2B + 1.6W + 1.2C + 1.6H (OPERATING)

   U2 = 1.2D + 1.6L + 1.3CLst + 1.2B + 1.6Wst + 1.2C + 1.6H (STOWED, VESSEL NOT MOORED)

   U3 = 1.2D + 1.6L + 1.0CLov + 1.2B + 1.0LATG + 1.2C + 1.6H (OVERLOAD)

   U4 = 1.2D + 1.2CLd+ 1.2B + 1.6W + 1.2C + 1.6H + 1.6 BE (BERTHING)

   U5 = 1.2D + 1.6L + 1.2B + 1.6W + 1.5CLop + 1.2C + 1.6H + 1.6M (MOORING)

   U6 = 1.4(D+L+EQ) (EXTREME, 1987 STRUCTURE)

   U7 = 0.9D ± 1.4EQ (EXTREME, 1987 STRUCTURE)

   ASD (GEOTECHNICAL PILE CAPACITY & STRUCTURE SERVICEABILITY)

   S1 = 1.0D + 1.0L + 1.0CLop + 1.0B + 1.0W + 1.0C + 1.0H (OPERATING)

   S2 = 1.0D + 1.0L + 1.0CLst + 1.0B + 1.0Wst + 1.0C + 1.0H (STOWED, VESSEL NOT MOORED)

   S3 = 1.0D + 1.0L + 1.0CLov + 1.0B + 1.0LATG + 1.0C + 1.0H (OVERLOAD)

   S4 = 1.0D + 1.0CLd + 1.0B + 1.0W + 1.0C + 1.0H + 1.0BE (BERTHING)

   S5 = 1.0D + 1.0L + 1.0B + 1.0 W + 1.0CLop + 1.0C + 1.0H + 1.0M (MOORING)

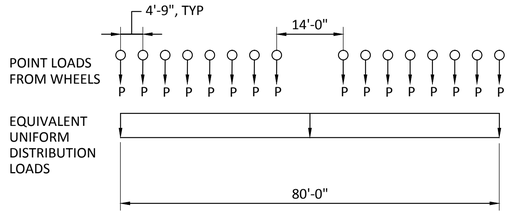
   S6 = D + L + EQ (1987 STRUCTURE)

   S7 = 0.85D ± EQ (1987 STRUCTURE)

   LEGEND:

   B - BOUYANCY LOAD
   BE - BERTHING LOAD
   C - CURRENT LOAD
   D - STRUCTURE DEAD LOAD
   CLd - CONTAINER CRANE DEAD LOAD
   EQ - EARTHQUAKE LOAD (INCLUDES CLeq)
   H - SOIL LOAD
   L - UNIFORM LIVE LOAD OR CONCENTRATED LIVE LOAD
   LATG - LATERAL GANTRY LOAD
   CLop - CONTAINER CRANE OPERATING LOAD (INCLUDES CLd)
   CLov - CONTAINER CRANE OVERLOAD (INCLUDES CLd)
   CLst - CONTAINER CRANE LOAD UNDER STOWED (WIND) CONDITIONS (INCLUDES CLd)
   M - MOORING LOAD
   W - WIND LOAD (55 MPH)
   Wst - STOWED WIND LOAD (85 MPH)
   CLeq - CONTAINER CRANE DEAD LOAD INCLUDING VERTICAL EQ

8. CONTAINER CRANE WHEEL LOAD DIAGRAM



9. SPECIAL INSPECTION:

   A. SPECIAL INSPECTION WILL BE PROVIDED BY THE PORT. COORDINATE SPECIAL INSPECTION WITH THE ENGINEER.

   B. THE ELEMENTS REQUIRING SPECIAL INSPECTION PER IEBC & IBC CHAPTER 17 ARE AS FOLLOWS:

      1. CONCRETE
      2. BOLTS AND ANCHORS INSTALLED IN CONCRETE
      3. DRILLED-IN DOWELS
      4. REINFORCING STEEL
      5. STRUCTURAL WELDING
      6. PILING

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PIER 3 UPGRADE

STRUCTURAL NOTES
SHEET 2

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

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SHEET 31 OF 129

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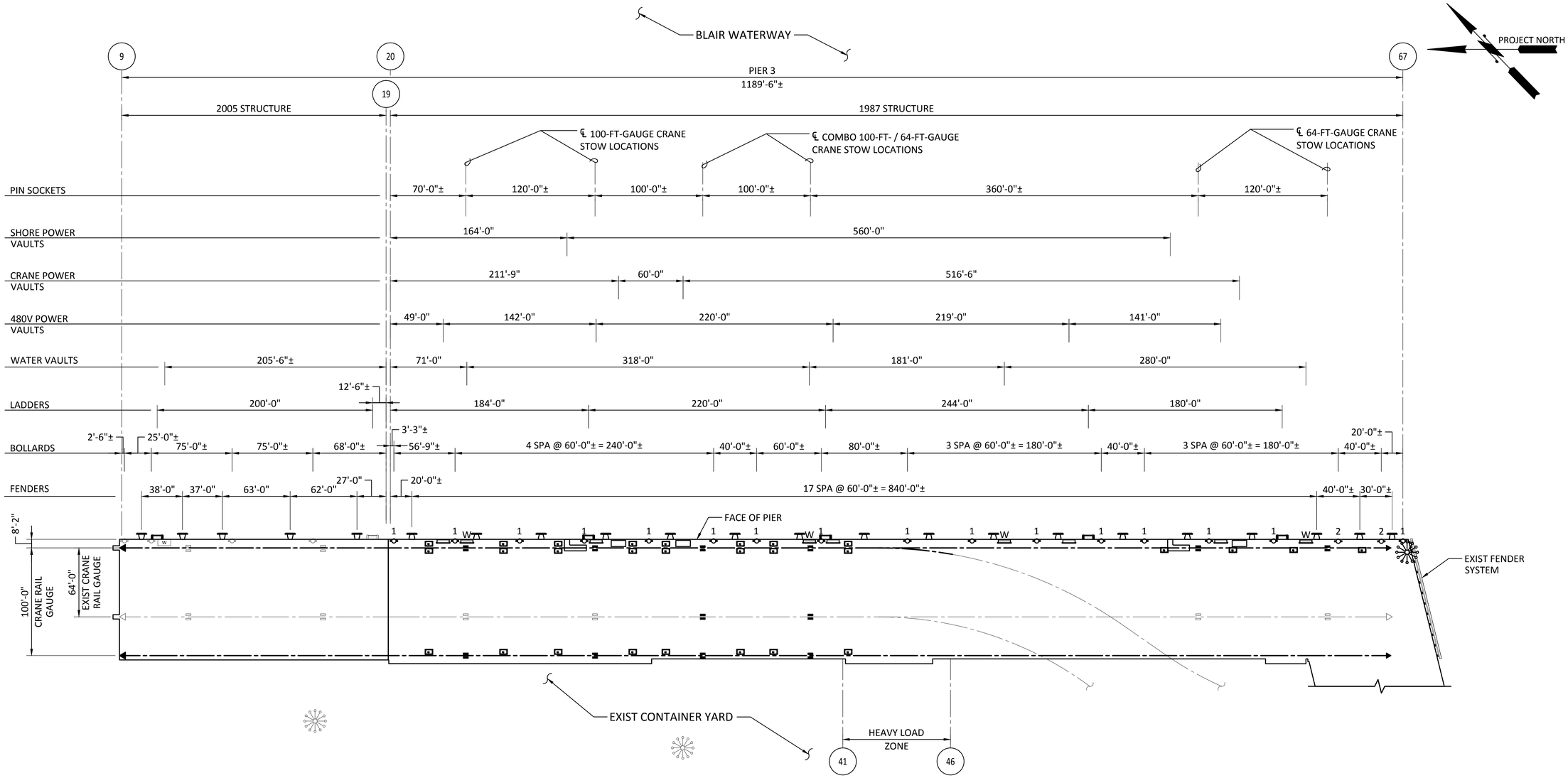

LEGEND

- EXIST 150 TON BOLLARD
- EXIST CRANE STOP
- EXIST PIN SOCKET
- EXIST CRANE POWER VAULT
- EXIST LADDER
- EXIST WATER SERVICE VAULT
- EXIST ℄ CRANE RAIL
- EXIST HIGH MAST LIGHTPOLE, SEE 6/S2.7
- 100 TON BOLLARD, SEE S19.0
- 200 TON BOLLARD, SEE S19.0
- FENDERS, SEE S13.0 & S13.1
- CRANE STOP, SEE 19.2 & S19.3
- LADDER, SEE S19.4
- SHORE POWER VAULT, SEE S16.0
- ℄ CRANE RAIL, SEE S5.0 & S12.0
- CRANE POWER VAULT, SEE S14.0
- PIN SOCKET, SEE S18.3
- CRANE TIE DOWN, SEE S18.0
- WATER UTILITY VAULT, SEE S15.0
- 480V UTILITY VAULT, SEE S15.0
- RELOCATED HIGH MAST LIGHTPOLE, SEE DWG S19.5

1/- PLAN - SURFACE FEATURES
SCALE: 1" = 50'

1" = 50' scale 50 0 50 100 feet

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SURFACE FEATURES PLAN

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

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PILE NO	MUDLINE EL (ft)	FINAL TIP EL (ft)	ULT CAPACITY (Kips)
1**	-40	-114.5	950
2**	-40	-114.5	850
3	-40	-114.5	850
4	-40	-114	1000
5*	-40	-114	1000
6*	-40	-114	975
7	-40	-114	900
8	-40	-113	925
9	-40	-114	875
10	-40	-114	975
11	-40	-114	925
12	-40	-114	950
13	-40	-114	875
14	-40	-114	950
15**	-40	-114	875
16	-40	-114	975
17**	-40	-114.5	925
18	-40	-114.5	825
19**	-40	-114.5	950
20	-40	-114.5	825
21	-40	-114.5	950
22	-40	-114.5	950
23**	-43	-114	950
24	-43	-114.5	925
25	-43	-114.5	925
26	-43	-114.5	975
27	-43	-114.5	950
28	-43	-115	950
29	-43	-115	950
30	-43	-115	950
31	-43	-115	950
32	-43	-115	950
33**	-43	-115.5	850
34	-43	-115	900
35	-44	-115	875
36	-44	-115	950
37	-43	-115	875
38	-42.5	-115	900
39	-41	-114.5	825
40**	-42	-114.5	800
41	-45	-115	875
42	-41	-115	875
43	-42	-115	800
44	-41	-115.5	750
45	-40	-115	700
46	-40	-114	675
47*	-40	-114	700

PILE NO	MUDLINE EL (ft)	FINAL TIP EL (ft)	ULT CAPACITY (Kips)
48	-40	-116	825
49	-40	-115.5	850
50	-39	-114.5	825
51	-42.5	-115	800
52	-39	-114.5	800
53	-39	-115	875
54	-39	-114.5	750
55	-39	-114.5	850
56	-39	-114.5	825
57	-39	-114.5	775
58	-41	-114.5	850
59	-41	-114.5	825
60	-41	-114.5	775
61**	-41	-115	725
62	-43	-113.5	725
63	-42.5	-115	850
64	-43	-115	850
65	-42	-115	850
66	-41	-114.5	850
67	-42	-113.5	725
68	-41	-116	800
69	-42	-115.5	850
70	-42	-115	825
71	-41	-115	850
72	-42	-114.5	775
73	-42	-115	950
74	-41	-114.5	950
75**	-40	-115	900
76	-42	-114.5	975
77	-42	-115.5	725
78	-39	-115	800
79	-40	-114.5	800
80	-42	-111	800
81	-42	-114.5	750
82	-39	-114.5	775
83	-39	-114.5	775
84	-38	-110.5	775
85*	-40	-114.5	810
86	-40	-114.5	825
87	-42	-114.5	850
88	-42	-114.5	850
89	-35	-103.5	800
90	-35	-115	800
91	-34	-115	800
92	-36	-114.5	800
93	-36	-114.5	700
94	-37	-114.5	675

PILE NO	MUDLINE EL (ft)	FINAL TIP EL (ft)	ULT CAPACITY (Kips)
95	-31.5	-118.5	900
96**	-29.5	-119.5	775
97	-13	-110	975
98	-15	-111	875
99	-8.5	-118	750
100	-7.5	-118	725
101	-0.5	-119	825
102	-0.5	-119	750
103	7	-75.5	1150
104*	7	-75.5	1075
105	7	-75.5	1150
106	7	-75.5	1150
107	14	-75.5	790
108	14	-75.5	790
109	14	-75.5	790
110	14	-75.5	790
111*	14	-75.5	790
112	14	-75.5	790
113	14	-75.5	790
114	14	-75.5	790
115	14	-75.5	960
116	14	-75.5	885
117	14	-75.5	985
118	14	-75.5	885
119	14	-75.5	935
120	14	-75.5	1010
121	14	-75.5	1010
122	14	-75.5	885
123	14	-75.5	960
124	14	-75.5	885
125	14	-75.5	935
126	14	-75.5	885
127	14	-75.5	810
128	14	-75.5	835
129	14	-75.5	760
130	14	-75.5	835
131	14	-75.5	835
132	14	-75.5	885
133	14	-75.5	860
134	14	-75.5	860
135*	14	-75.5	835
136*	14	-75.5	835
137	14	-75.5	810
138	14	-75.5	760

* PDA PILE W/ RESTRIKE

** RESTRIKE PILE

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PIER 3 UPGRADE

AS-BUILT PILE INFORMATION

6502
S1.3
SHEET 33 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
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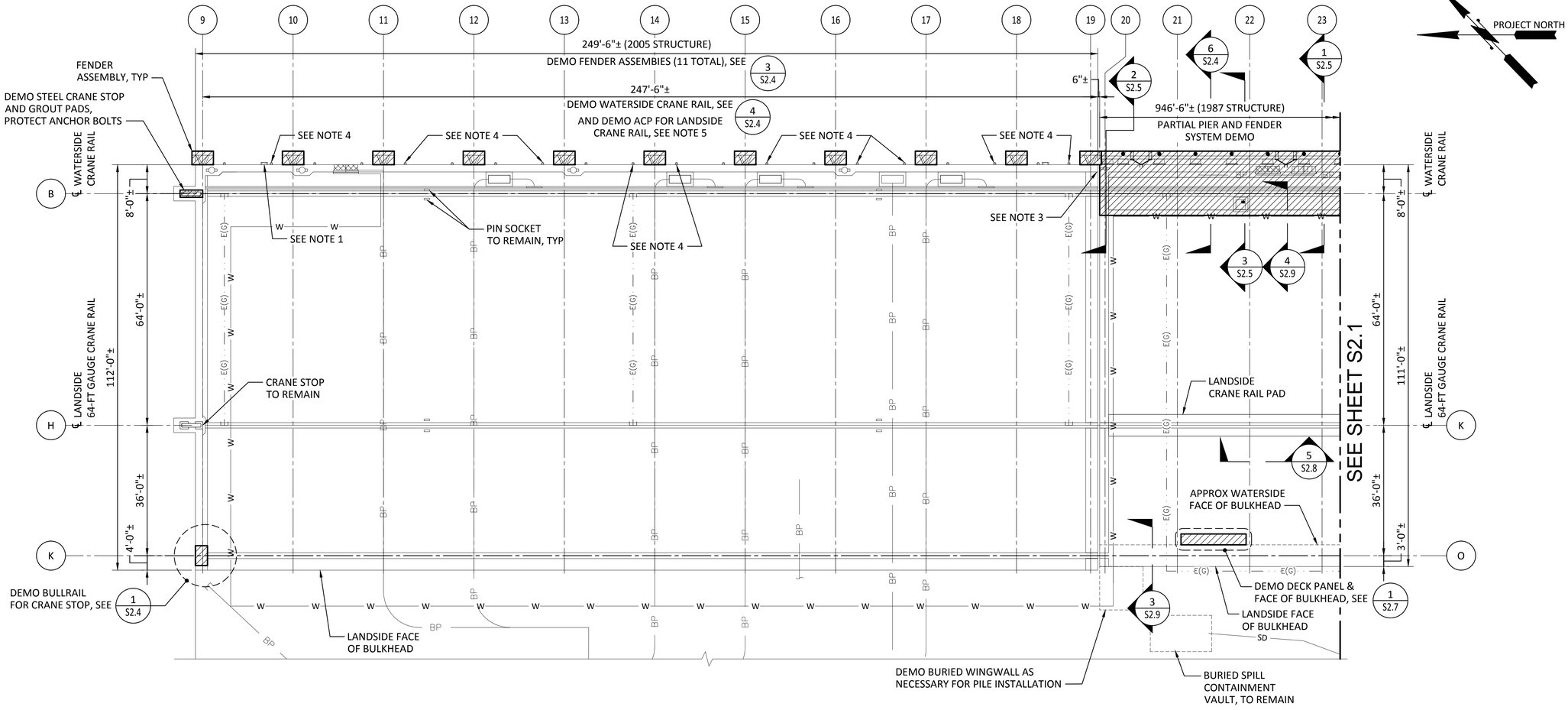


1 - PLAN - DEMOLITION
SCALE: 1/16" = 1'-0"

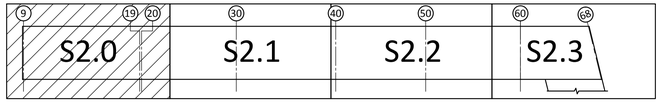
LEGEND:

- CRANE STOP
- CRANE POWER VAULT
- FENDER
- BOLLARD
- LADDER
- PIN SOCKET
- TREATED TIMBER FENDER PILE
- WATER VAULT
- POWER VAULT
- ELECTRICAL PULL BOX
- BURIED WATER (W)
- BURIED POWER (BP)
- BURIED ELECTRICAL (GROUND) (E(G))
- STORM DRAIN (SD)
- APPROXIMATE DEMO LIMITS

GENERAL NOTES:

1. DEMO LADDER AND GRAB BAR, DEMO EMBEDS PER 5 S2.4
2. FOR UPLAND UTILITIES, SEE C-SERIES DWGS.
3. SALVAGE STEEL BULLRAIL EXPANSION JOINT COVER PLATE, DEMO EMBEDS PER 5 S2.4
4. DEMO SELECT SHEAR CHAIN EMBEDS, DEMO EMBEDS PER 5 S2.4
5. EXISTING ACP AND BALLAST NOT SHOWN. FOR TYPICAL ACP & BALLAST DEMO DETAILS, SEE DWG S2.9. FOR APPROX EXTENT OF ACP DEMO SEE C4.0 TO C4.2.
6. DEMO BENT # TAGS ON 2005 STRUCTURE.

KEY PLAN:



1/16" = 1'-0"

16 0 16 32
scale feet

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PIER 3 UPGRADE

DEMOLITION PLAN
SHEET 1

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)	PORT ADDRESS:	ONE SITCUM WAY
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S2.0
SHEET 34 OF 129

CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS

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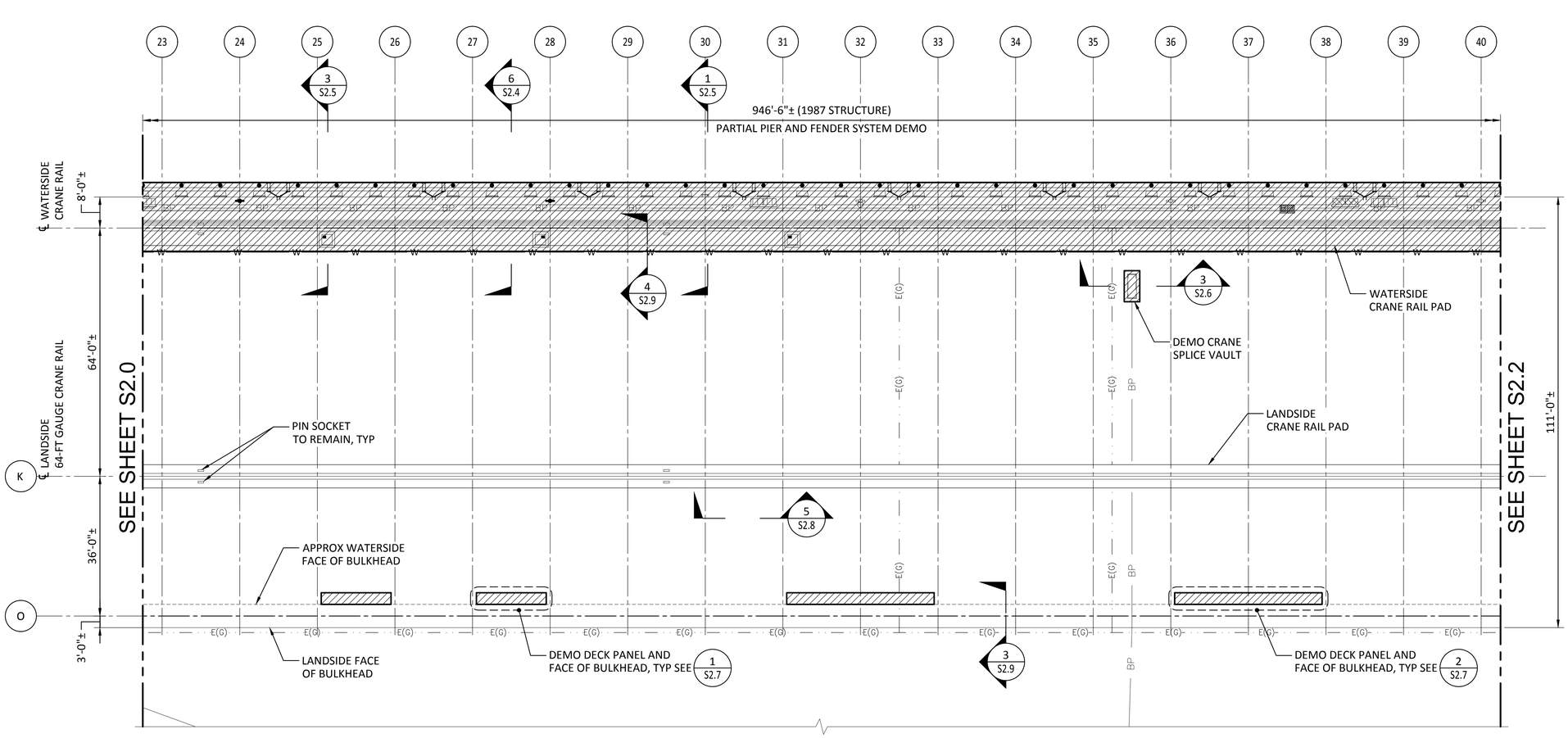


1 PLAN - DEMOLITION
SCALE: 1/16" = 1'-0"

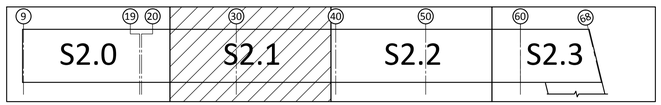
LEGEND:

- CRANE STOP
- CRANE POWER VAULT
- FENDER
- BOLLARD
- LADDER
- PIN SOCKET
- TREATED TIMBER FENDER PILE
- WATER VAULT
- POWER VAULT
- ELECTRICAL PULL BOX
- W — BURIED WATER
- BP — BURIED POWER
- E(G) — BURIED ELECTRICAL (GROUND)
- SD — STORM DRAIN
- APPROXIMATE DEMO LIMITS

GENERAL NOTES:

1. FOR UPLAND UTILITIES, SEE C-SERIES DWGS.
2. EXISTING ACP AND BALLAST NOT SHOWN. FOR TYPICAL ACP & BALLAST DEMO DETAILS, SEE DWG S2.9. FOR APPROX EXTENT OF ACP DEMO SEE C4.0 TO C4.2

KEY PLAN:



1/16" = 1'-0"

16 0 16 32
scale feet

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PROJ. ENGR	DATE	

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PIER 3 UPGRADE
DEMOLITION PLAN
SHEET 2

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN
PRINTED BY:	jason.mendenhall	SECTION: 27	
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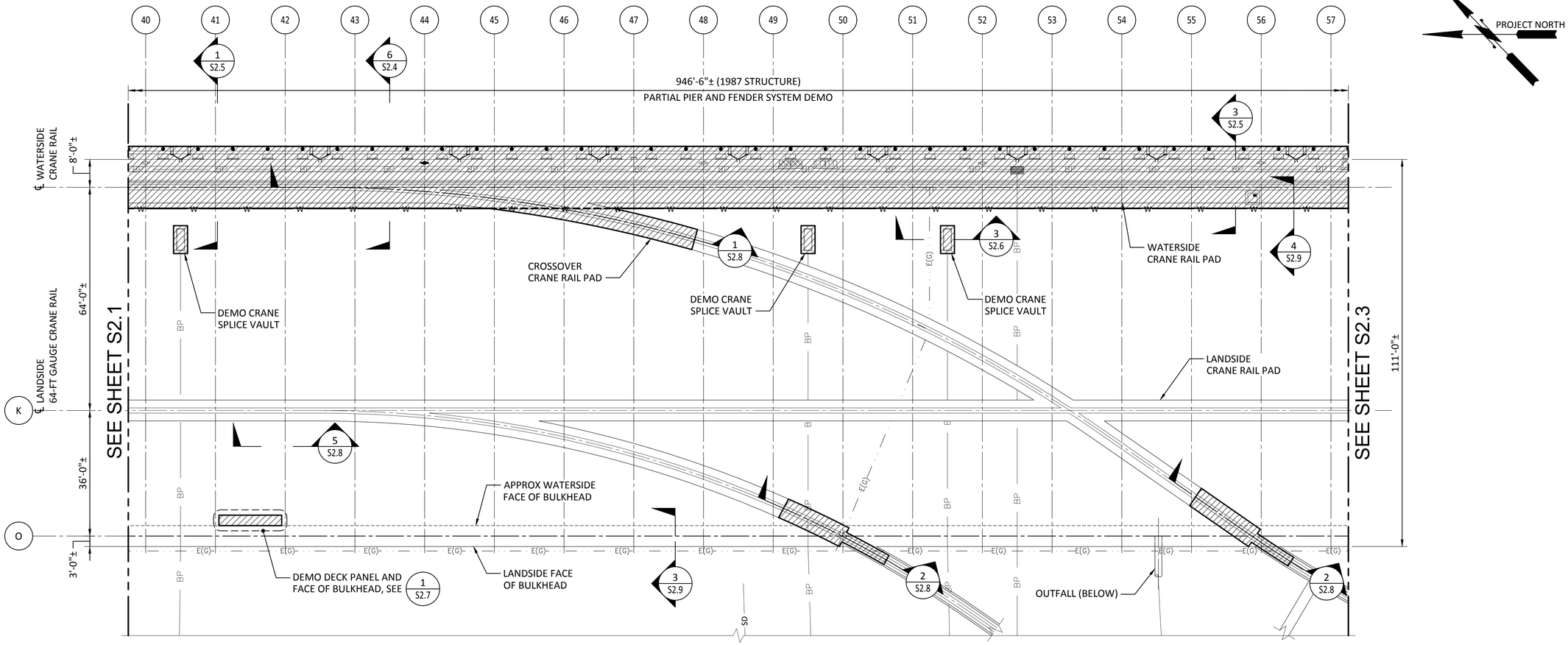
6502
S2.1
SHEET 35 OF 129

Last Saved by: Jason.mendenhall on: Jan 27, 2015 4:10 PM File: Q:\FederalWay\2012\FAWAT-12-0911\CADD\Dwgs\03_S02-01.dwg

BINDING EDGE



PLAN - DEMOLITION

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

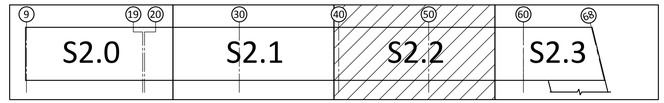
LEGEND:

- CRANE STOP
- CRANE POWER VAULT
- FENDER
- BOLLARD
- LADDER
- PIN SOCKET
- TREATED TIMBER FENDER PILE
- WATER VAULT
- POWER VAULT
- ELECTRICAL PULL BOX
- W — BURIED WATER
- BP — BURIED POWER
- E(G) — BURIED ELECTRICAL (GROUND)
- SD — STORM DRAIN
- APPROXIMATE DEMO LIMITS

GENERAL NOTES:

1. FOR UPLAND UTILITIES, SEE C-SERIES DWGS.
2. EXISTING ACP AND BALLAST NOT SHOWN. FOR TYPICAL ACP & BALLAST DEMO DETAILS, SEE DWG S2.9. FOR APPROX EXTENT OF ACP DEMO SEE C4.0 TO C4.2

KEY PLAN:



1/16" = 1'-0"

16 0 16 32
scale feet

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DIR OF ENG		DATE
DC	7/17/13	
PROJ. ENGR		DATE

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PRINTED BY:	jason.mendenhall
PORT ADDRESS:	ONE SITCUM WAY TACOMA, WA 98421-2300

PIER 3 UPGRADE

DEMOLITION PLAN
SHEET 3

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

6502
S2.2
SHEET 36 OF 129

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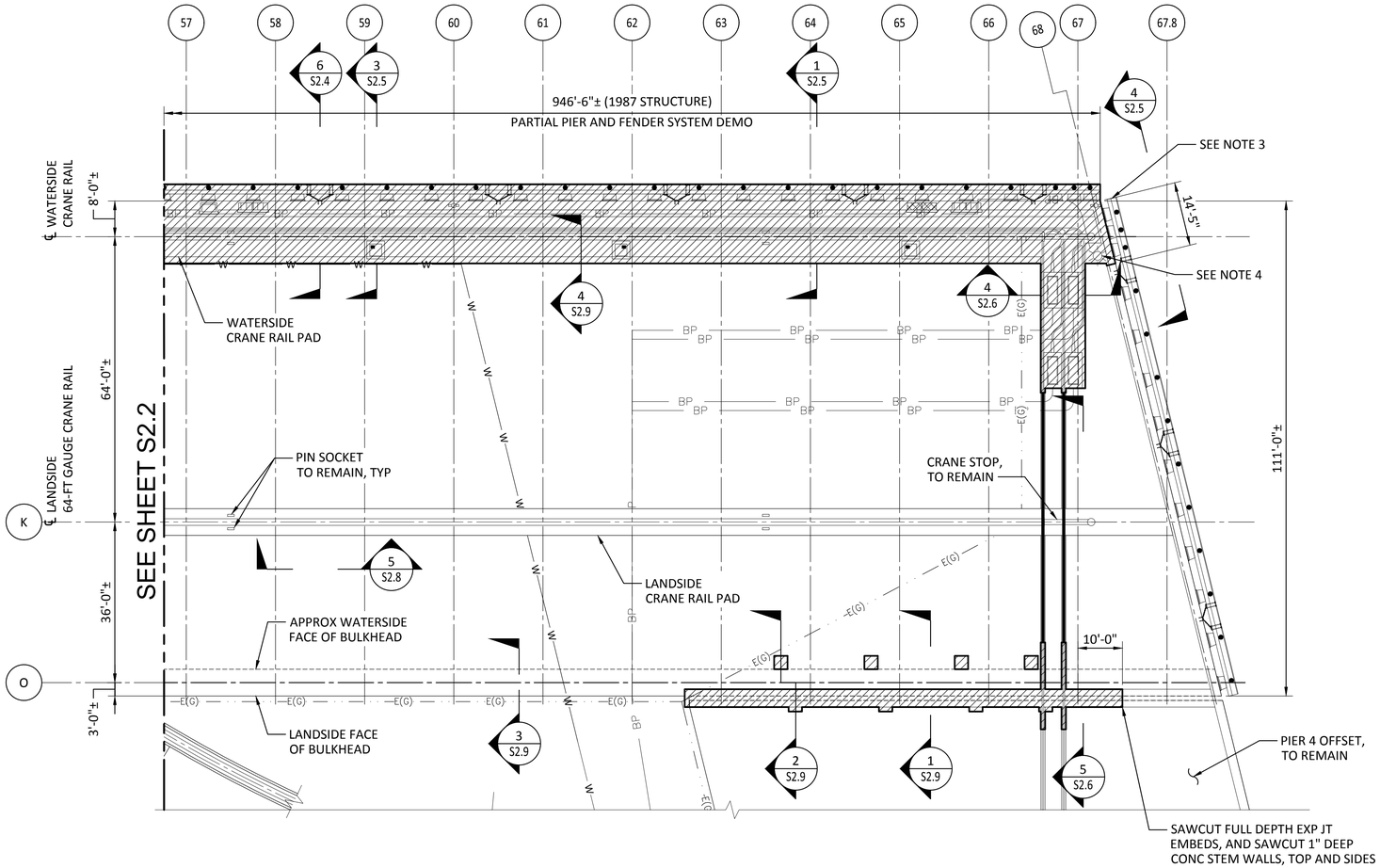


PROJECT NORTH

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

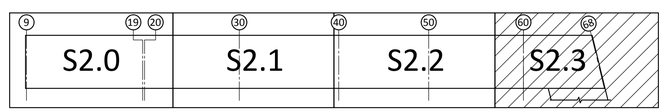
LEGEND:

- CRANE STOP
- CRANE POWER VAULT
- FENDER
- BOLLARD
- LADDER
- PIN SOCKET
- TREATED TIMBER FENDER PILE
- WATER VAULT
- POWER VAULT
- ELECTRICAL PULL BOX
- BURIED WATER (W)
- BURIED POWER (BP)
- BURIED ELECTRICAL (GROUND) (E(G))
- STORM DRAIN (SD)
- APPROXIMATE DEMO LIMITS

GENERAL NOTES:

1. FOR UPLAND UTILITIES, SEE C-SERIES DWGS.
2. EXISTING ACP AND BALLAST NOT SHOWN. FOR TYPICAL ACP & BALLAST DEMO DETAILS, SEE DWG S2.9. FOR APPROX EXTENT OF ACP DEMO SEE C4.0 TO C4.2
3. DETACH FENDER SYSTEM AS REQUIRED AND LEAVE INTACT. SALVAGE ALL FENDERS AND HARDWARE FOR RE-INSTALLATION.
4. SALVAGE HIGH MAST LIGHT FOR REINSTALLATION.

KEY PLAN:



1/16" = 1'-0"

16 0 16 32
scale feet

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jason.mendenhall		
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TACOMA, WA 98421-2300		

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DC	7/17/13	DATE
DIR OF ENG		

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PIER 3 UPGRADE

DEMOLITION PLAN
SHEET 4

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

SECTION: 27

6502
S2.3
SHEET 37 OF 129

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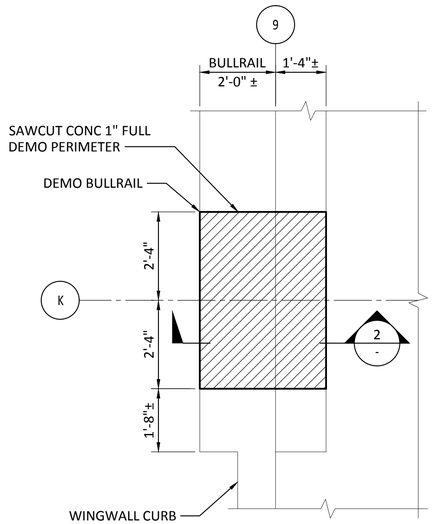
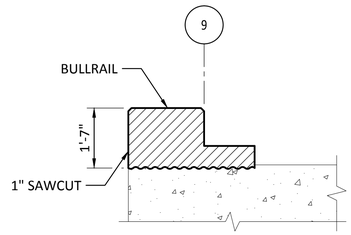
BINDING EDGE



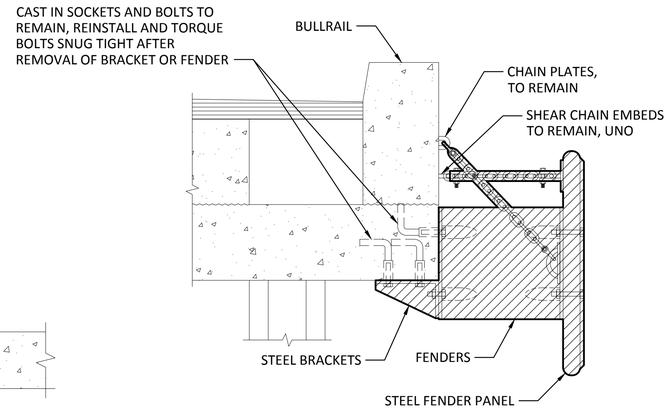
NOTE:
CUT ALL REINF FLUSH W/ CONC

1 / S2.0 **PLAN - BULLRAIL**
SCALE: 1/2"=1'-0"

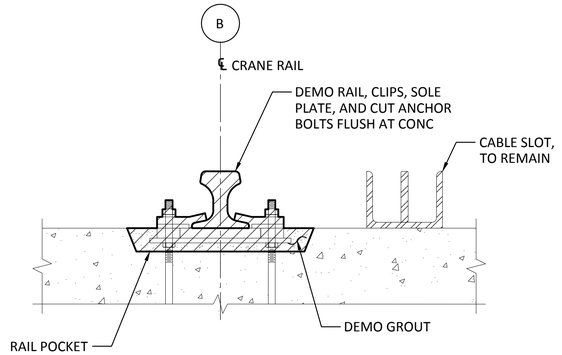


NOTE:
ACP NOT SHOWN

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

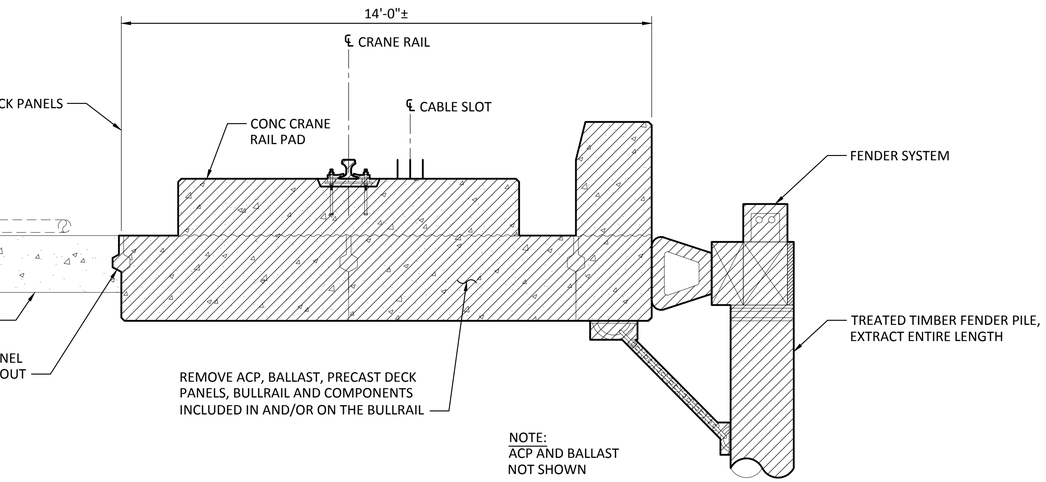


3 / S2.0 **ELEVATION - FENDER ASSEMBLY**
SCALE: 1/2"=1'-0"



NOTES:
1. PIN SOCKETS TO REMAIN (NOT SHOWN)
2. ACP NOT SHOWN

4 / S2.0 **SECTION - WATERSIDE CRANE RAIL**
SCALE: 1 1/2" = 1'-0"
2005 STRUCTURE



NOTE:
ACP AND BALLAST
NOT SHOWN

6 / S2.0 **SECTION - TYP DEMO AT DECK**
SCALE: 1/2" = 1'-0"
S2.1, S2.2, S2.3

DRILL OR GRIND EXPOSED ENDS OF REINF, ANCHOR BOLT, OR EMBED TO 1" BELOW FINISH SURFACE AND FILL RESULTING RECESS WITH EPOXY GROUT

5 / 2.0 **DETAIL**
SCALE: 1 1/2" = 1'-0"

1-1/2" = 1'-0" — 8 0 8 16 — scale inches

1/2" = 1'-0" — 2 0 2 4 — scale feet

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PIER 3 UPGRADE

DEMOLITION DETAILS
SHEET 1

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

SECTION: 27

6502
S2.4
SHEET 38 OF 129

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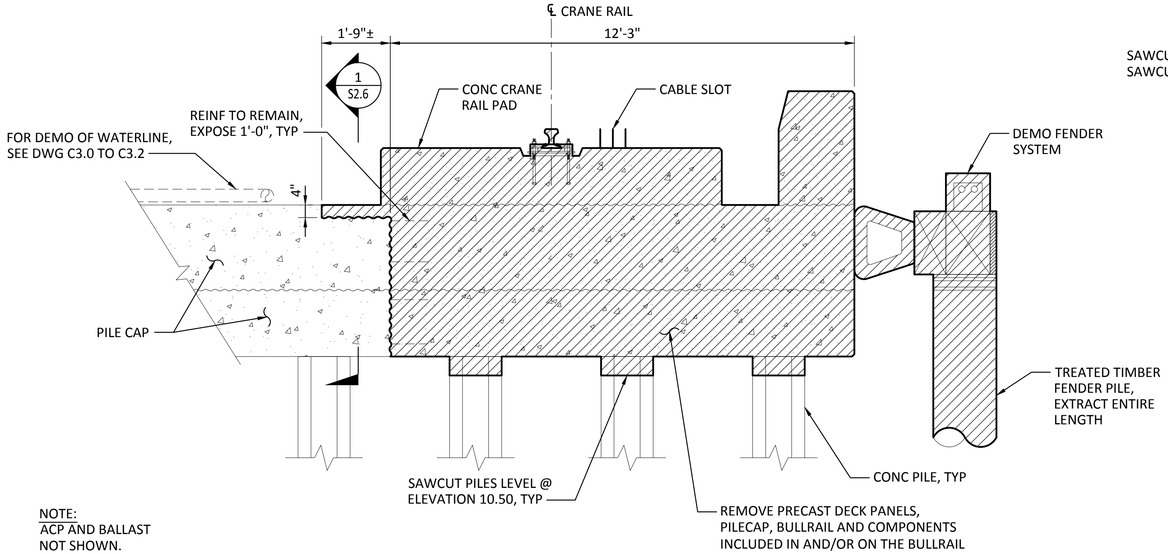
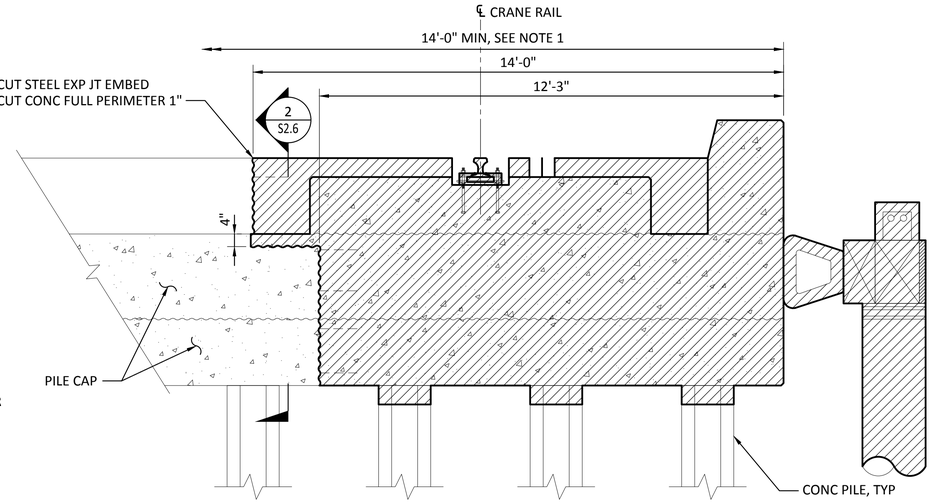


NOTE:
ACP AND BALLAST NOT SHOWN.

1/S2.0 SECTION - DEMO AT TYP PILE CAP

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

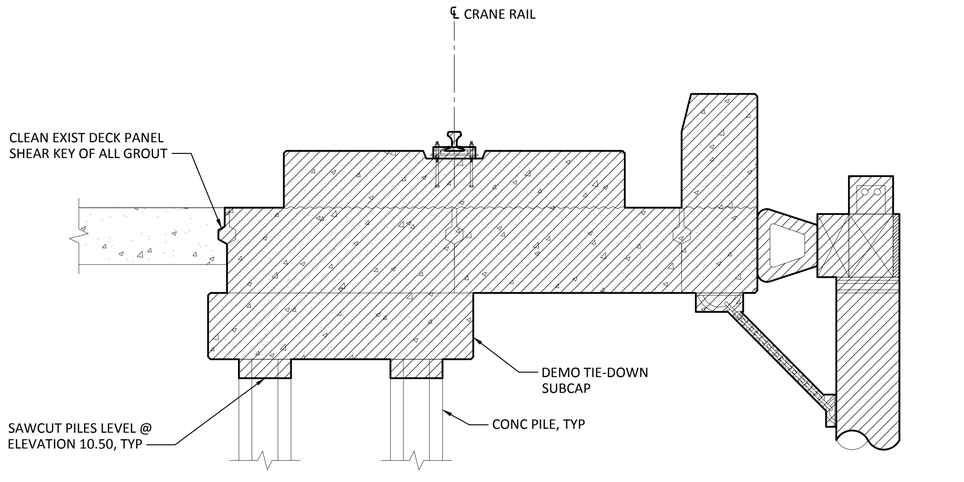
S2.1, S2.2, S2.3



NOTES:
1. SALVAGE EXIST EXP JT COVER PLATE FOR REINSTALLATION
2. FOR DETAILS NOT SHOWN, SEE 1/-

2/S2.0 SECTION - DEMO AT BENT 20

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

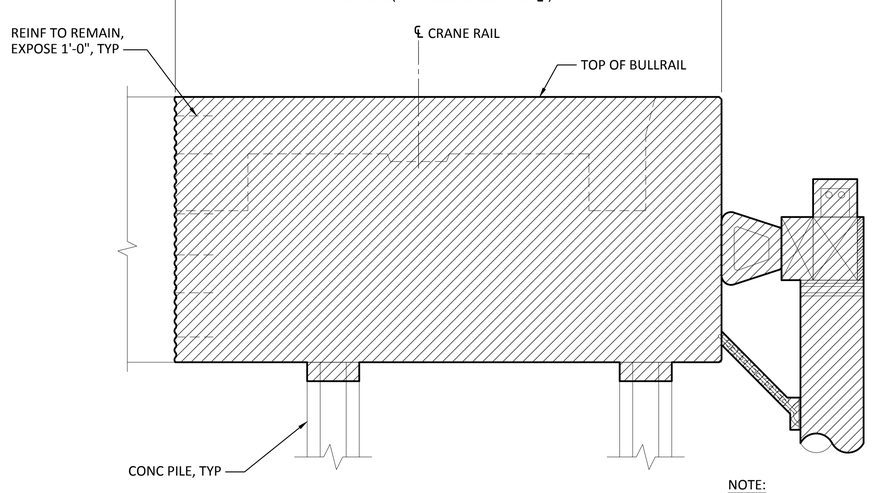


NOTE:
FOR DETAILS NOT SHOWN, SEE 1/-

3/S2.0 SECTION - DEMO AT TIE-DOWN

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

S2.1, S2.2, S2.3



NOTE:
1. EXIST FENDER SYSTEM ON SOUTH FACE OF PIER 3 NOT SHOWN, TO REMAIN.
2. FOR DETAILS NOT SHOWN, SEE 1/-

4/S2.3 ELEVATION - DEMO AT BENT 68

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

1/2" = 1'-0" scale 2 0 2 4 feet

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PIER 3 UPGRADE

DEMOLITION DETAILS SHEET 2

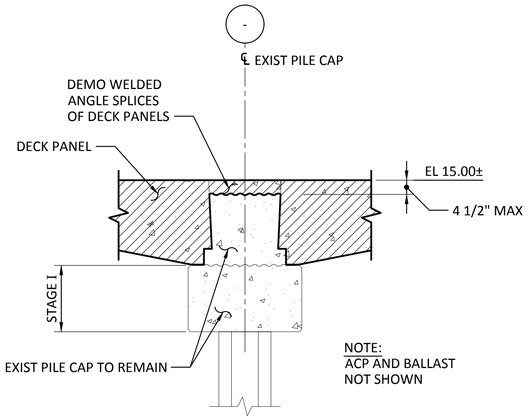
TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)	PORT ADDRESS:	ONE SITCUM WAY
PARCEL: 27	DRAWING SCALE: AS SHOWN		TACOMA, WA 98421-2300

CONT/CONS: 069458
MASTER ID NO: 092935
PHASE: RECORD DRAWINGS

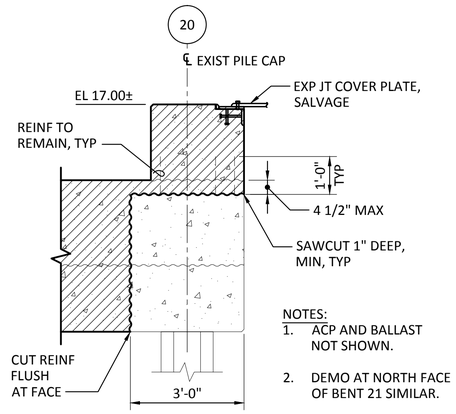
SHEET 39 OF 129

6502

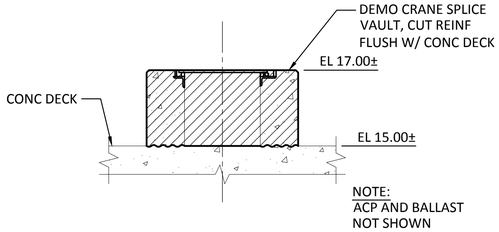
S2.5



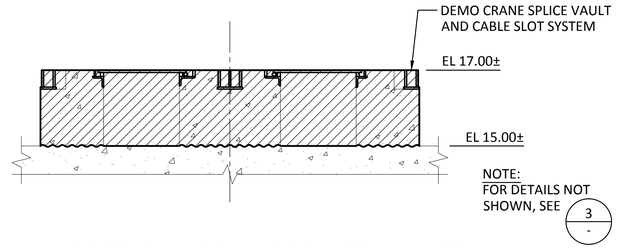
1 S2.5 **SECTION - PILE CAP**
SCALE: 1/2" = 1'-0"



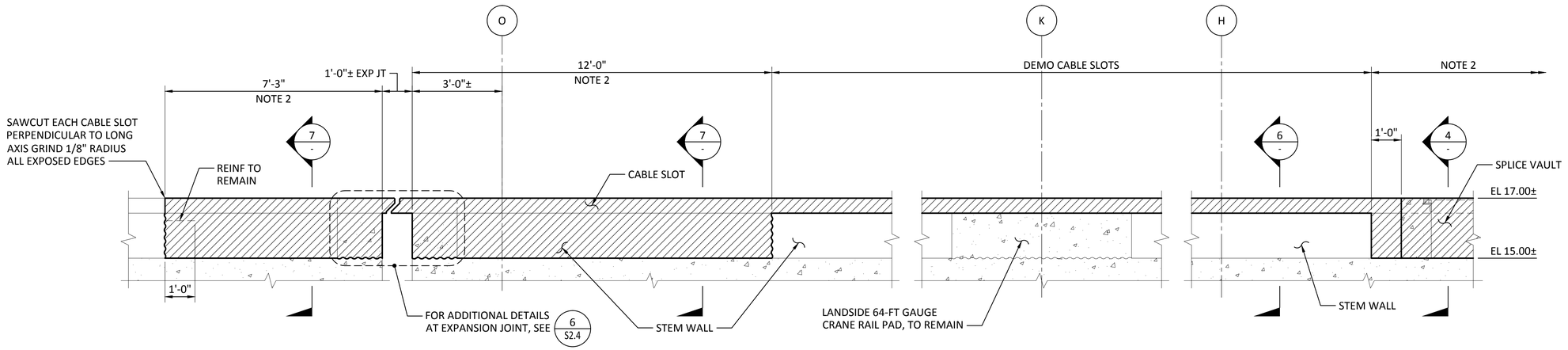
2 S2.5 **SECTION - BENT 20**
SCALE: 1/2" = 1'-0"



3 S2.1 S2.2 **SECTION - CRANE SPLICE VAULT**
SCALE: 1/2" = 1'-0"

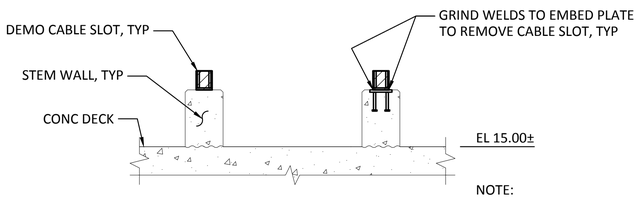


4 S2.3 **SECTION - CRANE SPLICE VAULTS**
SCALE: 1/2" = 1'-0"

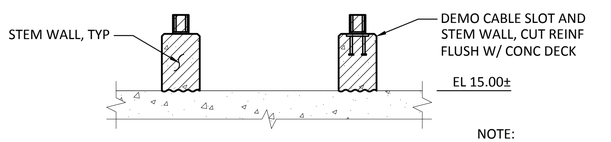


5 S2.3 **SECTION - CABLE SLOT CROSSOVER**
SCALE: 1/2" = 1'-0"

NOTES:
1. ACP AND BALLAST NOT SHOWN.
2. DEMO CABLE SLOT AND SUPPORTING STEM WALL TO EL 15.0±.



6 - **SECTION - CABLE SLOT**
SCALE: 1/2" = 1'-0"



7 - **SECTION - CABLE SLOT W/ WALL**
SCALE: 1/2" = 1'-0"

1/2" = 1'-0" scale 2 0 2 4 feet

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PIER 3 UPGRADE

DEMOLITION DETAILS
SHEET 3

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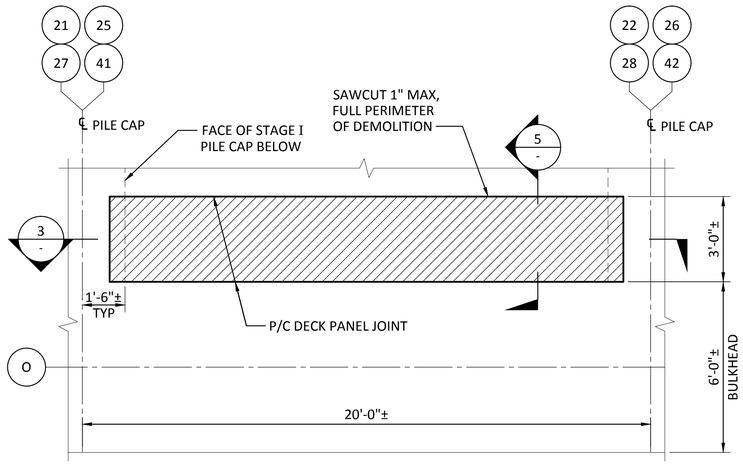
	TACOMA, WA 98421-2300		
DRAWING SCALE:	AS SHOWN		

6502
S2.6
SHEET 40 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27

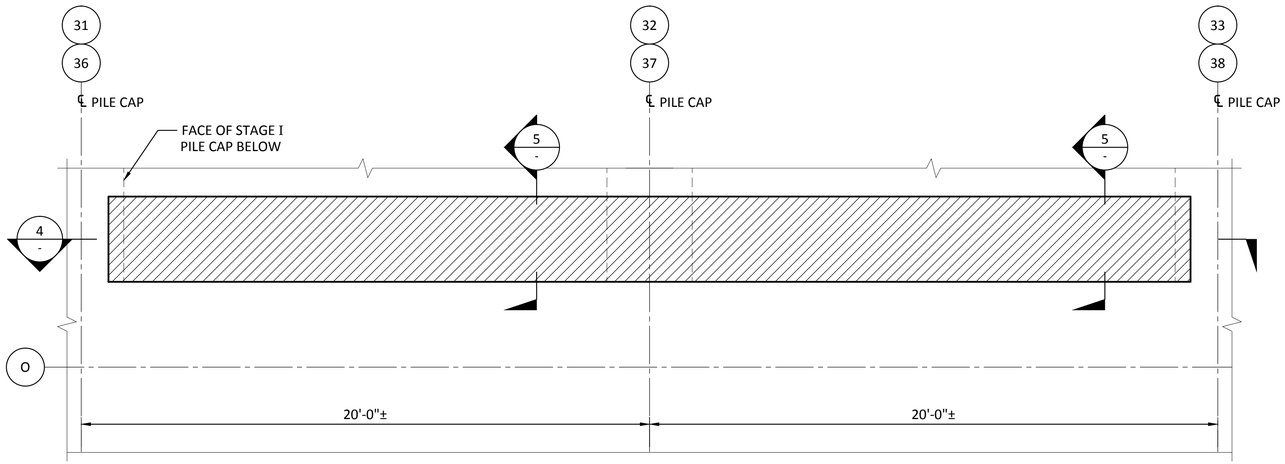


NOTE:
ACP AND BALLAST
NOT SHOWN

1/S2.0 PLAN - DEMO AT TIE-DOWNS

SCALE: 3/8" = 1'-0"

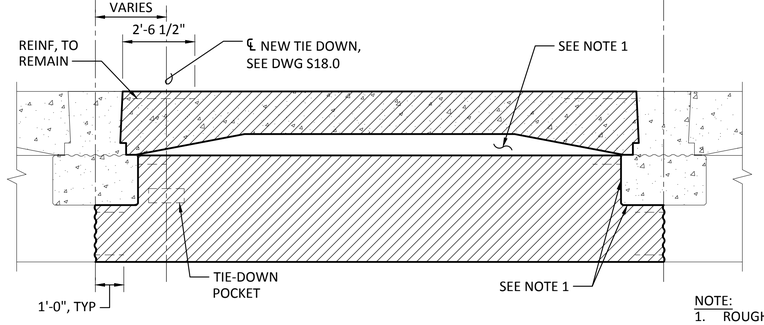
S2.1, S2.2



NOTE:
FOR DETAILS NOT
SHOWN, SEE 1/-

2/S2.1 PLAN - DEMO AT TIE-DOWNS

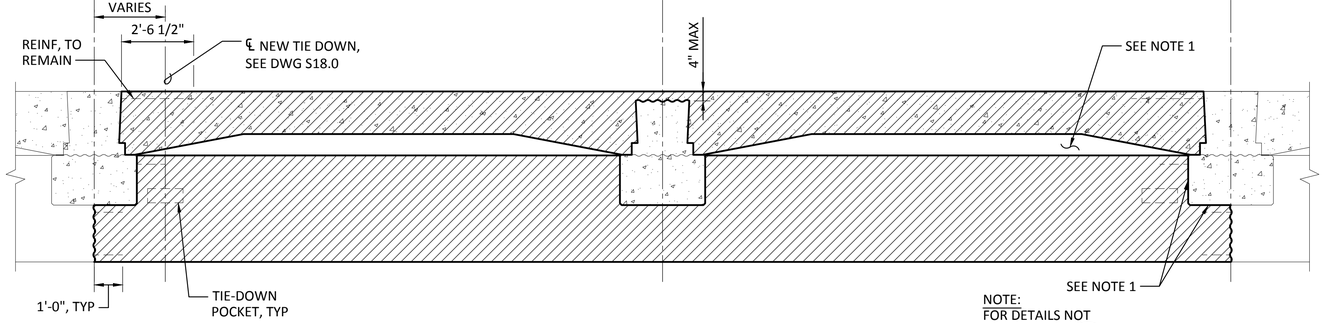
SCALE: 3/8" = 1'-0"



NOTE:
1. ROUGHEN SURFACE TO 1/4" AMPLITUDE.
2. ACP AND BALLAST NOT SHOWN.

