PORT OF TACOMA

TERMINAL 3 / TERMINAL 4
SHORE POWER
PROJECT NO. 201100.01
CONTRACT NO. 071357

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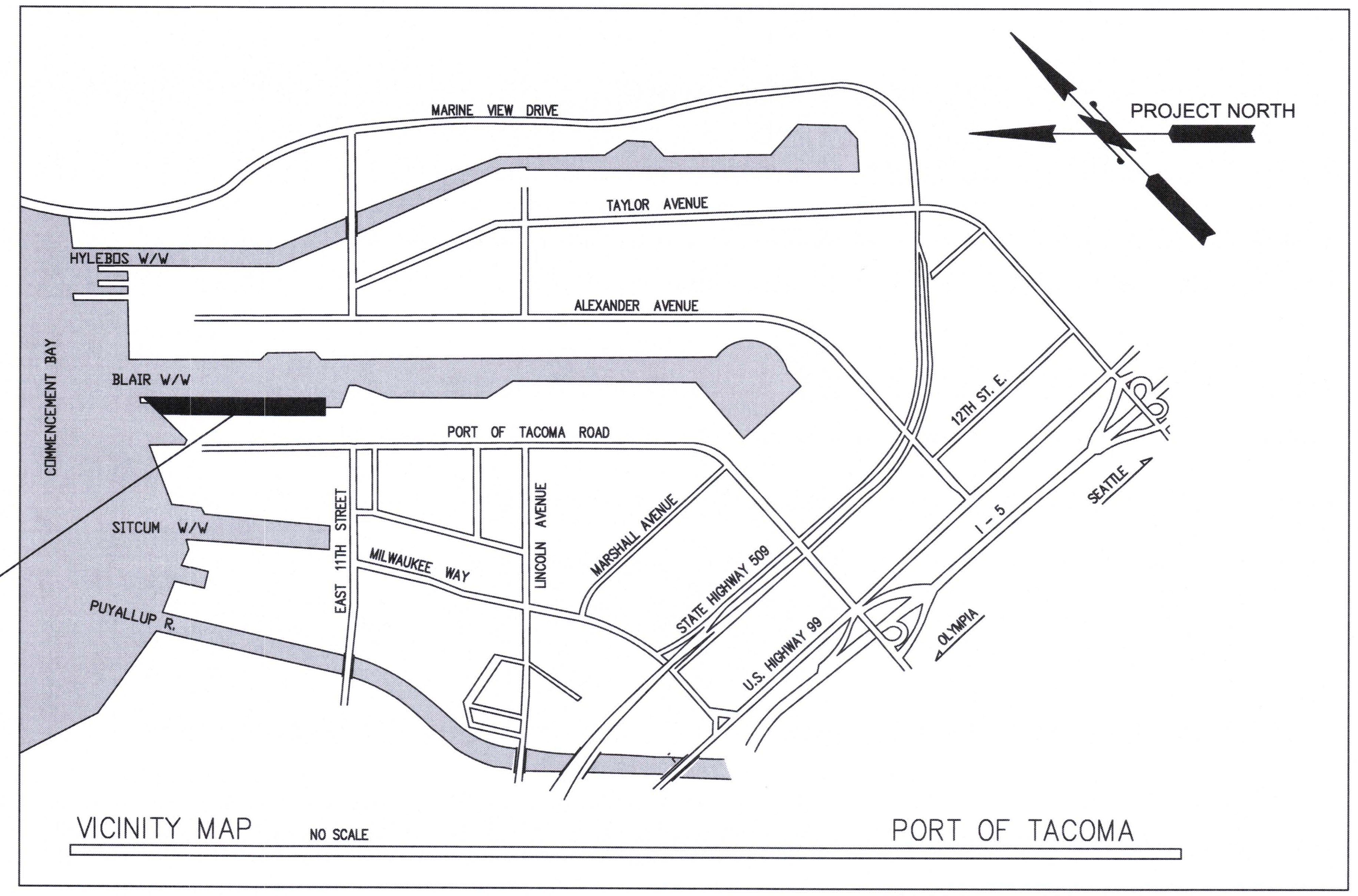

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APPROVED:
SJS 02/02/2022
CHECKED BY DATE
RAD 02/02/2022
PROJ. ENGR DATE
DIRECTOR ENG. DATE
PRINTED BY: dyu Feb 02, 2022
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98421

TERMINAL 3 / TERMINAL 4
SHORE POWER
TITLE SHEET

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

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PHASE: BID SET

BINDING EDGE

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LOAD CRITERIA:

1. ALL UNDERGROUND AND AT GRADE STRUCTURES INCLUDING MANHOLES, CATCH BASINS, HAND HOLES, VAULTS, CLEANOUTS AND OTHER STRUCTURES, INCLUDING ALL RINGS, COVERS, HATCHES, GRATES AND OTHER FEATURES WHICH MAY APPLY, SHALL BE CONTRACTOR DESIGNED. ALL VAULTS SHALL BE CONTRACTOR DESIGNED TO WITHSTAND LOADING CRITERIA SHOWN ON THIS SHEET UNLESS NOTED OTHERWISE. THE CATCH BASIN LOCATED WITHIN THE PROTECTIVE BOLLARDS SHALL BE CONTRACTOR DESIGNED TO WITHSTAND LOADING CRITERIA FOR THE AASHTO HS25 TRUCK.

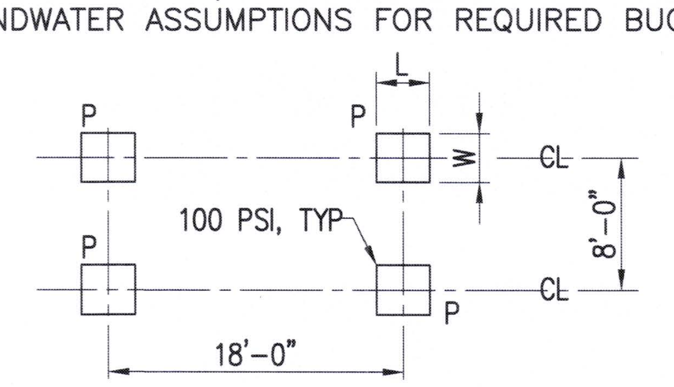
2. LID CASTING AND FRAME SHALL BE 200 KIP PROOF TEST LOAD RATED PER AASHTO M306 UNLESS NOTED OTHERWISE.

3. CONTRACTOR SHALL SUBMIT STAMPED AND SIGNED SHOP DRAWINGS AND CALCULATIONS COMPLETED BY A WASHINGTON STATE REGISTERED STRUCTURAL ENGINEER FOR APPROVAL BY THE ENGINEER PRIOR TO FABRICATION OF ALL UNDERGROUND UTILITY STRUCTURES. SHOP DRAWINGS AND CALCULATIONS PROVIDED BY THE CONTRACTOR SHALL ADDRESS BUOYANCY AND SOIL BEARING PRESSURE.

4. STANDARD PLAN REFERENCES AND MANUFACTURER MODEL NUMBERS FOR UNDERGROUND UTILITY STRUCTURES ARE INTENDED TO PROVIDE INTERIOR GEOMETRY AND INTENT ONLY. THE CONTRACTOR SHALL INCREASE REQUIRED REINFORCING AND WALL THICKNESS, AND CHANGE ACCESS GRATE AND COVER AS REQUIRED TO ACCOMMODATE LOADING CRITERIA REQUIREMENTS.

5. LIVE LOADS SHALL BE APPLIED TO ALL STRUCTURES TO ACT SIMULTANEOUSLY AND IN COMBINATION WITH DEAD LOADS, SOIL LOADS AND HYDROSTATIC PRESSURE.

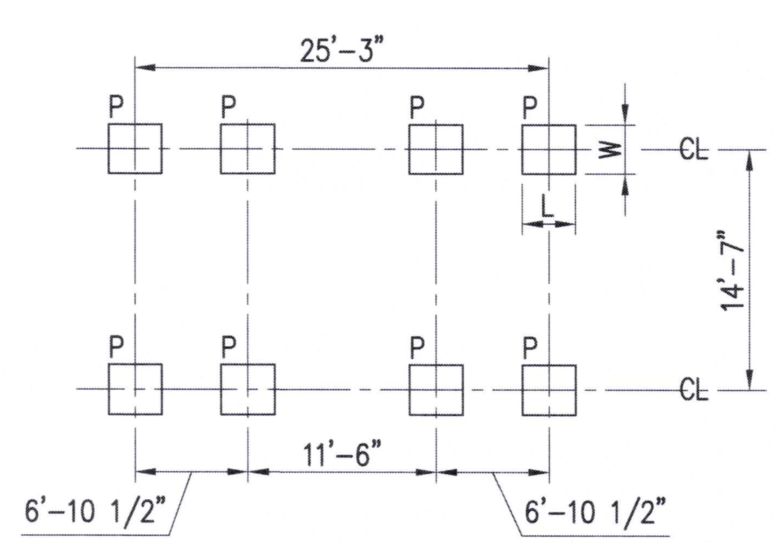
6. ALL STRUCTURES SHALL BE DESIGNED WITH A BOTTOM BEARING SLAB DESIGNED FOR A BOTTOM BEARING CAPACITY OF 2,500 PSF. SEE THE GEOTECHNICAL REPORT PREPARED BY GEOENGINEERS DATED OCTOBER 26, 2021 FOR ADDITIONAL INFORMATION. SEE GENERAL NOTE 12 FOR GROUNDWATER ASSUMPTIONS FOR REQUIRED BUOYANCY CALCULATIONS.



P = 125 k (INCLUDES IMPACT)

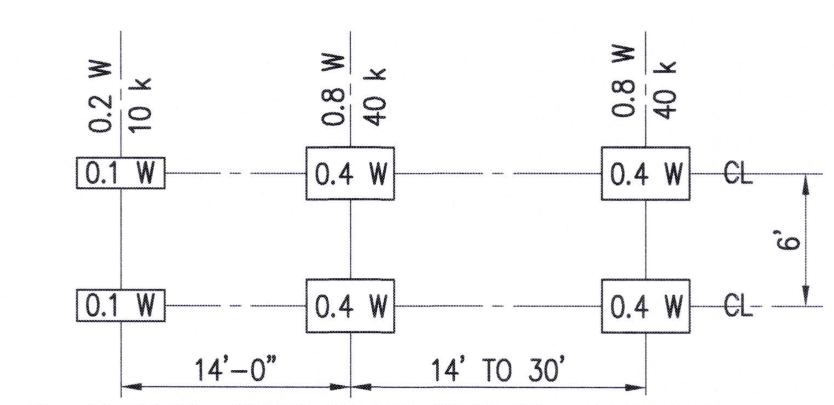
$L = W = \sqrt{\frac{P}{100}}$ (P IN LBS, L OR W IN INCHES)

CRANE OUTRIGGERS



P = 30.4 k (INCLUDES 10% IMPACT)
W = 10.24"
L = 20.24"
q = 145 psi

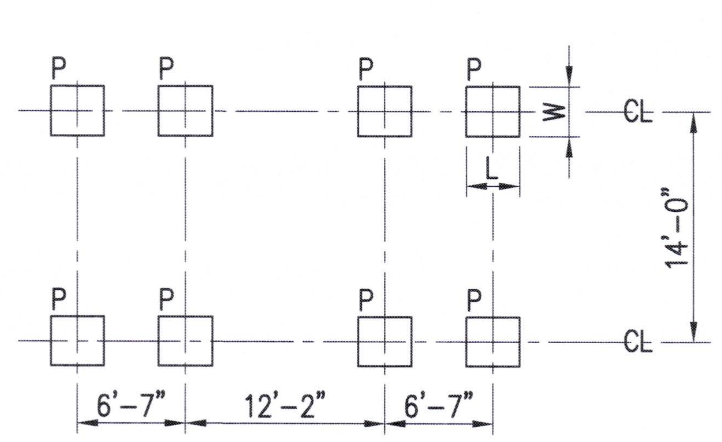
KALMAR CSC 340 STRADDLE CARRIER



W =COMBINED WEIGHT ON THE FIRST TWO AXLES WHICH IS THE SAME AS FOR THE CORRESPONDING H TRUCK.

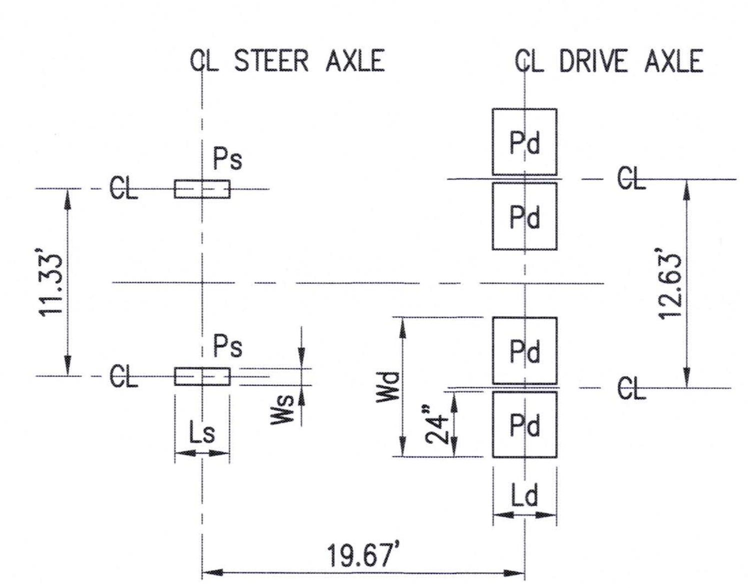
HS25 TRUCK = (1.25 x HS20)

NOTE: ADD 10% IMPACT TO ABOVE LOADS



P = 35 k (INCLUDES 10% IMPACT)
W = 18"
L = 19.5"
q = 100 psi

NOELL SC544 STRADDLE CARRIER



Ps = 16 k (INCLUDES 10% IMPACT)
Ws = 20"
Ls = 6.1"
qs = 131 psi

Pd = 62 k (INCLUDES 10% IMPACT)
Wd = 51"
Ld = 23"
qd = 112 psi

TAYLOR "BIG RED" THDC-976 CONTAINER HANDLER

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS AND THE CURRENT VERSION OF THE CITY OF TACOMA STANDARDS.

2. CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS, AND EXISTING CONDITIONS IN THE FIELD BEFORE PROCEEDING. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR FIELD CHANGES PRIOR TO INSTALLATION OR FABRICATION. IN CASE OF DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE PLANS, THE CONTRACTOR SHALL OBTAIN DIRECTION FROM THE ENGINEER BEFORE PROCEEDING. DIMENSIONS AND CALLOUTS NOTED AS PLUS OR MINUS (±) OR (REF) INDICATE UNVERIFIED DIMENSIONS AND ARE APPROXIMATE. NOTIFY THE ENGINEER IMMEDIATELY OF CONFLICTS OR EXCESSIVE VARIATIONS FROM AS INDICATED. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS – DO NOT SCALE THE PLANS.

3. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREIN HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID OTHER UTILITIES NOT SHOWN HEREIN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. THE CONTRACTOR SHALL POTHOLE OR OTHERWISE CONFIRM EXISTING CONDITIONS, SPECIFICALLY PIPE SIZES PRIOR TO CONSTRUCTION, AND BRING ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND NEW WORK TO THE ENGINEER'S ATTENTION.

4. THE CONTRACTOR SHALL LOCATE ALL UTILITIES WITHIN THE PROJECT SITE PRIOR TO WORK. CONTRACTOR SHALL CONTACT 811 "CALL BEFORE YOU DIG" AND AN INDEPENDENT LOCATING SERVICE TO LOCATE ALL UTILITIES AT LEAST 48 HOURS PRIOR TO WORK.

5. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS OF EXISTING STRUCTURES AND OTHER FEATURES THAT MAY IMPACT THE WORK. CONTRACTOR SHALL BRING ANY CONFLICTS TO THE ENGINEER'S ATTENTION PRIOR TO BEGINNING AFFECTED WORK.

6. ANY DAMAGE TO EXISTING UTILITIES, OTHER FACILITIES OR EQUIPMENT DUE TO THE CONTRACTOR'S NEGLIGENCE, EXCEPT FOR ITEMS DESIGNATED FOR DEMOLITION, SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. THIS INCLUDES ITEMS OUTSIDE THE WORK AREA AND WITHIN THE PORT OF TACOMA PROPERTY THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES DURING EXECUTION OF THIS CONTRACT.

7. A COPY OF THE PLANS SHALL BE ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS. THROUGHOUT THE PROGRESS OF THE WORK OF THIS CONTRACT, CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF ALL CHANGES IN THE CONTRACT DOCUMENTS. UPON THE COMPLETION OF THIS CONTRACT. CONTRACTOR SHALL PROVIDE ONE COMPLETE SET OF RECORD DOCUMENTS TO THE PORT OF TACOMA.

8. ALL ACTIVATION AND DEACTIVATION OF UTILITIES SHALL BE COORDINATED WITH THE ENGINEER IN ADVANCE. PROVIDE A MINIMUM OF 3 DAYS ADVANCE WRITTEN NOTICE TO THE ENGINEER.

9. SHORING AND EXCAVATION SHALL BE IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

10. THE CONTRACTOR SHALL KEEP ALL STREETS AND VEHICULAR TRAFFIC AREAS USED FOR THIS WORK CLEAN AT ALL TIMES, SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

11. MAINTAIN UTILITY SERVICE TO EXISTING BUILDINGS, BULLRAIL UTILITIES AND FIRE HYDRANTS DURING CONSTRUCTION UNLESS NOTED OTHERWISE OR APPROVED BY THE ENGINEER. INSTALL NEW UTILITY LINES TO POINTS OF CONNECTION TO EXISTING UTILITY LINE PRIOR TO DEMOLITION OF THE EXISTING LINES, UNLESS NOTED OTHERWISE.

12. THE GROUNDWATER TABLE RANGES BETWEEN APPROXIMATE ELEVATION +6' TO +11' MLLW, BUT VARIES DEPENDING ON LOCATION, SEASON AND TIDES. DEWATERING MAY BE REQUIRED FOR INSTALLATION OF UTILITY LINES AND STRUCTURES. SEE SPECIFICATIONS FOR REQUIREMENTS. GROUNDWATER ELEVATIONS FOR THE DESIGN OF ALL PERMANENT UNDERGROUND STRUCTURES SHALL BE AT ELEVATION +12 FEET. SEE SPECIFICATIONS FOR REQUIREMENTS.

13. THE FEMA FLOOD ELEVATION FOR THIS SITE IS 12' (NAVD88). THIS ELEVATION IS BELOW ANY SURVEYED ELEVATION ON PIER 3 OR PER 4.

TESC NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH, MAINTAIN, AND MODIFY AS NEEDED THE APPROVED CONSTRUCTION SWPPP IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

2. THE IMPLEMENTATION OF THESE TESC PLANS AND CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED.

3. THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS ANTICIPATED FOR SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DOES NOT LEAVE THE SITE.

4. ON-SITE EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF WORK AND SHALL BE MAINTAINED DURING AND AFTER EXCAVATION AND GRADING OPERATIONS TO THE APPROVAL OF THE ENGINEER.

5. IF CONSTRUCTION OCCURS DURING DRY WEATHER PERIODS, DUST FROM CONSTRUCTION SHALL BE MINIMIZED THROUGH USE OF BEST MANAGEMENT PRACTICES (BMPS) OUTLINED IN THE SWPPP AND THE CITY'S STORMWATER MANUAL.

6. THE TESC FACILITIES SHOWN ON THIS PLAN SHALL BE CONSTRUCTED IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM, COMMENCEMENT BAY, OR VIOLATE APPLICABLE WATER QUALITY STANDARDS.

7. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTION. DAILY INSPECTION REPORTS MUST BE REVIEWED BY THE CONTRACTOR, SIGNED AND MADE AVAILABLE TO THE PORT, CITY AND ANY OTHER ENVIRONMENTAL AUTHORITIES AT ALL TIMES. A COPY OF ALL INSPECTION RECORDS SHALL BE KEPT ON SITE.

8. ALL FACILITIES SHALL BE MAINTAINED ON SITE BY SWEEPING TO PREVENT DEBRIS, DUST AND MUD FROM ACCUMULATING ON THE PAVED SURFACES, BANK SLOPE, OR IN THE WATERWAY.

9. NON-COMPLIANCE WITH THE EROSION CONTROL AND WATER QUALITY REQUIREMENTS MAY RESULT IN A TEMPORARY STOP-WORK ORDER AT THE CONTRACTORS EXPENSE, UNTIL SAID EROSION CONTROL MEASURES ARE FUNCTIONAL.

10. THE CONTRACTOR SHALL REMOVE MATERIAL DROPPED, WASHED OR TRACKED FROM VEHICLES OUTSIDE OF THE DESIGNATED PROJECT WORK AREA LIMITS OR INTO THE EXISTING STORM DRAINAGE SYSTEM. DEBRIS SHALL NOT BE WASHED INTO THE STORM DRAINAGE SYSTEM, OR INTO THE WATERWAY.

11. ALL CATCH BASIN INLET PROTECTION INSTALLED SHALL BE REPLACED AND LEFT IN PLACE AT THE END OF CONSTRUCTION, AFTER FINAL INSPECTION AND ACCEPTANCE.

12. REMOVE SEDIMENT FROM THE STORM SYSTEM ONCE THE SITE IS PERMANENTLY STABILIZED. THE CLEANING AND REMOVAL OPERATION SHALL NOT FLUSH SEDIMENT DOWNSTREAM.

13. COORDINATE TESC PROVISION THAT ARE OUTSIDE OF THE PROJECT WORK AREA WITH THE ENGINEER.

14. IN ADDITION TO INLET PROTECTION SHOWN ON PLAN, CONTRACTOR SHALL INSTALL AND MAINTAIN INLET PROTECTION ON ALL EXISTING CATCH BASINS THAT ARE DISCOVERED IN FIELD WITHIN THE PROJECT WORK AREA LIMITS.

15. TESC MEASURES SHALL BE RELOCATED AS NECESSARY DURING CONSTRUCTION SEQUENCE TO ENSURE THAT RUNOFF FROM DISTURBED UPLAND AREAS IS NOT ALLOWED TO DIRECTLY DISCHARGE TO OPEN WATER.

16. DISCHARGES SHALL NOT CAUSE OR CONTRIBUTE TO A PROHIBITED DISCHARGE, OR A KNOWN OR LIKELY VIOLATION OF WATER QUALITY STANDARDS IN THE RECEIVING WATERS.

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SYMBOLS

PROJECT NORTH

NORTH ARROW

NUMBER OF DETAIL, SECTION OR ELEVATION NUMBERED CONSECUTIVELY ON EACH SHEET

X
X–X

DRAWING NUMBER WHERE DETAIL, SECTION, OR ELEVATION IS DRAWN, "–" IF SAME DRAWING

SECTION

ELEVATION

X DETAIL/SECTION
SCALE: NTS

PLAN
SCALE: NTS

0 40 80 120
SCALE IN FEET

SURVEY CONTROL POINT

POT CONTROL POINT

N XXXX
E XXXX
COORDINATES

67 INDICATES PIER 3 OR PIER 4 BENT NUMBERS

71 INDICATES PIER 4 BENT NUMBERS

SYMBOLS - CONTINUED

SD	EXISTING STORM DRAIN
SS	EXISTING SANITARY SEWER
BFO	EXISTING BELOW GROUND FIBER OPTIC
DW	EXISTING DOMESTIC WATER
FW	EXISTING FIRE WATER
BP	EXISTING BURIED POWER
T	EXISTING TELEPHONE
	EXISTING EDGE OF PAVEMENT
W	EXISTING WATER
	EXISTING TYPE B SHIP BUMPER
	EXISTING TYPE A SHIP BUMPER
	EXISTING CRANE STOP BAR
	EXISTING STOW PIN
	EXISTING SHIP TIE DOWN
E	EXISTING ELECTRICAL VAULT
T	EXISTING TELEPHONE VAULT
	EXISTING LIGHT STANDARD
	EXISTING PEDESTRIAN WALK SYMBOL
D	EXISTING STORM DRAIN MANHOLE
S	EXISTING SANITARY SEWER CLEANOUT
	EXISTING BOLLARD
	EXISTING CATCH BASIN
W	EXISTING WATER VALVE
	EXISTING HANDICAP RAMP
	EXISTING SANITARY SEWER CLEANOUT
A	EXISTING WHARF ACCESS MANHOLE
W	EXISTING WATER MANHOLE
W	EXISTING WATER METER
POWER VAULT	EXISTING POWER VAULT

ABBREVIATIONS:

ACP	ASPHALTIC CONCRETE PAVEMENT
APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVE	AVENUE
BP	BURIED POWER
BMP	BEST MANAGEMENT PRACTICE
CB	CATCH BASIN
CDF	CONTROL DENSITY FILL
CL	CENTER LINE
CONC	CONCRETE
CP	CONTROL POINT
CSBC	CRUSHED SURFACING BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
CSWGP	CONSTRUCTION STORMWATER GENERAL PERMIT
DAT–HRZ	HORIZONTAL DATUM
DEMO	DEMOLITION
DIA/ø	DIAMETER
DWG	DRAWING
E.	EAST
EL OR ELEV	ELEVATION
ENG.	ENGINEERING
ENGR	ENGINEER
EX OR EXIST	EXISTING
FF	FINISH FLOOR
FG	FINISH GRADE
GA	GAUGE
HMA	HOT MIX ASPHALT
ID	IDENTIFICATION
IE	INVERT ELEVATION
K	KIP(S) OR KILOPOUND(S)
L	LENGTH
LBS	POUNDS
MAX	MAXIMUM
ME	MATCH EXISTING
MIL	MILLIMETER
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
NCD	NEARSHORE CONFINED DISPOSAL
NO.	NUMBER
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NTS	NOT TO SCALE
OC	ON CENTER
OPS	OPERATIONS
P	POUNDS
PE	PROFESSIONAL ENGINEER
PG	PERFORMANCE GRADE
POT	PORT OF TACOMA
PROJ	PROJECT
PROP	PROPOSED
PSI	POUNDS PER SQUARE INCH
PT	POINT
SCH	SCHEDULE
SDMH	STORM DRAIN MANHOLE
ST	STREET
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TA	TOP OF ASPHALT
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TPU	TACOMA PUBLIC UTILITY
TS	TOP OF SLAB
TYP	TYPICAL
T3	TERMINAL 3
T4	TERMINAL 4
US	UNITED STATES
VERT	VERTICAL
W	WATER, WEST, WIDTH
WA	WASHINGTON
W/W	WATERWAY

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PARCEL: | DRAWING SCALE: AS NOTED

6658
G1.3
04 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

BINDING EDGE

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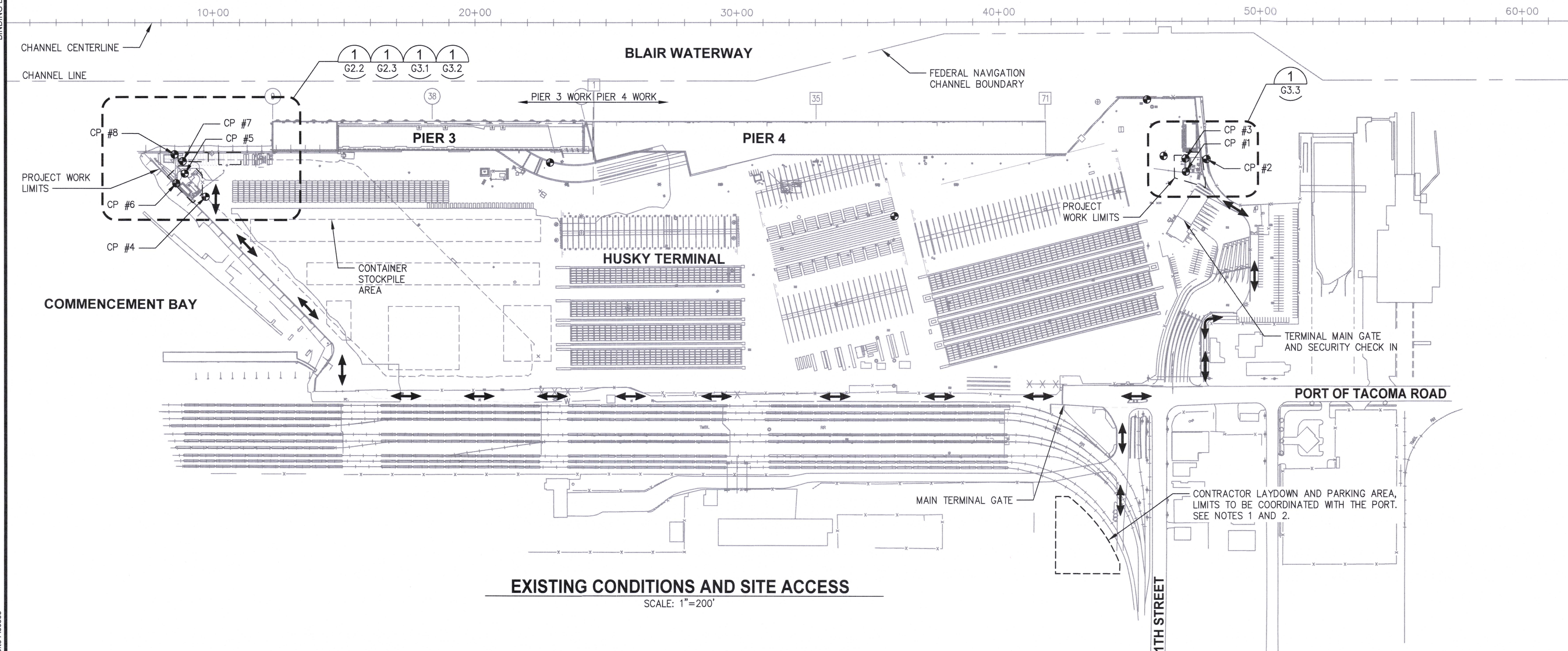


EXISTING CONDITIONS AND SITE ACCESS

SCALE: 1"=200'

PIER 3 SURVEY CONTROL POINTS

PT#	NORTHING	EASTING	ELEV.	DESCRIPTION
4	714545.02	1165012.80	16.70	MAG NAIL
5	714664.28	1165017.61	15.91	MAG NAIL
6	714660.41	1164968.33	17.02	MAG NAIL
7	714702.99	1165044.30	16.12	MAG NAIL
8	714742.98	1165039.49	16.63	MAG NAIL

PIER 4 SURVEY CONTROL POINTS

PT#	NORTHING	EASTING	ELEV.	DESCRIPTION
1	712007.60	1167767.46	19.04	MAG NAIL
2	711986.25	1167857.05	19.67	MAG NAIL
3	712044.15	1167801.52	18.95	MAG NAIL

SURVEY AND DATUM INFORMATION:

1. UPLAND SURVEY WITHIN PROJECT WORK LIMITS COMPLETED BY KPFF CONSULTING ENGINEERS DATED NOVEMBER 2020.
2. HORIZONTAL DATUM INFORMATION:
   WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE 4602, NAD83/09.
3. VERTICAL DATUM INFORMATION:
   MLLW DATUM, 1933 EPOCH – TIDE 22 BENCHMARK ELEVATION = 19.39'.

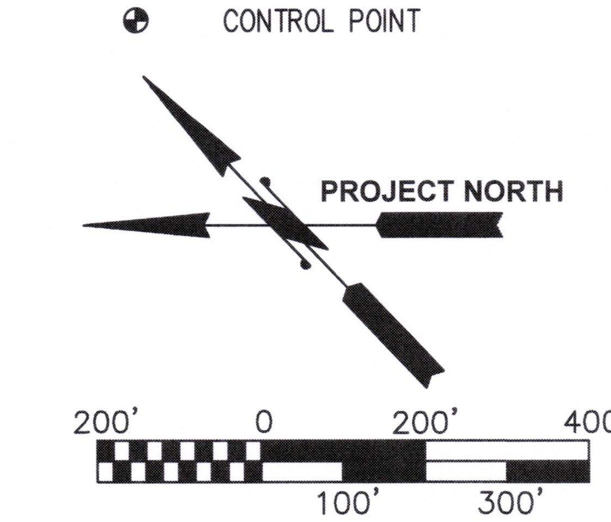
NOTES:

1. PORT WILL PROVIDE A MINIMUM OF 15,000 SQUARE FEET FOR CONTRACTOR USE.
2. ALL WORK AREAS AND OFFSITE CONTRACTOR LAYDOWN AREA ARE WITHIN SECURE TWIC BOUNDARY. SEE SPECIFICATIONS SECTION 01 14 00–WORK RESTRICTIONS.

LEGEND

CONTRACTOR ACCESS ROUTE

CONTROL POINT



SCALE: 1"=200'

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TERMINAL 3 / TERMINAL 4
SHORE POWER

EXISTING CONDITIONS AND SITE ACCESS

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT: DRAWING SCALE: AS NOTED
PARCEL:

6658
G2.1
05 OF 83

CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

LEGEND

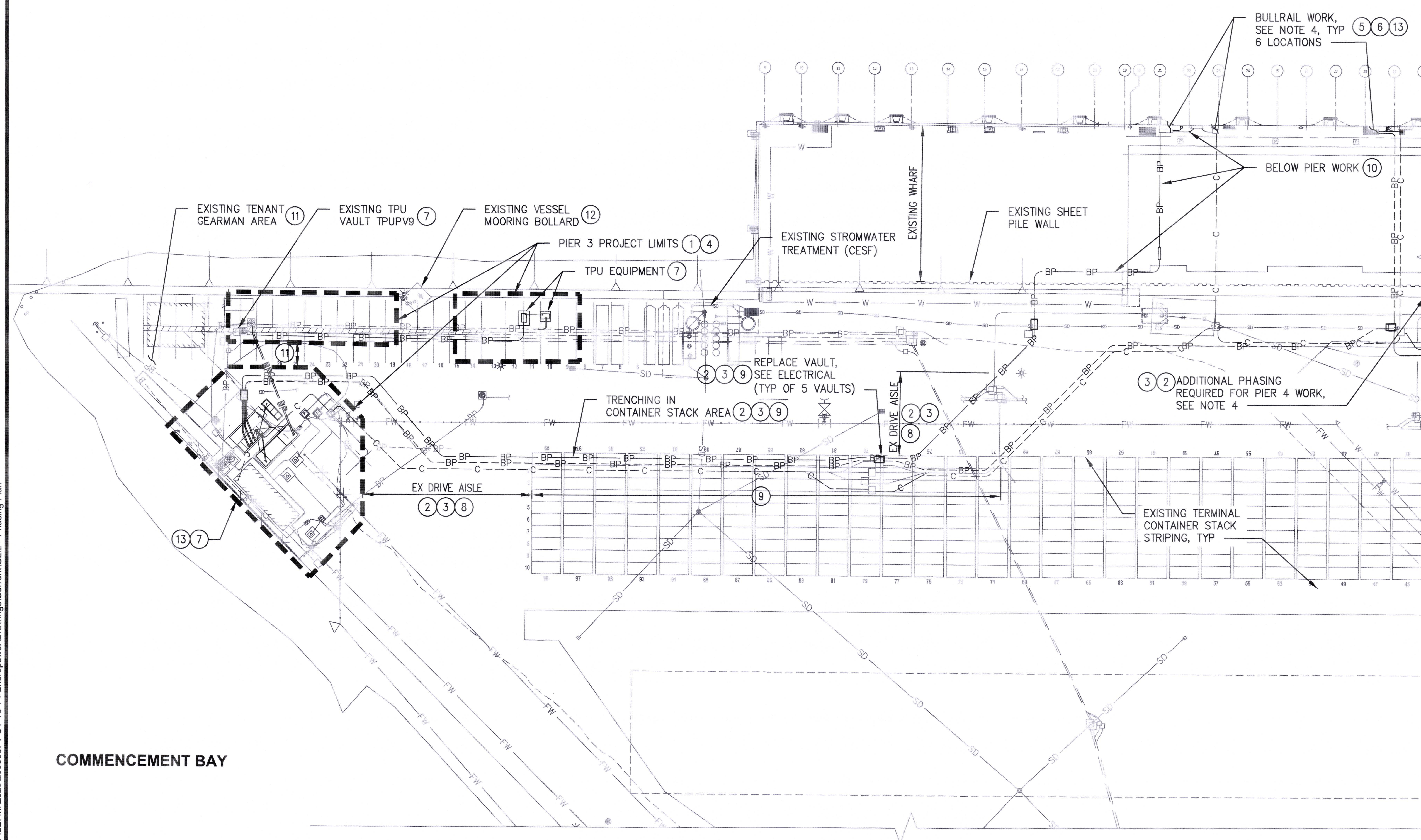
— — — — — — PROJECT WORK LIMITS (1)(4)

GENERAL NOTES

1. CONTRACTOR SHALL BE AWARE OF FACILITY OPERATIONS REQUIREMENTS AND COORDINATE THEIR ACCESS AND OPERATION REQUIREMENTS WITH THE ENGINEER. TERMINAL OPERATIONS HAVE PRECEDENCE AND SHALL NOT BE INTERRUPTED WITHOUT PRIOR APPROVAL OF THE ENGINEER. MAINTAIN TENANT ACCESS AND DO NOT RESTRICT TENANT OPERATIONS.
2. SEE SPECIFICATION SECTION 00 14 00 – WORK RESTRICTIONS FOR PHASING, CONSTRAINTS AND WORK LIMITATIONS BASED ON MAINTAINING TERMINAL OPERATIONS.
3. CONTRACTOR SHALL COORDINATE ACCESS TO EXISTING MANHOLES FOR CABLE PULLING WITH THE ENGINEER AND PROTECT REQUIRED WORK AREAS WITH TEMPORARY FENCING SIMILAR TO TRENCHING ACTIVITIES. PROVIDE SIMILAR ONE WEEK NOTICE TO THE ENGINEER FOR ACCESS.
4. PIER 3 AREA SHOWN. THE NOTES SHOWN ON THIS SHEET ARE APPLICABLE TO SIMILAR WORK ON THE REST OF THE TERMINAL BEYOND THAT SHOWN HERE (INCLUDING TRENCHING, BULLRAIL VAULTS, TEMPORARY WORK AREAS REQUIRED FOR PULLING THROUGH EXISTING MANHOLES AND WORK AT THE PIER 4 SUBSTATION).

KEYED NOTES

1. SEE SPECIFICATIONS AND TESC DRAWINGS FOR WORK AREA LIMITS AND FENCING REQUIREMENTS.
2. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR ACCESS TO REQUIRED WORK OUTSIDE OF THE FENCED WORK AREAS SHOWN. CONTRACTOR SHALL PROVIDE ONE WEEK MINIMUM NOTIFICATION TO THE ENGINEER FOR ACCESS TO AREAS OR MANHOLES OUTSIDE THE DESIGNATED WORK AREAS, INCLUDING TRENCHING ACTIVITIES. THE ENGINEER WILL COORDINATE WITH THE TENANT AND NOTIFY THE CONTRACTOR WHEN THE REQUESTED AREA IS AVAILABLE.
3. CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTED BARRELS AND FENCING TO PROTECT TEMPORARY WORK AREAS (OUTSIDE OF DESIGNATED PERMANENT WORK AREAS) FROM TENANT OPERATIONS. TEMPORARY FENCING SHALL BE IN PLACE WHILE TRENCH IS OPEN UNTIL PAVEMENT PATCHING IS COMPLETE. SEE SHEET G3.4.
4. THE CONTRACTOR SHALL STOCKPILE OR STAGE ALL EQUIPMENT, SUPPLIES AND MATERIALS (INCLUDING SOIL) WITHIN THE WORK LIMIT SHOWN UNLESS OTHERWISE COORDINATED AND APPROVED BY THE ENGINEER.
5. WORK AT THE NEW AND EXISTING BULLRAIL VAULTS INVOLVES THE REMOVAL OF ASPHALT PAVEMENT AND BALLAST TO ACCOMMODATE THE WORK. THIS WORK SHALL BE COORDINATED AROUND VESSEL SCHEDULES AND THE CONTRACTOR SHALL PLAN TO VACATE THE WORK AREA WHEN VESSELS ARE IN BERTH. CONTRACTOR SHALL PROTECT AND COVER OPEN AREAS AT THE WHARF BULLRAIL WITH PLYWOOD OR OTHER MEANS AT THE END OF EACH SHIFT, AND MARK THESE AREAS WITH CONES. PROVIDE TEMPORARY BARRIERS TO DENOTE BULLRAIL WORK AREAS AND REMOVE AT THE END OF EACH SHIFT.
6. THE CONTRACTOR SHALL ASSUME THAT THEY WILL ONLY BE ABLE TO WORK ON THE BULLRAIL VAULTS AT ONE BERTH AT A TIME (EITHER PIER 3 OR PIER 4). SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.
7. CONTRACTOR SHALL COORDINATE OVERNIGHT OR WEEKEND ELECTRICAL POWER SHUTDOWN WITH THE ENGINEER FOR TPU CHANGEOVER WORK AND ANY OTHER REQUIRED ELECTRICAL OUTAGES. THE ENGINEER WILL COORDINATE WITH TENANT AND TPU. SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR FURTHER REQUIREMENTS.
8. CONTRACTOR SHALL BREAK TRENCHING ACTIVITIES AT EXISTING DRIVE AISLES TO MAINTAIN TENANT TRAFFIC OVER A MINIMUM OF A 28 FT DRIVE AISLE AT ALL TIMES. CONTRACTOR SHALL NOT HAVE ACCESS TO THE REMAINDER OF THE DRIVE AISLE UNTIL PAVEMENT PATCHING AND STRIPING OVER THE FIRST PORTION IS COMPLETE.
9. PORTION OF NEW DUCTBANK TRENCHING IS WITHIN EXISTING CONTAINER STACKING. CONTRACTOR SHALL PROVIDE ONE WEEK MINIMUM NOTIFICATION TO THE ENGINEER TO COORDINATE ACCESS TO THE AREA AND GET CONTAINERS MOVED. CONTRACTOR SHALL COMPLETE TRENCHING IN TWO SEGMENTS, UTILIZING ONLY HALF OF THE CONTAINER STACK AREA (INCLUDING PAVEMENT AND STRIPE RESTORATION) BEFORE GAINING ACCESS TO THE OTHER HALF OF THE CONTAINER STACK.
10. CONTRACTOR SHALL COORDINATE ACCESS TO UNDER DOCK WORK WITH THE ENGINEER AND SHALL ASSUME WORK SKIFF MARINE ACCESS WILL BE REQUIRED. CONTRACTOR SHALL COORDINATE UNDER DOCK WORK WITH THE VESSEL SCHEDULE.
11. CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS TO THE TENANT GEARMAN AREA IN THE CORNER OF PIER 3.
12. CONTRACTOR SHALL MAINTAIN TENANT ACCESS TO MOORING BOLLARD FOR VESSEL BERTHING AT ALL TIMES. SEE G3.2.
13. SEE SPECIFICATIONS FOR SHORE POWER SYSTEM TESTING AND COMMISSIONING REQUIREMENTS.



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1 G2.1 PHASING AND CONSTRAINTS PLAN
SCALE: 1"=40'
PIER 3 SHOWN, PIER 4 SIMILAR (SEE NOTE 4 AND SHEET C1.1)

40' 0 20' 40' 60' 80'
SCALE: 1"=40'

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TERMINAL 3 / TERMINAL 4 SHORE POWER
PHASING AND CONSTRAINTS PLAN

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT: DRAWING SCALE: AS NOTED
PARCEL:

6658
G2.2
06 OF 83
CONT/CONS: 071357
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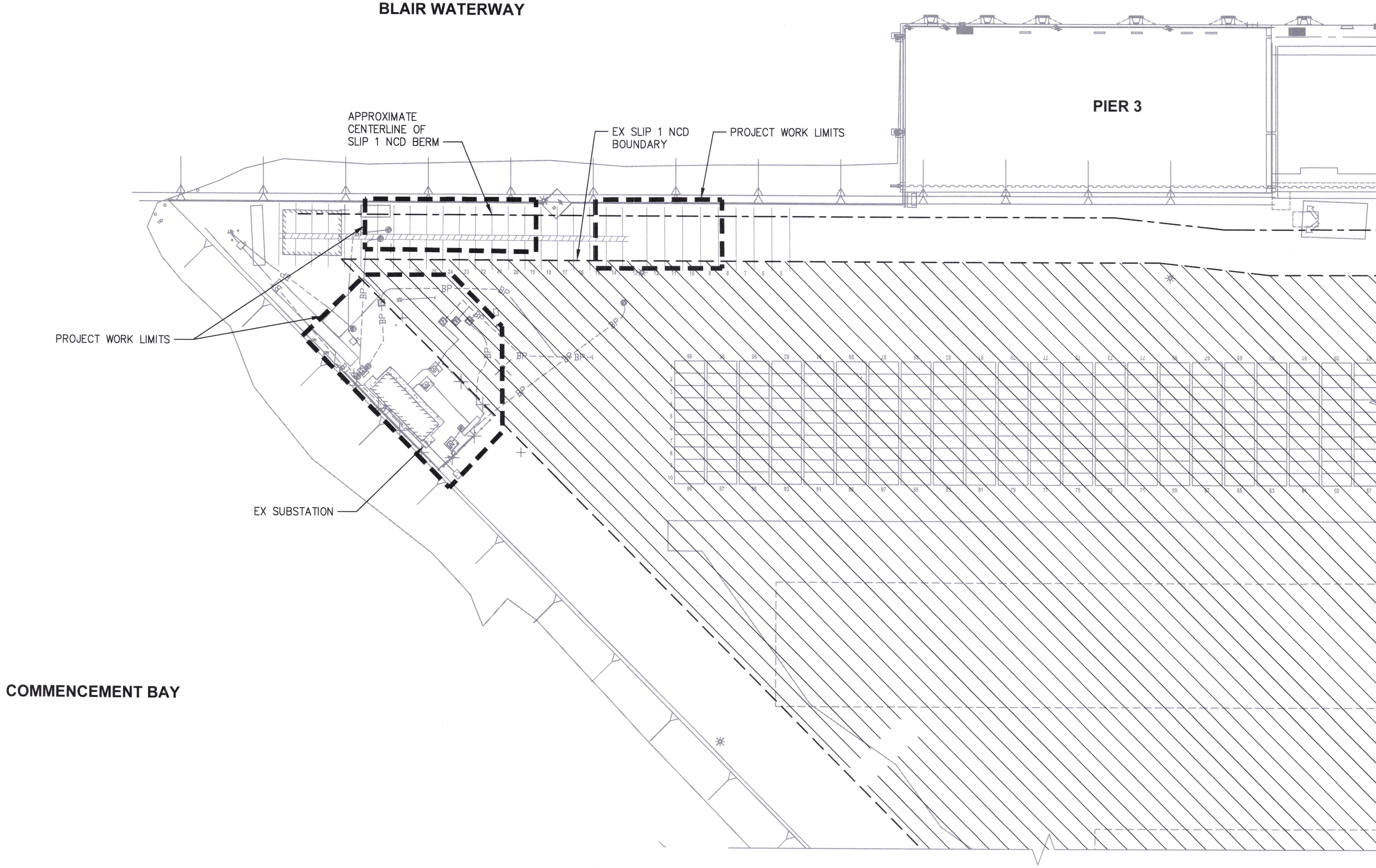


1 G2.1 **EXISTING ENVIRONMENTAL CONDITIONS**

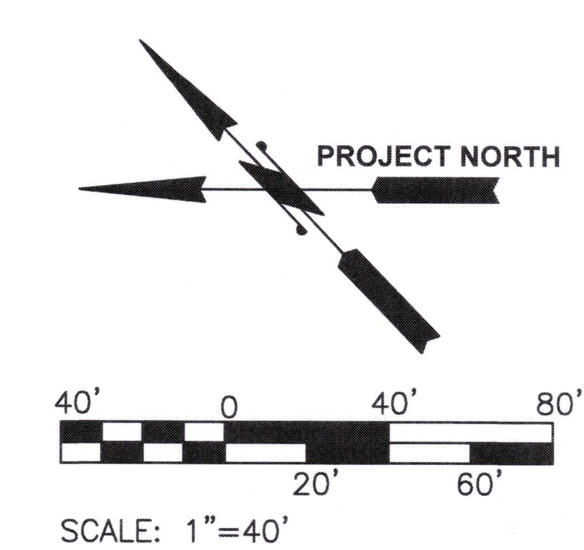
SCALE: 1" = 40'

LEGEND

(hatched area)	EXISTING SLIP 1 NCD AREA (BOTTOM OF CAP AT EL 9'±)
(dash-dot line)	CENTERLINE OF EXISTING SLIP 1 BERM
(heavy dashed line)	PROJECT WORK LIMITS

NOTES

1. SEE SPECIFICATIONS FOR REFERENCE INFORMATION AND SOIL MANAGEMENT/DISPOSAL REQUIREMENTS.



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TERMINAL 3 / TERMINAL 4
SHORE POWER

EXISTING ENVIRONMENTAL CONDITIONS

TOWNSHIP: | RANGE: | SECTION:

DAT-HRZ: | VERT:

PARCEL: | DRAWING SCALE: AS NOTED

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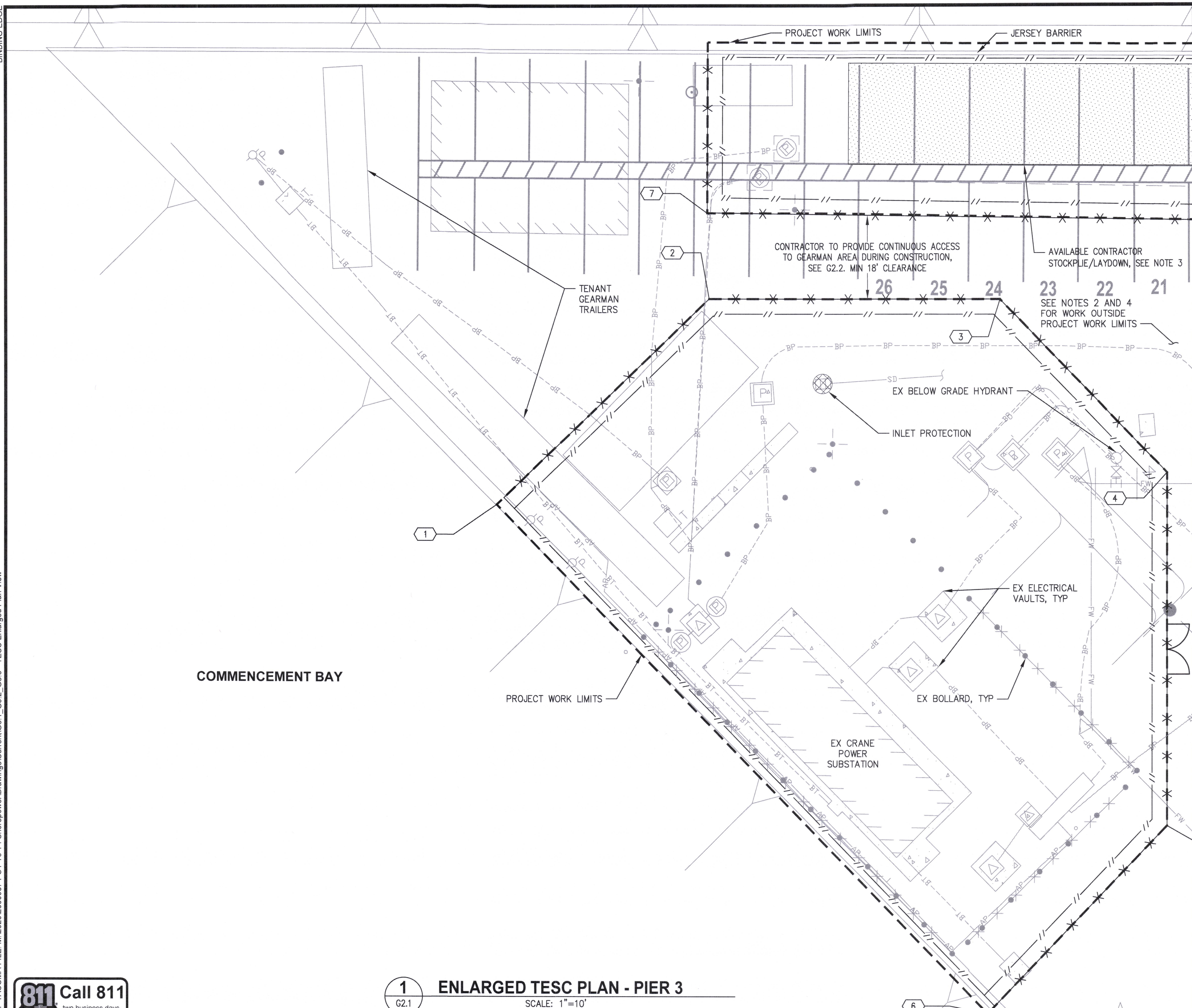
G2.3

CONT/CONS: 071357

M. ID: 201100.01

PHASE: BID SET



1
G2.1
ENLARGED TESC PLAN - PIER 3
SCALE: 1"=10'

NOTES

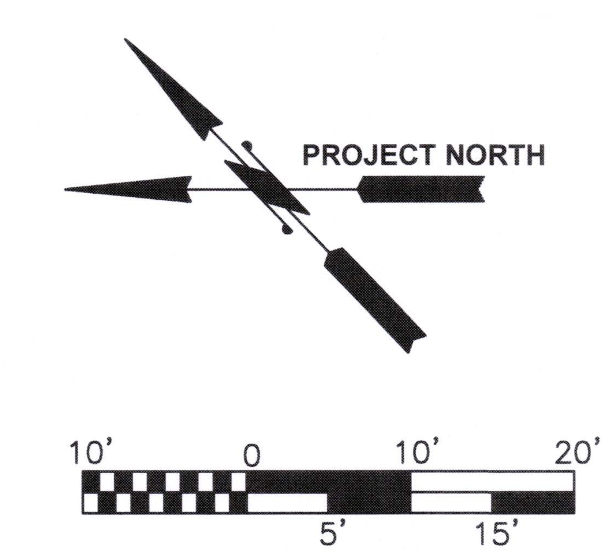
1. SEE SHEET G1.2 FOR TESC NOTES.
2. FOLLOW SIMILAR BMPs AND TESC PROVISIONS FOR NEW ELECTRICAL DUCTBANK TRENCH OUTSIDE OF MAIN WORK AREA.
3. CONTRACTOR TO LOCATE LAYDOWN AND STOCKPILE AREAS WITHIN PROJECT WORK AREA LIMITS AS NEEDED TO ACCOMPLISH WORK.
4. CONTRACTOR SHALL PLACE TEMP FENCING AND LIGHTED BARRELS ALONG ALL TRENCHING OUTSIDE WORK LIMITS. 3 / G3.4

LEGEND

- PROJECT WORK LIMITS
- TEMPORARY CONSTRUCTION FENCE AND CONCRETE BARRIER 5 / G3.4
- INLET PROTECTION 1 / G3.4
- TEMPORARY SEDIMENT BARRIER 2 / G3.4
- TEMPORARY CONSTRUCTION ACCESS GATE

HORIZONTAL CONTROL POINTS

POINT ID	NORTHING	EASTING
1	714702.11	1164960.74
2	714702.11	1165019.68
3	714661.79	1165061.65
4	714613.89	1165062.02
5	714563.30	1165013.48
6	714561.29	1164961.79
7	714714.82	1165031.17



SCALE: 1"=10'

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TERMINAL 3 / TERMINAL 4 SHORE POWER

PIER 3 ENLARGED TESC PLAN

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

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G3.1
08 OF 83

CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

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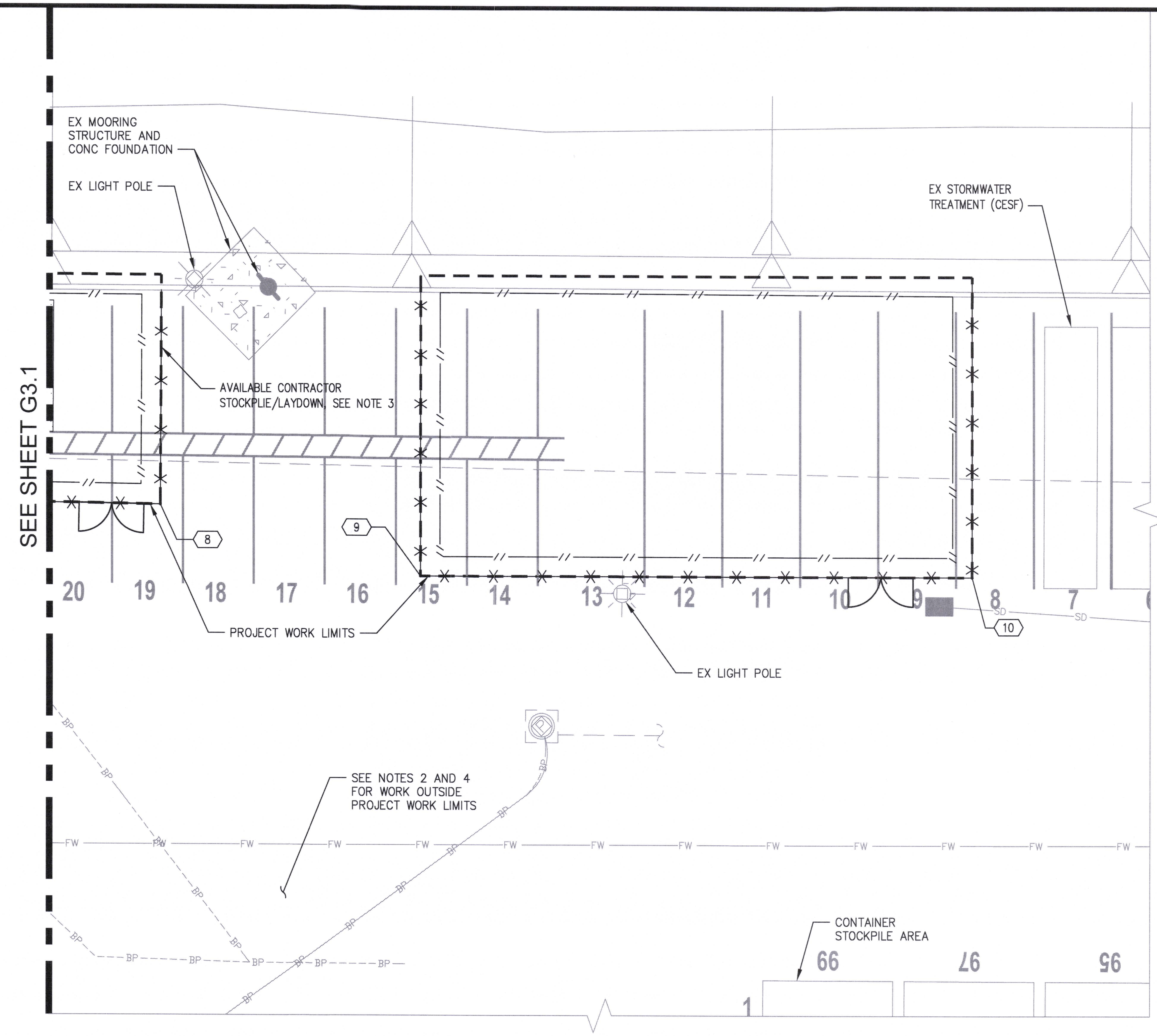


1 G2.1 **ENLARGED TESC PLAN - PIER 3**
SCALE: 1"=10'

LEGEND

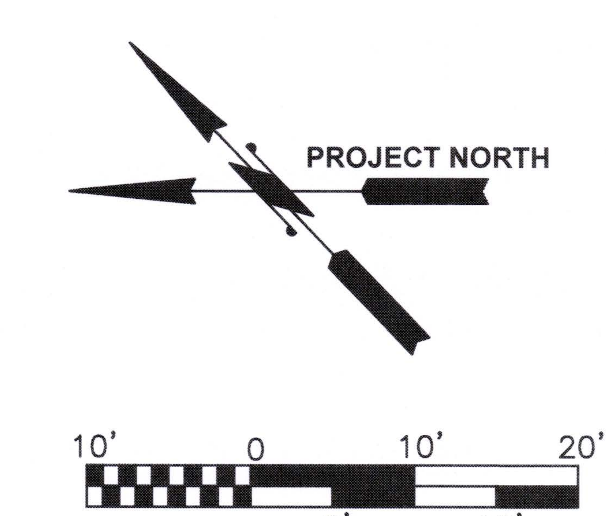
- PROJECT WORK LIMITS
- TEMPORARY CONSTRUCTION FENCE AND CONCRETE BARRIER (5 / G3.4)
- INLET PROTECTION (1 / G3.4)
- TEMPORARY SEDIMENT BARRIER (2 / G3.4)
- TEMPORARY CONSTRUCTION ACCESS GATE

NOTES

1. SEE SHEET G1.2 FOR TESC NOTES.
2. FOLLOW SIMILAR BMPs AND TESC PROVISIONS FOR NEW ELECTRICAL DUCTBANK TRENCH OUTSIDE OF MAIN WORK AREA.
3. CONTRACTOR TO LOCATE LAYDOWN AND STOCKPILE AREAS WITHIN PROJECT WORK AREA LIMITS AS NEEDED TO ACCOMPLISH WORK.
4. CONTRACTOR SHALL PLACE TEMP FENCING AND LIGHTED BARRELS ALONG ALL TRENCHING OUTSIDE WORK LIMITS. (3 / G3.4)

HORIZONTAL CONTROL POINTS

POINT ID	NORTHING	EASTING
8	714635.65	1165114.54
9	714598.36	1165134.23
10	714539.48	1165195.52



SCALE: 1"=10'

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TERMINAL 3 / TERMINAL 4 SHORE POWER
PIER 3 ENLARGED TESC PLAN

TOWNSHIP: RANGE: SECTION:
DAT–HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED

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09 OF 83
CONT/CONS: 071357
M. ID: 201100.01
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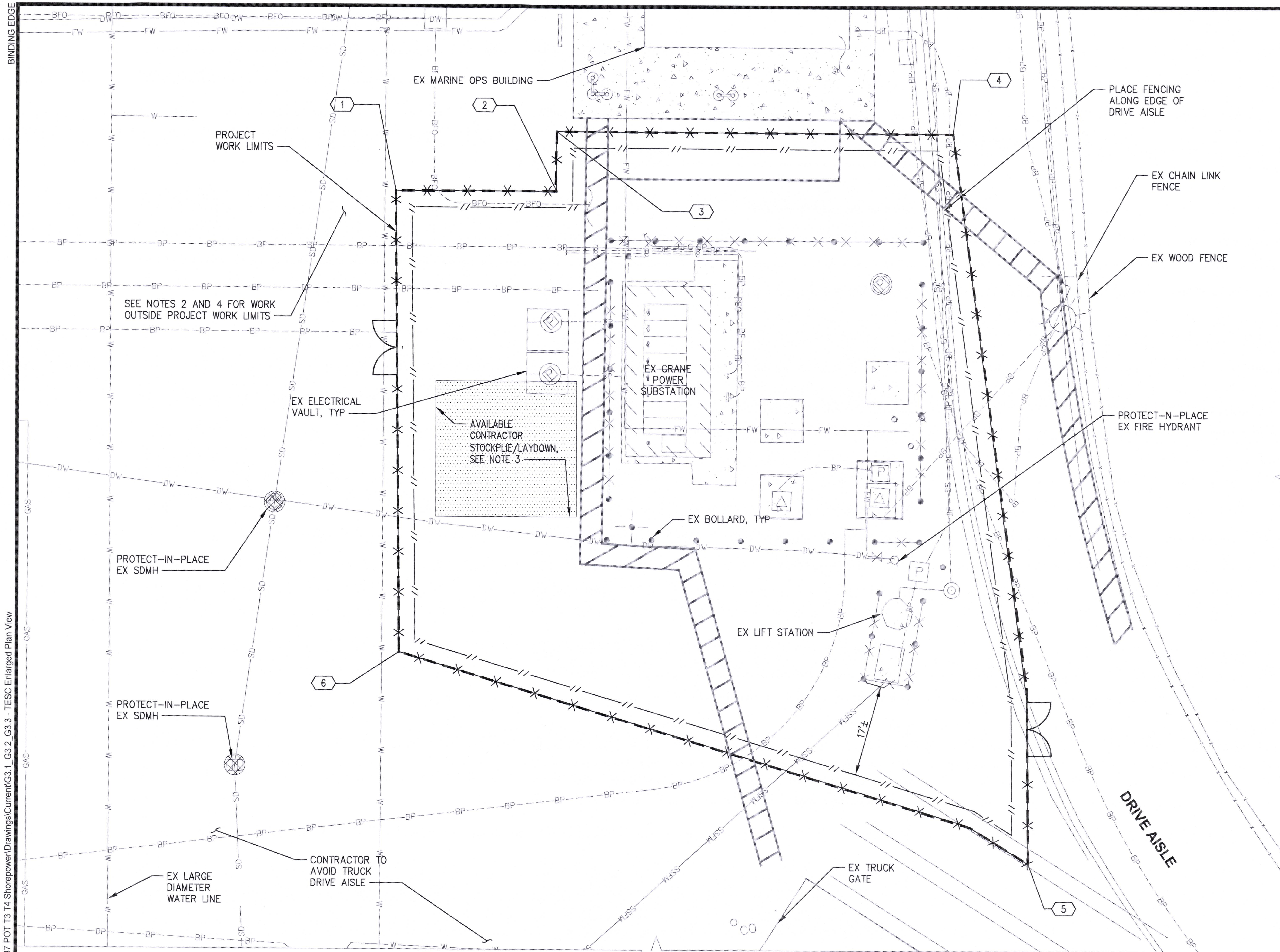

1 G2.1 **ENLARGED TESC PLAN - PIER 4**

SCALE: 1"=10'

LEGEND

- PROJECT WORK LIMITS
- TEMPORARY CONSTRUCTION FENCE AND CONCRETE BARRIER (5 / G3.4)
- INLET PROTECTION (1 / G3.4)
- TEMPORARY SEDIMENT BARRIER (2 / G3.4)
- TEMPORARY CONSTRUCTION ACCESS GATE

NOTES

1. SEE SHEET G1.2 FOR TESC NOTES.
2. FOLLOW SIMILAR BMPS AND TESC PROVISIONS FOR NEW ELECTRICAL DUCTBANK OR STORM DRAIN TRENCH OUTSIDE OF MAIN WORK AREA.
3. CONTRACTOR TO LOCATE LAYDOWN AND STOCKPILE AREAS WITHIN PROJECT WORK AREA LIMITS AS NEEDED TO ACCOMPLISH WORK.
4. CONTRACTOR SHALL PLACE TEMP FENCING AND LIGHTED BARRELS ALONG ALL TRENCHING OUTSIDE WORK LIMITS. (3 / G3.4)

HORIZONTAL CONTROL POINTS

POINT ID	NORTHING	EASTING
1	712082.78	1167778.50
2	712062.03	1167800.11
3	712069.99	1167807.75
4	712018.60	1167860.95
5	711911.44	1167777.95
6	712020.81	1167720.08

PROJECT NORTH

10' 0 10' 20'
5' 15'
SCALE: 1"=10'

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TERMINAL 3 / TERMINAL 4 SHORE POWER

PIER 4 ENLARGED TESC PLAN

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED

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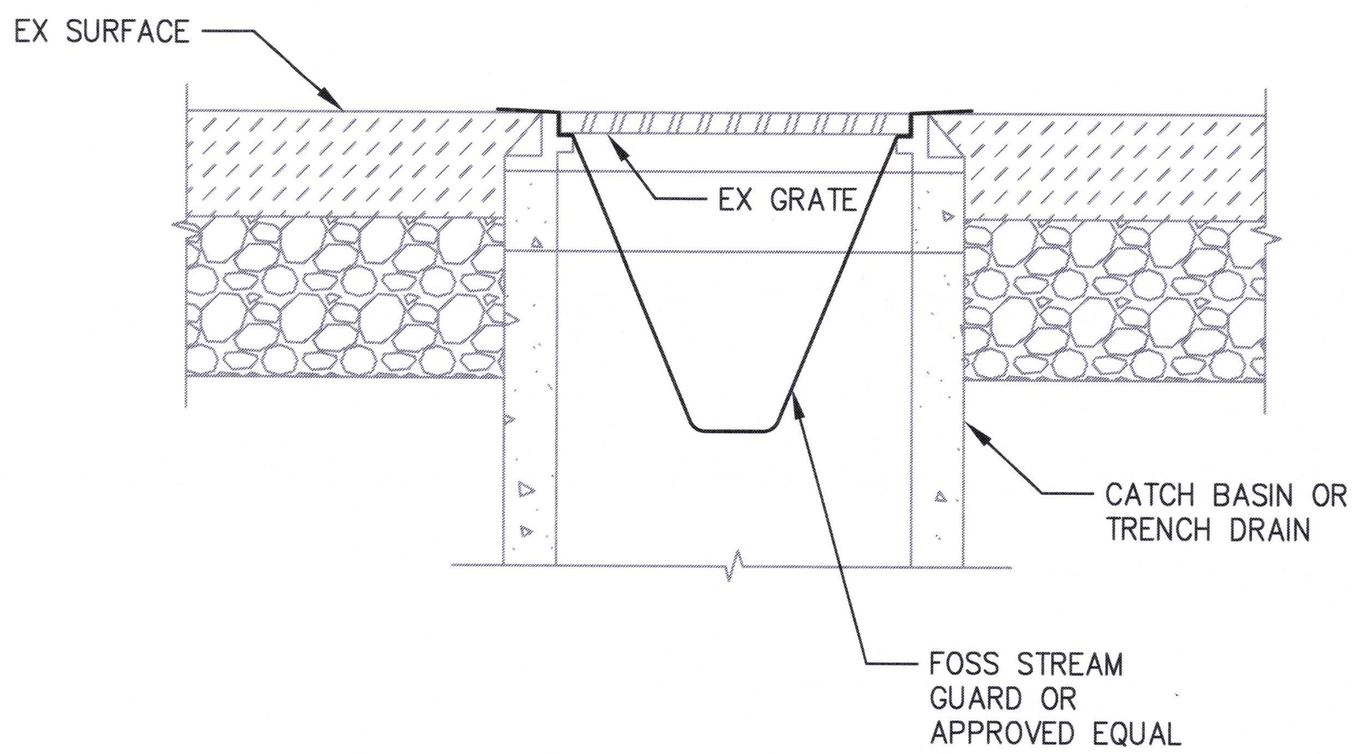
G3.3

CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

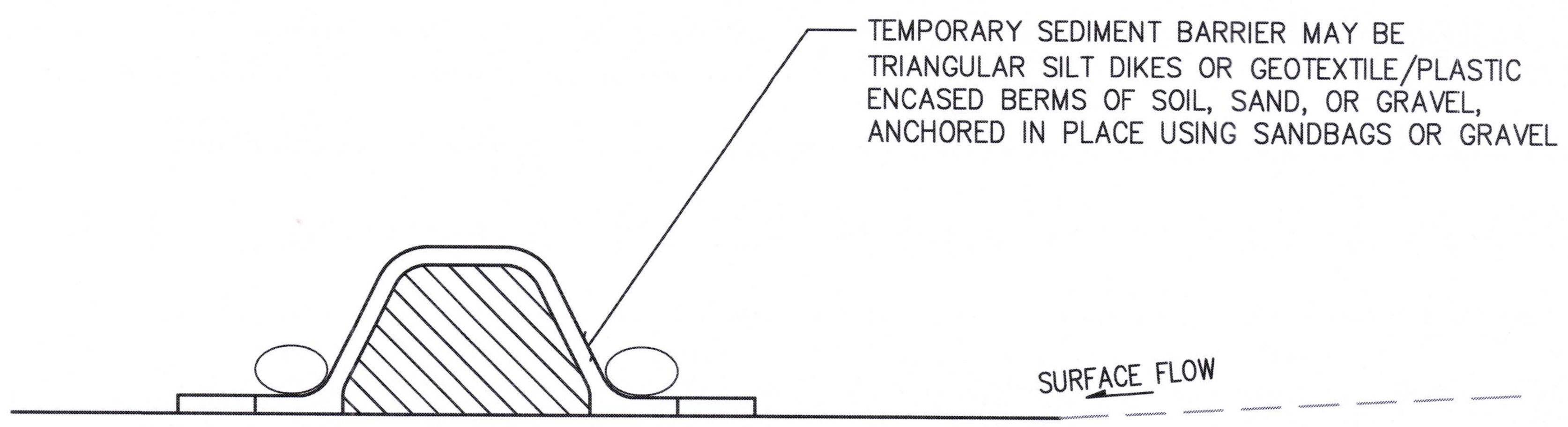


NOTES:

1. CLEAN OUT STORMWATER CATCH BASIN PRIOR TO INSTALLING INLET PROTECTION.
2. MAINTAIN INLET PROTECTION PER MANUFACTURERS RECOMMENDATIONS OR CLEAN OR REMOVE AND REPLACE WHEN SEDIMENT HAS FILLED ONE–THIRD OF THE AVAILABLE STORAGE. IMMEDIATELY REMOVE ANY ACCUMULATED SEDIMENT ON OR AROUND THE INLET.
3. DO NOT REMOVE SEDIMENT BY FLUSHING WITH WATER. DISPOSE OF ALL SEDIMENT OFF–SITE AT AN APPROVED FACILITY.

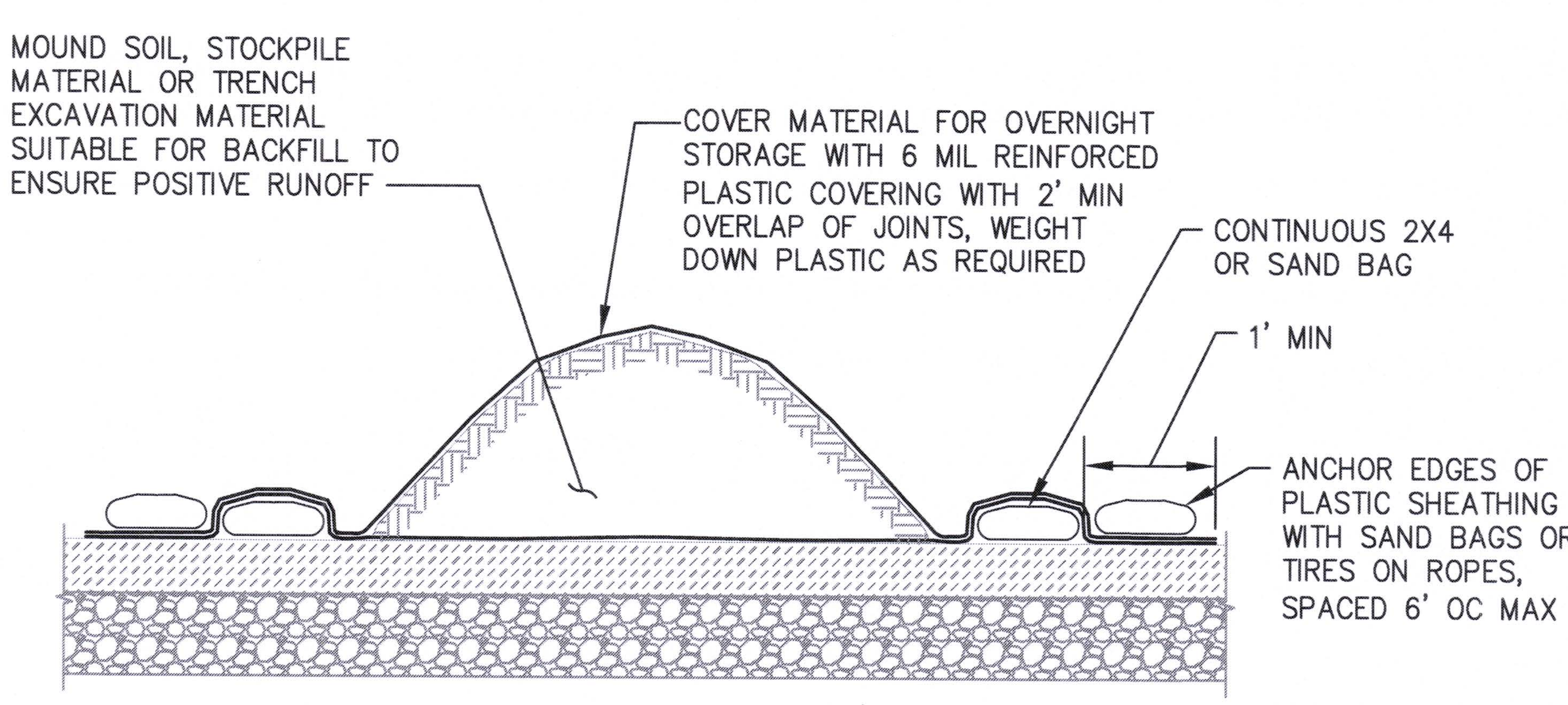
1 INLET PROTECTION

G3.1–G3.3 SCALE: NTS



2 TEMPORARY SEDIMENT BARRIER

G3.1–G3.3 SCALE: NTS

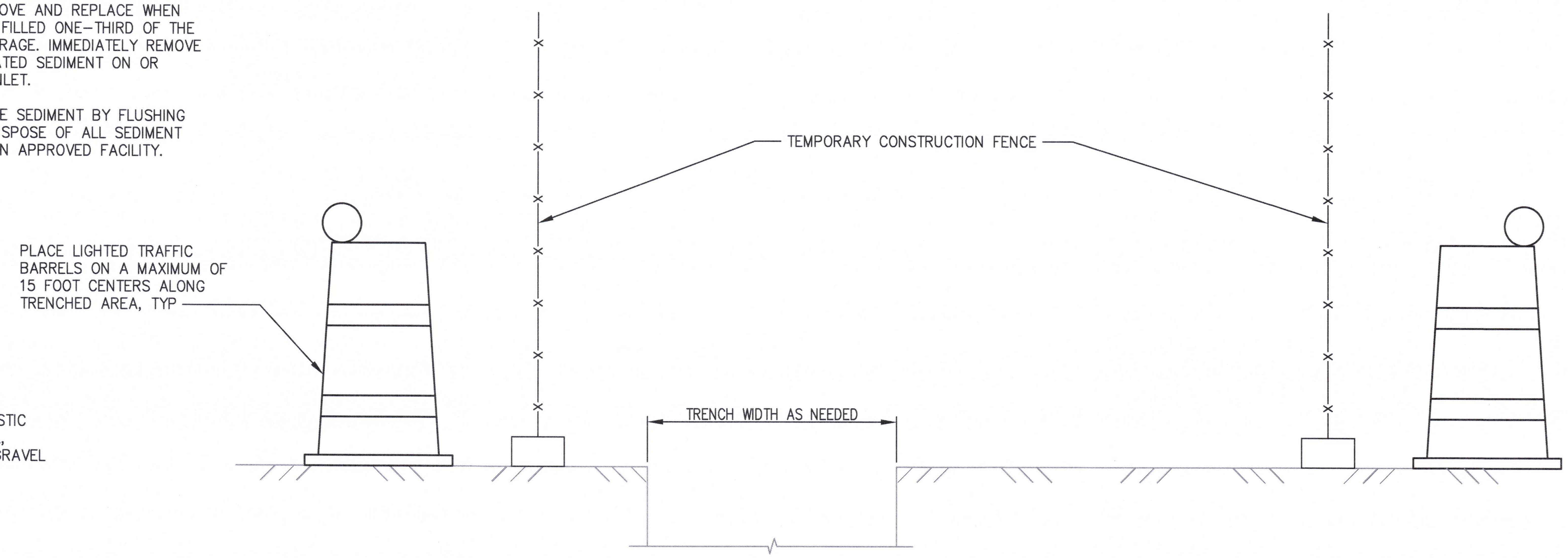


NOTES:

1. RIPS AND TEARS IN THE PLASTIC SHEETING SHALL BE REPAIRED IN A TIMELY MANNER.
2. SOIL, STOCKPILE MATERIAL, AND TRENCH EXCAVATION MATERIAL SUITABLE FOR BACKFILL SHALL BE STOCKPILED AT NO MORE THAN 1 TO 1 SLOPE AND THE TOE OF THE STOCKPILE SHALL BE NO CLOSER THAN 2' FROM THE EDGE OF EXCAVATION. STOCKPILES HEIGHT SHALL NOT EXCEED 10'.

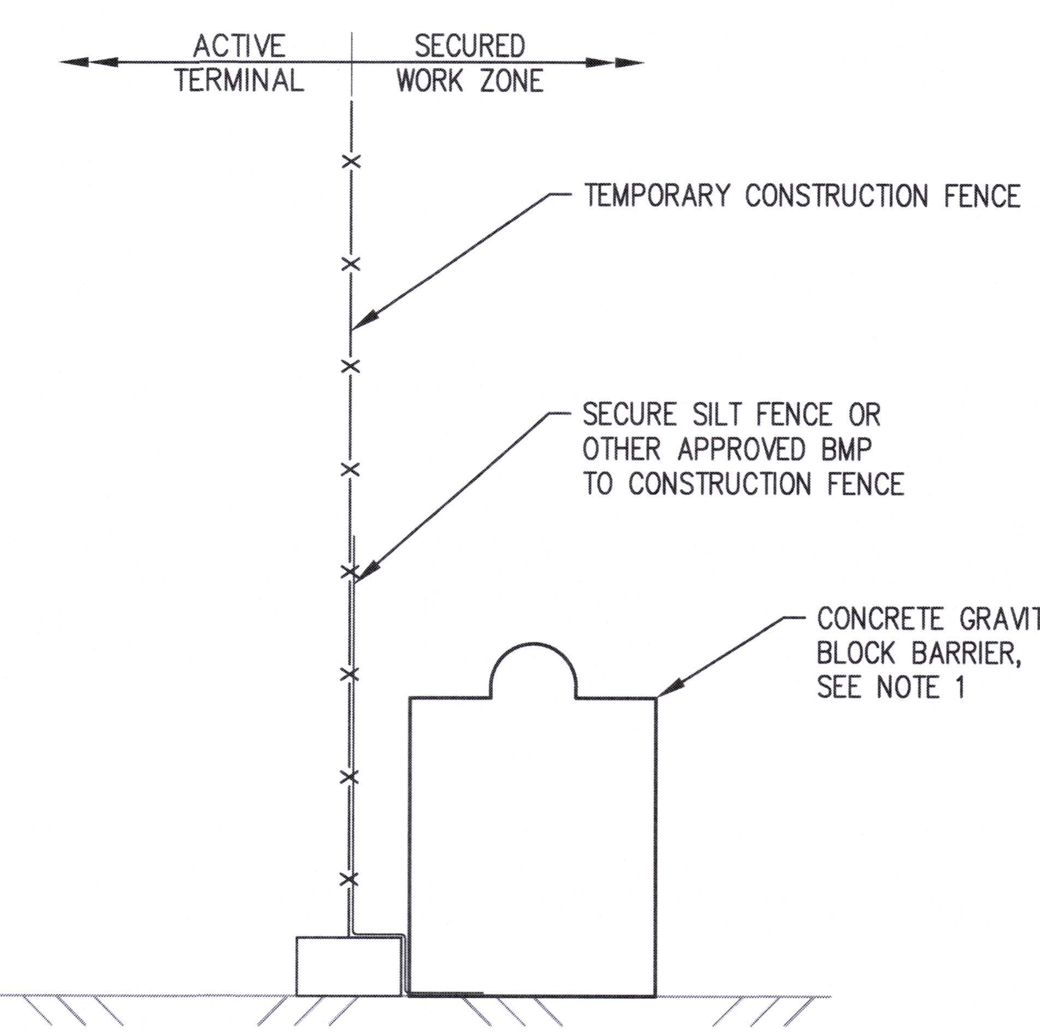
4 TEMPORARY STOCKPILE DETAIL

– SCALE: NTS



3 TRENCHING OUTSIDE OF WORK LIMITS

G3.1–G3.3 SCALE: NTS



NOTES:

1. SECURE WORK ZONE WITH PRECAST CONCRETE BARRIER WHERE VEHICULAR TRAFFIC IS POSSIBLE. CLEAR SPACE BETWEEN BLOCK SHALL BE NO GREATER THAN 6 FEET.

5 PRECAST CONCRETE BARRIER AND CONSTRUCTION FENCE WORK LIMIT

G3.1–G3.3 SCALE: NTS

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TERMINAL 3 / TERMINAL 4
SHORE POWER

TESC DETAILS

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DAT–HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED

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G3.4
11 OF 83
CONT/CONS: 071357
M. ID: 201100.01
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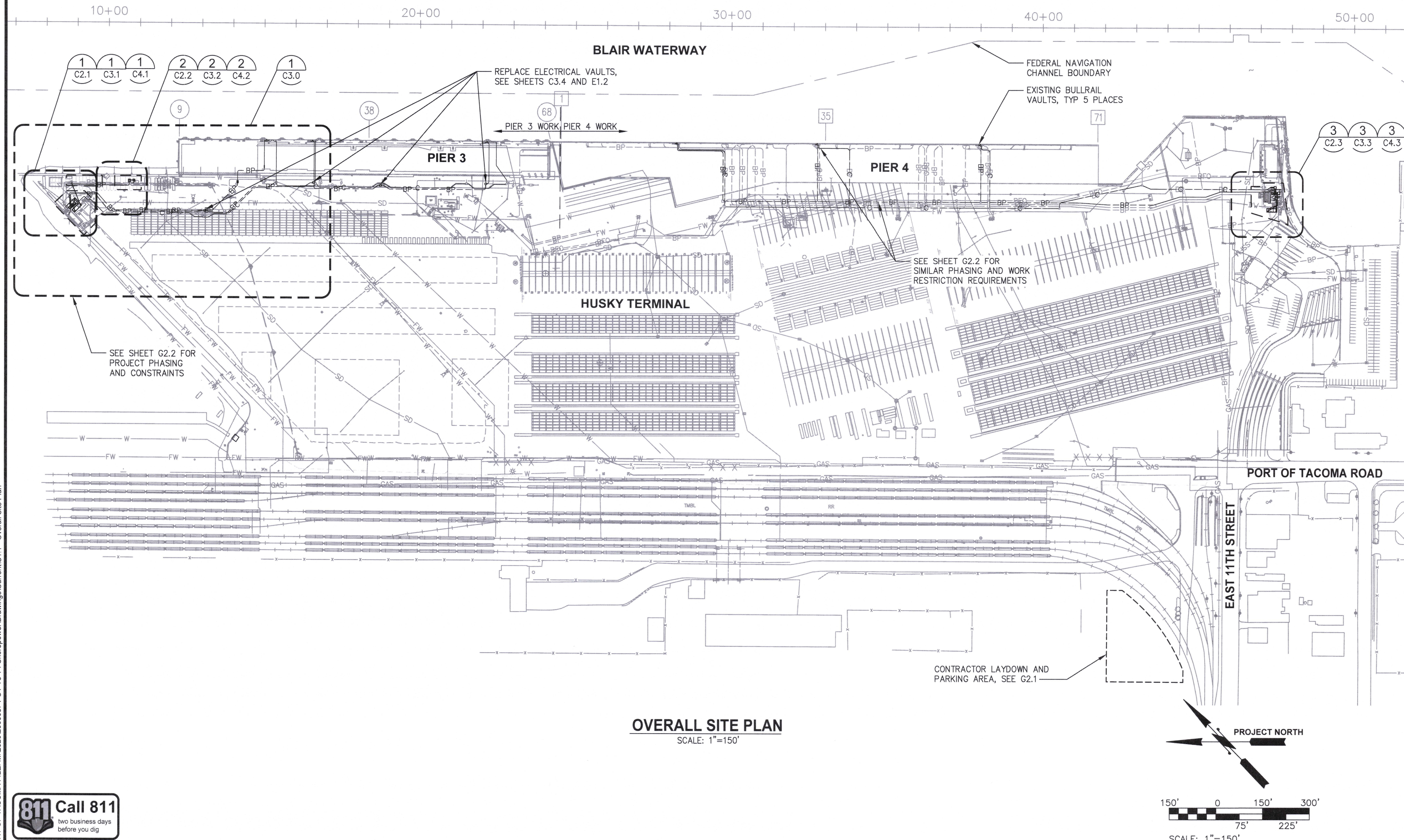

OVERALL SITE PLAN

SCALE: 1"=150'

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1601 Fifth Avenue, Suite 1600, Seattle, WA 98101

NATHAN A. TATSON, STATE OF WASHINGTON, 57014, REGISTERED PROFESSIONAL ENGINEER

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TERMINAL 3 / TERMINAL 4
SHORE POWER

OVERALL SITE PLAN

TOWNSHIP:	RANGE:	SECTION:
DAT-HRZ:	VERT:	
PARCEL:	DRAWING SCALE: AS NOTED	

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CONT/CONS: 071357
M. ID: 201100.01
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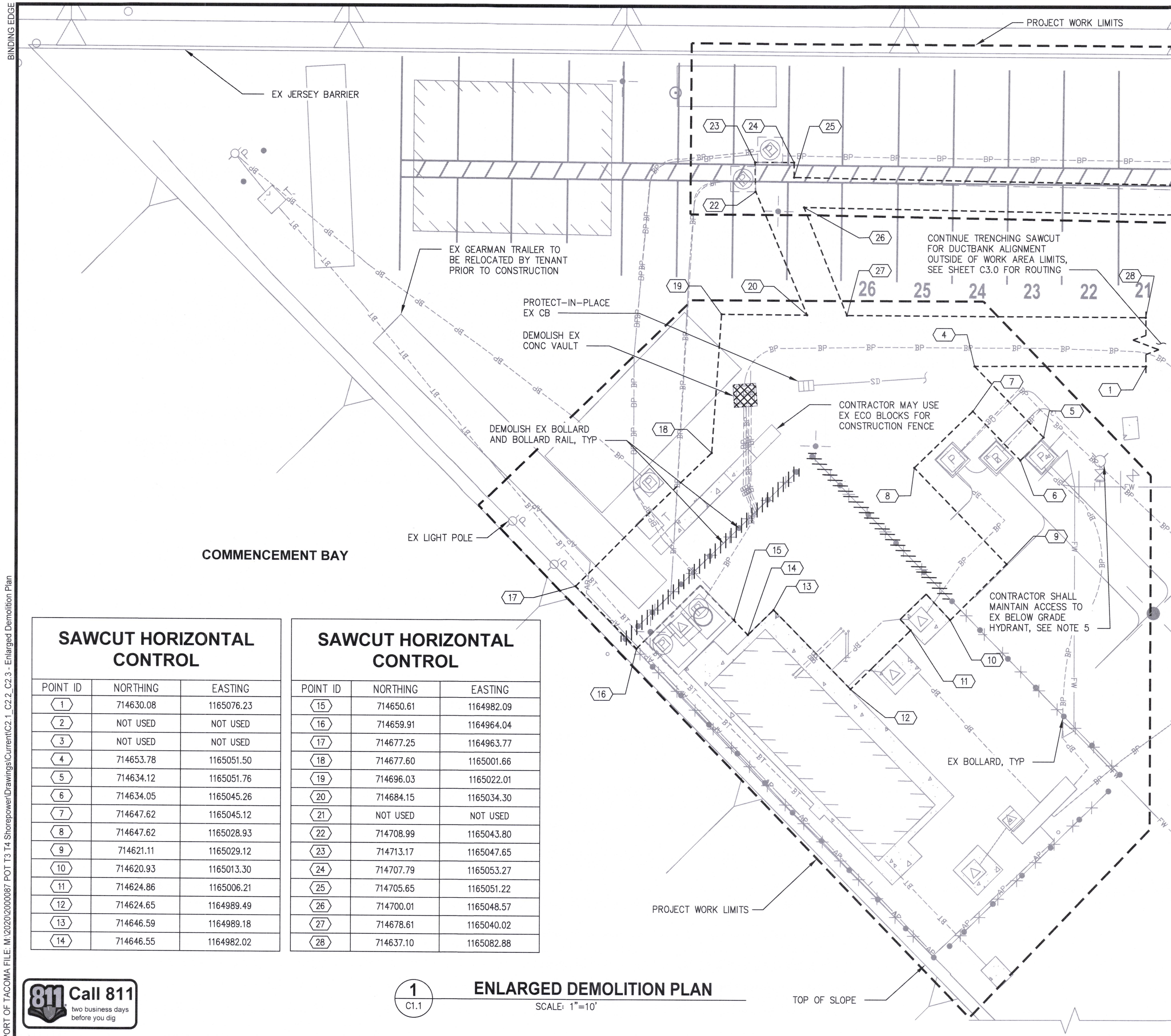

SAWCUT HORIZONTAL CONTROL

POINT ID	NORTHING	EASTING
1	714630.08	1165076.23
2	NOT USED	NOT USED
3	NOT USED	NOT USED
4	714653.78	1165051.50
5	714634.12	1165051.76
6	714634.05	1165045.26
7	714647.62	1165045.12
8	714647.62	1165028.93
9	714621.11	1165029.12
10	714620.93	1165013.30
11	714624.86	1165006.21
12	714624.65	1164989.49
13	714646.59	1164989.18
14	714646.55	1164982.02

SAWCUT HORIZONTAL CONTROL

POINT ID	NORTHING	EASTING
15	714650.61	1164982.09
16	714659.91	1164964.04
17	714677.25	1164963.77
18	714677.60	1165001.66
19	714696.03	1165022.01
20	714684.15	1165034.30
21	NOT USED	NOT USED
22	714708.99	1165043.80
23	714713.17	1165047.65
24	714707.79	1165053.27
25	714705.65	1165051.22
26	714700.01	1165048.57
27	714678.61	1165040.02
28	714637.10	1165082.88

Call 811 two business days before you dig

1 C1.1 **ENLARGED DEMOLITION PLAN**
SCALE: 1"=10'

NOTES

1. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM A REVIEW OF AVAILABLE RECORD DRAWINGS. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL POTHOLE OR OTHERWISE CONFIRM EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
2. SEE SHEET E3.1 FOR ELECTRICAL AND COMMUNICATION DEMOLITION REQUIREMENTS.
3. UTILITIES, STRUCTURES AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.
4. ALL ITEMS MARKED FOR DEMOLITION SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PER THE SPECIFICATIONS.
5. PRIOR TO DEMOLITION ACTIVITIES, CONTRACTOR SHALL LOCATE EXISTING WATER LINE FEEDING EXISTING HYDRANT AND EXISTING BELOW GRADE HYDRANT. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS WITH EXISTING UTILITIES AND PROPOSED WORK.