3/- ELEVATION - DEMO AT TIE-DOWNS

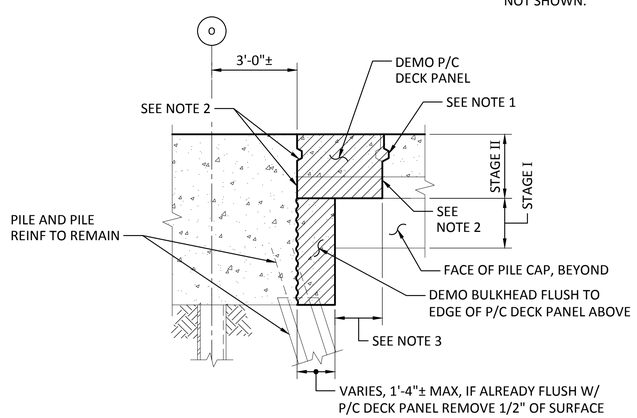
SCALE: 3/8" = 1'-0"



NOTE:
FOR DETAILS NOT
SHOWN, SEE 3/-

4/- ELEVATION - DEMO AT TIE-DOWNS

SCALE: 3/8" = 1'-0"

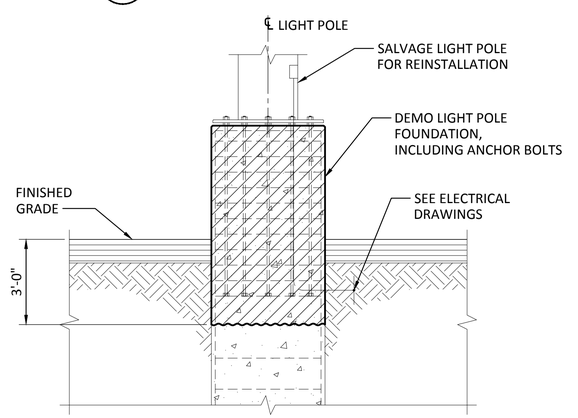


NOTES:

1. PRESERVE SHEAR KEYS, REMOVE LOOSE CONC.
2. ROUGHEN REMAINING SURFACE OF BULKHEAD CAST AGAINST P/C DECK PANEL AND SIDE OF P/C DECK PANEL TO REMAIN TO 1/4" AMPLITUDE.
3. ROUGHEN FACE AND SOFFIT OF PILE CAP TO 1/4" AMPLITUDE.
4. FOR ADDITIONAL DEMO AT TIE-DOWN WELDMENT, SEE 5/S10.4

5/- SECTION - DEMO AT TIE-DOWNS

SCALE: 3/8" = 1'-0"



6/S1.2 DETAIL - LIGHT POLE

SCALE: 3/8" = 1'-0" FOUNDATION DEMO

3/8" = 1'-0"

2 0 2 4
scale feet

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DC	7/17/13	DIR OF ENG	DATE

APPROVED:

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

DRAWING SCALE: AS SHOWN

PIER 3 UPGRADE

DEMOLITION DETAILS

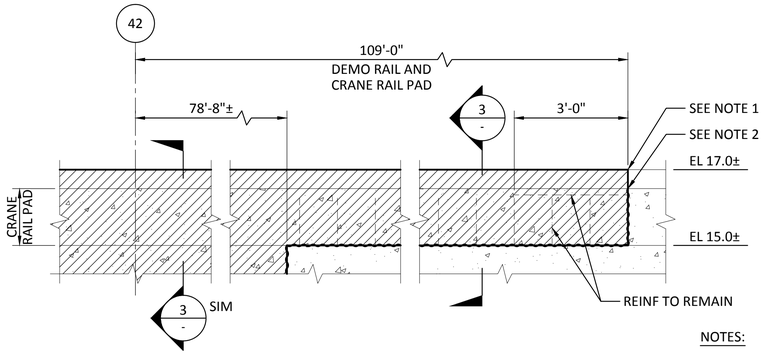
SHEET 4

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27

6502

S2.7

SHEET 41 OF 129

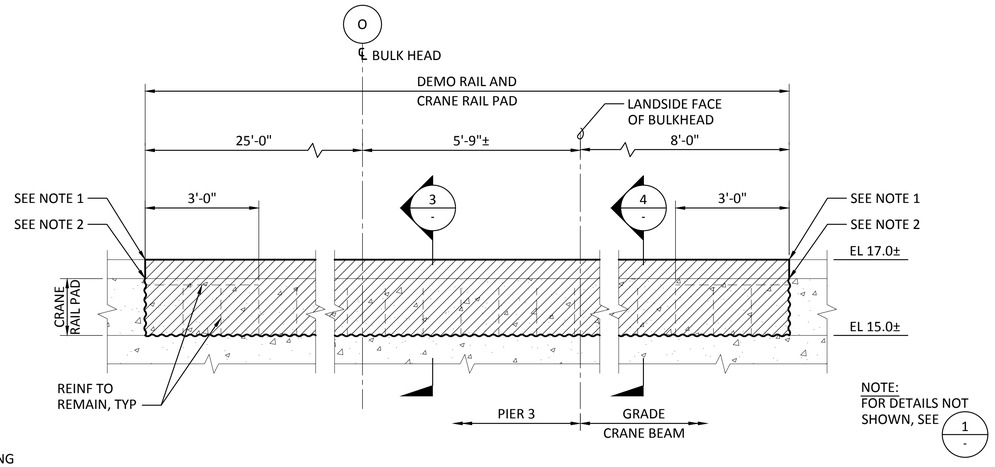


NOTES:

1. SAWCUT CRANE RAIL PERP TO LONG AXIS OF RAIL CENTER RAIL CUT BETWEEN RAIL CLAMP PLATES.
2. SAWCUT 1" DEEP TOP AND SIDES OF CRANE RAIL PAD.
3. ACP AND BALLAST NOT SHOWN.

1/S2.2 SECTION - DEMO AT CROSSOVER

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

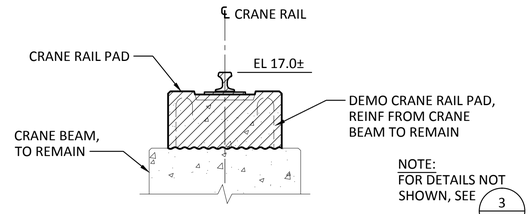


2/S2.2 SECTION - DEMO AT CROSSOVER (BULKHEAD)

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

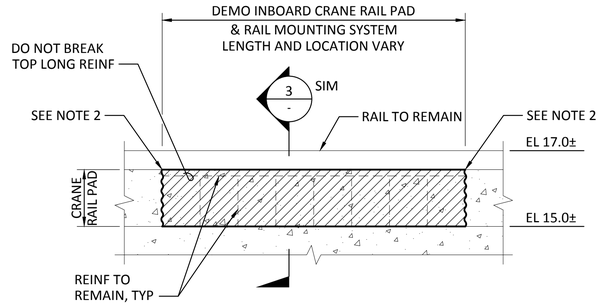
3/- SECTION - DEMO AT CROSSOVER

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



4/- SECTION - DEMO AT CROSSOVER

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



NOTES:

1. FOR DETAILS NOT SHOWN, SEE 1/-
2. FOR LOCATIONS OF DEMO, SEE ELECTRICAL DWGS.

5/S2.0 ELEVATION - DEMO AT INBOARD CRANE RAIL

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

S2.1, S2.2, S2.3

1/2" = 1'-0" scale 2 0 2 4 feet

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CSB	7/17/13	CHECKED BY	DATE
JRG	7/17/13	PROJ. ENGR	DATE

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

CONT/CONS:	069458	TOWNSHIP:	21 N
MASTER ID NO:	092935	DAT-HRZ:	NAD 83-07
PHASE:	RECORD DRAWINGS	PARCEL:	27
		RANGE:	3 E
		VERT:	NOS TIDAL (MLLW = 0.0)
		SECTION:	27
		DRAWING SCALE:	AS SHOWN

PIER 3 UPGRADE

DEMOLITION DETAILS
SHEET 5

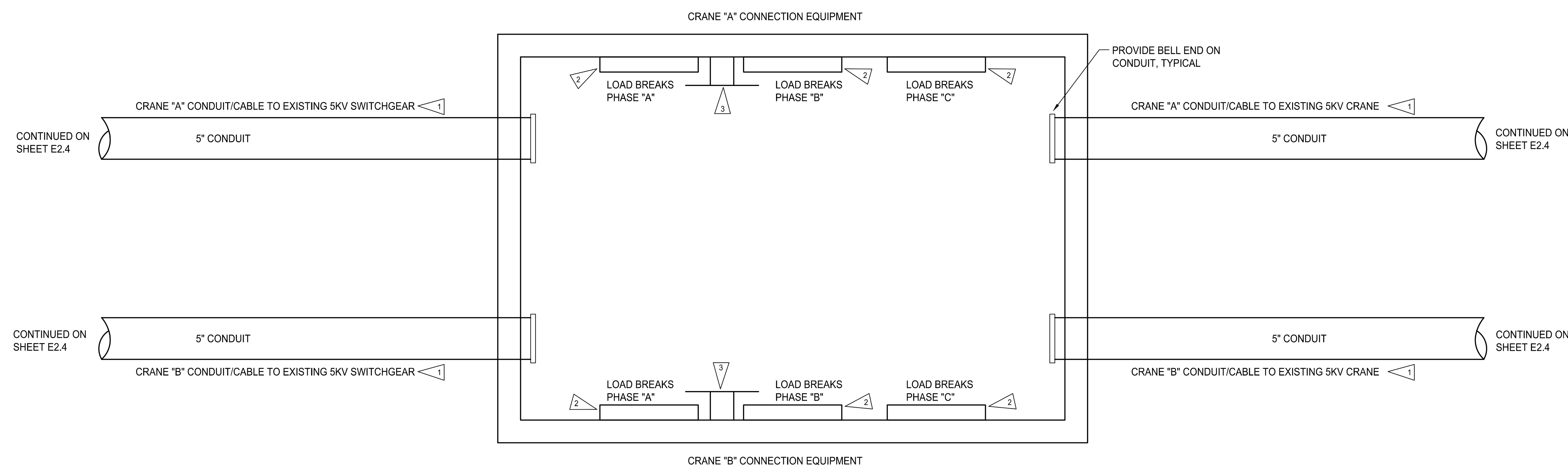
6502
S2.8
SHEET 42 OF 129

GENERAL NOTES:

1. SEE SHEET E2.0 FOR GENERAL NOTES.

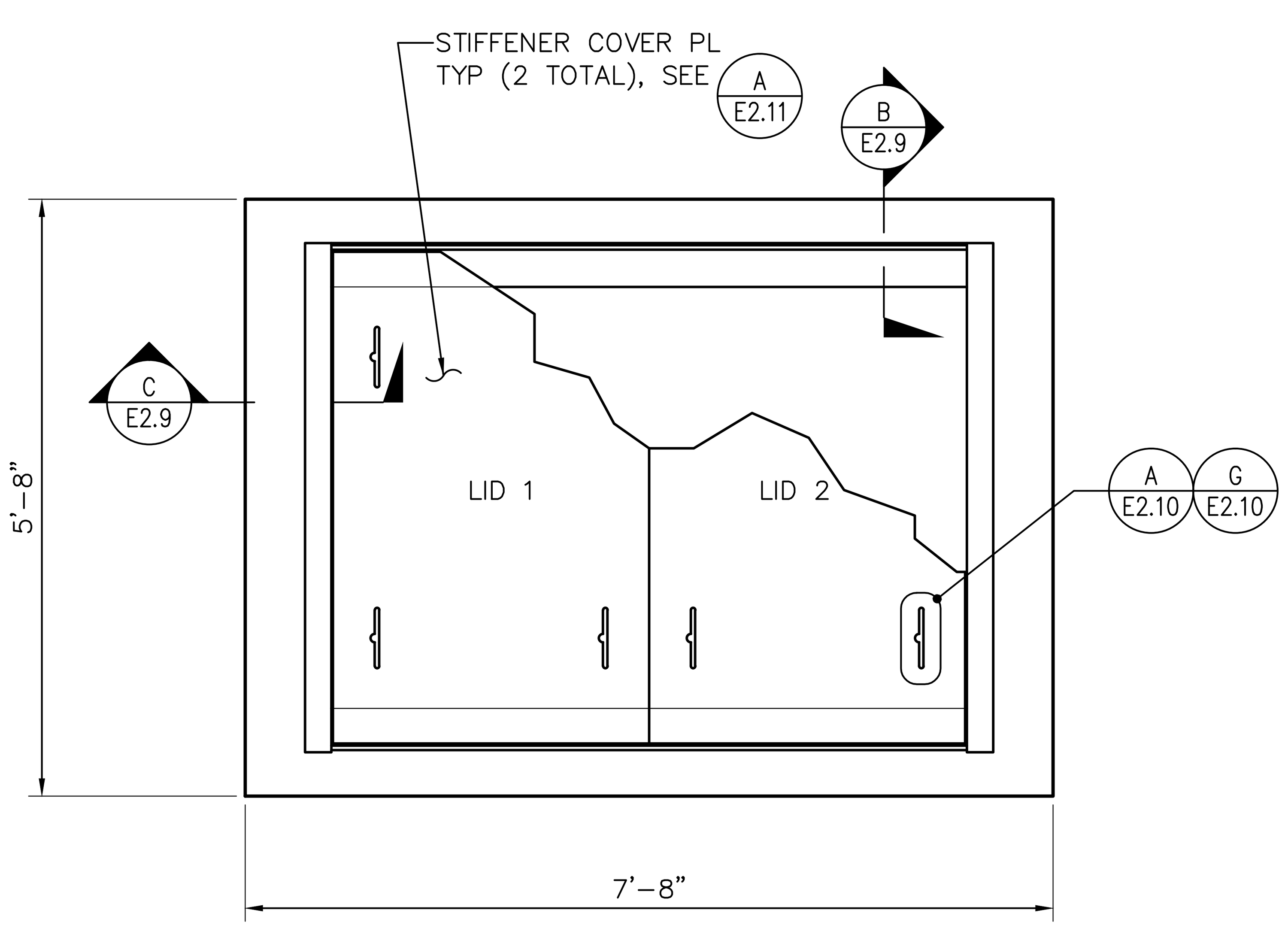
CONSTRUCTION NOTES:

1. CONTRACTOR SHALL COORDINATE WITH ENGINEER AND FIELD VERIFY EXACT LABELING AND IDENTIFICATION FOR EXISTING 5KV CRANES AND CABLES. PROVIDE NEW LABELS ON EXISTING 5KV SWITCHGEAR, CABLES (EXISTING AND NEW) AND JUNCTIONS TO MATCH FROM EXISTING 5KV SWITCHGEAR TO EXISTING CRANES.
2. PROVIDE TWO (2) POSITION LOAD-BREAK JUNCTIONS MOUNTED TO CONCRETE VAULT WALLS AND ROTATE TO A 45 DEGREE POSITION FOR MOUNTING 5KV, 200A LOAD-BREAK ELBOWS. PROVIDE TWO (2) 5KV, 200A LOAD-BREAK ELBOWS AT EACH JUNCTION (TOTAL OF 12). CONTRACTOR WILL NEED TO INSTALL LOAD-BREAK ELBOWS ON NEW 5KV CABLES AND ON EXISTING 5KV CRANE CABLES. COOPER PRODUCTS OR EQUAL.
3. PROVIDE GROUND BAR(S) WITH MULTIPLE SIZES GROUND HOLES MOUNTED TO VAULT WALL BELOW THE 5KV LOAD-BREAK JUNCTIONS. ALL GROUNDS WITHIN THE VAULT SHALL BE NEATLY ROUTED ALONG VAULT WALLS AND FLOOR.



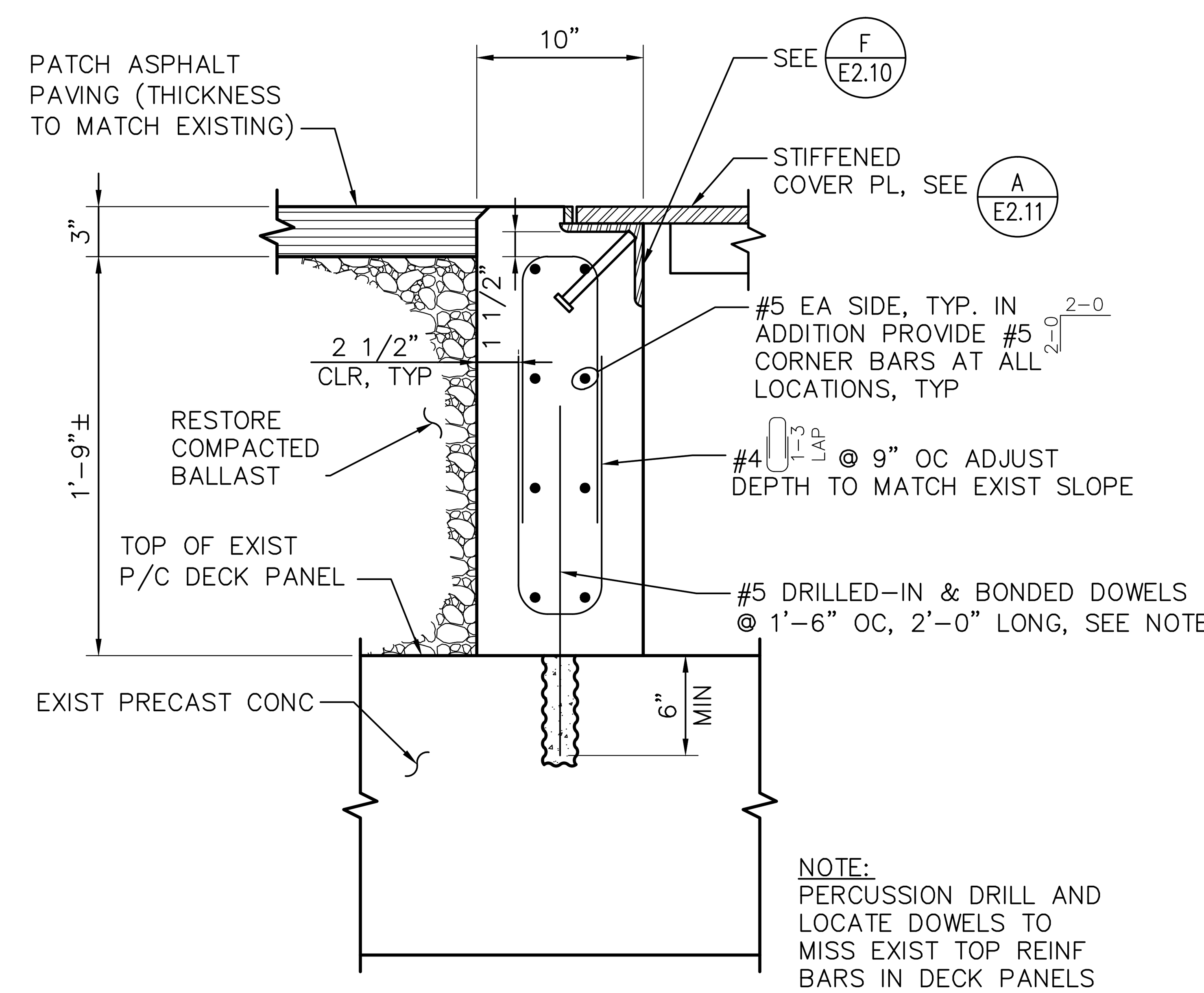
CRANE POWER TEMPORARY CONNECTION VAULT ELECTRICAL LAYOUT

SCALE: 1"=1'-0"



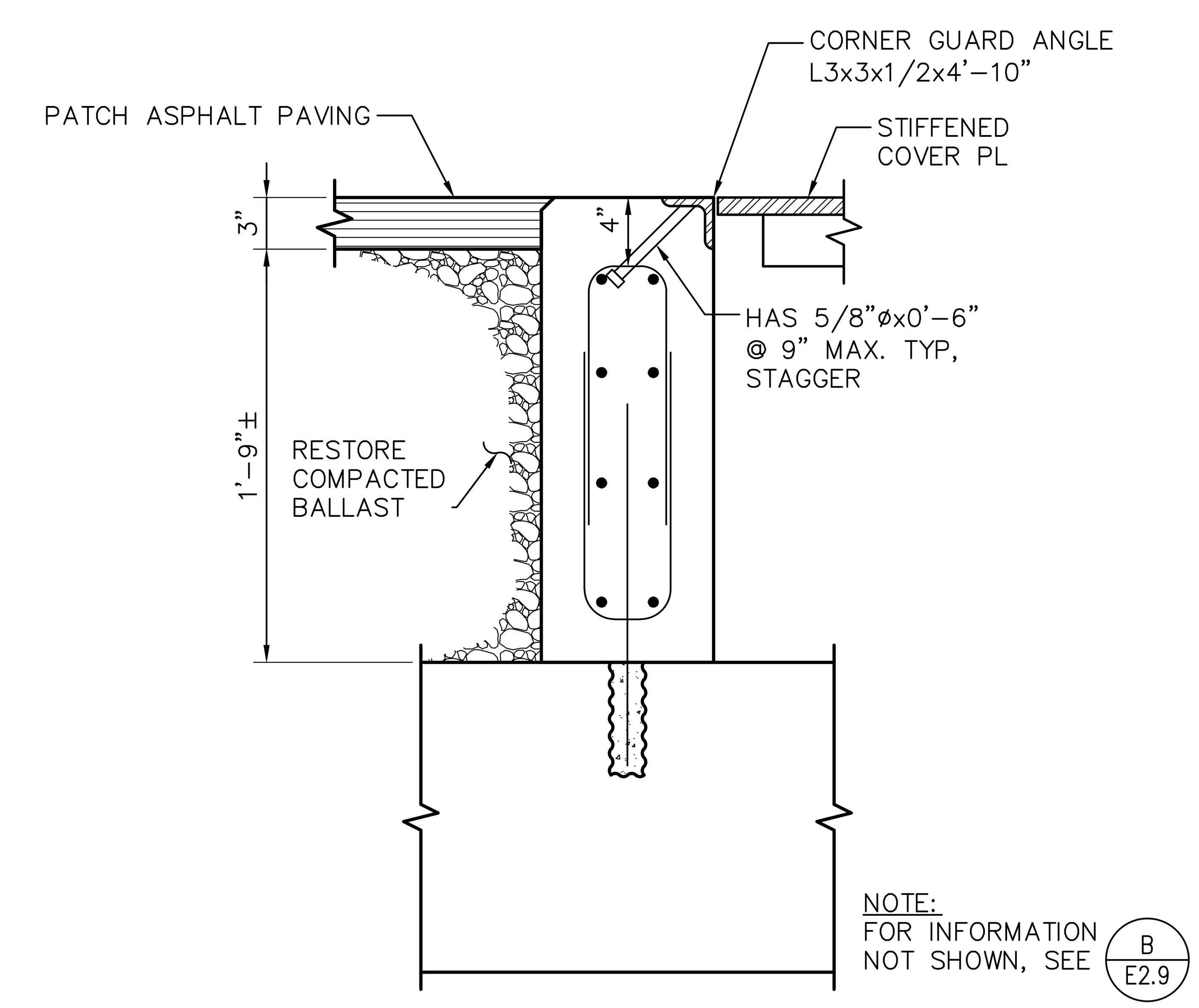
PLAN - TEMP CRANE POWER VAULT (A / E2.9)

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



SECTION - WALL (B / E2.9)

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



SECTION - WALL (C / E2.9)

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

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PIER 3 UPGRADE

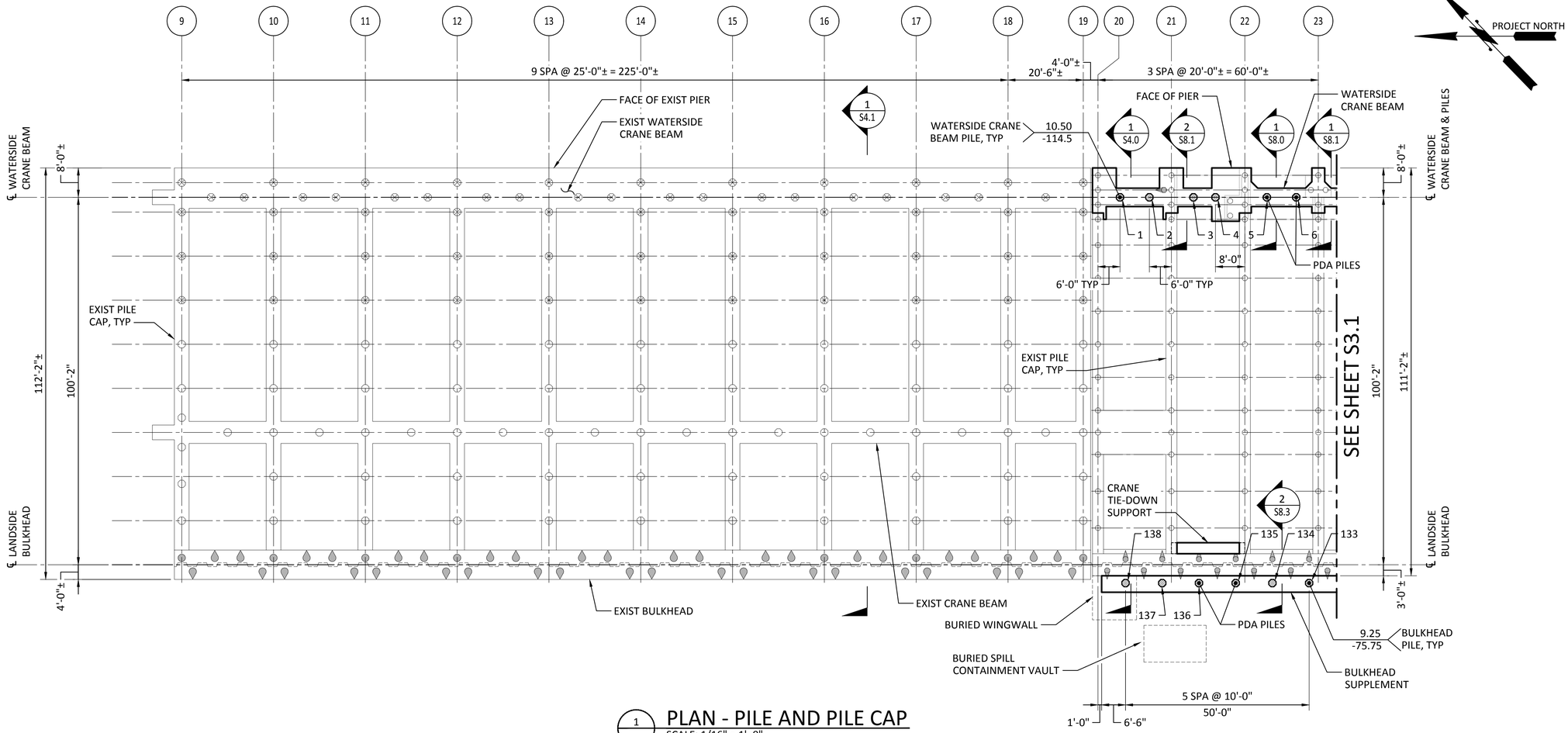
TEMPORARY CRANE CONNECTION VAULT DETAILS

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)	
PARCEL: 27	DRAWING SCALE: AS SHOWN	
CONT/CONS: 069458		
MASTER ID NO: 092935		
PHASE: RECORD DRAWINGS		

6502

E2.9

SHEET 109 OF 129



1 / - PLAN - PILE AND PILE CAP
SCALE: 1/16" = 1'=0"

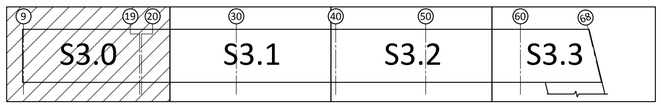
NOTE:
SEE S1.3 FOR AS-BUILT PILE INFORMATION

LEGEND:

- EXIST 24" OCT PC/PS CONC PILE
- EXIST 24"Ø STEEL PIPE PILE, PLUMB
- EXIST 24"Ø STEEL PIPE PILE, BATTERED
- EXIST 16 1/2"Ø OCT PC/PS CONC PILE, PLUMB
- EXIST 16 1/2" OCT PC/PS CONC PILE, BATTERED
- 24" OCT PC/PS CONC PILE, PLUMB, SEE S6.0
- 24" OCT PC/PS WITH KEY-LOCK MECHANICAL PILE SPLICE

XX.XX — PILE CUT-OFF ELEVATION
-XX.X — MIN PILE TIP ELEVATION
XXX — PILE NUMBER

KEY PLAN:



1/16" = 1'-0"
16 0 16 32
scale feet

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DRAWING SCALE:	AS SHOWN		

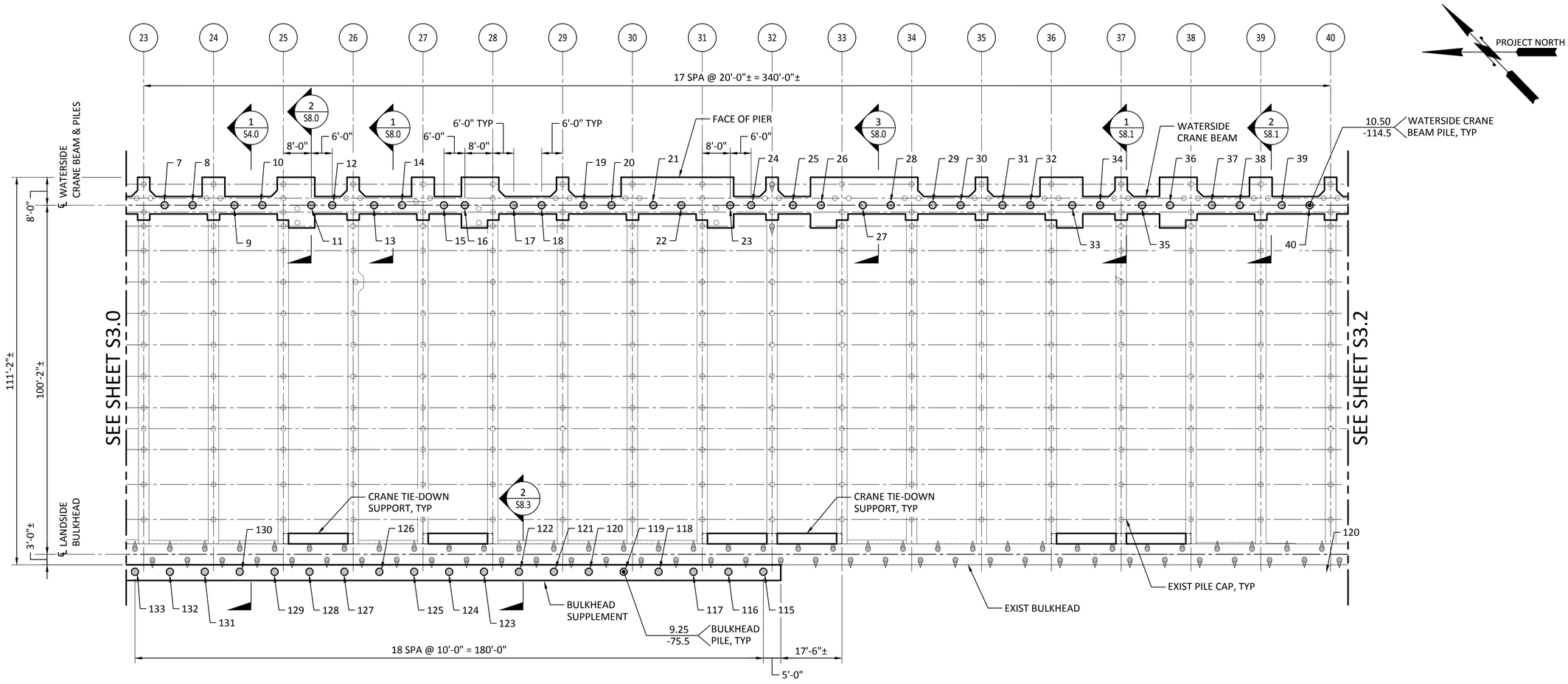
PIER 3 UPGRADE

PILE AND PILE CAP PLAN
SHEET 1

TOWNSHIP:	21 N	RANGE:	3 E
DAT-HRZ:	NAD 83-07	VERT:	NOS TIDAL (MLLW = 0.0)
PARCEL:	27	SECTION:	27

6502
S3.0
SHEET 44 OF 129

CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS



1 / - PLAN - PILE AND PILE CAP

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

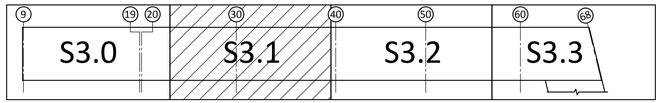
NOTE:
SEE S1.3 FOR AS-BUILT
PILE INFORMATION

LEGEND:

- EXIST 24" OCT PC/PS CONC PILE
- EXIST 24"Ø STEEL PIPE PILE, PLUMB
- EXIST 24"Ø STEEL PIPE PILE, BATTERED
- EXIST 16 1/2"Ø OCT PC/PS CONC PILE, PLUMB
- EXIST 16 1/2" OCT PC/PS CONC PILE, BATTERED
- 24" OCT PC/PS CONC PILE, PLUMB, SEE S6.0
- 24" OCT PC/PS WITH KEY-LOCK MECHANICAL PILE SPLICE

XX.XX — PILE CUT-OFF ELEVATION
-XX.X — MIN PILE TIP ELEVATION
XXX — PILE NUMBER

KEY PLAN:



1/16" = 1'-0"

16 0 16 32
scale feet

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DIR OF ENG			DATE
PRINTED BY:	jason.mendenhall		
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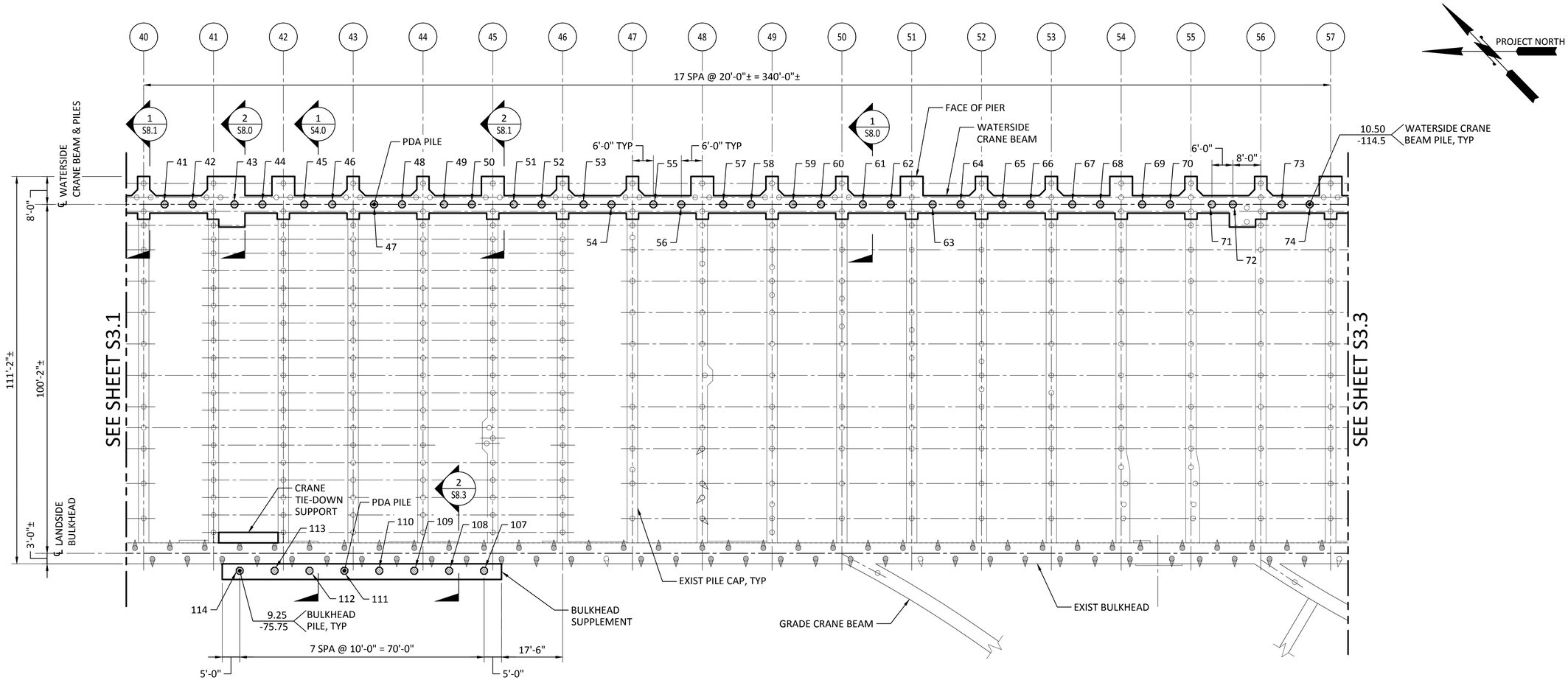
DRAWING SCALE:	AS SHOWN		

PIER 3 UPGRADE

PILE AND PILE CAP PLAN
SHEET 2

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27

6502
S3.1
SHEET 45 OF 129



1 / - PLAN - PILE AND PILE CAP
SCALE: 1/16" = 1'=0"

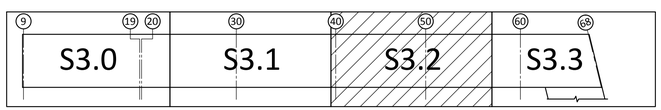
NOTE:
SEE S1.3 FOR AS-BUILT PILE INFORMATION

LEGEND:

- EXIST 24" OCT PC/PS CONC PILE
- EXIST 24"Ø STEEL PIPE PILE, PLUMB
- EXIST 24"Ø STEEL PIPE PILE, BATTERED
- EXIST 16 1/2"Ø OCT PC/PS CONC PILE, PLUMB
- EXIST 16 1/2" OCT PC/PS CONC PILE, BATTERED
- 24" OCT PC/PS CONC PILE, PLUMB, SEE S6.0
- 24" OCT PC/PS WITH KEY-LOCK MECHANICAL PILE SPLICE

XX.XX — PILE CUT-OFF ELEVATION
-XX.X — MIN PILE TIP ELEVATION
XXX — PILE NUMBER

KEY PLAN:



1/16" = 1'-0"
16 0 16 32
scale feet

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DRAWING SCALE:	AS SHOWN	SECTION:	27
VERT:	NOS TIDAL (MLLW = 0.0)	RANGE:	3 E
DAT-HRZ:	NAD 83-07	TOWNSHIP:	21 N
PARCEL:	27	CONT/CONS:	069458
PHASE:	RECORD DRAWINGS	MASTER ID NO:	092935

PIER 3 UPGRADE
PILE AND PILE CAP PLAN
SHEET 3

6502
S3.2
SHEET 46 OF 129

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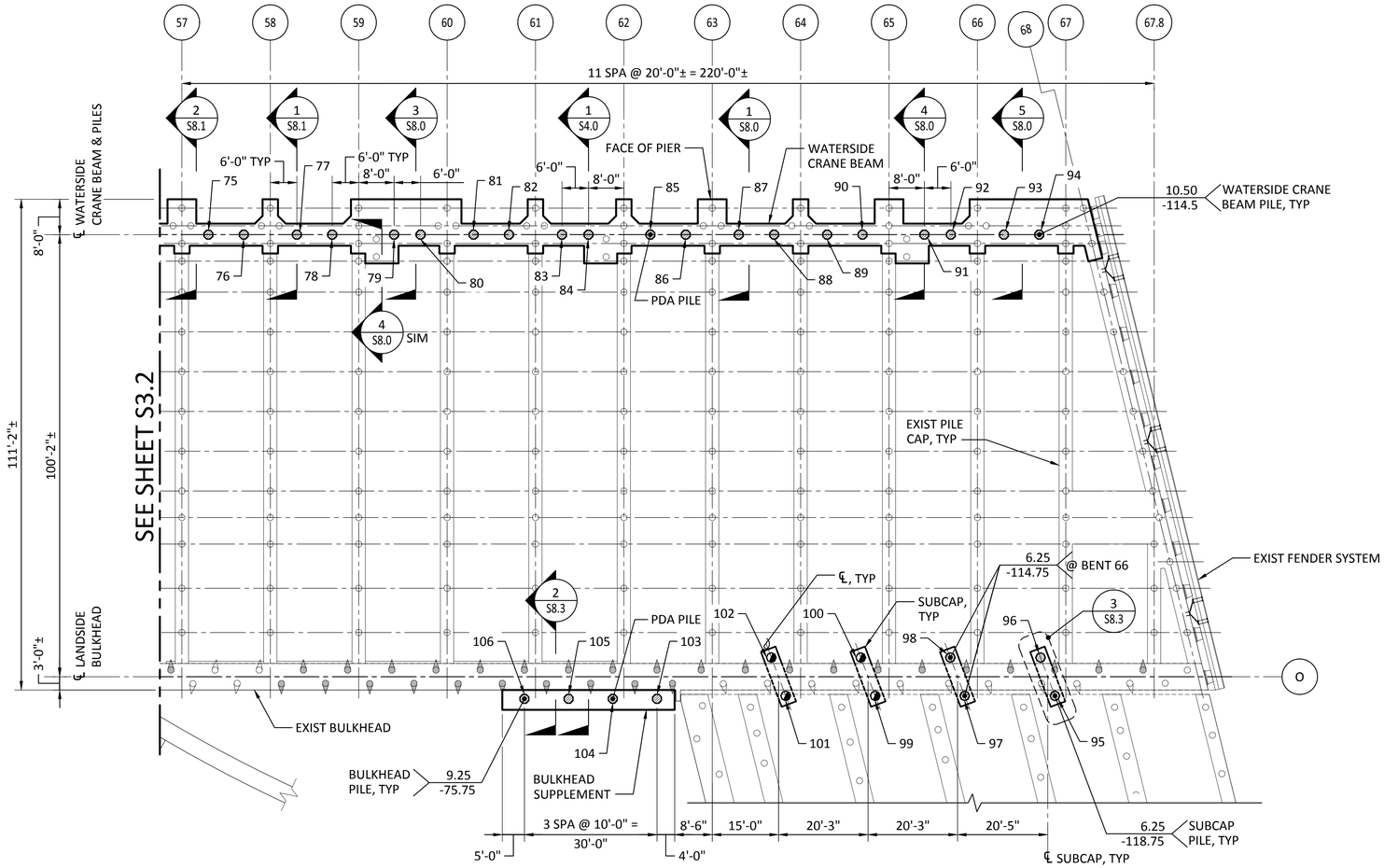


PLAN - PILE AND PILE CAP

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

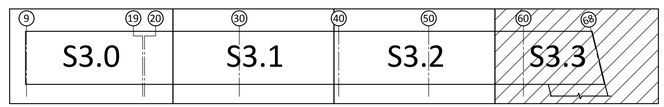
NOTE:
SEE S1.3 FOR AS-BUILT PILE INFORMATION

LEGEND:

- EXIST 24" OCT PC/PS CONC PILE
- EXIST 24"Ø STEEL PIPE PILE, PLUMB
- EXIST 24"Ø STEEL PIPE PILE, BATTERED
- EXIST 16 1/2"Ø OCT PC/PS CONC PILE, PLUMB
- EXIST 16 1/2" OCT PC/PS CONC PILE, BATTERED
- 24" OCT PC/PS CONC PILE, PLUMB, SEE S6.0
- 24" OCT PC/PS WITH KEY-LOCK MECHANICAL PILE SPLICE

XX.XX — PILE CUT-OFF ELEVATION
-XX.X — MIN PILE TIP ELEVATION
XXX — PILE NUMBER

KEY PLAN:



1/16" = 1'-0"

16 0 16 32
scale feet

PROJECT NORTH

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JRG	7/17/13		
PROJ. ENGR	DATE		

jason.mendenhall
ONE SITCUM WAY
TACOMA, WA 98421-2300

APPROVED:
DC 7/17/13
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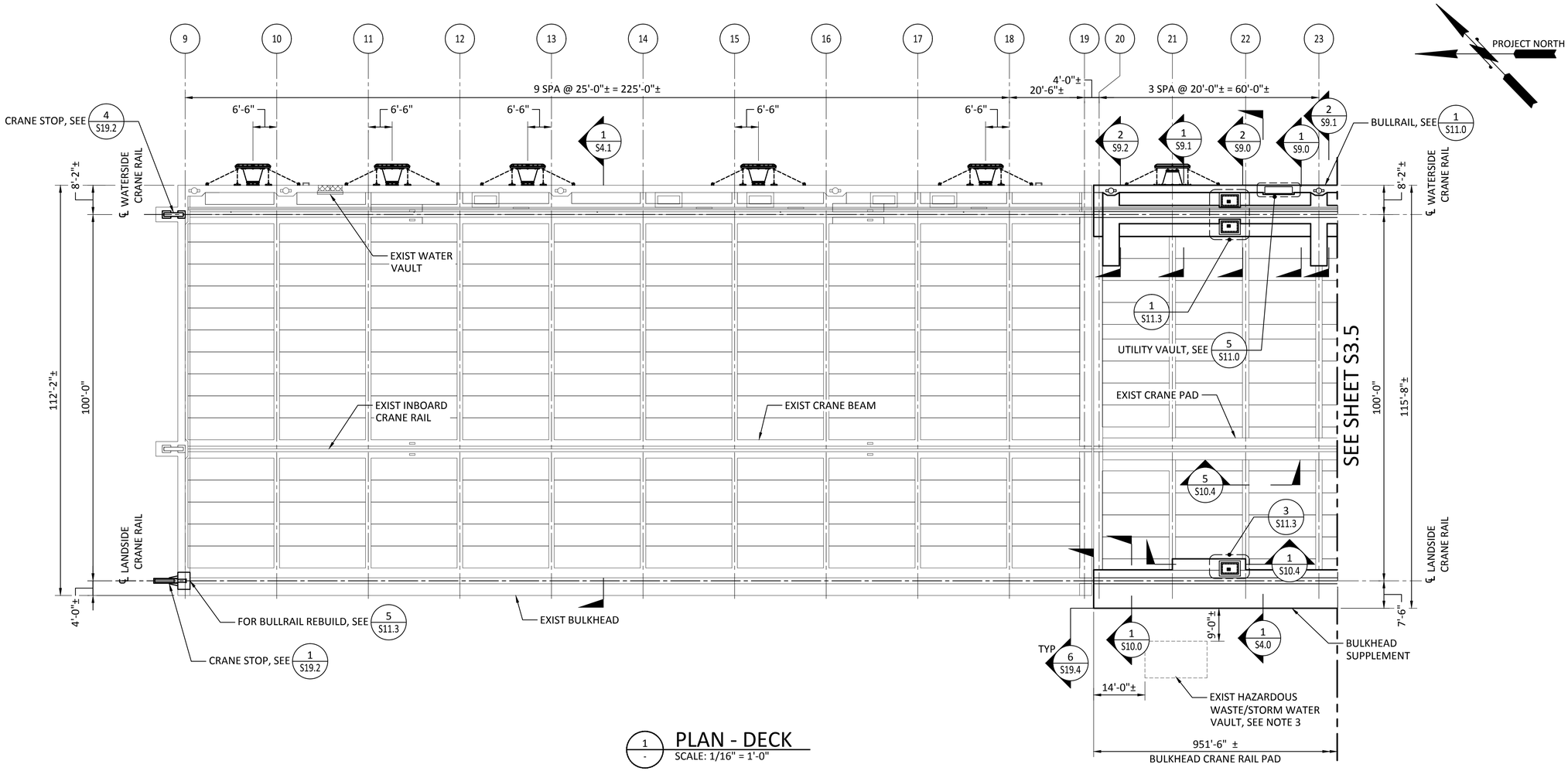
PIER 3 UPGRADE
PILE AND PILE CAP PLAN
SHEET 4

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

SECTION:	27	PRINTED BY:	jason.m
PORT ADDRESS:	ONE SI		

6502
S3.3
SHEET 47 OF 129



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

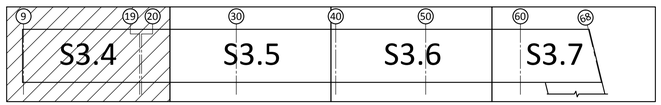
LEGEND:

- EXIST BOLLARD
- EXIST SPLICE BOX
- EXIST PIN SOCKET
- EXIST STORM WATER VAULT
- EXIST STORM DRAIN INLET
- W — EXIST WATER MAIN
- EXIST CRANE RAIL GROUNDING
- BP — EXIST ELECTRICAL CONDUIT
- SD — EXIST STORM DRAIN
- FENDER UNIT, NOTE 2
- 200-TON BOLLARD
- 100-TON BOLLARD
- LADDER
- WATER UTILITY VAULT
- 480V UTILITY VAULT
- CRANE TIE DOWNS
- CRANE POWER VAULT
- SHORE POWER VAULT
- HIGH MAST LIGHT
- PIN SOCKET

NOTES:

1. ACP AND BALLAST NOT SHOWN.
2. ALIGN CENTER OF FENDER UNITS ON CENTERLINE OF EXIST PILE CAPS, UNO.
3. DETERMINE LOCATION, SIZE, AND TOP ELEVATIONS (EA CORNER) OF THE EXISTING HAZARDOUS WASTE/STORM WATER VAULT, INCLUDING INLETS & OUTLETS. SUBMIT FINDINGS TO THE ENGINEER FOR APPROVAL BEFORE STARTING WORK ADJACENT TO THE VAULT.