LEGEND

- PROJECT WORK LIMITS
- SAW CUT BOUNDARY
- DEMOLISH EXISTING BOLLARD AND BOLLARD RAIL — 1 C2.4, 2 C2.4
- DEMOLISH EXISTING STRUCTURE — 3 C2.4

PROJECT NORTH

10' 0 5' 10' 15' 20'
SCALE: 1"=10'

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kpff 2407 North 31st Street, Suite 100 Tacoma, Washington 98407 (253) 396-0150

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TERMINAL 3 / TERMINAL 4 SHORE POWER

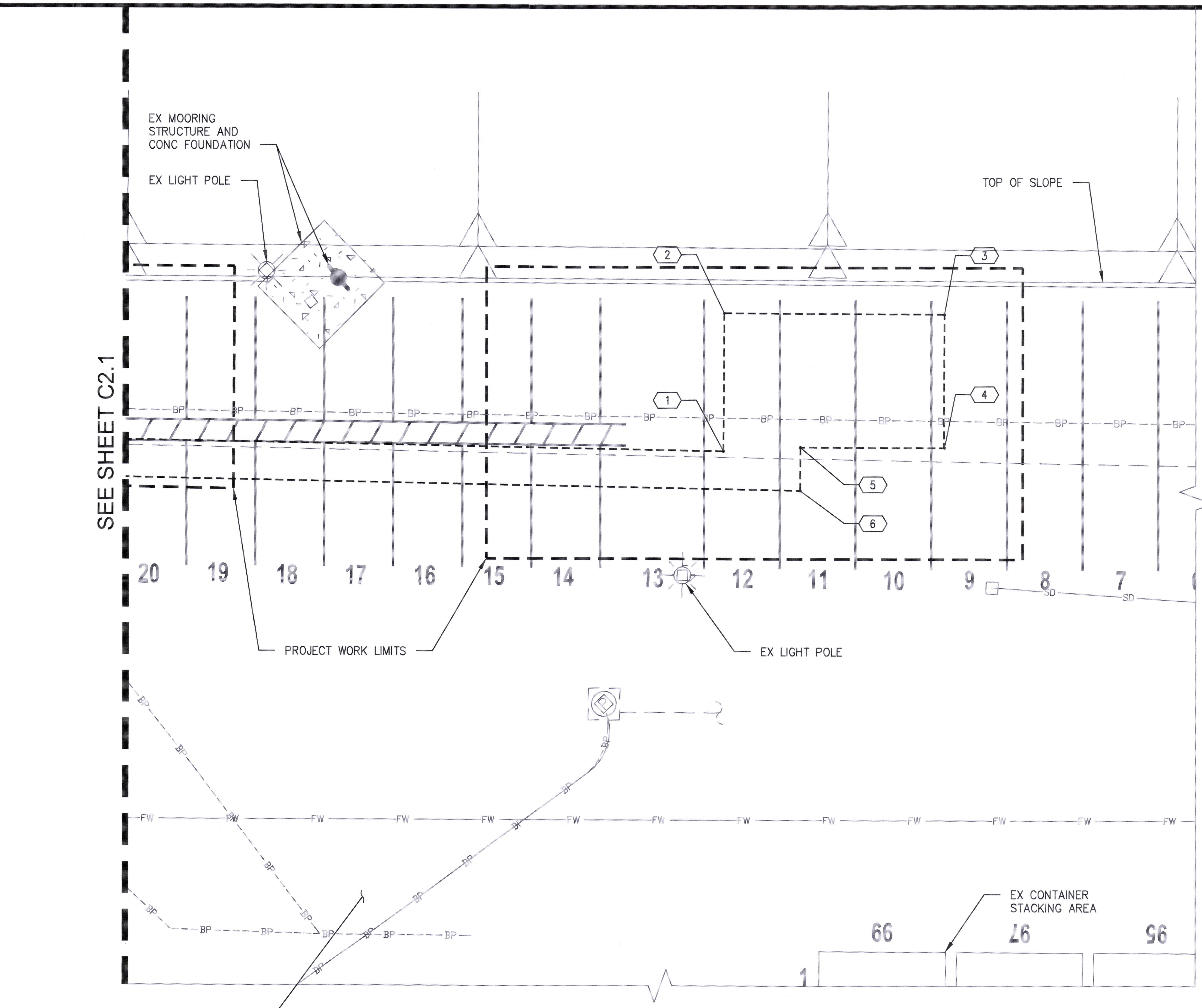
PIER 3 ENLARGED DEMOLITION PLAN

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED

6658
C2.1
13 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\C2.1_C2.2_C2.3 - Enlarged Demolition Plan

BINDING EDGE



2 / C1.1 **ENLARGED DEMOLITION PLAN**
SCALE: 1"=10'

NOTES

1. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM A REVIEW OF AVAILABLE RECORD DRAWINGS. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL POTHOLE OR OTHERWISE CONFIRM EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
2. SEE SHEET E3.1 FOR ELECTRICAL AND COMMUNICATION DEMOLITION REQUIREMENTS.
3. UTILITIES, STRUCTURES AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.
4. ALL ITEMS MARKED FOR DEMOLITION SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PER THE SPECIFICATIONS.
5. PRIOR TO DEMOLITION ACTIVITIES, CONTRACTOR SHALL LOCATE EXISTING WATER LINE FEEDING EXISTING HYDRANT. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS WITH EXISTING UTILITIES AND PROPOSED WORK.

LEGEND

PROJECT WORK LIMITS
SAW CUT BOUNDARY

SAWCUT HORIZONTAL CONTROL

POINT ID	NORTHING	EASTING
1	714584.57	1165173.06
2	714600.12	1165188.16
3	714575.87	1165213.25
4	714560.79	1165198.64
5	714576.56	1165182.32
6	714571.67	1165177.59

PROJECT NORTH
10' 0 5' 10' 15' 20'
SCALE: 1"=10'

Call 811 two business days before you dig

Port of Tacoma
kpff
TERMINAL 3 / TERMINAL 4 SHORE POWER
PIER 3 ENLARGED DEMOLITION PLAN
SJS 02/02/2022 CHECKED BY DATE
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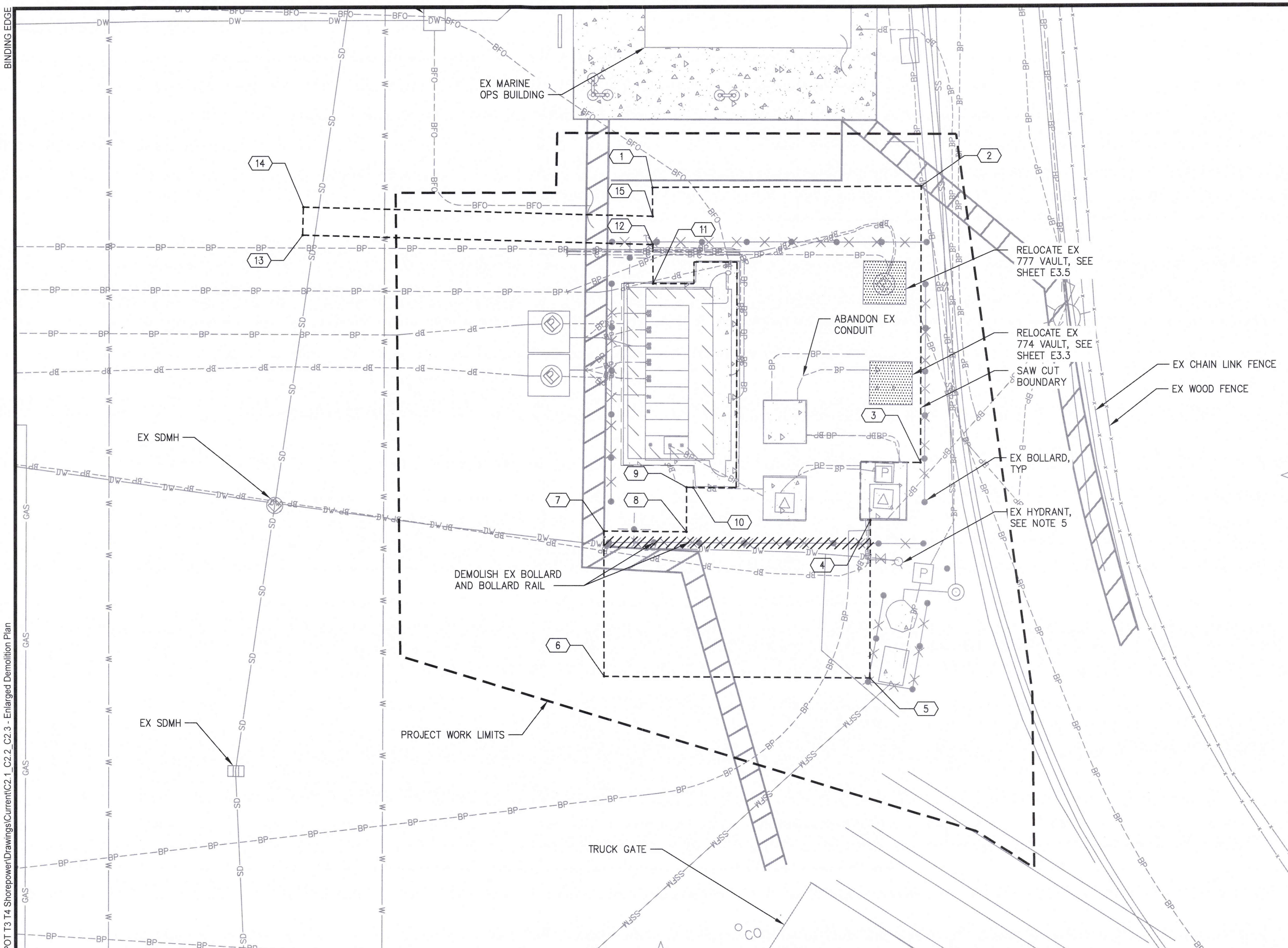
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98421
DRAWING SCALE: AS NOTED
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET
6658
C2.2
14 OF 83

PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\C2.1_C2.2_C2.3 - Enlarged Demolition Plan
BINDING EDGE



3
C1.1

ENLARGED DEMOLITION PLAN

SCALE: 1"=10'

NOTES

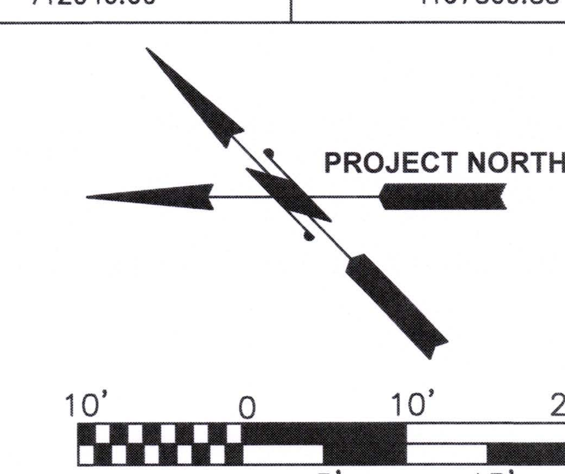
1. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM A REVIEW OF AVAILABLE RECORD DRAWINGS. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL POTHOLE OR OTHERWISE CONFIRM EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
2. SEE SHEET E3.4 FOR ELECTRICAL AND COMMUNICATION DEMOLITION REQUIREMENTS.
3. UTILITIES, STRUCTURES AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.
4. ALL ITEMS MARKED FOR DEMOLITION SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PER THE SPECIFICATIONS.
5. PRIOR TO DEMOLITION ACTIVITIES, CONTRACTOR SHALL LOCATE EXISTING WATER LINE FEEDING EXISTING HYDRANT. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS WITH EXISTING UTILITIES AND PROPOSED WORK.

LEGEND

PROJECT WORK LIMITS
SAW CUT BOUNDARY
DEMOLISH EXISTING BOLLARD AND BOLLARD RAIL 1 C2.4 2 C2.4
RELOCATE EXISTING STRUCTURE

SAWCUT HORIZONTAL CONTROL

POINT ID	NORTHING	EASTING
1	712050.53	1167813.52
2	712016.17	1167849.64
3	711979.68	1167814.33
4	711978.48	1167800.28
5	711957.69	1167780.15
6	711991.99	1167744.77
7	712011.23	1167763.22
8	712000.52	1167774.17
9	712006.41	1167779.85
10	712005.54	1167780.69
11	712037.73	1167801.36
12	712042.95	1167806.32
13	712089.14	1167760.68
14	712092.76	1167764.35
15	712046.69	1167809.88



SCALE: 1"=10'

Call 811
two business days before you dig

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

kpff
2407 North 31st Street, Suite 100
Tacoma, Washington 98407
(253) 396-0150 Fax (253) 396-0162

MARK:	REVISION:	BY:	APPR:	DATE:

NATHAN A. WASON, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER

APPROVED:
DIRECTOR ENG. DATE 2/11/22
SJS 02/02/2022 CHECKED BY DATE
RAD 02/02/2022 PROJ. ENGR DATE
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PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98421

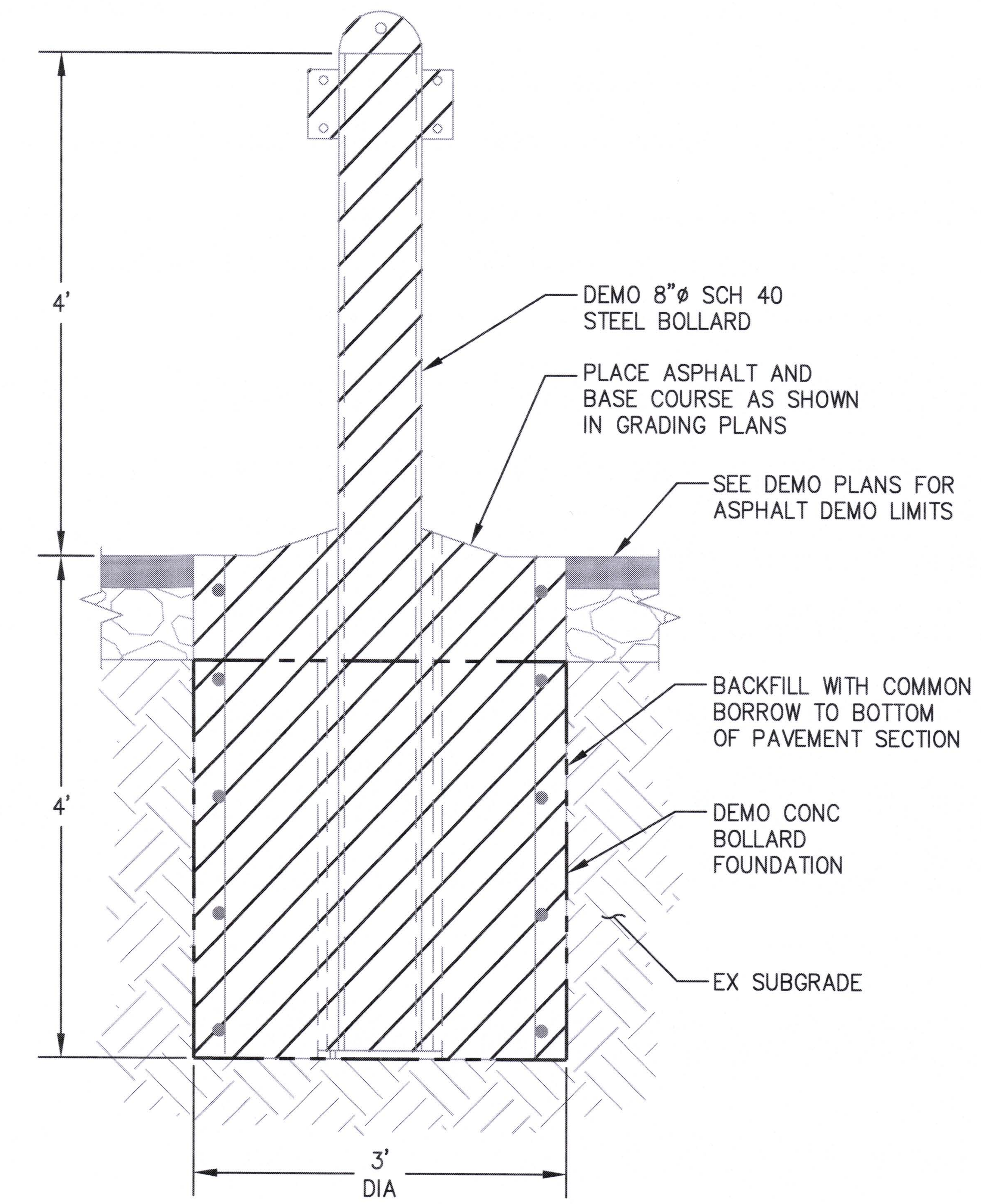
TERMINAL 3 / TERMINAL 4
SHORE POWER
PIER 4 ENLARGED DEMOLITION PLAN

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

6658
C2.3

CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

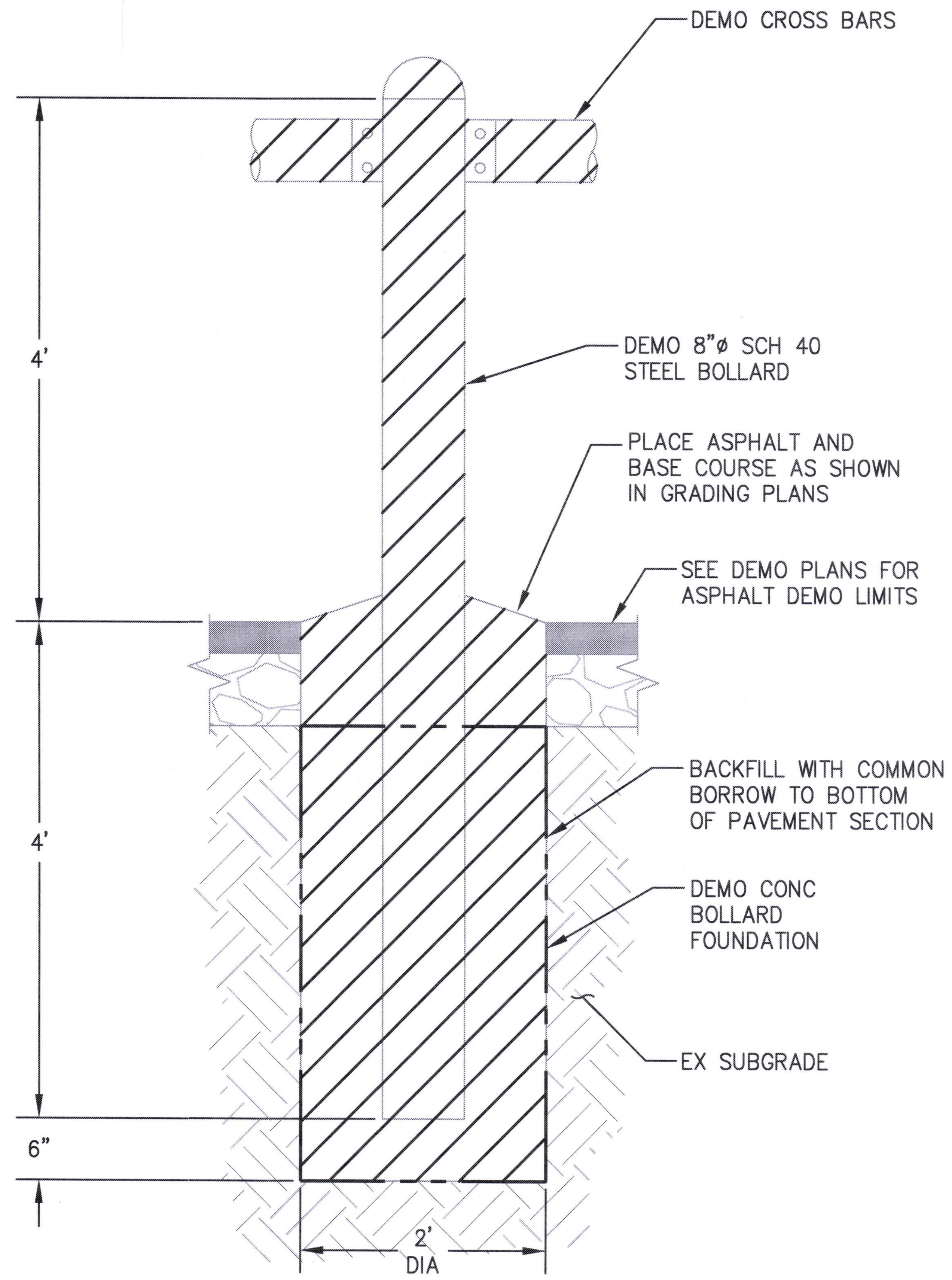
PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\C2.1_C2.2_C2.3 - Enlarged Demolition Plan



1 REMOVABLE TRAFFIC BOLLARD WITH BOLTED GUARD RAIL DEMOLITION

C2.1, C2.3

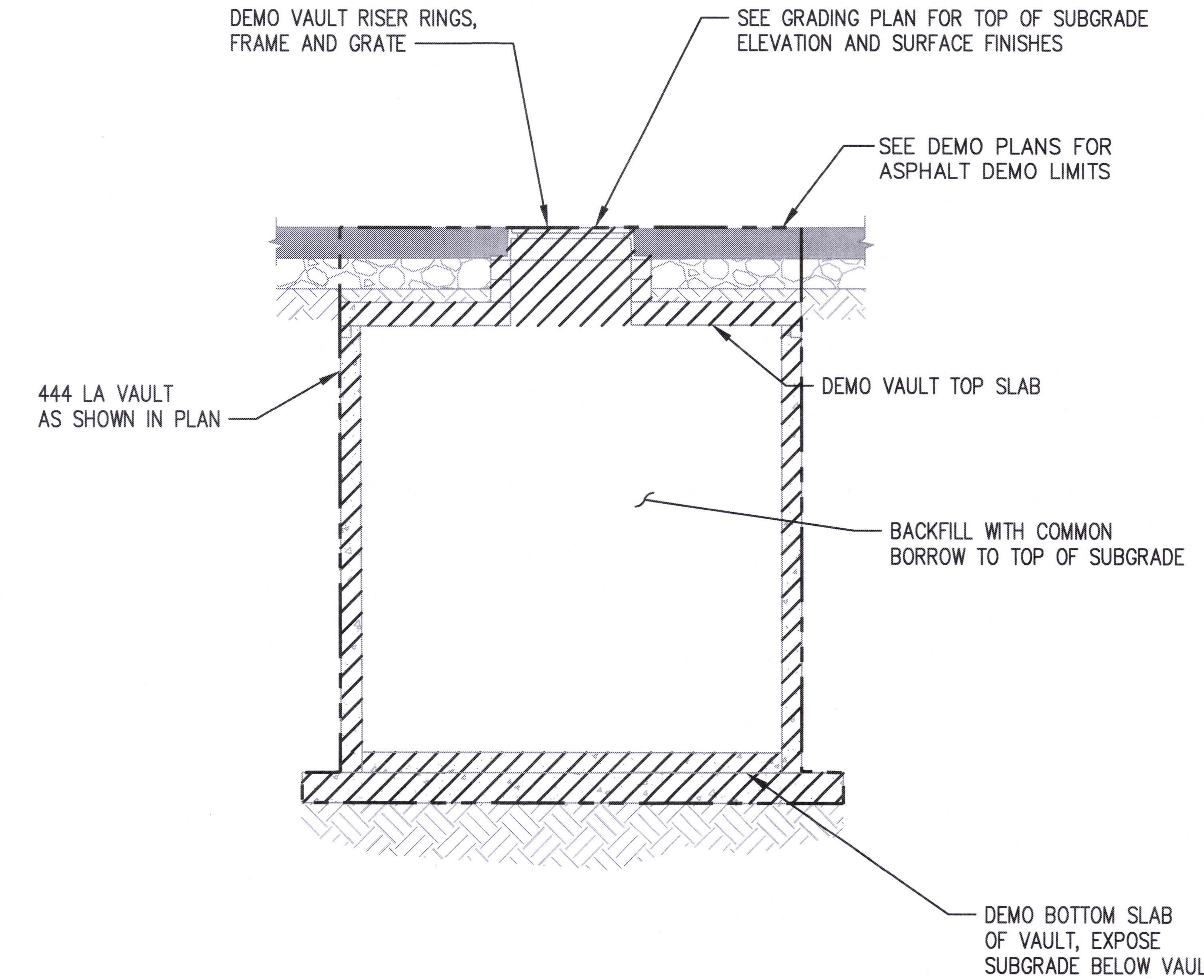
NTS



2 FIXED UTILITY PROTECTION BOLLARD WITH BOLTED GUARD RAIL DEMOLITION

C2.1, C2.3

NTS



3 ELECTRICAL VAULT DEMOLITION

C2.1

NTS

BINDING EDGE

PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\C2.4 - Demolition Details

6658	
C2.4	16 OF 83
CONT/CONS: 071357	TOWNSHIP:
M. ID: 201100.01	DAT-HRZ:
PHASE: BID SET	PARCEL:

TERMINAL 3 / TERMINAL 4
SHORE POWER

DEMOLITION DETAILS

RANGE: | SECTION:
VERT: |
DRAWING SCALE: AS NOTED

APPROVED:

DIRECTOR ENG. DATE 2/1/22

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1601 Fifth Avenue, Suite 1600 Seattle, WA 98101

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MARK:	REVISION:	BY:	APPR:	DATE:

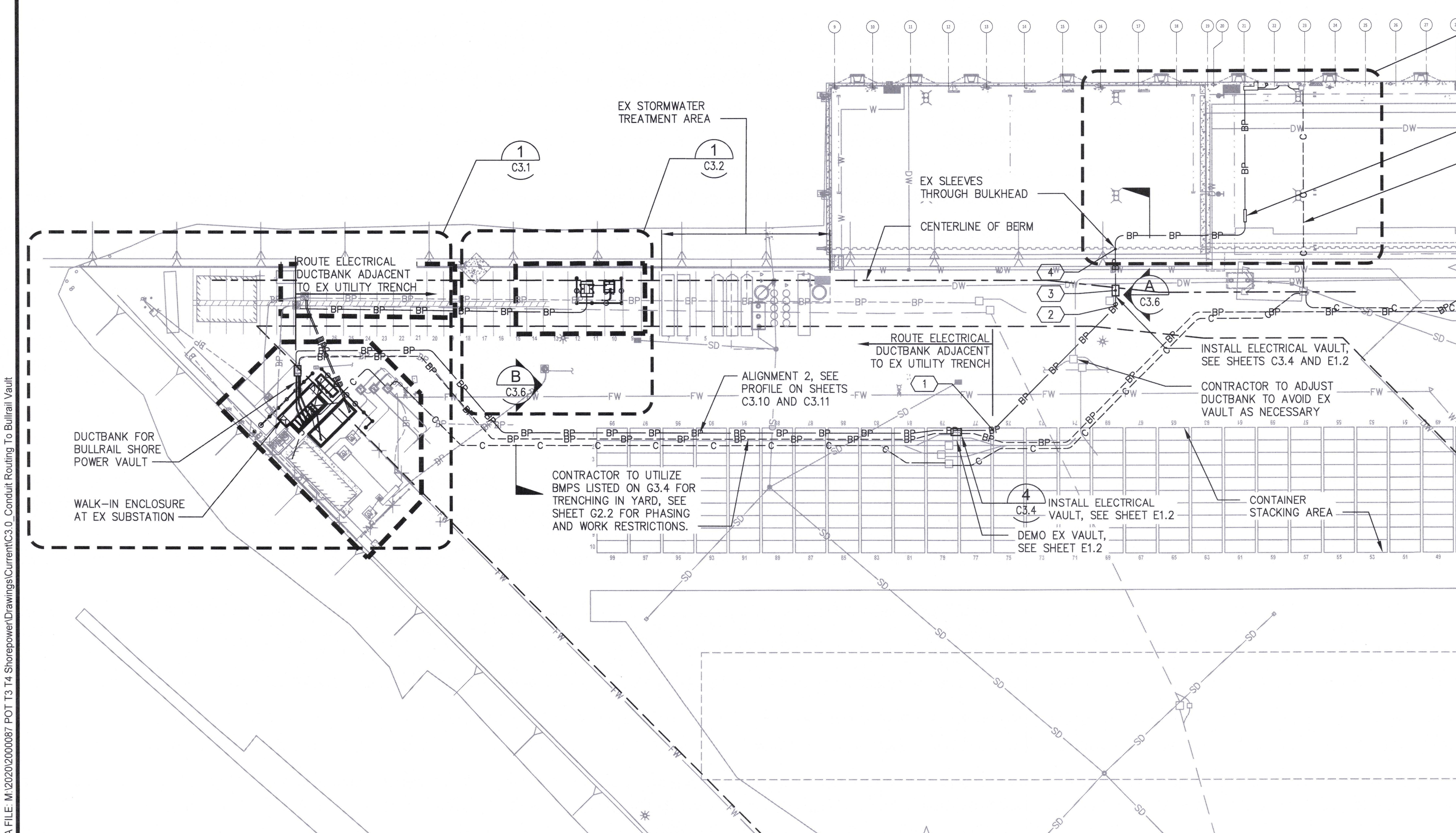
BINDING EDGE

LEGEND

——— BP ———	ELECTRICAL DUCTBANK
- - - - BP - - - - BP -	EX CONDUIT TO BE USED FOR CABLING, SEE SHEET E1.2
— — — — — —	EXISTING SLIP 1 NCD BOUNDARY, SEE SHEET G2.2 (BOTTOM OF CAP AT ELEVATION 9'±)
—·—·—·—	CENTERLINE OF EXISTING SLIP 1 BERM

NOTES

1. SEE SHEET E1.2 FOR ADDITIONAL DUCTBANK AND VAULT INFORMATION.



CENTER OF TRENCH HORIZONTAL CONTROL

POINT ID	NORTHING	EASTING
1	714335.15	1165316.05
2	714336.98	1165430.04
3	714344.02	1165437.39
4	714363.44	1165456.19

PROJECT NORTH

40' 0 40' 80'
20' 60'
SCALE: 1"=40'

1 C1.1 CONDUIT ROUTING TO BULLRAIL VAULT
SCALE: 1" = 40'

Call 811 two business days before you dig

PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\C3.0_Conduit Routing To Bullrail Vault

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Port of Tacoma P.O. BOX 1837 TACOMA, WA 98401

MARK: | REVISION: | BY: | APPR: | DATE:

NATHAN A. WATSON, STATE OF WASHINGTON, PROFESSIONAL ENGINEER

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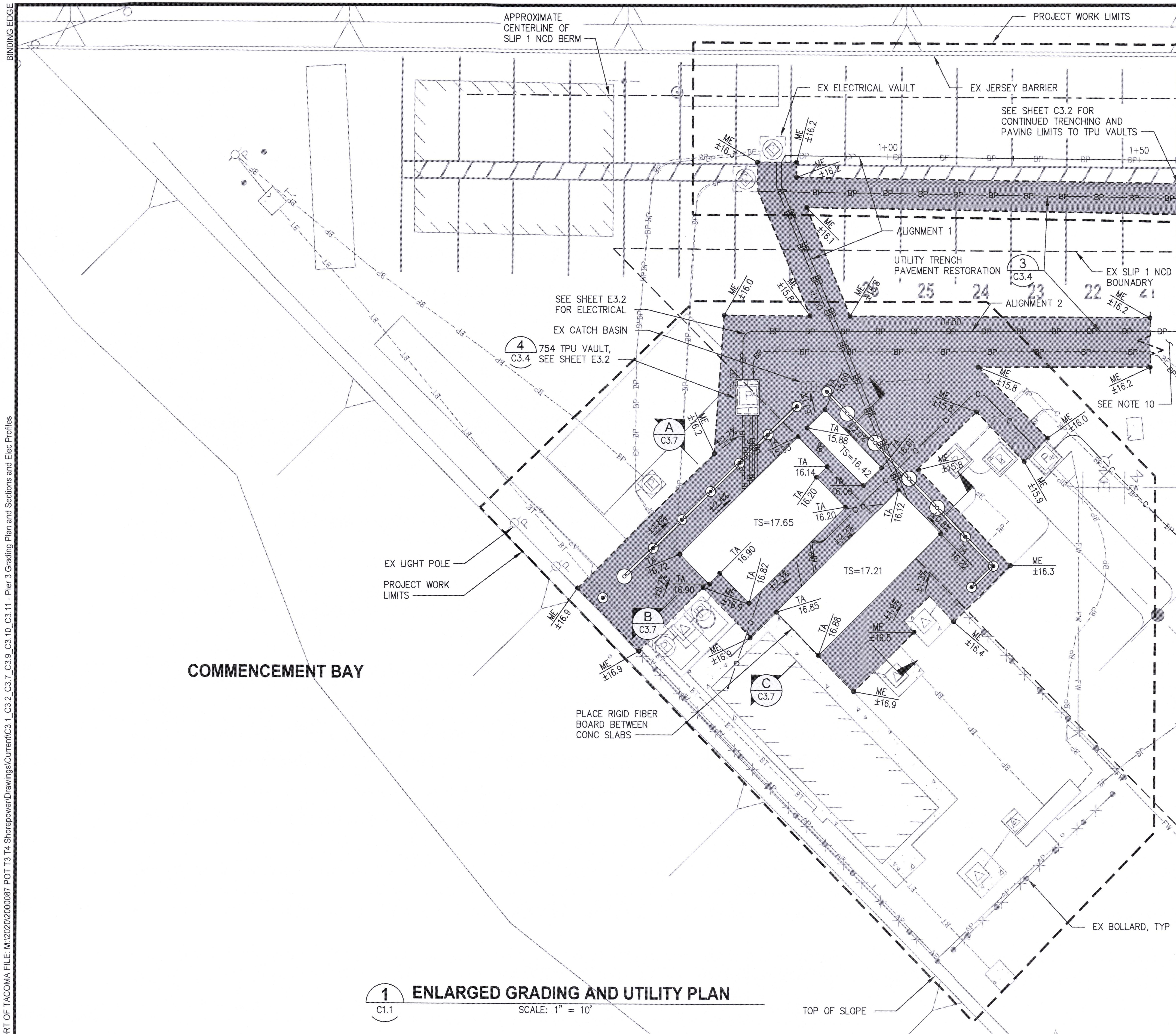
TERMINAL 3 / TERMINAL 4 SHORE POWER
CONDUIT ROUTING TO BULLRAIL VAULT
TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

6658
C3.0
17 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET



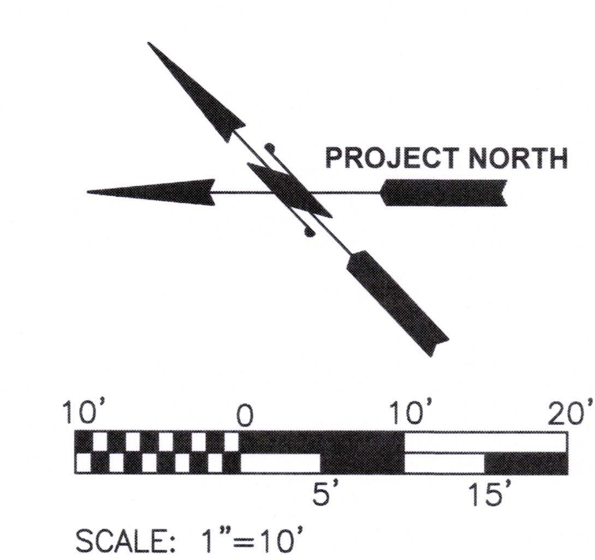
1 C1.1 **ENLARGED GRADING AND UTILITY PLAN**
SCALE: 1" = 10'

NOTES

1. ALL SPOT ELEVATIONS REPRESENT TOP OF PAVEMENT.
2. STRAIGHT GRADES SHALL BE MAINTAINED BETWEEN SPOT ELEVATIONS UNLESS OTHERWISE NOTED.
3. ALL AREAS DISTURBED OR OVER EXCAVATED DURING CONSTRUCTION SHALL BE COMPACTED PER SECTION 31 00 00 - EARTHWORK.
4. EXCAVATE TO SUBGRADE, PLACE AND COMPACT BASE COURSE AND PAVE WHERE ASPHALT PAVEMENT IS INDICATED.
5. SAWCUT AND APPLY TACK COAT AT ALL ASPHALT PAVEMENT JOINTS.
6. TOP OF FINISH GRADE OF PAVEMENT RESTORATION AREAS SHALL BE FLUSH WITH EXISTING PAVEMENT FOR A SMOOTH TRANSITION AT PAVEMENT EDGES.
7. CONTRACTOR SHALL STOCKPILE AND STAGE ALL EQUIPMENT, SUPPLIES AND MATERIALS WITHIN THE PROJECT WORK AREA LIMITS UNLESS OTHERWISE NOTED. WHEN CONTRACT WORK IS COMPLETE, CONTRACTOR SHALL CLEAR AND CLEAN THE WORK AREA AND REPAIR ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS.
8. ALL ELECTRICAL VAULTS SHALL BE SET SUCH THAT THERE IS POSITIVE DRAINAGE AWAY FROM VAULT LIDS. NO VAULTS SHALL BE SET PROUD OF THE ADJACENT PAVEMENT.
9. SEE SHEETS C3.9–C3.11 FOR TYPICAL ELECTRICAL DUCT BANK PROFILES. SEE ELECTRICAL PLANS FOR CABLE AND CONDUIT REQUIREMENTS. PROFILES PROVIDED FOR APPROXIMATE ROUTING AND MINIMUM REQUIREMENTS, CONTRACTOR SHALL POTHOLE AND VERIFY CROSSINGS TO DETERMINE FINAL ROUTING.
10. RESTORE PAVEMENT FOR TRENCHING OUTSIDE OF WORK AREA LIMITS, SEE SHEET C3.0 FOR ALIGNMENT.
11. FOR HORIZONTAL CONTROL OF SLABS AND BOLLARDS, SEE SHEET C4.1.

LEGEND

- PROJECT WORK LIMITS
- PAVING LIMITS
- EXISTING SLIP NCD BOUNDARY (BOTTOM OF CAP AT EL 9'±), SEE SHEET G2.3
- CENTERLINE OF EXISTING SLIP 1 BERM
- ASPHALT PAVEMENT (1 / C3.4)
- ME ±X.XX — SPOT ELEVATION
- REMOVABLE BOLLARD (1 / C3.5)
- BOLLARD (2 / C3.5)



SCALE: 1"=10'

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P.O. BOX 1837 TACOMA, WA 98401

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PROJ. ENGR	DATE

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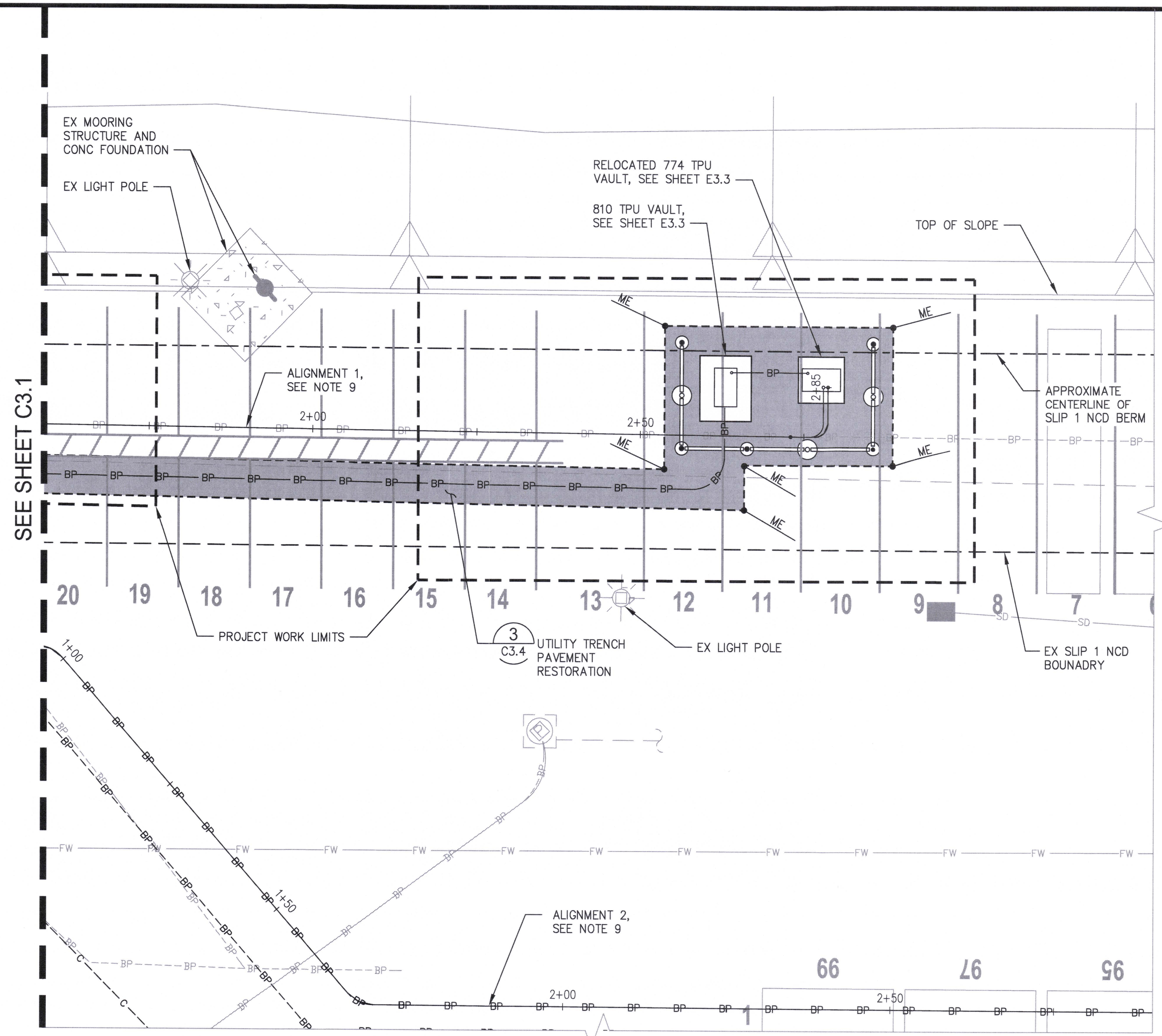
TERMINAL 3 / TERMINAL 4 SHORE POWER

PIER 3 ENLARGED GRADING AND UTILITY PLAN

TOWNSHIP:	RANGE:	SECTION:
DAT-HRZ:	VERT:	
PARCEL:	DRAWING SCALE: AS NOTED	

6658
C3.1
18 OF 83

CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET



2 ENLARGED GRADING AND UTILITY PLAN

C1.1 SCALE: 1" = 10'

NOTES

1. ALL SPOT ELEVATIONS REPRESENT TOP OF PAVEMENT.
2. STRAIGHT GRADES SHALL BE MAINTAINED BETWEEN SPOT ELEVATIONS UNLESS OTHERWISE NOTED.
3. ALL AREAS DISTURBED OR OVER EXCAVATED DURING CONSTRUCTION SHALL BE COMPACTED PER SECTION 31 00 00 - EARTHWORK.
4. EXCAVATE TO SUBGRADE, PLACE AND COMPACT BASE COURSE AND PAVE WHERE ASPHALT PAVEMENT IS INDICATED.
5. SAWCUT AND APPLY TACK COAT AT ALL ASPHALT PAVEMENT JOINTS.
6. TOP OF FINISH GRADE OF PAVEMENT RESTORATION AREAS SHALL BE FLUSH WITH EXISTING PAVEMENT FOR A SMOOTH TRANSITION AT PAVEMENT EDGES.
7. CONTRACTOR SHALL STOCKPILE AND STAGE ALL EQUIPMENT SUPPLIES AND MATERIALS WITHIN THE PROJECT WORK AREA LIMITS UNLESS OTHERWISE NOTED. WHEN CONTRACT WORK IS COMPLETE, CONTRACTOR SHALL CLEAR AND CLEAN THE WORK AREA AND REPAIR ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS.
8. ALL ELECTRICAL VAULTS SHALL BE SET SUCH THAT THERE IS POSITIVE DRAINAGE AWAY FROM VAULT LIDS. NO VAULTS SHALL BE SET PROUD OF THE ADJACENT PAVEMENT OUTSIDE THE BOLLARD AREAS.
9. SEE SHEETS C3.9–C3.11 FOR TYPICAL ELECTRICAL DUCT BANK PROFILES. SEE ELECTRICAL PLANS FOR CABLE AND CONDUIT REQUIREMENTS. PROFILES PROVIDED FOR APPROXIMATE ROUTING AND MINIMUM REQUIREMENTS, CONTRACTOR SHALL POTHOLE AND VERIFY CROSSINGS TO DETERMINE FINAL ROUTING.
10. RESTORE PAVEMENT FOR TRENCHING OUTSIDE OF WORK AREA LIMITS, SEE SHEET C3.0 FOR ALIGNMENT.
11. FOR HORIZONTAL CONTROL OF BOLLARDS, SEE SHEET C4.2.
12. SEE SHEET C3.4 FOR VAULT BEDDING. NOTE: VAULTS WITHIN BOLLARDS DO NOT NEED TO BE TOP PICK RATED.

LEGEND

— — —	PROJECT WORK LIMITS
- - - -	PAVING LIMITS
— — —	EXISTING SLIP NCD BOUNDARY (BOTTOM OF CAP AT EL 9'±), SEE SHEET G2.3
—·—·—	CENTERLINE OF EXISTING SLIP 1 BERM
	ASPHALT PAVEMENT 1 / C3.4
ME ±X.XX	SPOT ELEVATION
	REMOVABLE BOLLARD 1 / C3.5
	BOLLARD 2 / C3.5

PROJECT NORTH

10' 0 5' 10' 15' 20'

SCALE: 1"=10'

Port of Tacoma

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kpff

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APPROVED:

DIRECTOR ENG. DATE

PRINTED BY: rdorr Feb 02, 2022

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TERMINAL 3 / TERMINAL 4 SHORE POWER

PIER 3 ENLARGED GRADING AND UTILITY PLAN

TOWNSHIP: RANGE: SECTION:

DAT-HRZ: VERT:

PARCEL: DRAWING SCALE: AS NOTED

6658

C3.2

19 OF 83

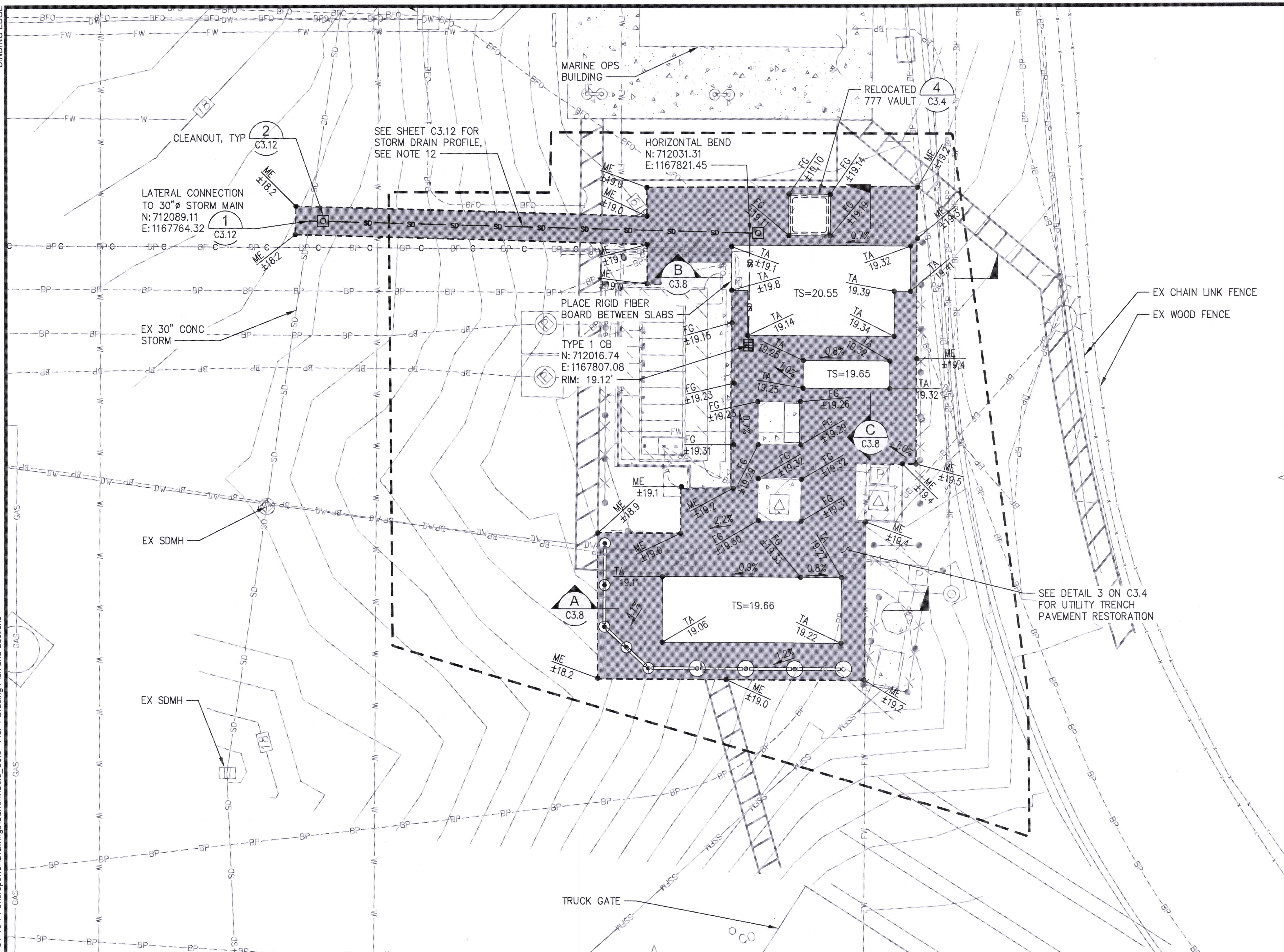
CONT/CONS: 071357

M. ID: 201100.01

PHASE: BID SET

BINDING EDGE

PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\C3.1_C3.2_C3.7_C3.9_C3.10_C3.11 - Pier 3 Grading Plan and Sections and Elec Profiles



3 C1.1 **ENLARGED GRADING AND UTILITY PLAN**

SCALE: 1" = 10'

Call 811 two business days before you dig

NOTES

1. ALL SPOT ELEVATIONS REPRESENT TOP OF PAVEMENT.
2. STRAIGHT GRADES SHALL BE MAINTAINED BETWEEN SPOT ELEVATIONS UNLESS OTHERWISE NOTED.
3. ALL AREAS DISTURBED OR OVER EXCAVATED DURING CONSTRUCTION SHALL BE COMPACTED PER SECTION 31 00 00 - EARTHWORK.
4. EXCAVATE TO SUBGRADE, PLACE AND COMPACT BASE COURSE AND PAVE WHERE ASPHALT PAVEMENT IS INDICATED.
5. SAWCUT AND APPLY TACK COAT AT ALL ASPHALT PAVEMENT JOINTS.
6. TOP OF FINISH GRADE OF PAVEMENT RESTORATION AREAS SHALL BE FLUSH WITH EXISTING PAVEMENT FOR A SMOOTH TRANSITION AT PAVEMENT EDGES.
7. CONTRACTOR SHALL STOCKPILE AND STAGE ALL EQUIPMENT SUPPLIES AND MATERIALS WITHIN THE PROJECT WORK AREA LIMITS UNLESS OTHERWISE NOTED. WHEN CONTRACT WORK IS COMPLETE, CONTRACTOR SHALL CLEAR AND CLEAN THE WORK AREA AND REPAIR ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS.
8. ALL ELECTRICAL VAULTS SHALL BE SET SUCH THAT THERE IS POSITIVE DRAINAGE AWAY FROM VAULT LIDS. NO VAULTS SHALL BE SET PROUD OF THE ADJACENT PAVEMENT OUTSIDE THE BOLLARD AREAS.
9. SEE SHEETS C3.9–C3.11 FOR TYPICAL ELECTRICAL DUCT BANK PROFILES. SEE ELECTRICAL PLANS FOR CABLE AND CONDUIT REQUIREMENTS. PROFILES PROVIDED FOR APPROXIMATE ROUTING AND MINIMUM REQUIREMENTS, CONTRACTOR SHALL POTHOLE AND VERIFY CROSSINGS TO DETERMINE FINAL ROUTING.
10. RESTORE PAVEMENT FOR TRENCHING OUTSIDE OF WORK AREA LIMITS, SEE SHEETS G3.4 AND C3.4.
11. FOR HORIZONTAL CONTROL OF BOLLARDS, SEE SHEET C4.3.
12. COORDINATE ROUTING OF STORM DRAIN LINE WITH NEW ELECTRICAL DUCTBANKS AND CONDUITS SHOWN ON SHEET E3.5.

LEGEND

PROJECT WORK LIMITS	
PAVING LIMITS	
SD — STORM DRAIN LINE	
ASPHALT PAVEMENT	1 C3.4
ME ±X.XX — SPOT ELEVATION	1 C3.5
REMOVABLE BOLLARD	
BOLLARD	2 C3.5

Port of Tacoma, P.O. BOX 1837 TACOMA, WA 98401

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APPROVED: DIRECTOR ENG. DATE

SJS 02/02/2022 CHECKED BY DATE

RAD 02/02/2022 PROJ. ENGR DATE

PRINTED BY: dyu Feb 02, 2022

PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98421

TERMINAL 3 / TERMINAL 4 SHORE POWER

PIER 4 ENLARGED GRADING AND UTILITY PLAN

TOWNSHIP: | RANGE: | SECTION:

DAT–HRZ: | VERT: | DRAWING SCALE: AS NOTED

PARCEL:

6658

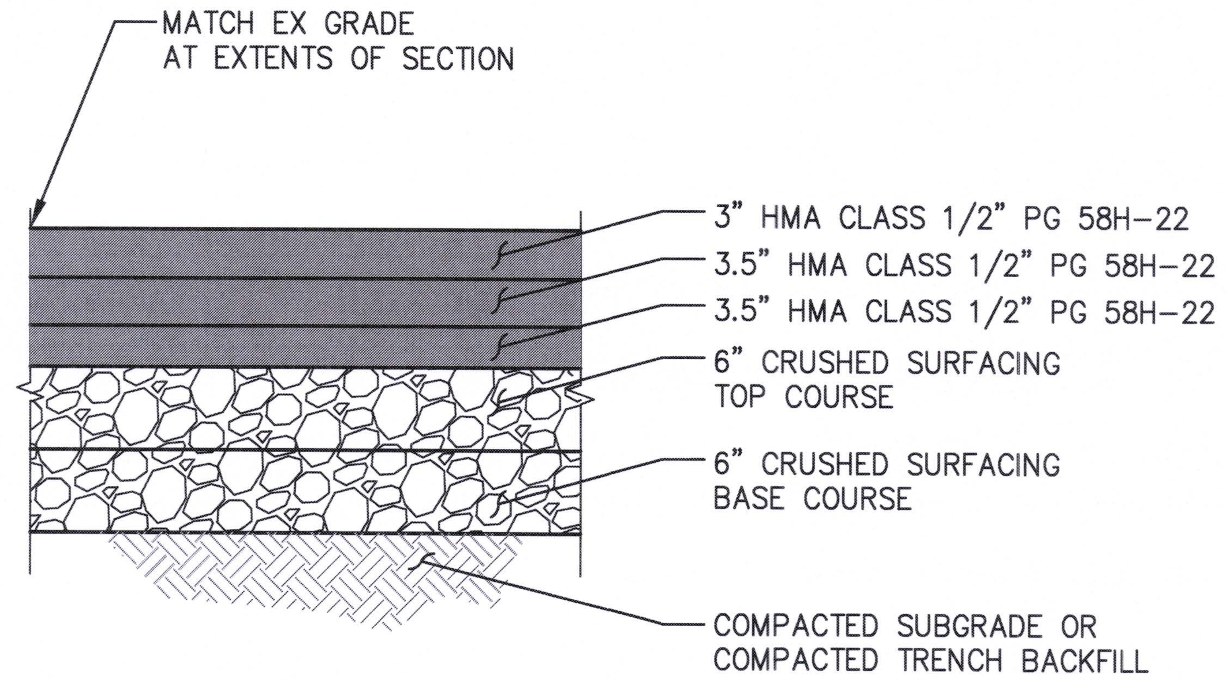
C3.3

CONT/CONS: 071357

M. ID: 201100.01

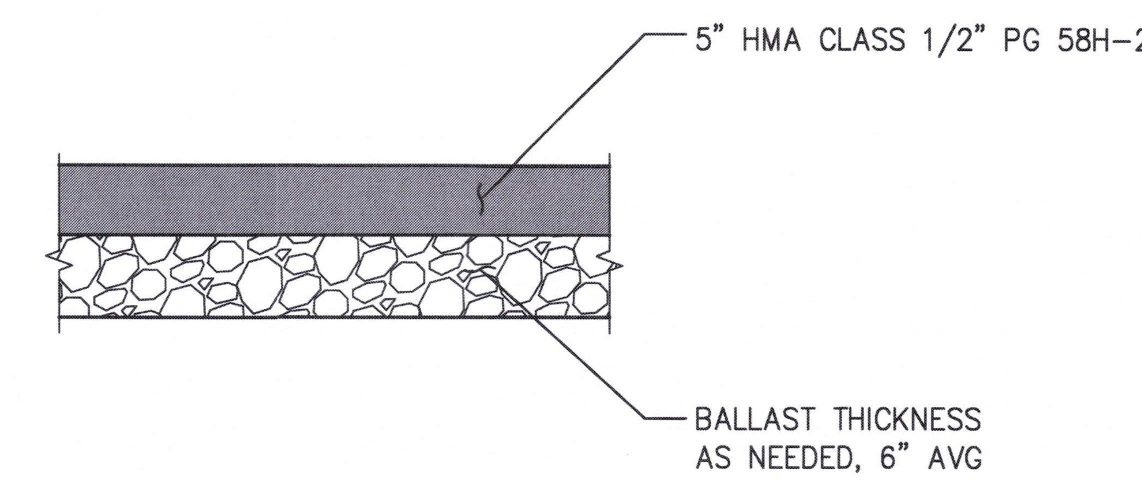
PHASE: BID SET

BINDING EDGE



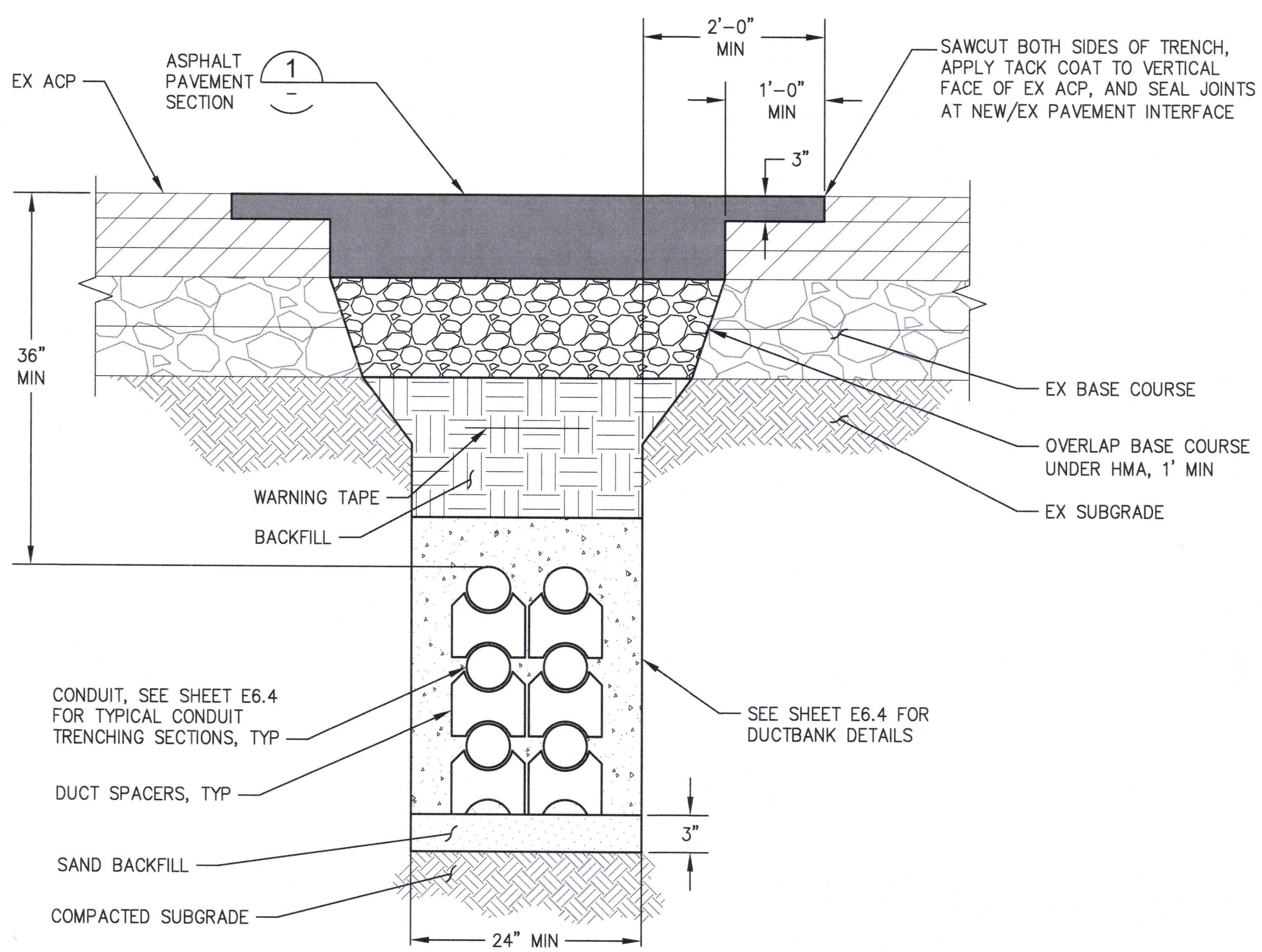
1 ASPHALT PAVEMENT SECTION

C3.1, C3.2, C3.3, C3.6 SCALE: 1" = 1'–0"



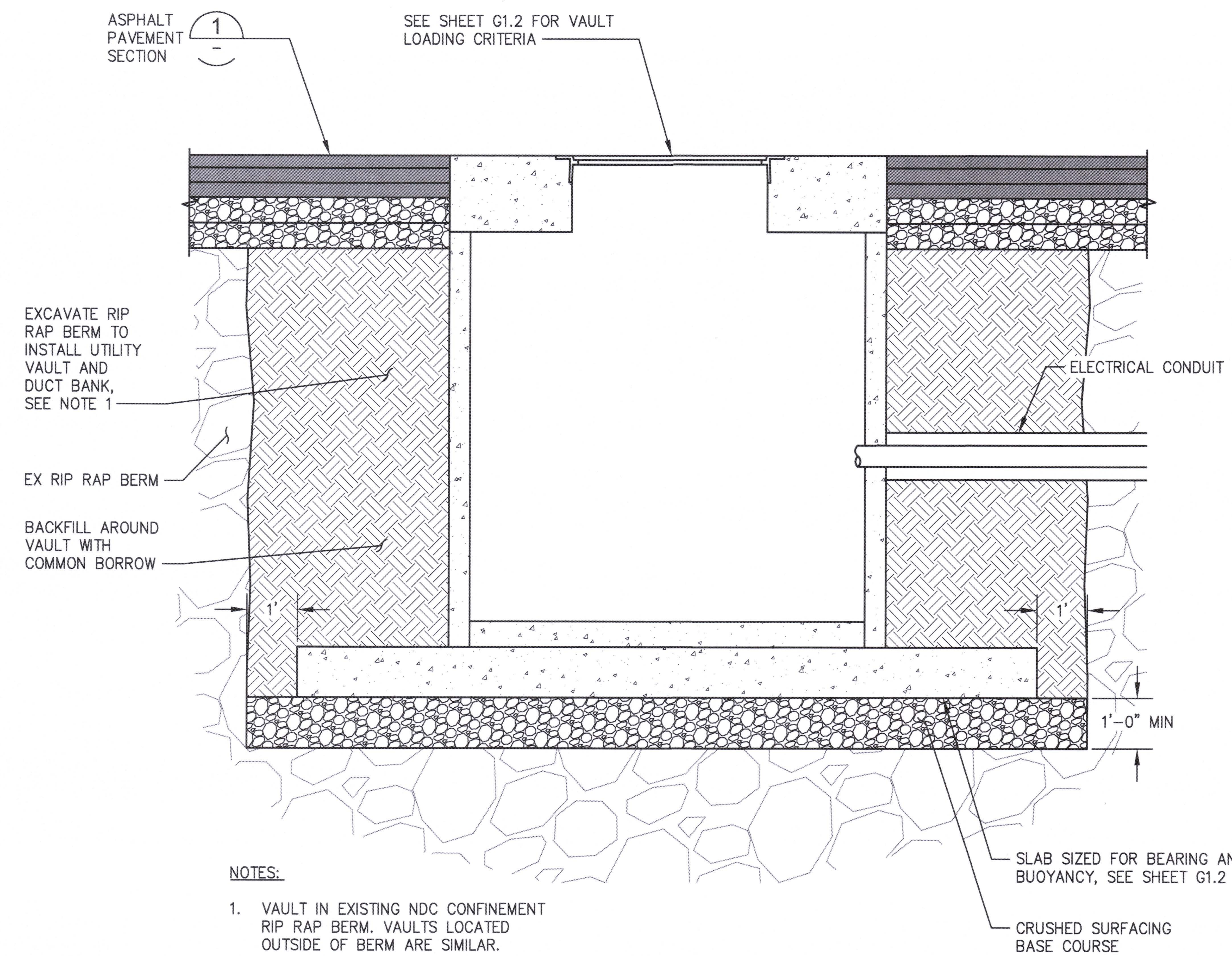
2 ASPHALT PAVEMENT SECTION ON PIER

S2.3, S2.4, S2.5, S7.2 1" = 1'–0"



3 UTILITY TRENCH PAVEMENT RESTORATION

C3.1, C3.2 NTS



NOTES:

1. VAULT IN EXISTING NDC CONFINEMENT RIP RAP BERM. VAULTS LOCATED OUTSIDE OF BERM ARE SIMILAR.

4 UTILITY VAULT DETAIL

C3.0, C3.1, C3.2, C3.3 NTS

PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\C3.4 - Grading and Utility Details

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2407 North 31st Street, Suite 100
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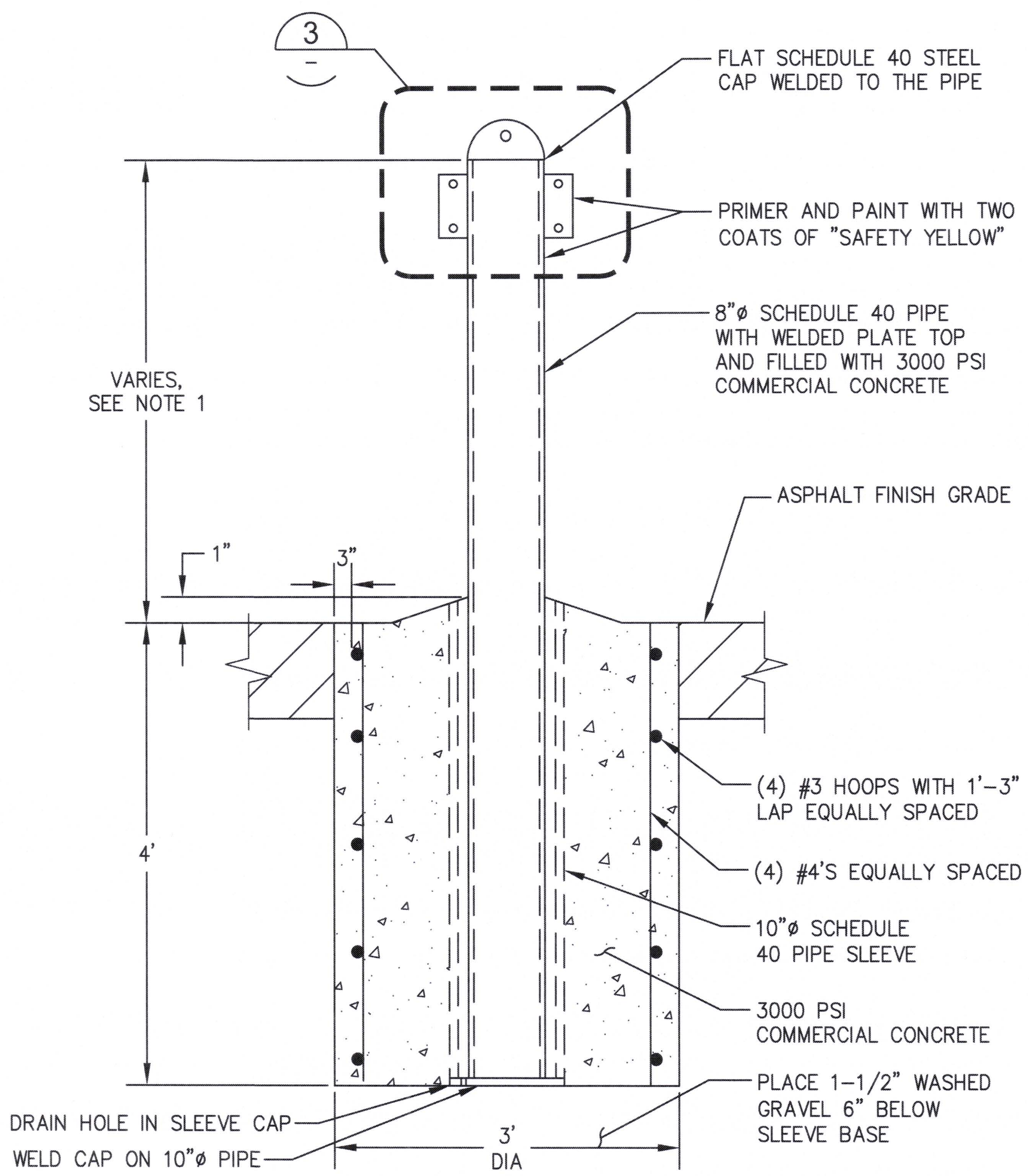
TERMINAL 3 / TERMINAL 4
SHORE POWER
GRADING AND UTILITY DETAILS

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT: | DRAWING SCALE: AS NOTED
PARCEL:

6658
C3.4
21 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET



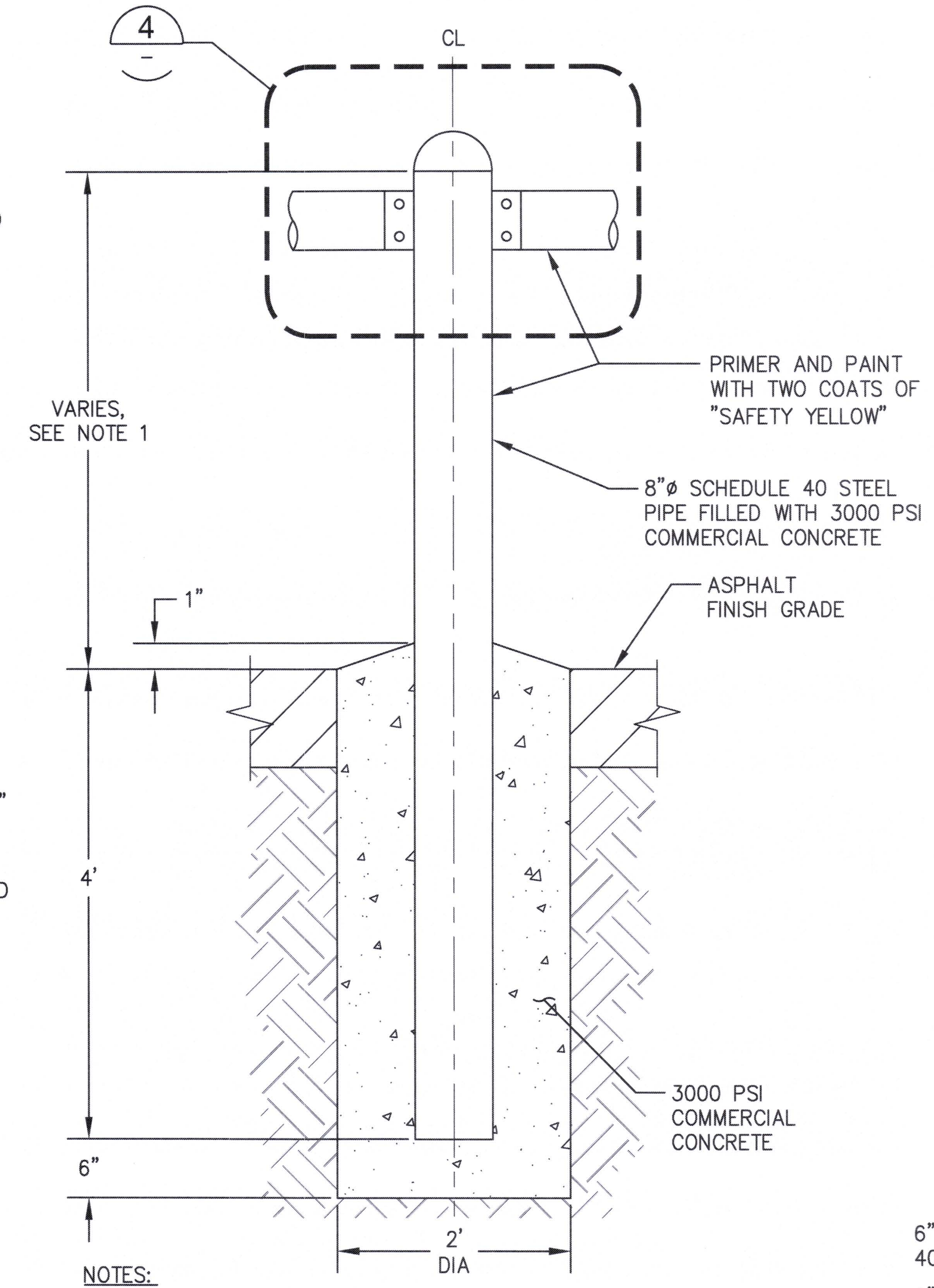
NOTES:

1. BOLLARDS AT PIER 3 EXTEND 3' ABOVE GRADE. BOLLARDS AT PIER 4 EXTEND 4' ABOVE GRADE.

1 REMOVABLE TRAFFIC BOLLARD WITH BOLTED GUARD RAIL

C3.1, C3.2, C3.3

NTS



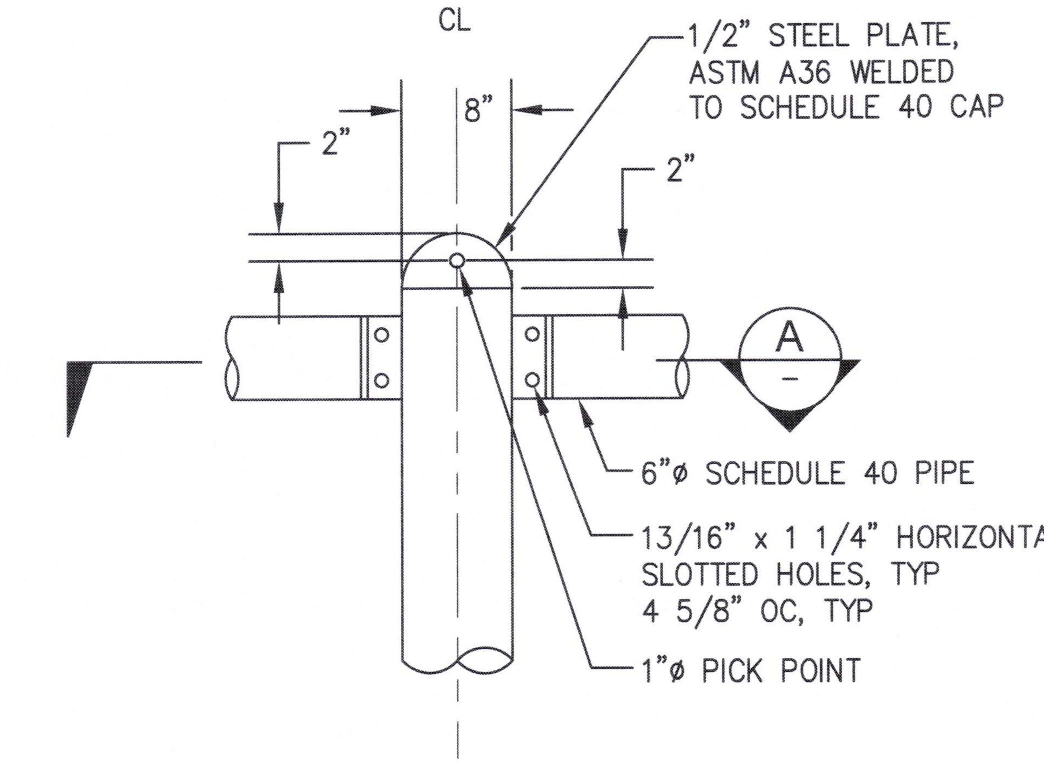
NOTES:

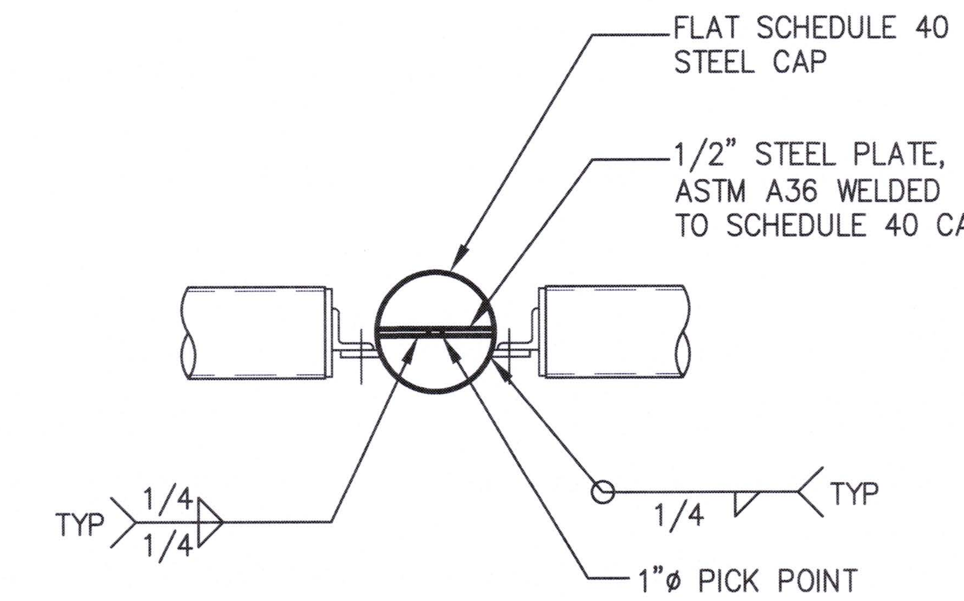
1. BOLLARDS AT PIER 3 EXTEND 3' ABOVE GRADE. BOLLARDS AT PIER 4 EXTEND 4' ABOVE GRADE.

2 FIXED UTILITY PROTECTION BOLLARD WITH BOLTED GUARD RAIL

C3.1, C3.2, C3.3

NTS

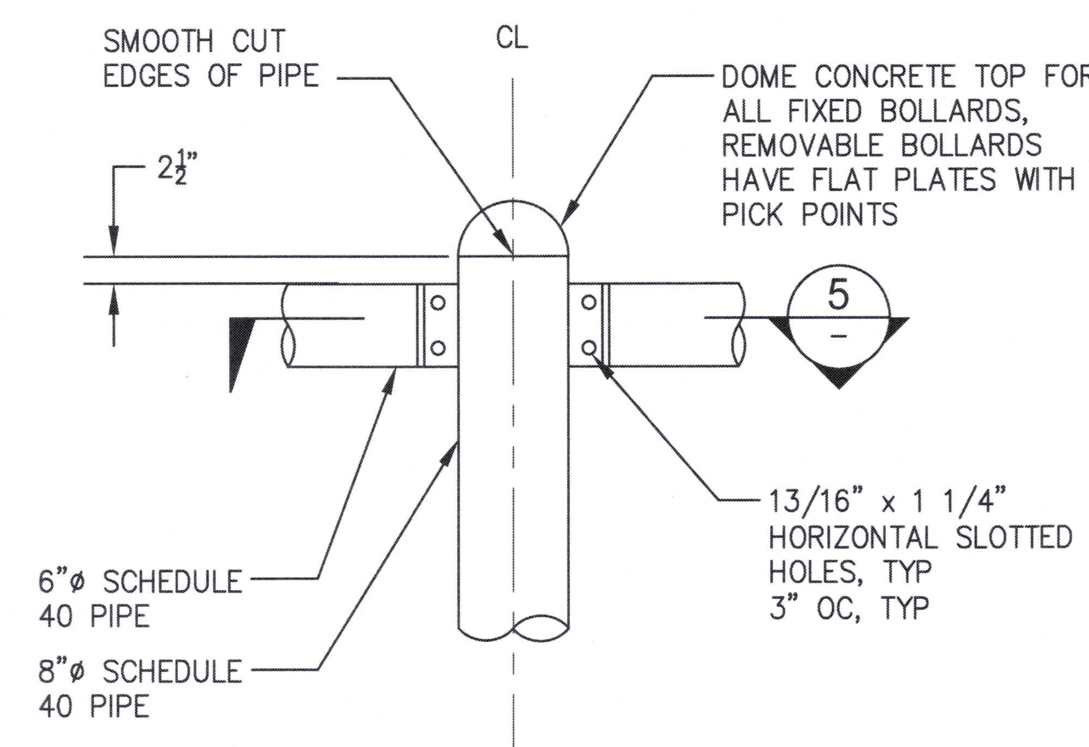




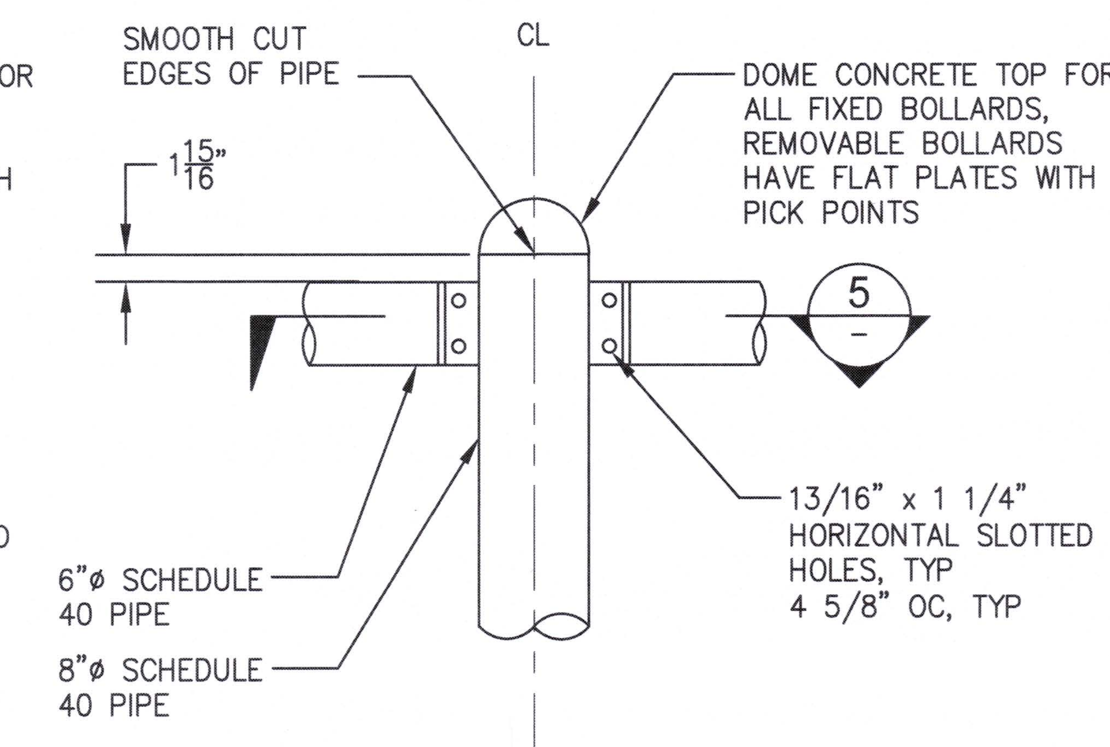
SECTION A

3 REMOVABLE BOLLARD CAP

NTS



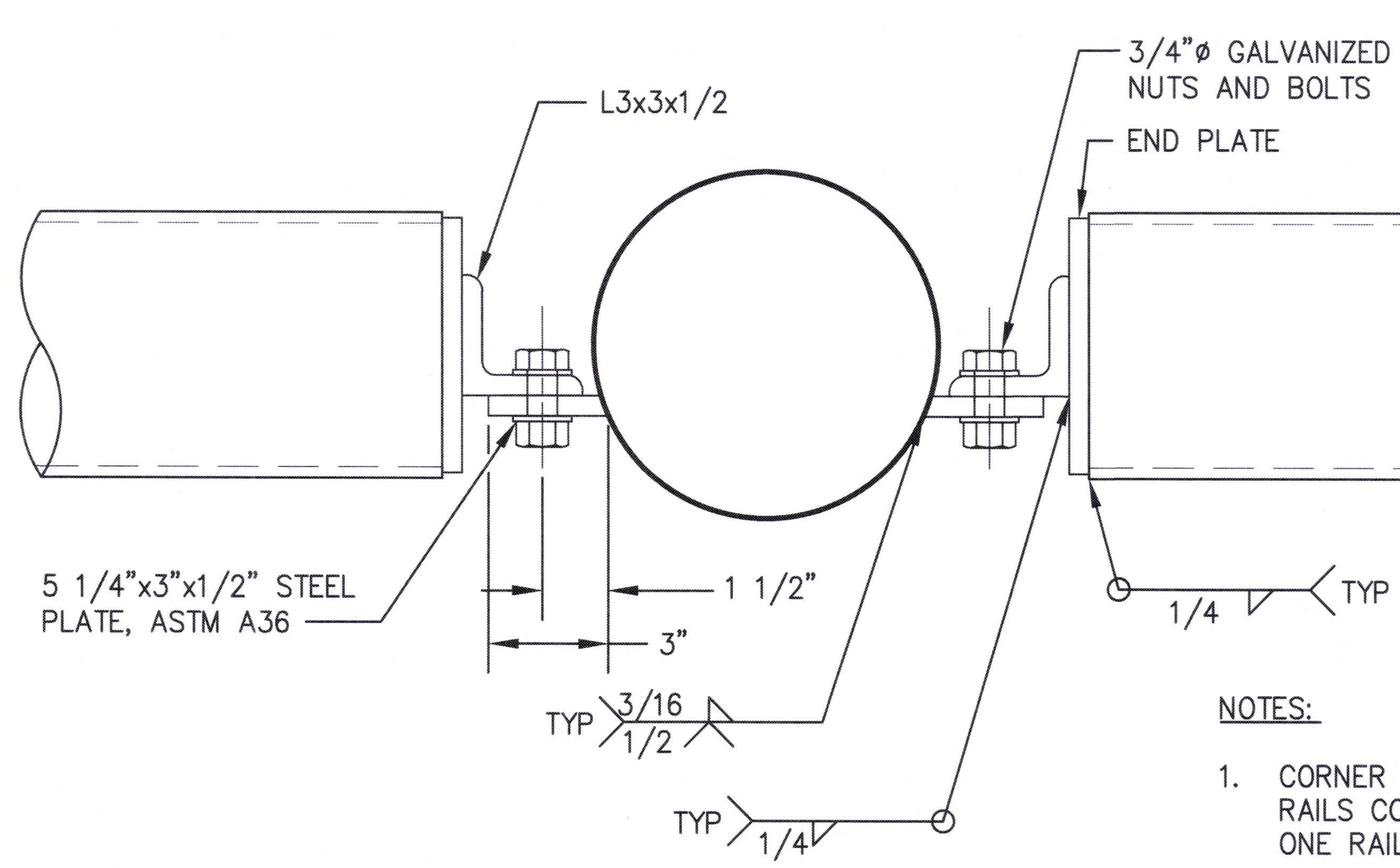
PIER 3



PIER 4

4 BOLTED GUARD RAIL

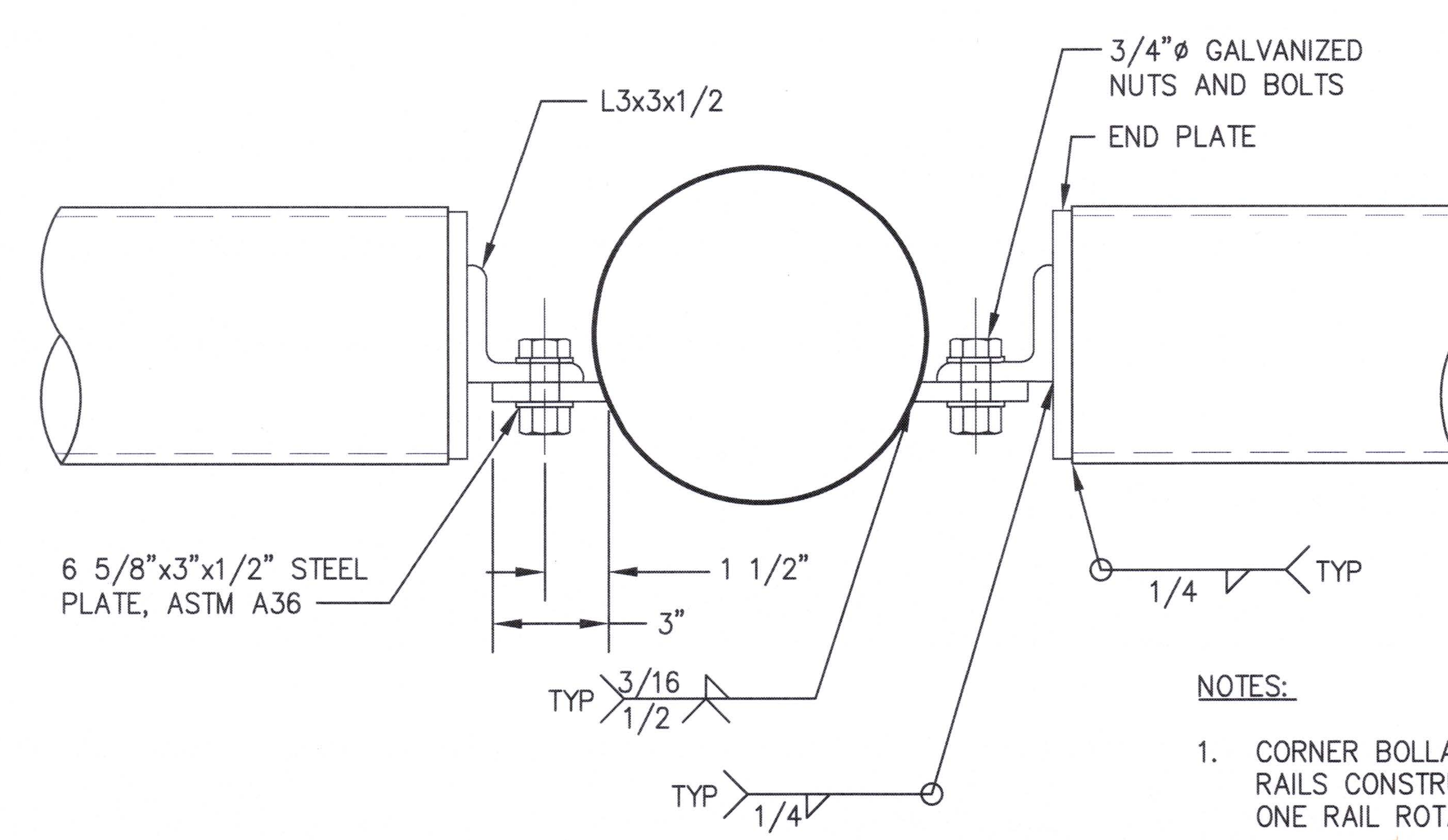
NTS



NOTES:

1. CORNER BOLLARDS SHALL HAVE GUARD RAILS CONSTRUCTED SIMILARLY BUT HAVE ONE RAIL ROTATED 90° HORIZONTALLY.

PIER 3



NOTES:

1. CORNER BOLLARDS SHALL HAVE GUARD RAILS CONSTRUCTED SIMILARLY BUT HAVE ONE RAIL ROTATED 90° HORIZONTALLY.

PIER 4

5 BOLTED GUARD RAIL SECTION

NTS

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TERMINAL 3 / TERMINAL 4
SHORE POWER

GRADING AND UTILITY DETAILS

TOWNSHIP:	RANGE:	SECTION:
DAT–HRZ:	VERT:	
PARCEL:	DRAWING SCALE:	AS NOTED

6658

C3.5

22 OF 83

CONT/CONS:	071357
M. ID:	201100.01
PHASE:	BID SET

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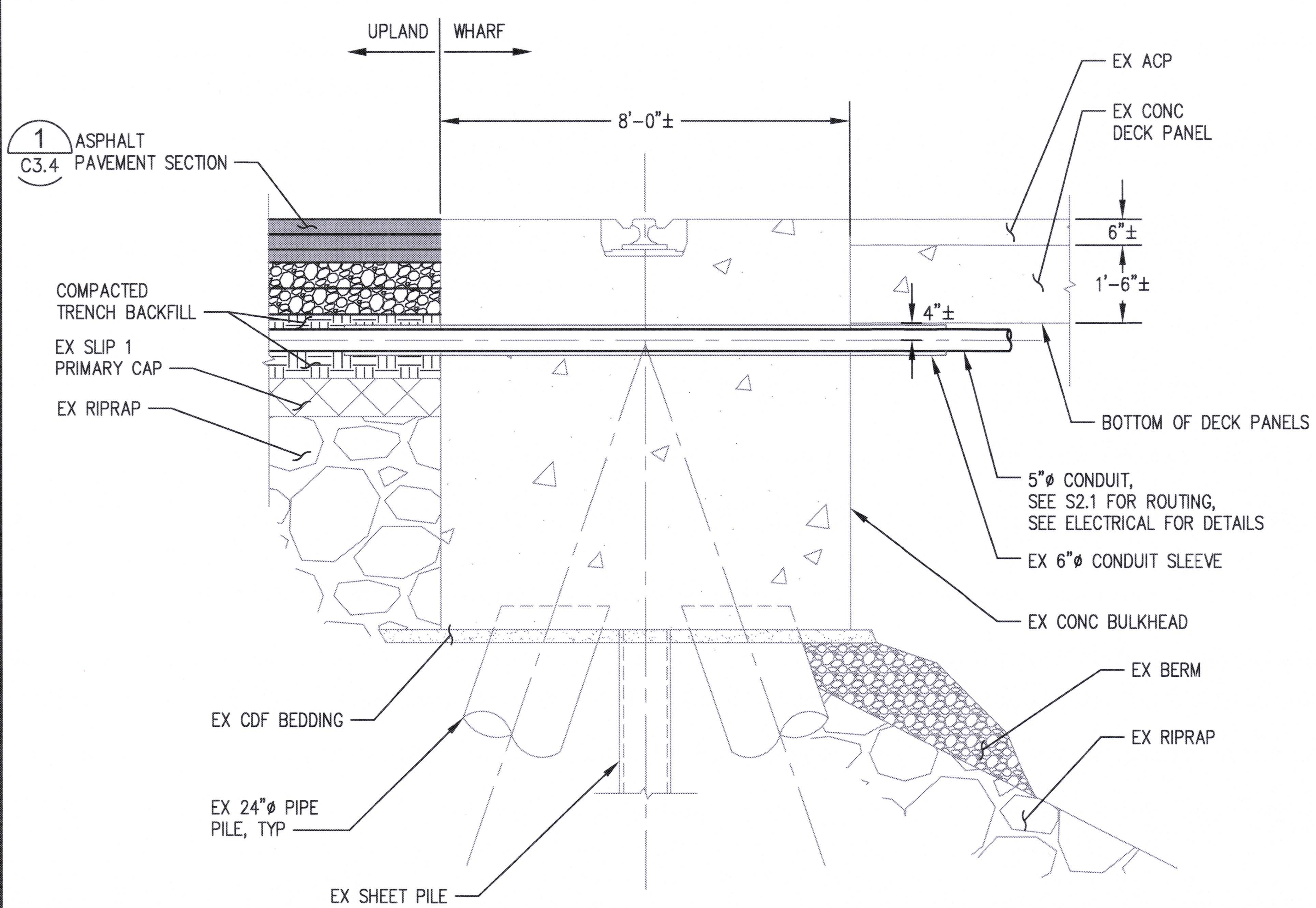
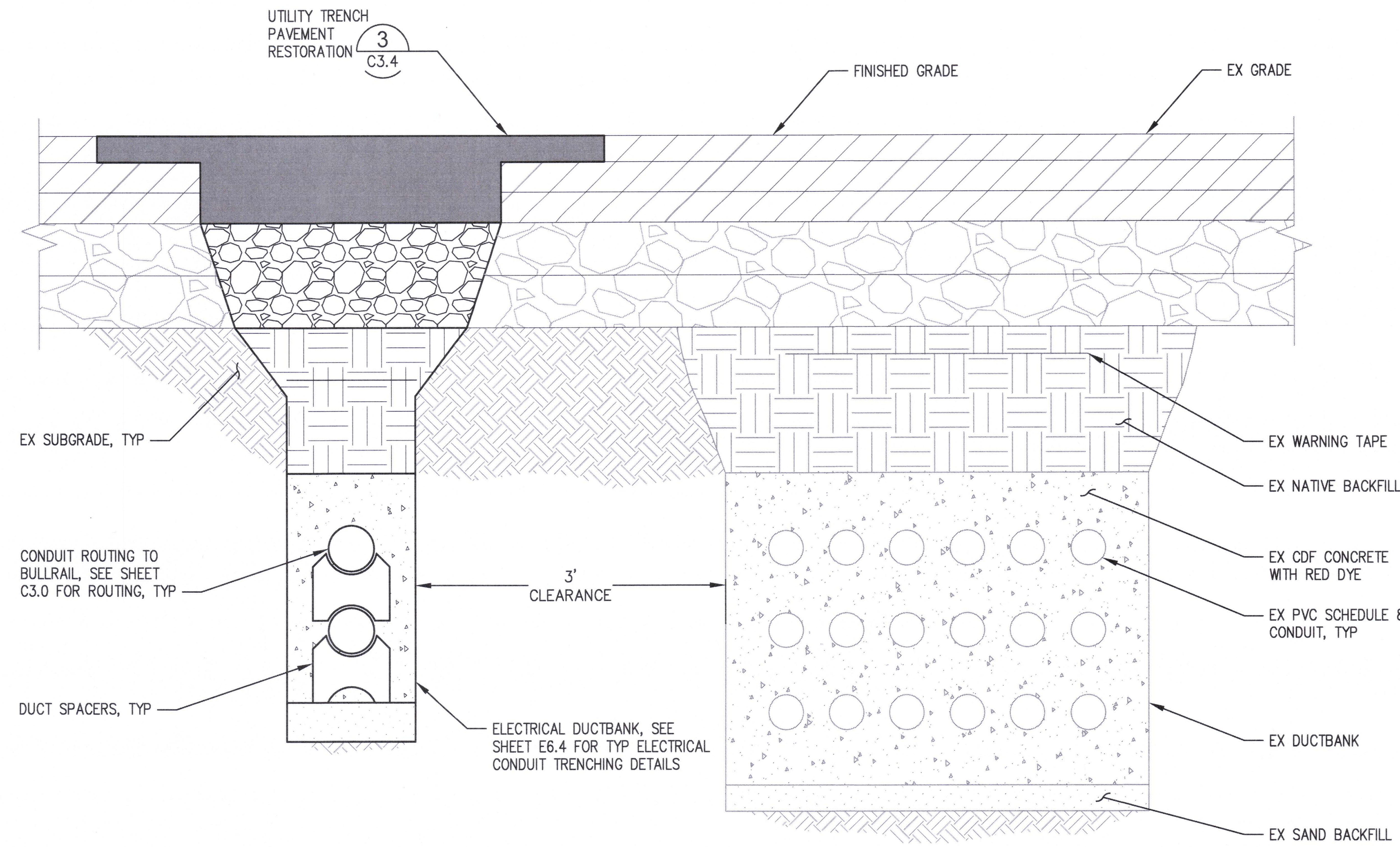


A C3.0 EXISTING CONDUIT SLEEVE BULKHEAD PENETRATION

SCALE: 1"=2'



NOTE: SEE DETAIL 3 ON SHEET C3.4 FOR UTILITY TRENCH PAVEMENT RESTORATION AND TRENCH DETAILS. SEE SHEET E6.4 FOR TYPICAL CONDUIT TRENCHING SECTIONS.

B C3.0 CONDUIT ROUTING TO BULLRAIL VAULT TYPICAL SECTION

SCALE: NTS

2' 0 2' 4'
1' 3'
SCALE: 1"=2'

BINDING EDGE

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TERMINAL 3 / TERMINAL 4 SHORE POWER

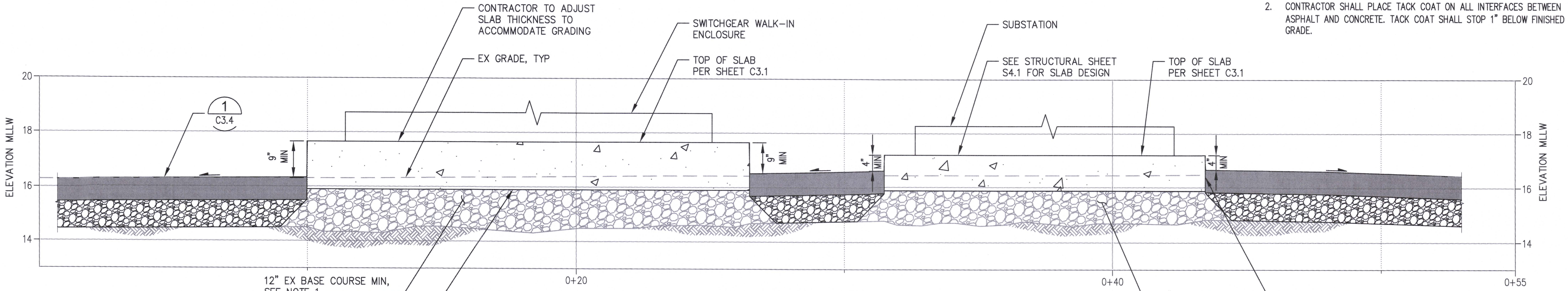
UTILITY DETAILS

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED

6658
C3.6
23 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

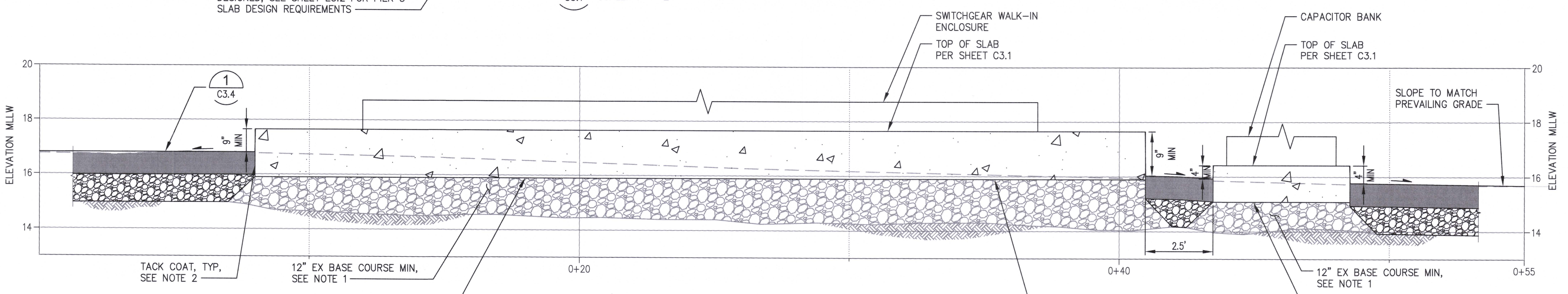
NOTES

1. CONTRACTOR MAY ELECT TO IMPORT ADDITOINAL BASE COURSE TO SUPPLEMENT EXISTING BASE COURSE BENEATH CONCRETE SLABS.
2. CONTRACTOR SHALL PLACE TACK COAT ON ALL INTERFACES BETWEEN ASPHALT AND CONCRETE. TACK COAT SHALL STOP 1" BELOW FINISHED GRADE.



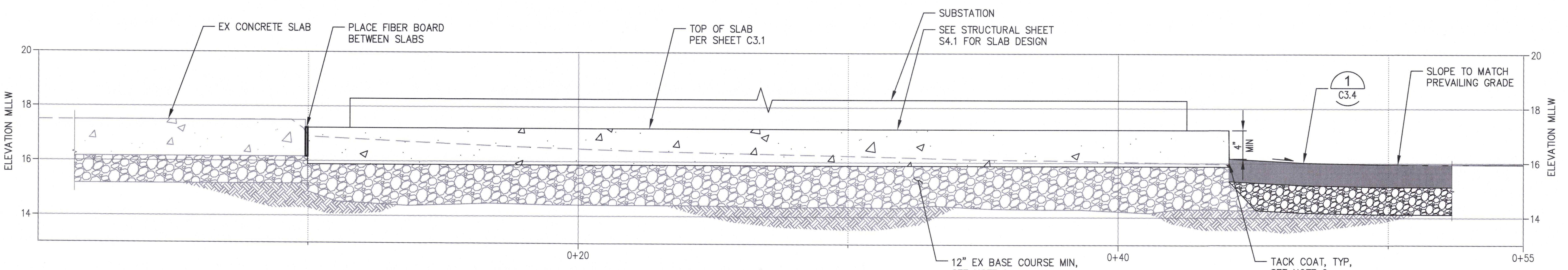
A PIER 3 NORTH AND SOUTH SLAB CROSS SECTIONS

C3.1 SCALE: 1" = 2'



B PIER 3 NORTH SLAB CROSS SECTION

C3.1 SCALE: 1" = 2'



C PIER 3 SOUTH SLAB CROSS SECTION

C3.1 SCALE: 1" = 2'

2' 0 2' 4'
SCALE: 1"=2'

BINDING EDGE

PORT OF TACOMA FILE: M:\2020\200087 POT T3 T4 Shorepower\Drawings\Current\C3.1_C3.2_C3.7_C3.9_C3.10_C3.11 - Pier 3 Grading Plan and Sections and Elec Profiles

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STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER NATHAN A. WATSON 37014

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TERMINAL 3 / TERMINAL 4
SHORE POWER
PIER 3 GRADING SECTIONS

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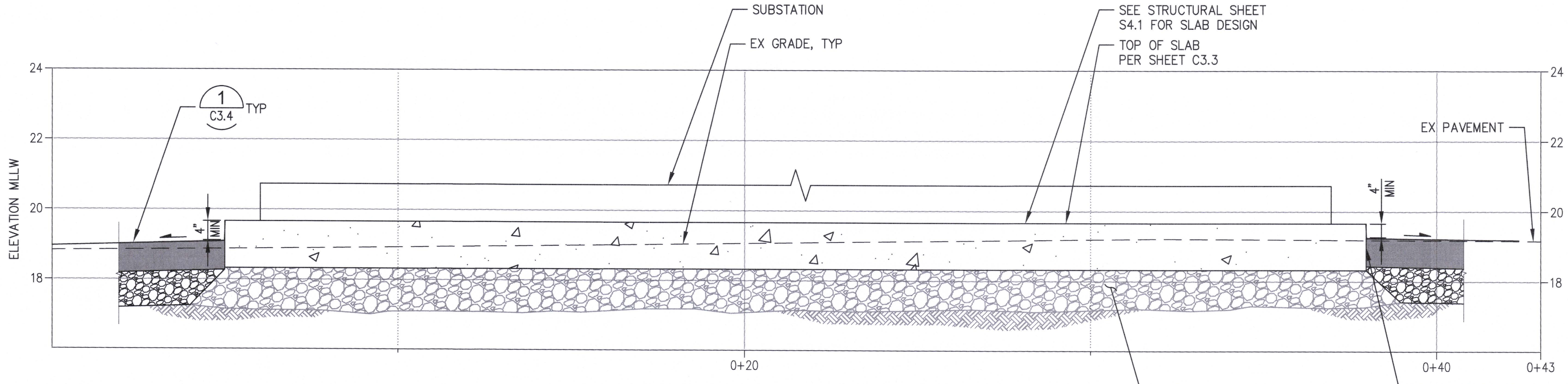
DAT-HRZ: | VERT: |
PARCEL: | DRAWING SCALE: AS NOTED

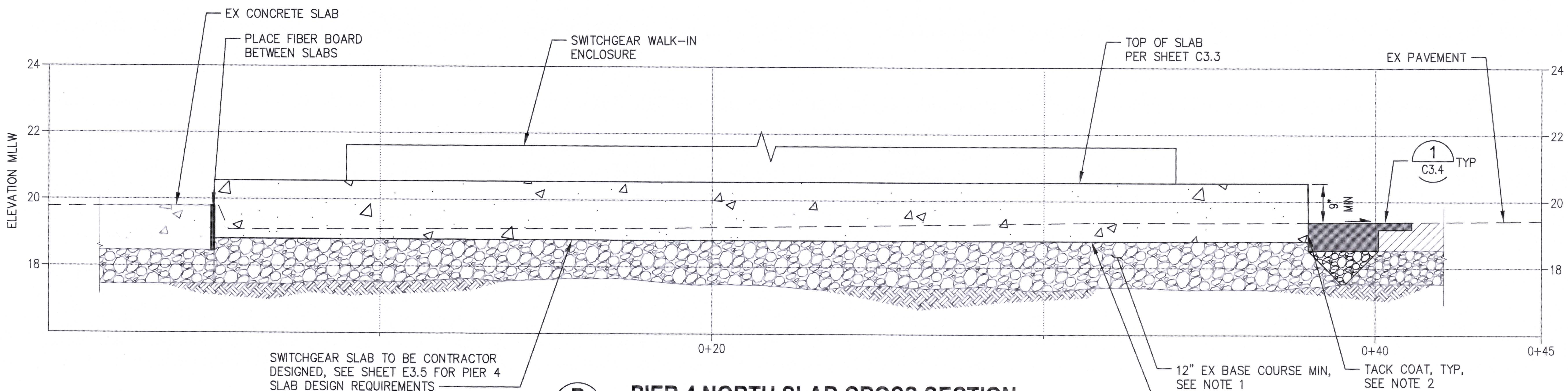
6658
C3.7
24 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

BINDING EDGE



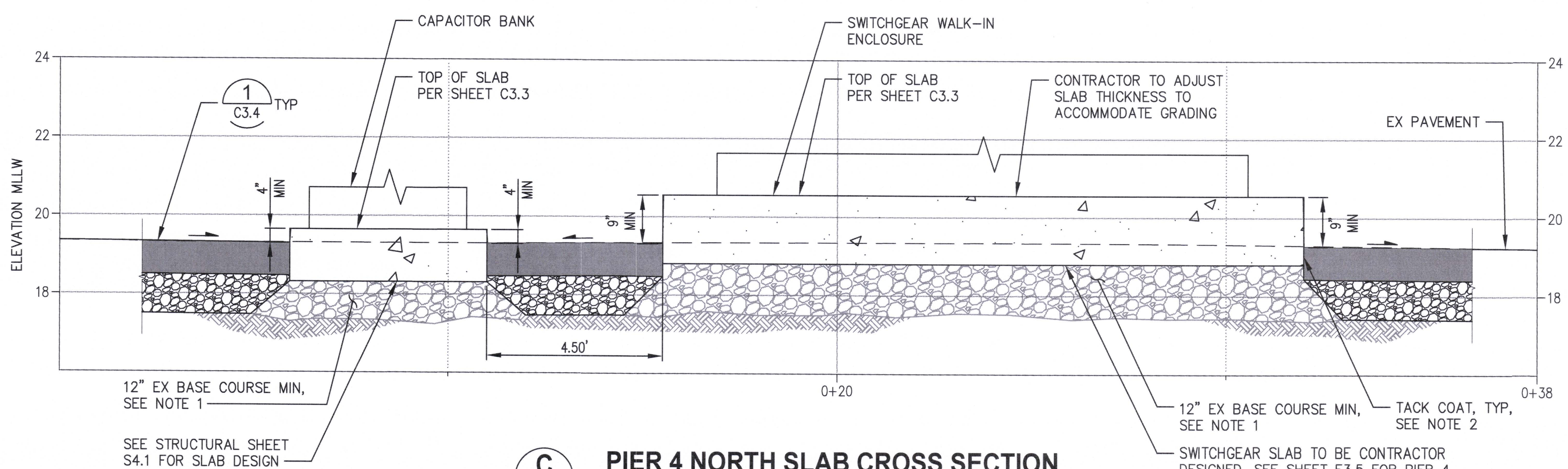
A C3.3 **PIER 4 SOUTH SLAB CROSS SECTION**

SCALE: 1" = 2'



B C3.3 **PIER 4 NORTH SLAB CROSS SECTION**

SCALE: 1" = 2'



C C3.3 **PIER 4 NORTH SLAB CROSS SECTION**

SCALE: 1" = 2'

NOTES

1. CONTRACTOR MAY ELECT TO IMPORT ADDITOINAL BASE COURSE TO SUPPLEMENT EXISTING BASE COURSE BENEATH CONCRETE SLABS.
2. CONTRACTOR SHALL PLACE TACK COAT ON ALL INTERFACES BETWEEN ASPHALT AND CONCRETE. TACK COAT SHALL STOP 1" BELOW FINISHED GRADE.

2' 0 2' 4'

SCALE: 1"=2'

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TERMINAL 3 / TERMINAL 4 SHORE POWER

PIER 4 GRADING SECTIONS

TOWNSHIP: | RANGE: | SECTION:

DAT-HRZ: | VERT:

PARCEL: | DRAWING SCALE: AS NOTED

6658

C3.8

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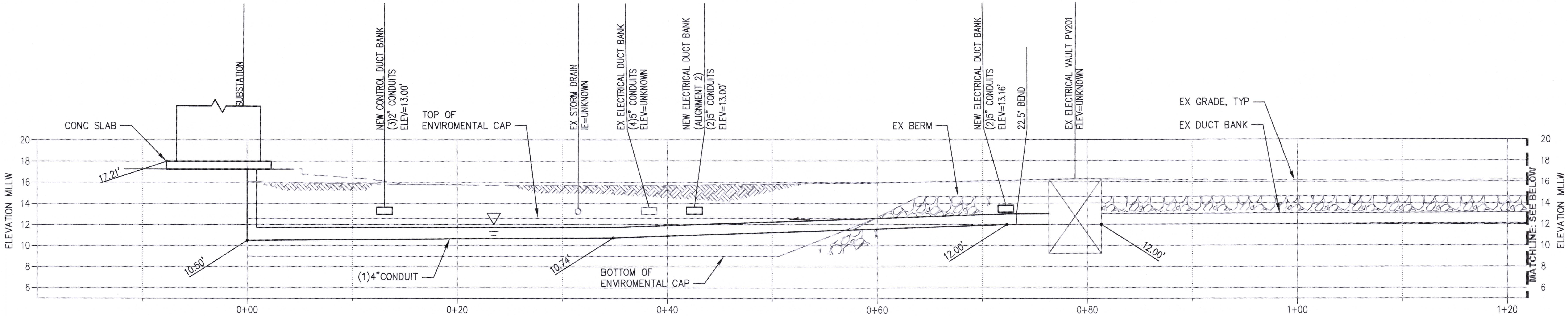
CONT/CONS: 071357

M. ID: 201100.01

PHASE: BID SET

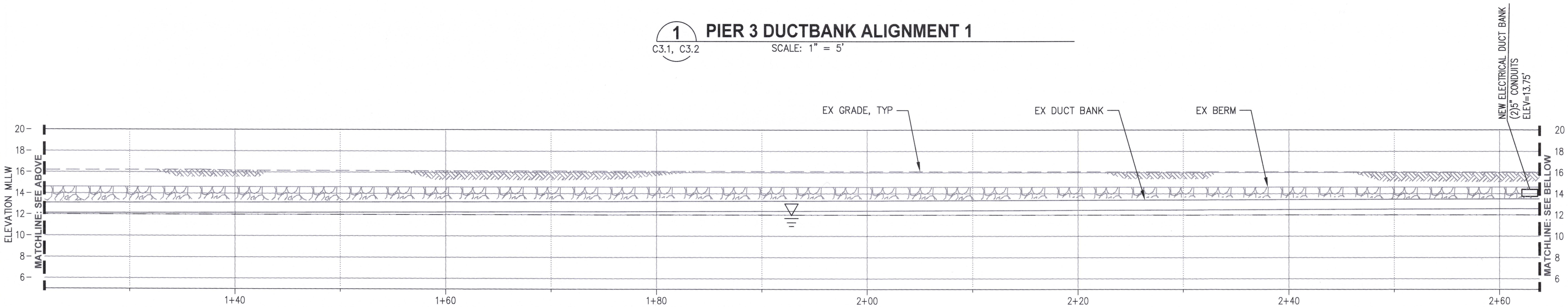
PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\C3.3_C3.8 - Pier 4 Grading Plan and Sections



1 PIER 3 DUCTBANK ALIGNMENT 1

C3.1, C3.2

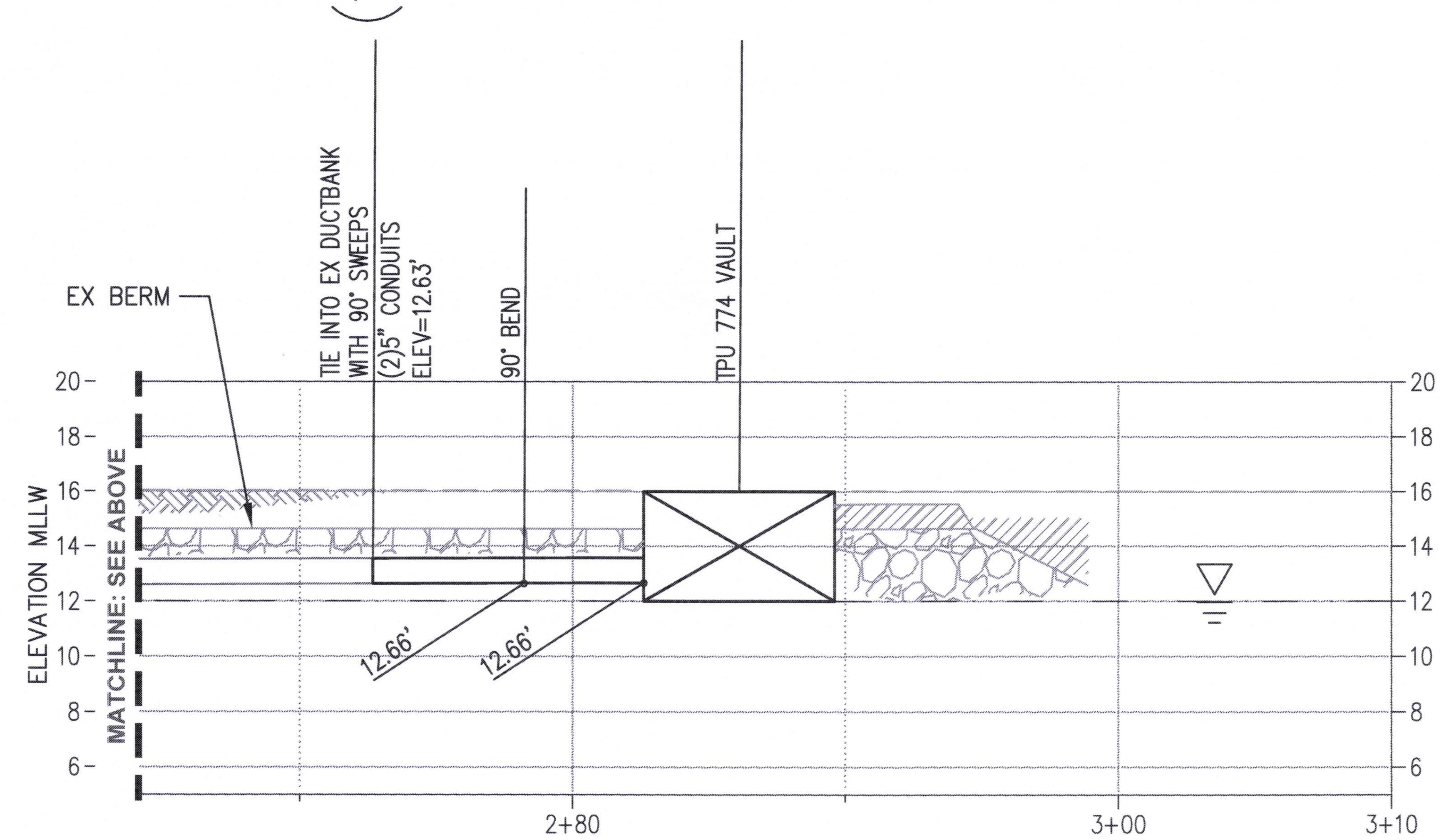
SCALE: 1" = 5'



1 PIER 3 DUCTBANK ALIGNMENT 1 CONT'D

C3.1, C3.2

SCALE: 1" = 5'



1 PIER 3 DUCTBANK ALIGNMENT 1 CONT'D

C3.1, C3.2

SCALE: 1" = 5'

NOTES

1. PROFILES PROVIDED FOR APPROXIMATE ROUTING AND MINIMUM REQUIREMENTS, CONTRACTOR SHALL POTHOLE AND VERIFY CROSSINGS TO DETERMINE FINAL ROUTING.
2. NCD 1 ENVIRONMENTAL CAP BOTTOM ELEVATION IS APPROXIMATELY +9 MLLW.

LEGEND

- GROUNDWATER (EL ±12.00')
- EX UTILITY CROSSING
- EX DUCTBANK CROSSING
- DUCKBANK CROSSING
- EX NDC BERM

5' 0 5' 10'

SCALE: 1"=5'

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TERMINAL 3 / TERMINAL 4 SHORE POWER

ELECTRICAL PROFILES

TOWNSHIP: | RANGE: | SECTION:

DAT-HRZ: | VERT:

PARCEL: | DRAWING SCALE: AS NOTED

6658

C3.9

CONT/CONS: 071357

M. ID: 201100.01

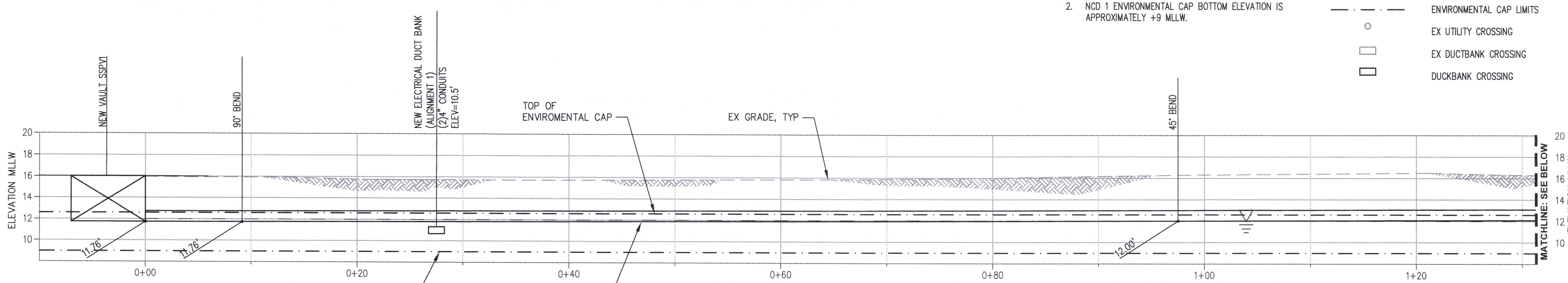
PHASE: BID SET

NOTES

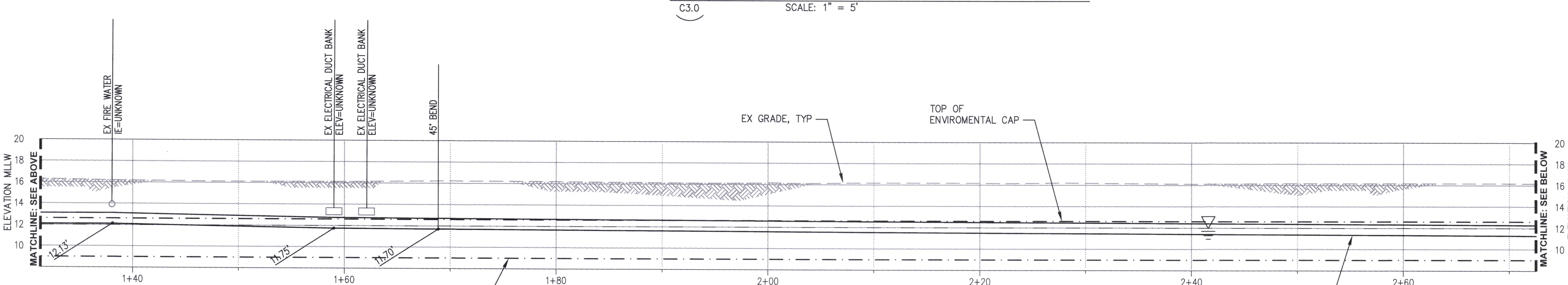
1. PROFILES PROVIDED FOR APPROXIMATE ROUTING AND MINIMUM REQUIREMENTS, CONTRACTOR SHALL POTHOLE AND VERIFY CROSSINGS TO DETERMINE FINAL ROUTING.
2. NCD 1 ENVIRONMENTAL CAP BOTTOM ELEVATION IS APPROXIMATELY +9 MLLW.

LEGEND

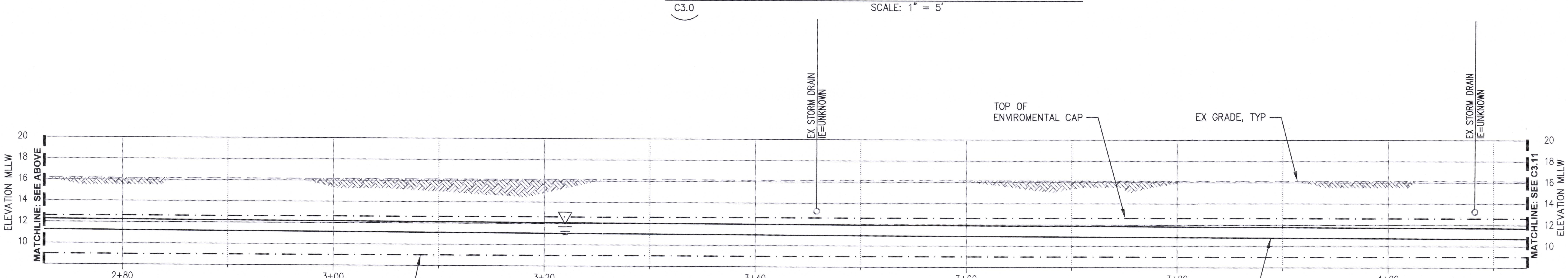
— — —	EX GRADE
— · —	GROUNDWATER (EL ±12.00')
—·—	ENVIRONMENTAL CAP LIMITS
○	EX UTILITY CROSSING
▭	EX DUCTBANK CROSSING
▭	DUCKBANK CROSSING



B C3.0 **PIER 3 DUCTBANK ALIGNMENT 2**
SCALE: 1" = 5'



B C3.0 **PIER 3 DUCTBANK ALIGNMENT 2 CONT'D**
SCALE: 1" = 5'



B C3.0 **PIER 3 DUCTBANK ALIGNMENT 2 CONT'D**
SCALE: 1" = 5'

5' 0 5' 10'
SCALE: 1"=5'

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TERMINAL 3 / TERMINAL 4
SHORE POWER
ELECTRICAL PROFILES

TOWNSHIP:	RANGE:	SECTION:
DAT-HRZ:	VERT:	
PARCEL:	DRAWING SCALE: AS NOTED	

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C3.10
27 OF 83
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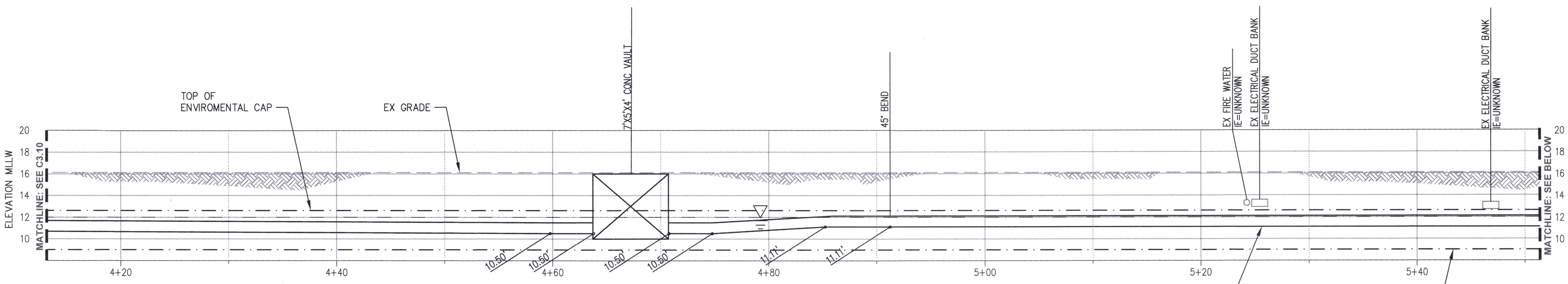
NOTES

1. PROFILES PROVIDED FOR APPROXIMATE ROUTING AND MINIMUM REQUIREMENTS, CONTRACTOR SHALL POTHOLE AND VERIFY CROSSINGS TO DETERMINE FINAL ROUTING.
2. NCD 1 ENVIRONMENTAL CAP BOTTOM ELEVATION IS APPROXIMATELY +9 MLLW.
3. SEE SHEETS C3.6 AND S5.2 FOR EXISTING CONDUIT SLEEVES.