KEY PLAN:



1/16" = 1'-0"

16 0 16 32
scale feet

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

PIER 3 UPGRADE

DECK PLAN
SHEET 1

CSB	7/17/13		
CHECKED BY	DATE		
JRG	7/17/13		
PROJ. ENGR	DATE		
TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27			

6502
S3.4
SHEET 48 OF 129

CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS

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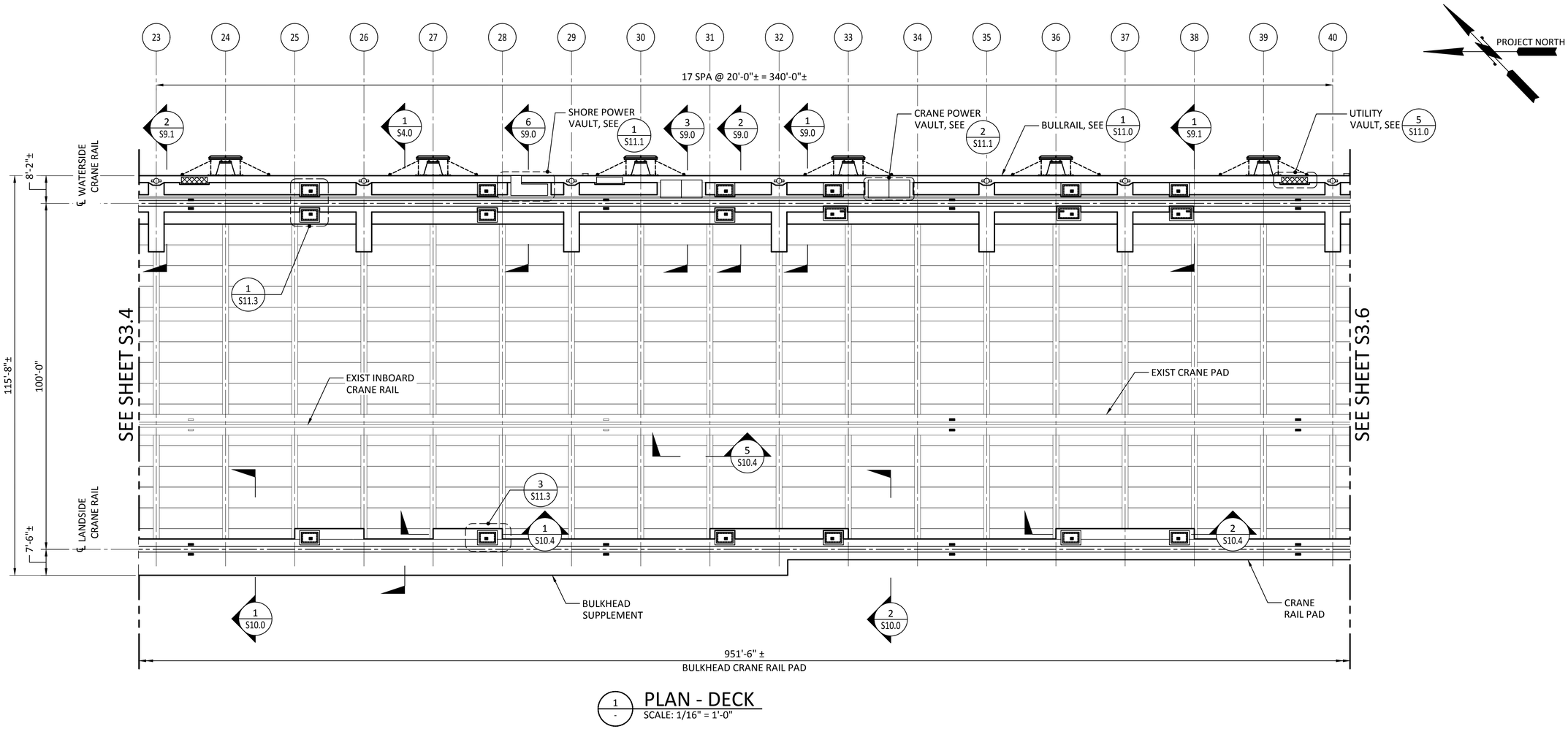


1 - PLAN - DECK
SCALE: 1/16" = 1'-0"

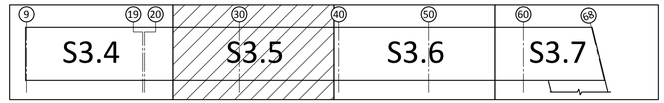
LEGEND:

- EXIST BOLLARD
- EXIST SPLICE BOX
- EXIST PIN SOCKET
- EXIST STORM WATER VAULT
- EXIST STORM DRAIN INLET
- W — EXIST WATER MAIN
- EXIST CRANE RAIL GROUNDING
- BP — EXIST ELECTRICAL CONDUIT
- SD — EXIST STORM DRAIN
- FENDER UNIT, NOTE 2
- 200-TON BOLLARD
- 100-TON BOLLARD
- LADDER
- WATER UTILITY VAULT
- 480V UTILITY VAULT
- CRANE TIE DOWNS
- CRANE POWER VAULT
- SHORE POWER VAULT
- HIGH MAST LIGHT
- PIN SOCKET

NOTES:

1. ACP AND BALLAST NOT SHOWN.
2. ALIGN CENTER OF FENDER UNITS ON CENTERLINE OF EXIST PILE CAPS, UNO.

KEY PLAN:



1/16" = 1'-0"

16 0 16 32
scale feet

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Federal Way, Washington 98003-2600
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CHECKED BY		
JRG	7/17/13	DATE
PROJ. ENGR		
jason.mendenhall		
ONE SITCUM WAY		
TACOMA, WA 98421-2300		

APPROVED:

DC	7/17/13	DATE
DIR OF ENG		

PIER 3 UPGRADE

DECK PLAN
SHEET 2

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

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SECTION: 27

6502
S3.5
SHEET 49 OF 129

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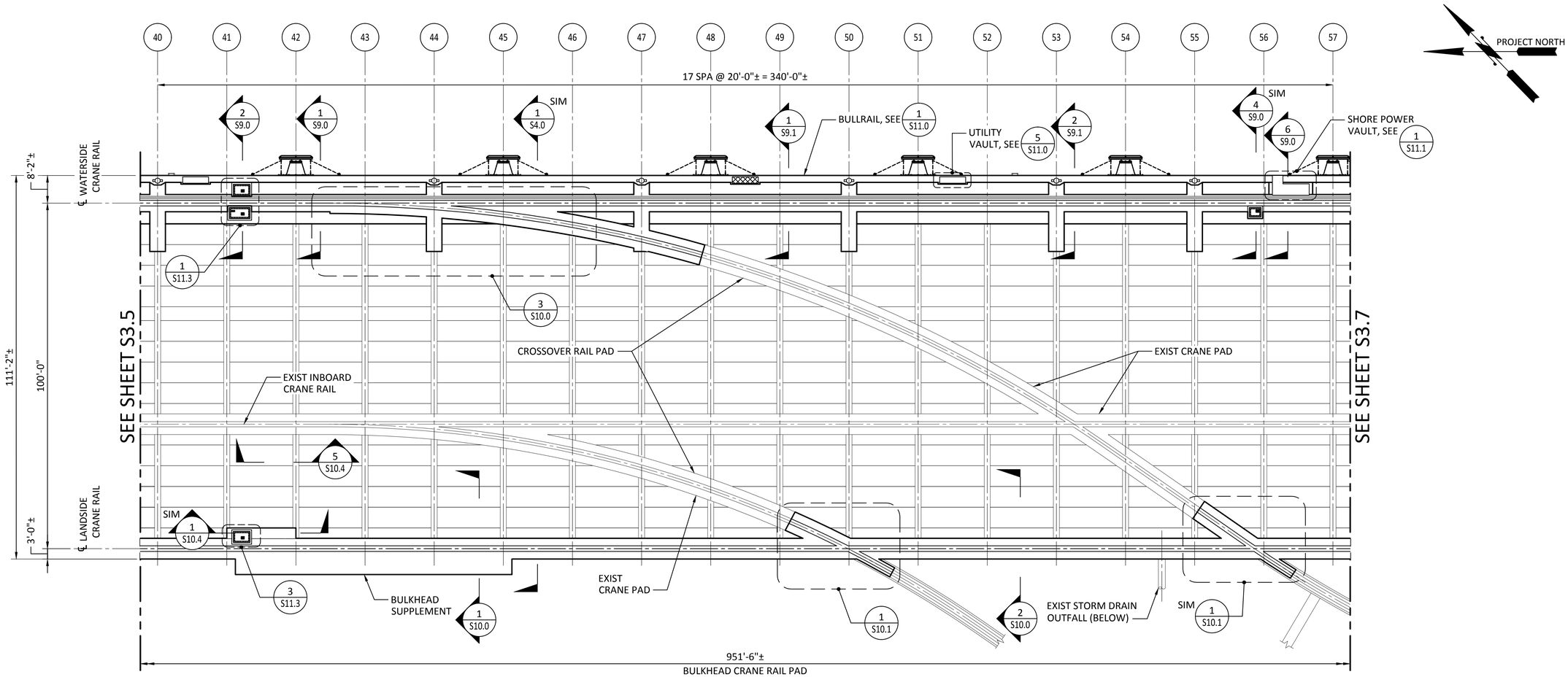


1 - PLAN - DECK
SCALE: 1/16" = 1'-0"

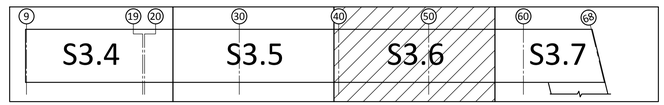
LEGEND:

- EXIST BOLLARD
- EXIST SPLICE BOX
- EXIST PIN SOCKET
- EXIST STORM WATER VAULT
- EXIST STORM DRAIN INLET
- W — EXIST WATER MAIN
- EXIST CRANE RAIL GROUNDING
- BP — EXIST ELECTRICAL CONDUIT
- SD — EXIST STORM DRAIN
- FENDER UNIT, NOTE 2
- 200-TON BOLLARD
- 100-TON BOLLARD
- LADDER
- WATER UTILITY VAULT
- 480V UTILITY VAULT
- CRANE TIE DOWNS
- CRANE POWER VAULT
- SHORE POWER VAULT
- HIGH MAST LIGHT
- PIN SOCKET

NOTES:

1. ACP AND BALLAST NOT SHOWN.
2. ALIGN CENTER OF FENDER UNITS ON CENTERLINE OF EXIST PILE CAPS, UNO.

KEY PLAN:



1/16" = 1'-0"

16 0 16 32
scale feet

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CHECKED:	JRG	7/17/13	DATE
APPROVED:	DC	7/17/13	DATE
DIR OF ENG			
PROJ. ENGR			

PRINTED BY: jason.mendenhall
PORT ADDRESS: ONE SITCUM WAY
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DRAWING SCALE: AS SHOWN

PIER 3 UPGRADE

DECK PLAN
SHEET 3

TOWNSHIP:	21 N	RANGE:	3 E
DAT-HRZ:	NAD 83-07	VERT:	NOS TIDAL (MLLW = 0.0)
PARCEL:	27	SECTION:	27

CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS

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S3.6
SHEET 50 OF 129

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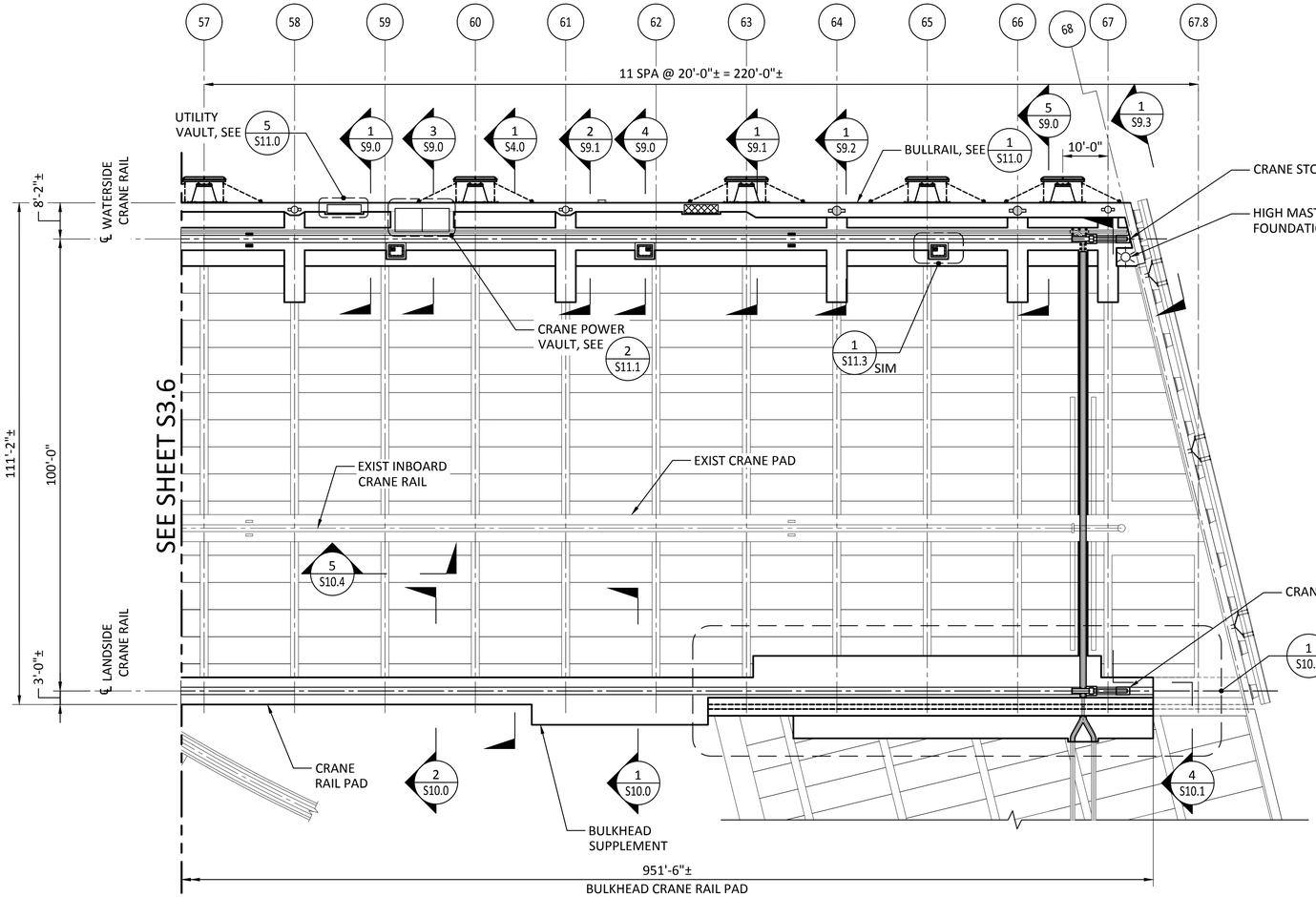


1 / - PLAN - DECK
SCALE: 1/16" = 1'-0"

PROJECT NORTH

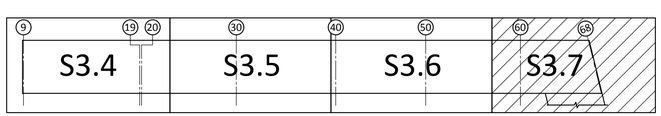
LEGEND:

- EXIST BOLLARD
- EXIST SPLICE BOX
- EXIST PIN SOCKET
- EXIST STORM WATER VAULT
- EXIST STORM DRAIN INLET
- W — EXIST WATER MAIN
- EXIST CRANE RAIL GROUNDING
- BP — EXIST ELECTRICAL CONDUIT
- SD — EXIST STORM DRAIN
- FENDER UNIT, NOTE 2
- 200-TON BOLLARD
- 100-TON BOLLARD
- LADDER
- WATER UTILITY VAULT
- 480V UTILITY VAULT
- CRANE TIE DOWNS
- CRANE POWER VAULT
- SHORE POWER VAULT
- HIGH MAST LIGHT
- PIN SOCKET

NOTES:

1. ACP AND BALLAST NOT SHOWN.
2. ALIGN CENTER OF FENDER UNITS ON CENTERLINE OF EXIST PILE CAPS, UNO.

KEY PLAN:



1/16" = 1'-0"

16 0 16 32
scale feet

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PIER 3 UPGRADE

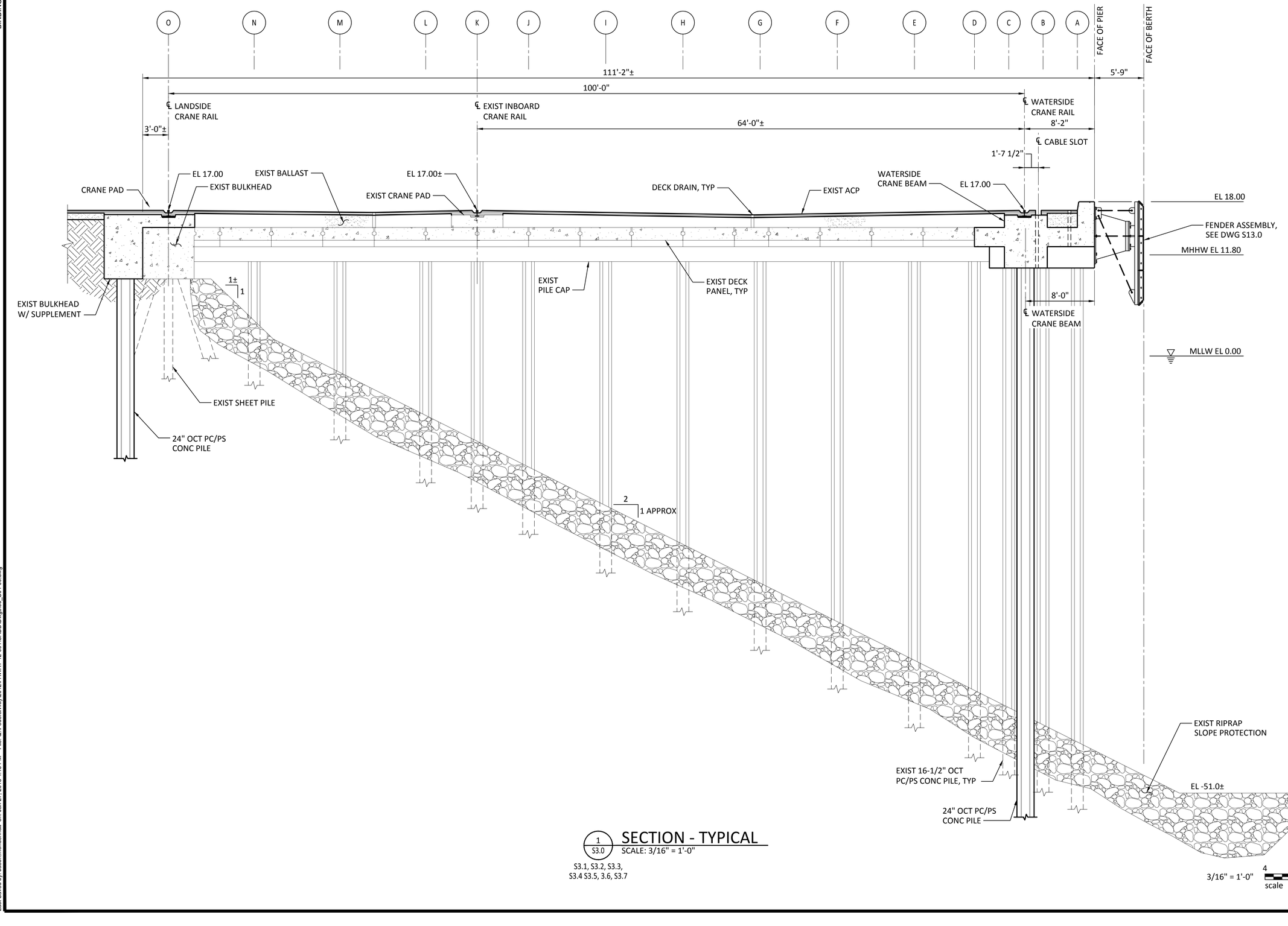
DECK PLAN
SHEET 4

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27			

6502
S3.7
SHEET 51 OF 129

CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS

BINDING EDGE



1 / S3.0 SECTION - TYPICAL
SCALE: 3/16" = 1'-0"

S3.1, S3.2, S3.3, S3.4 S3.5, 3.6, S3.7

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PIER 3 UPGRADE

TYPICAL SECTION
SHEET 1

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

6502
S4.0
SHEET 52 OF 129

CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS

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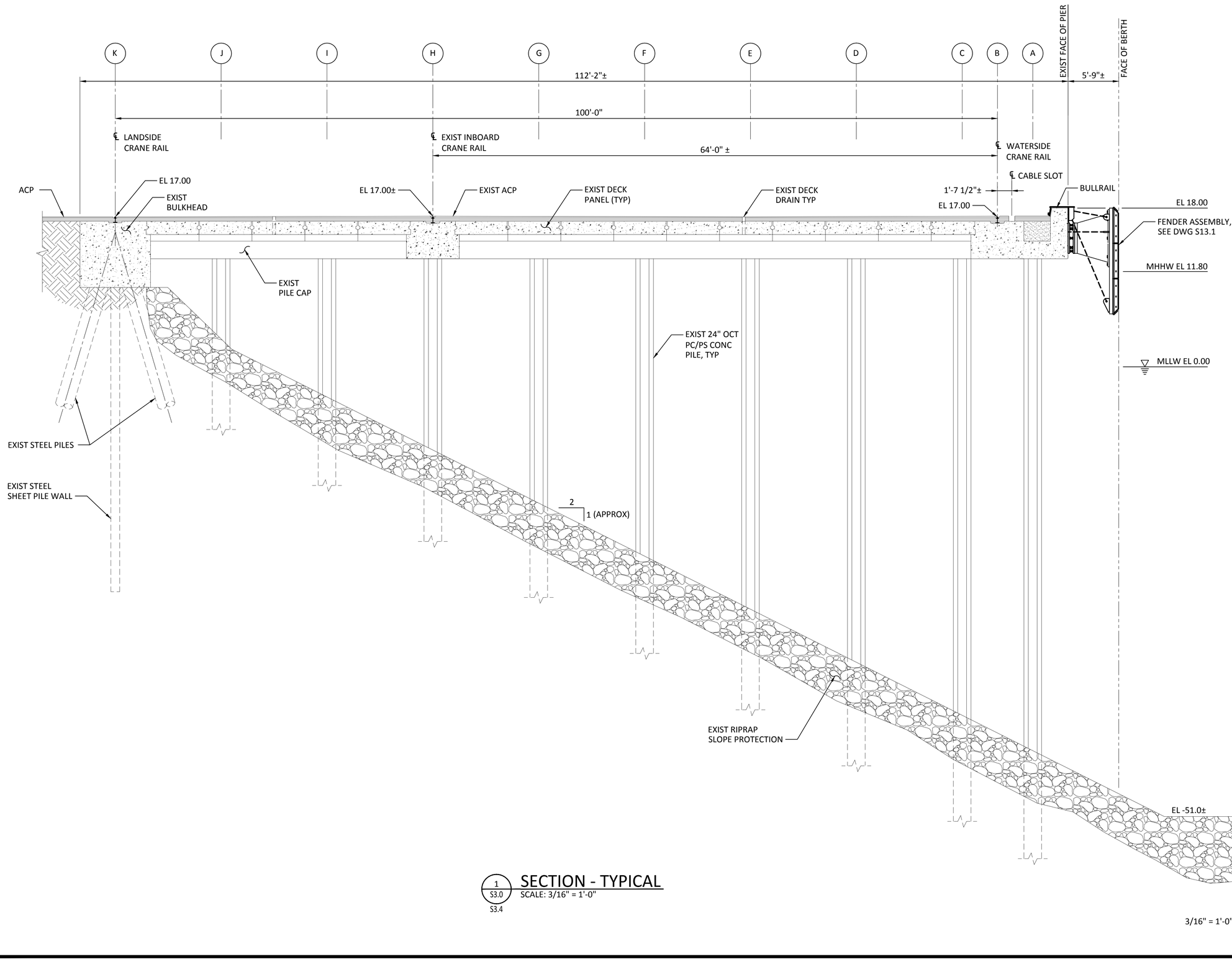

1 / S3.0 / S3.4 SECTION - TYPICAL
SCALE: 3/16" = 1'-0"

3/16" = 1'-0" scale 4 0 4 8 feet

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PIER 3 UPGRADE

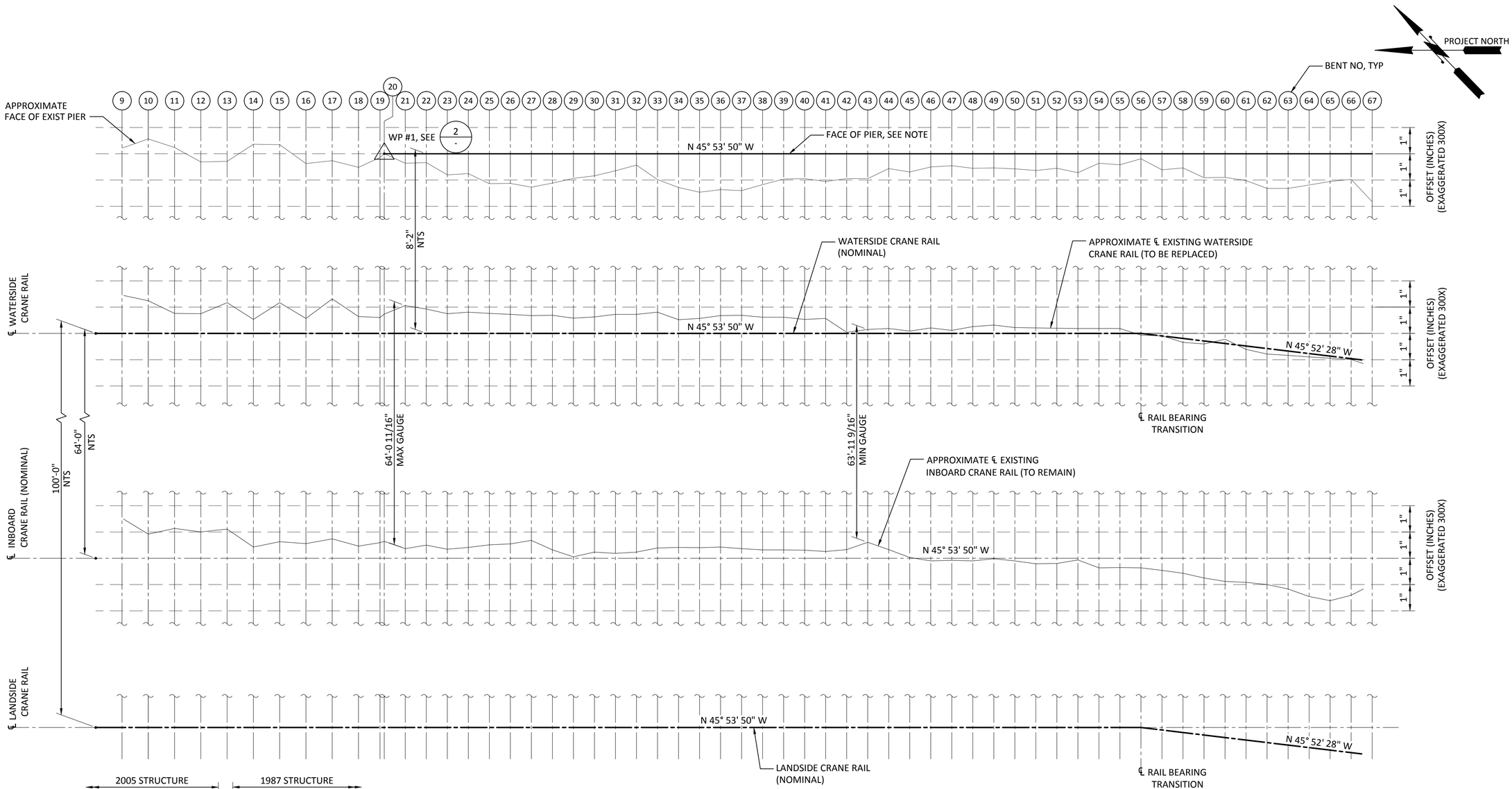
TYPICAL SECTION
SHEET 2

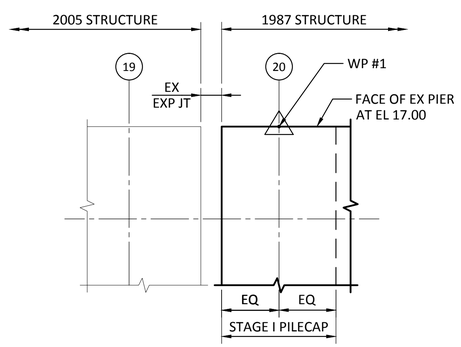
TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

6502
S4.1
SHEET 53 OF 129

CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS

BINDING EDGE





2/- DETAIL - WORKPOINT
NTS

1/- PLAN - CRANE RAIL ALIGNMENTS
SCALE: 1" = 50' (HORIZONTAL)

NOTES:

1. FACE OF PIER IS DEFINED BY WP #1 AND PROJECT NORTH BEARING. WP #1 IS DEFINED BY FACE OF EXIST PIER AT BENT 20, EL 17.00, SEE 2/-

1" = 50' scale 50 0 50 100 feet

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PIER 3 UPGRADE

CRANE RAIL ALIGNMENT PLAN

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MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
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		DRAWING SCALE:	AS SHOWN

6502
S5.0
SHEET 54 OF 129

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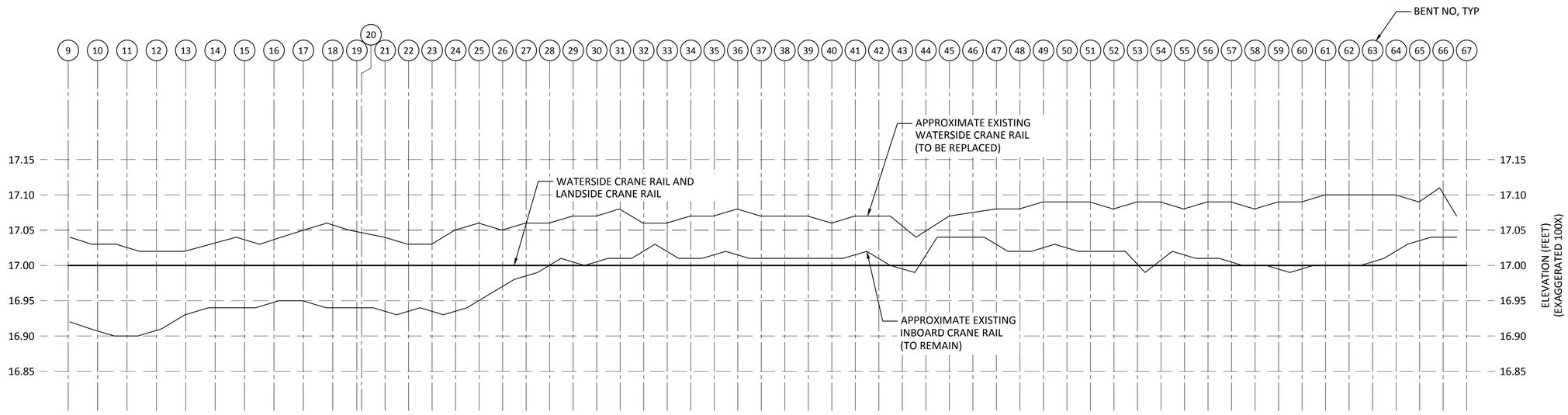

NOTE:

1. ELEVATIONS ARE TO TOP OF RAIL

1/- PLAN - CRANE RAIL PROFILES

SCALE: 1" = 50' (VERTICAL)

1" = 50' scale 50 0 50 100 feet

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PIER 3 UPGRADE

CRANE RAIL PROFILES

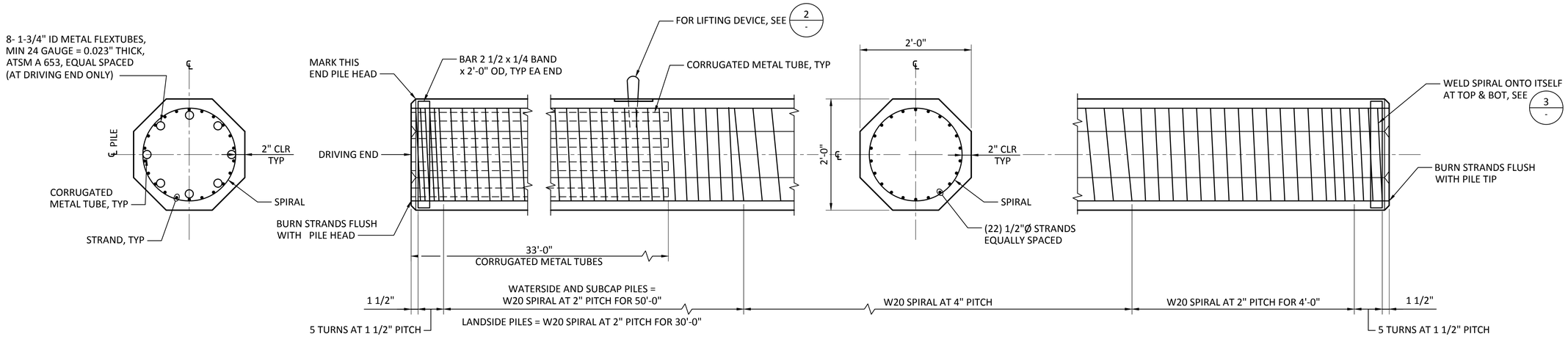
CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

SECTION: 27

6502

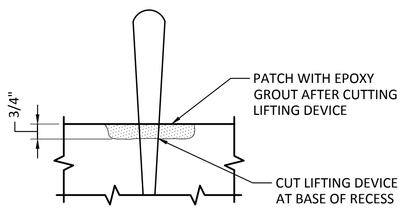
S5.1

SHEET 55 OF 129



1 - 24" SOLID OCTAGONAL PRESTRESSED CONCRETE PILE

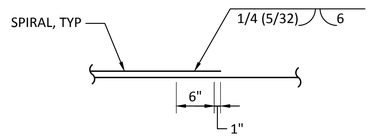
SCALE: 1" = 1'-0"



NOTE:
LIFTING DEVICE QUANTITY 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.

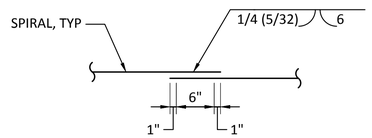
2 - DETAIL - LIFTING DEVICE

SCALE: NTS



3 - DETAIL - WELD DETAIL AT END

SCALE: NTS



NOTE:
WELD ALL SPIRAL SPLICES IN THE TOP 1/3 OF THE PILE. LAPPED SPLICES WITH 2 OVER-LAPPING TURNS AND 135° HOOKS EXTENDING COMPLETELY ACROSS THE CORE MAY BE USED IN THE BOTTOM 2/3 OF THE PILE.

4 - DETAIL - SPIRAL SPLICE

SCALE: NTS

PRECAST PRESTRESSED PILE DATA

(SOLID OCTAGONAL PILES)

SIZE	24" SOLID
SECTION AREA	477 SQ IN
WEIGHT	525 LBS/FT
SECTION MODULUS	1515 CUBIC IN
PRETENSION:	24" SOLID
NUMBER OF STRANDS	22
DESIGN FORCE	555 KIPS
PRESTRESS IN CONCRETE	1160 PSI
MIN CONCRETE COMPRESSIVE STRENGTH:	
AT RELEASE	4800 PSI
AT DRIVING	8000 PSI
AT 28 DAYS	8000 PSI
PRESTRESSING STEEL	1/2" DIA 7-WIRE LOW RELAXATION STRAND
SPIRAL	ASTM A82 SPACING/DRAWING

NOTE:
MARK DRIVING END OF ALL PILES CLEARLY IN PRECAST PLANT.

PILING SCHEDULE

(24" SOLID OCTAGONAL CONCRETE PILES)

INSTALLED LOCATIONS	QTY	SUPPLIED LENGTH (FT)	ULTIMATE DEMAND
WATERSIDE CRANE BEAM	93	130'-0"	650 KIPS
SUBCAP @ 66	2	130'-0"	650 KIPS
SUBCAP @ 67	2	138'-0"	650 KIPS
WATERSIDE CRANE BEAM NEAR BENT 67	1	138'-0"	650 KIPS
BULKHEAD SUPPLEMENT	36	90'-0"	500 KIPS

1" = 1'-0" scale 1 0 1 2 feet

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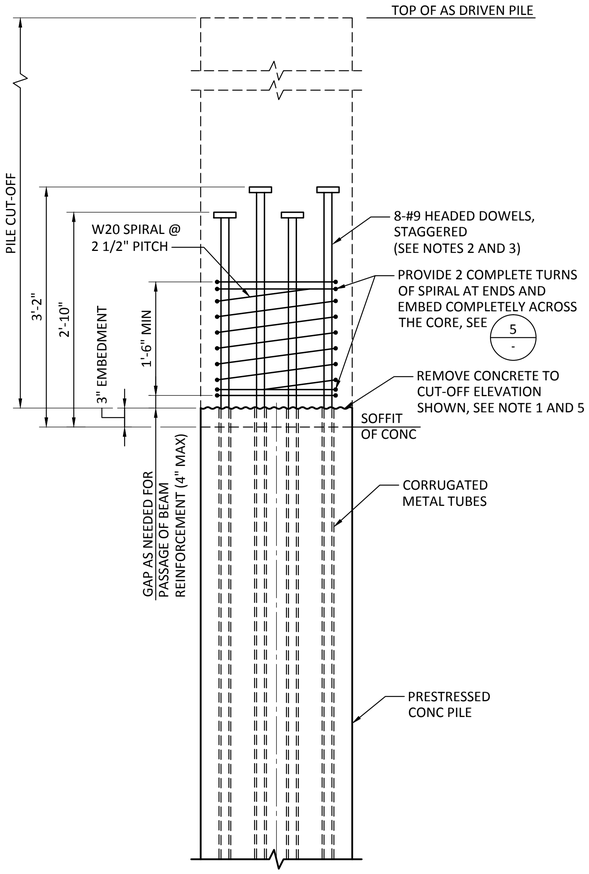
PIER 3 UPGRADE

PRESTRESSED CONCRETE PILE DETAILS

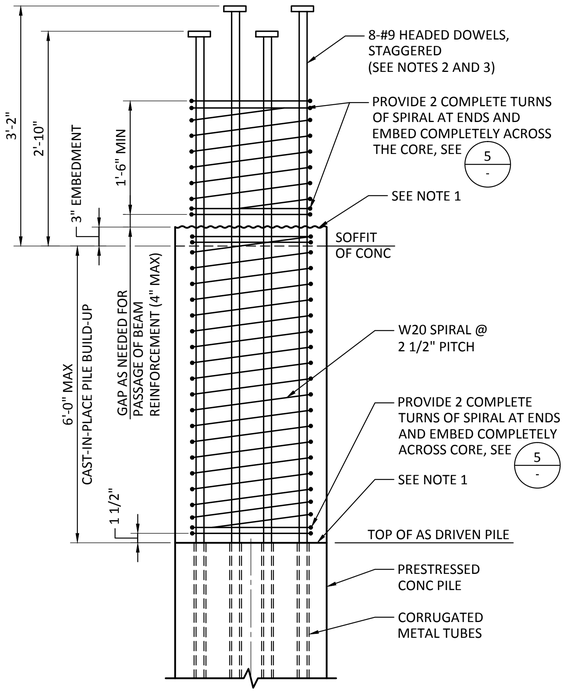
6502
S6.0
SHEET 56 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27
			DRAWING SCALE: AS SHOWN

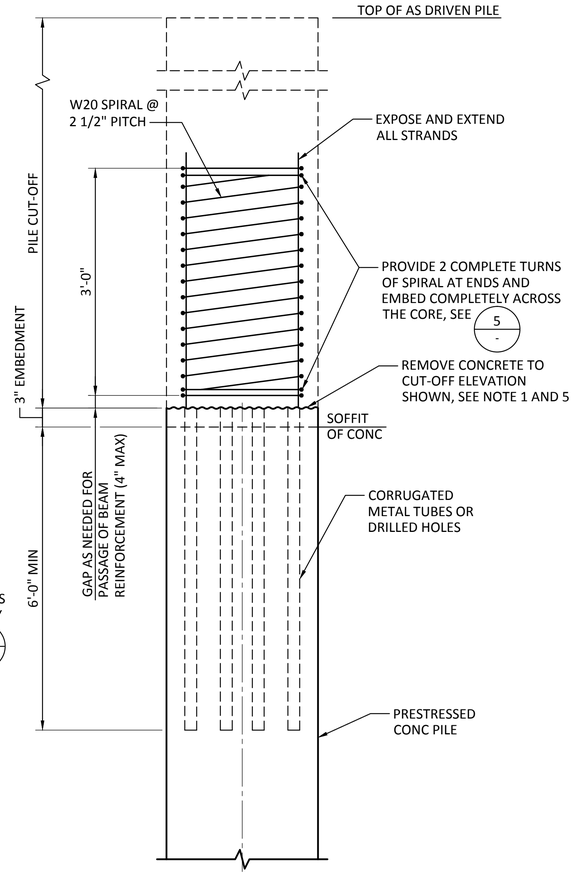
BINDING EDGE



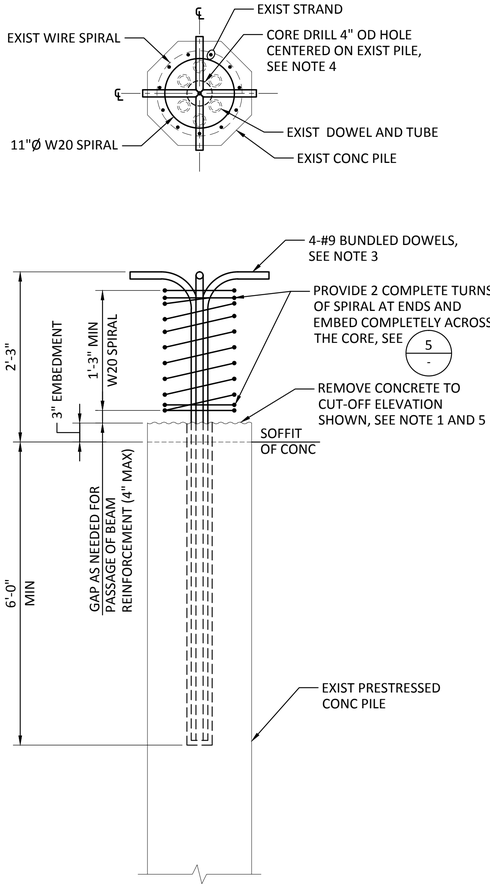
1/- DETAIL - PILE CONNECTION
SCALE: 1" = 1'-0" PILE CUT-OFF LESS THAN 18'-9" FEET



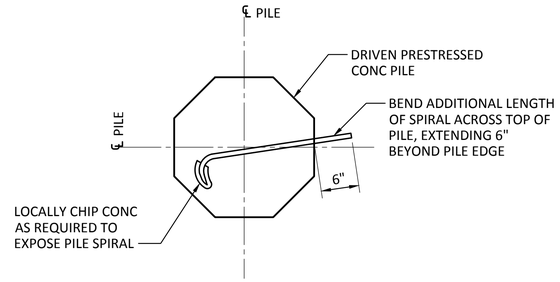
2/- DETAIL - PILE CONNECTION
SCALE: 1" = 1'-0" NO PILE CUT-OFF NECCESSARY



3/- DETAIL - PILE CONNECTION
SCALE: 1" = 1'-0" PILE CUT-OFF EXCEEDS 18'-9" FEET



4/- DETAIL - EXIST PILE CONNECTION
SCALE: 1" = 1'-0"



5/- DETAIL - SPIRAL DEVELOPMENT @ TOP OF PILE
SCALE: NTS

NOTES:

1. ROUGHEN TOP SURFACE OF PILE TO 1/4" AMPLITUDE.
2. DOWELS SHALL BE GROUTED INTO PILE MINIMUM 6'-3". FILL TUBE LENGTHS BELOW DOWELS WITH GROUT.
3. DOWEL TUBES SHALL BE FILLED WITH GROUT. DOWELS SHALL BE PLACED INDIVIDUALLY AND IMMEDIATELY AFTER GROUTING. SEE SPECIFICATIONS FOR GROUT REQUIREMENTS.
4. HOLES SHALL BE ROUGHENED TO 1/8" AMPLITUDE AND CLEANED PRIOR TO INSTALLATION OF DOWELS AND GROUT.
5. DEVELOP PILE SPIRAL SIMILAR TO 5/-

1" = 1'-0" scale 1 0 1 2 feet

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DRAWING SCALE:	AS SHOWN	

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PIER 3 UPGRADE

PILE TO PILE CAP CONNECTION DETAILS

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27

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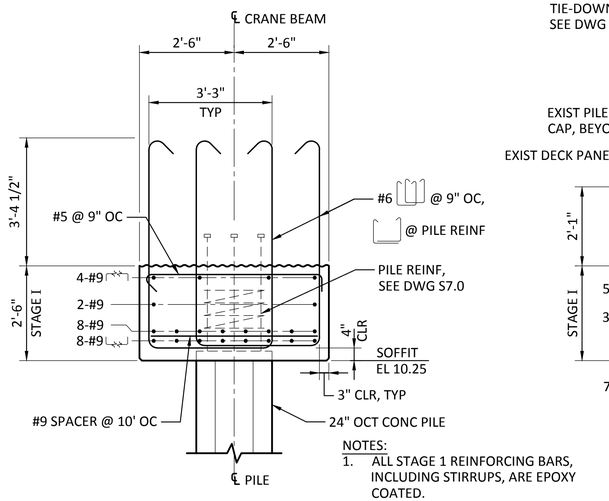
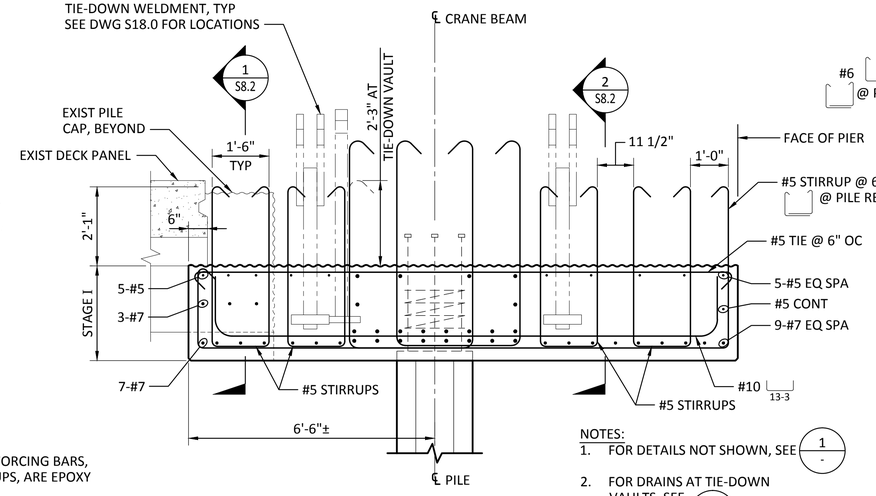
S7.0
SHEET 57 OF 129

Last Saved by: Jason.mendenhall on: Jan 27, 2015 4:13 PM File: Q:\FederalWay\2012\FAWAT-12-0911\CADD\Dwgs\03_S07-00.dwg



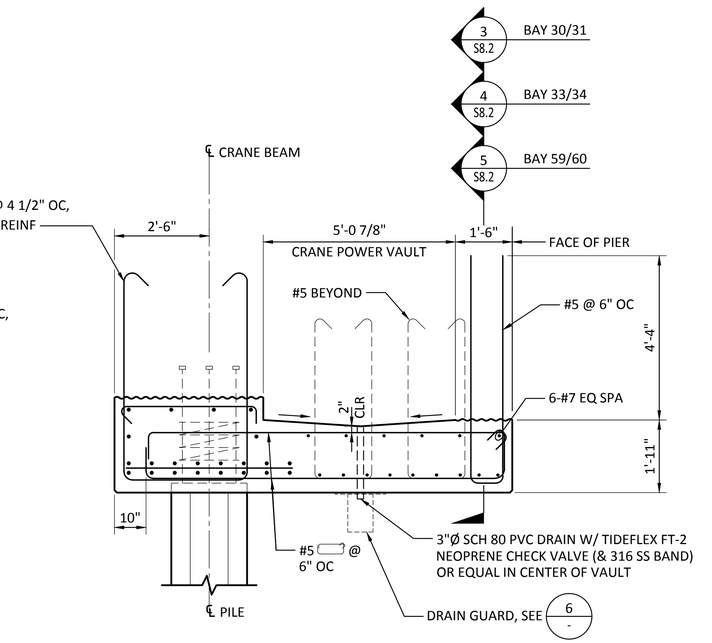
NOTES:
1. ALL STAGE 1 REINFORCING BARS, INCLUDING STIRRUPS, ARE EPOXY COATED.
2. FOR PIPE SLEEVES AT CRANE STOP SEE DWG S19.3

1 / S3.0 — SECTION - CRANE BEAM
SCALE: 1/2" = 1'-0"
S3.1, S3.2, S3.3



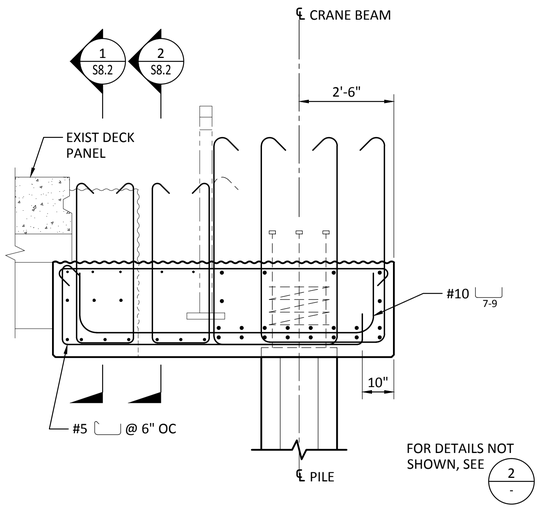
NOTES:
1. FOR DETAILS NOT SHOWN, SEE 1 / -
2. FOR DRAINS AT TIE-DOWN VAULTS, SEE 2 / S11.3

2 / S3.1 — SECTION - TIE-DOWN (PAIR)
SCALE: 1/2" = 1'-0"
S3.2



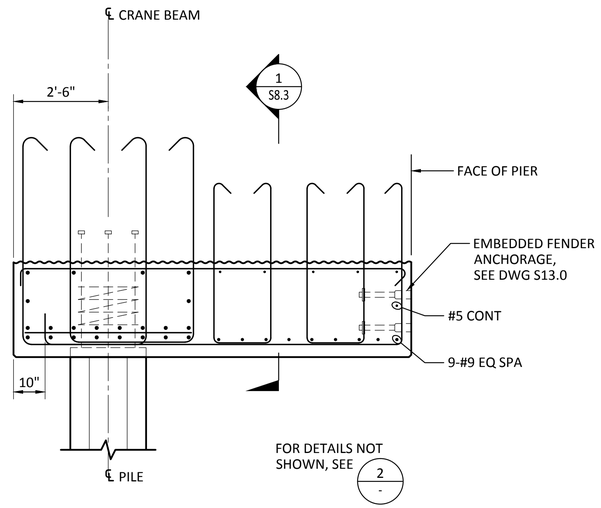
FOR DETAILS NOT SHOWN, SEE 2 / -

3 / S3.1 — SECTION - CRANE POWER VAULT
SCALE: 1/2" = 1'-0"
S3.3



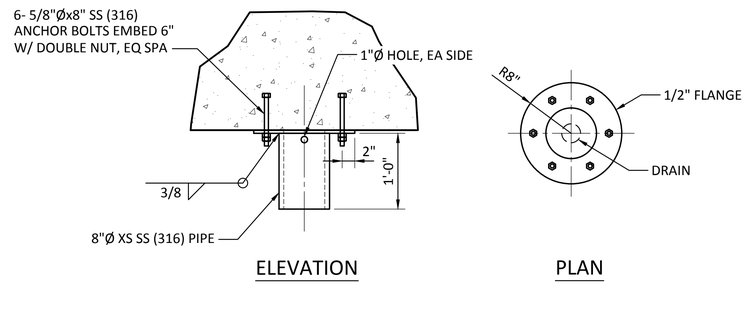
FOR DETAILS NOT SHOWN, SEE 2 / -

4 / S3.3 — SECTION - TIE-DOWN (SINGLE)
SCALE: 1/2" = 1'-0"



FOR DETAILS NOT SHOWN, SEE 2 / -

5 / S3.3 — SECTION - BAY 66 - 68
SCALE: 1/2" = 1'-0"



6 / - — DETAIL - DRAIN GUARD (3 TOTAL)
SCALE: 1" = 1'-0"

1" = 1'-0" — 1 0 1 2 — scale feet

1/2" = 1'-0" — 2 0 2 4 — scale feet

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jason.mendenhall
ONE SITCUM WAY
TACOMA, WA 98421-2300

APPROVED:
DC 7/17/13

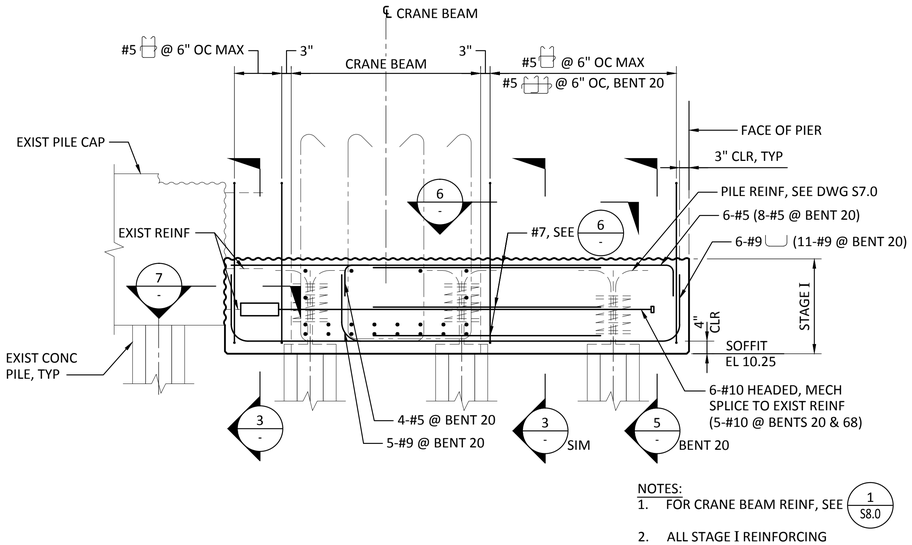
DIR OF ENG	DATE
PRINTED BY:	jason.mendenhall
PORT ADDRESS:	ONE SITCUM WAY
	TACOMA, WA 98421-2300
DRAWING SCALE:	AS SHOWN

PIER 3 UPGRADE
STAGE I
CONCRETE WATERSIDE CRANE BEAM

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27			

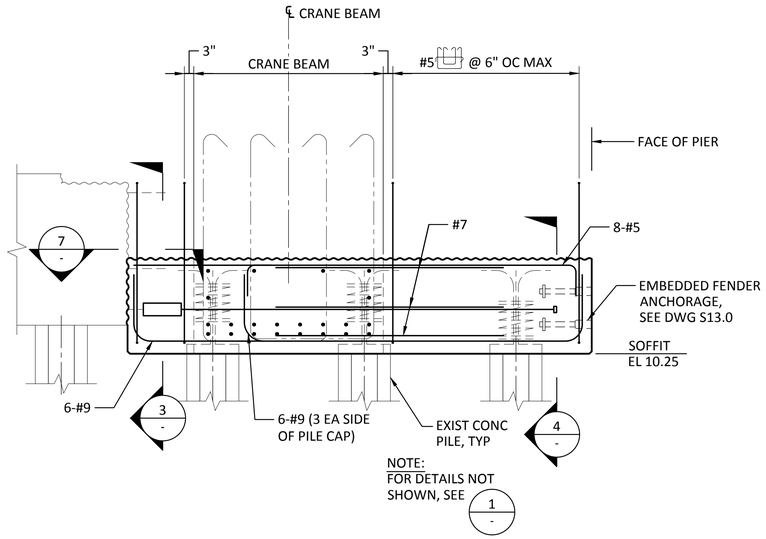
6502
S8.0
SHEET 58 OF 129

CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS

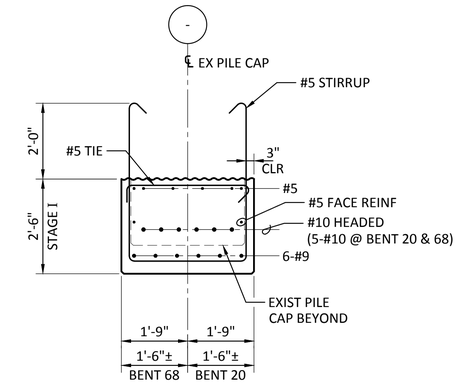


NOTES:
1. FOR CRANE BEAM REINF, SEE 1 / S8.0
2. ALL STAGE I REINFORCING BARS, INCLUDING STIRRUPS, ARE EPOXY COATED.

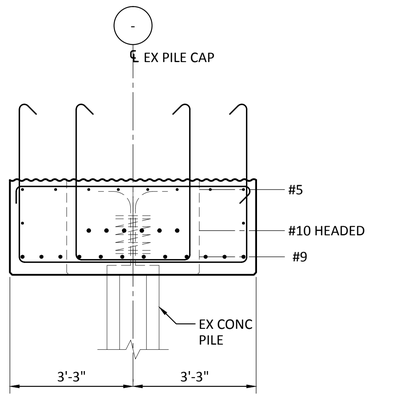
1 / S3.0 ELEVATION - PILE CAP
SCALE: 1/2"=1'-0"
S3.1, S3.2, S3.3



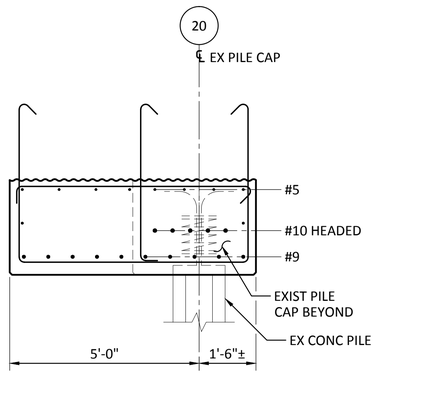
2 / S3.0 ELEVATION - FENDER PILE CAP
SCALE: 1/2"=1'-0"
S3.1, S3.2, S3.3



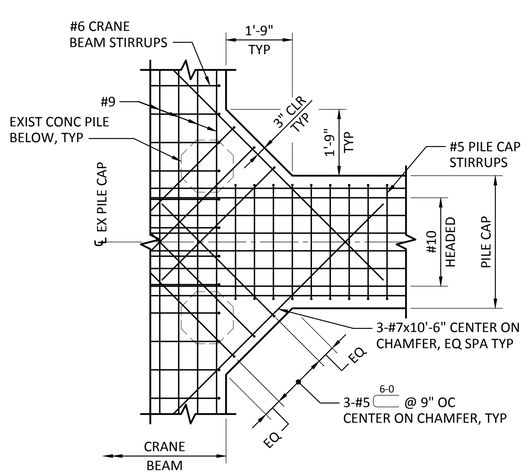
3 SECTION - PILE CAP
SCALE: 1/2" = 1'-0"



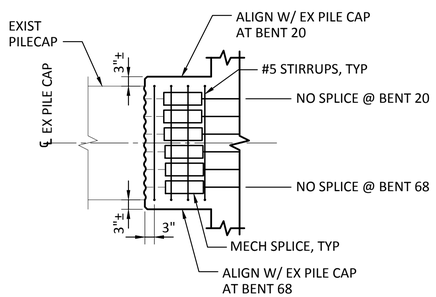
4 SECTION - PILE CAP AT FENDER
SCALE: 1/2" = 1'-0"



5 SECTION - PILE CAP (BENT 20)
SCALE: 1/2" = 1'-0"



6 DETAIL - CHAMFER
SCALE: 1/2" = 1'-0"



7 DETAIL
SCALE: 1/2" = 1'-0"

1/2" = 1'-0"

2 0 2 4
scale feet

BINDING EDGE

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JRG	7/17/13	DATE
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APPROVED:		
DC	7/17/13	DATE
DIR OF ENG		

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PORT ADDRESS:	ONE SITCUM WAY
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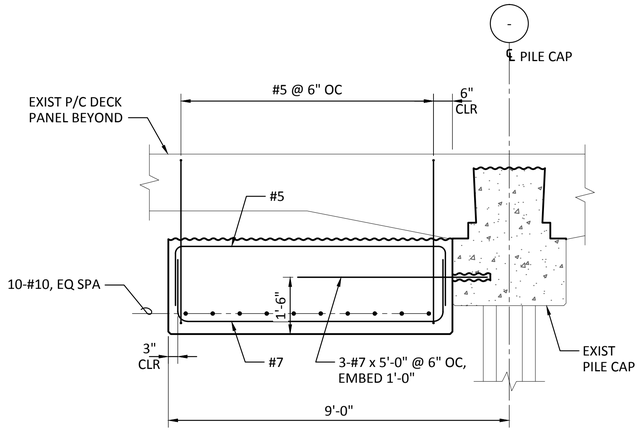
PIER 3 UPGRADE

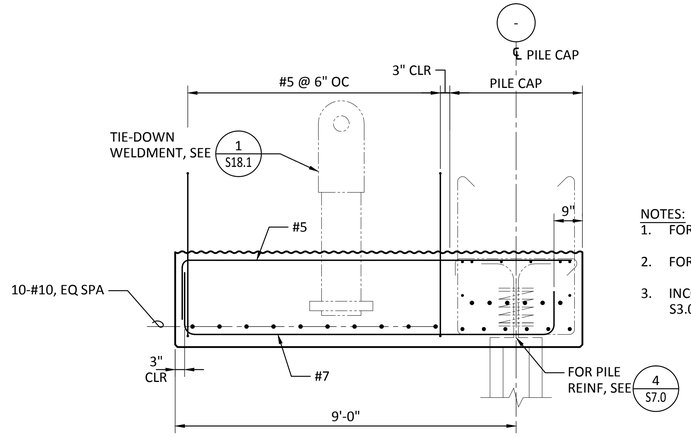
STAGE I
CONCRETE PILE CAPS

CONT/CONS:	069458	RANGE: 3 E	SECTION: 27
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

6502
S8.1
SHEET 59 OF 129

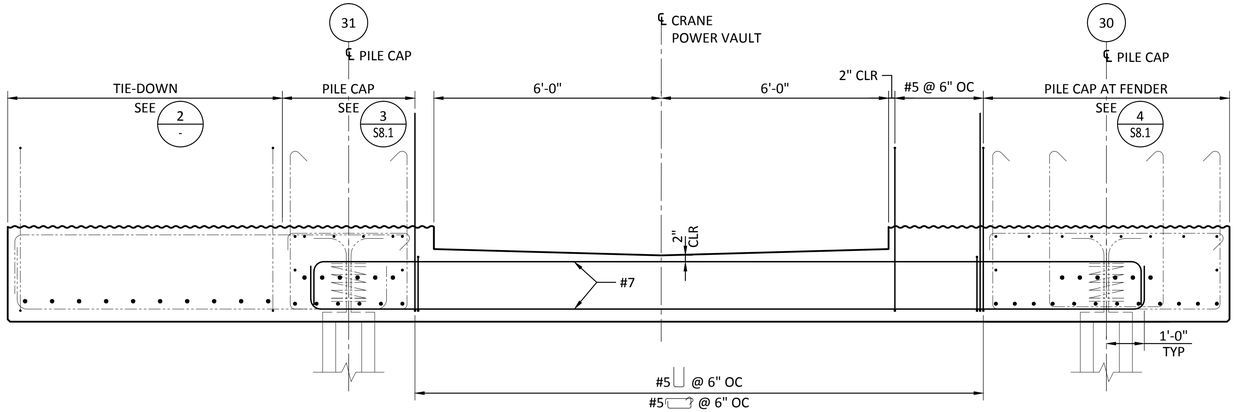


1/S8.0 SECTION - TIE DOWN
SCALE: 1/2"=1'-0"

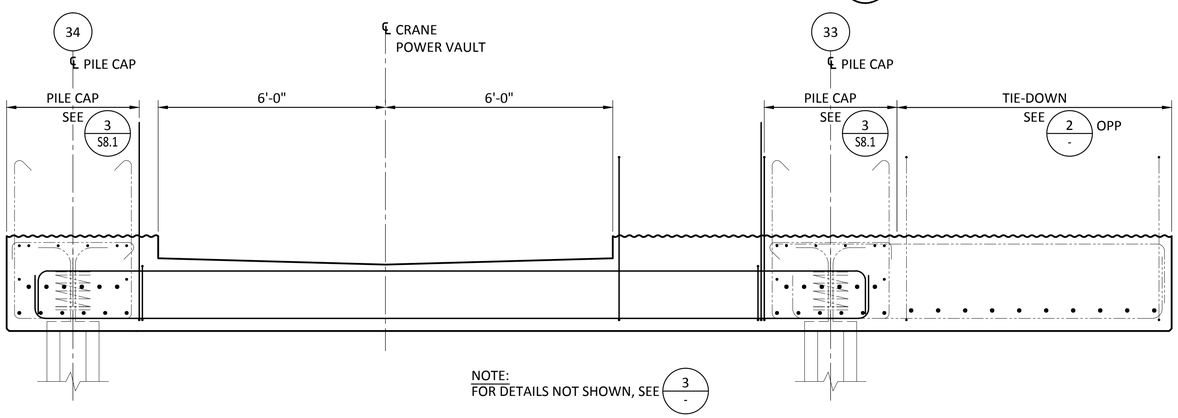


NOTES:
1. FOR TYP PILE CAP REINF, SEE 3/S8.1
2. FOR PILE CAP REINF AT 36, SEE 4/S8.1
3. INCORPORATE EXIST PILES, SEE DWG S3.0 TO DWG S3.3.