LEGEND

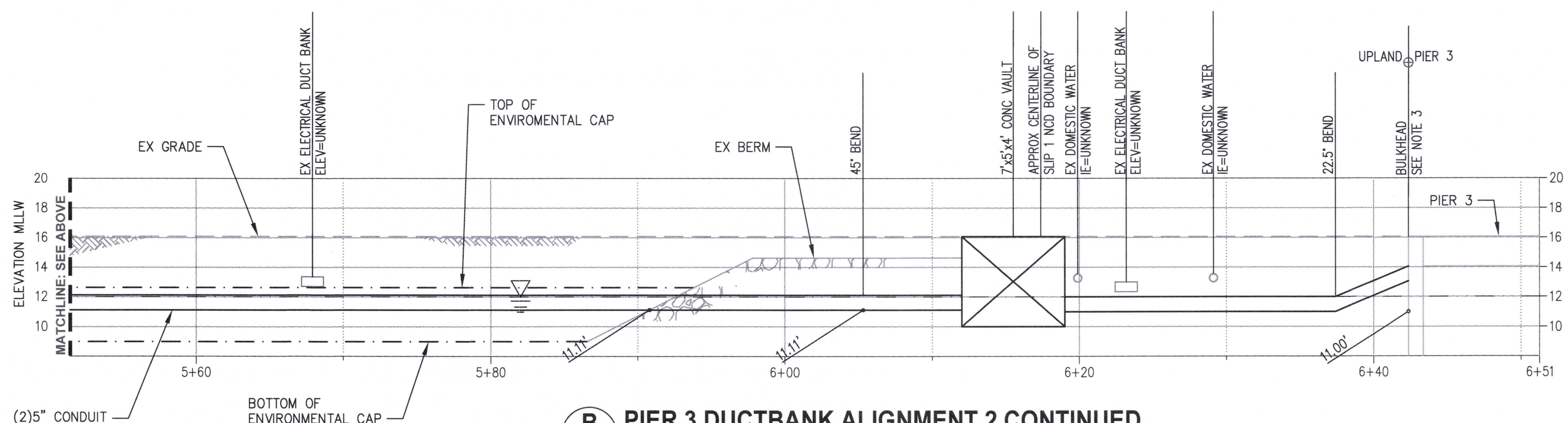
- EX GRADE
- GROUNDWATER (EL ±12.00')
- ENVIRONMENTAL CAP LIMITS
- EX UTILITY CROSSING
- EX DUCTBANK CROSSING
- DUCKBANK CROSSING



B PIER 3 DUCTBANK ALIGNMENT 2 CONT'D

C3.0

SCALE: 1" = 5'



B PIER 3 DUCTBANK ALIGNMENT 2 CONTINUED

C3.0

SCALE: 1" = 5'

5' 0 5' 10'

SCALE: 1"=5'

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NATHAN A. JATSON, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER, 37034

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TERMINAL 3 / TERMINAL 4 SHORE POWER

ELECTRICAL PROFILES

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DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

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C3.11

28 OF 83

CONT/CONS: 071357
M. ID: 201100.01
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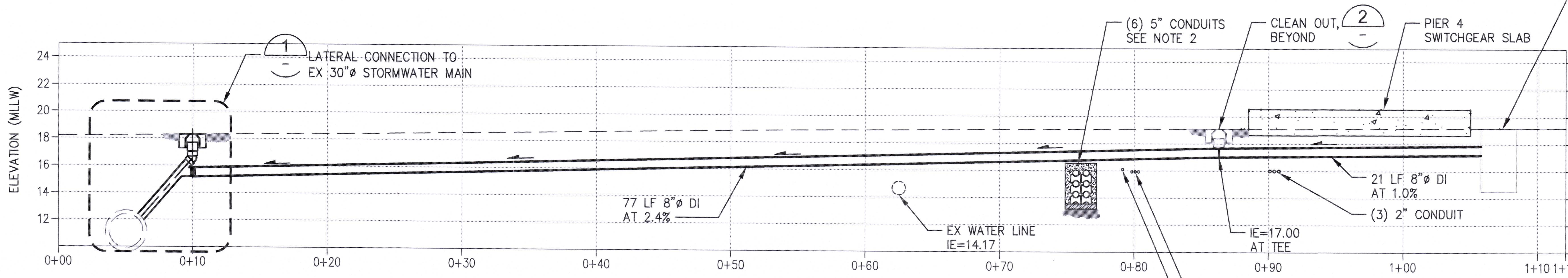
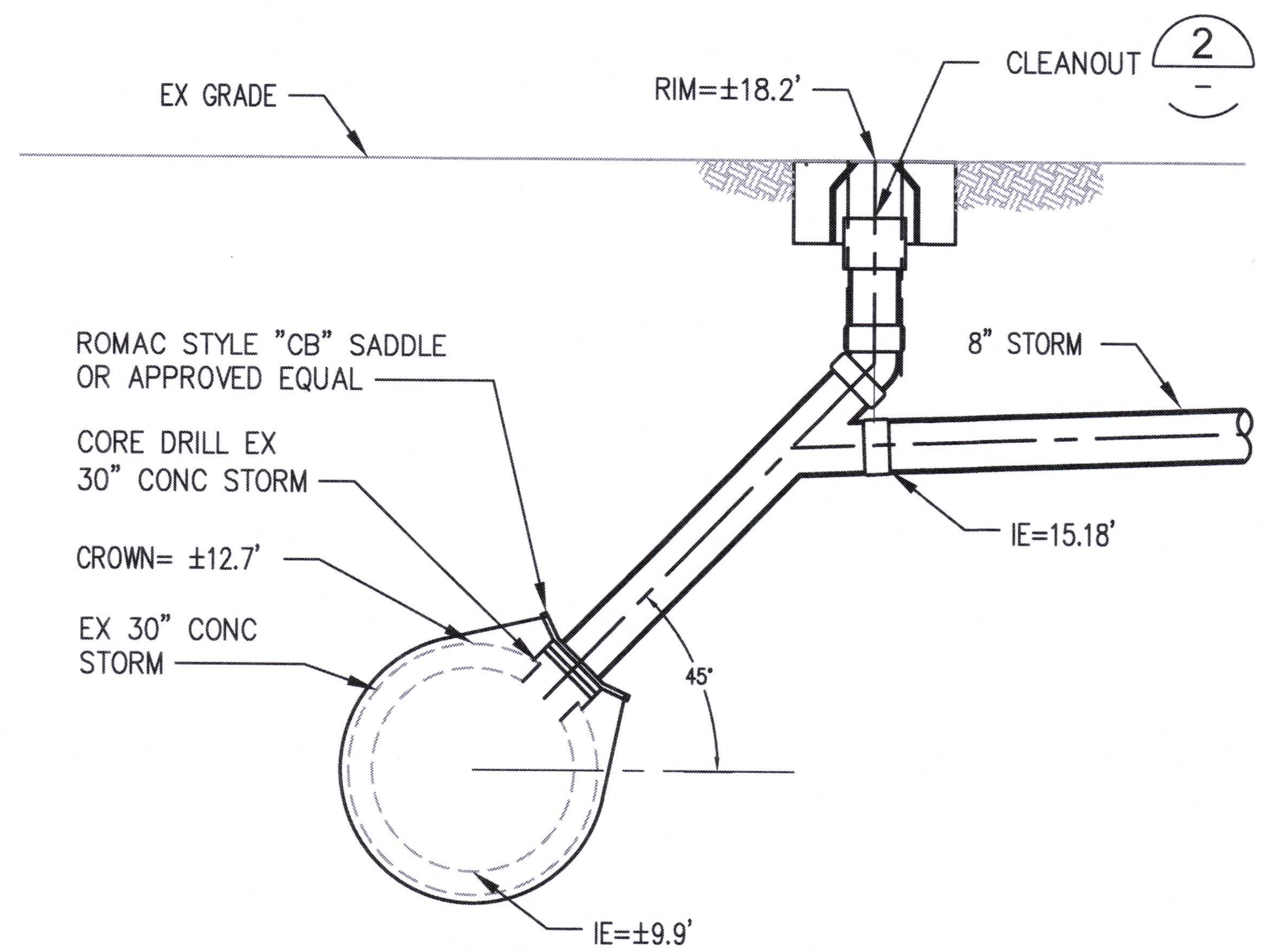


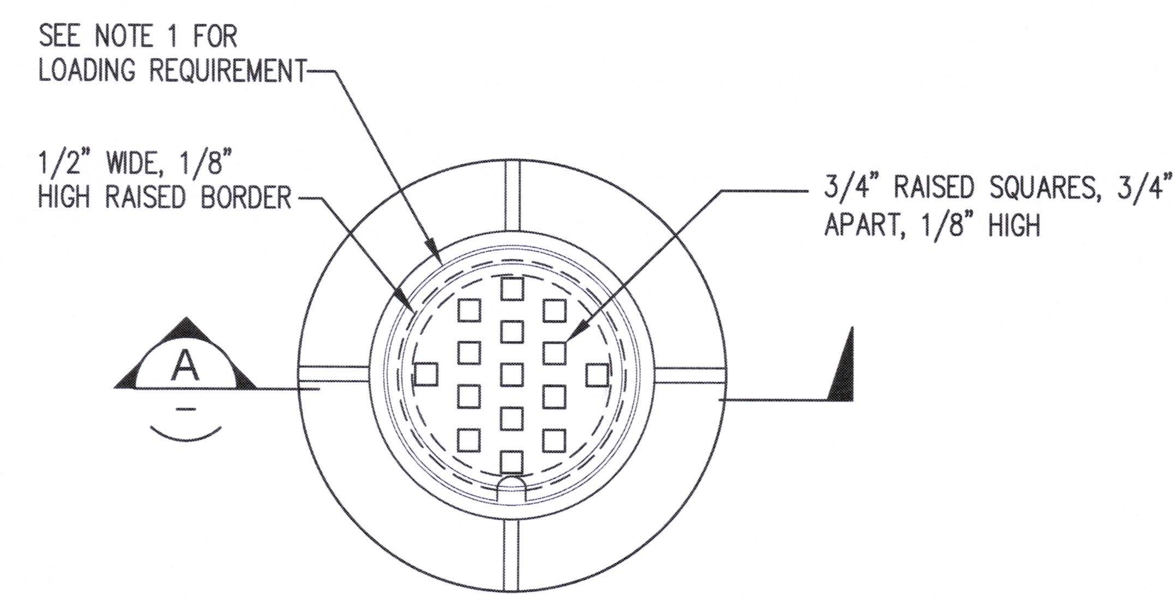
1 STORM DRAIN PROFILE
C3.3
SCALE: 1"=2'

NOTES

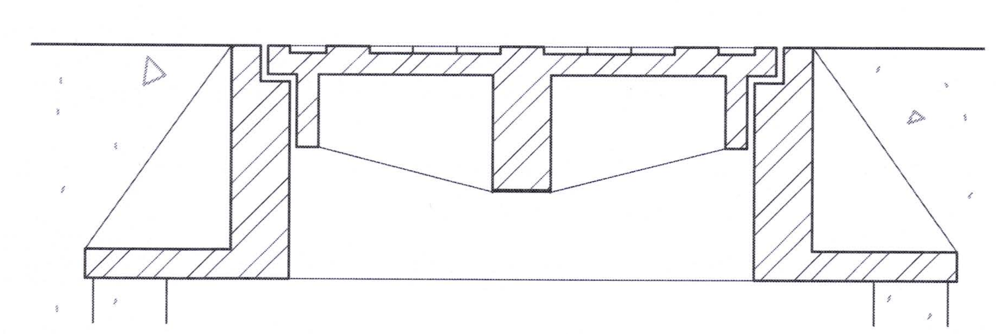
1. PROFILES PROVIDED FOR APPROXIMATE ROUTING AND MINIMUM REQUIREMENTS, CONTRACTOR SHALL POTHOLE AND VERIFY CROSSINGS TO DETERMINE FINAL ROUTING.
2. SEE SHEET E3.5 FOR PROPOSED ELECTRICAL CROSSINGS AND COORDINATION.



1 LATERAL STORMWATER MAIN CONNECTION
C3.3
SCALE: 1"=2'



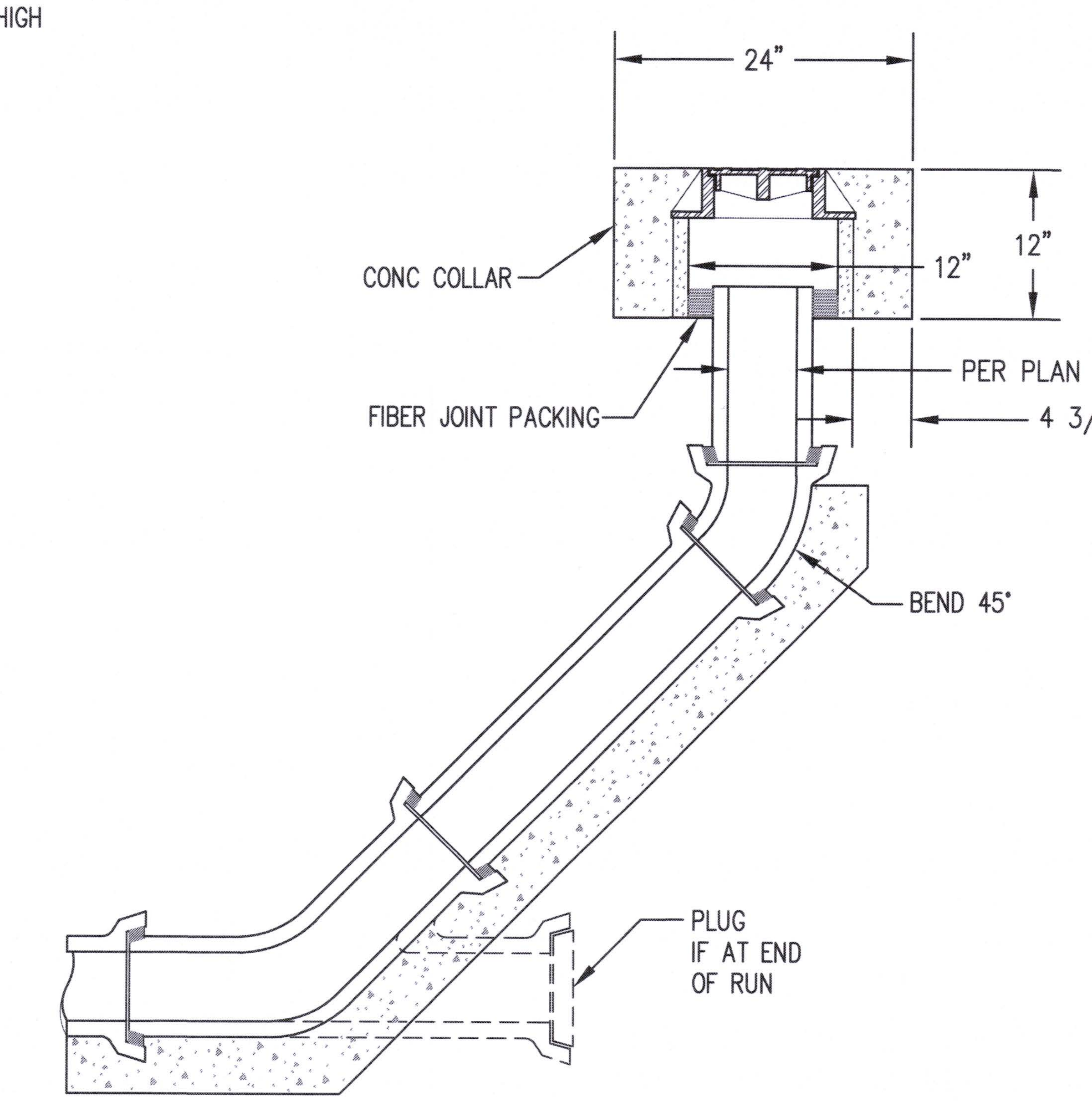
PLAN



SECTION A

NOTES:

1. CLEANOUT LIDS SHALL BE NEENAH FOUNDRY R-3485-B OR APPROVED EQUAL AIRPORT RATED LID.



2 TYPICAL STORMWATER CLEANOUT
C3.3
NTS

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TERMINAL 3 / TERMINAL 4 SHORE POWER
STORM DRAIN PROFILE AND DETAILS
TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

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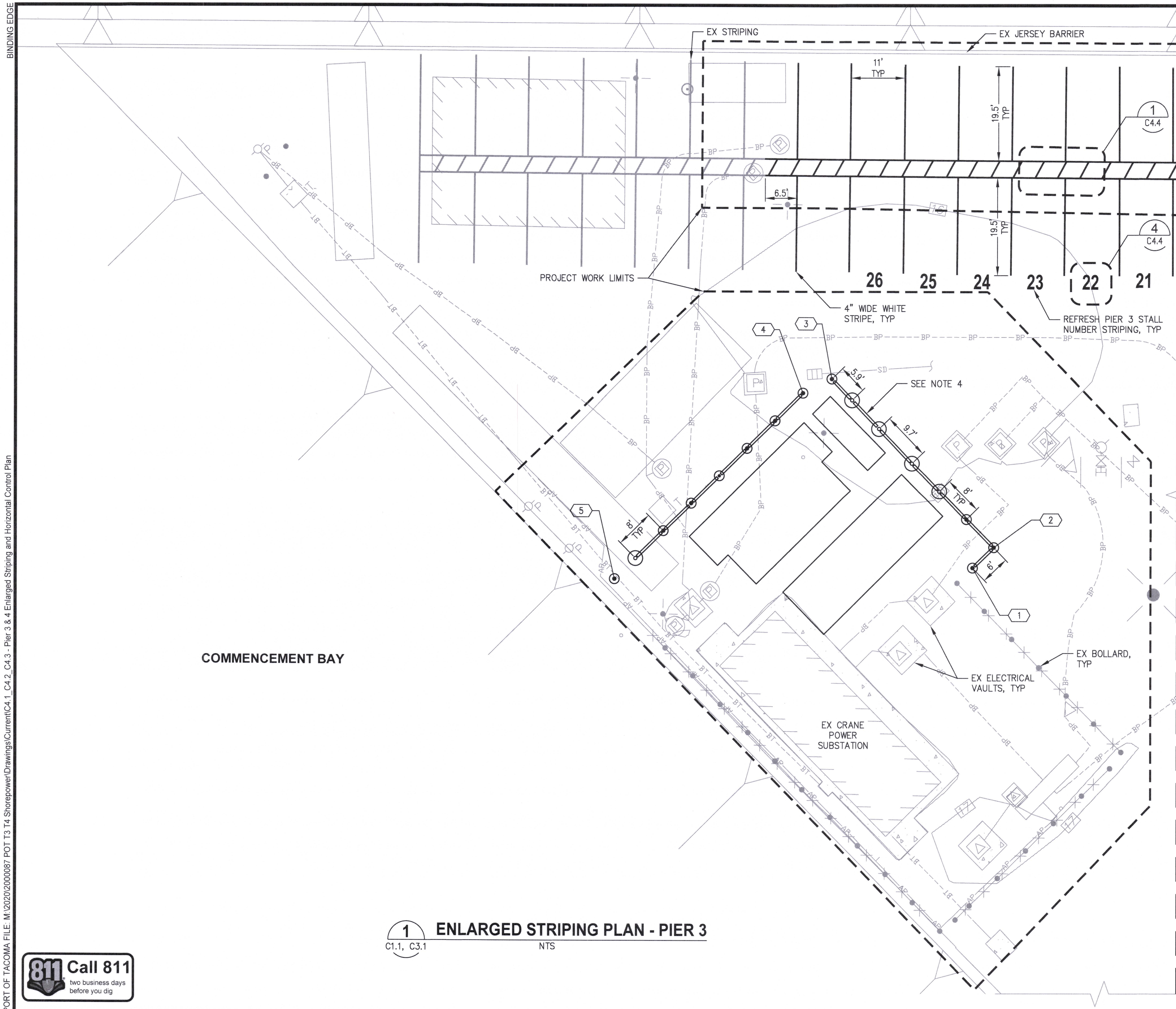

1 ENLARGED STRIPING PLAN - PIER 3
C1.1, C3.1 NTS

NOTES

1. CONTRACTOR SHALL COORDINATE WORK WITH PORT FOR ANY STRIPING OUTSIDE OF WORK LIMITS.
2. WHERE TRENCHING OR OTHER DEMOLITION ACTIVITIES IMPACT EXISTING STRIPING, THE ENTIRE STRIPE SHALL BE "REFRESHED".
3. ADDITIONAL STRIPING LOCATION ON PIERS NOT SHOWN. SEE STRUCTURAL DRAWINGS AND DETAIL 2 ON C4.4 FOR STRIPING ON PIER.
4. BOLLARD LAYOUT BASED ON ASSUMED EQUIPMENT SIZING. CONTRACTOR SHALL COORDINATE BOLLARD LAYOUT WITH ACTUAL EQUIPMENT SHOP DRAWINGS AND PROVIDE TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

BOLLARD HORIZONTAL CONTROL POINTS

POINT ID	NORTHING	EASTING
1	714623.38	1165020.61
2	714623.38	1165026.61
3	714671.05	1165026.37
4	714673.06	1165020.07
5	714672.45	1164966.09

PROJECT NORTH

10' 0 10' 20'
5' 15'
SCALE: 1"=10'

Call 811 two business days before you dig

PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\C4.1_C4.2_C4.3 - Pier 3 & 4 Enlarged Striping and Horizontal Control Plan

BINDING EDGE

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Tacoma, Washington 98407
(253) 396-0150 Fax (253) 396-0162

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NATHAN A. WATSON
STATE OF WASHINGTON
37014
REGISTERED PROFESSIONAL ENGINEER

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TERMINAL 3 / TERMINAL 4
SHORE POWER
PIER 3 ENLARGED STRIPING PLAN

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

6658
C4.1
30 OF 83
CONT/CONS: 071357
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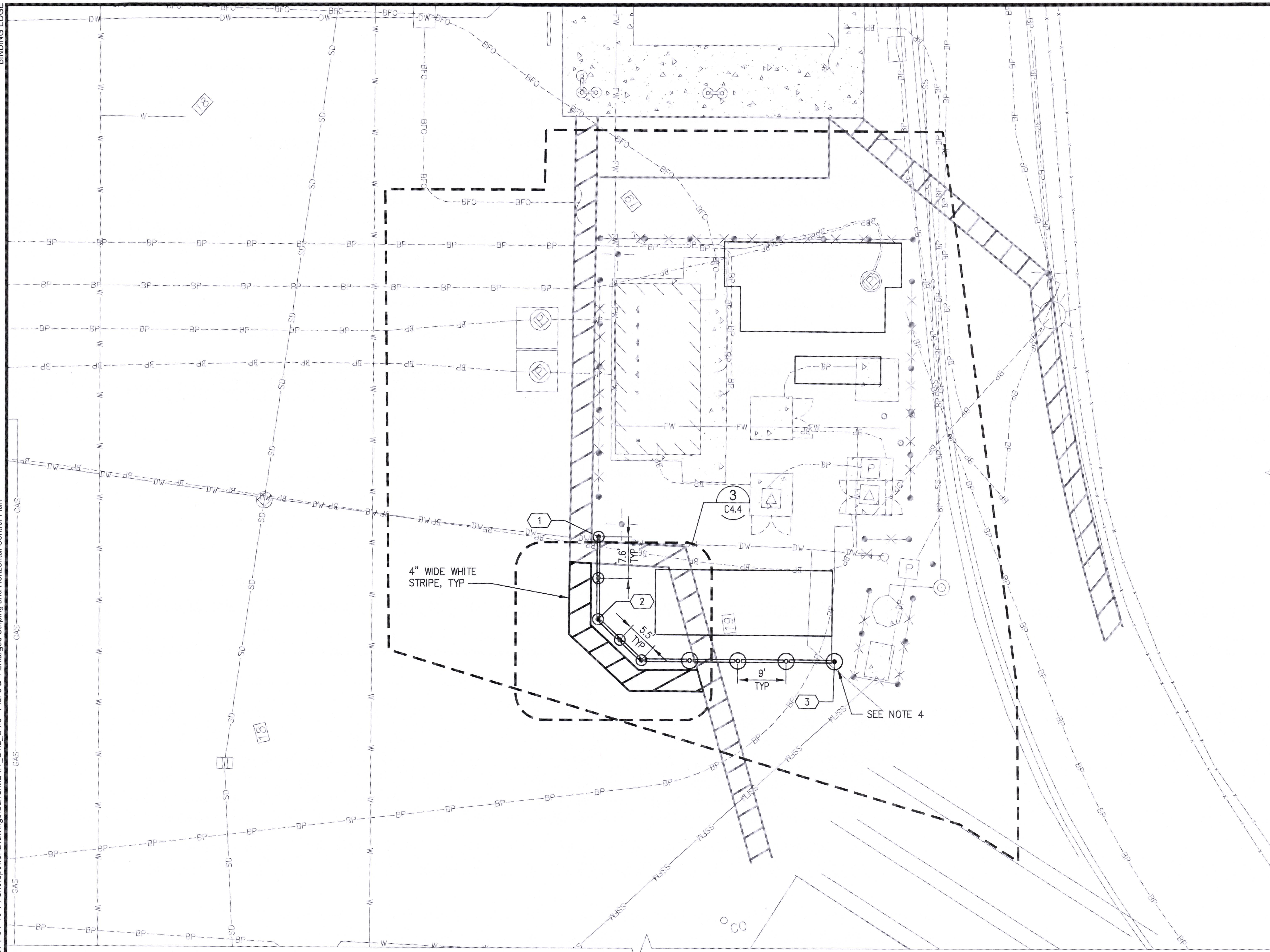


3 ENLARGED STRIPING PLAN - PIER 4

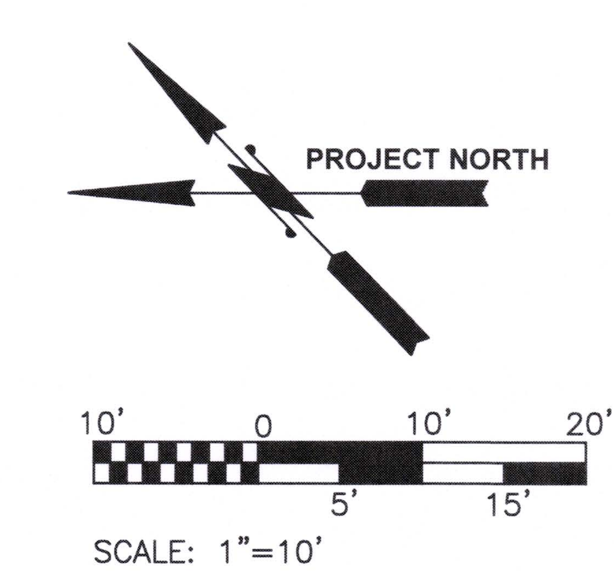
C1.1, C3.3 NTS

NOTES

1. CONTRACTOR SHALL COORDINATE WORK WITH PORT FOR ANY STRIPING OUTSIDE OF WORK LIMITS.
2. WHERE TRENCHING OR OTHER DEMOLITION ACTIVITIES IMPACT EXISTING STRIPING, THE ENTIRE STRIPE SHALL BE "REFRESHED".
3. ADDITIONAL STRIPING LOCATION ON PIERS NOT SHOWN. SEE STRUCTURAL DRAWINGS AND DETAIL 2 ON C4.4 FOR STRIPING ON PIER.
4. BOLLARD LAYOUT BASED ON ASSUMED EQUIPMENT SIZING. CONTRACTOR SHALL COORDINATE BOLLARD LAYOUT WITH ACTUAL EQUIPMENT SHOP DRAWINGS AND PROVIDE TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

BOLLARD HORIZONTAL CONTROL POINTS

POINT ID	NORTHING	EASTING
1	712008.86	1167762.77
2	711997.97	1167752.22
3	711961.89	1167778.74



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TERMINAL 3 / TERMINAL 4 SHORE POWER

PIER 4 ENLARGED STRIPING PLAN

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED

6658
C4.3

CONT/CONS: 071357
M. ID: 201100.01
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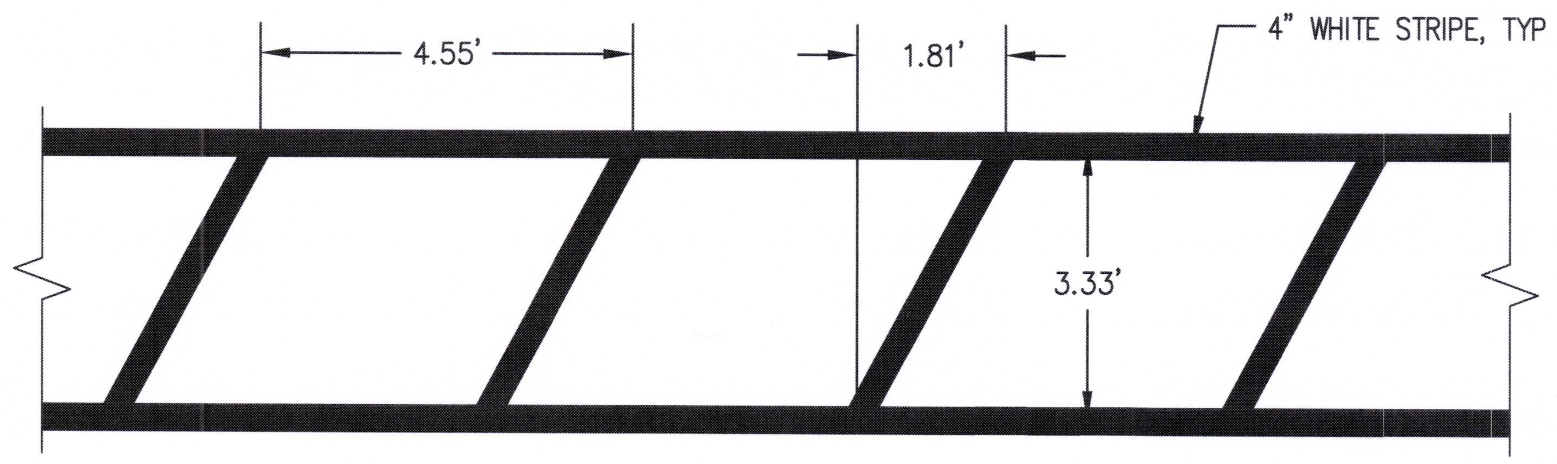
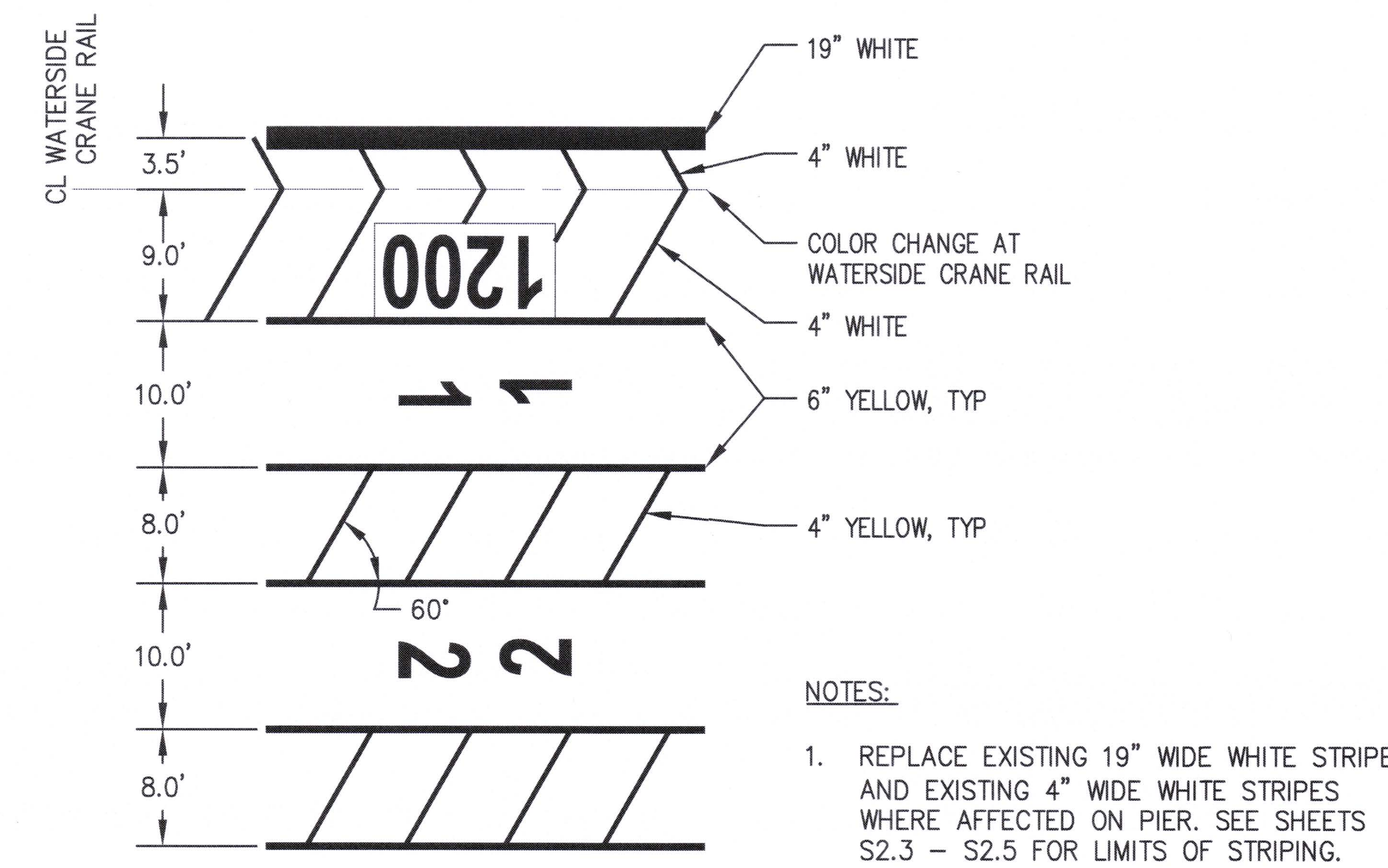


1 PIER 3 ACCESS AISLE STRIPING

C4.1 C4.2

NTS



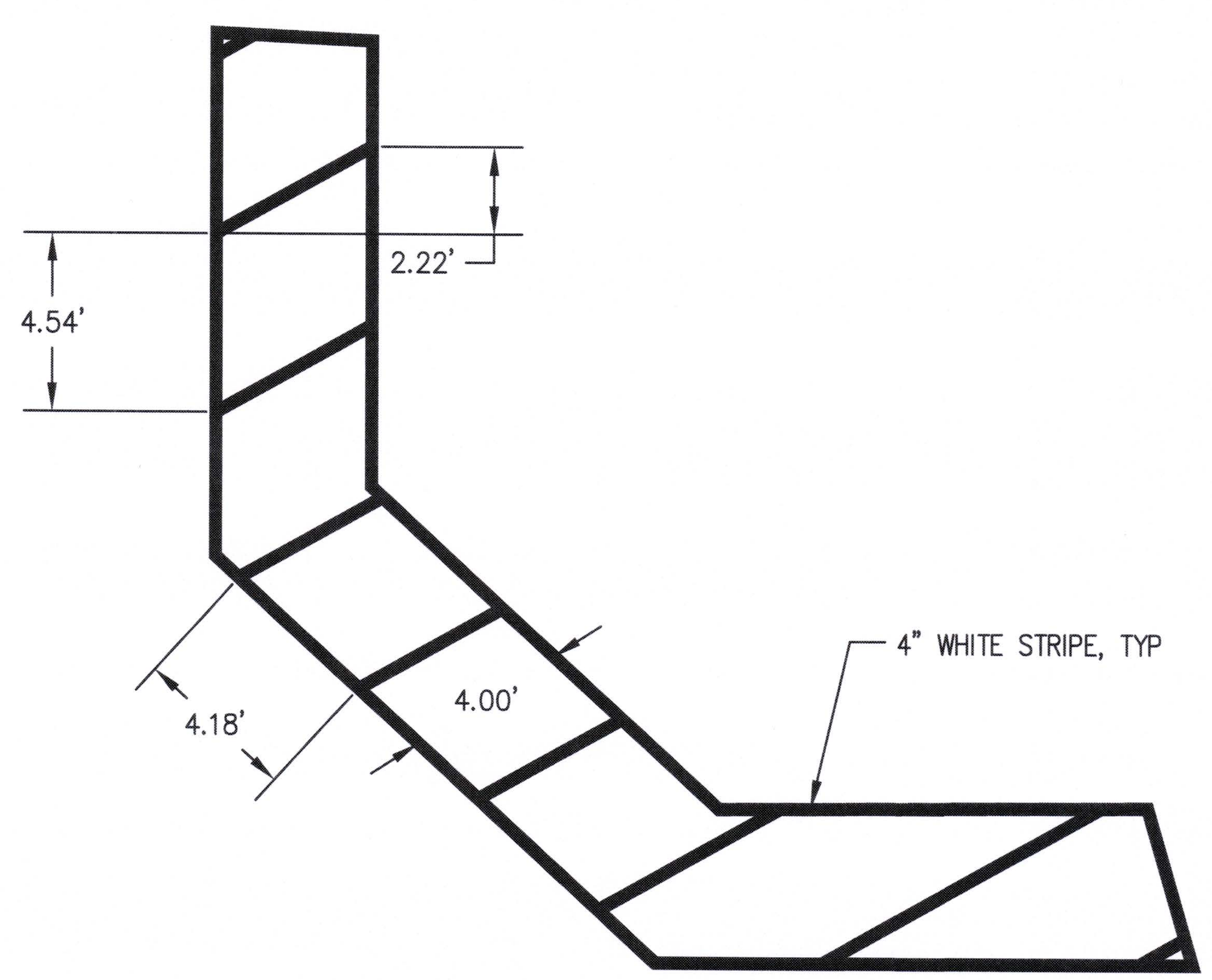
NOTES:

1. REPLACE EXISTING 19" WIDE WHITE STRIPE AND EXISTING 4" WIDE WHITE STRIPES WHERE AFFECTED ON PIER. SEE SHEETS S2.3 – S2.5 FOR LIMITS OF STRIPING.

2 BULLRAIL STRIPING DETAIL

S2.3, S2.4, S2.5, S6.1

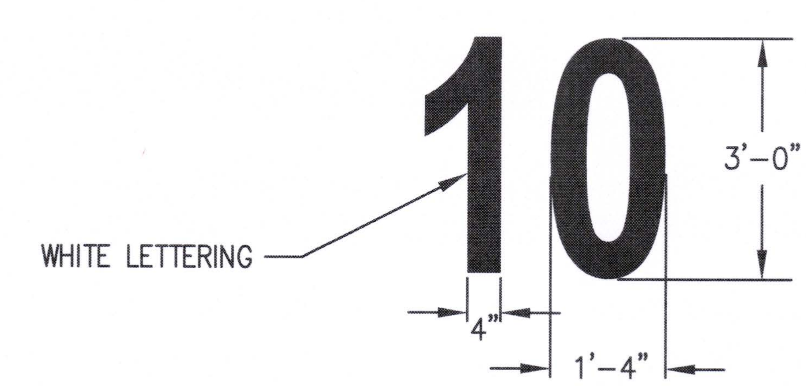
NTS



3 PIER 4 ACCESS AISLE STRIPING

C4.3

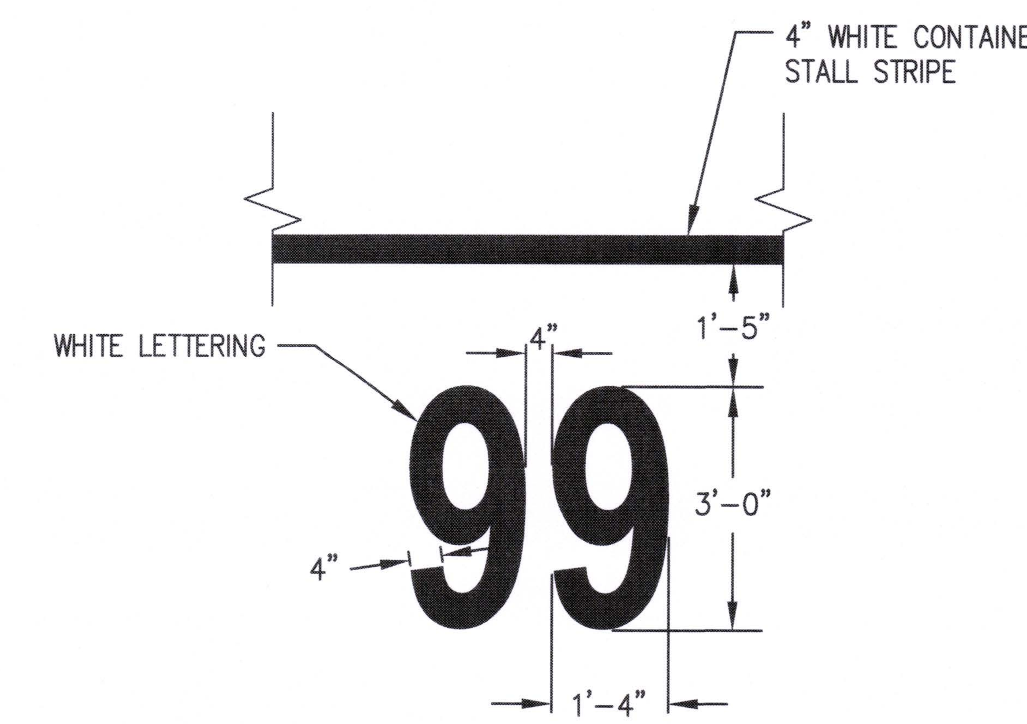
NTS



4 PIER 3 STALL NUMBER STRIPING

C4.1, C4.2

NTS



5 CONTAINER STALL NUMBER STRIPING

C3.0, C4.2

NTS

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TERMINAL 3 / TERMINAL 4

SHORE POWER

STRIPING DETAILS

TOWNSHIP: | RANGE: | SECTION:

DAT-HRZ: | VERT:

PARCEL: | DRAWING SCALE: AS NOTED

6658

C4.4

33 OF 83

CONT/CONS: 071357

M. ID: 201100.01

PHASE: BID SET

BINDING EDGE

ONE-LINE DIAGRAM

	15kV POWER SWITCH BY TACOMA POWER, VAULT BY ELECTRICAL CONTRACTOR
	GROUND
Δ Y	TRANSFORMER, SECONDARY VOLTAGE, PHASE AND RATING AS INDICATED, WITH NEUTRAL GROUNDING RESISTOR
400	CIRCUIT BREAKER, TRIP SHOWN, 3 POLE UNLESS OTHERWISE NOTED
M	REVENUE METER AND 774 METERING VAULT. VAULT BY CONTRACTOR. REVENUE METER BY TPY
1,200A 52	METAL CLAD TYPE AC CIRCUIT BREAKER 1200A = BREAKER SIZE 52–P = PRIMARY BREAKER 52–M = MAIN SECONDARY BREAKER 52–S = SECONDARY BREAKER
25	SYNCHRO CHECK RELAY
27	UNDER VOLTAGE RELAY
32	REVERSE POWER RELAY
50	INSTANTANEOUS OVERCURRENT RELAY
50G	INSTANTANEOUS OVERCURRENT GROUND RELAY
51	AC INVERSE TIME OVERCURRENT RELAY
51G	INVERSE TIME OVERCURRENT GROUND RELAY
86	LOCKOUT RELAY
87T	TRANSFORMER DIFFERENTIAL RELAY
87C	CABLE DIFFERENTIAL RELAY
3	POTENTIAL TRANSFORMER 3 = QUANTITY
200:5 3	CURRENT TRANSFORMER 3 = QUANTITY 200:5 = CT RATIO
	SHORE POWER RECEPTACLE, 350A, 7.2kV
SPD	SURGE PROTECTION DEVICE
1200A A–1 B–1 M–1	1,200A, 15kV SHORE POWER DISCONNECT SWITCH WITH KIRK KEY INTERLOCKS
	15kV SERVICE DISCONNECT SWITCH
	SURGE ARRESTORS
	15kV FUSES
NGR R	NEUTRAL GROUNDING RESISTOR

POWER

	GROUND ROD
J	JUNCTION BOX
	DUPLEX RECEPTACLE
	EQUIPMENT CONNECTION
	COMBINATION MOTOR STARTER
P	PULLBOX
	GROUND ROD IN TEST WELL
	GROUND PIGTAIL

CONDUIT AND RACEWAY

THIN DASHED LINES INDICATE EXISTING BURIED CONDUITS AND CONDUCTORS

––– BFO –––	BURIED FIBER OPTIC
––– BL –––	BURIED LIGHTING
––– BP –––	BURIED POWER
–––– C ––––	BURIED CONTROL
–––– G ––––	BURIED GROUNDING

THIN SOLID LINES INDICATE EXISTING ABOVEGROUND CABLES/CONDUITS AND CONDUCTORS

—— AC ——	ABOVEGROUND CONTROL
—— AP ——	ABOVEGROUND POWER
	EXISTING CONDUIT/DUCT BANK CONTINUED

HEAVY SOLID LINES INDICATE NEW CONDUITS/DUCT BANK AND NEW CONDUCTORS, SEE SHEET E6.4 FOR NEW DUCT BANK DETAILS INCLUDING ENCASEMENT REQUIREMENTS.

—— BP ——	BURIED POWER
—— C ——	BURIED CONTROL
——TPU——	BURIED TPU 15kV DUCT BANK

HEAVY DASHED LINES INDICATE NEW CONDUCTORS IN EXISTING CONDUITS/DUCT BANK

––– BP –––	BURIED POWER
–––– C ––––	BURIED CONTROL
––– BFO –––	BURIED FIBER OPTIC
	NEW CONDUIT/DUCT BANK CONTINUED

DRAWING CONVENTIONS

X E1 DETAIL NTS	DETAIL/SECTION TITLE UNDERLINE, E1 = SHEET WHERE SHOWN
A E1	A = DETAIL NUMBER E1 = SHEET WHERE SHOWN
1 E1	1 = DETAIL NUMBER E1 = SHEET WHERE SHOWN
PROJECT NORTH	NORTH ARROW
3	KEY NOTE
1	REVISION REFERENCE
ID TAG	EQUIPMENT ID TAG – SEE SCHEDULE REFERENCED ON EQUIPMENT DWGS
1A	CONDUIT 1A. SEE CONDUIT AND CONDUCTOR SCHEDULE, DWGS. E4.1 AND E4.2.
	DEMOLISH EQUIPMENT UNDER HATCHING

ABBREVIATIONS

A	AMMETER, AMPERE
AF	AMP FUSE, AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ANN	ANNUNCIATOR
AS	AMP SWITCH
ASYM	ASYMMETRICAL
AT	AMP TRIP
AS	AMP SENSOR
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
BRKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CGR	CHARGER
℄	CENTER LINE
CLF	CURRENT LIMITING FUSE
CLR	CLEAR
CM	CIRCULAR MILS
C.O.	CONDUIT ONLY
COMM	COMMUNICATIONS
CONC	CONCRETE
CONT	CONTINUED
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	BREAKER CLOSE SWITCH
CT	CURRENT TRANSFORMER
CTRL	CONTROL
CU	COPPER
CGR	CHARGER
DEM	DEMAND
DEMO	DEMOLITION
DIM	DIMENSION
DISC	DISCONNECT
DN	DOWN
DS	DISCONNECT SWITCH
DWG	DRAWING
E	EMPTY, EXISTING
ELEC	ELECTRICAL
ELEV	ELEVATION, ELEVATOR
EPO	EMERGENCY POWER OFF
EXIST	EXISTING
F,FU	FUSE
FO	FIBER OPTIC
FT	FOOT
G,GND	GROUND
GA	GAUGE
GALV	GALVANIZED
GC	GROUND CHECK
GFI	GROUND FAULT INTERRUPTER
GO	GANG OPERATED
GRC,GRS	GALVANIZED RIGID STEEL
HH	HANDHOLE
HMI	HUMAN MACHINE INTERFACE
HP	HORSEPOWER
HVSC	HIGH VOLTAGE SHORE CONNECTION
IC	INTERRUPTING CAPACITY
J–BOX	JUNCTION BOX
K	KEY OPERATOR
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT(S)
KVA	KILOVOLT AMPERE(S)
KVAR	KILOVAR(S)
KVARH	KILOVARHOURS
KW	KILOWATT(S)
KWHR	KILOWATTHOURS
LED	LIGHTING EMITTING DIODE
LTG	LIGHTING
MIN	MINIMUM
MM	MULTI–MODE
MPZ	MINI POWER ZONE
MTG	MOUNTING
MV	MEDIUM VOLTAGE
MVA	MEGA VOLT AMPS
N	NEUTRAL, NEW
NC	NORMALLY CLOSED
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEUT	NEUTRAL
NGR	NEUTRAL GROUNDING RESISTOR
NO	NORMALLY OPEN, NUMBER
NP	NAMEPLATE
ø	PHASE, DIAMETER
P	PANEL, POLE
PB	PUSH–BUTTON
PF	POWER FACTOR
PH	PHASE
PMH	MODEL OF S&C SWITCHGEAR
PNL	PANEL
POT	PORT OF TACOMA
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
R	RELAY, RADIUS
REC	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
SCHED	SCHEDULE
SEL	SCHWEITZER ENGINEERING LABORATORIES
SHT	SHEET
SIM	SIMILAR
SPD	SURGE PROTECTIVE DEVICE
SUB	SUBSTATION
SUPV	SUPERVISOR
SW	SWITCH
SYM	SYMMETRICAL
TB	TERMINAL BLOCK, TRANSFORMER BANK
THRU	THROUGH
TPU	TACOMA POWER UTILITY
TS	BREAKER TRIP SWITCH
TYP	TYPICAL
TVSS	TRANSIENT VOLTAGE SURGE SUPPESSOR
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
V	VOLTMETER, VOLT
W	WIRE, WATT
W/	WITH
WHD	WATTHOUR DEMAND METER
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER

GENERAL NOTES

1. MEET ALL REQUIREMENTS OF THE NEC, UTILITY AND AHJ FOR INSTALLATION AND CONSTRUCTION.
2. ALL WIRING SHALL BE COPPER UNLESS NOTED OTHERWISE.
3. VERIFY LOCATIONS OF OTHER UTILITIES PRIOR TO COMMENCING WORK, PROVIDE REQUIRED CLEARANCES FROM OTHER UTILITIES, BUILDINGS, AND FREESTANDING STRUCTURES, DURING INSTALLATION OF CONDUITS, CABLES, ETC.
4. NOT ALL COMPONENTS OF THE ELECTRICAL SYSTEMS ARE SHOWN (FOR CLARITY). PROVIDE MATERIALS AND LABOR NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.
5. THE AIC OF THE EQUIPMENT SHOWN ARE TENTATIVE AND GIVEN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL CALCULATE THE EQUIPMENT AIC BASED UPON FINAL CONDUIT ROUTING AND TRANSFORMERS AND FUSES SUBMITTED.
6. THE OPERATION OF THE FACILITY WILL TAKE PRECEDENCE OVER THE WORK OF THE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE CONSTRUCTION WITH UTILITY'S AND OWNER'S PERSONNEL TO MINIMIZE DISRUPTION TO THE FACILITY.
7. OUTAGES ARE TO BE MINIMIZED. PROVIDE ADVANCED NOTIFICATION TO ENGINEER FOR REQUIRED POWER OUTAGES AND PROCEED WITH EACH OUTAGE ONLY AFTER APPROVAL FROM OWNER'S PERSONNEL IS GIVEN. SEE SPECIFICATIONS AND SHEET G2.2 FOR FURTHER REQUIREMENTS.
8. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL DIMENSIONS AND CONDITIONS, WHICH MAY AFFECT THE WORK REQUIRED FOR THIS PROJECT PRIOR TO THE BEGINNING WORK.
9. CONTRACTOR TO VERIFY THAT ALL WIRING IN VAULTS, PULLBOXES, ETC. WITHIN AREA OF DEMOLITION IS DE–ENERGIZED PRIOR TO PROCEEDING WITH ANY DEMOLITION WORK.
10. REFER TO CIVIL/STRUCTURAL DEMOLITION DRAWINGS, FOR DEMOLITION OF EXISTING EQUIPMENT AND UTILITIES.
11. SEE GENERAL NOTES ON SHEET G1.2.
12. ALL PRECAST VAULTS SUBJECT TO TERMINAL LOADS SHALL BE CONTRACTOR DESIGNED TO MEET THE UNDERGROUND STRUCTURE LOADING CRITERIA ON SHEET G1.2. SEE SPECIFICATIONS FOR FURTHER DETAILS.
13. LIGHT OR SCREENED LINES INDICATE EXISTING ELECTRICAL EQUIPMENT UNLESS NOTED OTHERWISE. HEAVY LINES INDICATE NEW OR REUSED EQUIPMENT AND MATERIALS UNLESS NOTED OTHERWISE.
14. SEE SPECIFICATIONS FOR REQUIREMENTS FOR ACCEPTANCE TESTING (USING LOAD BANKS) AND COMMISSIONING WITH VESSELS.
15. SEE SHEET C3.4 FOR VAULT INSTALLATION DETAILS.