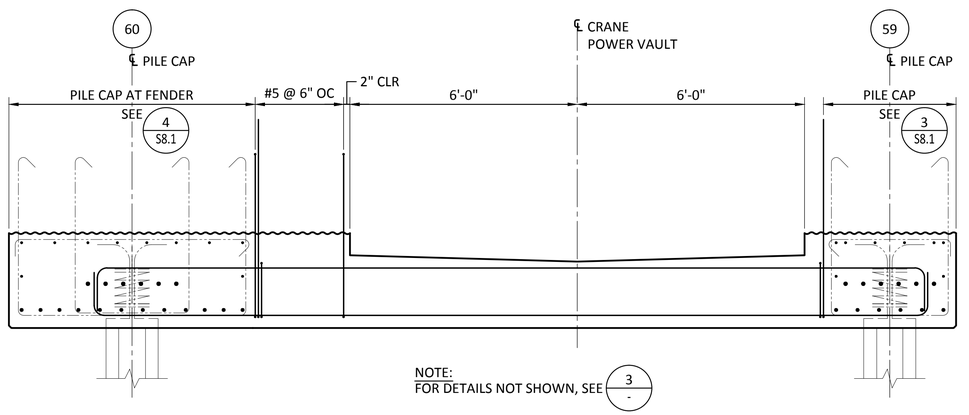
2/S8.0 SECTION - TIE DOWN
SCALE: 1/2"=1'-0"



3/S8.0 SECTION - CRANE POWER VAULT (BAY 30/31)
SCALE: 1/2"=1'-0"



4/S8.0 SECTION - CRANE POWER VAULT (BAY 33/34)
SCALE: 1/2"=1'-0"



5/S8.0 SECTION - CRANE POWER VAULT (BAY 59/60)
SCALE: 1/2"=1'-0"

1/2" = 1'-0"

2 0 2 4
scale feet

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TACOMA, WA 98421-2300			

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DC	7/17/13
DIR OF ENG	DATE

PIER 3 UPGRADE

STAGE I
CONCRETE DETAILS

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

SECTION:	27
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6502
S8.2
SHEET 60 OF 129

BINDING EDGE

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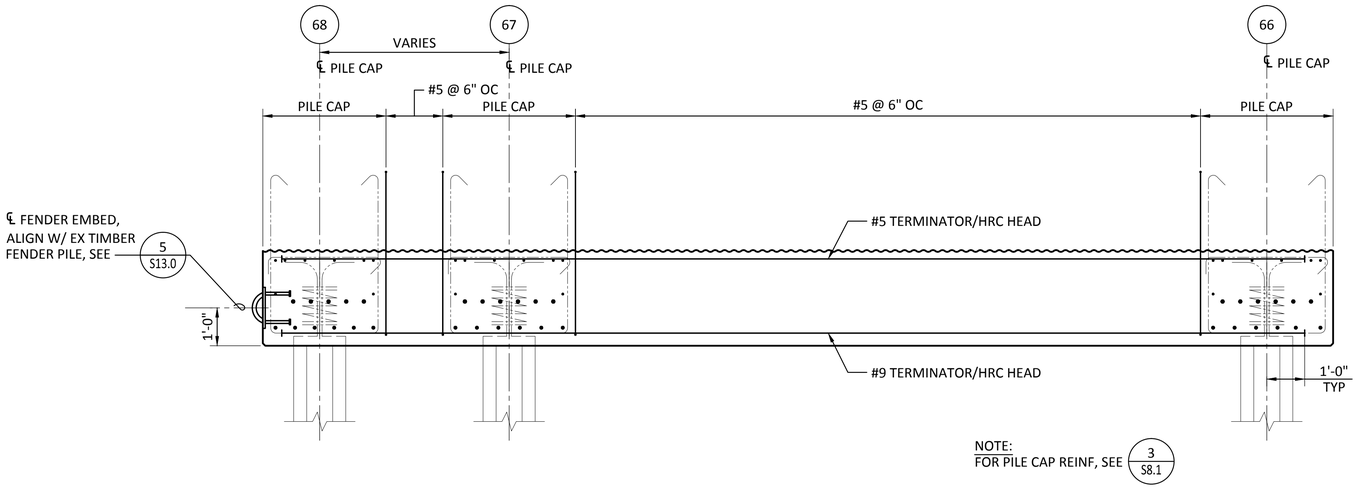
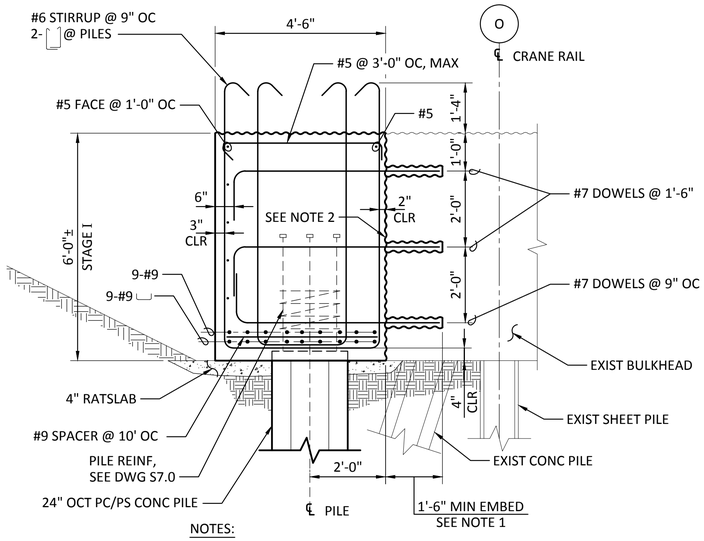


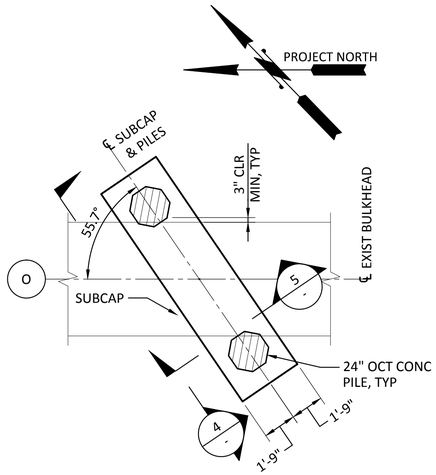
1 S8.0 **SECTION - BENT 66 TO 68**
SCALE: 1/2"=1'-0"



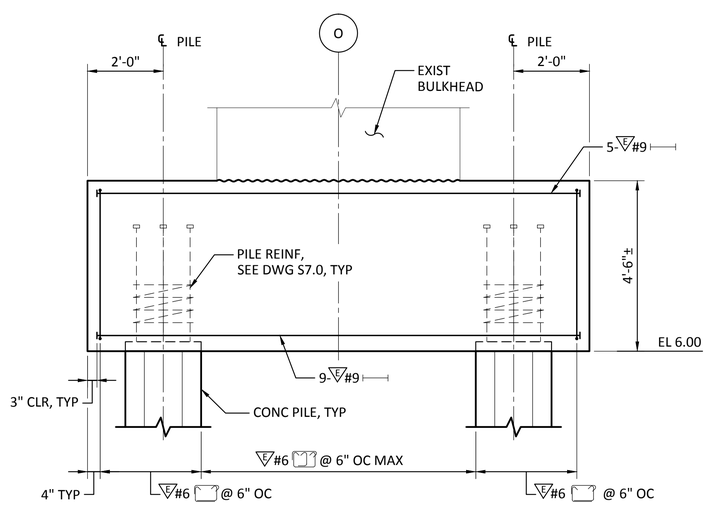
NOTES:

1. LOCATE EXISTING REINFORCING BARS IN BULKHEAD & MARK, PRIOR TO DRILLING HOLES FOR DOWELS SET IN EPOXY.
2. ROUGHEN FACE TO 1/4" AMPLITUDE.

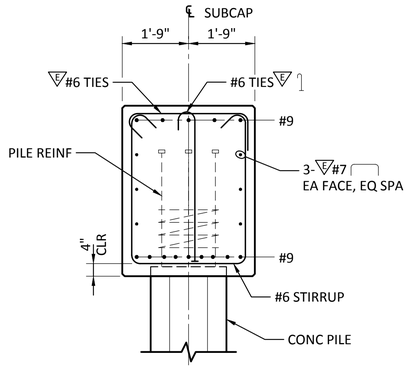
2 S3.0 **SECTION - BULKHEAD SUPPLEMENT**
SCALE: 1/2"=1'-0"
S3.1, S3.2, S3.3



3 S3.3 **DETAIL - SUBCAP**
SCALE: 1/4" = 1'-0" (4 TOTAL)



4 - **ELEVATION - SUBCAP**
SCALE: 1/2"=1'-0"



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

1/2" = 1'-0" 2 0 2 4 scale feet

1/4" = 1'-0" 4 0 4 8 scale feet

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PIER 3 UPGRADE

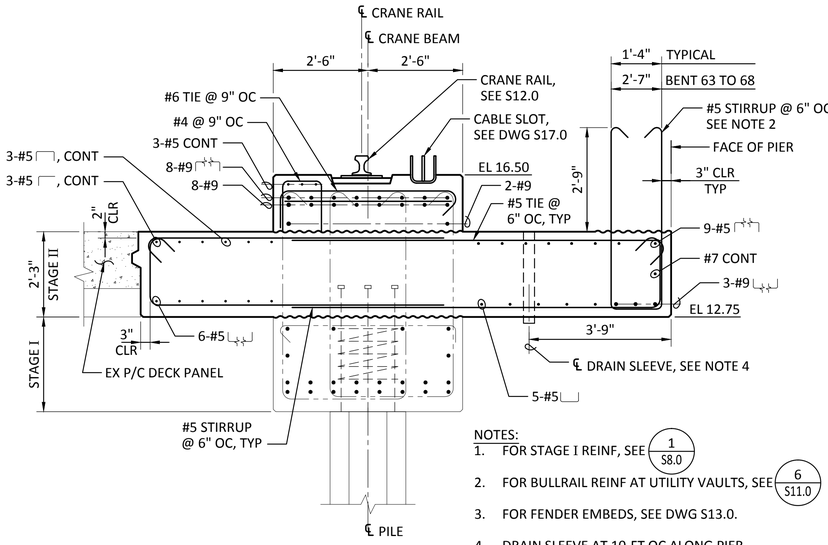
STAGE I

DETAILS, BULKHEAD SUPPLEMENT, & SUBCAPS

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

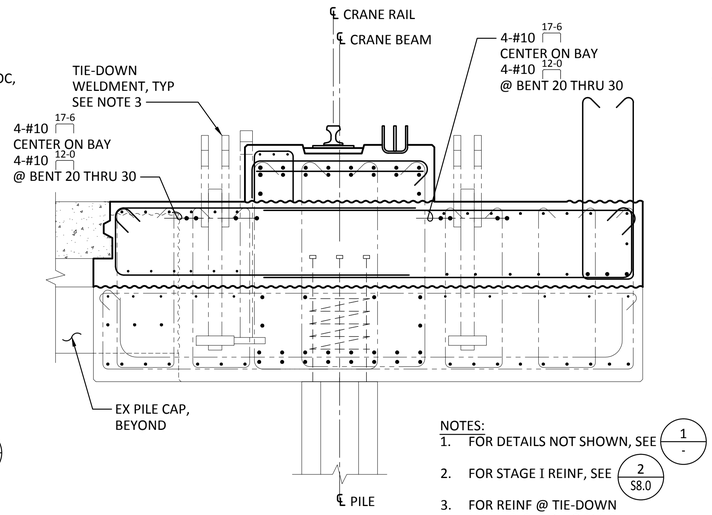
6502
S8.3
SHEET 61 OF 129

CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS



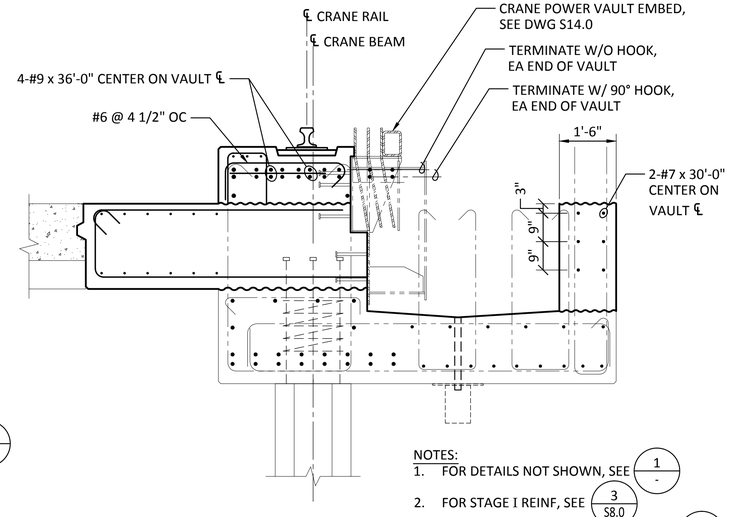
NOTES:
1. FOR STAGE I REINF, SEE 1 / S8.0
2. FOR BULLRAIL REINF AT UTILITY VAULTS, SEE 6 / S11.0
3. FOR FENDER EMBEDS, SEE DWG S13.0.
4. DRAIN SLEEVE AT 10-FT OC ALONG PIER, FOR DRAIN DETAILS, SEE 2 / C4.2
5. ACP AND BALLAST NOT SHOWN.
6. FOR CRANE STOP EMBEDS SEE DWG S19.3

1 / S3.4 SECTION - TYPICAL
SCALE: 1/2" = 1'-0"
S3.5, S3.6, S3.7



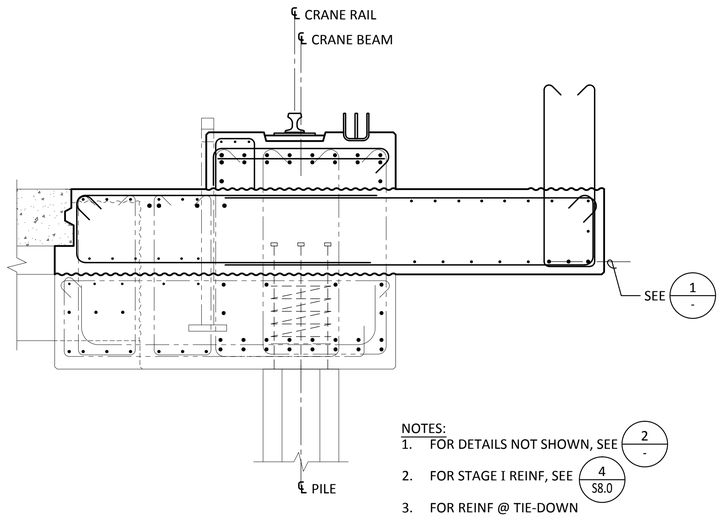
NOTES:
1. FOR DETAILS NOT SHOWN, SEE 1 / -
2. FOR STAGE I REINF, SEE 2 / S8.0
3. FOR REINF @ TIE-DOWN VAULTS, SEE DWG S11.3.

2 / S3.4 SECTION - TIE-DOWN (PAIR)
SCALE: 1/2" = 1'-0"
S3.5, S3.6



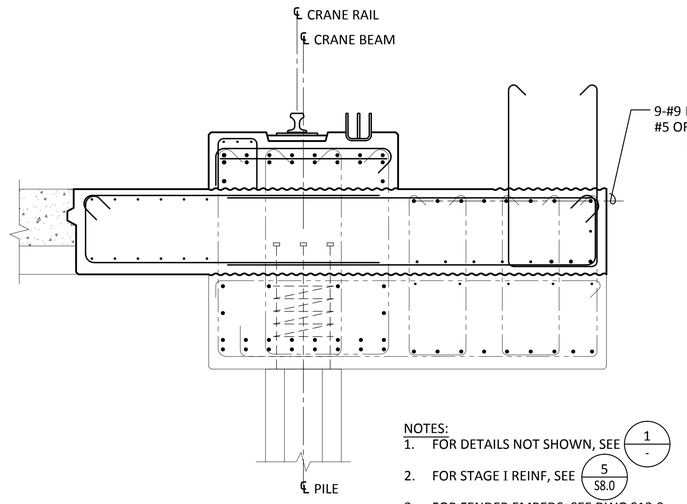
NOTES:
1. FOR DETAILS NOT SHOWN, SEE 1 / -
2. FOR STAGE I REINF, SEE 3 / S8.0
3. FOR ADDITIONAL REINF AT VAULT, SEE 2 / S11.1

3 / S3.5 SECTION - CRANE POWER VAULT
SCALE: 1/2" = 1'-0"
S3.7



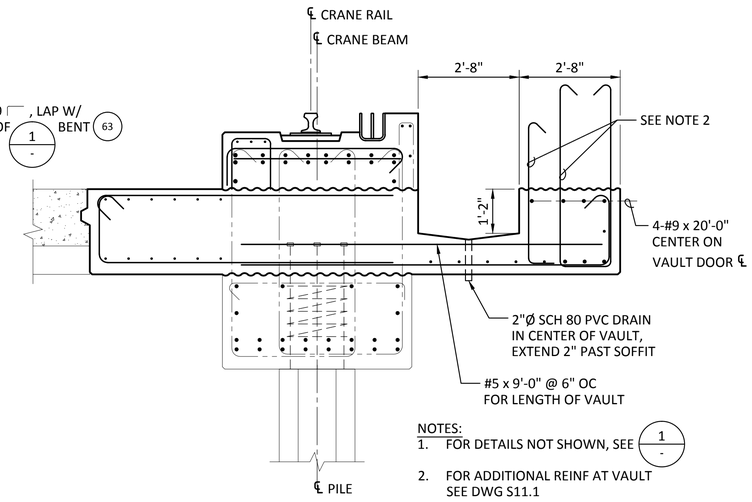
NOTES:
1. FOR DETAILS NOT SHOWN, SEE 2 / -
2. FOR STAGE I REINF, SEE 4 / S8.0
3. FOR REINF @ TIE-DOWN VAULTS, SEE DWG S11.3.

4 / S3.6 SECTION - TIE-DOWN (SINGLE)
SCALE: 1/2" = 1'-0"
S3.7



NOTES:
1. FOR DETAILS NOT SHOWN, SEE 1 / -
2. FOR STAGE I REINF, SEE 5 / S8.0
3. FOR FENDER EMBEDS, SEE DWG S13.0.

5 / S3.7 SECTION - BAY 66 TO 68
SCALE: 1/2" = 1'-0"



NOTES:
1. FOR DETAILS NOT SHOWN, SEE 1 / -
2. FOR ADDITIONAL REINF AT VAULT SEE DWG S11.1

6 / S3.5 SECTION - SHORE POWER VAULT
SCALE: 1/2" = 1'-0"
S3.6

1/2" = 1'-0"

2 0 2 4
scale feet

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TACOMA, WA 98421-2300

APPROVED:

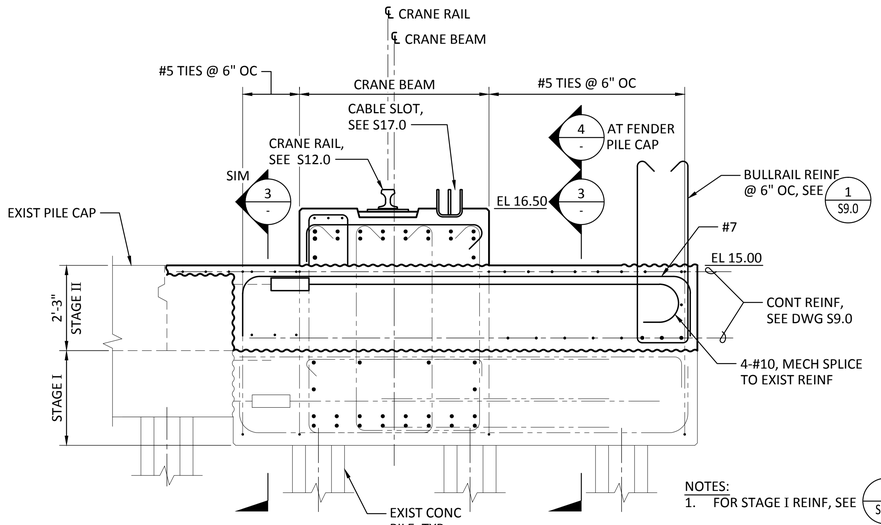
DC	7/17/13	
DIR OF ENG		DATE

PIER 3 UPGRADE
STAGE II
WATERSIDE CRANE BEAM

PRINTED BY:	jason.mendenhall	SECTION:	27
PORT ADDRESS:	ONE SITCUM WAY TACOMA, WA 98421-2300	DRAWING SCALE:	AS SHOWN

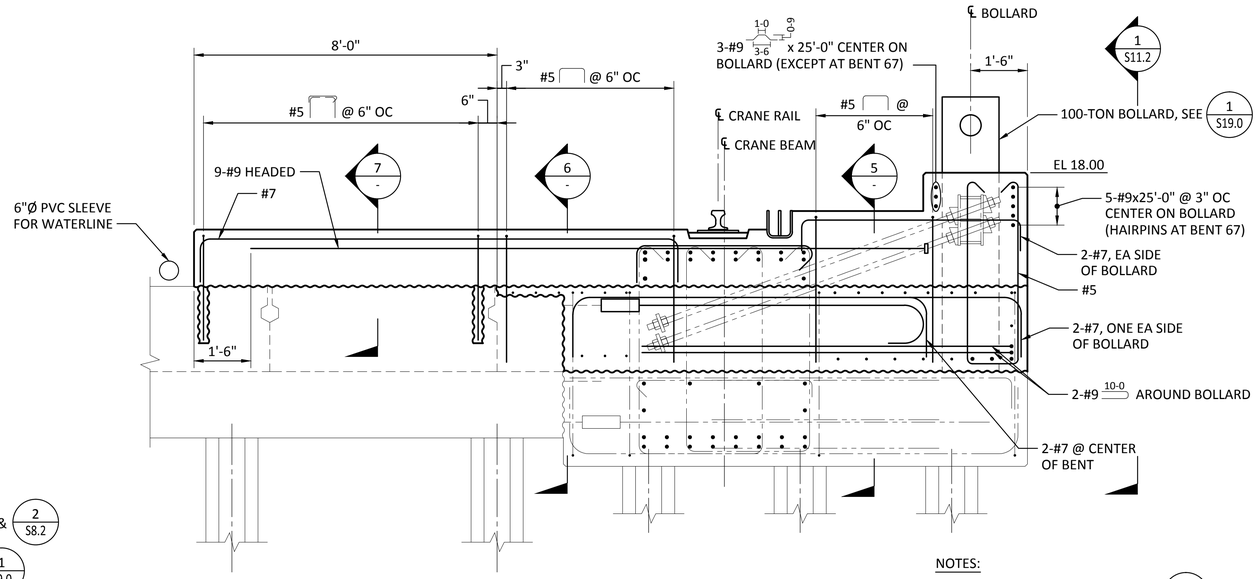
6502
S9.0
SHEET 62 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	



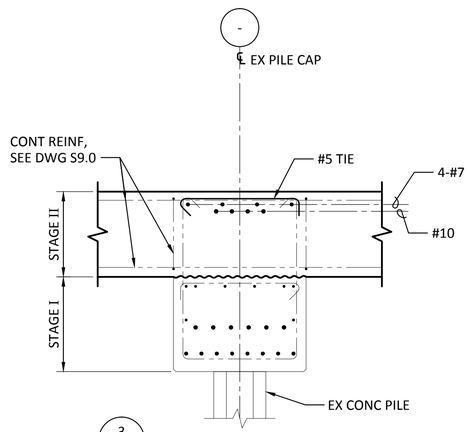
NOTES:
1. FOR STAGE I REINF, SEE 1/S8.1 & 2/S8.2
2. FOR CRANE BEAM REINF, SEE 1/S9.0
3. FOR FENDER EMBEDS, SEE DWG S13.0.
4. ACP AND BALLAST NOT SHOWN.

1/S3.4 ELEVATION - TYPICAL PILE CAP
SCALE: 1/2"=1'-0"
S3.5, S3.6, S3.7



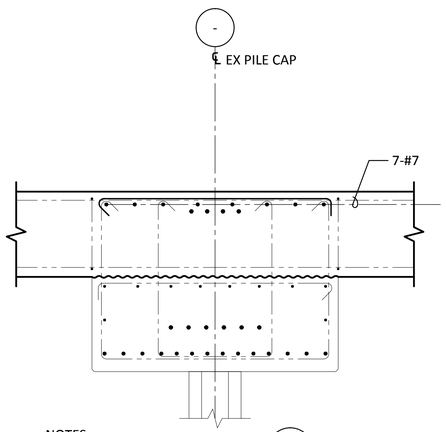
NOTES:
1. FOR DETAILS NOT SHOWN, SEE 1/-
2. TYPICAL BULLRAIL REINF NOT SHOWN, SEE 2/S11.0

2/S3.4 ELEVATION - PILE CAP AT 100-TON BOLLARD
SCALE: 1/2"=1'-0"
S3.5, S3.6, S3.7



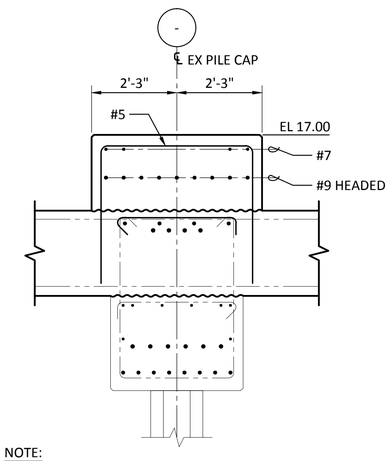
NOTES:
1. FOR STAGE I REINF, SEE 3/S8.1
2. ACP AND BALLAST NOT SHOWN.

3/- SECTION - TYPICAL PILE CAP
SCALE: 1/2" = 1'-0"



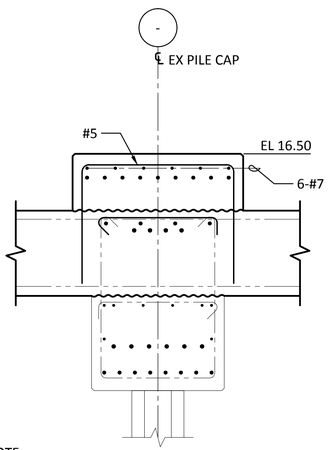
NOTES:
1. FOR DETAILS NOT SHOWN, SEE 3/-
2. FOR STAGE I REINF, SEE 4/S8.1

4/- SECTION - AT FENDER
SCALE: 1/2" = 1'-0"



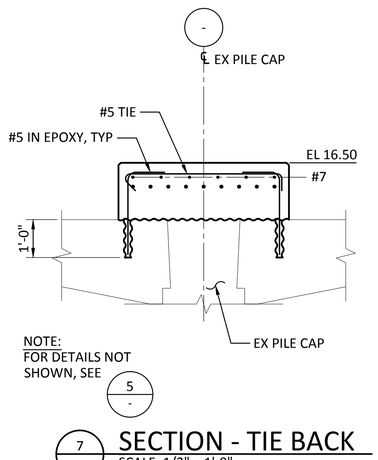
NOTE:
FOR DETAILS NOT SHOWN, SEE 3/-

5/- SECTION - TYPICAL AT BOLLARD
SCALE: 1/2" = 1'-0"



NOTE:
FOR DETAILS NOT SHOWN, SEE 5/-

6/- SECTION - TYPICAL AT BOLLARD
SCALE: 1/2" = 1'-0"



NOTE:
FOR DETAILS NOT SHOWN, SEE 5/-

7/- SECTION - TIE BACK
SCALE: 1/2" = 1'-0"

1/2" = 1'-0" scale 2 0 2 4 feet

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PROJ. ENGR	DATE		

APPROVED:
DC 7/17/13
DIR OF ENG DATE

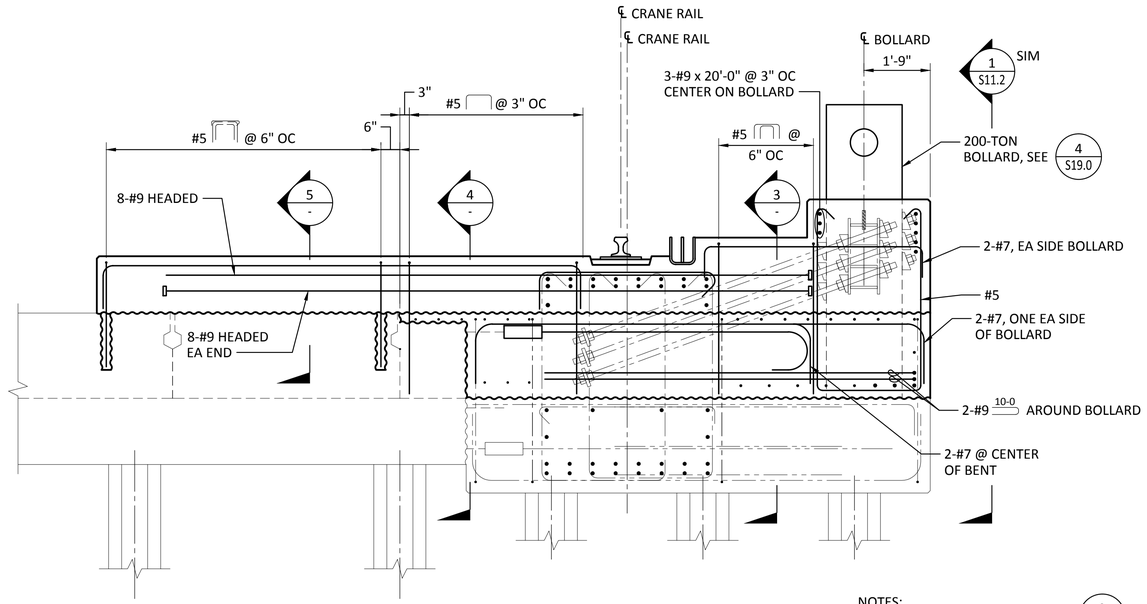
PIER 3 UPGRADE
STAGE II
PILE CAPS - SHEET 1

PRINTED BY:	jason.mendenhall	SECTION:	27
PORT ADDRESS:	ONE SITCUM WAY	RANGE:	3 E
	TACOMA, WA 98421-2300	TOWNSHIP:	21 N
DRAWING SCALE:	AS SHOWN	VERT:	NOS TIDAL (MLLW = 0.0)
		DAT-HRZ:	NAD 83-07
		PARCEL:	27

6502
S9.1
SHEET 63 OF 129

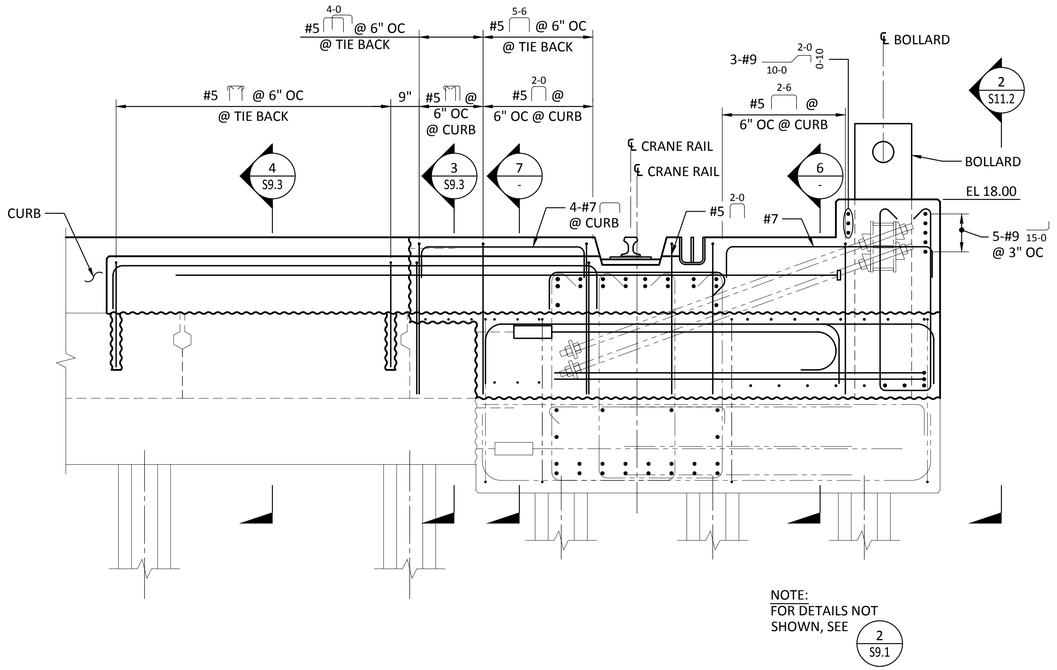
CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS

BINDING EDGE



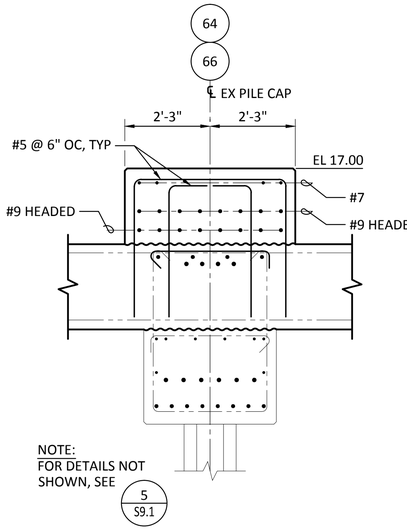
NOTES:
1. FOR DETAILS NOT SHOWN, SEE 2 / S9.1
2. TYPICAL BULLRAIL REINF NOT SHOWN, SEE 3 / S11.0

1 / S3.7 ELEVATION - PILE CAP AT 200-TON BOLLARD
SCALE: 1/2"=1'-0"



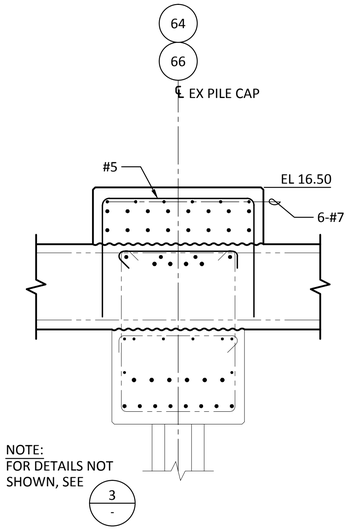
NOTE:
FOR DETAILS NOT SHOWN, SEE 2 / S9.1

2 / S3.4 ELEVATION - BENT 20
SCALE: 1/2"=1'-0"



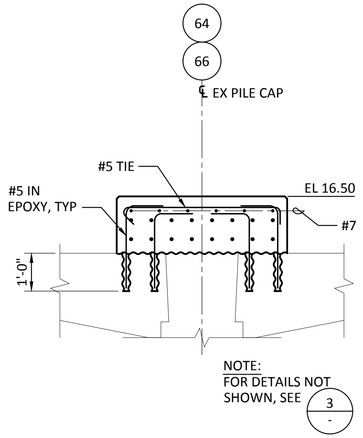
NOTE:
FOR DETAILS NOT SHOWN, SEE 5 / S9.1

3 / - SECTION - 200-TON BOLLARD
SCALE: 1/2" = 1'-0"



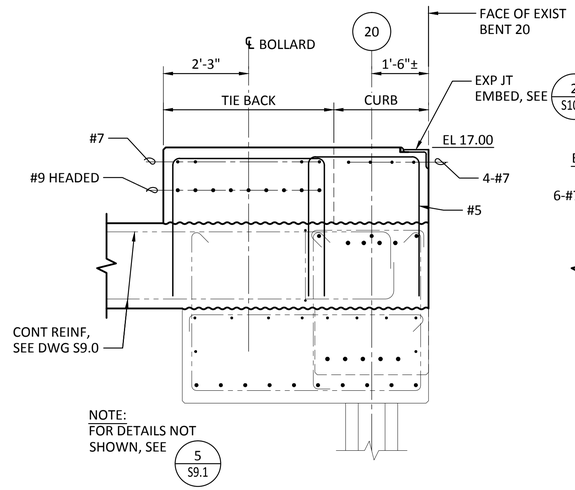
NOTE:
FOR DETAILS NOT SHOWN, SEE 3 / -

4 / - SECTION - 200-TON BOLLARD
SCALE: 1/2" = 1'-0"



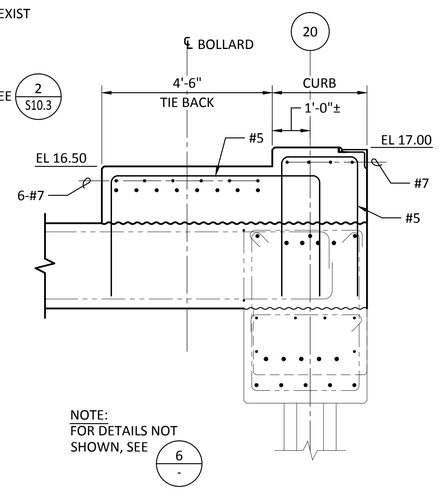
NOTE:
FOR DETAILS NOT SHOWN, SEE 3 / -

5 / - SECTION - TIE BACK
SCALE: 1/2" = 1'-0"



NOTE:
FOR DETAILS NOT SHOWN, SEE 5 / S9.1

6 / - SECTION - BENT 20
SCALE: 1/2" = 1'-0"



NOTE:
FOR DETAILS NOT SHOWN, SEE 6 / -

7 / - SECTION - BENT 20
SCALE: 1/2" = 1'-0"

1/2" = 1'-0"

2 0 2 4
scale feet

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PROJ. ENGR	DATE		

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DIR OF ENG	DATE		

PIER 3 UPGRADE

STAGE II
PILE CAPS - SHEET 2

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

6502
S9.2
SHEET 64 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27

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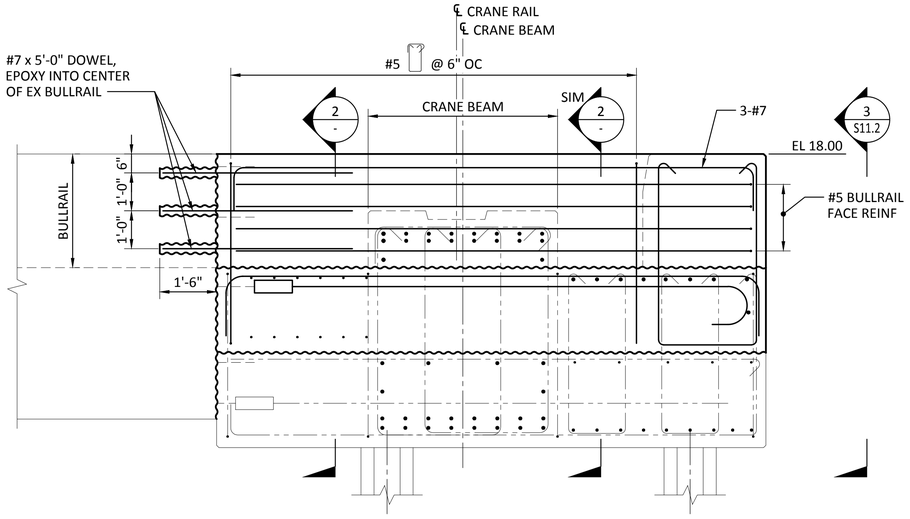
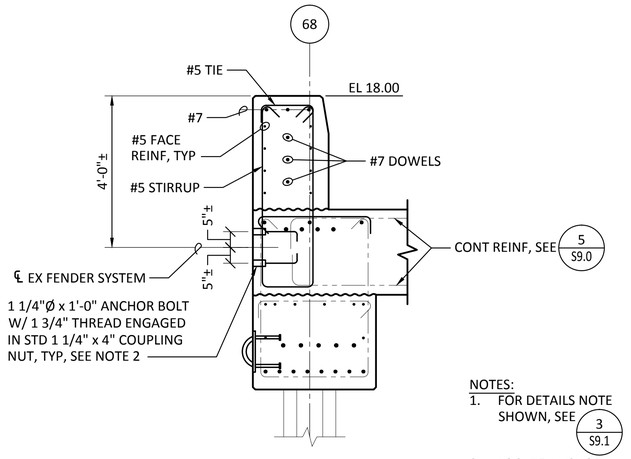


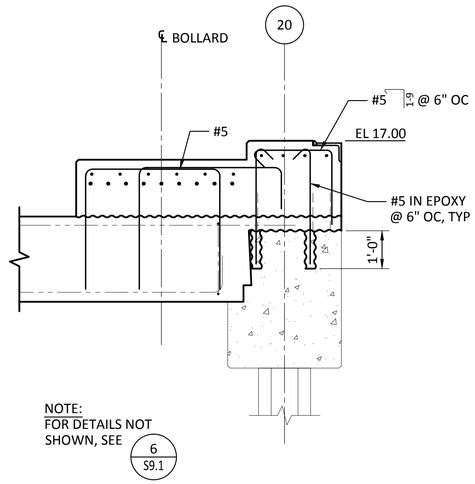
1 S3.7 — ELEVATION - BENT 68
SCALE: 1/2"=1'-0"

NOTES:
1. FOR STAGE I REINF, SEE 1 S8.1
2. FOR CRANE BEAM REINF, SEE 1 S9.0
3. FOR DETAILS NOTE SHOWN, SEE 1 S9.1
4. FOR TYP BULLRAIL REINF, SEE 3 S11.0
5. CRANE STOP AND LIGHTPOLE NOT SHOWN.

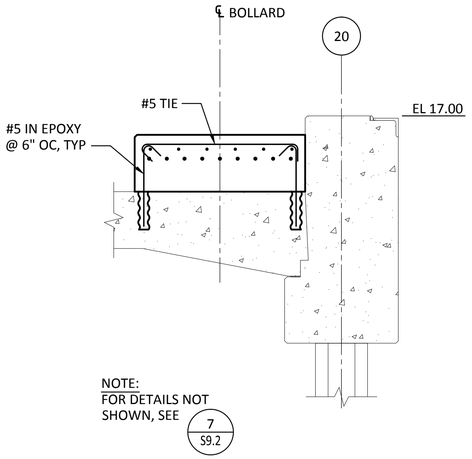


2 - SECTION - BENT 68
SCALE: 1/2" = 1'-0"

NOTES:
1. FOR DETAILS NOTE SHOWN, SEE 3 S9.1
2. LOCATE ANCHOR BOLTS TO RE-ATTACH SALVAGED FENDERS.



3 S9.2 — SECTION - BENT 20
SCALE: 1/2" = 1'-0"



4 S9.2 — SECTION - BENT 20
SCALE: 1/2" = 1'-0"

1/2" = 1'-0"
2 0 2 4
scale feet

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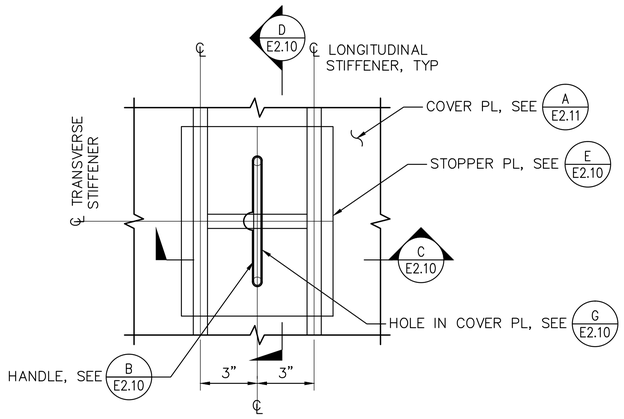
6502
S9.3
SHEET 65 OF 129

PIER 3 UPGRADE
STAGE II
PILE CAPS - SHEET 3

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27
		DRAWING SCALE: AS SHOWN	

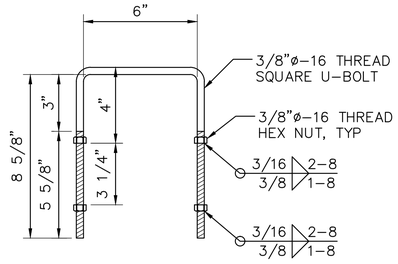
DESIGN VEHICLE LIVE LOAD:
125 KIPS AT 140 PSI APPLIED OVER A 24IN x 37.2IN AREA, PLUS 15% IMPACT



PLAN - LIFTING POINT

SCALE: 3"=1'-0"

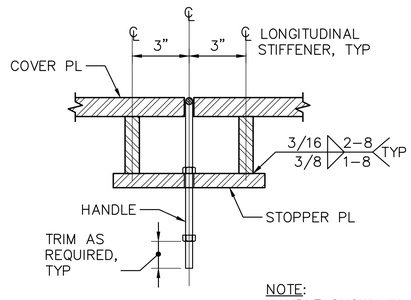
A E2.10



DETAIL - HANDLE

SCALE: 3"=1'-0"

B E2.10

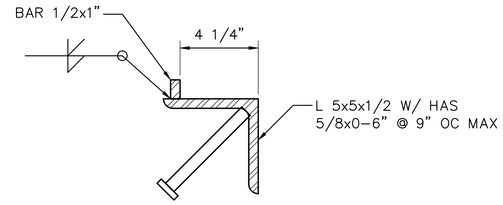


NOTE:
HANDLE SHOWN IN LOWERED POSITION

SECTION

SCALE: 3"=1'-0"

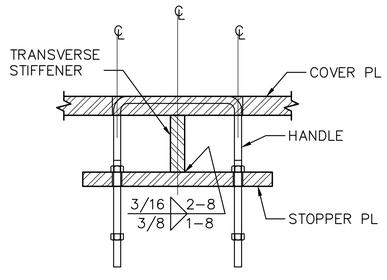
C E2.10



DETAIL

SCALE: 3"=1'-0"

F 2.10

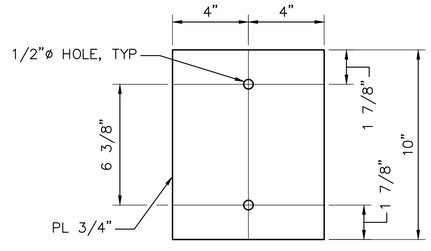


NOTE:
HANDLE SHOWN IN

SECTION

SCALE: 3"=1'-0"

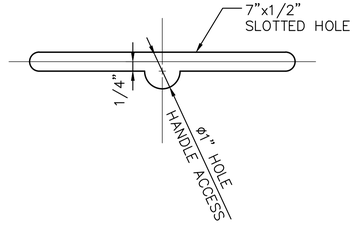
D E2.10



DETAIL - STOPPER PLATE

SCALE: 3"=1'-0"

E 2.10



DETAIL - SLOTTED HOLE IN COVER PLATE

SCALE: 6"=1'-0"

G E2.10

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Job Number: 11-0111

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PROJ. ENGR DATE	DIR OF ENG DATE	
jason.mendenhall	PRINTED BY:	
ONE SITCUM WAY	PORT ADDRESS:	
TACOMA, WA 98421–2300		

PIER 3 UPGRADE

TEMPORARY CRANE CONNECTION
VAULT DETAILS

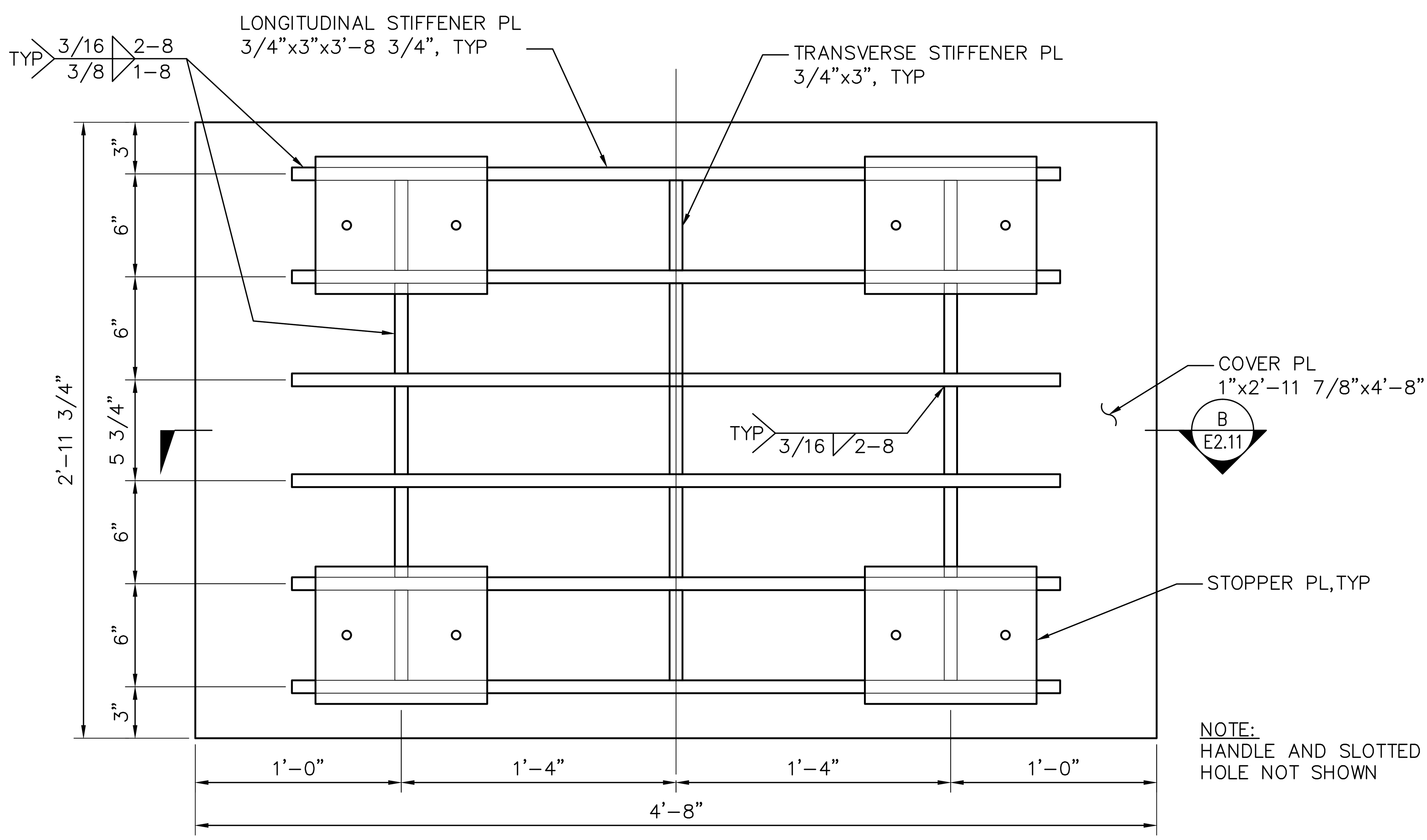
CONT/CONS: 069458	TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27
MASTER ID NO: 092935	DAT-HRZ: NAD 83–07	VERT: NOS TIDAL (MLLW = 0.0)	
PHASE: RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN	

6502
E2.10
SHEET 110 OF 129

BINDING EDGE

DESIGN VEHICLE LIVE LOAD:

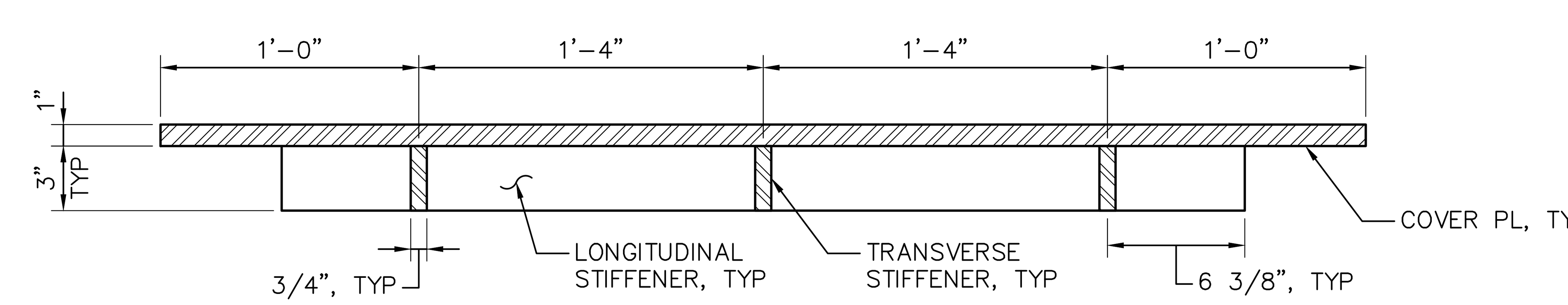
125 KIPS AT 140 PSI APPLIED OVER A 24IN x 37.2IN AREA, PLUS 15% IMPACT



NOTE:
HANDLE AND SLOTTED HOLE NOT SHOWN

PLAN - UNDERSIDE OF STIFFENED COVER PLATE (A / E2.11)

SCALE: 2"=1'-0"



SECTION - STIFFENED COVER PLATE (B / E2.11)

SCALE: 2"=1'-0"

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DC 7/17/13 — DIR OF ENG, DATE
GLW 7/17/13 — PROJ. ENGR, DATE
PRINTED BY: jason.mendenhall
PORT ADDRESS: ONE SITCUM WAY, TACOMA, WA 98421-2300

PIER 3 UPGRADE

TEMPORARY CRANE CONNECTION
VAULT DETAILS

TOWNSHIP: 21 N | RANGE: 3 E | SECTION: 27
DAT-HRZ: NAD 83-07 | VERT: NOS TIDAL (MLLW = 0.0)
PARCEL: 27 | DRAWING SCALE: AS SHOWN

6502
E2.11
SHEET 111 OF 129

CONT/CONS: 069458
MASTER ID NO: 092935
PHASE: RECORD DRAWINGS

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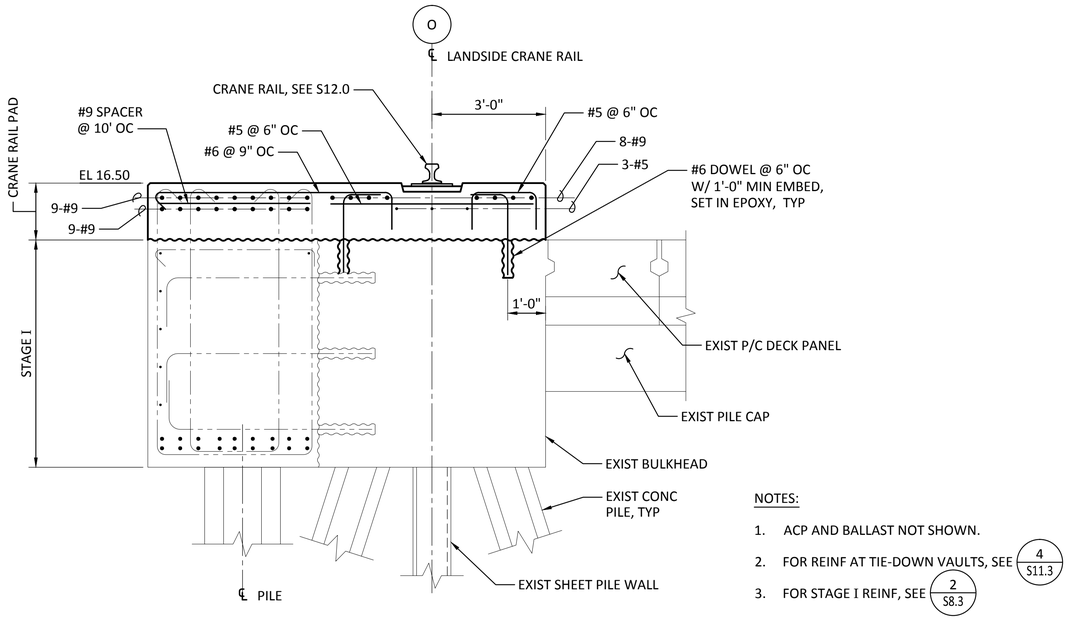


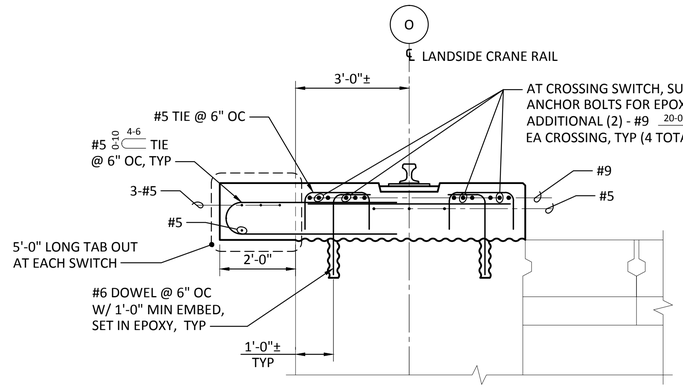
NOTES:

1. ACP AND BALLAST NOT SHOWN.
2. FOR REINF AT TIE-DOWN VAULTS, SEE 4 / S11.3
3. FOR STAGE I REINF, SEE 2 / S8.3

1 / S3.4 SECTION - CRANE RAIL PAD W/ SUPPLEMENT

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

S3.5, S3.6, S3.7, S10.2



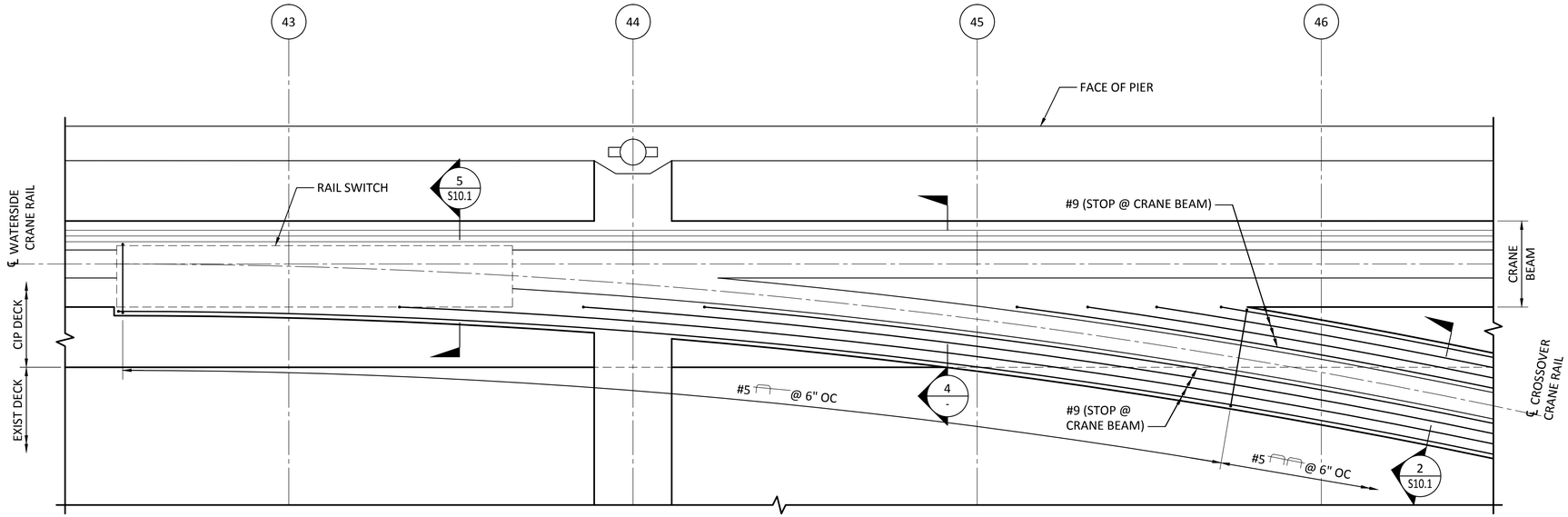
NOTES:

1. ACP & BALLAST NOT SHOWN.
2. FOR DETAILS NOT SHOWN, SEE 1 / -

2 / S3.5 SECTION - CRANE RAIL PAD

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

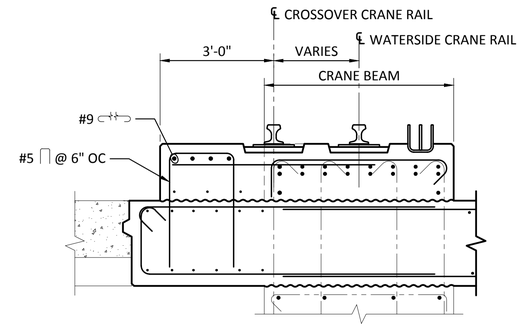
S3.6, S3.7



NOTE:
CRANE BEAM REINF NOT
SHOWN, SEE DWG S9.0

3 / S3.6 PLAN - RAIL PAD AT SWITCH

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



NOTE:
FOR CRANE BEAM REINF, SEE 1 / S9.0

4 / S10.0 SECTION

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

1/4" = 1'-0" — 4 0 4 8 — scale feet

1/2" = 1'-0" — 2 0 2 4 — scale feet

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PROJ. ENGR		DATE
jason.mendenhall		
ONE SITCUM WAY		
TACOMA, WA 98421-2300		

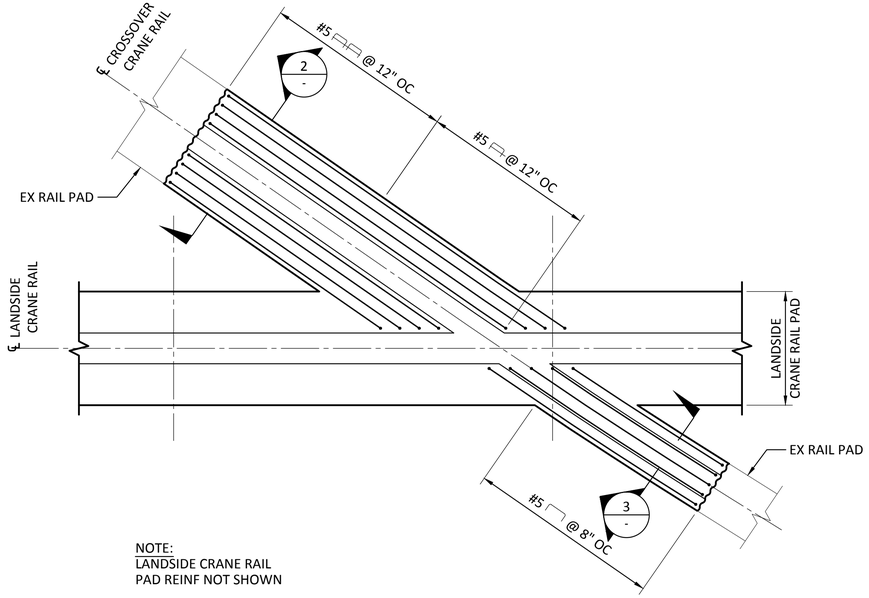
APPROVED:
DC 7/17/13
DIR OF ENG DATE

PIER 3 UPGRADE
CRANE PADS

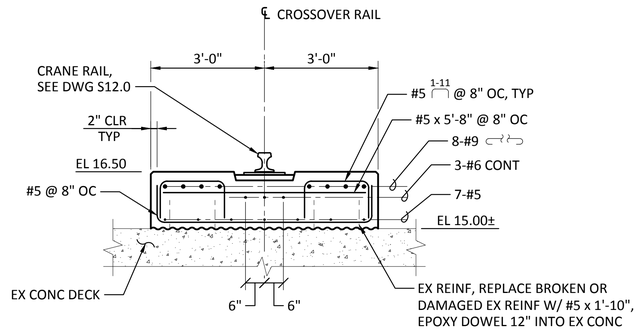
TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

6502
S10.0
SHEET 66 OF 129

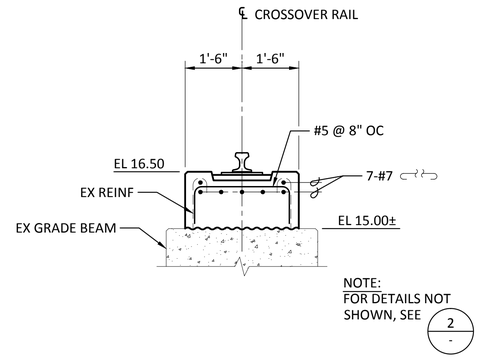
CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS



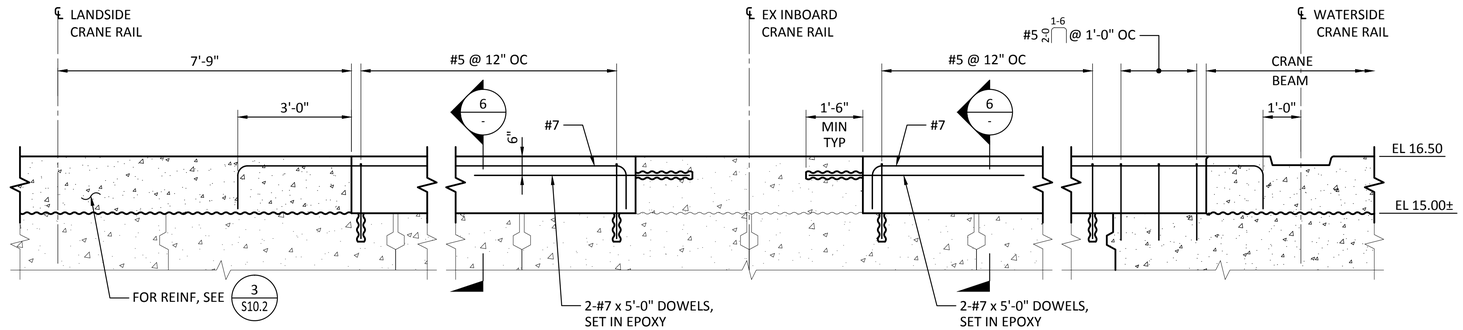
1 / S3.6 PLAN - RAIL PAD AT CROSSING
SCALE: 1/4" = 1'-0"



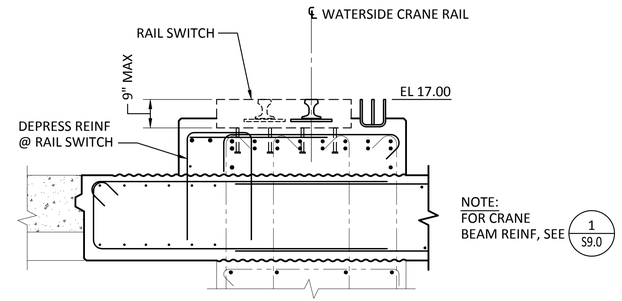
2 / S10.0 SECTION - RAIL PAD AT CROSSOVER RAIL
SCALE: 1/2"=1'-0"



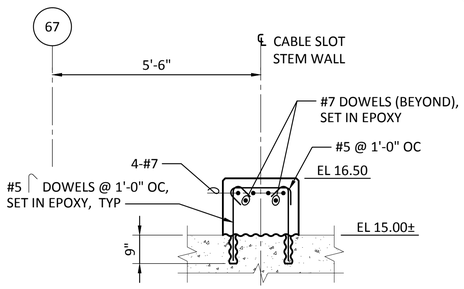
3 / - SECTION - GRADE BEAM RAIL PAD
SCALE: 1/2"=1'-0"



4 / S3.7 ELEVATION - CABLE SLOT STEM WALL
SCALE: 1/2"=1'-0"



5 / S10.0 SECTION
SCALE: 1/2" = 1'-0"



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

1/4" = 1'-0" 4 0 4 8 scale feet

1/2" = 1'-0" 2 0 2 4 scale feet

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PROJ. ENGR	DATE	DIR OF ENG	DATE
jason.mendenhall		PRINTED BY:	
ONE SITCUM WAY		PORT ADDRESS:	
TACOMA, WA 98421-2300			

PIER 3 UPGRADE

CRANE PADS AND MISC DETAILS

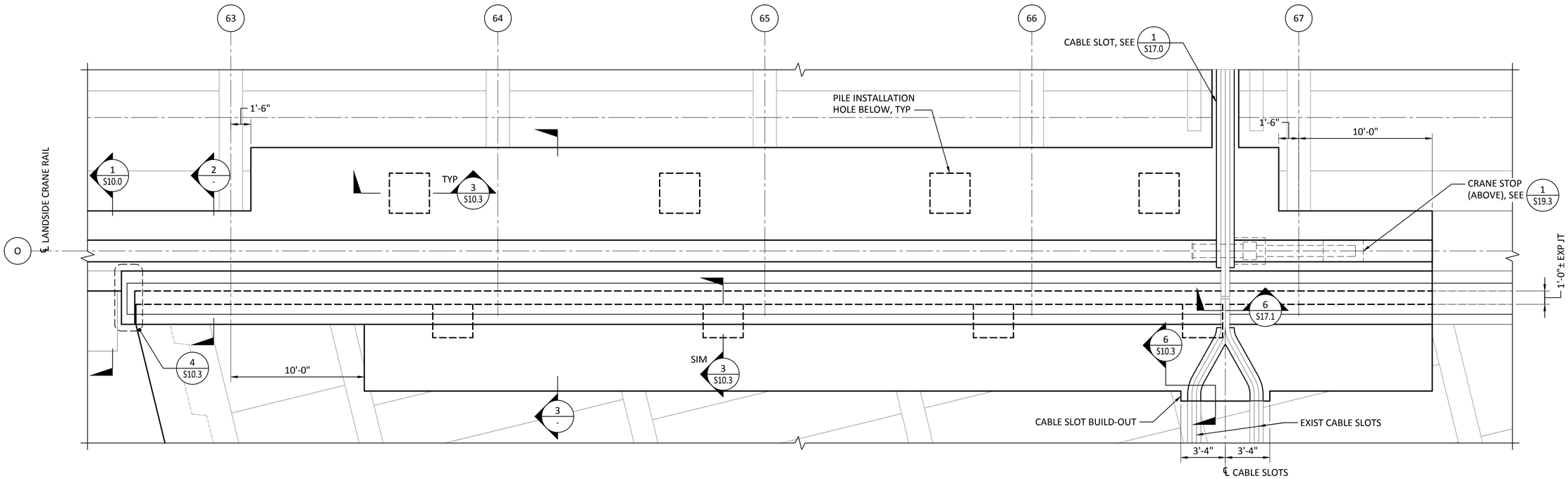
SHEET 1

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

6502

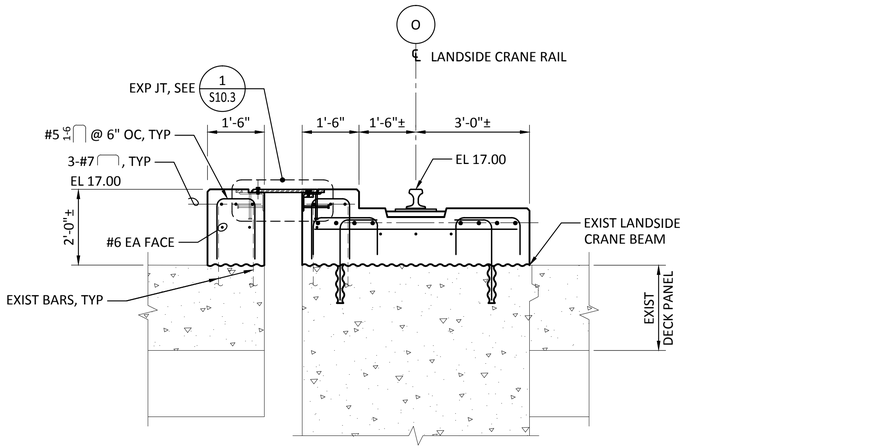
S10.1

SHEET 67 OF 129



1/S3.7 DETAIL - DECK AT SUBCAPS

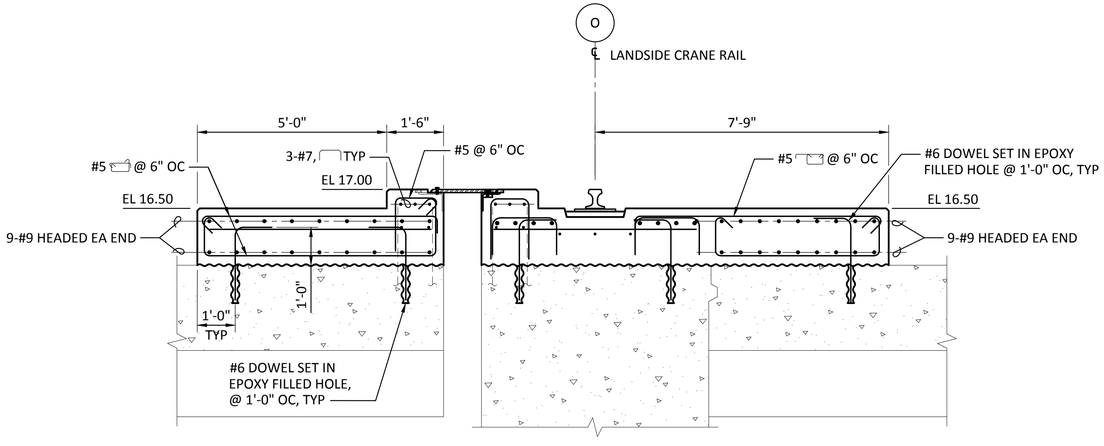
SCALE: 1/4" = 1'-0"



NOTES:
1. ACP AND BALLAST NOT SHOWN.
2. FOR INFORMATION NOT SHOWN, SEE 2 S10.0

2/- SECTION - CRANE RAIL PAD AT EXP JT

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



NOTE:
1. FOR INFORMATION NOT SHOWN, SEE 2 -
2. FOR CRANE STOP EMBEDS SEE DWG S19.3

3/- SECTION - DECK AT SUBCAPS

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

1/4" = 1'-0" scale 4 0 4 8 feet

1/2" = 1'-0" scale 2 0 2 4 feet

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PROJ. ENGR	DATE	

APPROVED:
DC 7/17/13

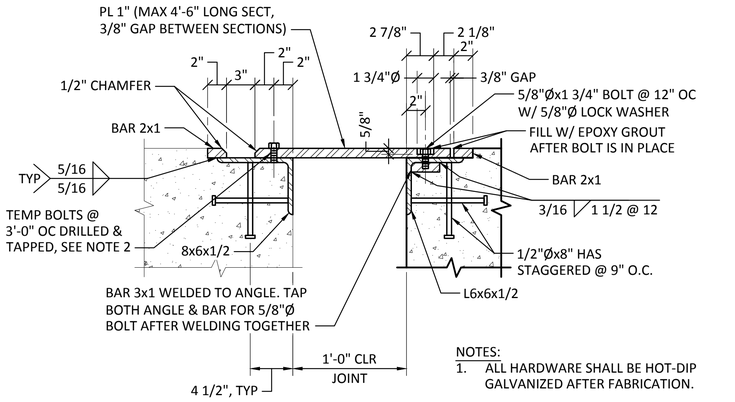
PIER 3 UPGRADE

CRANE PADS AND MISC DETAILS
SHEET 2

PRINTED BY:	jason.mendenhall	SECTION:	27
PORT ADDRESS:	ONE SITCUM WAY	RANGE:	3 E
	TACOMA, WA 98421-2300	TOWNSHIP:	21 N
DRAWING SCALE:	AS SHOWN	VERT:	NOS TIDAL (MLLW = 0.0)
		DAT-HRZ:	NAD 83-07
		PARCEL:	27

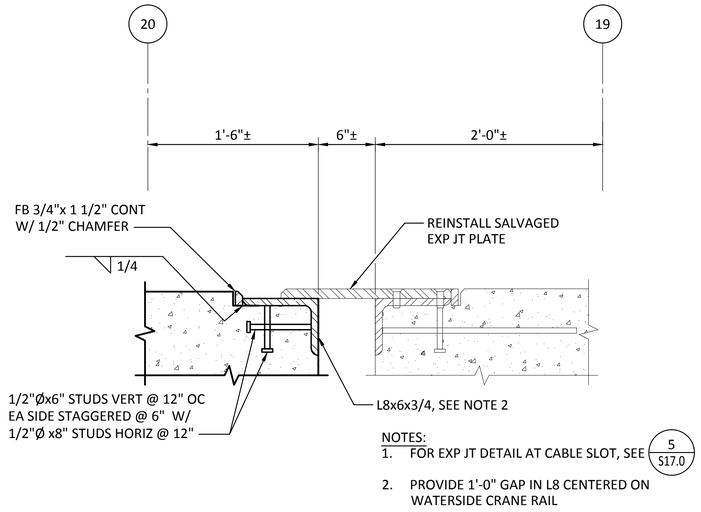
6502
S10.2
SHEET 68 OF 129

CONT/CONS:	069458	MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS		



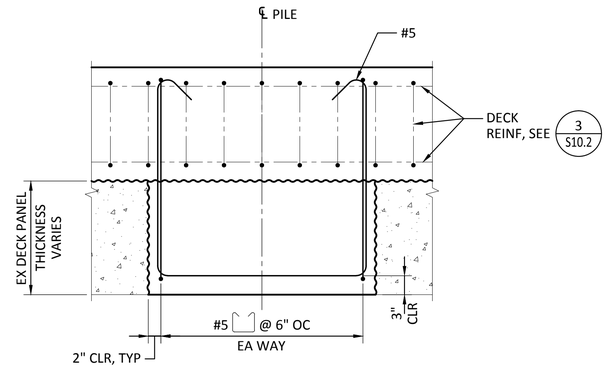
NOTES:
1. ALL HARDWARE SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
2. COMPLETE EXPANSION JOINT ASSEMBLY SHALL BE BOLTED TOGETHER AND CAST INTO CONCRETE. REMOVE TEMP BOLTS 72 HRS AFTER CASTING.

1/S10.2 DETAIL - EXPANSION JOINT
SCALE: 1 1/2" = 1'-0"

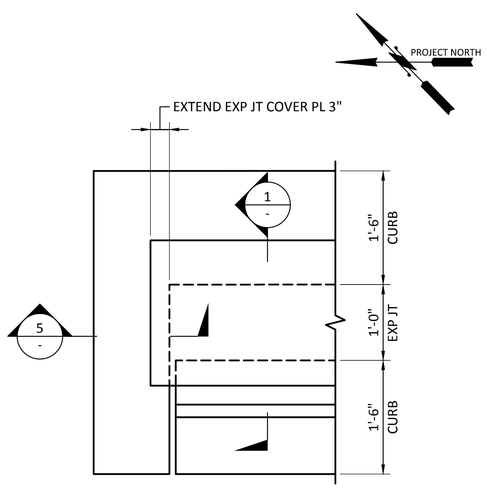


NOTES:
1. FOR EXP JT DETAIL AT CABLE SLOT, SEE 5/S17.0
2. PROVIDE 1'-0" GAP IN L8 CENTERED ON WATERSIDE CRANE RAIL

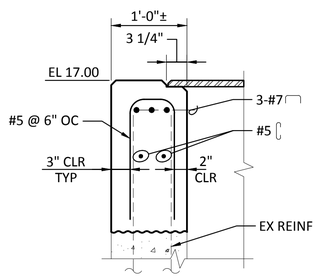
2/S9.2 DETAIL - SEISMIC JOINT
SCALE: 1 1/2" = 1'-0"



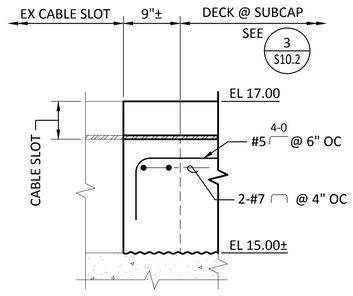
3/S10.2 SECTION - PILE HOLE REPAIR
SCALE: 1" = 1'-0"



4/S10.2 DETAIL - CURB RETURN
SCALE: 1" = 1'-0"



5/- SECTION - CURB RETURN
SCALE: 1" = 1'-0"



6/S10.2 SECTION - CABLE SLOT BUILD-OUT
SCALE: 1" = 1'-0"

2" = 1'-0" — 4 0 4 8 — scale inches

1" = 1'-0" — 1 0 1 2 — scale feet

1-1/2" = 1'-0" — 8 0 8 16 — scale inches

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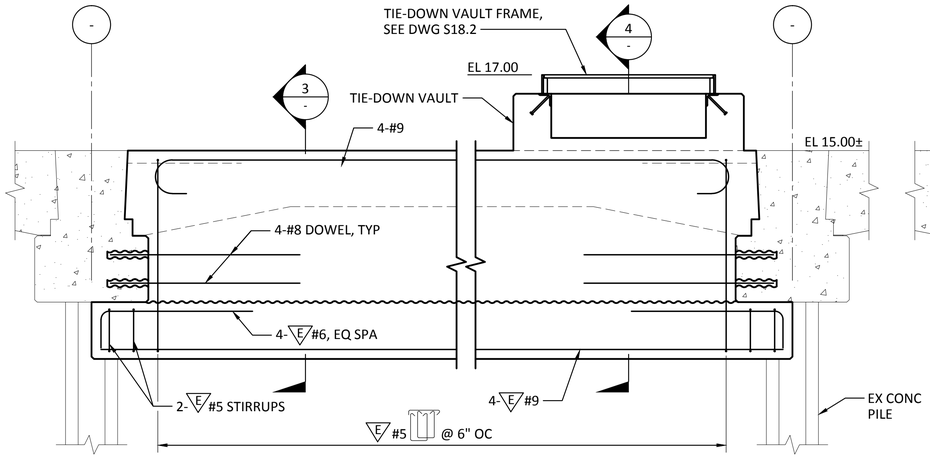
PORT ADDRESS:
DRAWING SCALE: AS SHOWN

PIER 3 UPGRADE
MISC DECK DETAILS

6502
S10.3
SHEET 69 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27



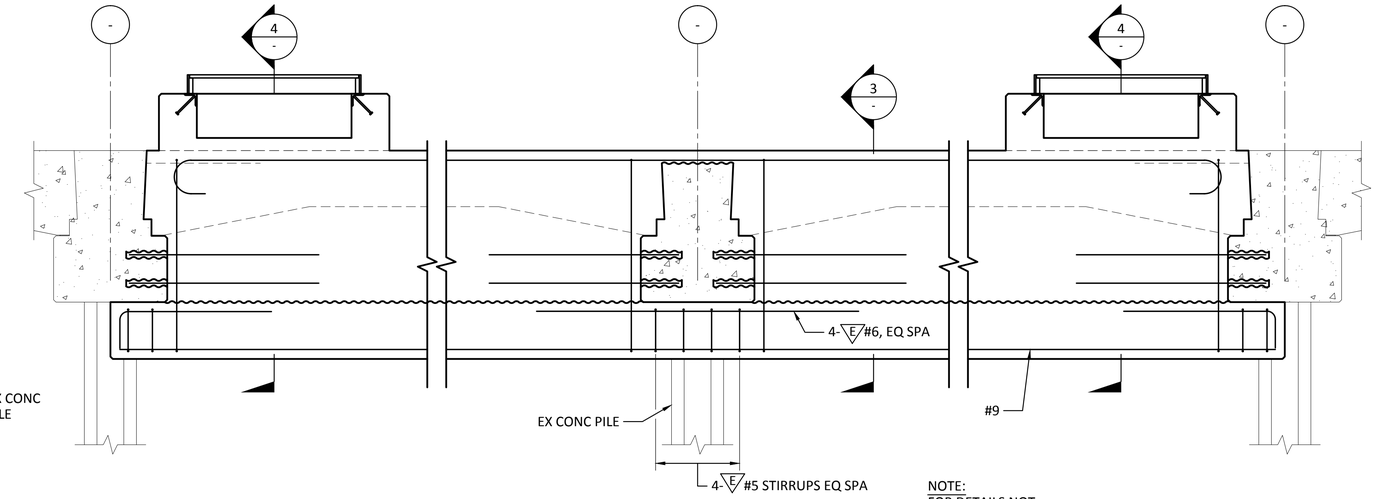
1 / S3.4 SECTION - BULKHEAD TIE-DOWN

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

S3.5, S3.6

NOTES:

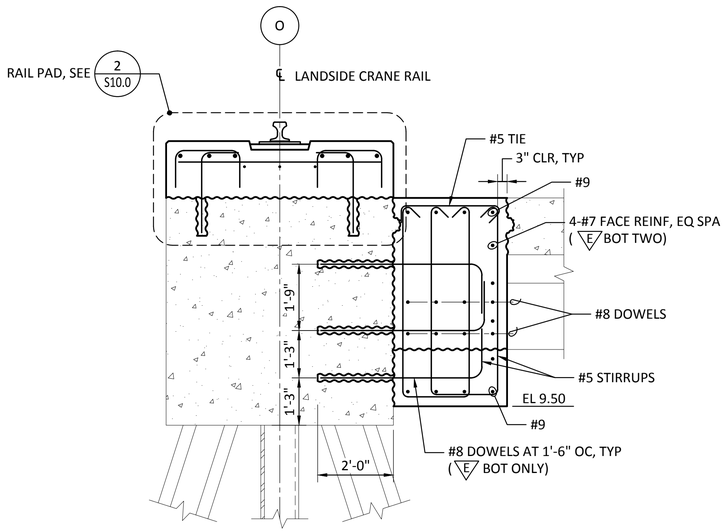
1. FACE REINF NOT SHOWN.
2. TIE-DOWN VAULT REINF NOT SHOWN, SEE DWG S11.3
3. FOR TIE-DOWN VAULT LOCATION, SEE DWG S18.0
4. ACP & BALLAST NOT SHOWN.



NOTE:
FOR DETAILS NOT SHOWN, SEE 1 / -

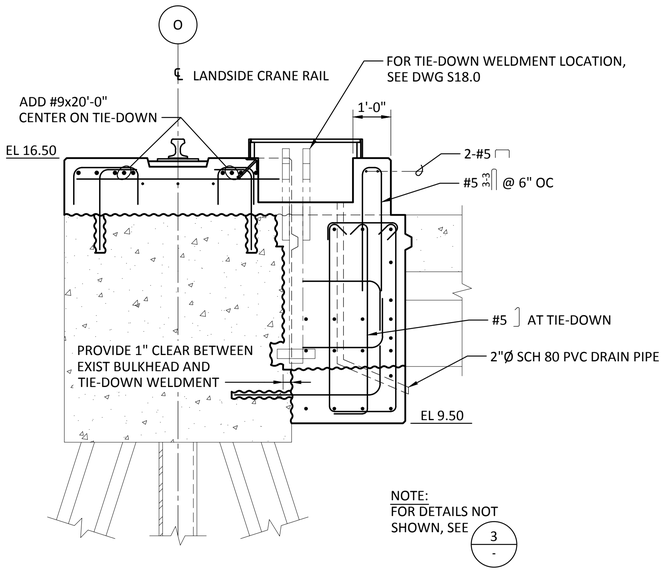
2 / S3.5 SECTION - BULKHEAD TIE-DOWN

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



3 / - SECTION - TYPICAL

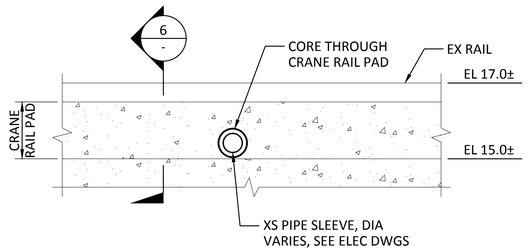
SCALE: 1/2"=1'-0"



NOTE:
FOR DETAILS NOT SHOWN, SEE 3 / -

4 / - SECTION - AT TIE-DOWN

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



5 / S3.4 ELEVATION - UTILITIES INBOARD CRANE RAIL PAD

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

S3.5, S3.6, S3.7

1/2" = 1'-0" scale 2 0 2 4 feet

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PIER 3 UPGRADE

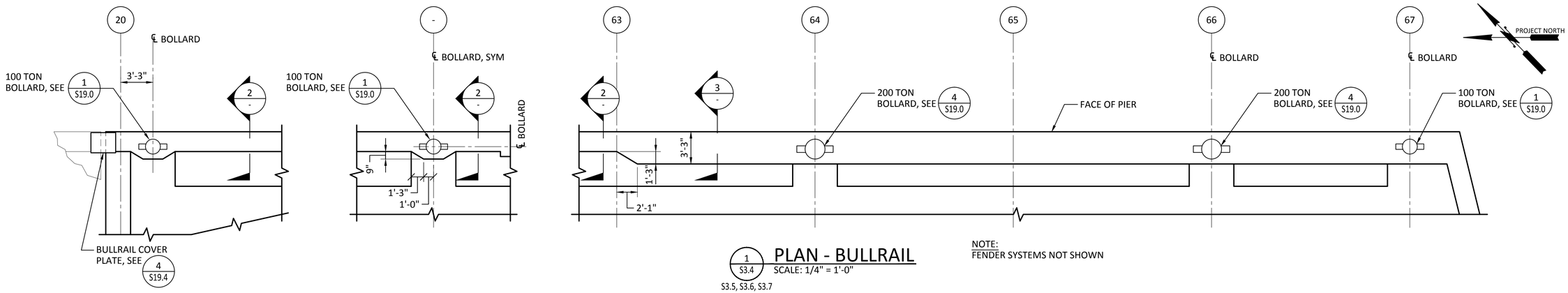
BULKHEAD TIE-DOWN

6502

S10.4

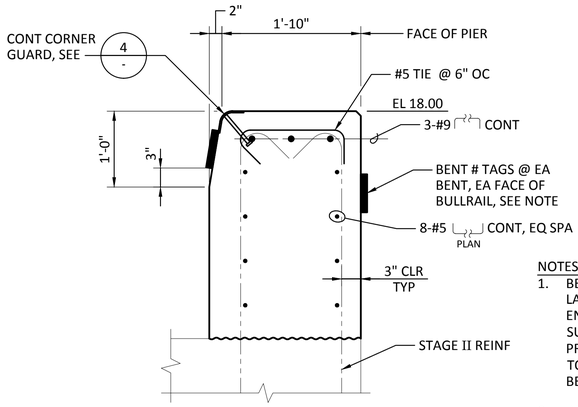
SHEET 70 OF 129

CONT/CONS:	069458	RANGE: 3 E	SECTION: 27
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN



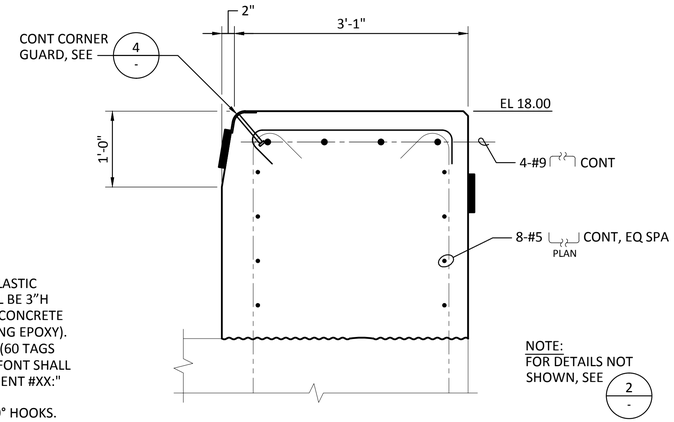
1 / S3.4 **PLAN - BULLRAIL**
SCALE: 1/4" = 1'-0"
S3.5, S3.6, S3.7

NOTE:
FENDER SYSTEMS NOT SHOWN



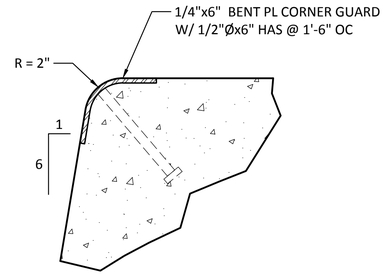
2 / - **SECTION - TYPICAL BULLRAIL**
SCALE: 1" = 1'-0"

NOTES:
1. BENT # TAGS SHALL BE 1/8" X 6"W X 4"H PHENOLIC PLASTIC LAMINATED BLACK WITH WHITE CORE. LETTERS SHALL BE 3"H ENGRAVED TO EXPOSE WHITE CORE. EPOXY TAGS TO CONCRETE SURFACE (ROUGHEN BACK OF TAGS PRIOR TO APPLYING EPOXY). PROVIDE BENT # TAGS AT BENT LINES 9 THROUGH 68 (60 TAGS TOTAL). SEE DWG S3.0 TO S3.3 FOR BENT # SYSTEM. FONT SHALL BE CALIBRI, TEXT SHALL BE 3" HIGH AND SHALL SAY "BENT #XX:"
2. AT BULLRAIL REINF DISCONTINUITIES PROVIDE STD 90° HOOKS.
3. INSERTS FOR FENDER EMBEDS NOT SHOWN, SEE DWG S13.0.
4. ACP AND BALLAST NOT SHOWN.

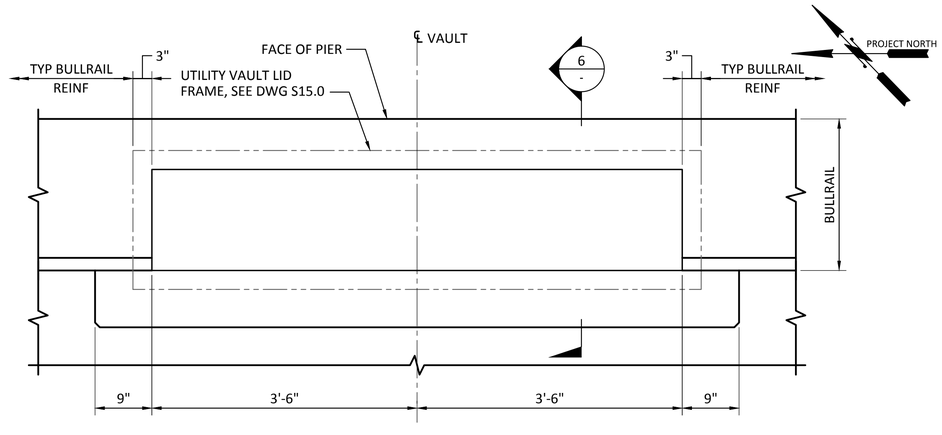


3 / - **SECTION - BULLRAIL**
SCALE: 1" = 1'-0"

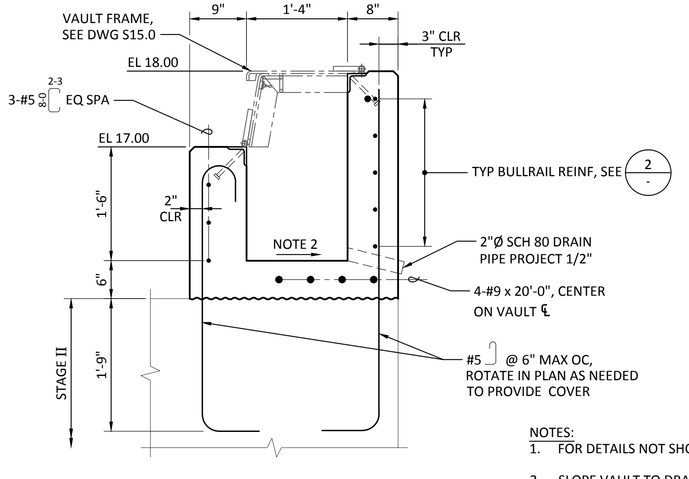
NOTE:
FOR DETAILS NOT SHOWN, SEE 2 -



4 / - **DETAIL - BENT PL CORNER GUARD**
SCALE: 3" = 1'-0"



5 / S3.4 **PLAN - UTILITY VAULT**
SCALE: 1" = 1'-0"
S3.5, S3.6, S3.7



6 / - **SECTION - UTILITY VAULT**
SCALE: 1" = 1'-0"
WATER AND 480V SERVICE

NOTES:
1. FOR DETAILS NOT SHOWN, SEE 2 -
2. SLOPE VAULT TO DRAIN.

1" = 1'-0" scale 1 0 1 2 feet
1/4" = 1'-0" scale 4 0 4 8 feet
3" = 1'-0" scale 4 0 4 8 inches

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PRINTED BY: jason.mendenhall
PORT ADDRESS: ONE SITCUM WAY TACOMA, WA 98421-2300

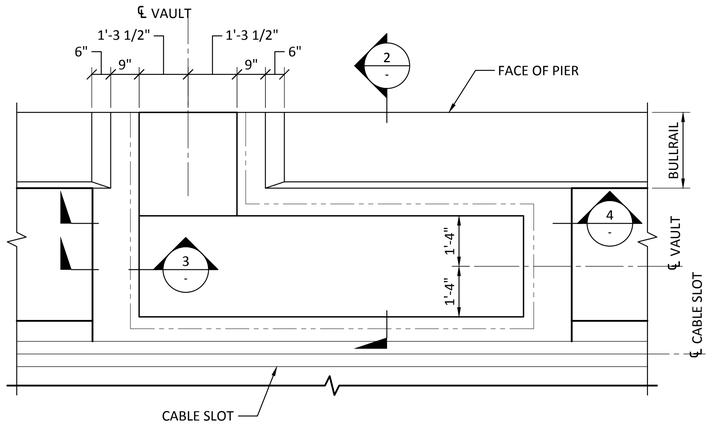
CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

SECTION: 27

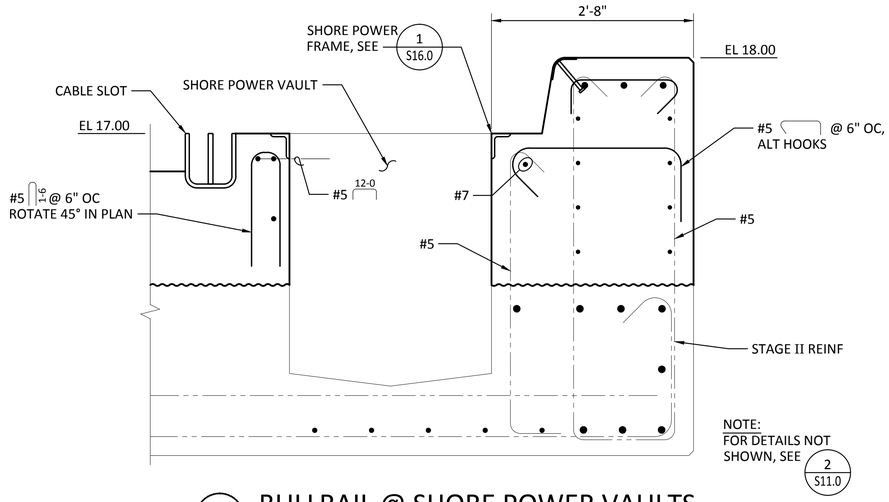
PIER 3 UPGRADE

BULLRAIL PLAN AND DETAILS

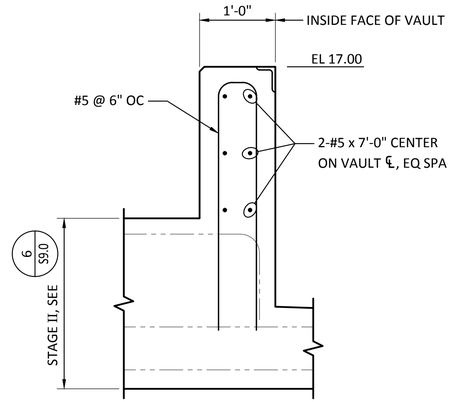
6502
S11.0
SHEET 71 OF 129



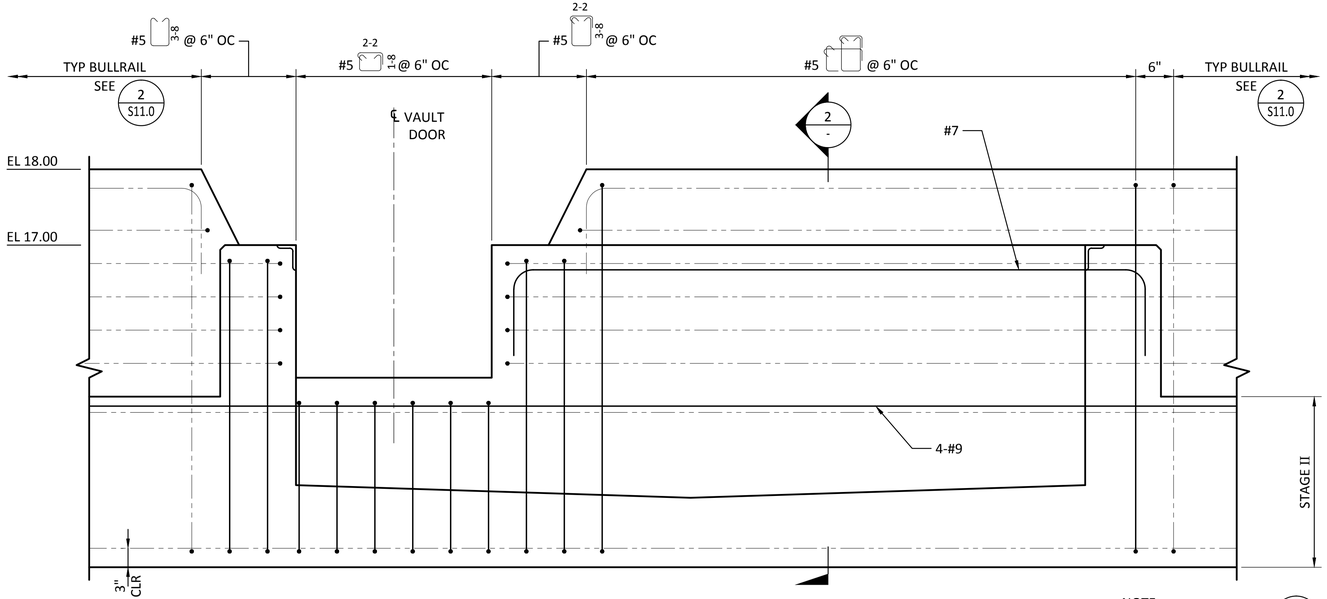
1 / S3.5 / S3.6 PLAN - SHORE POWER VAULT
SCALE: 1/2" = 1'-0"



2 / - BULLRAIL @ SHORE POWER VAULTS
SCALE: 1" = 1'-0"



3 / - DETAIL - VAULT WALL
SCALE: 1" = 1'-0"



4 / - SECTION - BULLRAIL @ SHORE POWER VAULT
SCALE: 3/4" = 1'-0"

1/2" = 1'-0" 2 0 2 4 scale feet

1" = 1'-0" 1 0 1 2 scale feet

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DRAWING SCALE:	AS SHOWN		

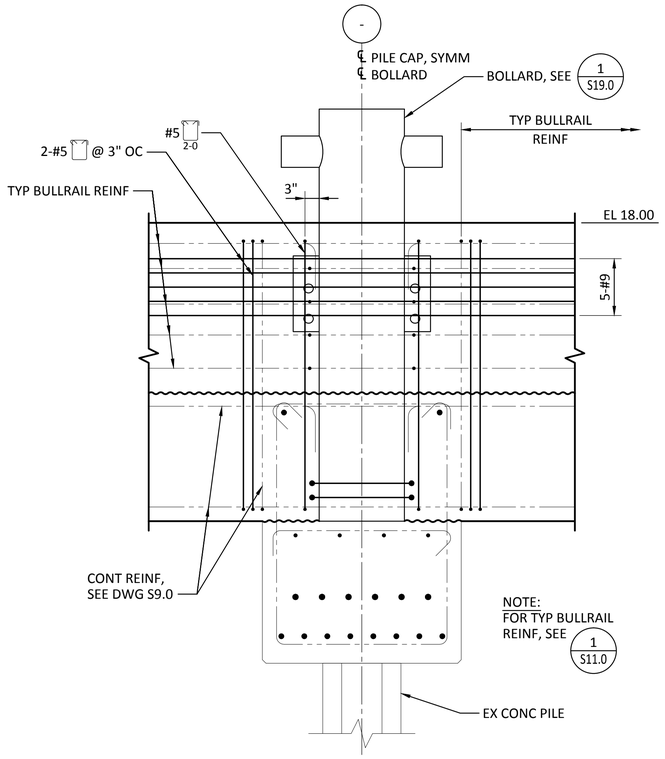
PIER 3 UPGRADE

BULLRAIL DETAILS
SHEET 1

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27

6502
S11.1
SHEET 72 OF 129

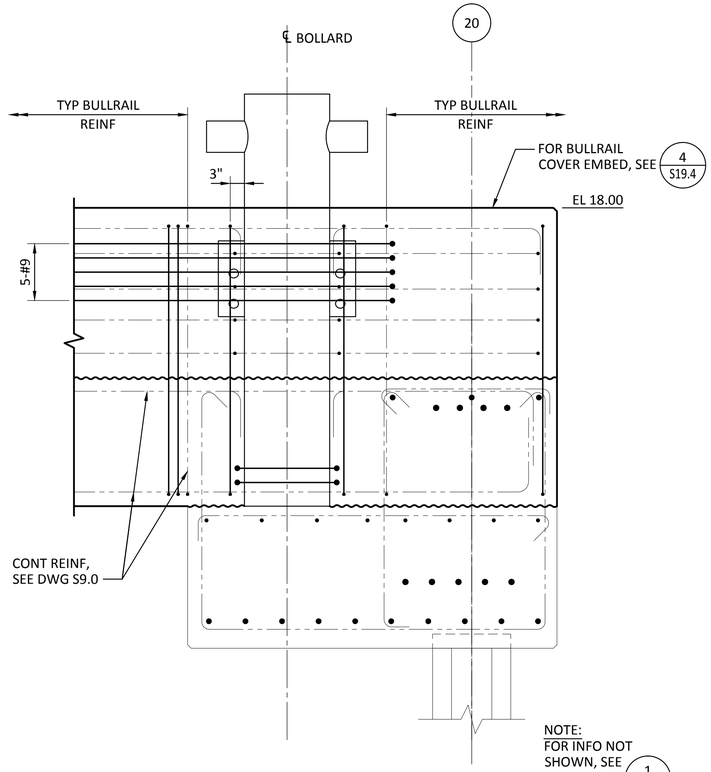
BINDING EDGE



1/S9.1 — S9.2

ELEVATION - AT TYP BOLLARD

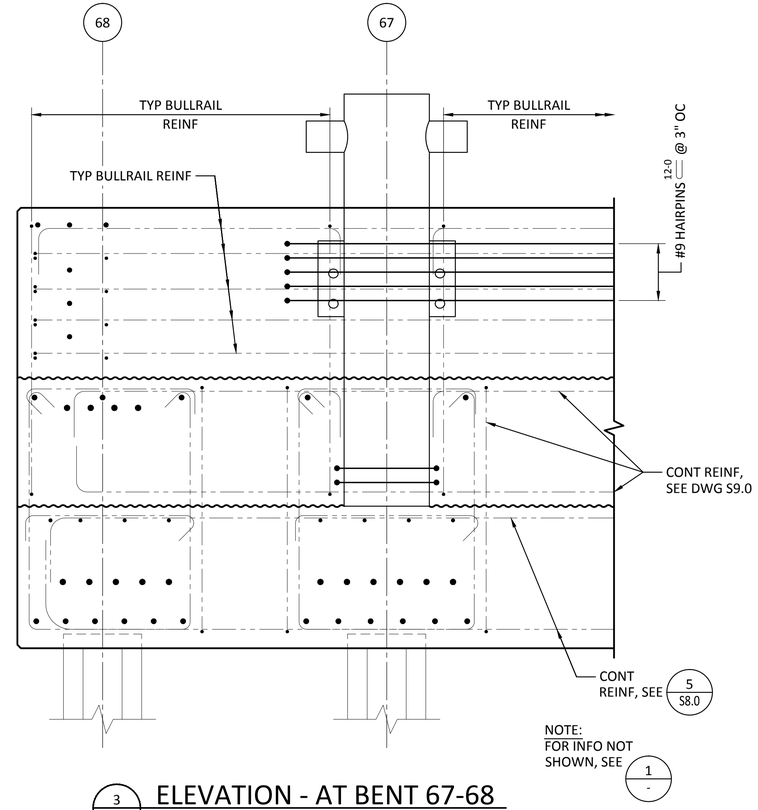
SCALE: 3/4" = 1'-0"



2/S9.2

ELEVATION - AT BENT 20

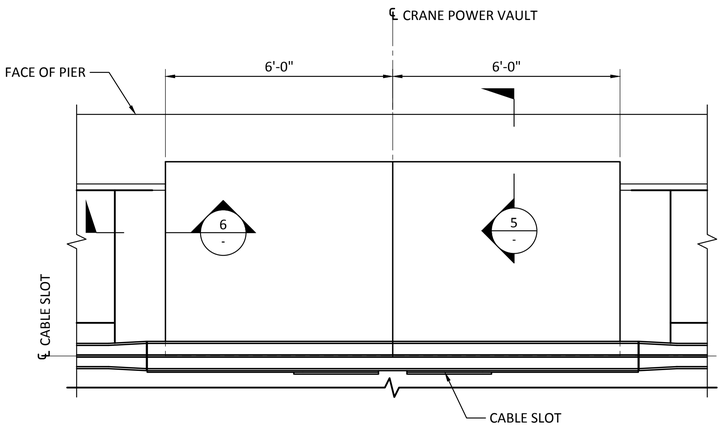
SCALE: 3/4" = 1'-0"



3/S9.3

ELEVATION - AT BENT 67-68

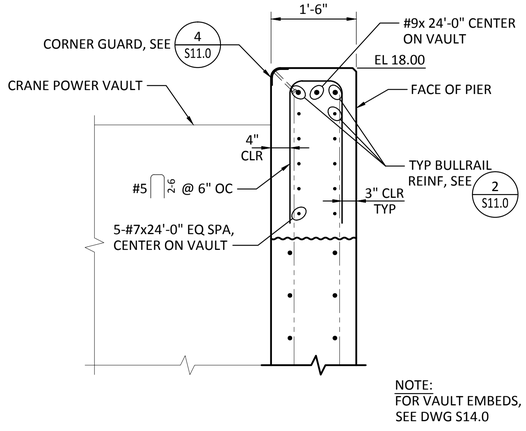
SCALE: 3/4" = 1'-0"



4/S3.5 — S3.7

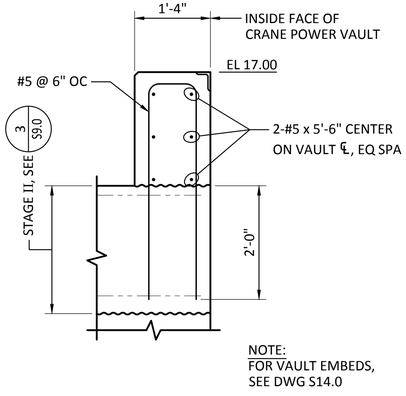
PLAN - CRANE POWER VAULT

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



5/- — SCALE: 3/4" = 1'-0"

SECTION - CRANE POWER VAULT



6/- — SCALE: 3/4" = 1'-0"

DETAIL - VAULT WALL

3/4" = 1'-0" — 1 0 1 2 — scale — feet

1/2" = 1'-0" — 2 0 2 4 — scale — feet

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PROJ. ENGR	DATE	PROJ. ENGR	DATE
jason.mendenhall		jason.mendenhall	
ONE SITCUM WAY		ONE SITCUM WAY	
TACOMA, WA 98421-2300		TACOMA, WA 98421-2300	

APPROVED:

DC 7/17/13
DIR OF ENG DATE

PIER 3 UPGRADE

BULLRAIL DETAILS
SHEET 2

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)	PORT ADDRESS:	
PARCEL: 27	DRAWING SCALE: AS SHOWN		

6502
S11.2
SHEET 73 OF 129

CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS

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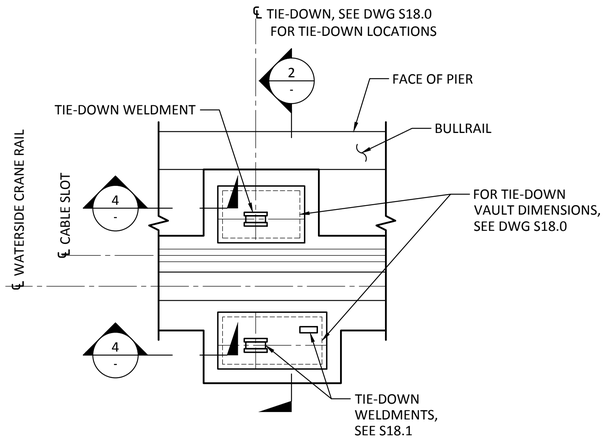
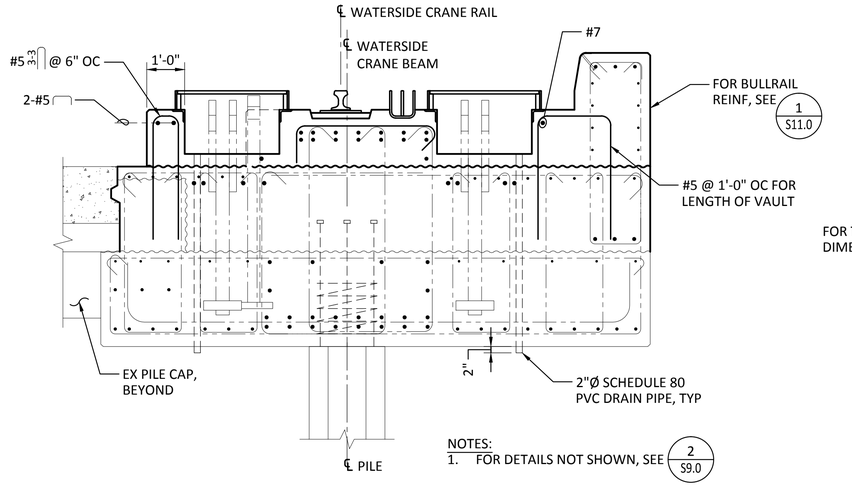
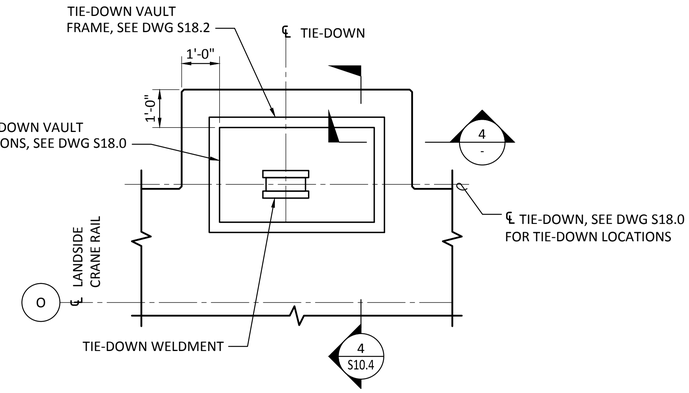


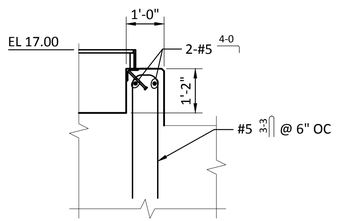
1 / S3.4 — PLAN - WATERSIDE TIE DOWN VAULT
SCALE: 1/4" = 1'-0"
S3.5, S3.6, S3.7



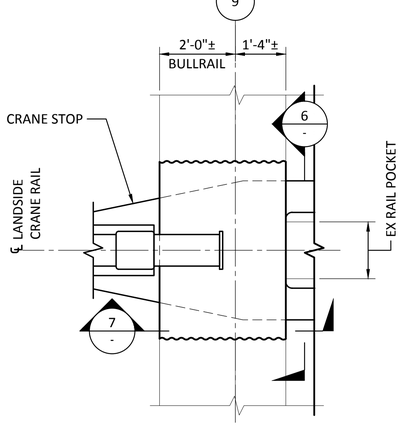
2 / - — SECTION - WATERSIDE TIE-DOWN VAULTS
SCALE: 1/2" = 1'-0"



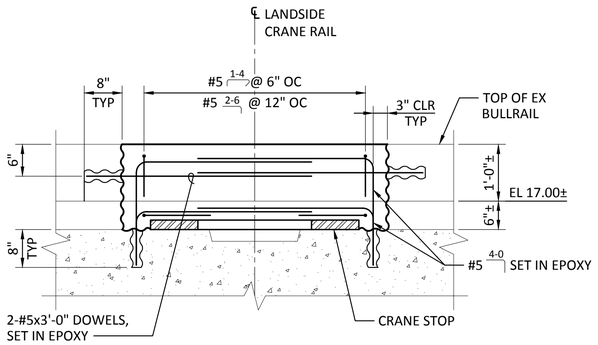
3 / S3.4 — PLAN - BULKHEAD TIE-DOWN VAULT
SCALE: 1/2" = 1'-0"
S3.5, S3.6



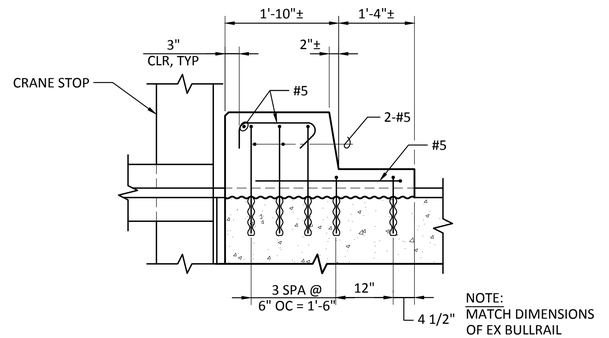
4 / - — SECTION - VAULT WALL
SCALE: 1/2"=1'-0"



5 / S3.4 — PLAN - BULLRAIL @ CRANE STOP
SCALE: 1/2"=1'-0"



6 / - — ELEVATION -
SCALE: 3/4"=1'-0"



7 / - — SECTION -
SCALE: 3/4"=1'-0"

3/4" = 1'-0" — 1 0 1 2 — scale — feet
1/2" = 1'-0" — 2 0 2 4 — scale — feet
1/4" = 1'-0" — 4 0 4 8 — scale — feet

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		CHECKED BY	DATE
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PIER 3 UPGRADE

WATERSIDE CRANE TIE-DOWN VAULTS

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27
PRINTED BY:	jason.mendenhall		
PORT ADDRESS:	ONE SITCUM WAY		
DRAWING SCALE:	AS SHOWN		

6502
S11.3
SHEET 74 OF 129

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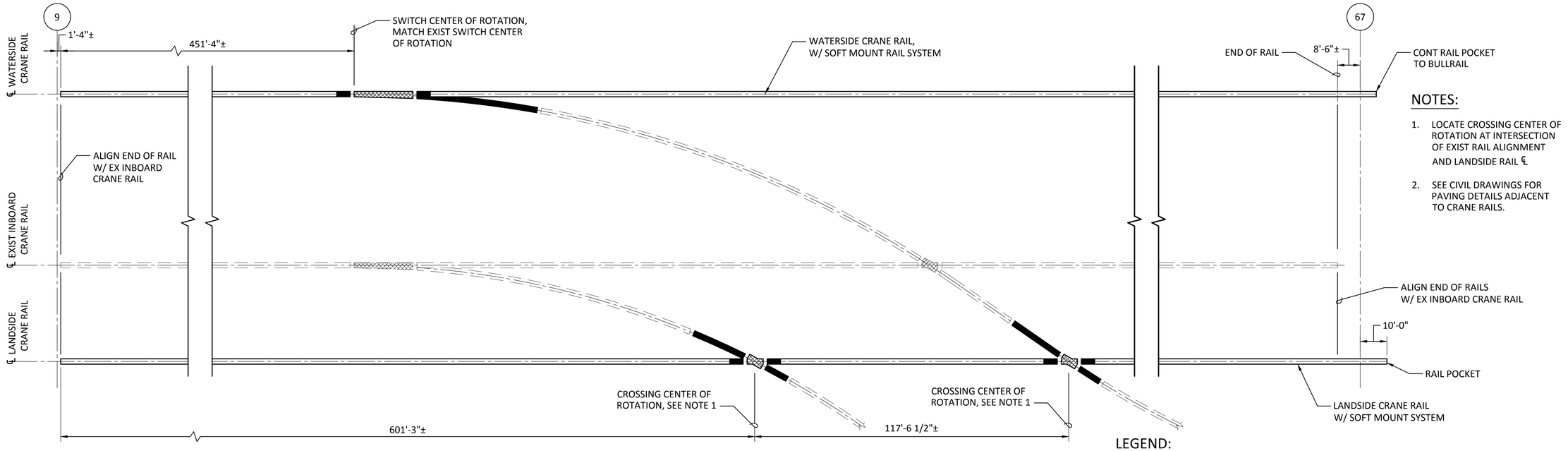


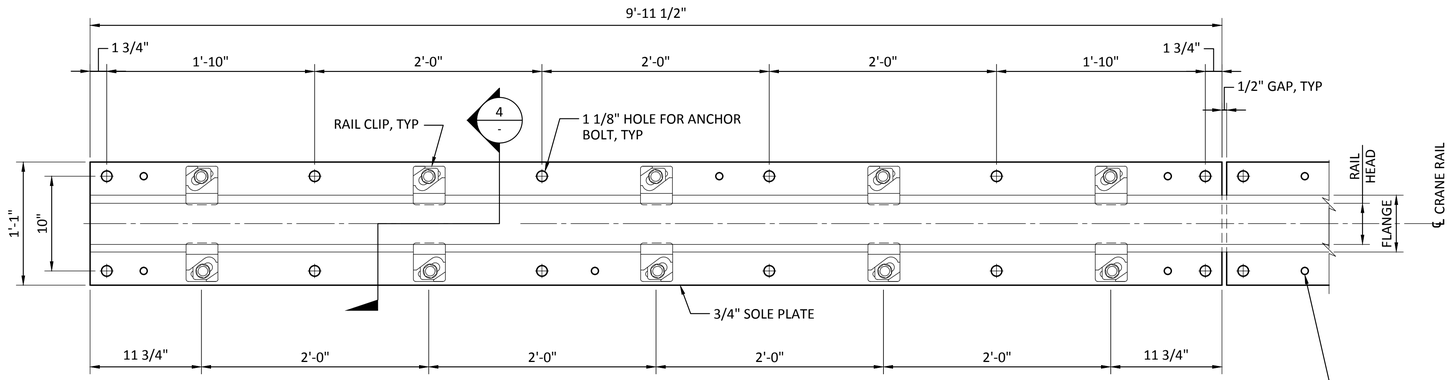
NOTES:

1. LOCATE CROSSING CENTER OF ROTATION AT INTERSECTION OF EXIST RAIL ALIGNMENT AND LANDSIDE RAIL ℄
2. SEE CIVIL DRAWINGS FOR PAVING DETAILS ADJACENT TO CRANE RAILS.