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STATE OF WASHINGTON
23791
REGISTERED PROFESSIONAL ENGINEER
2/2/22

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TERMINAL 3 / TERMINAL 4
SHORE POWER
ELECTRICAL SYMBOLS, ABBREVIATIONS AND GENERAL NOTES

TOWNSHIP: | RANGE: | SECTION:
DAT–HRZ: | VERT:
PARCEL: | DRAWING SCALE: NONE

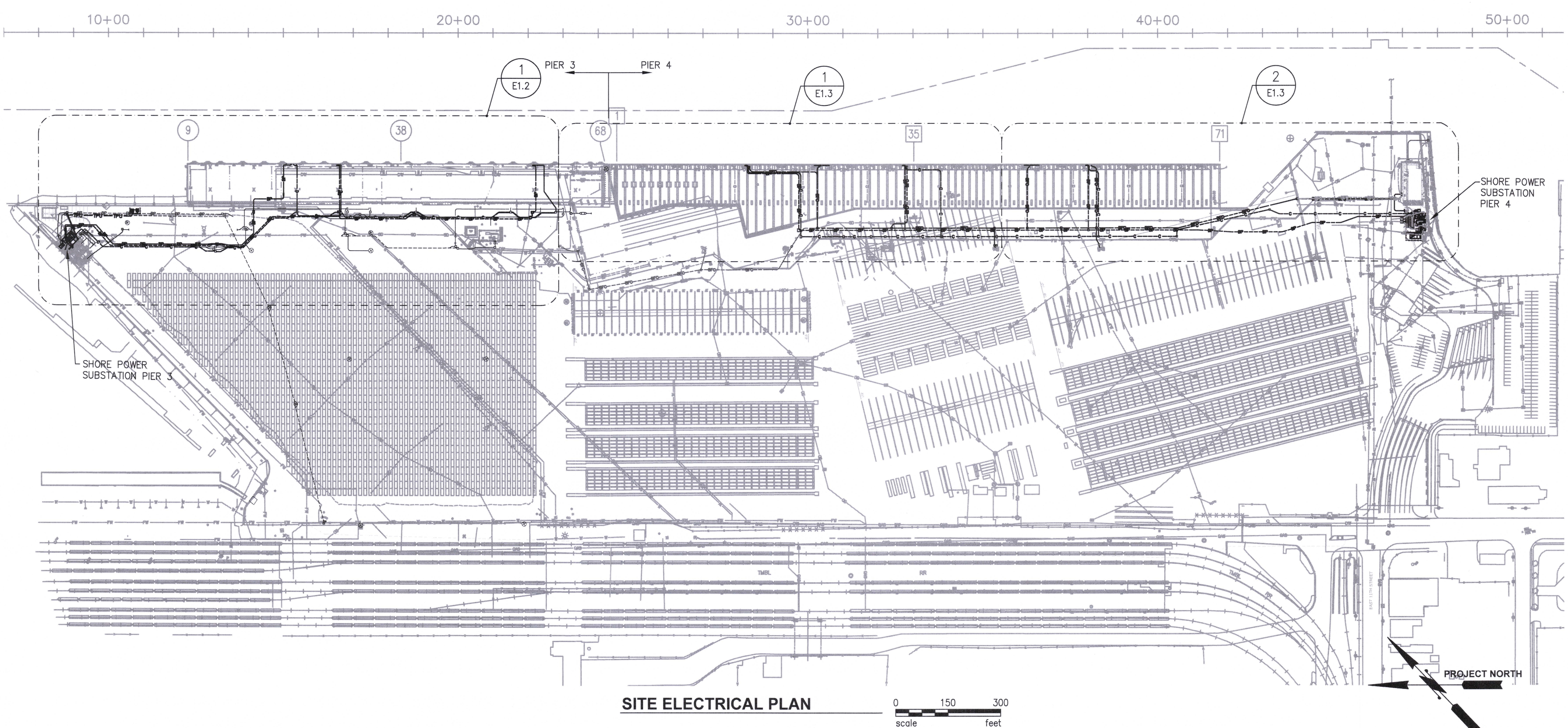
6658
E1.0
34 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

PORT OF TACOMA FILE: R:\5650-099.00\Dwgs\201119 01-E10

BINDING EDGE

GENERAL NOTES

1. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.



SITE ELECTRICAL PLAN

0 150 300
scale feet

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TERMINAL 3 / TERMINAL 4
SHORE POWER
T3/T4 OVERALL ELECTRICAL SITE PLAN

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

6658
E1.1
35 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

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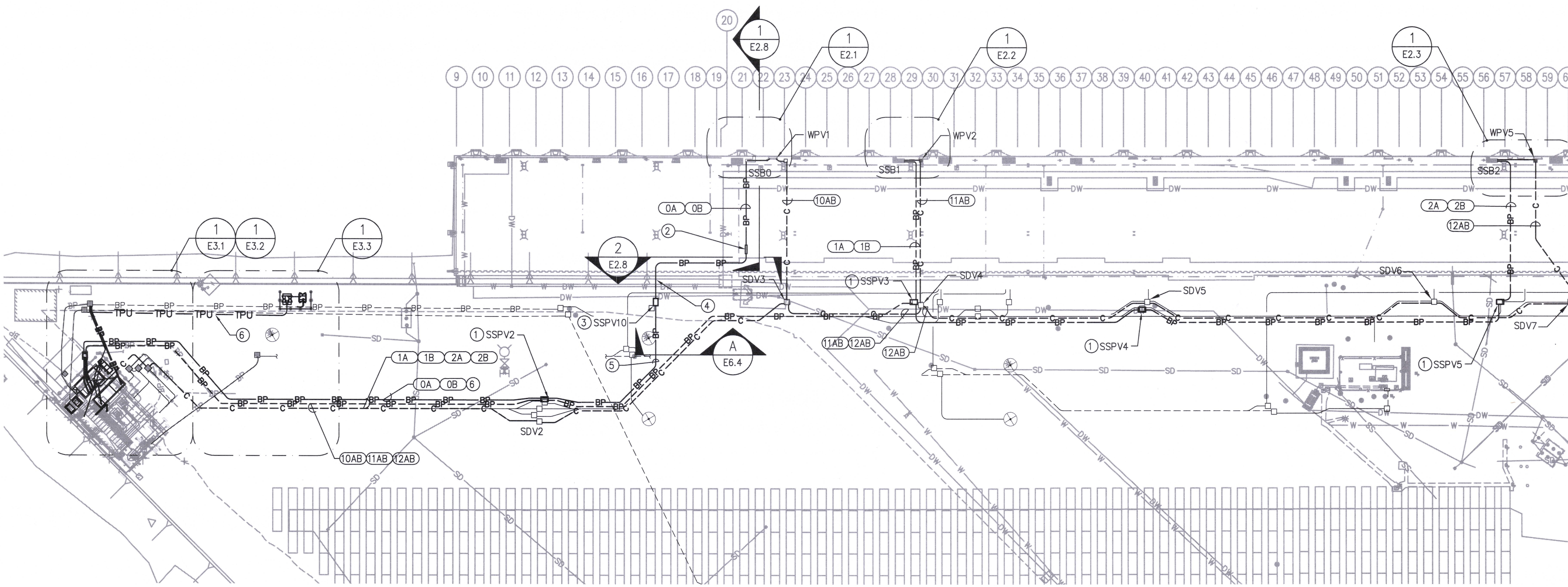
KEY NOTES

1. DEMOLISH 4'x4'x4' CONCRETE VAULT, PROVIDE 7'x5'x4' CONCRETE VAULT. SPLICE EXISTING 5" CONDUITS AND EXTEND INTO NEW VAULT. THESE CONDUITS ARE EMPTY.
2. PROVIDE PULLBOX PER SHEET E2.8.
3. PROVIDE 7'x5'x4' CONCRETE VAULT.
4. SEE SHEET C3.6 FOR EXISTING SLEEVE THROUGH BULKHEAD DETAIL.
5. SEE SHEET C3.0 FOR HORIZONTAL CONTROL AS DUCT BANK NO LONGER ADJACENT TO EXISTING.
6. MAINTAIN 3' MINIMUM CLEARANCE BETWEEN EXISTING AND NEW PARALLEL DUCT BANKS.

GENERAL NOTES

1. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.
2. SEE SHEETS C3.9–C3.11 FOR DUCT BANK PROFILES.



SITE ELECTRICAL PLAN - PIER 3

1 E1.1

0 50 100 scale feet

PROJECT NORTH

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TERMINAL 3 / TERMINAL 4
SHORE POWER
SITE ELECTRICAL PLAN - PIER 3

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT: |
PARCEL: | DRAWING SCALE: AS NOTED

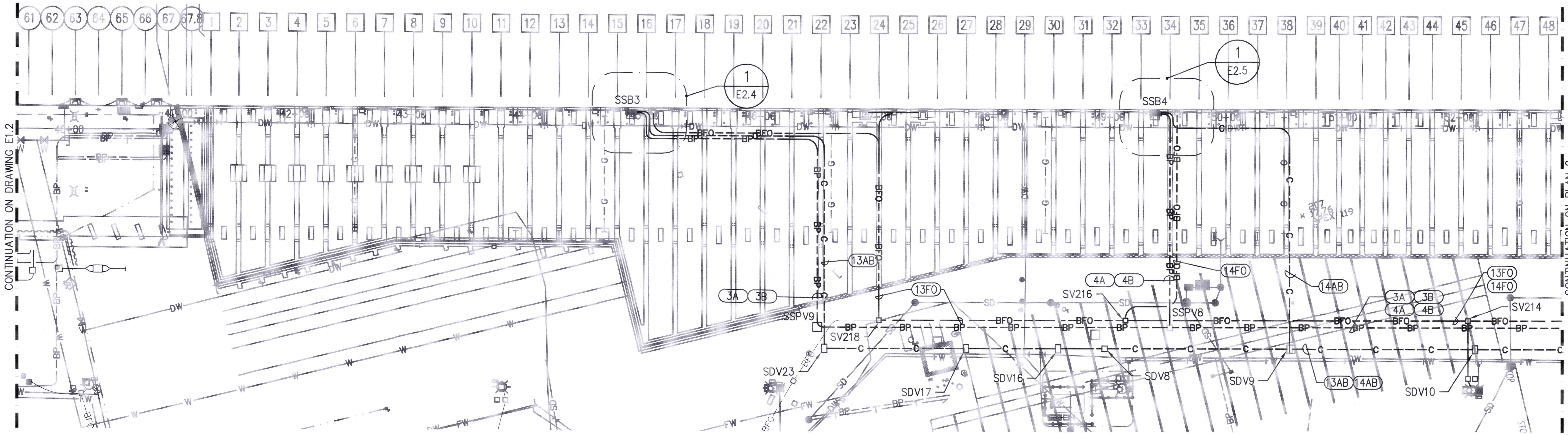
6658
E1.2
36 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

KEY NOTES

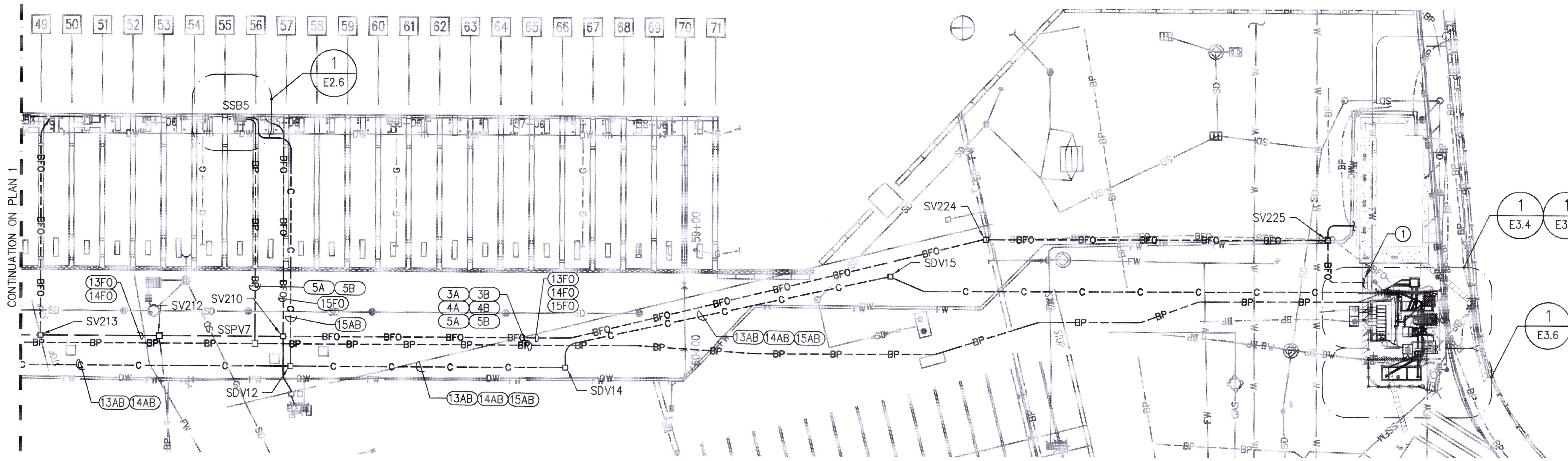
1. SEE SHEET E3.5 FOR CONTINUATION.

GENERAL NOTES

1. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.



SITE ELECTRICAL PLAN 1 - PIER 4 (1 / E1.1) 0 50 100 scale feet



SITE ELECTRICAL PLAN 2 - PIER 4 (2 / E1.1) 0 50 100 scale feet

PROJECT NORTH

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TERMINAL 3 / TERMINAL 4
SHORE POWER
SITE ELECTRICAL PLAN - PIER 4

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT: DRAWING SCALE: AS NOTED
PARCEL:

6658
E1.3
37 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

BINDING EDGE

PORT OF TACOMA FILE: R:\5650-099.00\Dwgs\201119.01-E13

KEY NOTES

1. SEE SHEET S6.1 FOR WORK REQUIRED TO INSTALL NEW CONDUIT INTO NEW VAULT, INCLUDING CORE DRILL THROUGH EXSITING CONCRETE STRUCTURE.
2. NOT USED.
3. GROUND SHORE POWER BOX TO VAULT REBAR.
4. NEW SHORE POWER VAULT. SEE STRUCTURAL SHEET S6.1.
5. PROVIDE SHORE POWER RECEPTACLE BOX WITH (2) SHORE POWER RECEPTACLES (HVSC B0-A,B).
6. SHORE POWER CABLE AND PLUG BY OTHERS.
7. PROVIDE 5" SHORE POWER CONDUIT AND WIRE PER CONDUIT AND CONDUCTOR SCHEDULE. END OF CONDUIT SHALL BE THREADED FOR CONNECTION INTO RECEPTACLE BOX.
8. PROVIDE 2" CONTROLS/FIBER OPTIC CONDUIT AND WIRE PER CONDUIT AND CONDUCTOR SCHEDULE. END OF CONDUIT SHALL BE THREADED FOR CONNECTION INTO RECEPTACLE BOX.
9. SHORE POWER RECEPTACLE KIRK KEY, SEE TABLE.
10. NEW SHORE POWER VAULT LID. SEE STRUCTURAL
11. SEE DETAIL 1, SHEET E6.1 FOR LID LIMIT SWITCH CIRCUIT INTER-LOCK.
12. PROVIDE SEALING LOCK-NUTS INSIDE AND OUTSIDE TO PROVIDE WATERTIGHT CONDUIT ENTRY INTO SHORE POWER OUTLET ENCLOSURE.
13. PROVIDE WATERPROOF INTERIOR CONDUIT SEAL TO PREVENT ENTRY OF WATER THRU THE CONDUIT SYSTEM. PROVIDE ROXTEC CONDUIT SEAL, EMERSON(O-Z/GEDNEY) 'CSB', OR ENGINEER APPROVED EQUAL, SIZED FOR CONDUIT AND CABLES.
14. PROVIDE TWO-PART EPOXY GROUT AS A WATERPROOF SEALANT (VOID SEALANT) UNDER RECEPTACLE ENCLOSURE. PROVIDE STAINLESS STEEL EXPANSION ANCHORS TO SECURE ENCLOSURE TO VAULT FLOOR, SLOPE ENCLOSURE TO ENCLOSURE VENT/DRAIN.

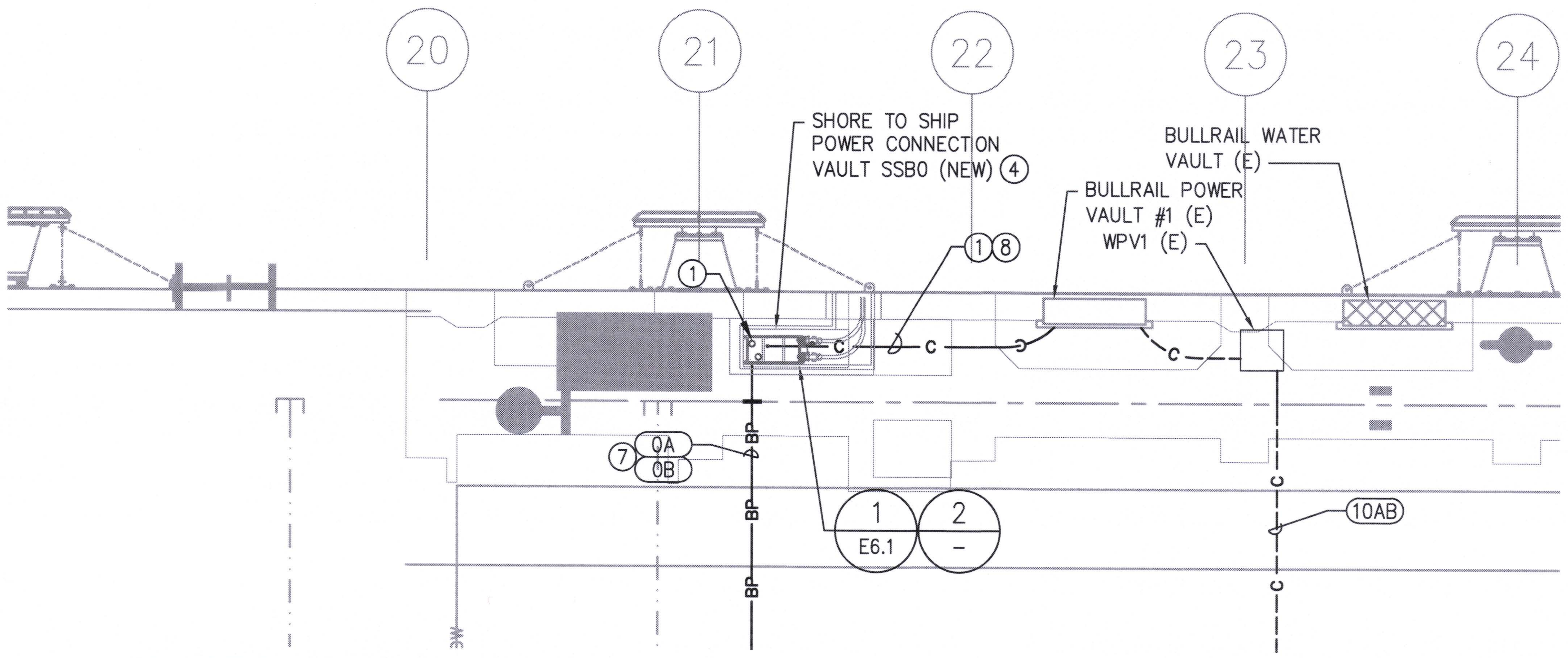
GENERAL NOTES

1. SCOPE OF WORK: PROVIDE RECEPTACLE BOX AND THREADED CONDUITS AS SHOWN, SEE KEYED NOTES FOR FURTHER DETAILS. RECEPTACLE BOX SIZING AND PLACEMENT SHALL NOT INTERFERE WITH VAULT LID.
2. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.

RECEPTACLE KEY-INTER-LOCK

VAULT ID	LOCATION
SSB0	RIGHT
SSB1	RIGHT
SSB2	LEFT
SSB3	LEFT
SSB4	LEFT
SSB5	LEFT

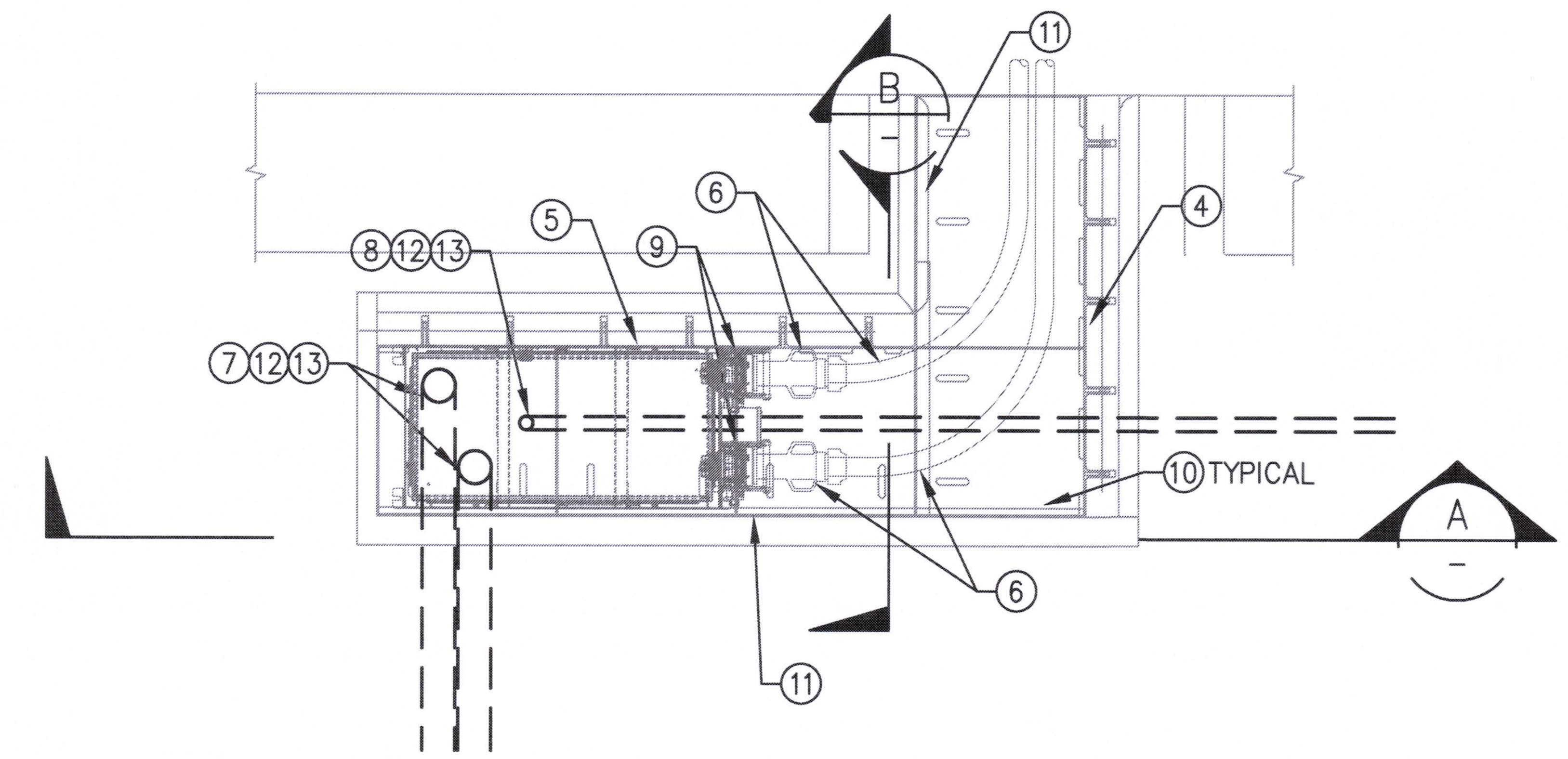
KEY ACCESS IS THE SAME FOR RED AND BLUE RECEPTACLES, ACCESS IS DETERMINED WHILE FACING RECEPTACLE



SHORE POWER VAULT SSB0 ENLARGED PLAN

1 E1.2

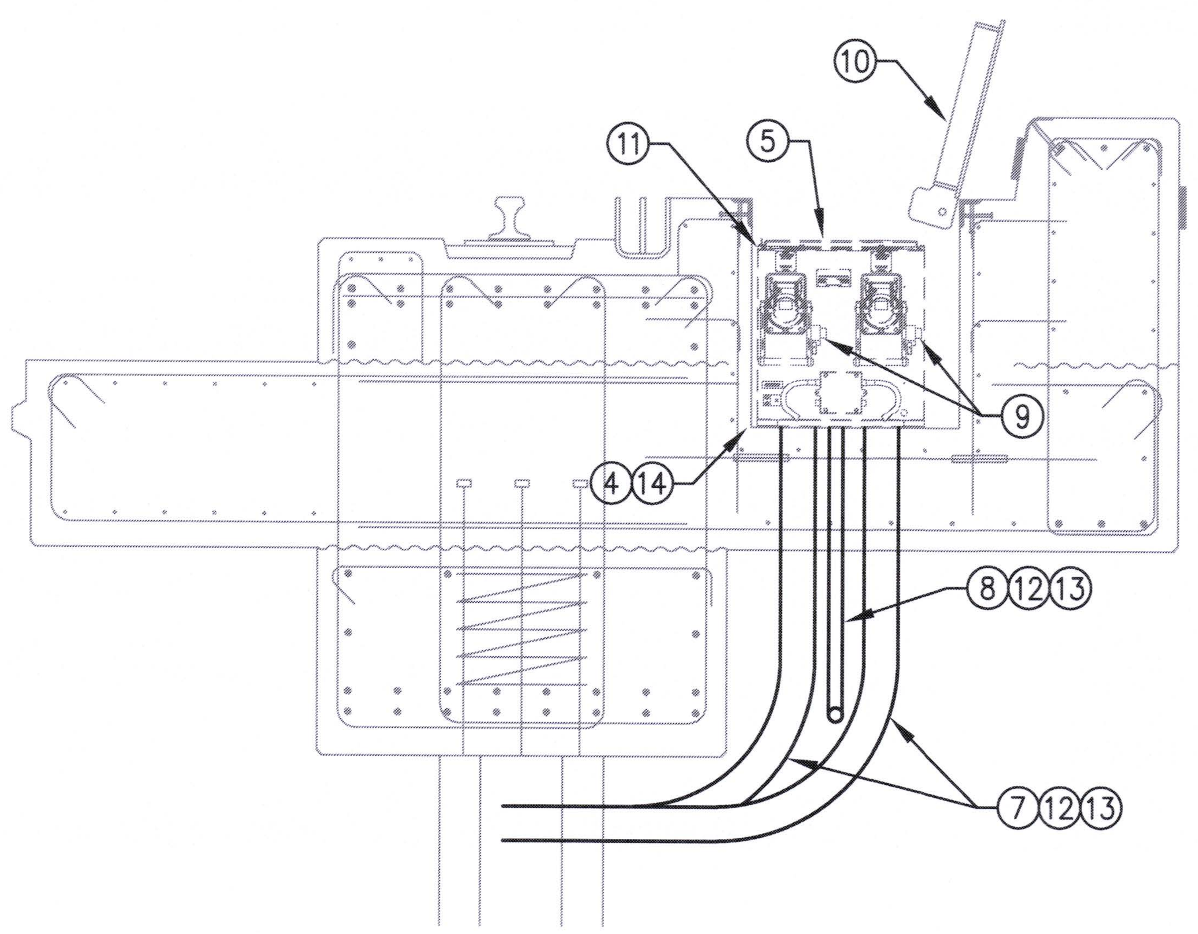
0 8 16 scale feet



SHORE POWER OUTLET SSB0 ASSEMBLY PLAN

2 –

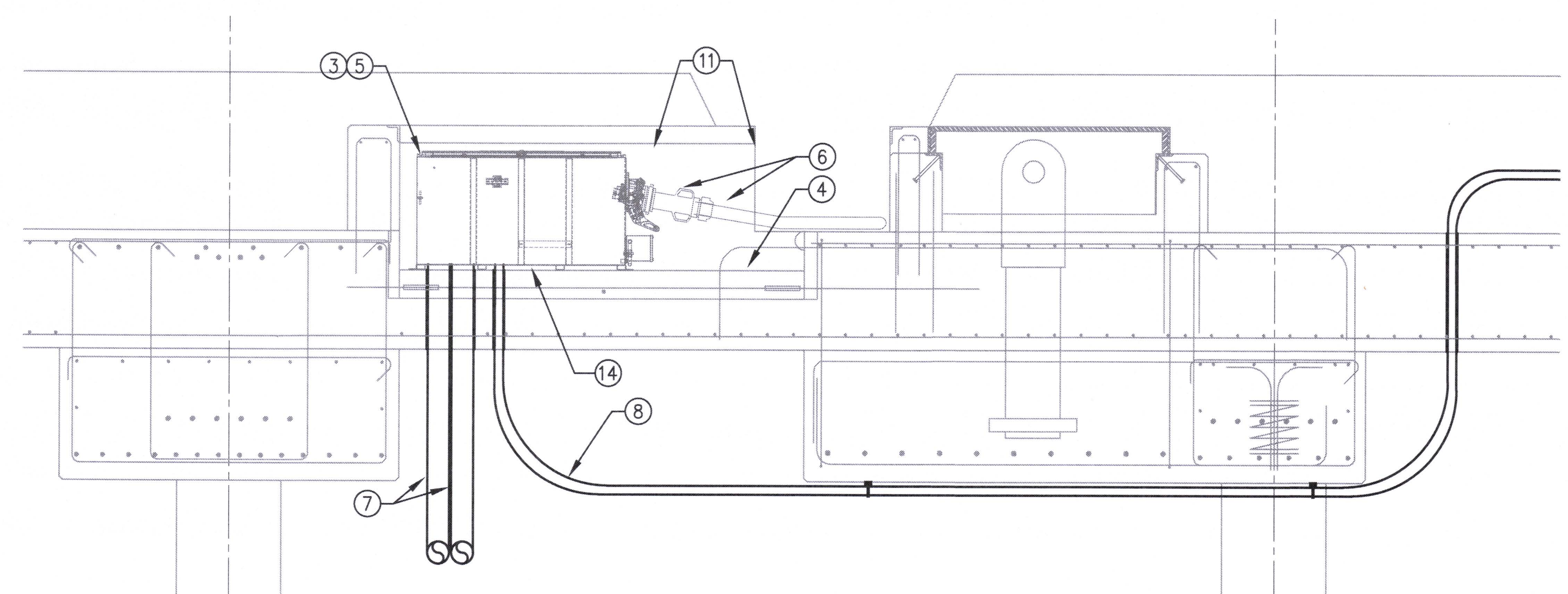
0 2 4 scale feet



SHORE POWER OUTLET SSB0 ASSEMBLY SECTION

B –

0 2 4 scale feet



SHORE POWER OUTLET SSB0 ASSEMBLY SECTION

A –

0 2 4 scale feet

PROJECT NORTH

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TERMINAL 3 / TERMINAL 4
SHORE POWER
ENLARGED SHORE POWER VAULT SSB0

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

6658
E2.1
38 OF 83

CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

PORT OF TACOMA FILE: R:\5650-099.00\Dwgs\201119.01-E21

BINDING EDGE

KEY NOTES

1. ADJUST RECEPTACLE BOX'S HEIGHT AND/OR DEPTH TO MATCH EXISTING 5" SHORE POWER CONDUIT, PROVIDE THREADED CONDUIT END FOR CONNECTION INTO RECEPTACLE BOX. IF RECEPTACLE BOX CANNOT BE ADJUSTED TO MEET EXISTING CONDUIT, DEMOLISH SUFFICIENT PORTION OF CONDUIT TO ALLOW FOR ALIGNMENT OF CONDUIT TO MATCH RECEPTACLE BOX CONDUIT ENTRY POINT.
2. RELOCATE EXISTING GROUND BAR, EXTEND GROUND WIRE AS REQUIRED.
3. EXISTING 3/4" CONDUIT WITH GROUND WIRE TO REMAIN. RELOCATE GROUND WIRE AND/OR GROUND BUS WITHIN VAULT SHOULD SUBMITTED SIZE OF RECEPTACLE BOX INTERFERE WITH GROUND BUS ACCESS.
4. EXISTING SHORE POWER VAULT.
5. PROVIDE SHORE POWER RECEPTACLE BOX WITH (2) SHORE POWER RECEPTACLES (HVSC B1-A,B).
6. SHORE POWER CABLE AND PLUG BY OTHERS.
7. SEE SHEET S2.3 FOR WORK REQUIRED TO INSTALL NEW CONDUIT ALONG BULLRAIL BETWEEN EXISTING VAULTS, INCLUDING CORE DRILL THROUGH CONCRETE CAP STRUCTURE AT BENT 29.
8. PROVIDE 2" CONTROLS/FIBER OPTIC CONDUIT AND WIRE PER CONDUIT AND CONDUCTOR SCHEDULE. END OF CONDUIT SHALL BE THREADED FOR CONNECTION INTO RECEPTACLE BOX.
9. SHORE POWER RECEPTACLE KIRK KEY, SEE TABLE.
10. EXISTING SHORE POWER VAULT LID.
11. SEE DETAIL 1, SHEET E6.1 FOR LID LIMIT SWITCH CIRCUIT INTER-LOCK.
12. PROVIDE SEALING LOCK-NUTS INSIDE AND OUTSIDE TO PROVIDE WATERTIGHT CONDUIT ENTRY INTO SHORE POWER OUTLET ENCLOSURE.
13. PROVIDE WATERPROOF INTERIOR CONDUIT SEAL TO PREVENT ENTRY OF WATER THRU THE CONDUIT SYSTEM. PROVIDE ROXTEC CONDUIT SEAL, EMERSON(O-Z/GEDNEY) 'CSB', OR ENGINEER APPROVED EQUAL, SIZED FOR CONDUIT AND CABLES.
14. PROVIDE STAINLESS STEEL EXPANSION ANCHORS TO SECURE ENCLOSURE TO VAULT FLOOR, SLOPE ENCLOSURE TO ENCLOSURE VENT/DRAIN.

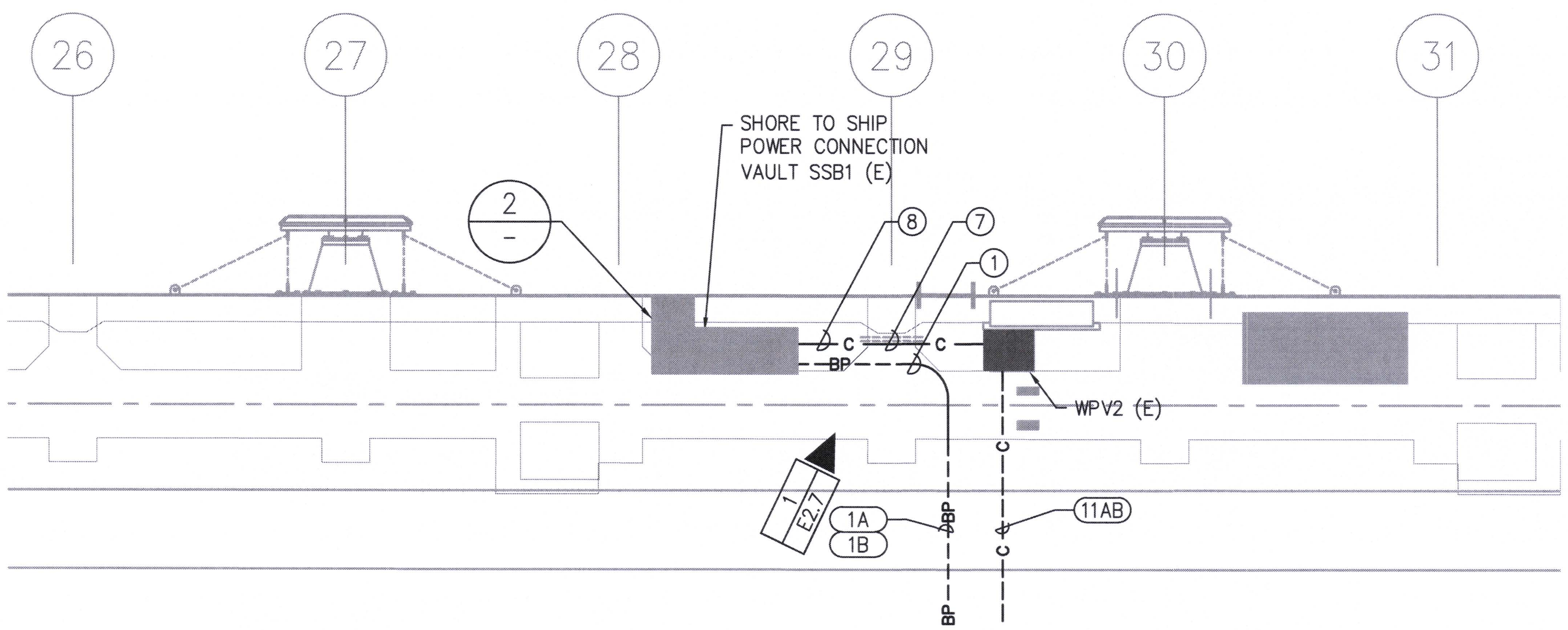
GENERAL NOTES

1. SCOPE OF WORK: PROVIDE RECEPTACLE BOX AND THREADED CONDUIT CONNECTIONS, SPLICE THREADED CONDUITS TO EXISTING CONDUITS AS SHOWN. POSITIONING OF RECEPTACLE BOX WITHIN VAULT MAY WARRANT DEMOLITION OF EXISTING CONDUITS AND/OR POSITIONING KIRK KEY ACCESS TO AVOID CONFLICTS WITH VAULT LID HINGES OR OTHER EXISTING CONSTRAINTS, SEE KEYED NOTES FOR FURTHER DETAILS. RECEPTACLE BOX SIZING AND PLACEMENT SHALL NOT INTERFERE WITH VAULT LID.
2. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.
3. VAULT PLANS AND SECTIONS ARE BASED ON HISTORICAL DOCUMENTS, DIMMENSIONS HAVE BEEN SPOT CHECKED IN THE FIELD TO BE ACCURATE WITHIN ±1". CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS THAT MAY AFFECT RECEPTACLE BOX PLACEMENT/INSTALLATION PRIOR TO EQUIPMENT SUBMITTALS.