1 - PLAN - CRANE RAIL
SCALE: 1" = 20'-0"

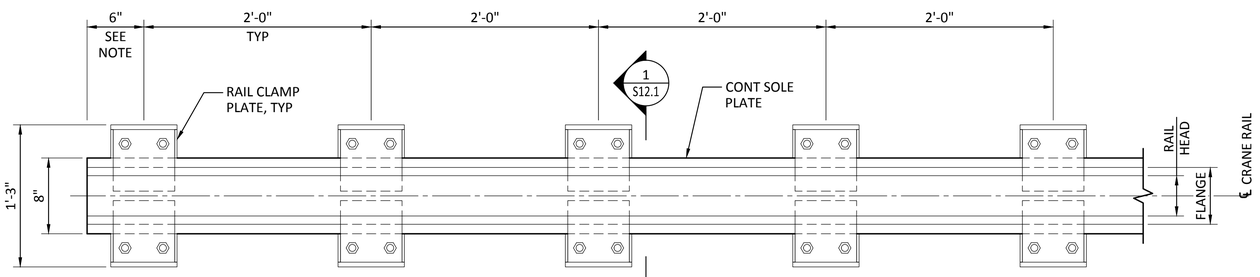
LEGEND:

- 175 LB/YD RAIL ON SOFT MOUNT SYSTEM, SEE 2/-
- 175 LB/YD RAIL ON HARD MOUNT SYSTEM, SEE 3/-
- EXIST 175 LB/YD RAIL ON HARD MOUNT SYSTEM
- MOUNTING SYSTEM TRANSITION, SEE 5/S12.1
- BOLTED RAIL SPLICE
- RAIL SWITCH
- EXIST RAIL SWITCH
- RAIL CROSSING
- EXIST RAIL CROSSING



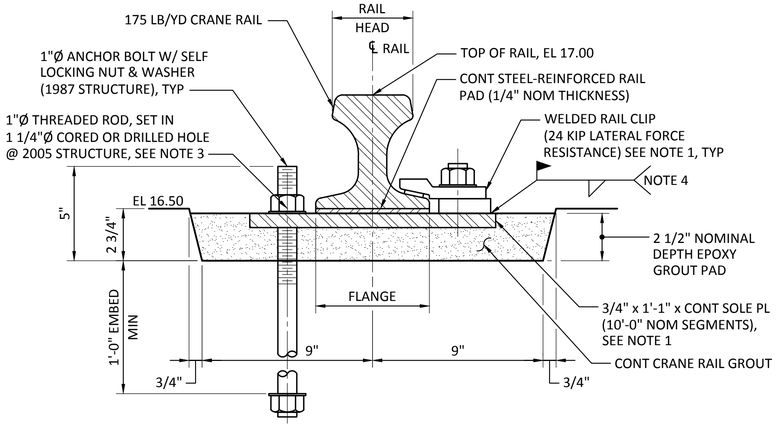
DRILL AND TAP 3/4"-10 UNC HOLES (10 THREADS PER INCH) FOR BOLTS. SET ELEVATION USING GREASED BOLTS. BACK OFF BOLTS ONE FULL TURN AFTER EPOXY GROUT HAS SET.

2 - PLAN - SOFT MOUNT SYSTEM
SCALE: 1 1/2" = 1'-0"



NOTE:
AT CROSSOVER RAIL ADJACENT TO SWITCH LOCATE FIRST RAIL CLAMP PLATE 1'-3" FROM EDGE OF SWITCH.

3 - PLAN - HARD MOUNT SYSTEM
SCALE: 1 1/2" = 1'-0"



4 - SECTION - SOFT MOUNT RAIL
SCALE: 3" = 1'-0"

NOTES:
1. SOLE PLATES AND RAIL CLIP ASSEMBLIES SHALL BE HOT-DIP GALVANIZED.
2. ACP NOT SHOWN.
3. HOLES SHALL BE ROUGHENED TO 1/8" AMPLITUDE AND CLEANED PRIOR TO INSTALLATION OF ANCHOR BOLTS AND EPOXY.
4. WELD RAIL CLIP PER MANUFACTURER'S REQUIREMENTS.

1" = 20' — 20 0 20 40 — scale feet
3" = 1'-0" — 4 0 4 8 — scale inches
1-1/2" = 1'-0" — 8 0 8 16 — scale inches

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PROJ. ENGR	DATE	DIR OF ENG	DATE
jason.mendenhall		PRINTED BY:	
ONE SITCUM WAY		PORT ADDRESS:	
TACOMA, WA 98421-2300			

PIER 3 UPGRADE

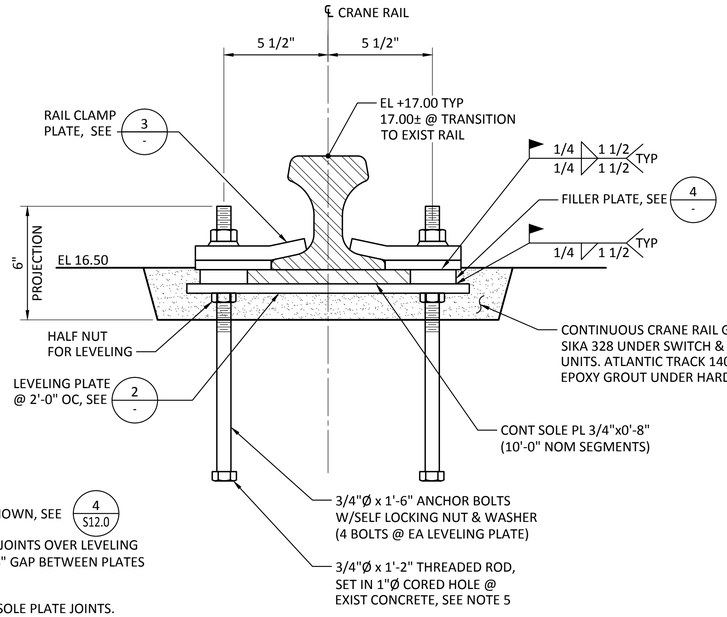
CRANE RAIL
SHEET 1

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

6502
S12.0
SHEET 75 OF 129

CONT/CONS:	069458		
MASTER ID NO:	092935		
PHASE:	RECORD DRAWINGS		

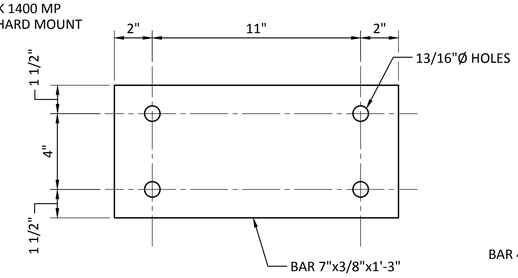
BINDING EDGE



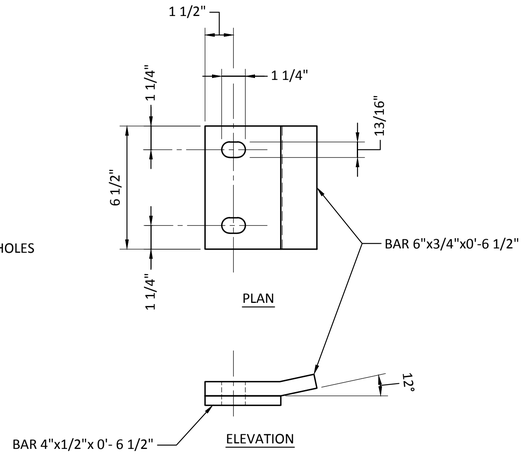
NOTES:

1. FOR DETAILS NOT SHOWN, SEE 4 / S12.0
2. LOCATE SOLE PLATE JOINTS OVER LEVELING PLATE. PROVIDE 1/4" GAP BETWEEN PLATES AT JOINT.
3. STAGGER RAIL AND SOLE PLATE JOINTS.
4. SOLE PLATE EDGES UNDER RAIL, AT JOINT LINE, SHALL BE GROUND SMOOTH.
5. HOLES SHALL BE ROUGHENED TO 1/8" AMPLITUDE AND CLEANED PRIOR TO INSTALLATION OF ANCHOR BOLTS AND EPOXY.

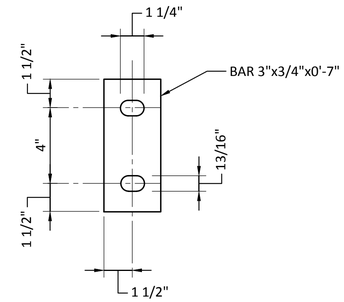
1 / S12.0 — SECTION - HARD MOUNT RAIL
SCALE: 3" = 1'-0"



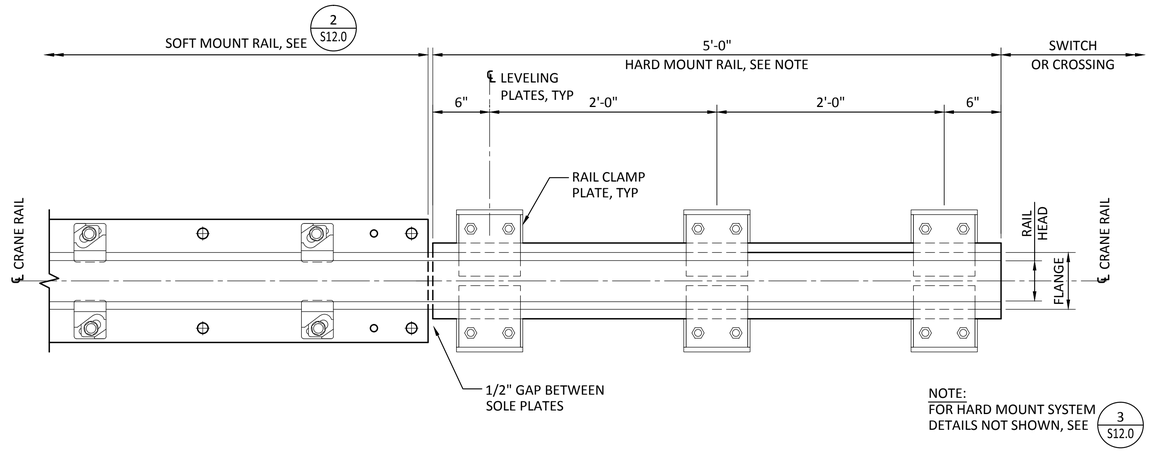
2 / - — DETAIL - LEVELING PLATE
SCALE: 3" = 1'-0"



3 / - — DETAIL - RAIL CLAMP
SCALE: 3" = 1'-0"



4 / - — DETAIL - FILLER PLATE
SCALE: 3" = 1'-0"



5 / - — DETAIL - MOUNTING SYSTEM TRANSITION
SCALE: 1 1/2" = 1'-0"

3" = 1'-0" — 4 0 4 8 — scale — inches

1-1/2" = 1'-0" — 8 0 8 16 — scale — inches

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DC	7/17/13		
DIR OF ENG	DATE		

APPROVED:

PIER 3 UPGRADE

CRANE RAIL
SHEET 2

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN
SECTION:	27		
PRINTED BY:	jason.mendenhall		
PORT ADDRESS:	ONE SITCUM WAY TACOMA, WA 98421-2300		

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S12.1
SHEET 76 OF 129

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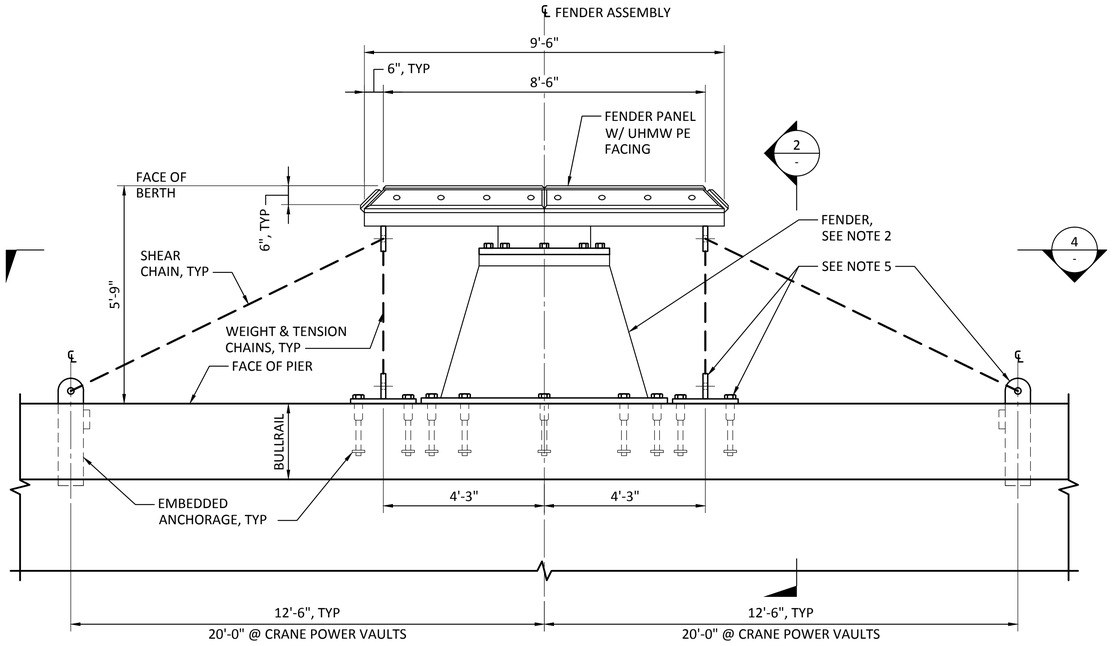
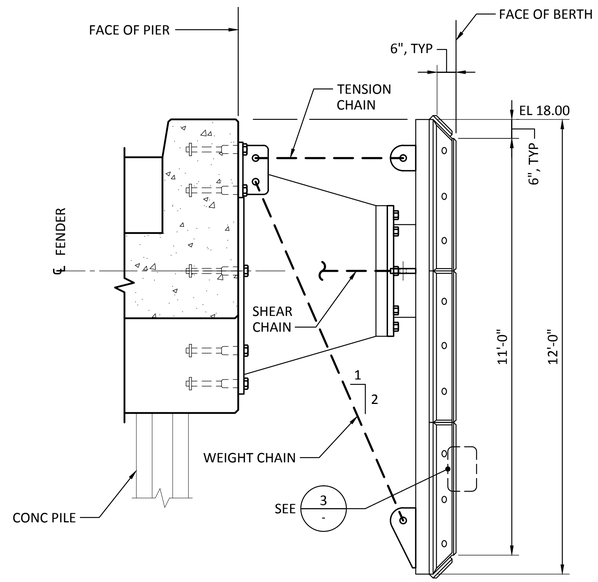
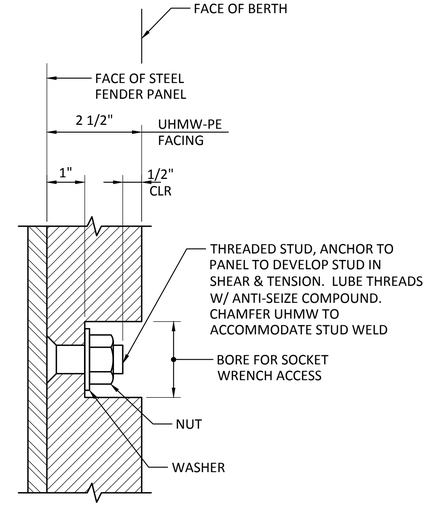


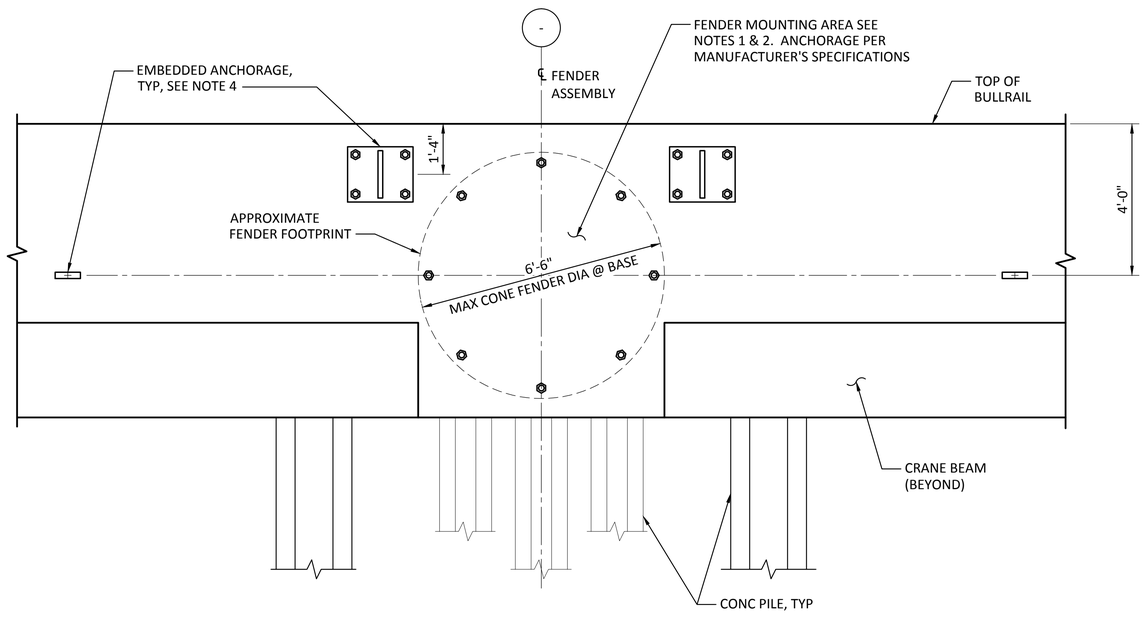
1 / S3.4 — PLAN - FENDER AT BENTS 20 TO 67
SCALE: 1/2"=1'-0" (17 TOTAL)
S3.5, S3.6, S3.7



2 / - — SECTION
SCALE: 1/2" = 1'-0"



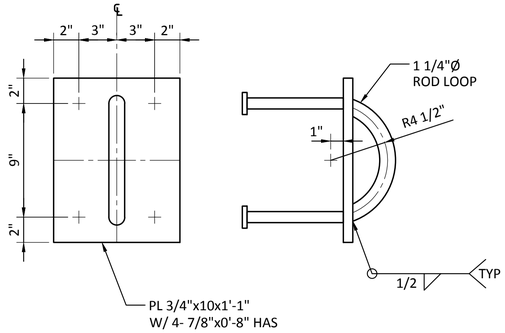
3 / - — DETAIL - ATTACHMENT OF FACING
SCALE: 6" = 1'-0"



4 / - — ELEVATION - FENDER
SCALE: 1/2" = 1'-0"

FENDER SYSTEM NOTES:

1. SEE DWG S1.1 FOR MINIMUM ENERGY AND MAXIMUM REACTION REQUIREMENTS. FOR FENDER LOCATIONS, SEE DWG S2.0. SEE SPECIFICATIONS FOR DEFLECTION LIMITS AND OTHER REQUIREMENTS.
2. FENDER SHOWN IS REPRESENTATIVE OF AN ACCEPTABLE PRODUCT. OTHER PRODUCTS THAT FIT WITHIN THE AREA ALLOWED FOR FENDER ASSEMBLY AND MEET SPECIFIED ENERGY AND REACTION PERFORMANCE CHARACTERISTICS MAY BE ACCEPTED SUBJECT TO ENGINEER'S PRIOR APPROVAL.
3. COORDINATE LOCATION OF EMBEDDED ITEMS WITH PLACEMENT OF REINFORCING STEEL AND OTHER APPURTENANCES DURING SUBMITTAL PREPARATION.
4. PRIOR TO FABRICATING ANY MATERIALS FOR FENDER SYSTEM VERIFY SIZE, DIMENSIONS, AND LOCATIONS OF ALL ITEMS. INCLUDING RUBBER FENDER, UHMW-PE FACING, FENDER PANEL, CHAINS, FENDER BOLTS, ANCHORS RODS OR BOLTS, EMBEDDED PLATES, ETC., SO THAT TIGHT CONNECTIONS CAN BE MADE AND ALL COMPONENTS ARE COMPATIBLE AND SNUG UPON COMPLETION.
5. EMBEDDED ANCHORAGE (1987 STRUCTURE) IS PART OF THE FENDER ASSEMBLY AND SHALL BE DESIGNED AND PROVIDED BY THE FENDER ASSEMBLY MANUFACTURER.



5 / S8.3 — DETAIL - FENDER EMBED
SCALE: 2" = 1'-0"

2" = 1'-0" — 4 0 4 8 — scale inches
1/2" = 1'-0" — 2 0 2 4 — scale feet
6" = 1'-0" — 2 0 2 4 — scale inches

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PROJ. ENGR	DATE		

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ONE SITCUM WAY
TACOMA, WA 98421-2300

APPROVED:
DC 7/17/13
DIR OF ENG DATE

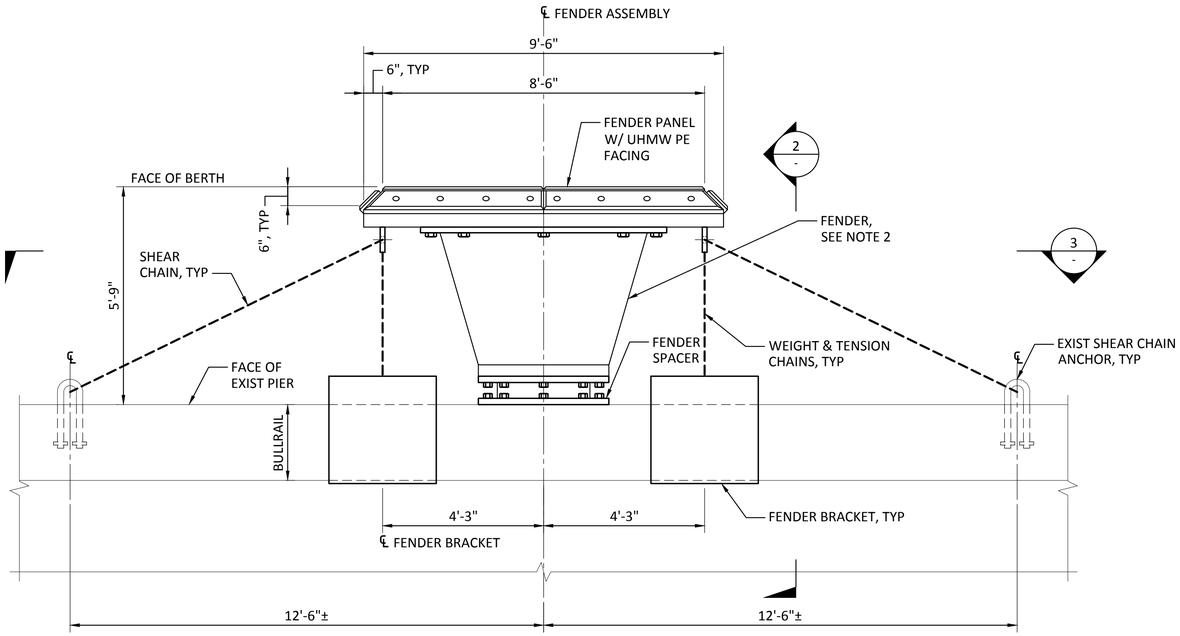
PIER 3 UPGRADE
FENDER SYSTEM DETAILS
SHEET 1

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

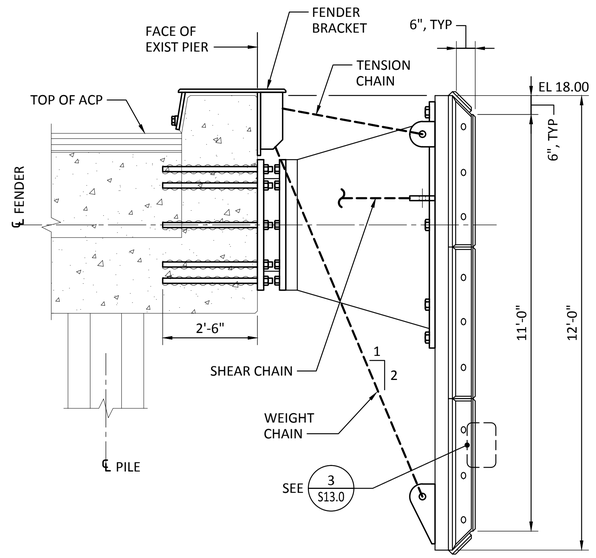
PRINTED BY:
PORT ADDRESS:

6502
S13.0
SHEET 77 OF 129

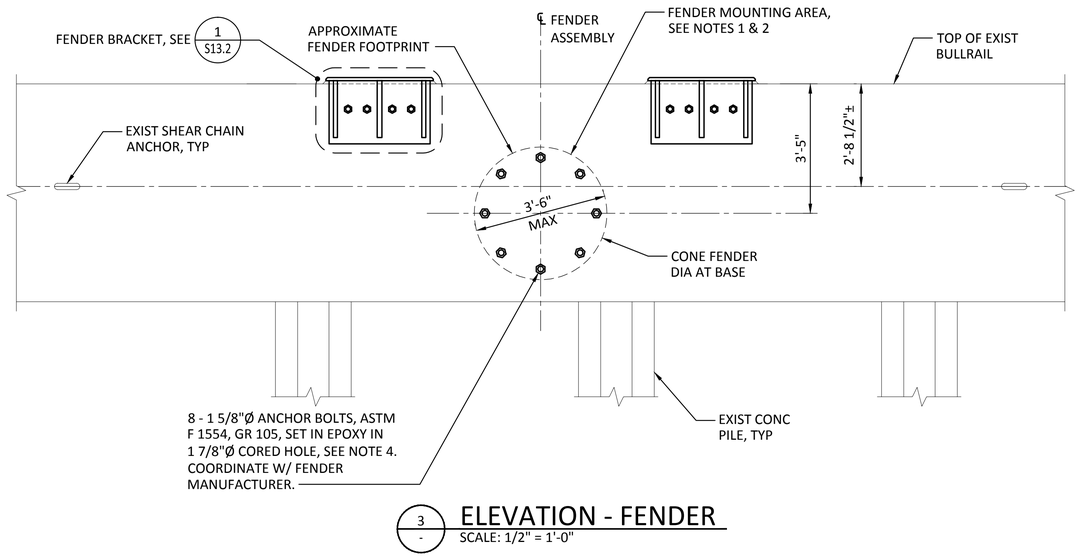
CONT/CONS: 069458
MASTER ID NO: 092935
PHASE: RECORD DRAWINGS



1 / S3.5 PLAN - FENDER AT BENTS 9 TO 19 (5 TOTAL)
SCALE: 1/2" = 1'-0"



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



3 / - ELEVATION - FENDER
SCALE: 1/2" = 1'-0"

FENDER SYSTEM NOTES:

1. SEE DWG S1.1 FOR MINIMUM ENERGY AND MAXIMUM REACTION REQUIREMENTS. FOR FENDER LOCATIONS, SEE DWG S2.0. SEE SPECIFICATIONS FOR DEFLECTION LIMITS AND OTHER REQUIREMENTS.
2. FENDER SHOWN IS REPRESENTATIVE OF AN ACCEPTABLE PRODUCT. OTHER PRODUCTS THAT FIT WITHIN THE AREA ALLOWED FOR FENDER ASSEMBLY SHALL MEET SPECIFIED ENERGY AND REACTION PERFORMANCE CHARACTERISTICS MAY BE ACCEPTED SUBJECT TO ENGINEER'S PRIOR APPROVAL.
3. PRIOR TO FABRICATING ANY MATERIALS FOR FENDER SYSTEM VERIFY SIZE, DIMENSIONS, AND LOCATIONS OF ALL ITEMS. INCLUDING RUBBER FENDER, UHMW-PE FACING, FENDER PANEL, FENDER SPACER, CHAINS, FENDER BOLTS, ANCHORS RODS OR BOLTS, EMBEDDED PLATES, ETC., SO THAT TIGHT CONNECTIONS CAN BE MADE AND ALL COMPONENTS ARE COMPATIBLE AND SNUG UPON COMPLETION.
4. HOLES SHALL BE ROUGHENED TO 1/8" AMPLITUDE AND CLEANED PRIOR TO INSTALLATION OF ANCHOR BOLTS AND EPOXY.

1/2" = 1'-0" scale 2 0 2 4 feet

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DIR OF ENG		DATE

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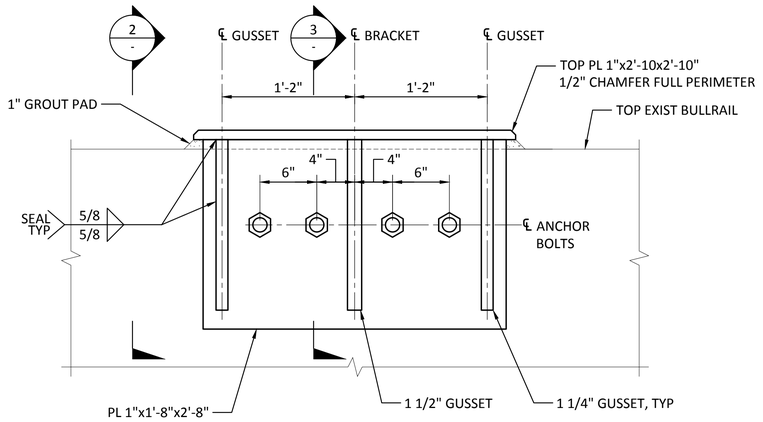
PIER 3 UPGRADE

FENDER SYSTEM DETAILS
SHEET 2

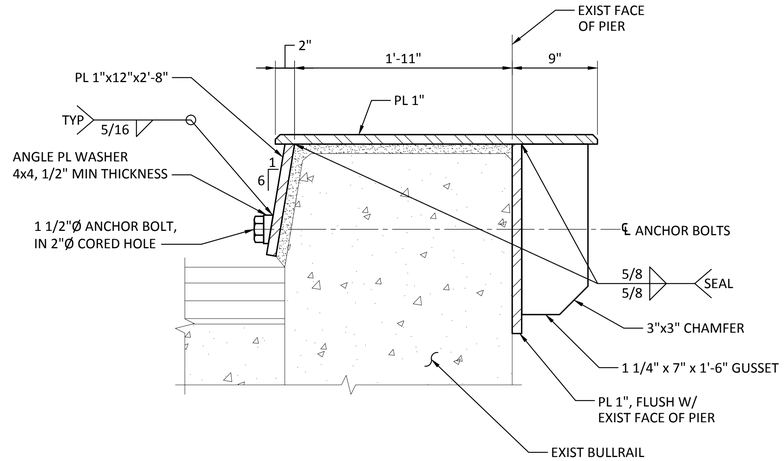
CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

SECTION:	27
PORT ADDRESS:	ONE SITCUM WAY
	TACOMA, WA 98421-2300

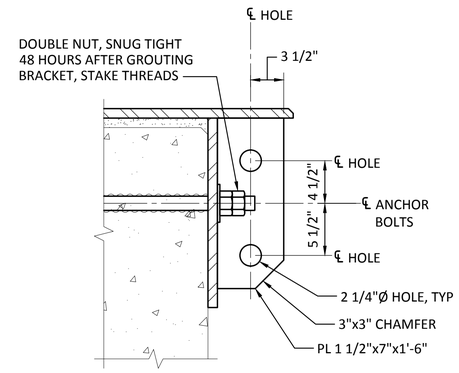
6502
S13.1
SHEET 78 OF 129



1 S13.1 **ELEVATION - FENDER BRACKET**
SCALE: 1 1/2" = 1'-0"



2 S13.2 **SECTION - BRACKET**
SCALE: 1 1/2" = 1'-0"



3 S13.2 **SECTION - BRACKET**
SCALE: 1 1/2" = 1'-0"

1-1/2" = 1'-0"
8 0 8 16
scale inches

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S13.2
SHEET 79 OF 129

PIER 3 UPGRADE
FENDER SYSTEM DETAILS
SHEET 3

CONT/CONS:	069458	RANGE: 3 E	SECTION: 27
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

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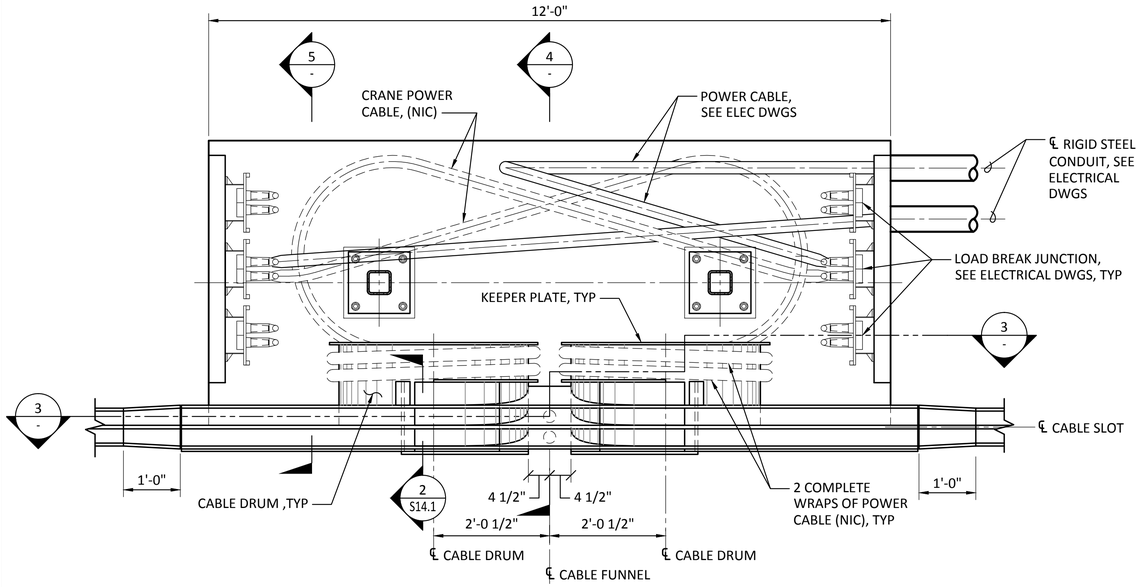
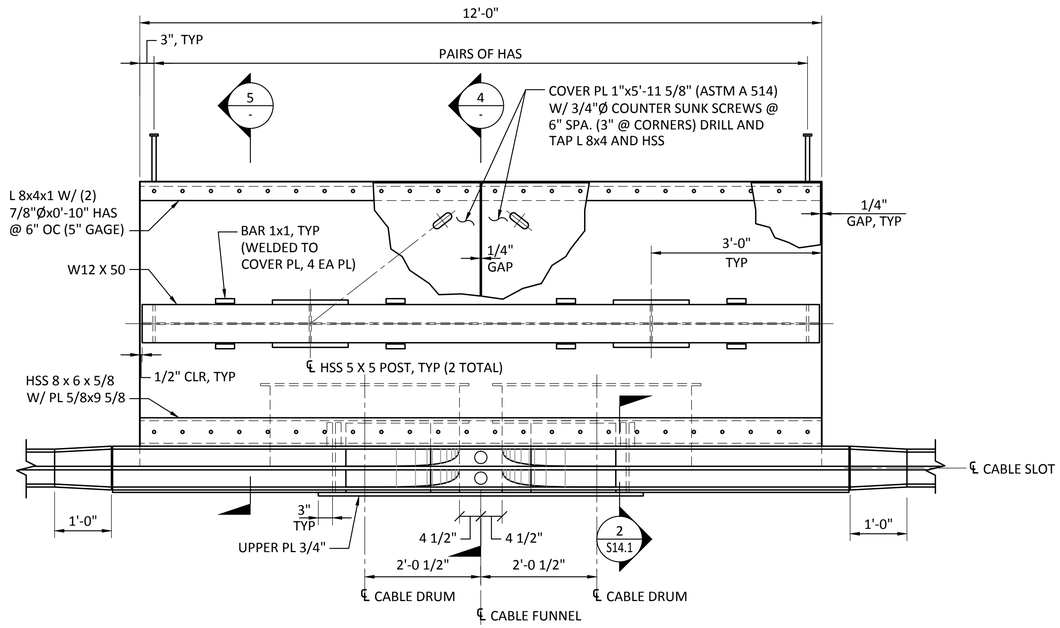
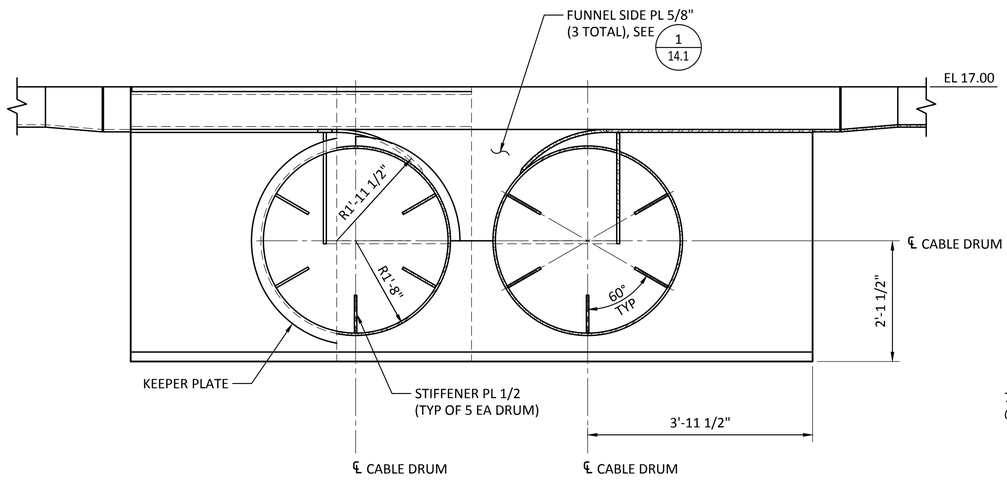


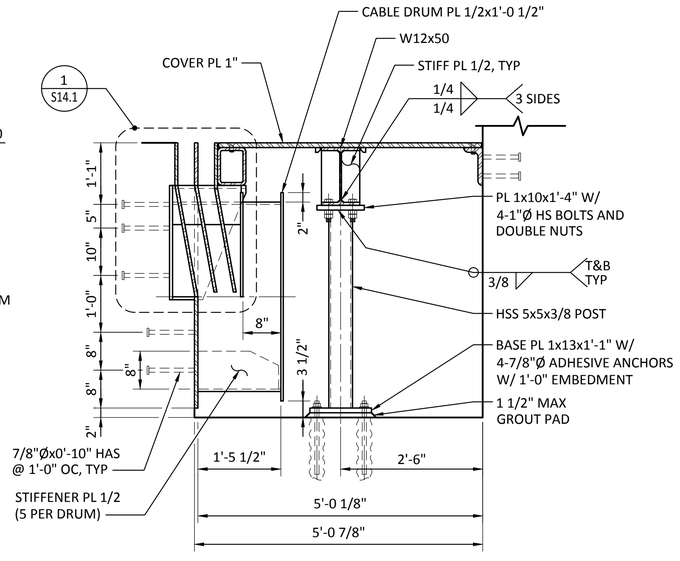
1 - PLAN - CRANE POWER VAULT
SCALE: 3/4" = 1'-0"



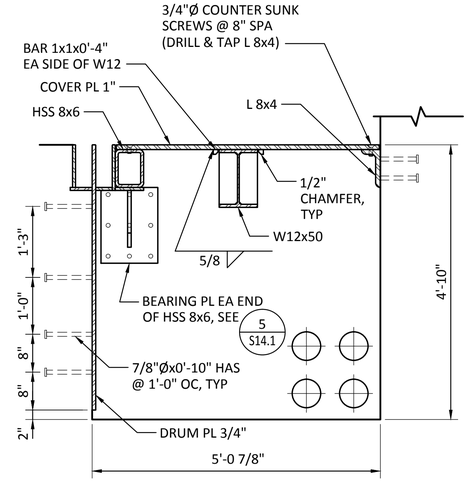
2 - PLAN - CRANE POWER VAULT
SCALE: 3/4" = 1'-0"



3 - SECTION - CRANE POWER VAULT
SCALE: 3/4" = 1'-0"



4 - SECTION - CRANE POWER VAULT
SCALE: 3/4" = 1'-0"



NOTE:
SLOPE OF CONCRETE FLOOR NOT SHOWN, SEE DWG S8.2

5 - SECTION - CRANE POWER VAULT
SCALE: 3/4" = 1'-0"

3/4" = 1'-0" scale 1 0 1 2 feet

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PROJ. ENGR	DATE		

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PIER 3 UPGRADE

CRANE POWER VAULT DETAILS
SHEET 1

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S14.0
SHEET 80 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN		

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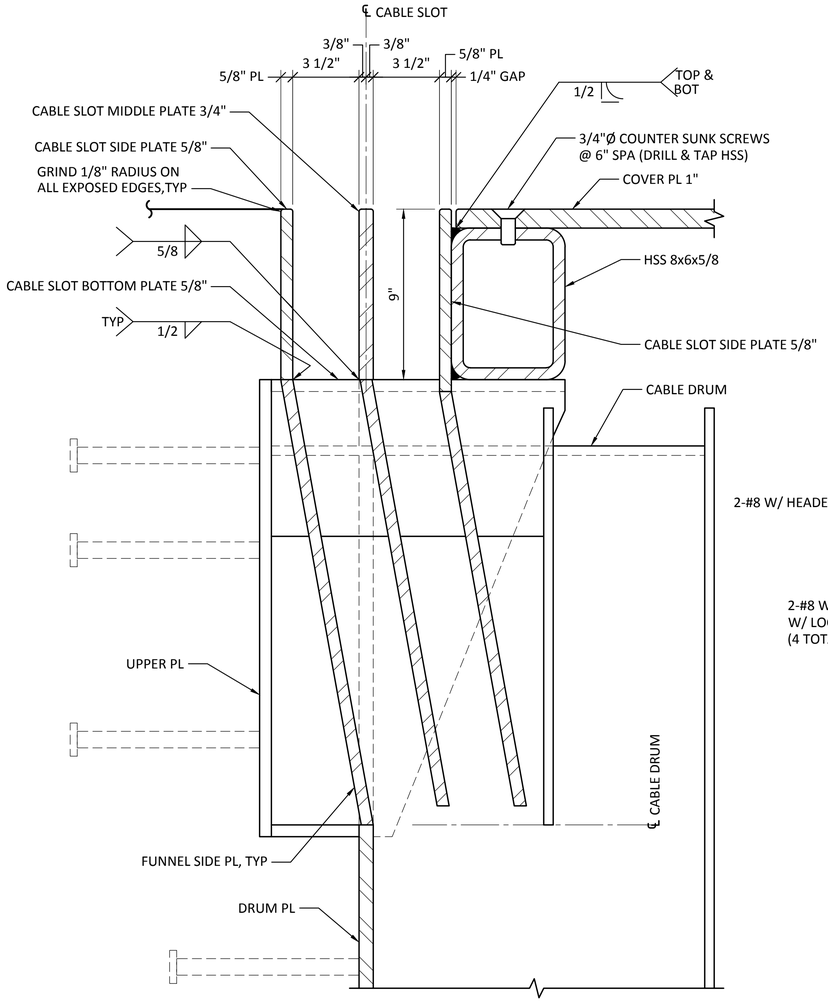
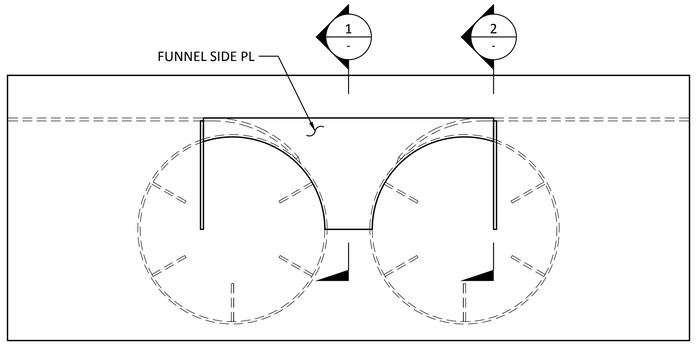
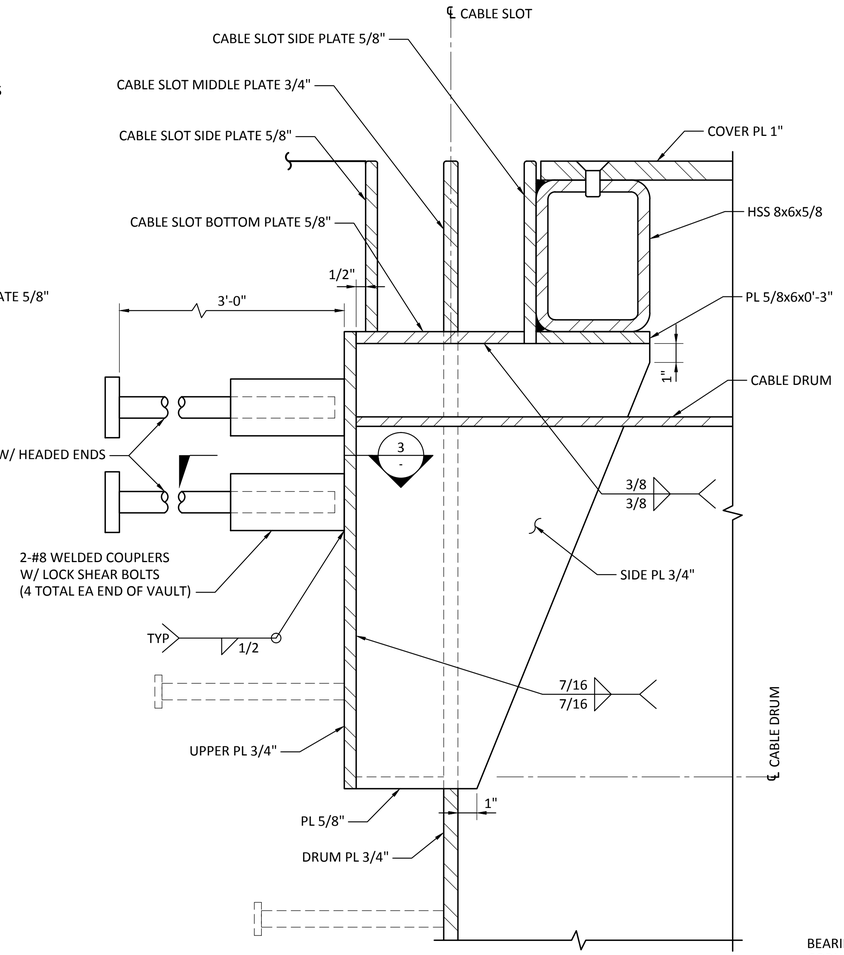


1 / S14.0 DETAIL
SCALE: 3" = 1'-0"

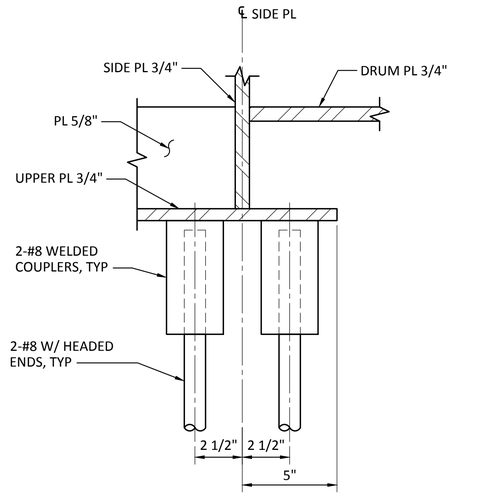


4 / - ELEVATION - DRUM PLATE
SCALE: 3/4" = 1'-0"

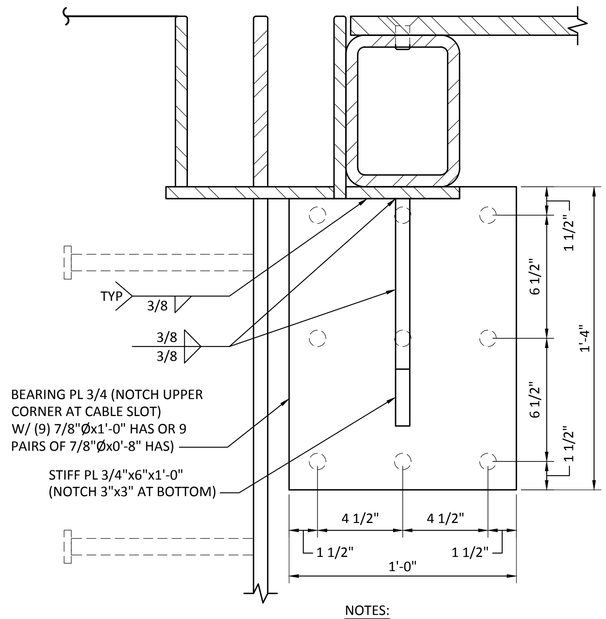


NOTE:
FOR INFO NOT SHOWN, SEE 1 / -

2 / S14.0 SECTION
SCALE: 3" = 1'-0"



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



NOTES:
1. EMBED BEARING PLATE FLUSH W/ FACE OF CONCRETE WALL
2. FOR INFO NOT SHOWN, SEE 2 / -

5 / - SECTION
SCALE: 3" = 1'-0"

3/4" = 1'-0" scale 1 0 1 2 feet

3" = 1'-0" scale 4 0 4 8 inches

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PIER 3 UPGRADE

CRANE POWER VAULT DETAILS
SHEET 2

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)	PORT ADDRESS: ONE SITCUM WAY	
PARCEL: 27	DRAWING SCALE: AS SHOWN	TACOMA, WA 98421-2300	

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S14.1
SHEET 81 OF 129

CONT/CONS:	069458		
MASTER ID NO:	092935		
PHASE:	RECORD DRAWINGS		

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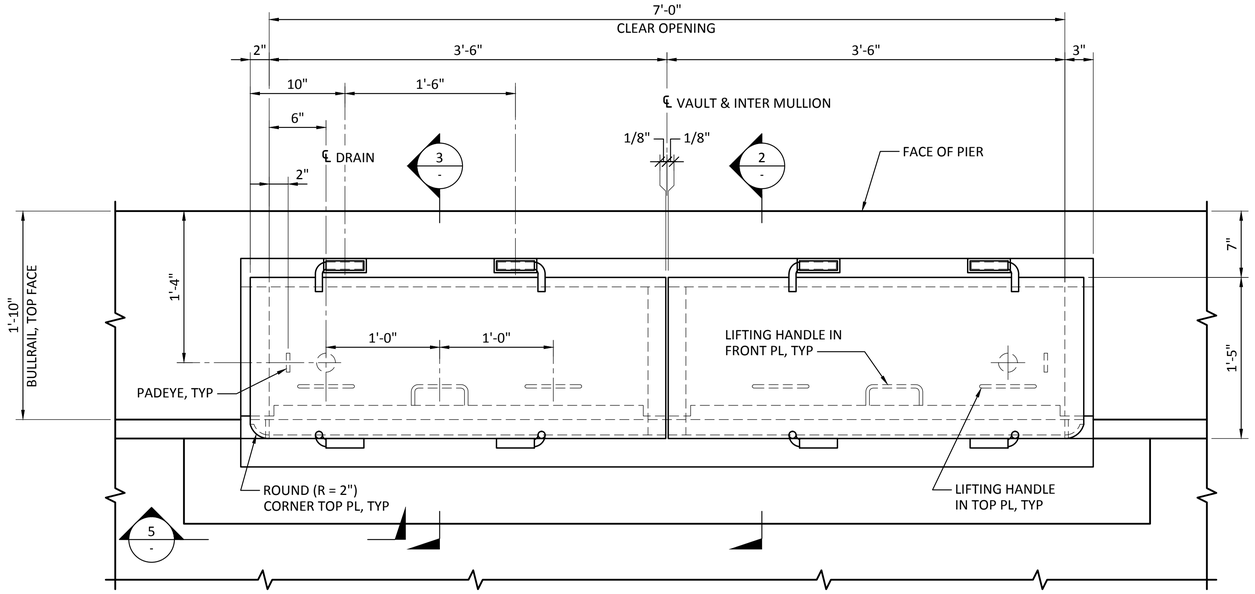
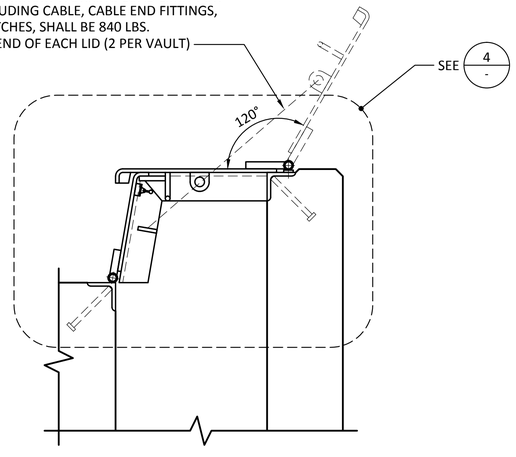


1 - PLAN - UTILITY VAULT
SCALE: 1 1/2" = 1'-0"

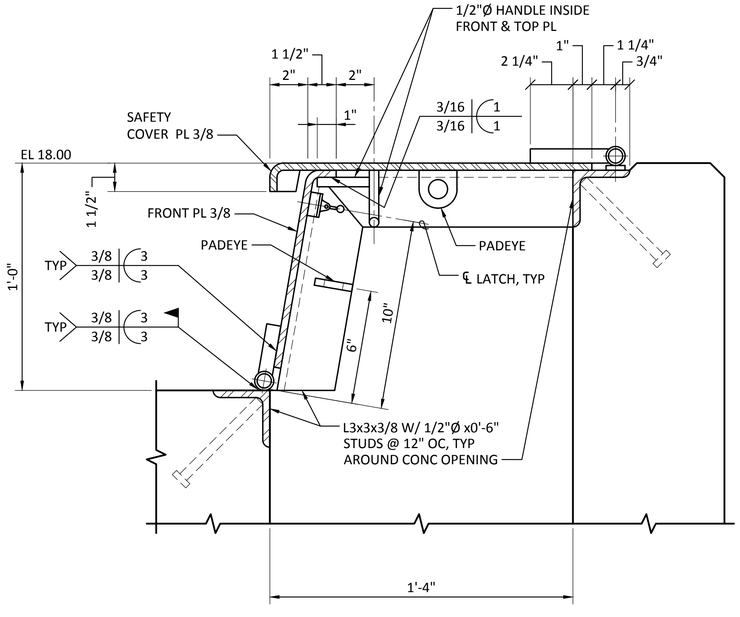
NOTES:

1. PAINT DESIGNATOR SIGNS - "WATER" & "ELECTRICAL" ON TOP OF RESPECTIVE VAULTS. USE HELVETICA FONT 4" TALL TEXT.
2. CONTRACTOR SHALL VERIFY AND COORDINATE ALL PENETRATIONS PRIOR TO FABRICATION AND SHOW ON SHOP DWGS.

GALV AIRCRAFT CABLE ASSEMBLY W/ SPRING LATCH AT EACH END. MINIMUM WORKING LOAD LIMIT FOR ASSEMBLY, INCLUDING CABLE, CABLE END FITTINGS, AND SPRING LATCHES, SHALL BE 840 LBS. PROVIDE (1) AT END OF EACH LID (2 PER VAULT)

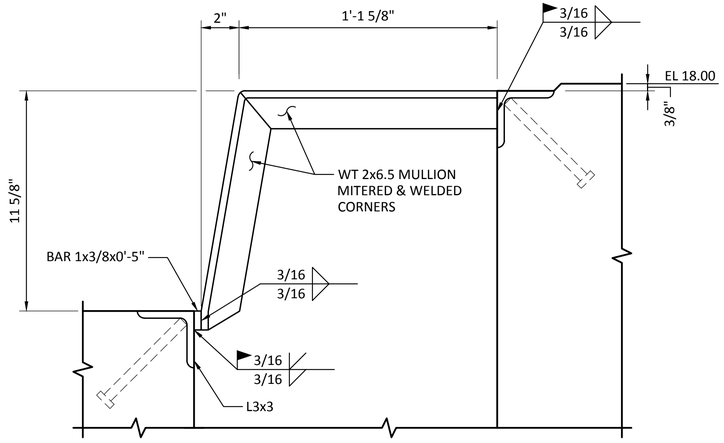


3 - SECTION - UTILITY VAULT
SCALE: 1" = 1'-0"

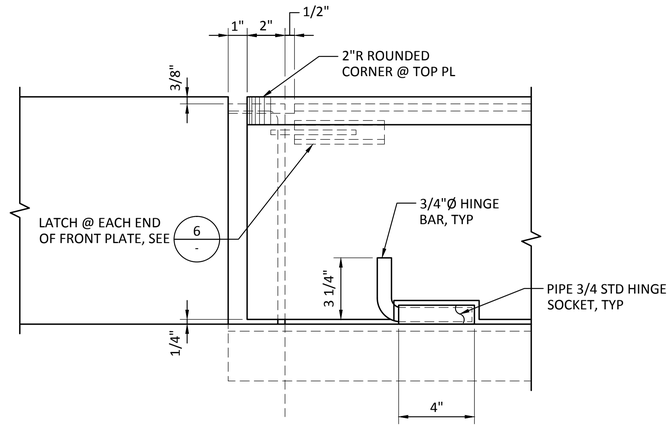


4 - DETAIL - VAULT COVER
3" = 1'-0"

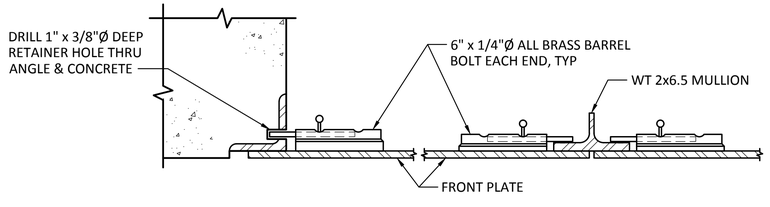
NOTE:
LID WIRE RESTRAINT NOT SHOWN FOR CLARITY.



2 - SECTION - INTERMEDIATE MULLION
3" = 1'-0"



5 - ELEVATION - FRONT PLATE
3" = 1'-0"



6 - PLAN - LATCH DETAIL
3" = 1'-0"

3" = 1'-0" scale: 4 0 4 8 inches

1-1/2" = 1'-0" scale: 8 0 8 16 inches

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PIER 3 UPGRADE
UTILITY VAULT DETAILS

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DRAWING SCALE: AS SHOWN	TACOMA, WA 98421-2300

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S15.0
SHEET 82 OF 129

CONT/CONS: 069458	TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27
MASTER ID NO: 092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)	
PHASE: RECORD DRAWINGS	PARCEL: 27		

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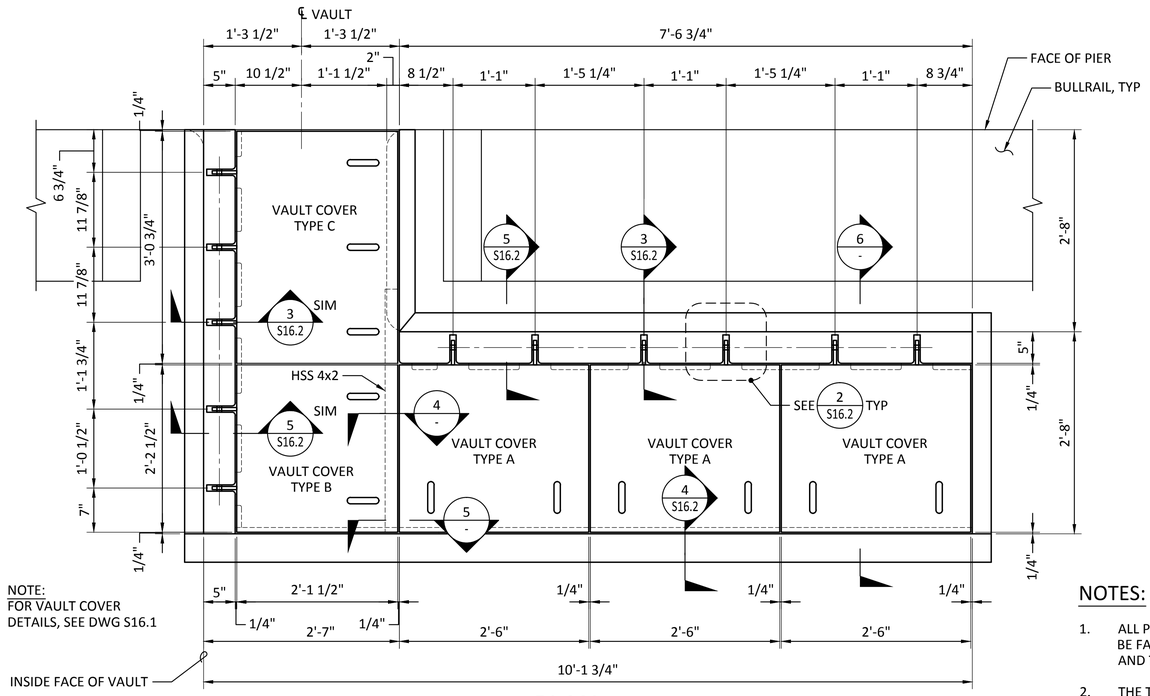
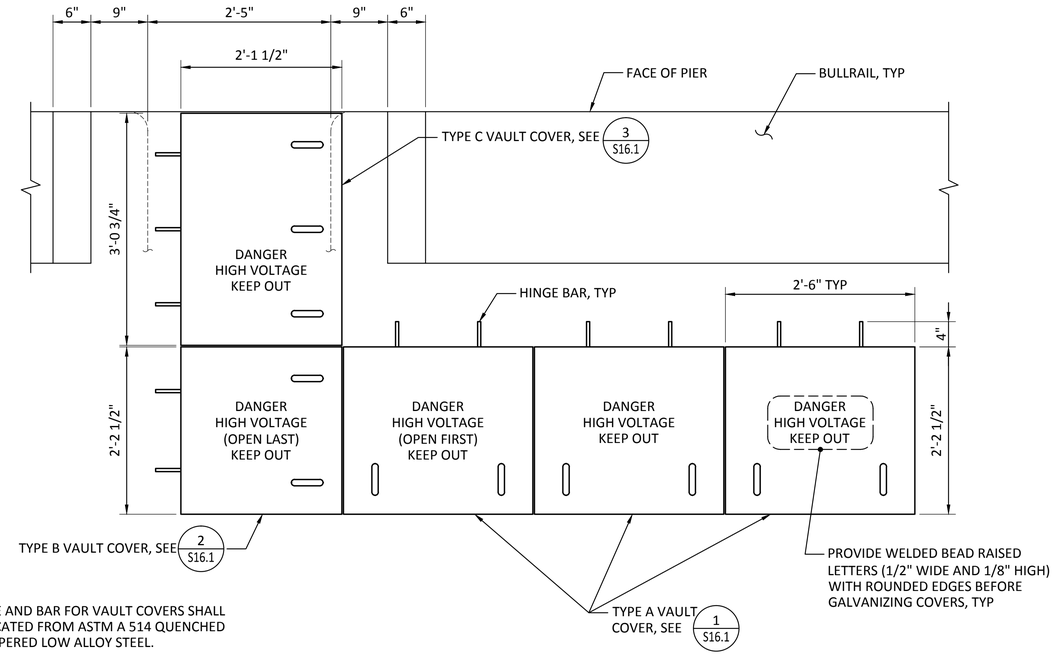


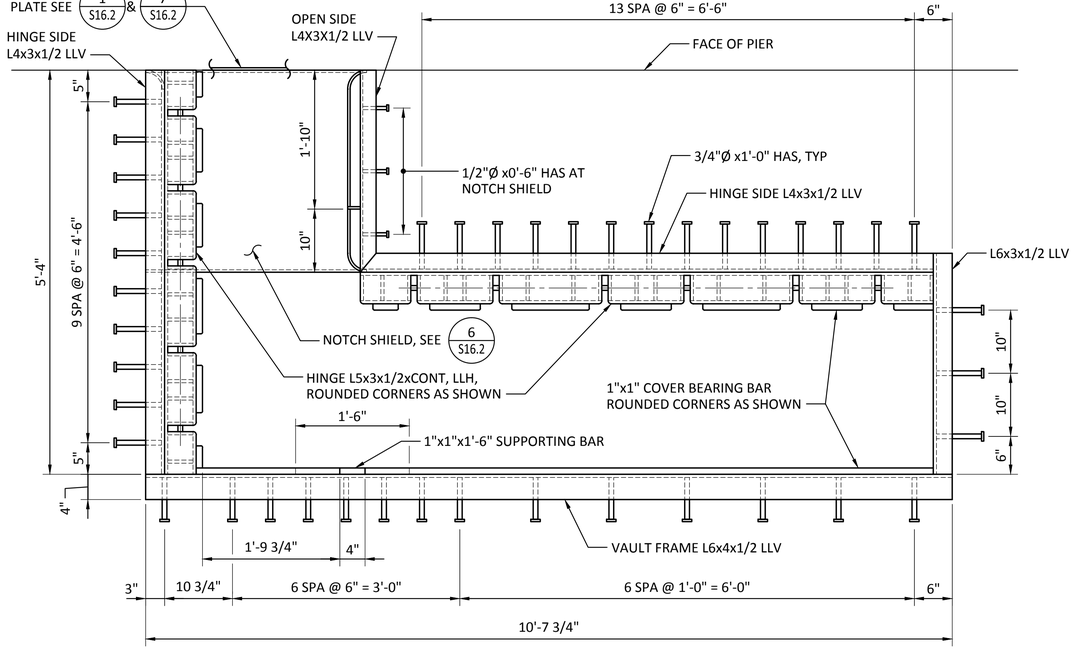
1 - PLAN
SCALE: 1" = 1'-0"



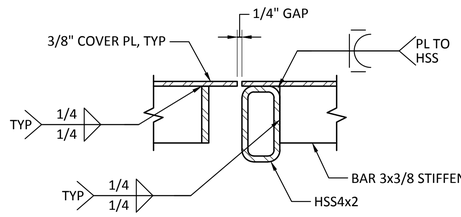
NOTES:

1. ALL PLATE AND BAR FOR VAULT COVERS SHALL BE FABRICATED FROM ASTM A 514 QUENCHED AND TEMPERED LOW ALLOY STEEL.
2. THE TERM "PLATE" AND "BAR" HAVE BEEN USED INTERCHANGEABLY FOR SOME ASTM A 514 MATERIAL CALL OUTS.

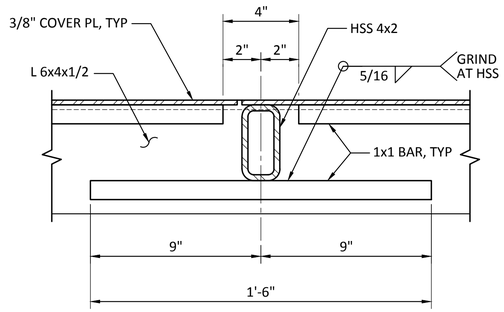
2 - PLAN - COVERS
SCALE: 1" = 1'-0"



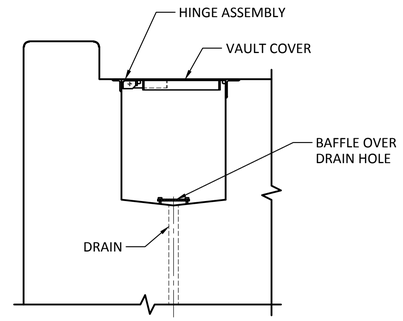
3 - PLAN - FRAME
SCALE: 1" = 1'-0"



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



5 - SECTION
SCALE: 3" = 1'-0"



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

3" = 1'-0" (scale 4 0 4 8 inches)
1" = 1'-0" (scale 1 0 1 2 feet)
1/2" = 1'-0" (scale 2 0 2 4 feet)

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PIER 3 UPGRADE

SHORE POWER VAULT DETAILS
SHEET 1

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

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S16.0
SHEET 83 OF 129

CONT/CONS:	069458		
MASTER ID NO:	092935		
PHASE:	RECORD DRAWINGS		

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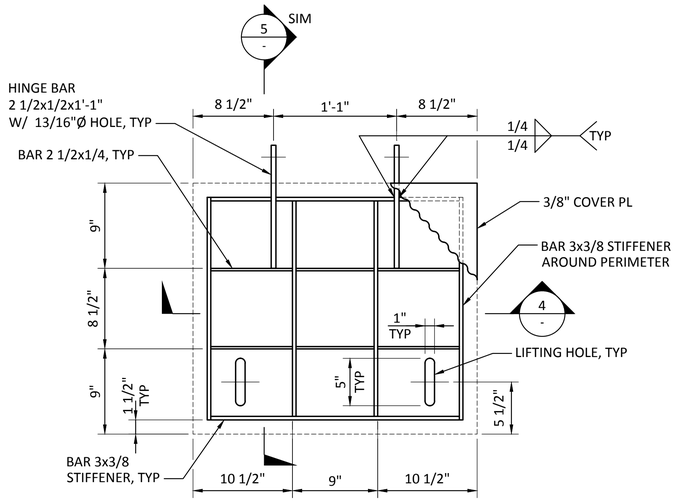
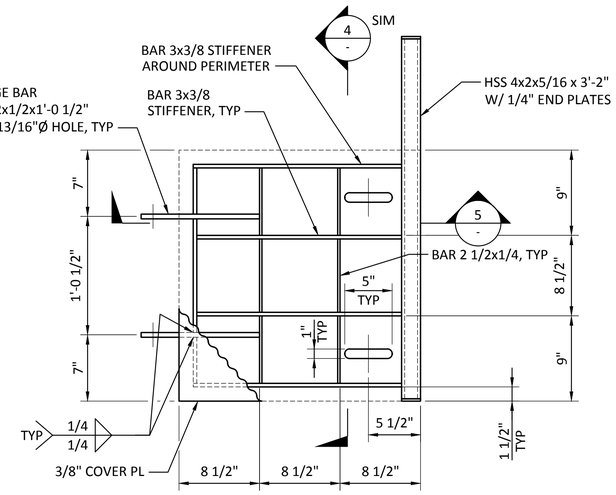
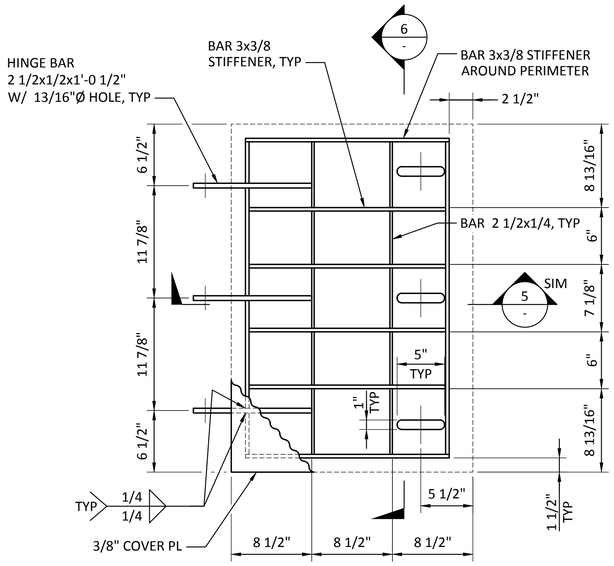


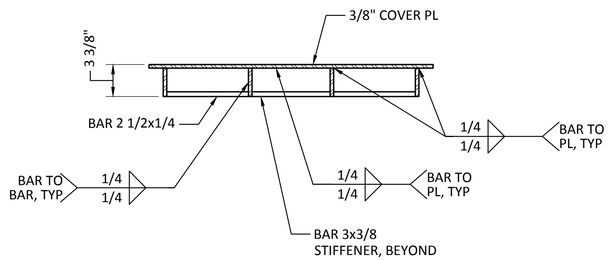
1 S16.0 **DETAIL - VAULT COVER (TYPE A)**
SCALE: 1 1/2" = 1'-0"



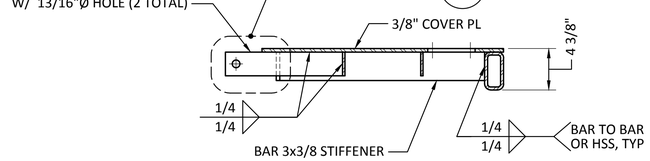
2 S16.0 **DETAIL - VAULT COVER (TYPE B)**
SCALE: 1 1/2" = 1'-0"



3 S16.0 **DETAIL - VAULT COVER (TYPE C)**
SCALE: 1 1/2" = 1'-0"

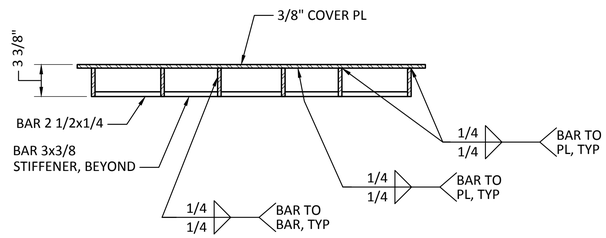


4 - **SECTION**
SCALE: 1 1/2" = 1'-0"



NOTE:
FOR INFORMATION
NOT SHOWN SEE 4
-

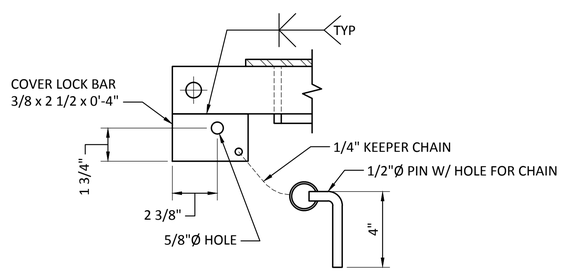
5 - **SECTION**
SCALE: 1 1/2" = 1'-0"



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

NOTE:

SEE NOTES ON DWG S16.0.



7 - **DETAIL - COVER LOCK**
SCALE: 3" = 1'-0"

3" = 1'-0" 4 0 4 8 scale inches

1-1/2" = 1'-0" 8 0 8 16 scale inches

BINDING EDGE

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PORT ADDRESS:			
DRAWING SCALE:	AS SHOWN		

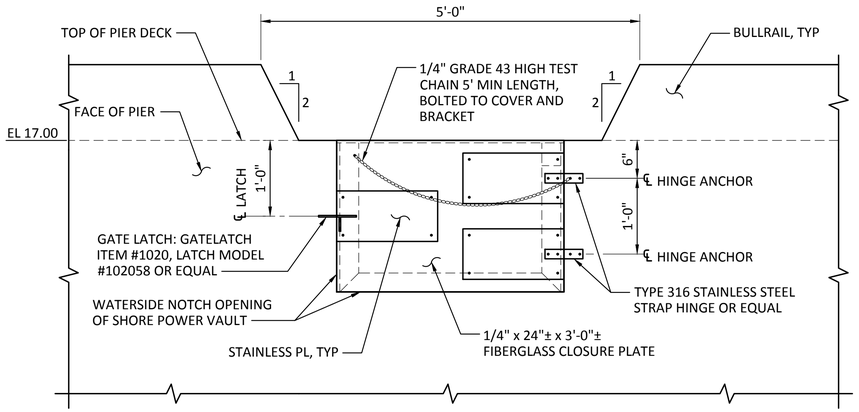
PIER 3 UPGRADE

SHORE POWER VAULT DETAILS
SHEET 2

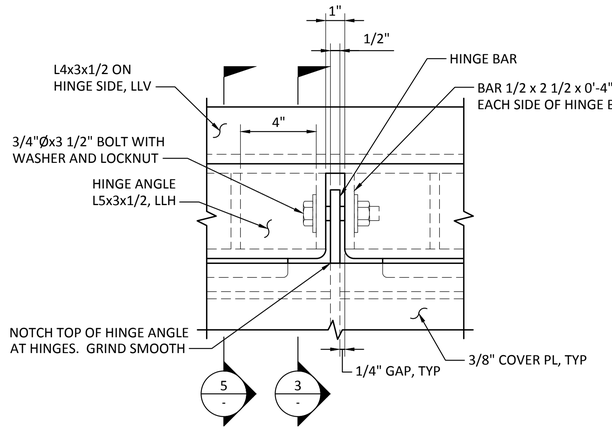
CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27

6502
S16.1
SHEET 84 OF 129

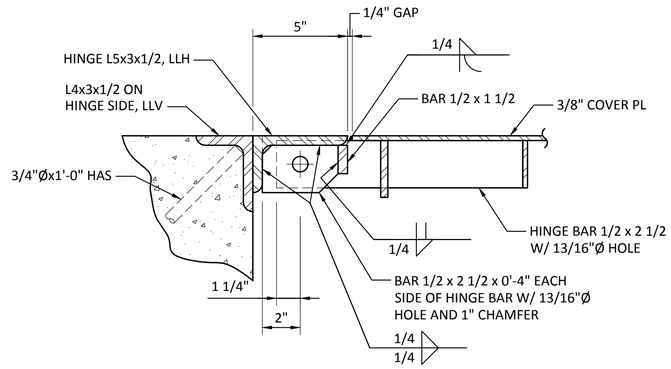
BINDING EDGE



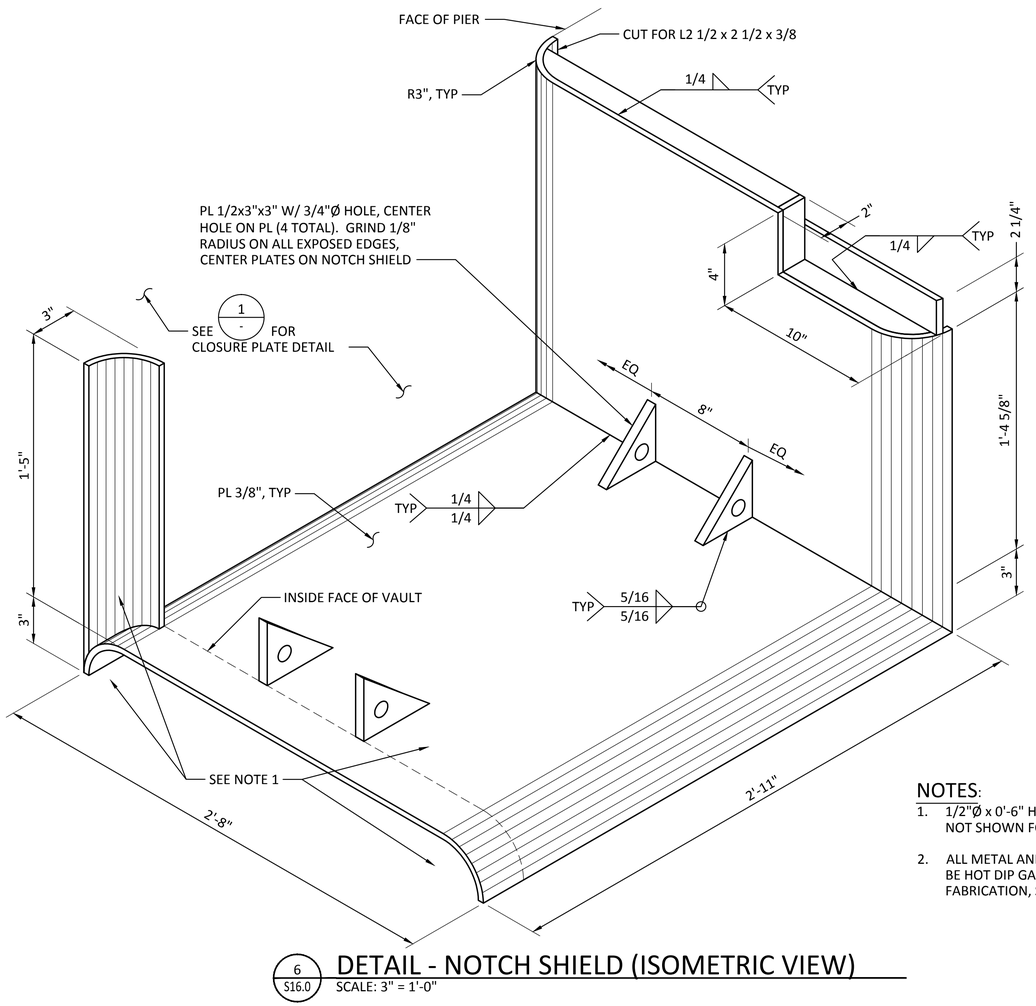
1 / S16.0 **DETAIL - CLOSURE PLATE**
SCALE: 1" = 1'-0"



2 / S16.0 **DETAIL - HINGE**
SCALE: 3" = 1'-0"

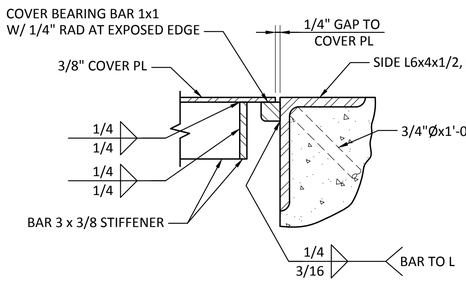


3 / S16.0 **SECTION**
SCALE: 3" = 1'-0"

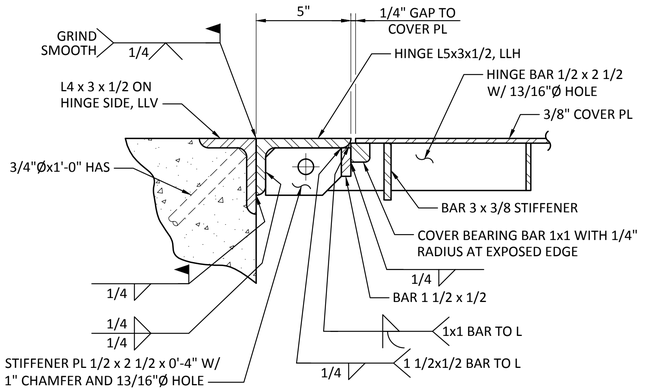


6 / S16.0 **DETAIL - NOTCH SHIELD (ISOMETRIC VIEW)**
SCALE: 3" = 1'-0"

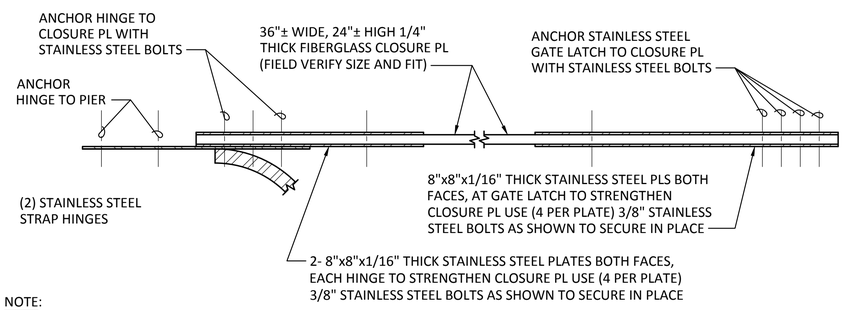
NOTES:
1. 1/2"Ø x 0'-6" HAS @ 12" OC EW NOT SHOWN FOR CLARITY, TYP
2. ALL METAL AND HARDWARE SHALL BE HOT DIP GALVANIZED AFTER FABRICATION, SEE SPECIFICATIONS.



4 / S16.0 **SECTION**
SCALE: 3" = 1'-0"



5 / S16.0 **SECTION**
SCALE: 3" = 1'-0"



NOTE:

USE TYPE 316 SS HARDWARE

7 / S16.0 **DETAIL - CLOSURE PLATE**
SCALE: 6" = 1'-0"

1" = 1'-0" — 1 0 1 2 — scale feet
3" = 1'-0" — 4 0 4 8 — scale inches
6" = 1'-0" — 2 0 2 4 — scale inches

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PIER 3 UPGRADE

SHORE POWER VAULT DETAILS
SHEET 3

6502
S16.2
SHEET 85 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27
			DRAWING SCALE: AS SHOWN

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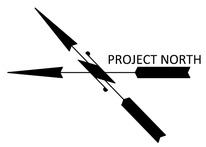
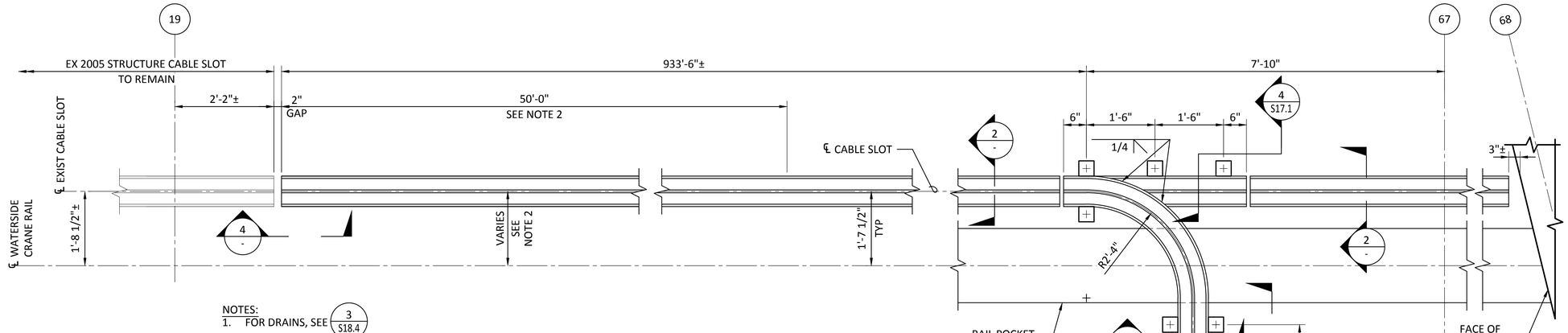
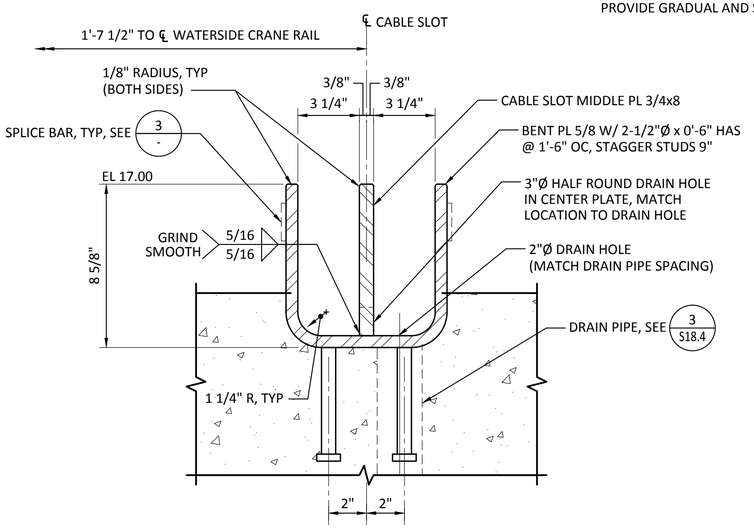


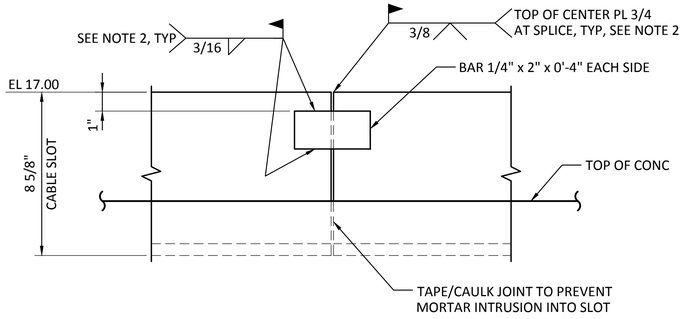


NOTES:
1. FOR DRAINS, SEE 3 / S18.4
2. TRANSITION CABLE SLOT ℄ TO EXIST CABLE ℄. PROVIDE GRADUAL AND SMOOTH TRANSITION

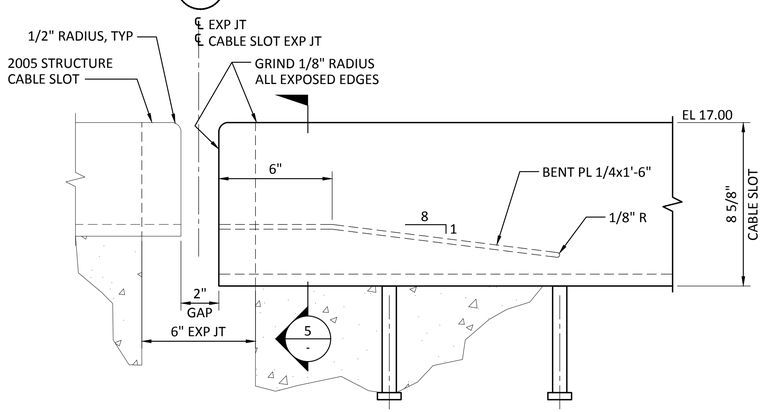
1 - PLAN - CABLE SLOT
SCALE: 3/8"=1'-0"



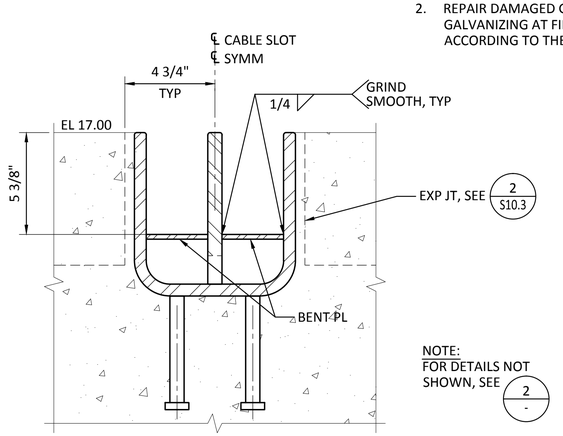
2 - SECTION - CABLE SLOT
SCALE: 3" = 1'-0"



3 - ELEVATION - CABLE SLOT AT SPLICE
SCALE: 3" = 1'-0"



4 - ELEVATION - CABLE SLOT AT TRANSITION
SCALE: 3" = 1'-0"



5 - SECTION - AT TRANSITION
SCALE: 3" = 1'-0"

GENERAL NOTES

1. ACP NOT SHOWN .
2. REPAIR DAMAGED GALVANIZING AND GALVANIZING AT FIELD WELDS ACCORDING TO THE SPECIFICATIONS.

* FIELD VERIFY AND ADJUST CABLE SLOT TO ALIGN W/ EXISTING

3/8" = 1'-0" scale 2 0 2 4 feet

3" = 1'-0" scale 4 0 4 8 inches

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PIER 3 UPGRADE

CABLE SLOT PLAN & SECTIONS

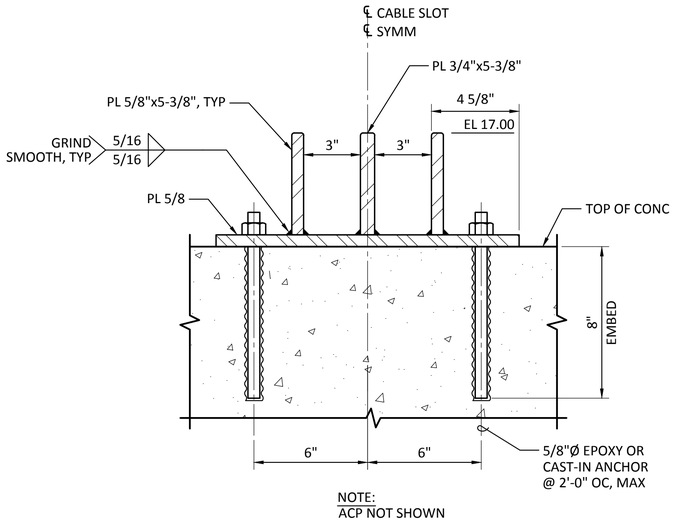
TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

6502

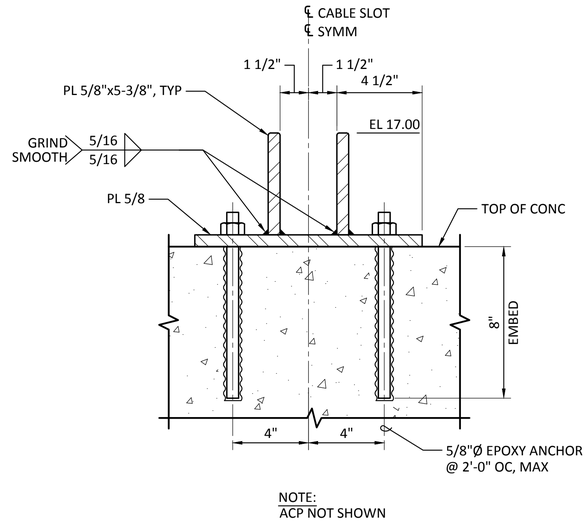
S17.0

SHEET 86 OF 129

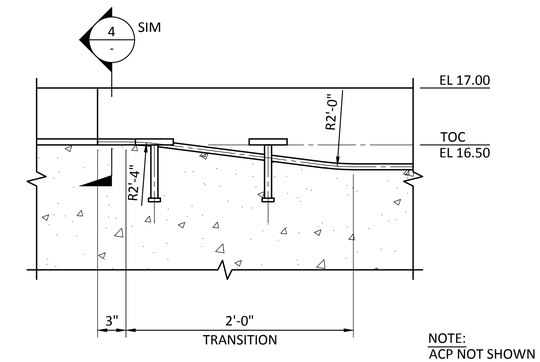
CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS



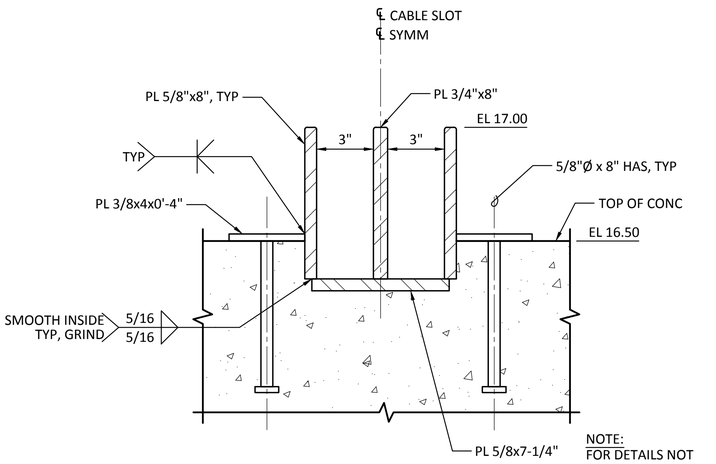
1 / S17.0 SECTION - DOUBLE CABLE SLOT
SCALE: 3" = 1'-0"



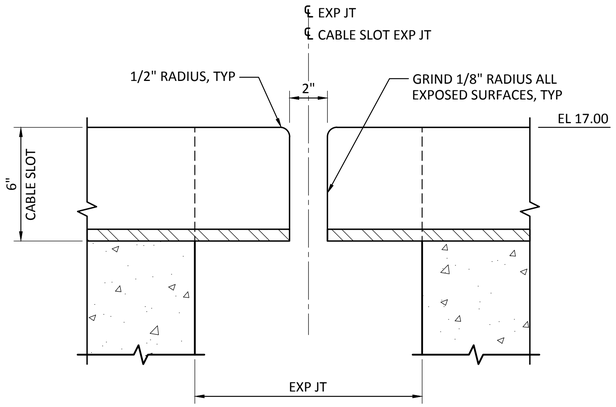
2 / S17.0 SECTION - SINGLE CABLE SLOT
SCALE: 3" = 1'-0"



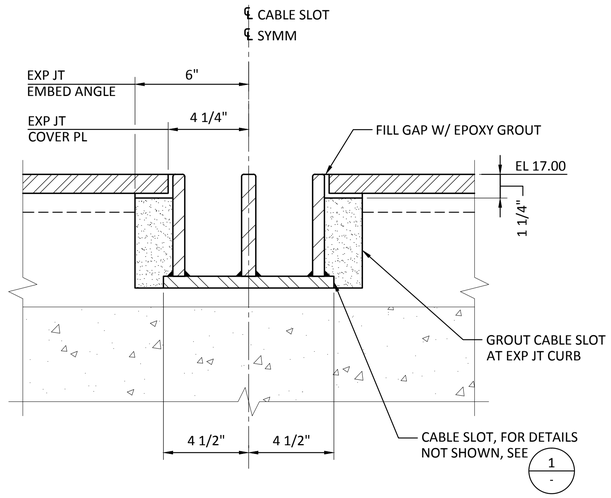
3 / S17.0 SECTION - CABLE SLOT TRANSITION
SCALE: 1 1/2"=1'-0"



4 / S17.0 SECTION
SCALE: 3" = 1'-0"



5 / S17.0 SECTION - CABLE SLOT EXP JOINT
SCALE: 3" = 1'-0"



6 / S17.0 SECTION - CABLE SLOT AT EXP JOINT
SCALE: 2" = 1'-0"

3" = 1'-0" scale 4 0 4 8 inches

BINDING EDGE

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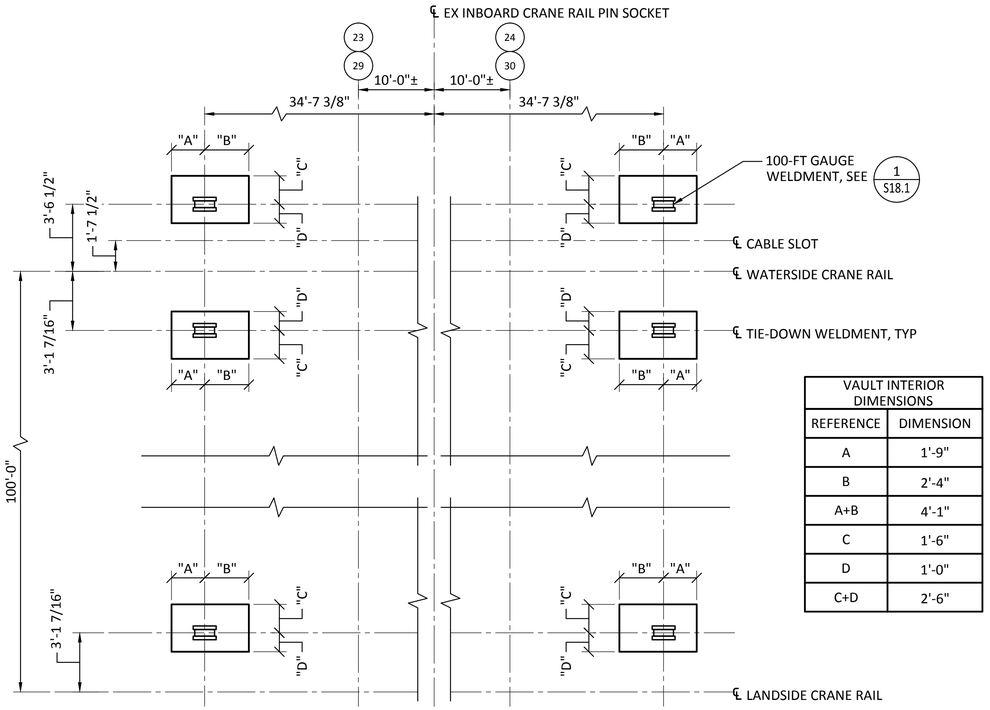
DRAWING SCALE: AS SHOWN

PIER 3 UPGRADE
CABLE SLOT DETAILS

6502
S17.1
SHEET 87 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27

BINDING EDGE

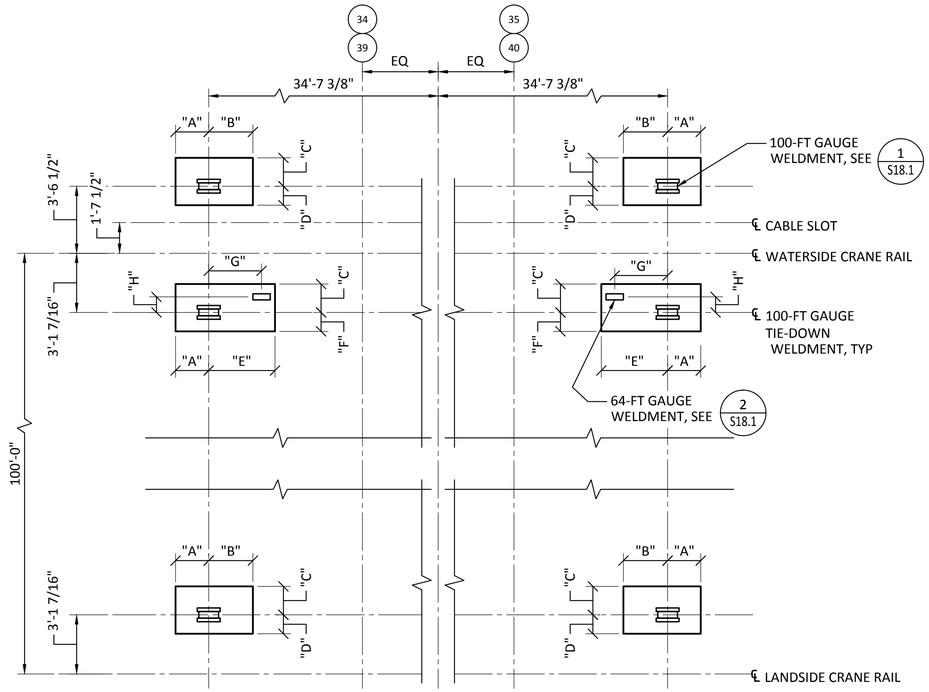


VAULT INTERIOR DIMENSIONS	
REFERENCE	DIMENSION
A	1'-9"
B	2'-4"
A+B	4'-1"
C	1'-6"
D	1'-0"
C+D	2'-6"

NOTE:
COVER PLATES AND FRAME
EMBEDMENTS NOT SHOWN.

1 S11.3 PLAN - 100-FT GAUGE CRANE TIE DOWN VAULTS

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

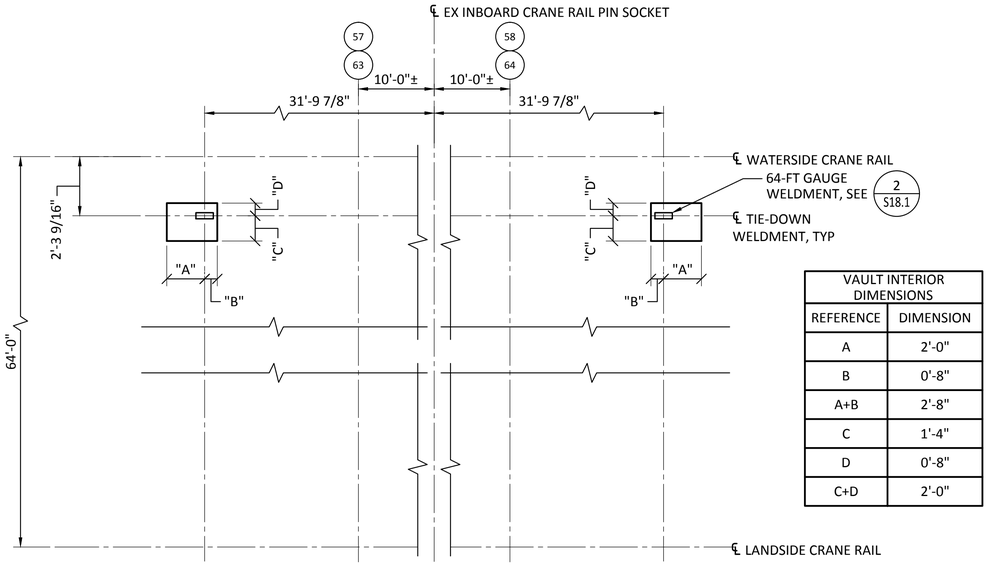


VAULT INTERIOR DIMENSIONS	
REFERENCE	DIMENSION
A	1'-9"
B	2'-4"
A+B	4'-1"
C	1'-6"
D	1'-0"
C+D	2'-6"
E	3'-6"
F	1'-0"
A+E	5'-3"
C+F	2'-6"
G	2'-9 1/2"
H	0'-9 7/8"

NOTE:
COVER PLATES AND FRAME
EMBEDMENTS NOT SHOWN.

2 S11.3 PLAN - COMBINED 64-FT AND 100-FT GAUGE CRANE TIE DOWN VAULTS

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



VAULT INTERIOR DIMENSIONS	
REFERENCE	DIMENSION
A	2'-0"
B	0'-8"
A+B	2'-8"
C	1'-4"
D	0'-8"
C+D	2'-0"

NOTE:
COVER PLATES AND FRAME
EMBEDMENTS NOT SHOWN.

3 S11.3 PLAN - 64-FT GAUGE CRANE TIE DOWN VAULTS

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

1/4" = 1'-0"

4 0 4 8
scale feet

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DRAWING SCALE:	AS SHOWN		

PIER 3 UPGRADE

CRANE TIE-DOWN PLANS

6502

S18.0

SHEET 88 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27

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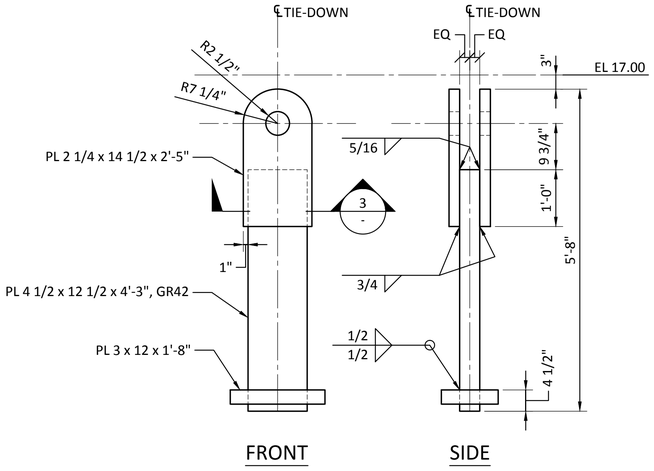
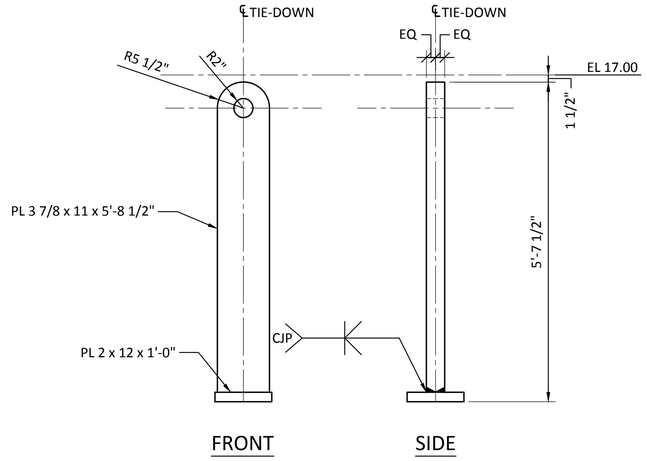
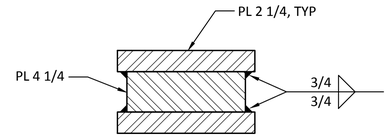


1 / S18.0 **DETAIL - 100-FT-GAUGE WELDMENT** (24 TOTAL)
SCALE: 3/4" = 1'-0"



2 / S18.0 **DETAIL - 64-FT-GAUGE WELDMENT** (8 TOTAL)
SCALE: 3/4" = 1'-0"



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

3/4" = 1'-0" 1 0 1 2 scale feet

1-1/2" = 1'-0" 8 0 8 16 scale inches

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PIER 3 UPGRADE

CRANE TIE-DOWN WELDMENTS

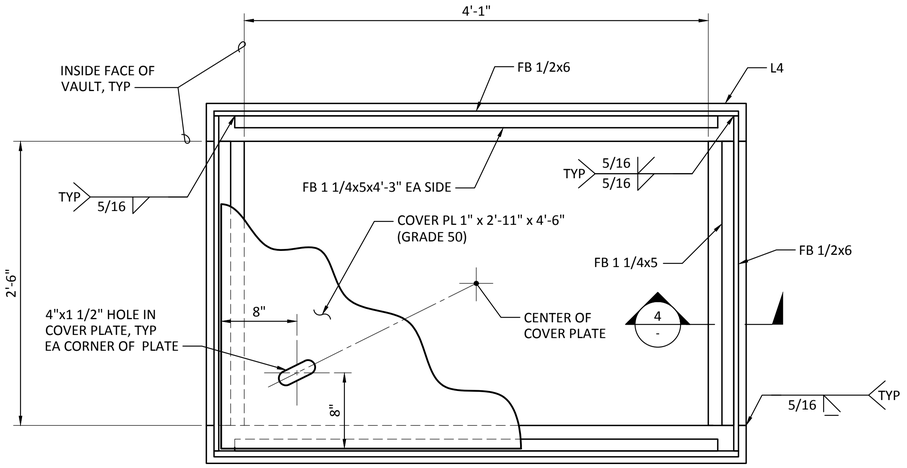
6502

S18.1

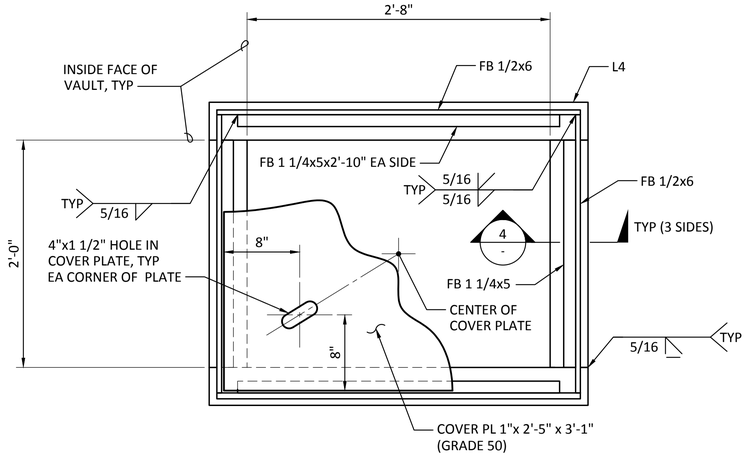
SHEET 89 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

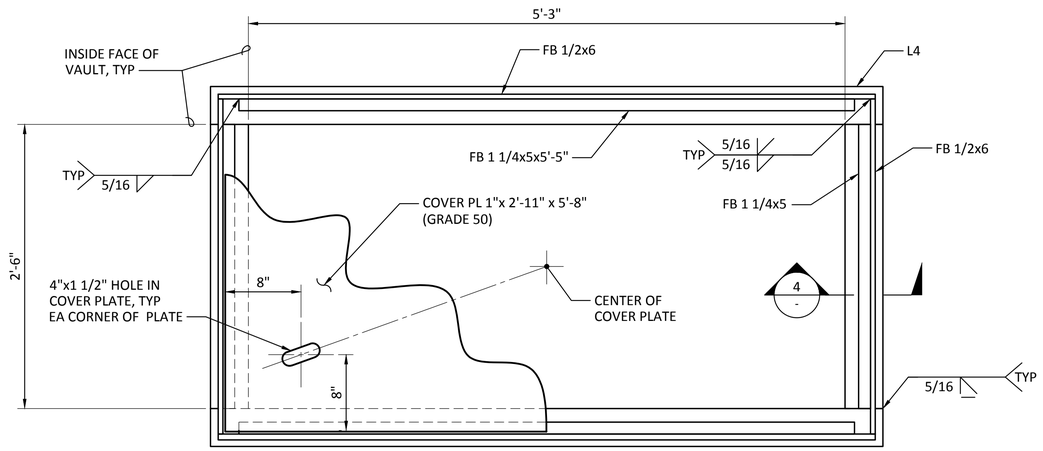
SECTION: 27



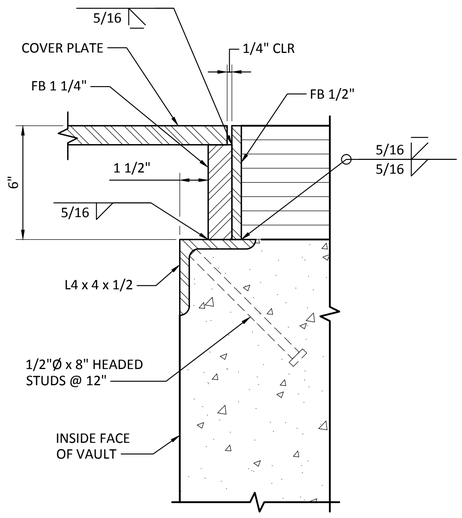
1 S11.3 — PLAN - TIE-DOWN VAULT FRAME - TYPE 1
SCALE: 1 1/2" = 1'-0"
(20 TOTAL)



2 S11.3 — PLAN - TIE-DOWN VAULT FRAME - TYPE 2
SCALE: 1 1/2" = 1'-0"
(4 TOTAL)



3 S11.3 — PLAN - TIE-DOWN VAULT FRAME - TYPE 3
SCALE: 1 1/2" = 1'-0"
(4 TOTAL)



4 - — SECTION - COVER PLATE SUPPORT
SCALE: 3" = 1'-0"

1-1/2" = 1'-0" — 8 0 8 16 — scale inches

3" = 1'-0" — 4 0 4 8 — scale inches

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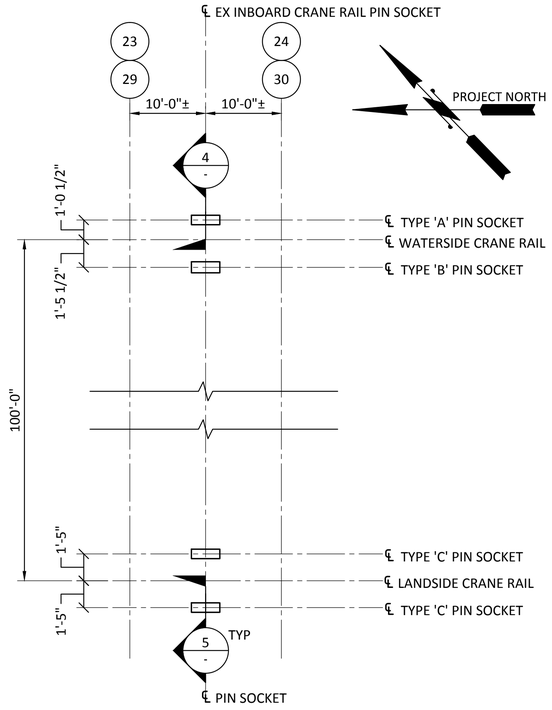
			JRG 7/17/13
			PRINTED BY: jason.mendenhall
			PORT ADDRESS: ONE SITCUM WAY
			TACOMA, WA 98421-2300

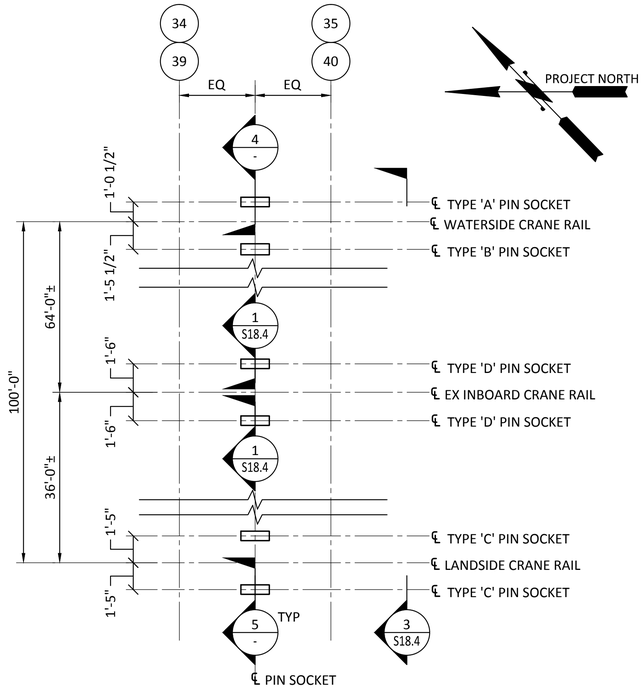
PIER 3 UPGRADE
CRANE TIE-DOWN VAULT LIDS

6502
S18.2
SHEET 90 OF 129

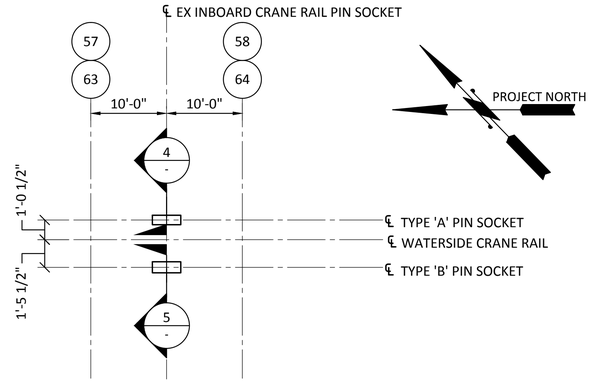
CONT/CONS: 069458	TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27
MASTER ID NO: 092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)	
PHASE: RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN	



1 - PLAN - 100-FT GAUGE CRANE PIN SOCKETS
SCALE: 1/4" = 1'-0"

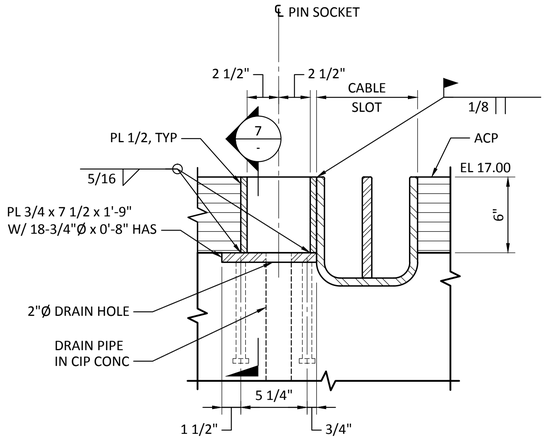


2 - PLAN - COMBINED 64-FT AND 100-FT GAUGE CRANE PIN SOCKETS
SCALE: 1/4" = 1'-0"

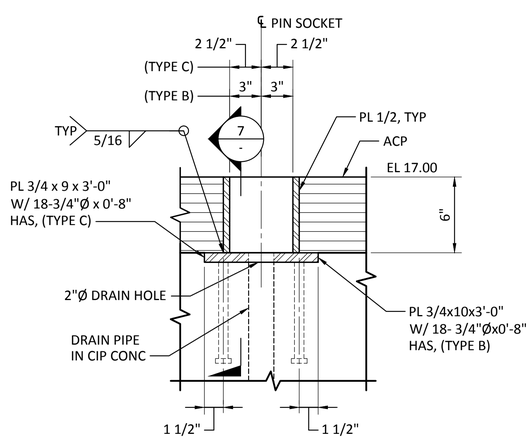


3 - PLAN - 64-FT GAUGE CRANE PIN SOCKETS
SCALE: 1/4" = 1'-0"

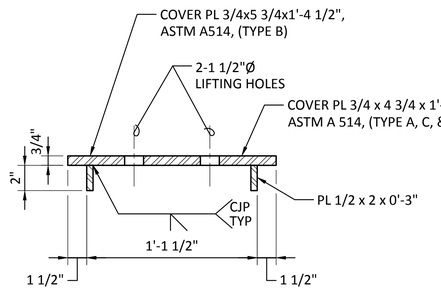
NOTES:
1. COVER PLATES AND EMBEDMENTS NOT SHOWN.
2. FOR COVER PLATES, SEE 6 / -
3. FOR PIN SOCKET DRAINS, SEE 3 / S18.4



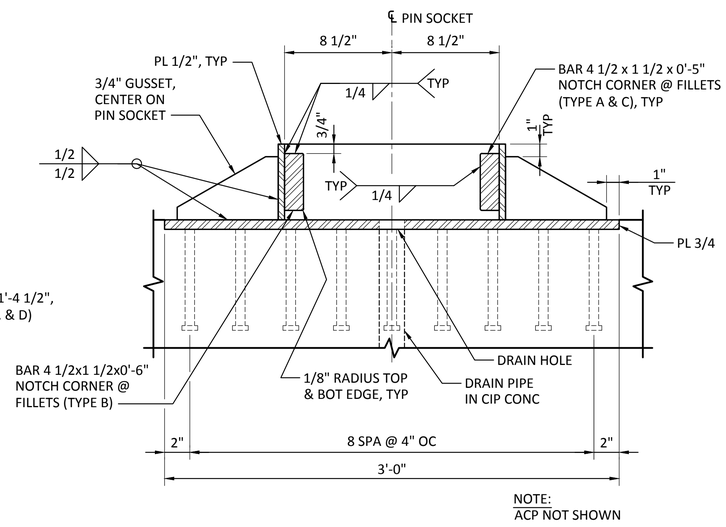
4 - SECTION - TYPE 'A' PIN SOCKET
SCALE: 2" = 1'-0"



5 - SECTION - TYPE 'B' & 'C' PIN SOCKET
SCALE: 2" = 1'-0"



6 - SECTION - COVER PLATE
SCALE: 2" = 1'-0"



NOTE:
ACP NOT SHOWN

7 - SECTION - TYPICAL PIN SOCKET
SCALE: 2" = 1'-0"

1/4" = 1'-0" scale 4 0 4 8 feet

2" = 1'-0" scale 4 0 4 8 inches

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JRG	7/17/13	DATE
PROJ. ENGR		

APPROVED:
DC 7/17/13
DIR OF ENG DATE

PIER 3 UPGRADE
CRANE PIN SOCKET PLAN AND DETAILS
SHEET 1

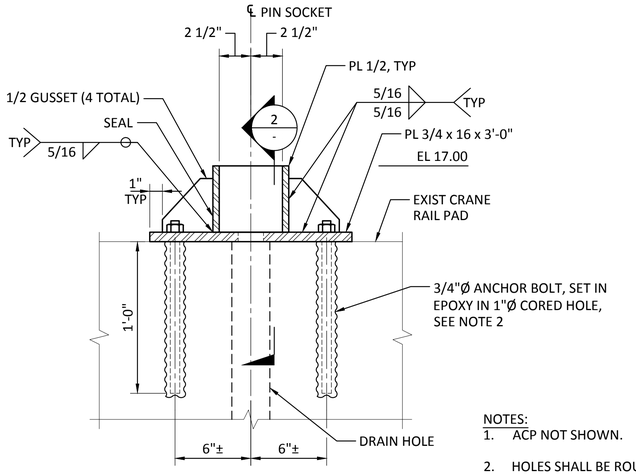
PRINTED BY:	jason.mendenhall	SECTION:	27
PORT ADDRESS:	ONE SITCUM WAY		
	TACOMA, WA 98421-2300	DRAWING SCALE:	AS SHOWN

CONT/CONS:	069458	TOWNSHIP:	21 N
MASTER ID NO:	092935	DAT-HRZ:	NAD 83-07
PHASE:	RECORD DRAWINGS	PARCEL:	27
		RANGE:	3 E
		VERT:	NOS TIDAL (MLLW = 0.0)

6502
S18.3
SHEET 91 OF 129

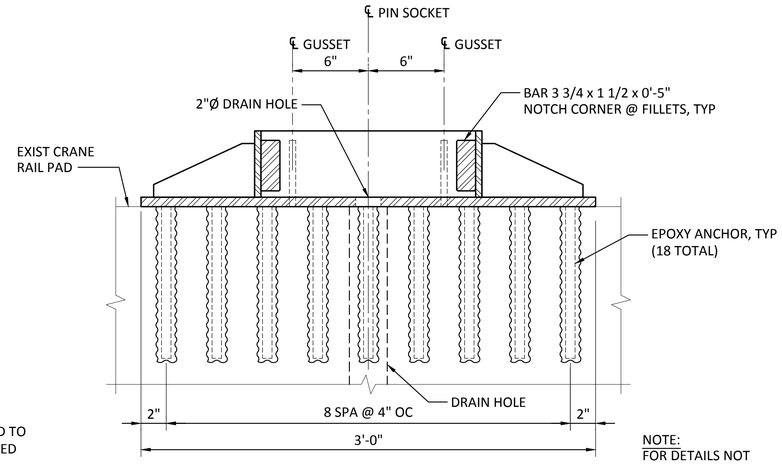
BINDING EDGE

Last Saved by: Jason.mendenhall on: Jan 27, 2015 4:17 PM File: Q:\Federal\Way\2012\FAWAT-12-091\CADD\Dwgs\03_S18-03.dwg



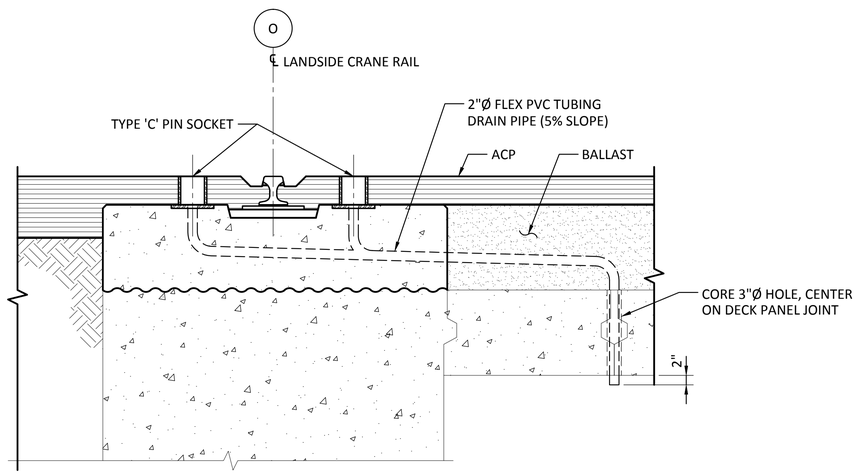
NOTES:
1. ACP NOT SHOWN.
2. HOLES SHALL BE ROUGHENED TO 1/8" AMPLITUDE AND CLEANED PRIOR TO INSTALLATION OF ANCHOR BOLTS AND EPOXY

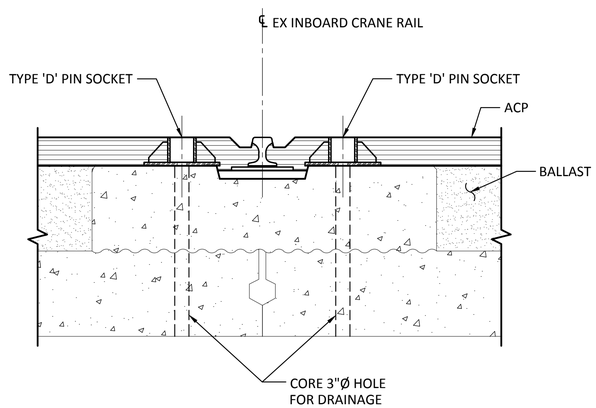
1 / S18.3 **SECTION - TYPE 'D' PIN SOCKET**
SCALE: 2" = 1'-0"

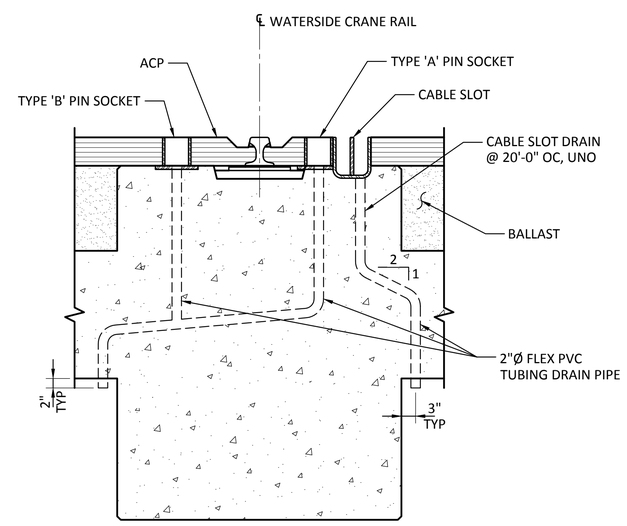


NOTE:
FOR DETAILS NOT SHOWN, SEE 7 / S18.3

2 / - **SECTION - TYPE 'D' PIN SOCKET**
SCALE: 2" = 1'-0"







NOTE:
CAULK GAP BETWEEN PIN SOCKET
DRAIN HOLE AND DRAIN PIPE OR HOLE

3 / S18.3 **SECTION - PIN SOCKET DRAINS**
SCALE: 3/4" = 1'-0"

3/4" = 1'-0" 1 0 1 2 scale feet

2" = 1'-0" 4 0 4 8 scale inches

BINDING EDGE

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TACOMA, WA 98421-2300		

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PIER 3 UPGRADE

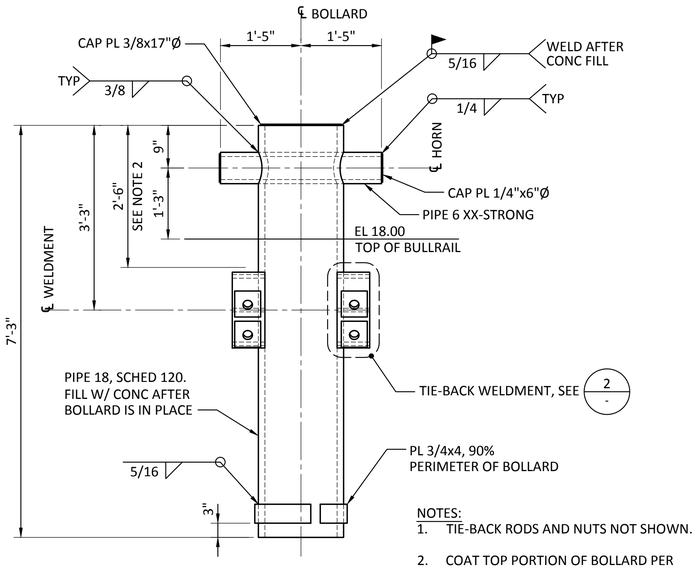
CRANE PIN SOCKET PLAN AND DETAILS
SHEET 2

CONT/CONS:	069458	TOWNSHIP:	21 N	RANGE:	3 E
MASTER ID NO:	092935	DAT-HRZ:	NAD 83-07	VERT:	NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL:	27	DRAWING SCALE:	AS SHOWN

SECTION:	27

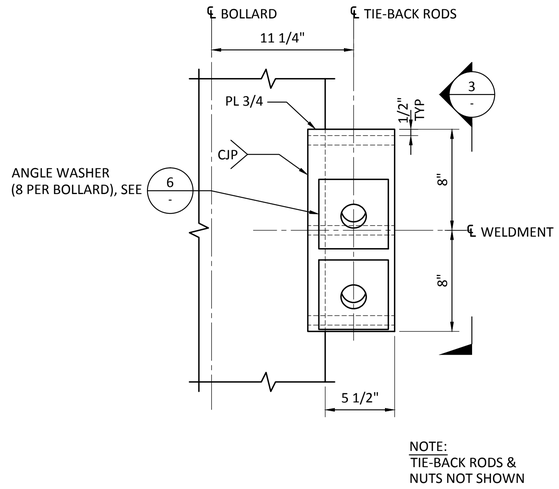
6502
S18.4
SHEET 92 OF 129

BINDING EDGE



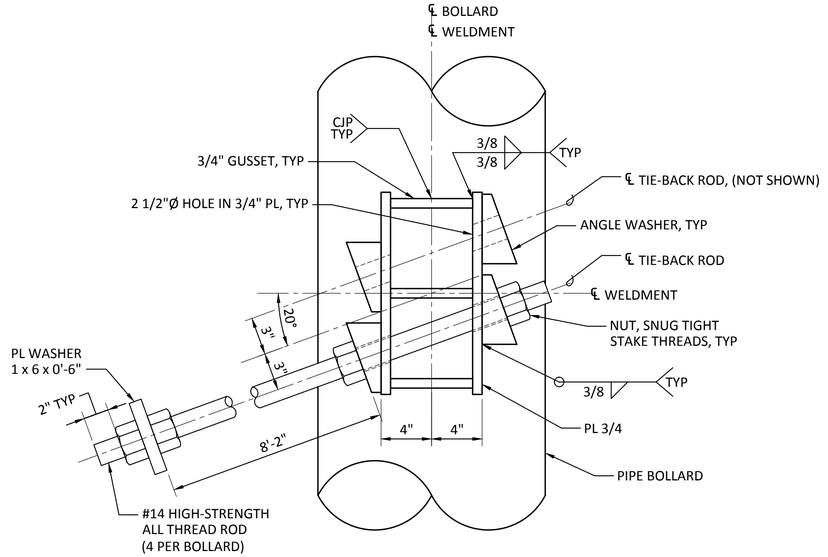
NOTES:
1. TIE-BACK RODS AND NUTS NOT SHOWN.
2. COAT TOP PORTION OF BOLLARD PER SPECIFICATIONS.

1 - DETAIL - 100-TON BOLLARD
SCALE: 3/4" = 1'-0"

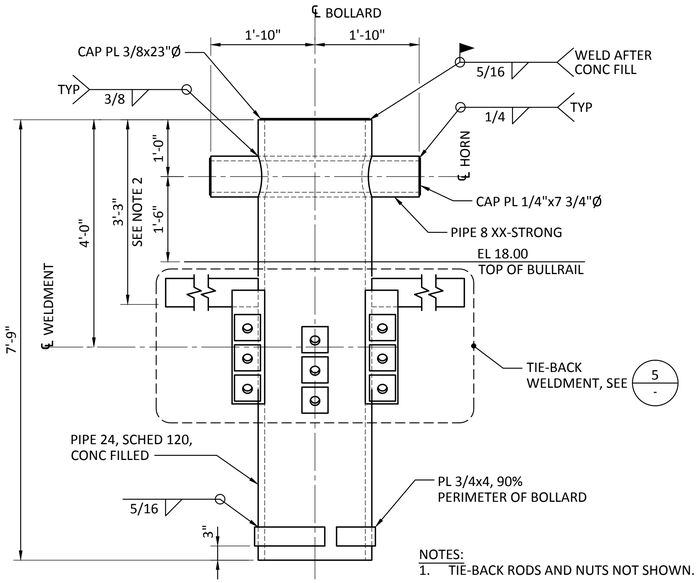


NOTE:
TIE-BACK RODS &
NUTS NOT SHOWN

2 - DETAIL - 100-TON WELDMENT
SCALE: 2" = 1'-0"

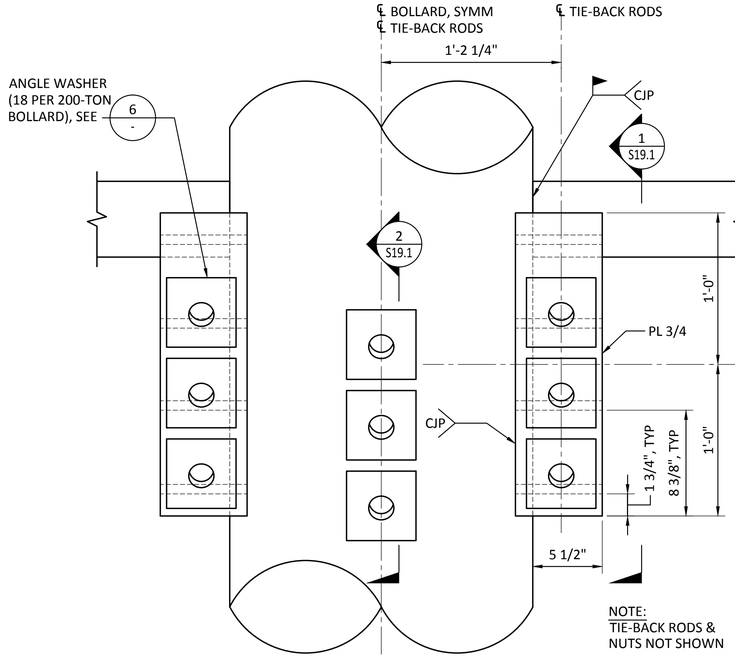


3 - DETAIL - 100-TON WELDMENT
SCALE: 2" = 1'-0"



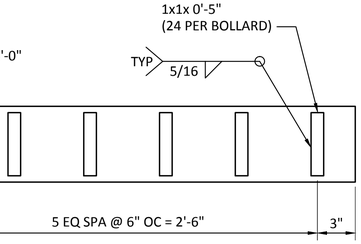
NOTES:
1. TIE-BACK RODS AND NUTS NOT SHOWN.
2. COAT TOP PORTION OF BOLLARD PER SPECIFICATIONS.

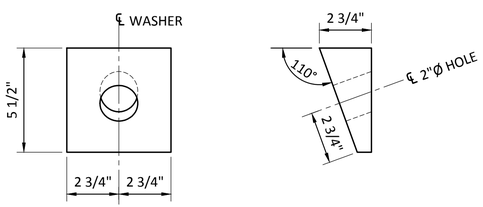
4 - DETAIL - 200 TON BOLLARD (BENTS 64 & 66)
SCALE: 3/4" = 1'-0"



NOTE:
TIE-BACK RODS &
NUTS NOT SHOWN

5 - DETAIL - 200-TON WELDMENT
SCALE: 2" = 1'-0"





6 - DETAIL - ANGLE WASHER
SCALE: 3" = 1'-0"

2" = 1'-0" 4 0 4 8 scale inches
3" = 1'-0" 4 0 4 8 scale inches
3/4" = 1'-0" 1 0 1 2 scale feet

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DRAWING SCALE:	AS SHOWN		

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DC 7/17/13
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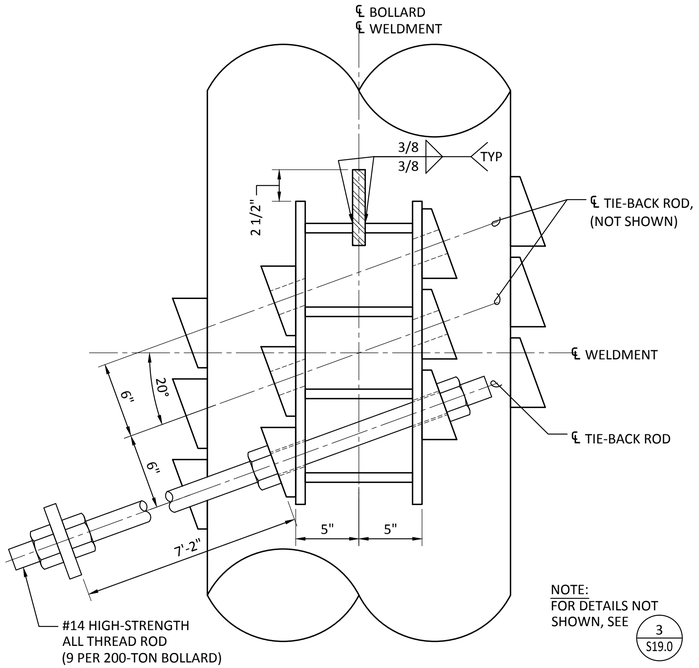
PIER 3 UPGRADE
BOLLARD DETAILS
SHEET 1

6502
S19.0
SHEET 93 OF 129

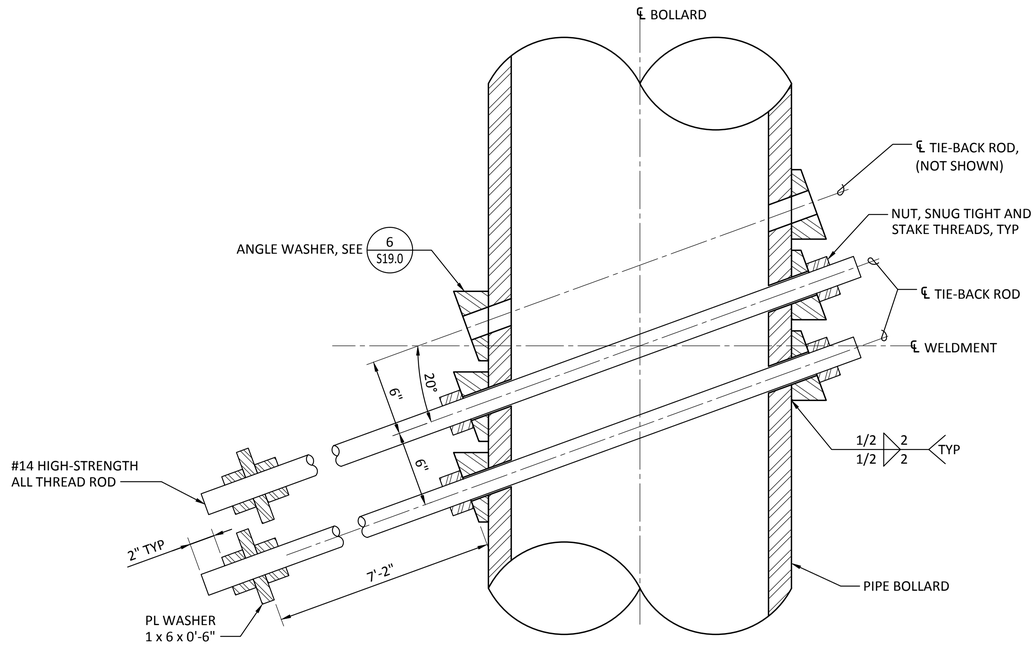
CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	SECTION: 27

TACOMA, WA 98421-2300



1 S19.0 DETAIL - 200-TON WELDMENT

SCALE: 2" = 1'-0"



2 S19.0 DETAIL - 200-TON TIE-BACK RODS

SCALE: 2" = 1'-0"

2" = 1'-0"

4 0 4 8
scale inches

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PIER 3 UPGRADE

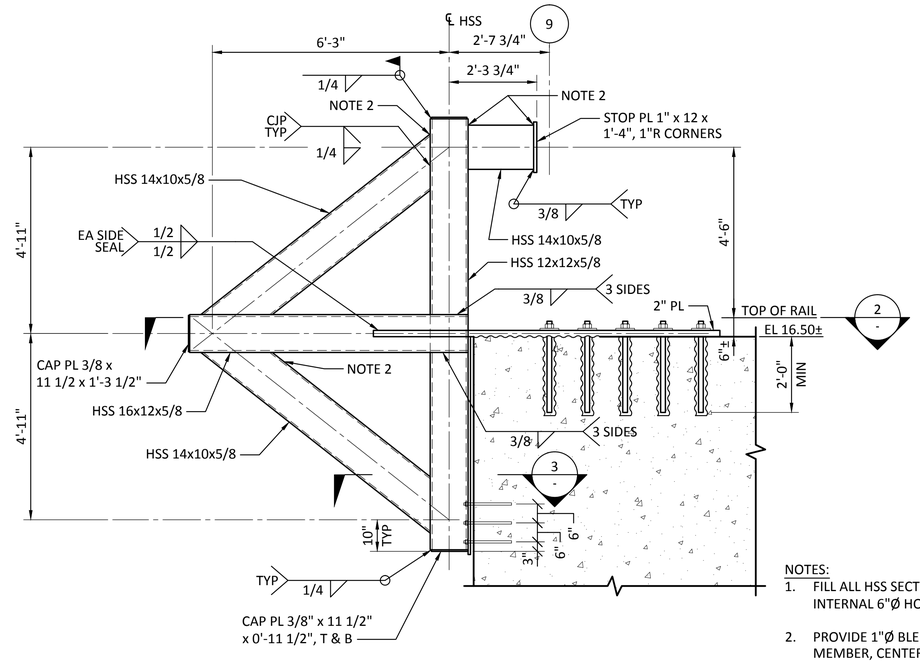
BOLLARD DETAILS
SHEET 2

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

6502
S19.1
SHEET 94 OF 129

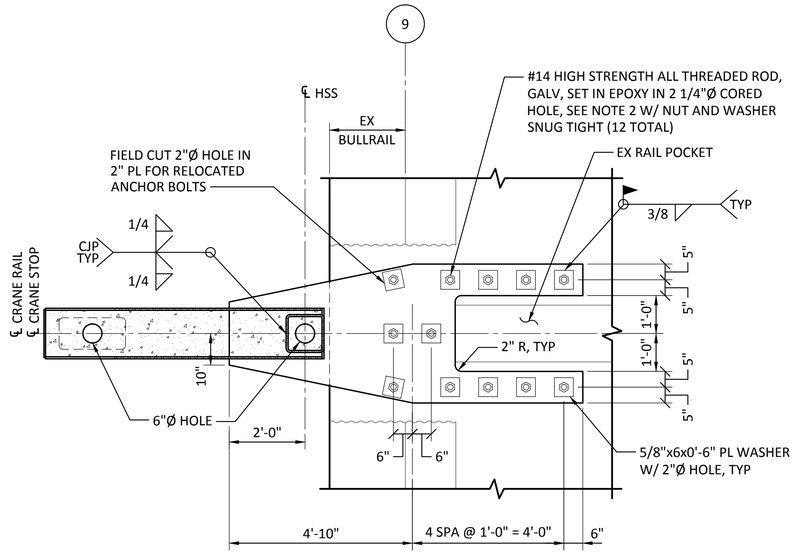
CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS

BINDING EDGE



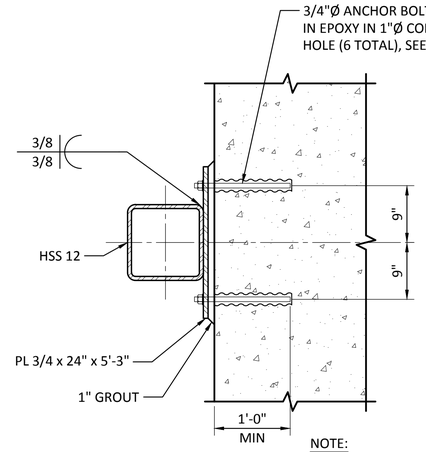
NOTES:
1. FILL ALL HSS SECTIONS W/ CONC. PROVIDE INTERNAL 6"Ø HOLES BETWEEN HSS MEMBERS
2. PROVIDE 1"Ø BLEED HOLE IN TOP OF HSS MEMBER, CENTER ON CRANE BEAM CL
3. ACP NOT SHOWN.

1 / S3.4 ELEVATION - NORTHWEST CRANE STOP
SCALE: 1/2" = 1'-0"



NOTES:
1. ACP NOT SHOWN.
2. HOLES SHALL BE ROUGHENED TO 1/8" AMPLITUDE AND CLEANED PRIOR TO INSTALLATION OF THREADED ROD.

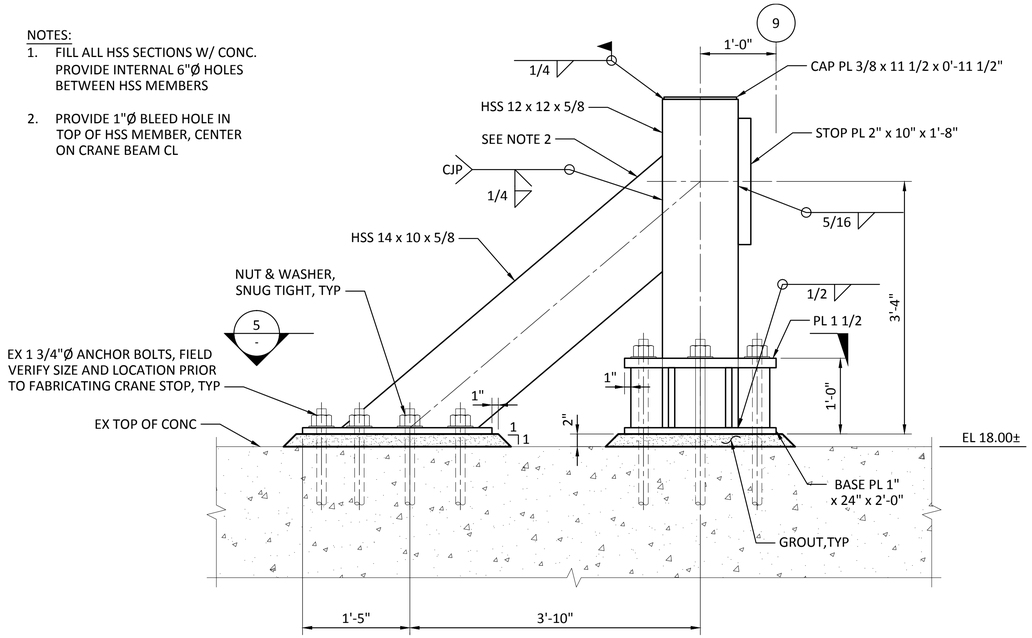
2 / - PLAN - NORTHWEST CRANE STOP
SCALE: 1/2" = 1'-0"



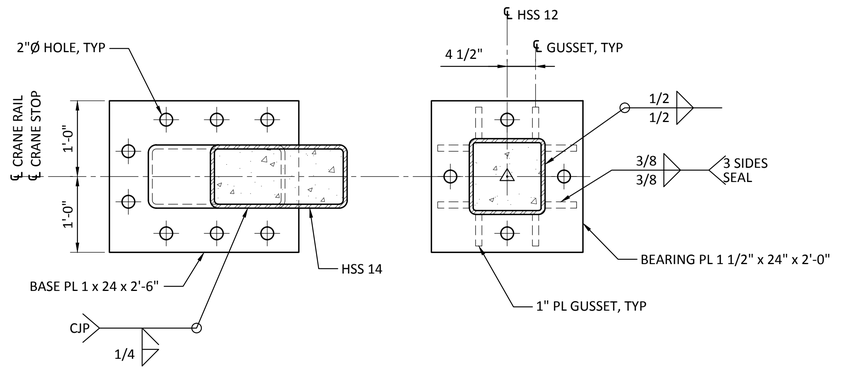
NOTE:
HOLES SHALL BE ROUGHENED TO 1/8" AMPLITUDE AND CLEANED PRIOR TO INSTALLATION OF ANCHOR BOLTS AND EPOXY

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

NOTES:
1. FILL ALL HSS SECTIONS W/ CONC. PROVIDE INTERNAL 6"Ø HOLES BETWEEN HSS MEMBERS
2. PROVIDE 1"Ø BLEED HOLE IN TOP OF HSS MEMBER, CENTER ON CRANE BEAM CL



4 / S3.4 ELEVATION - NORTHEAST CRANE STOP
SCALE: 1" = 1'-0"



5 / - DETAIL - BASE PLATE
SCALE: 1" = 1'-0"

1/2" = 1'-0" — 2 0 2 4 — scale feet

1" = 1'-0" — 1 0 1 2 — scale feet

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PIER 3 UPGRADE

CRANE STOP DETAILS
SHEET 1

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN

PRINTED BY:	SECTION:	27	
PORT ADDRESS:			

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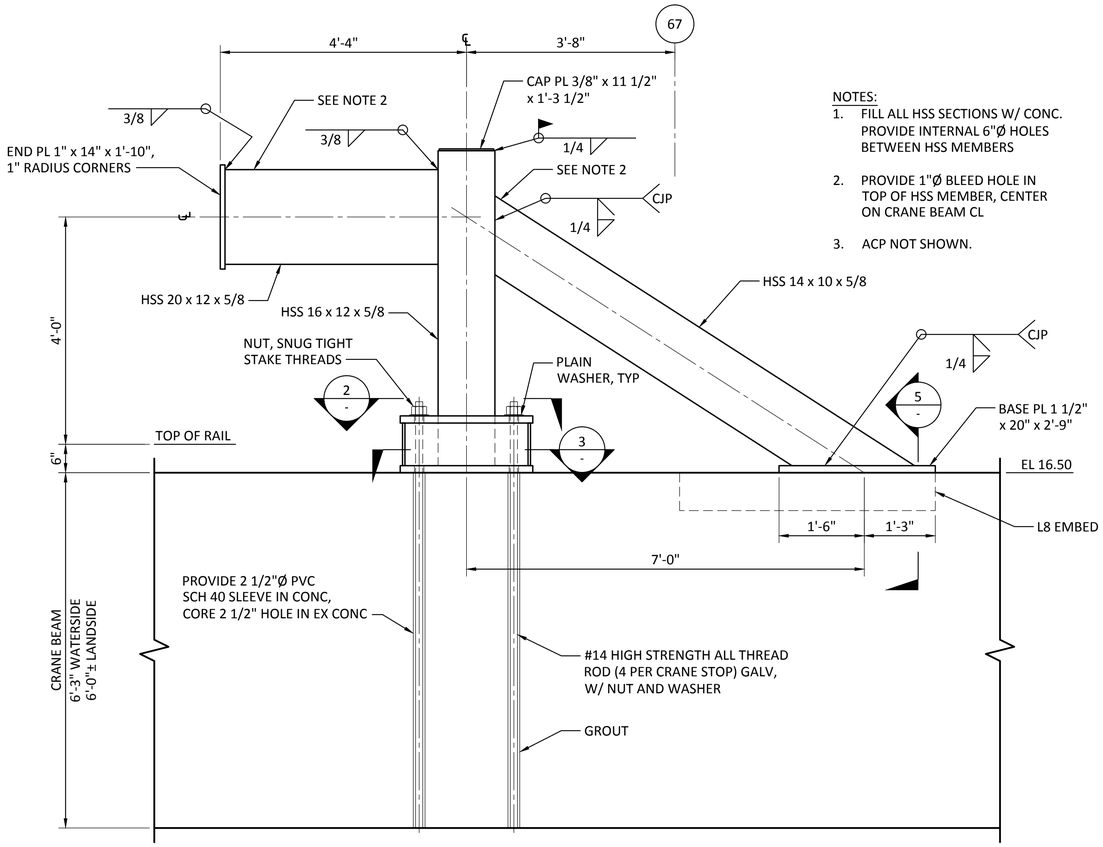
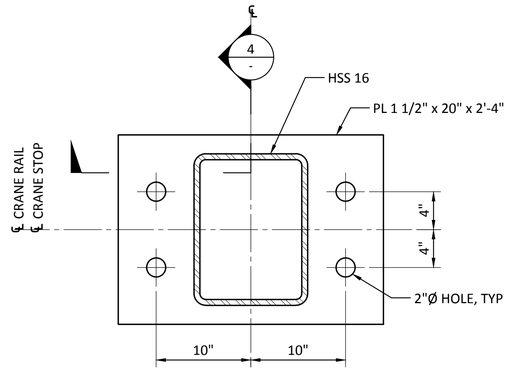
S19.2
SHEET 95 OF 129

Last Saved by: Jason.mendenhall on: Jan 27, 2015 4:18 PM File: Q:\FederalWay\2012\FAWA1-12-091\CADD\Dwgs\03_S19-02.dwg

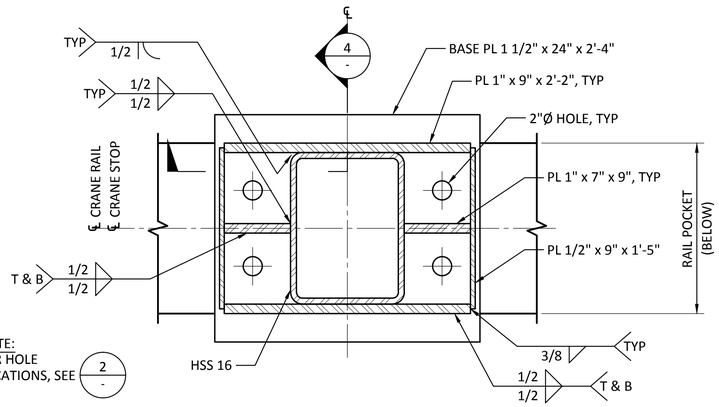


NOTES:
1. FILL ALL HSS SECTIONS W/ CONC. PROVIDE INTERNAL 6"Ø HOLES BETWEEN HSS MEMBERS
2. PROVIDE 1"Ø BLEED HOLE IN TOP OF HSS MEMBER, CENTER ON CRANE BEAM CL
3. ACP NOT SHOWN.

1 / S3.7 ELEVATION - SOUTH CRANE STOP
SCALE: 3/4" = 1'-0"

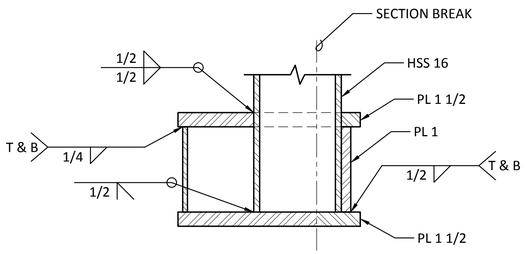


2 / - SECTION
SCALE: 1 1/2" = 1'-0"

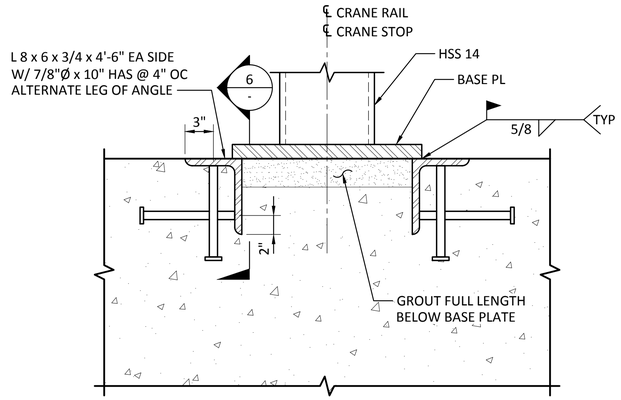


NOTE:
FOR HOLE LOCATIONS, SEE 2 / -

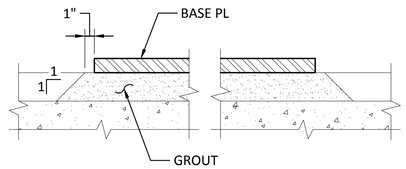
3 / - SECTION
SCALE: 1 1/2" = 1'-0"



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



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



6 / - DETAIL - GROUT EDGE
SCALE: 1 1/2" = 1'-0"

3/4" = 1'-0" scale 1 0 1 2 feet

1-1/2" = 1'-0" scale 8 0 8 16 inches

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DIR OF ENG			
PROJ. ENGR			DATE

PIER 3 UPGRADE

CRANE STOP DETAILS
SHEET 2

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)		
PARCEL: 27	DRAWING SCALE: AS SHOWN		

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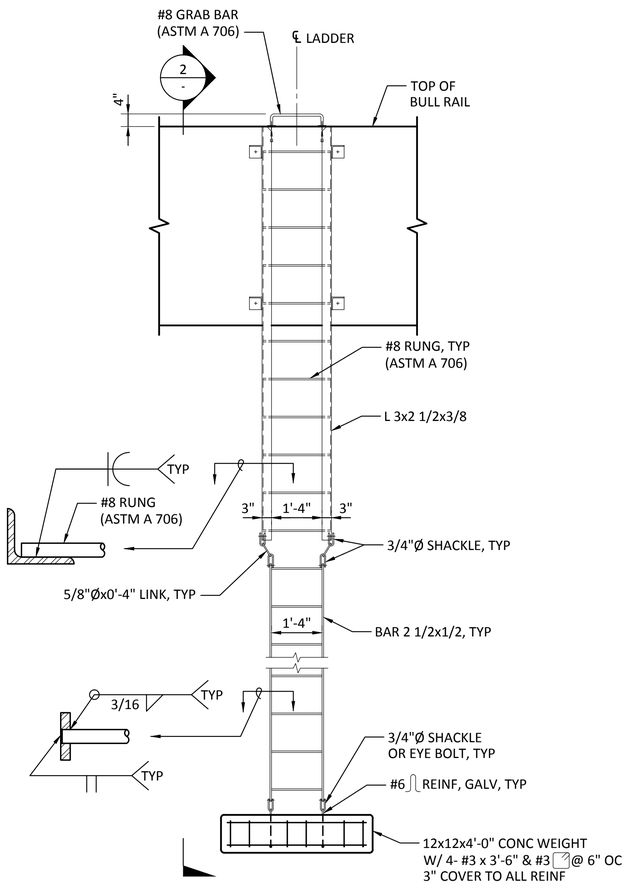
PORT ADDRESS:	ONE SITCUM WAY
	TACOMA, WA 98421-2300

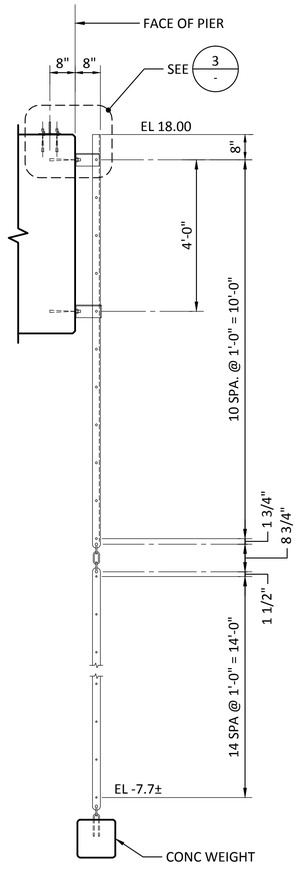
6502
S19.3
SHEET 96 OF 129

CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS

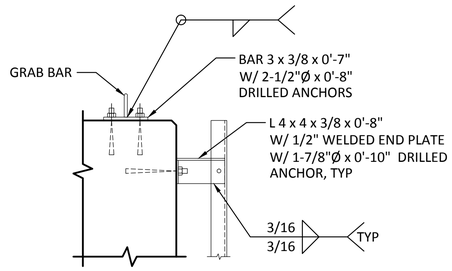
BINDING EDGE



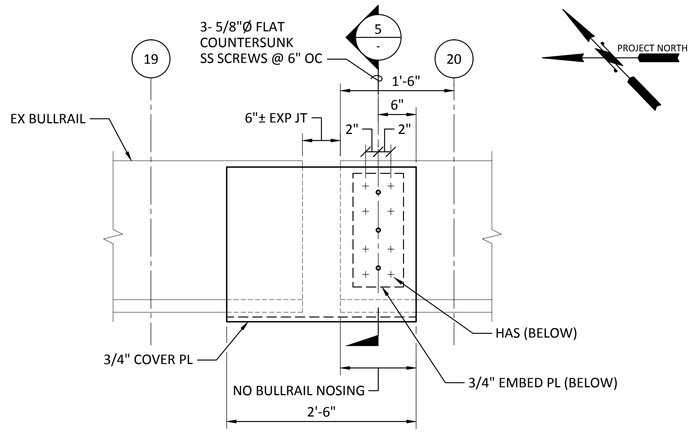
1 - ELEVATION - LADDER
SCALE: 1/2" = 1'-0"



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

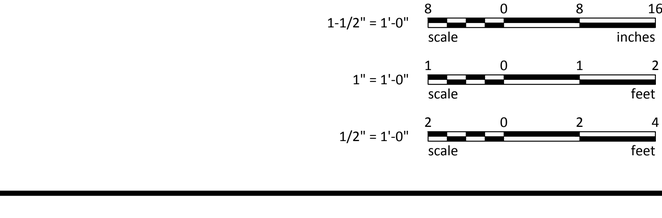


3 - DETAIL
SCALE: 1" = 1'-0"



4 S11.0 S11.2 - PLAN - BULLRAIL COVER PLATE
SCALE: 1" = 1'-0"

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



6 S3.4 - ELEVATION - RAIL POCKET STOP (EA SIDE OF EXP JT)
SCALE: 1 1/2" = 1'-0"

1-1/2" = 1'-0" — 8 0 8 16 — scale inches
1" = 1'-0" — 1 0 1 2 — scale feet
1/2" = 1'-0" — 2 0 2 4 — scale feet

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JRG	7/17/13	PROJ. ENGR	DATE
DC	7/17/13	DIR OF ENG	DATE

APPROVED:

PIER 3 UPGRADE

LADDER DETAILS

TOWNSHIP: 21 N	RANGE: 3 E	SECTION: 27	
DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)	PORT ADDRESS: ONE SITCUM WAY	
PARCEL: 27	DRAWING SCALE: AS SHOWN	TACOMA, WA 98421-2300	

6502
S19.4
SHEET 97 OF 129

CONT/CONS:	069458
MASTER ID NO:	092935
PHASE:	RECORD DRAWINGS

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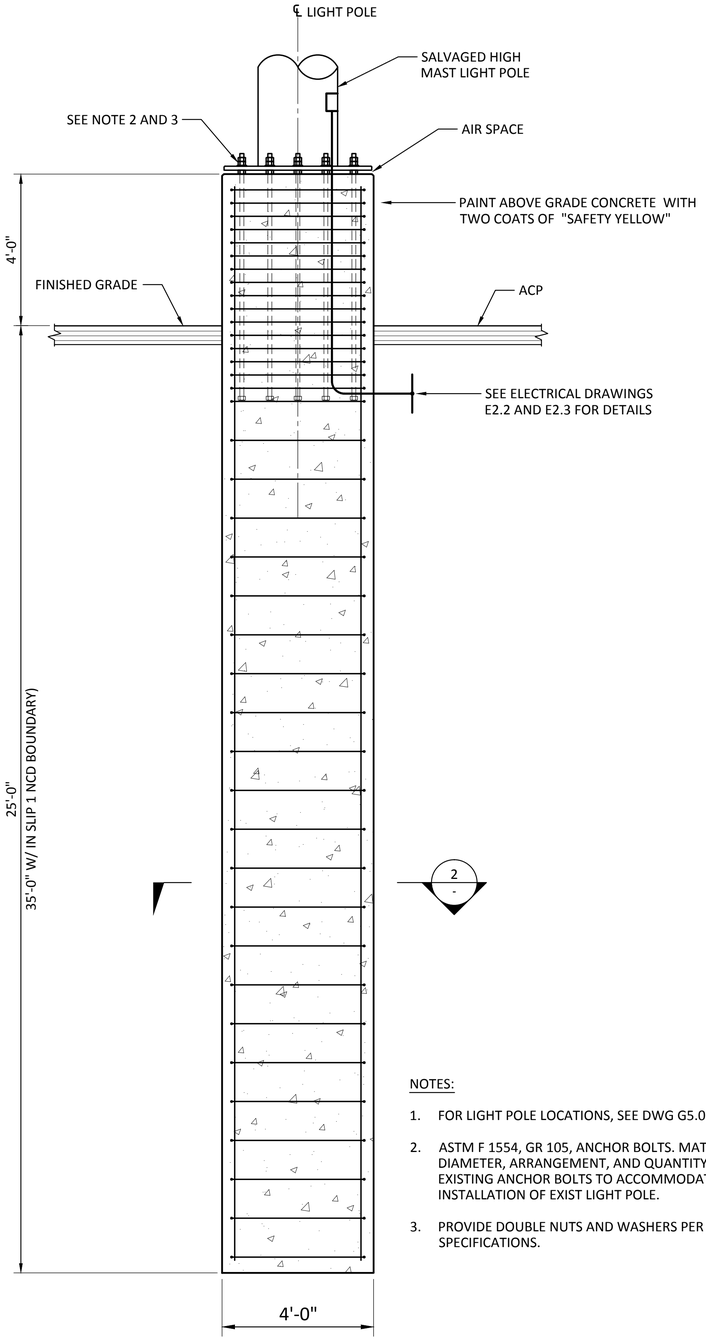
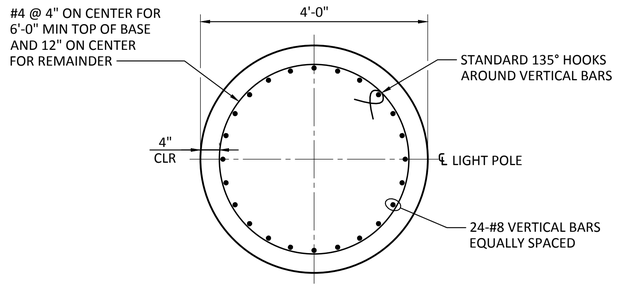


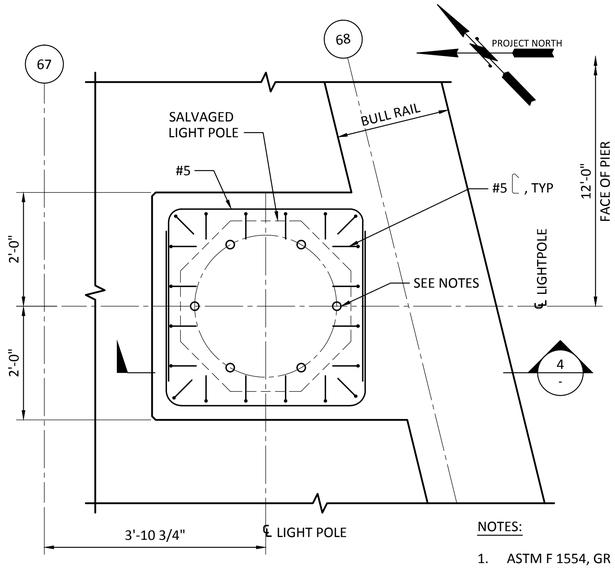
1 / S1.2 LIGHT POLE CONCRETE BASE
SCALE: 1/2" = 1'-0"

NOTES:

1. FOR LIGHT POLE LOCATIONS, SEE DWG G5.0.
2. ASTM F 1554, GR 105, ANCHOR BOLTS. MATCH DIAMETER, ARRANGEMENT, AND QUANTITY OF EXISTING ANCHOR BOLTS TO ACCOMMODATE INSTALLATION OF EXIST LIGHT POLE.
3. PROVIDE DOUBLE NUTS AND WASHERS PER SPECIFICATIONS.



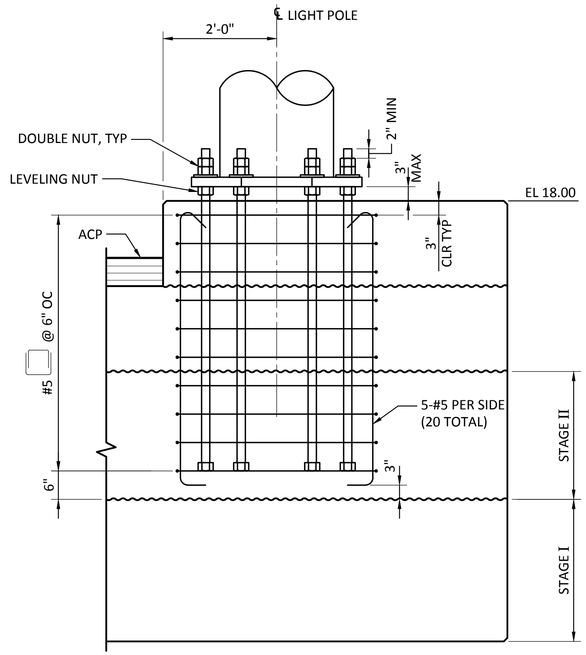
2 / - SECTION
SCALE: 3/4" = 1'-0"



3 / S3.7 PLAN - HIGH MAST LIGHT
SCALE: 3/4" = 1'-0"

NOTES:

1. ASTM F 1554, GR 105, ANCHOR BOLTS MATCH DIAMETER, ARRANGEMENT, AND QUANTITY OF EXISTING ANCHOR BOLTS TO ACCOMMODATE INSTALLATION OF EXIST LIGHT POLE.
2. PROVIDE DOUBLE NUTS AND WASHERS PER SPECIFICATIONS.



4 / - SECTION - PIER LIGHT
SCALE: 3/4" = 1'-0"

NOTE:
FOR TYP REINF, SEE DWG S9.3

3/4" = 1'-0" scale 1 0 1 2 feet

1/2" = 1'-0" scale 2 0 2 4 feet

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PIER 3 UPGRADE

LIGHT POLE FOUNDATION DETAILS

6502
S19.5
SHEET 98 OF 129

CONT/CONS:	069458	TOWNSHIP: 21 N	RANGE: 3 E
MASTER ID NO:	092935	DAT-HRZ: NAD 83-07	VERT: NOS TIDAL (MLLW = 0.0)
PHASE:	RECORD DRAWINGS	PARCEL: 27	DRAWING SCALE: AS SHOWN
		SECTION: 27	

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