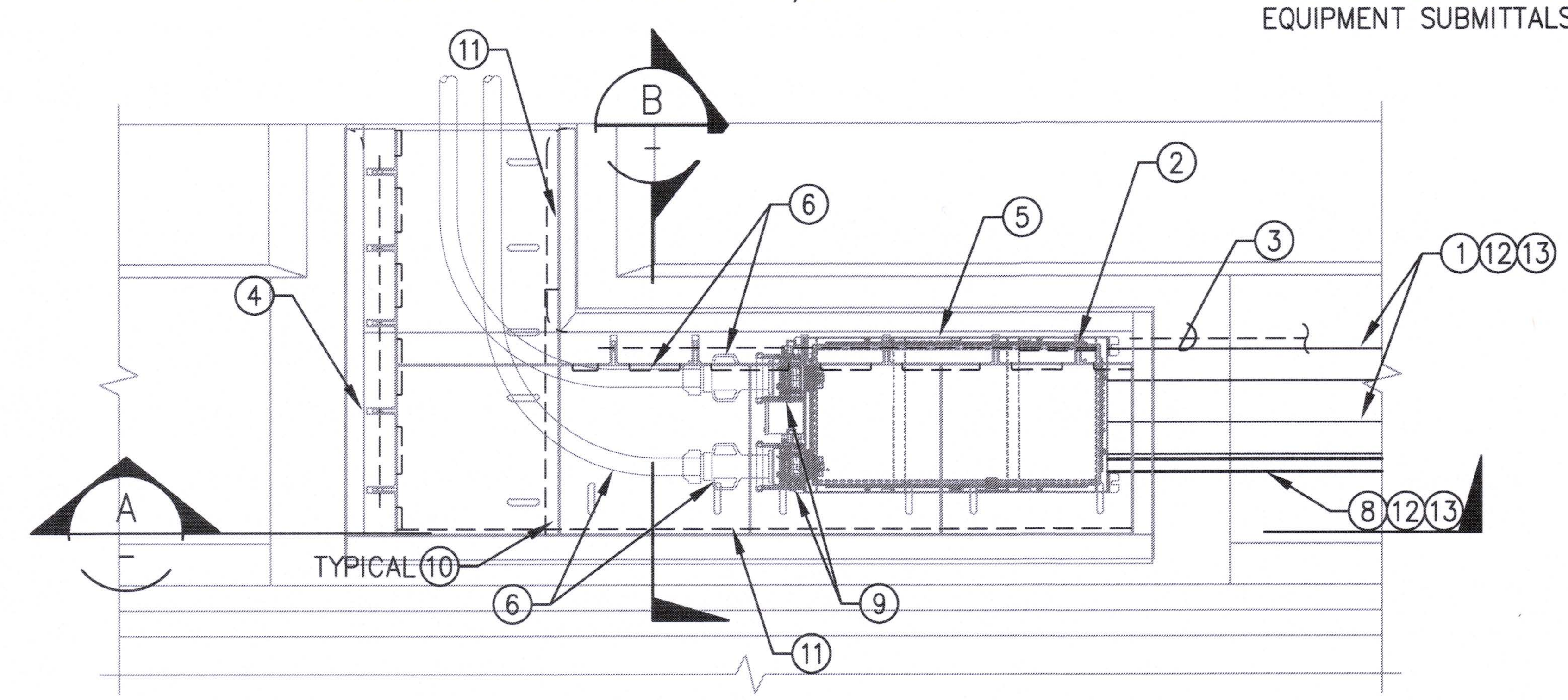
RECEPTACLE KEY-INTER-LOCK

VAULT ID	LOCATION
SSB0	RIGHT
SSB1	RIGHT
SSB2	LEFT
SSB3	LEFT
SSB4	LEFT
SSB5	LEFT

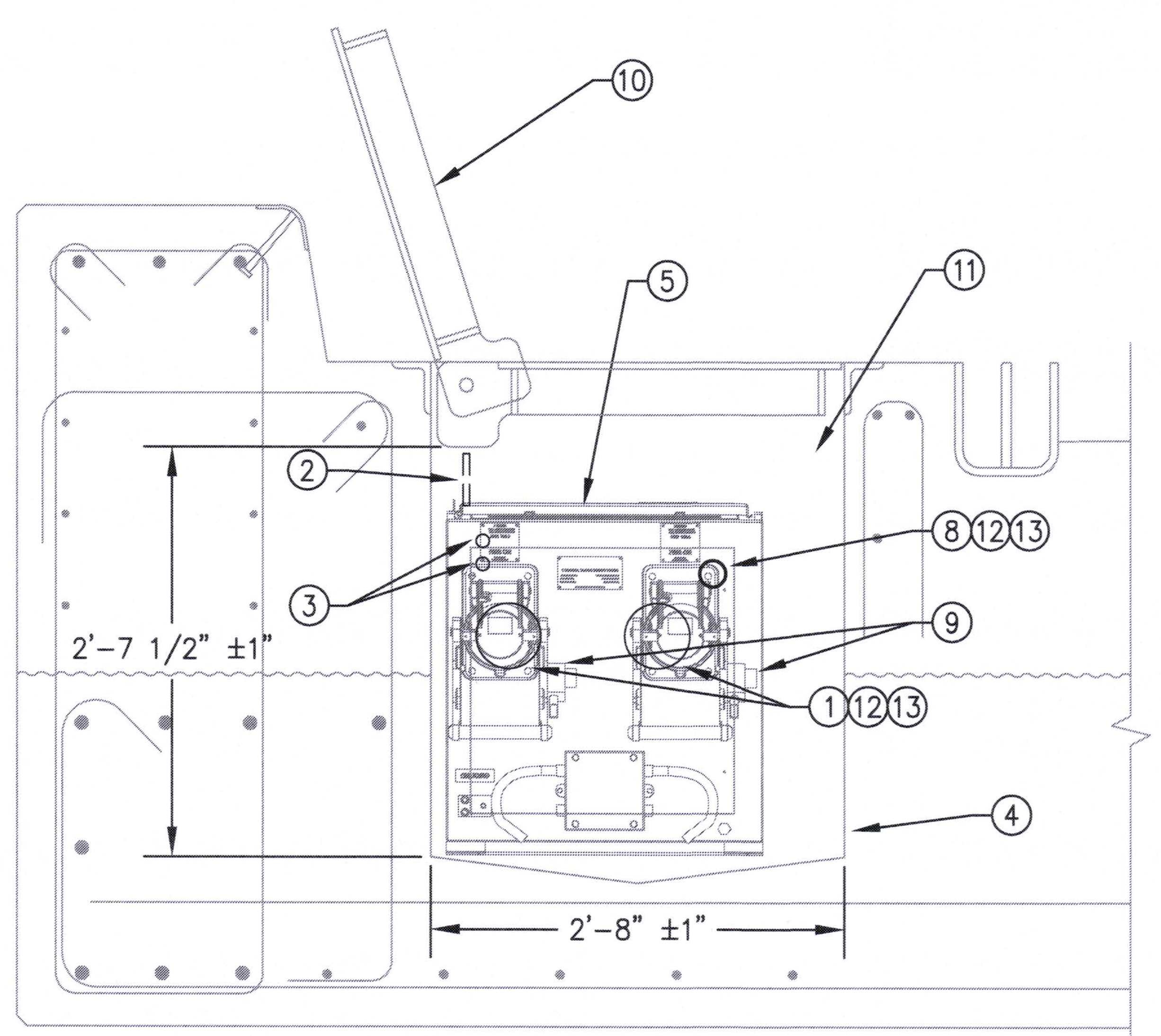
KEY ACCESS IS THE SAME FOR RED AND BLUE RECEPTACLES, ACCESS IS DETERMINED WHILE FACING RECEPTACLE



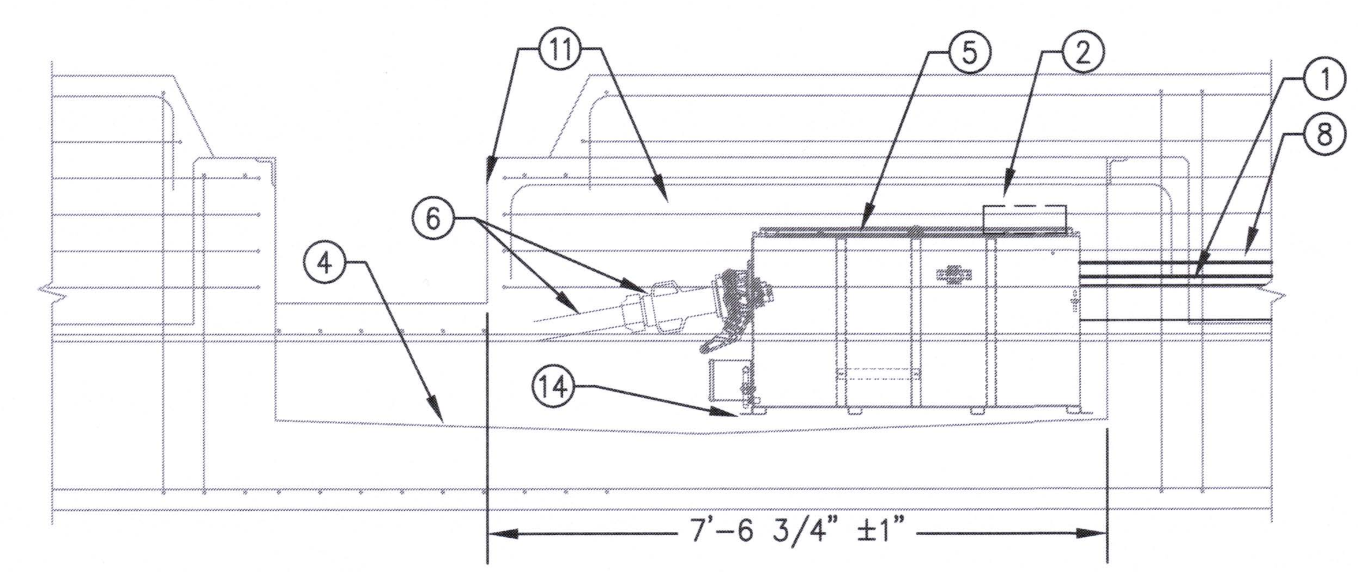
SHORE POWER VAULT SSB1 ENLARGED PLAN 1 / E1.2 — scale 0 8 16 feet



SHORE POWER OUTLET SSB1 ASSEMBLY PLAN 2 / – — scale 0 2 4 feet



SHORE POWER OUTLET SSB1 ASSEMBLY SECTION B / – — scale 0 1 2 feet



SHORE POWER OUTLET SSB1 ASSEMBLY SECTION A / – — scale 0 2 4 feet

PROJECT NORTH

BINDING EDGE

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DIMITRIOS K. SIATERLIS — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER 23791 — 2/2/22

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PRINTED BY: curtis Feb 02, 2022
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837

TERMINAL 3 / TERMINAL 4
SHORE POWER
ENLARGED SHORE POWER VAULT SSB1

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

6658
E2.2
39 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

KEY NOTES

1. ADJUST RECEPTACLE BOX'S HEIGHT AND/OR DEPTH TO MATCH EXISTING 5" SHORE POWER CONDUIT, PROVIDE THREADED CONDUIT END FOR CONNECTION INTO RECEPTACLE BOX. IF RECEPTACLE BOX CANNOT BE ADJUSTED TO MEET EXISTING CONDUIT, DEMOLISH SUFFICIENT PORTION OF CONDUIT TO ALLOW FOR ALIGNMENT OF CONDUIT TO MATCH RECEPTACLE BOX CONDUIT ENTRY POINT.
2. DEMOLISH PORTION OF EXISTING 5" SHORE POWER CONDUIT, BACK TO AND POSSIBLY INCLUDING 90° SWEEP IF NECESSARY, FOR INSTALLATION OF CONDUIT INTO RECEPTACLE NEW ENTRY POINT WITHIN VAULT.
3. EXISTING 3/4" CONDUIT WITH GROUND WIRE TO REMAIN. RELOCATE GROUND WIRE AND/OR GROUND BUS WITHIN VAULT SHOULD SUBMITTED SIZE OF RECEPTACLE BOX INTERFERE WITH GROUND BUS ACCESS.
4. EXISTING SHORE POWER VAULT.
5. PROVIDE SHORE POWER RECEPTACLE BOX WITH (2) SHORE POWER RECEPTACLES (HVSC B2-A,B).
6. SHORE POWER CABLE AND PLUG BY OTHERS.
7. PROVIDE 5" SHORE POWER CONDUIT AND WIRE PER CONDUIT AND CONDUCTOR SCHEDULE. END OF CONDUIT SHALL BE THREADED FOR CONNECTION INTO RECEPTACLE BOX AND MATCH RECEPTACLE'S CONDUIT ENTRY.
8. PROVIDE 2" CONTROLS/FIBER OPTIC CONDUIT AND WIRE PER CONDUIT AND CONDUCTOR SCHEDULE. END OF CONDUIT SHALL BE THREADED FOR CONNECTION INTO RECEPTACLE BOX.
9. SHORE POWER RECEPTACLE KIRK KEY, SEE TABLE.
10. EXISTING SHORE POWER VAULT LID.
11. SEE DETAIL 1, SHEET E6.1 FOR LID LIMIT SWITCH CIRCUIT INTER-LOCK.
12. EXISTING GROUND BAR TO REMAIN.
13. SEE SHEET S2.4 FOR WORK REQUIRED TO INSTALL NEW CONDUIT ALONG BULLRAIL BETWEEN EXISTING VAULTS, INCLUDING CORE DRILL THROUGH CONCRETE CAP STRUCTURE AT BENT 58.
14. PROVIDE SEALING LOCK-NUTS INSIDE AND OUTSIDE TO PROVIDE WATERTIGHT CONDUIT ENTRY INTO SHORE POWER OUTLET ENCLOSURE.
15. PROVIDE WATERPROOF INTERIOR CONDUIT SEAL TO PREVENT ENTRY OF WATER THRU THE CONDUIT SYSTEM. PROVIDE ROXTEC CONDUIT SEAL, EMERSON(O-Z/GEDNEY) 'CSB', OR ENGINEER APPROVED EQUAL, SIZED FOR CONDUIT AND CABLES.
16. PROVIDE STAINLESS STEEL EXPANSION ANCHORS TO SECURE ENCLOSURE TO VAULT FLOOR, SLOPE ENCLOSURE TO ENCLOSURE VENT/DRAIN.

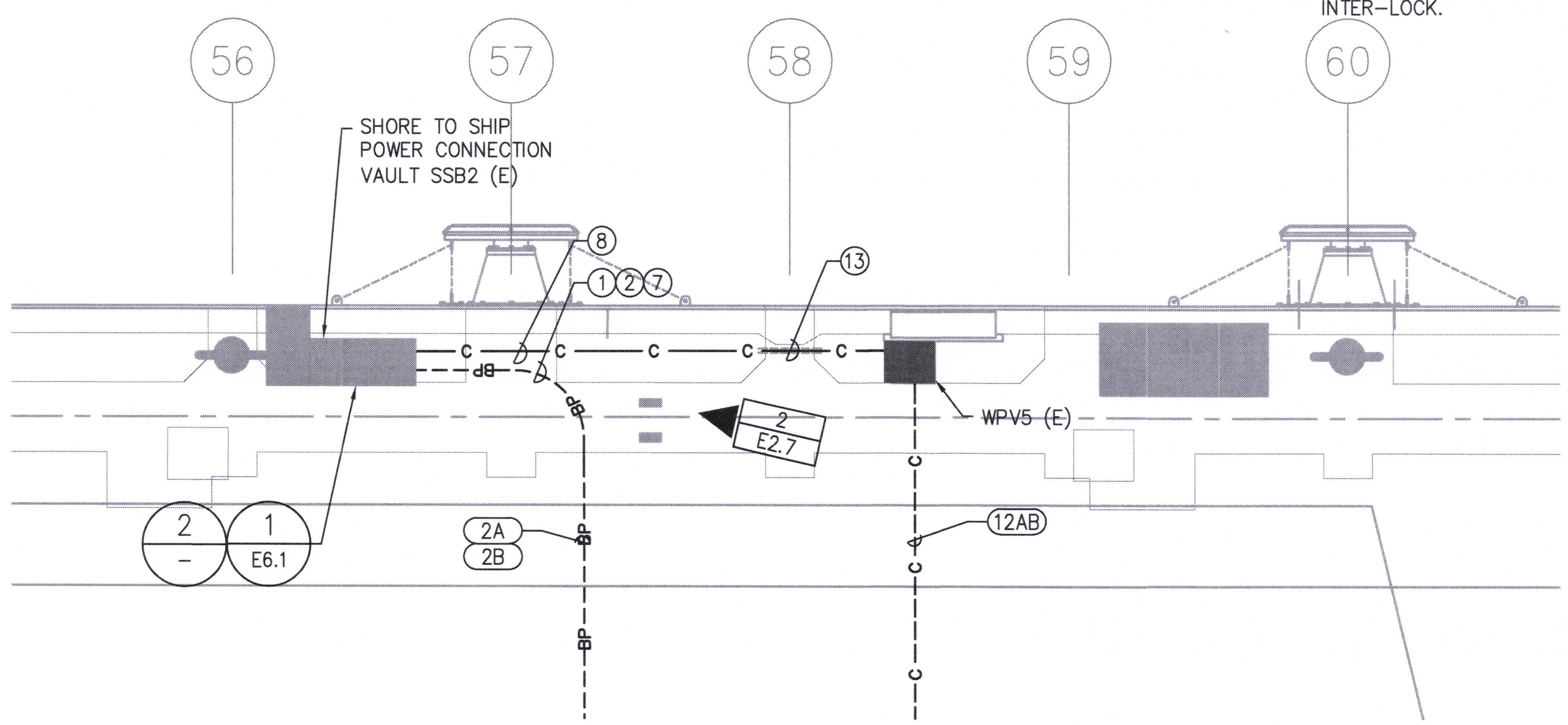
GENERAL NOTES

1. SCOPE OF WORK: PROVIDE RECEPTACLE BOX AND THREADED CONDUIT CONNECTIONS, SPLICE THREADED CONDUITS TO EXISTING CONDUITS AS SHOWN. POSITIONING OF RECEPTACLE BOX WITHIN VAULT MAY WARRANT DEMOLITION OF EXISTING CONDUITS AND/OR POSITIONING KIRK KEY ACCESS TO AVOID CONFLICTS WITH VAULT LID HINGES OR OTHER EXISTING CONSTRAINTS, SEE KEYED NOTES FOR FURTHER DETAILS. RECEPTACLE BOX SIZING AND PLACEMENT SHALL NOT INTERFERE WITH VAULT LID.
2. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.
3. VAULT PLANS AND SECTIONS ARE BASED ON HISTORICAL DOCUMENTS, DIMMENSIONS HAVE BEEN SPOT CHECKED IN THE FIELD TO BE ACCURATE WITHIN ±1". CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS THAT MAY AFFECT RECEPTACLE BOX PLACEMENT/INSTALLATION PRIOR TO EQUIPMENT SUBMITTALS.

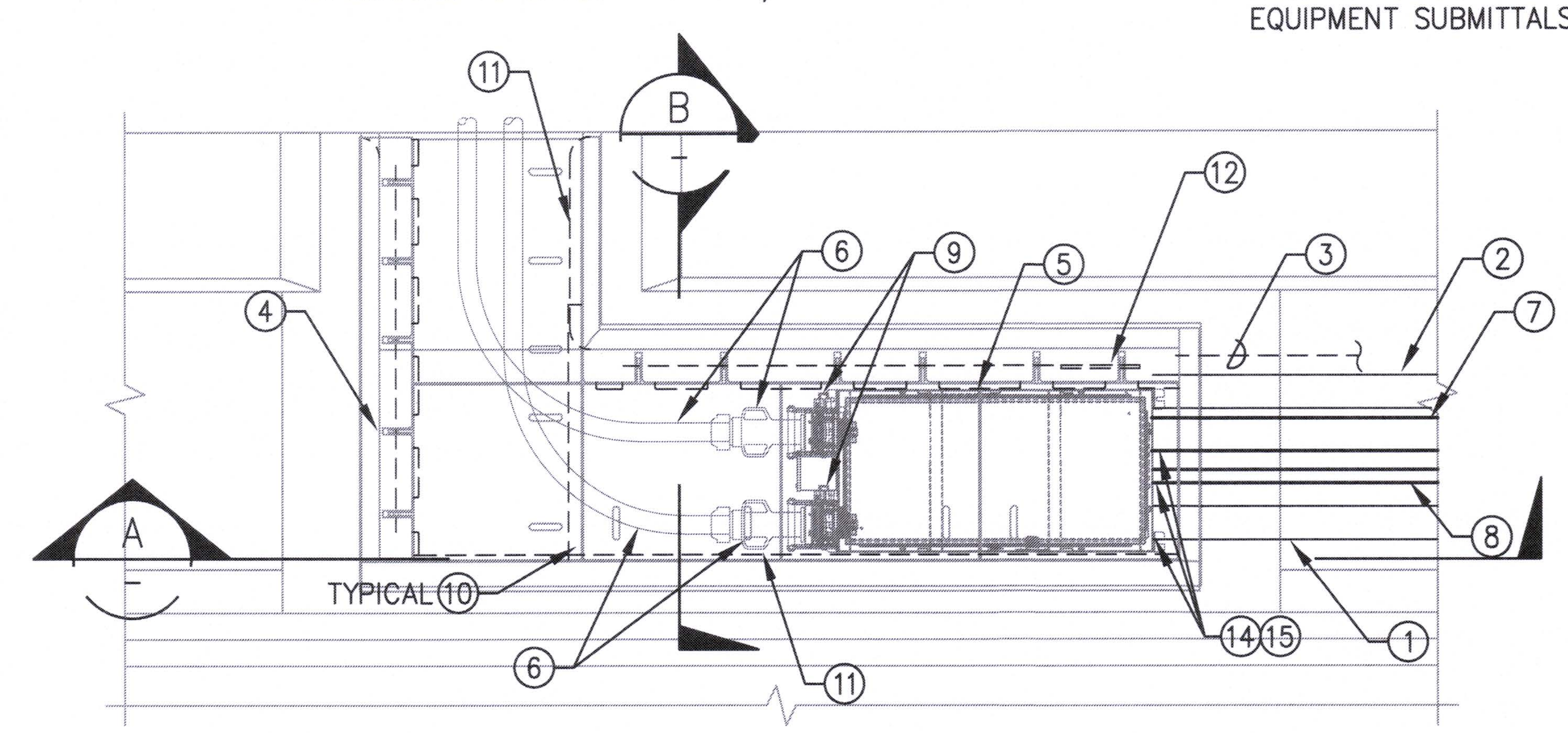
RECEPTACLE KEY-INTER-LOCK

VAULT ID	LOCATION
SSB0	RIGHT
SSB1	RIGHT
SSB2	LEFT
SSB3	LEFT
SSB4	LEFT
SSB5	LEFT

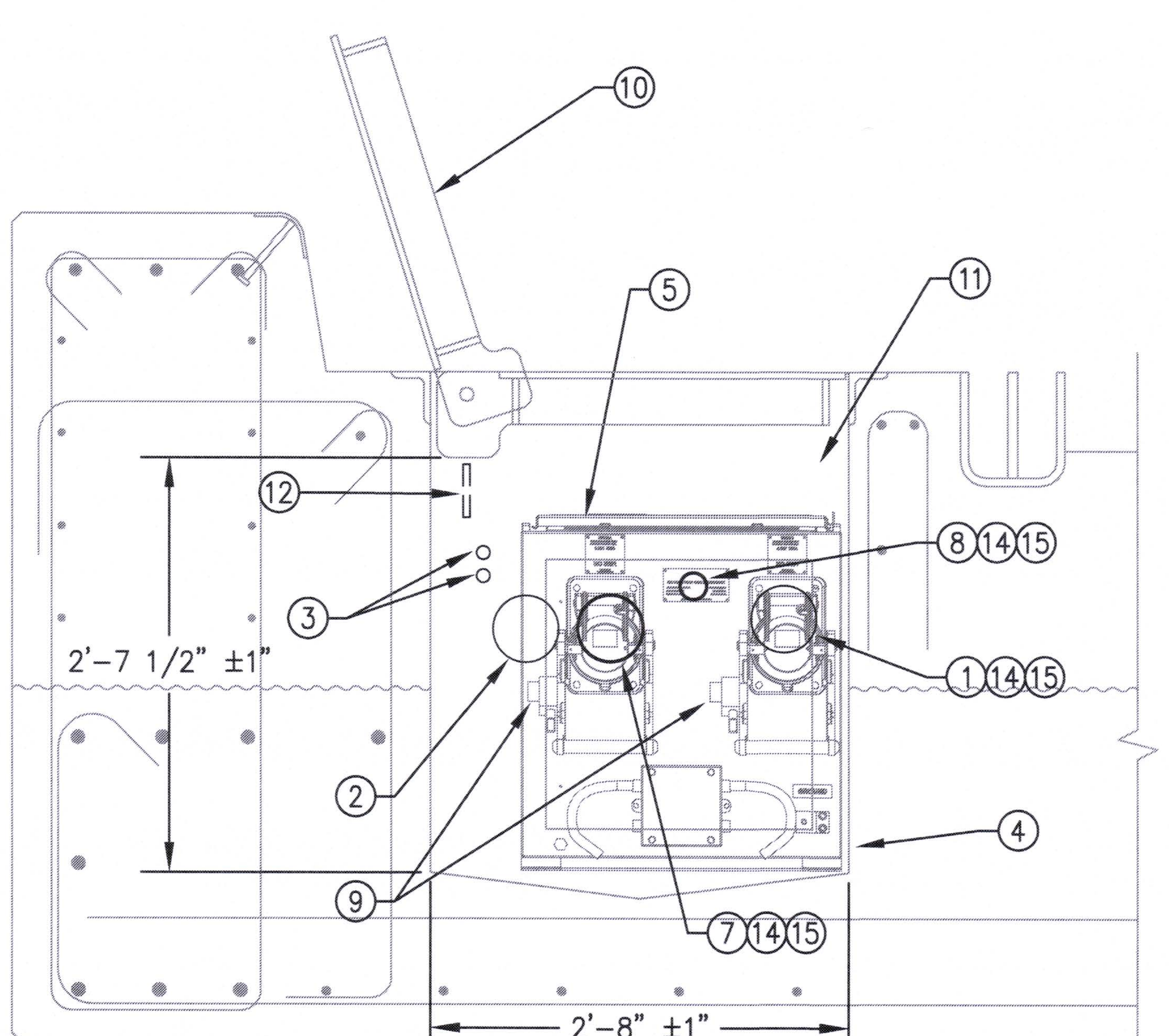
KEY ACCESS IS THE SAME FOR RED AND BLUE RECEPTACLES, KEY ACCESS IS DETERMINED WHILE FACING RECEPTACLE



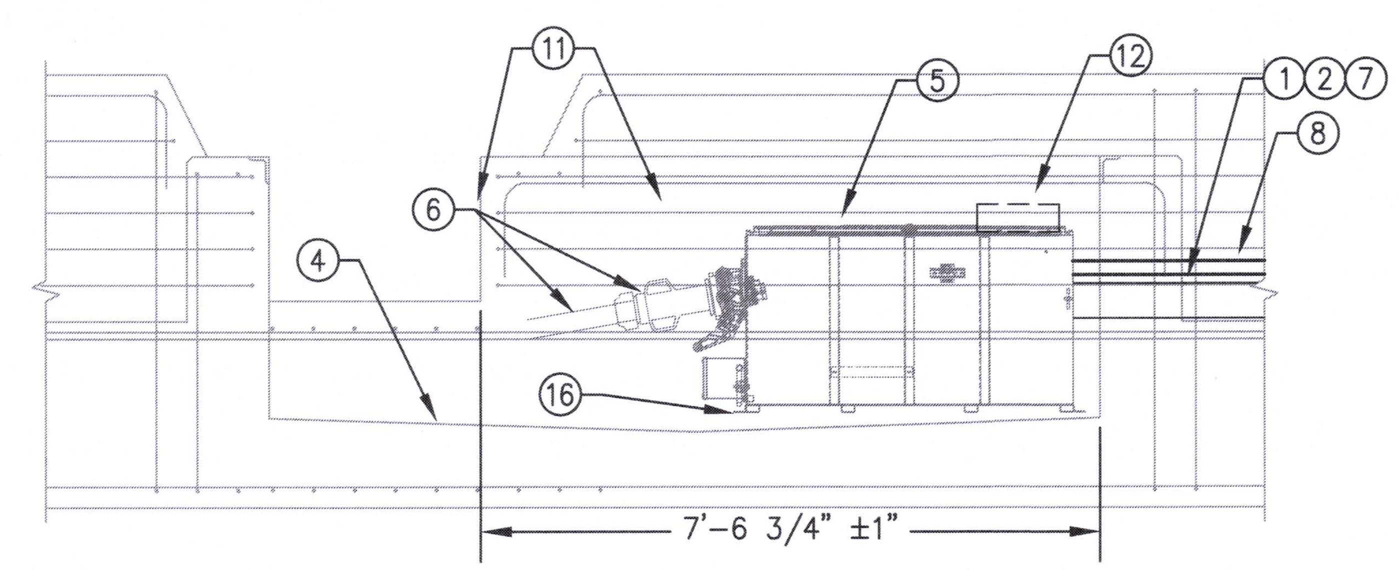
SHORE POWER VAULT SSB2 ENLARGED PLAN 1 / E1.2 — scale 0 8 16 feet



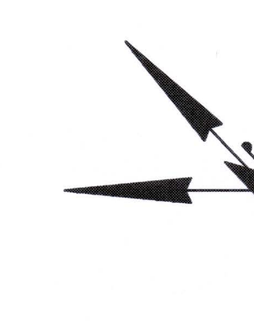
SHORE POWER OUTLET SSB2 ASSEMBLY PLAN 2 / – — scale 0 2 4 feet



SHORE POWER OUTLET SSB2 ASSEMBLY SECTION B / – — scale 0 1 2 feet



SHORE POWER OUTLET SSB2 ASSEMBLY SECTION A / – — scale 0 2 4 feet



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DIMITRIOS K. SIATERLIS, WASHINGTON, PROFESSIONAL ENGINEER, 2/2/22

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TERMINAL 3 / TERMINAL 4 SHORE POWER
ENLARGED SHORE POWER VAULT SSB2

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT: DRAWING SCALE: AS NOTED
PARCEL:

6658
E2.3
40 OF 83

CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

BINDING EDGE
PORT OF TACOMA FILE: R:\5650-099.00\Dwgs\201119.01-E23

BINDING EDGE

KEY NOTES

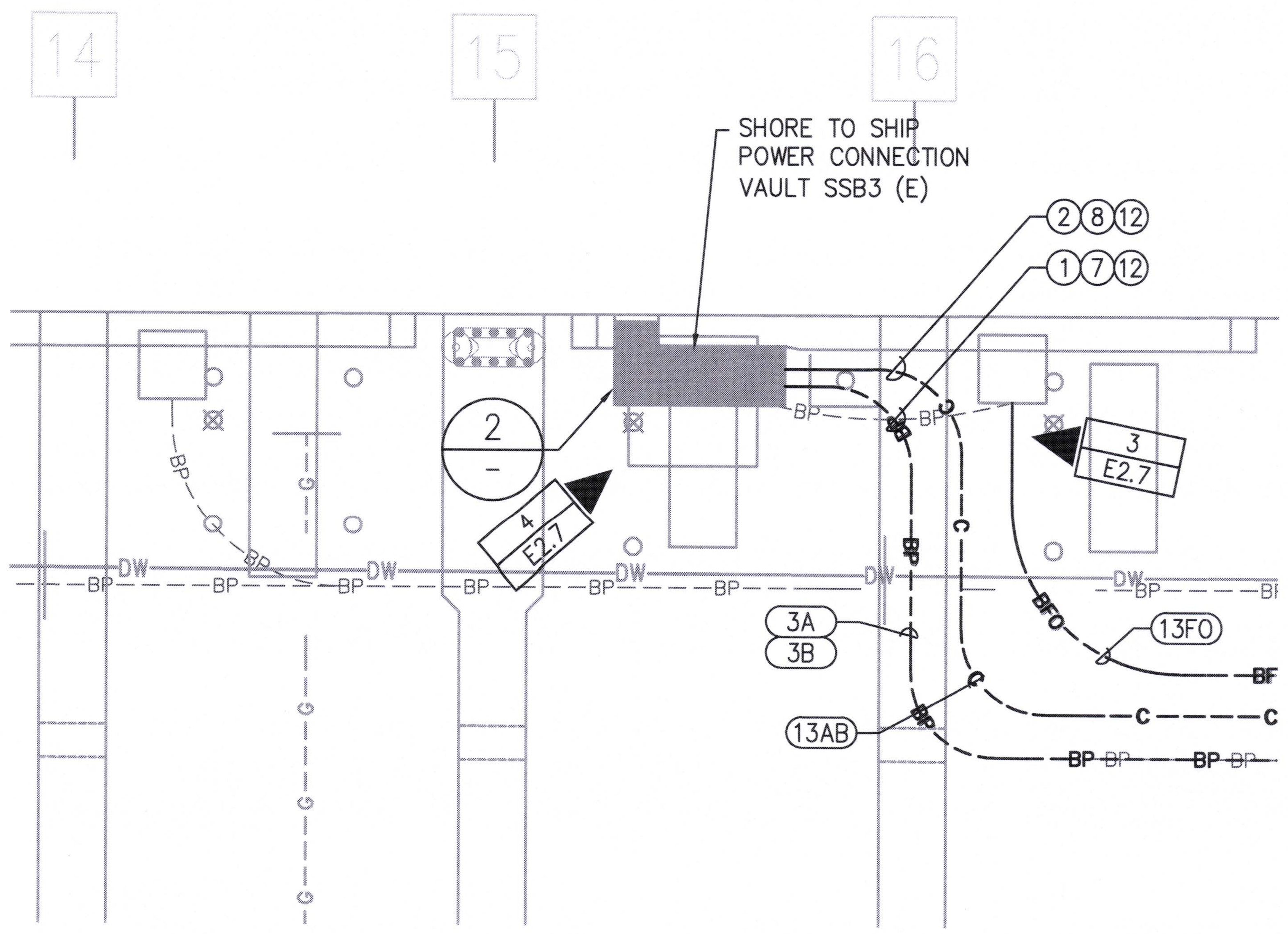
1. DEMOLISH PORTION OF EXISTING 5" SHORE POWER CONDUIT, BACK TO AND POSSIBLY INCLUDING 90° SWEEP IF NECESSARY, FOR INSTALLATION OF CONDUIT INTO NEW ENTRY POINT WITHIN VAULT.
2. DEMOLISH PORTION OF EXISTING 2" CONTROLS/FIBER OPTIC CONDUIT FOR INSTALLATION OF CONDUIT INTO RECEPTACLE NEW ENTRY POINT WITHIN VAULT.
3. EXISTING 3/4" CONDUIT WITH GROUND WIRE TO REMAIN. RELOCATE GROUND WIRE AND/OR GROUND BUS WITHIN VAULT SHOULD SUBMITTED SIZE OF RECEPTACLE BOX INTERFERE WITH GROUND BUS ACCESS.
4. EXISTING SHORE POWER VAULT.
5. PROVIDE SHORE POWER RECEPTACLE BOX WITH (2) SHORE POWER RECEPTACLES (HVSC B3–A,B).
6. SHORE POWER CABLE AND PLUG BY OTHERS.
7. PROVIDE 5" SHORE POWER CONDUIT AND WIRE PER CONDUIT AND CONDUCTOR SCHEDULE. END OF CONDUIT SHALL BE THREADED FOR CONNECTION INTO RECEPTACLE BOX AND MATCH RECEPTACLE'S CONDUIT ENTRY.
8. PROVIDE 2" CONTROLS/FIBER OPTIC CONDUIT AND WIRE PER CONDUIT AND CONDUCTOR SCHEDULE. END OF CONDUIT SHALL BE THREADED FOR CONNECTION INTO RECEPTACLE BOX.
9. SHORE POWER RECEPTACLE KIRK KEY, SEE TABLE.
10. EXISTING SHORE POWER VAULT LID.
11. SEE DETAIL 1, SHEET E6.1 FOR LID LIMIT SWITCH CIRCUIT INTER–LOCK.
12. SEE SHEET S2.5 FOR WORK REQUIRED TO CORE DRILL EXISTING WALL FOR RELOCATED CONDUIT PENETRATIONS.
13. PROVIDE SEALING LOCK–NUTS INSIDE AND OUTSIDE TO PROVIDE WATERTIGHT CONDUIT ENTRY INTO SHORE POWER OUTLET ENCLOSURE.
14. PROVIDE WATERPROOF INTERIOR CONDUIT SEAL TO PREVENT ENTRY OF WATER THRU THE CONDUIT SYSTEM. PROVIDE ROXTEC CONDUIT SEAL, EMERSON(O–Z/GEDNEY) 'CSB', OR ENGINEER APPROVED EQUAL, SIZED FOR CONDUIT AND CABLES.
15. PROVIDE STAINLESS STEEL EXPANSION ANCHORS TO SECURE ENCLOSURE TO VAULT FLOOR, SLOPE ENCLOSURE TO ENCLOSURE VENT/DRAIN.

GENERAL NOTES

1. SCOPE OF WORK: PROVIDE RECEPTACLE BOX AND THREADED CONDUIT CONNECTIONS, SPLICE THREADED CONDUITS TO EXISTING CONDUITS AS SHOWN. POSITIONING OF RECEPTACLE BOX WITHIN VAULT MAY WARRANT DEMOLITION OF EXISTING CONDUITS AND/OR POSITIONING KIRK KEY ACCESS TO AVOID CONFLICTS WITH VAULT LID HINGES OR OTHER EXISTING CONSTRAINTS, SEE KEYED NOTES FOR FURTHER DETAILS. RECEPTACLE BOX SIZING AND PLACEMENT SHALL NOT INTERFERE WITH VAULT LID.
2. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.
3. VAULT PLANS AND SECTIONS ARE BASED ON HISTORICAL DOCUMENTS, DIMENSIONS HAVE BEEN SPOT CHECKED IN THE FIELD TO BE ACCURATE WITHIN ±1". CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS THAT MAY AFFECT RECEPTACLE BOX PLACEMENT/INSTALLATION PRIOR TO EQUIPMENT SUBMITTALS.

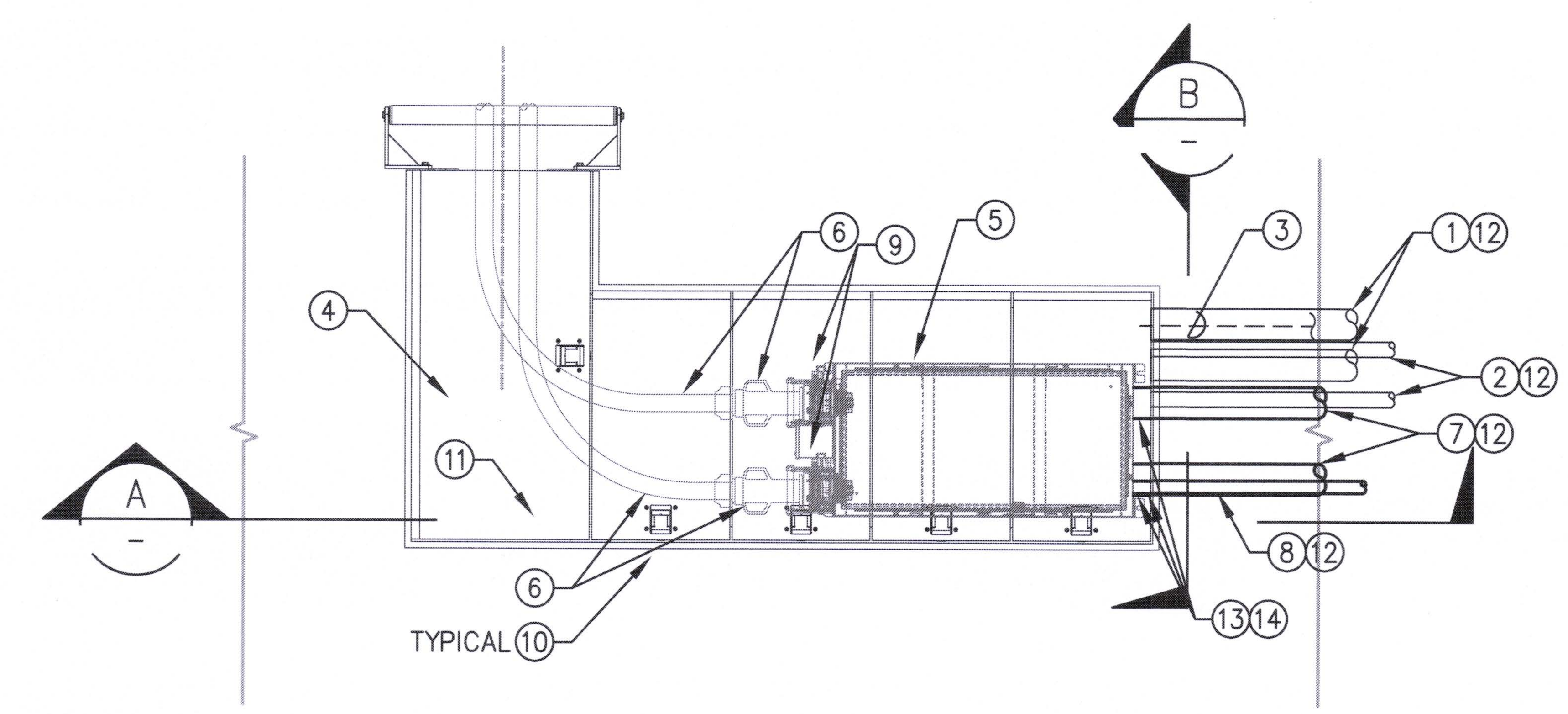
RECEPTACLE KEY–INTER–LOCK	
VAULT ID	LOCATION
SSB0	RIGHT
SSB1	RIGHT
SSB2	LEFT
SSB3	LEFT
SSB4	LEFT
SSB5	LEFT

KEY ACCESS IS THE SAME FOR RED AND BLUE RECEPTACLES, ACCESS IS DETERMINED WHILE FACING RECEPTACLE



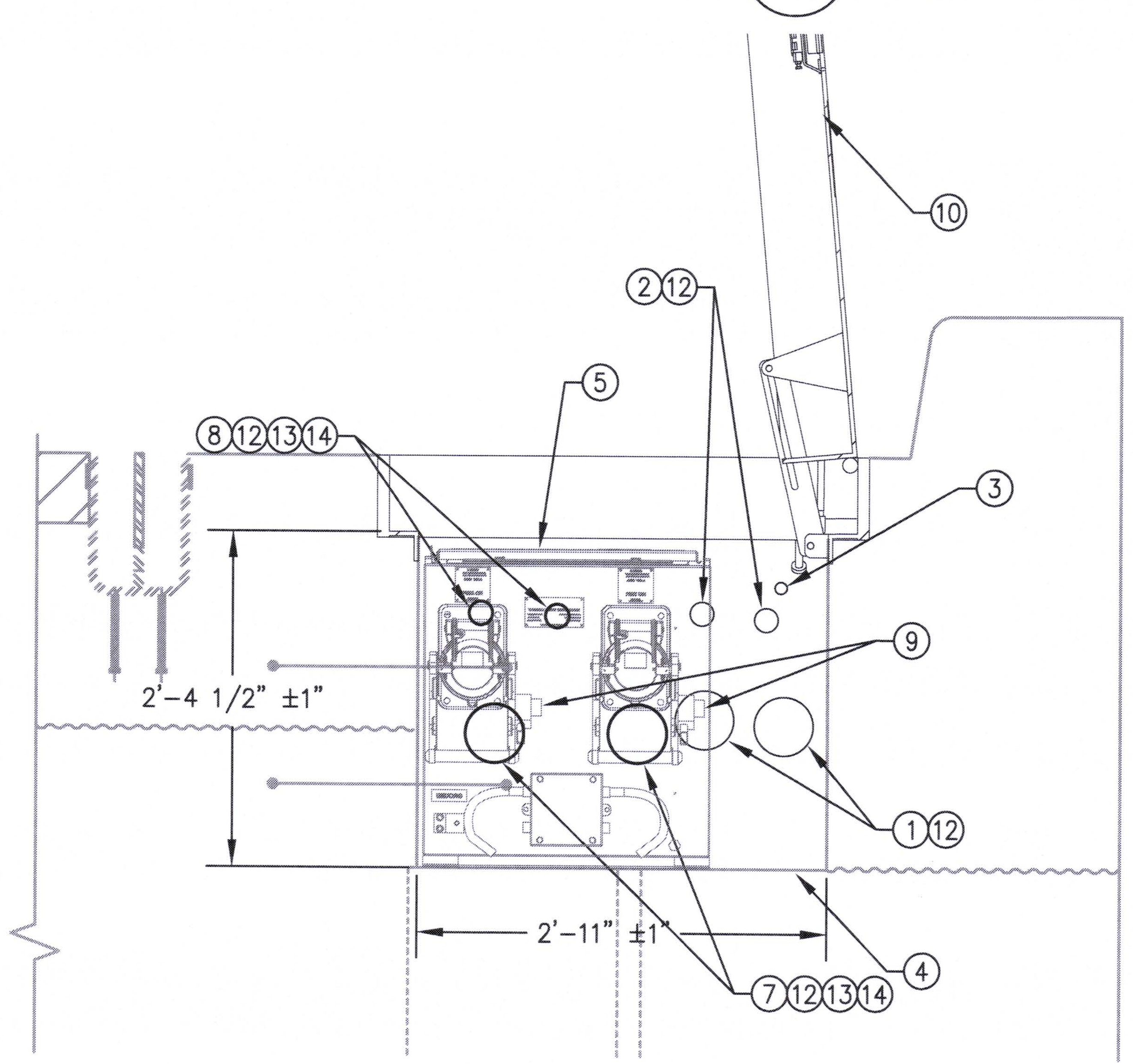
SHORE POWER VAULT SSB3 ENLARGED PLAN 1 E1.3

0 8 16 scale feet



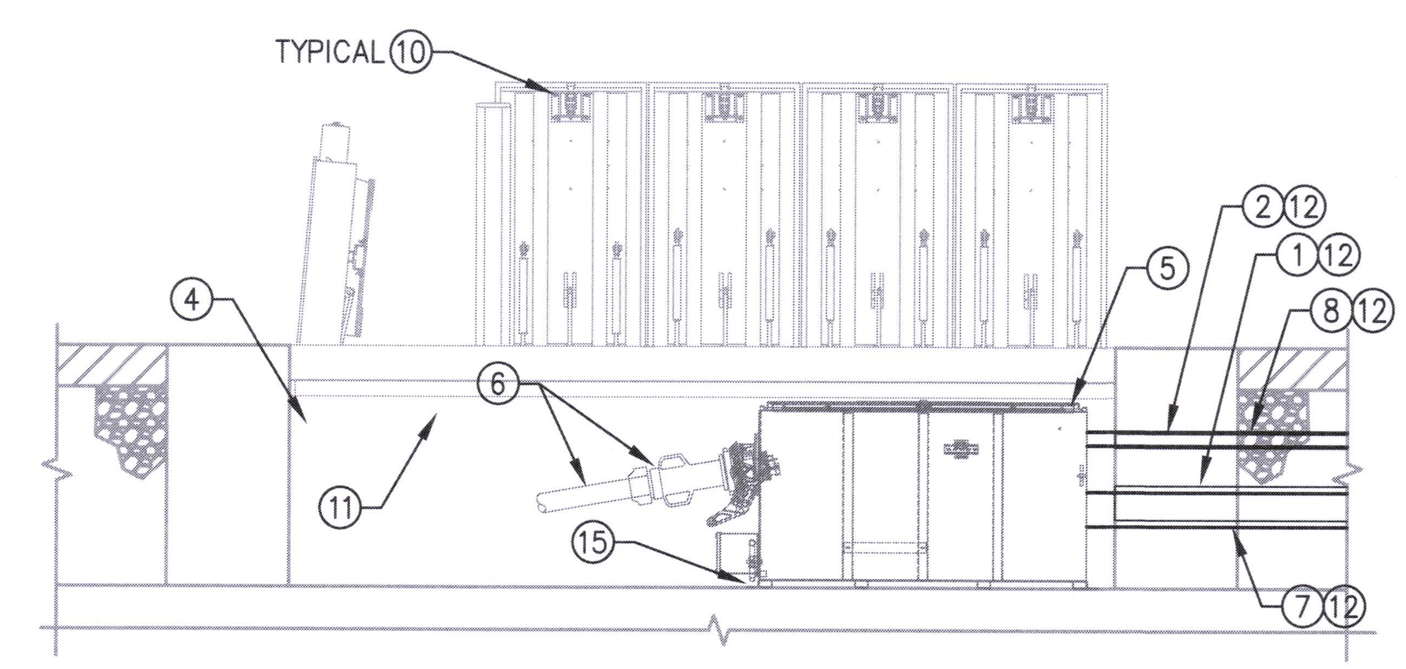
SHORE POWER OUTLET SSB3 ASSEMBLY PLAN 2 –

0 2 4 scale feet



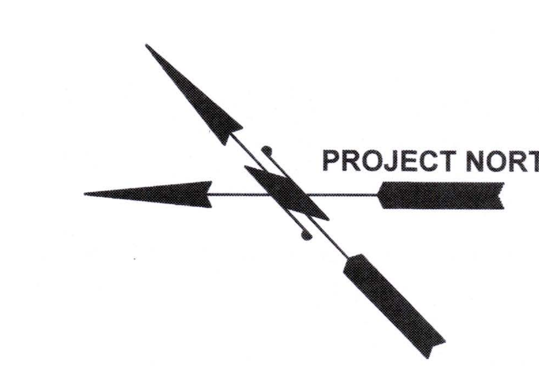
SHORE POWER OUTLET SSB3 ASSEMBLY SECTION B –

0 1 2 scale feet



SHORE POWER OUTLET SSB3 ASSEMBLY SECTION A –

0 2 4 scale feet



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DIMITRIOS K. SIATERLIS, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER 2/2/22

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TERMINAL 3 / TERMINAL 4
SHORE POWER
ENLARGED SHORE POWER VAULT SSB3

TOWNSHIP: RANGE: SECTION:
DAT–HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED

6658
E2.4
41 OF 83

CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

PORT OF TACOMA FILE: R:\5650-099.00\Dwgs\201119.01-E24

KEY NOTES

(1) DEMOLISH PORTION OF EXISTING 5" SHORE POWER CONDUIT, BACK TO AND POSSIBLY INCLUDING 90° SWEEP IF NECESSARY, FOR INSTALLATION OF CONDUIT INTO NEW ENTRY POINT WITHIN VAULT.

(2) DEMOLISH PORTION OF EXISTING 2" CONTROLS/FIBER OPTIC CONDUIT FOR INSTALLATION OF CONDUIT INTO RECEPTACLE NEW ENTRY POINT WITHIN VAULT.

(3) EXISTING 3/4" CONDUIT WITH GROUND WIRE TO REMAIN. RELOCATE GROUND WIRE AND/OR GROUND BUS WITHIN VAULT SHOULD SUBMITTED SIZE OF RECEPTACLE BOX INTERFERE WITH GROUND BUS ACCESS.

(4) EXISTING SHORE POWER VAULT.

(5) PROVIDE SHORE POWER RECEPTACLE BOX WITH (2) SHORE POWER RECEPTACLES (HVSC B4-A,B).

(6) SHORE POWER CABLE AND PLUG BY OTHERS.

(7) PROVIDE 5" SHORE POWER CONDUIT AND WIRE PER CONDUIT AND CONDUCTOR SCHEDULE. END OF CONDUIT SHALL BE THREADED FOR CONNECTION INTO RECEPTACLE BOX AND MATCH RECEPTACLE'S CONDUIT ENTRY.

(8) PROVIDE 2" CONTROLS/FIBER OPTIC CONDUIT AND WIRE PER CONDUIT AND CONDUCTOR SCHEDULE. END OF CONDUIT SHALL BE THREADED FOR CONNECTION INTO RECEPTACLE BOX.

(9) SHORE POWER RECEPTACLE KIRK KEY, SEE TABLE.

(10) EXISTING SHORE POWER VAULT LID.

(11) SEE DETAIL 1, SHEET E6.1 FOR LID LIMIT SWITCH CIRCUIT INTER-LOCK.

(12) SEE SHEET S2.5 FOR WORK REQUIRED TO CORE DRILL EXISTING WALL FOR RELOCATED CONDUIT PENETRATIONS.

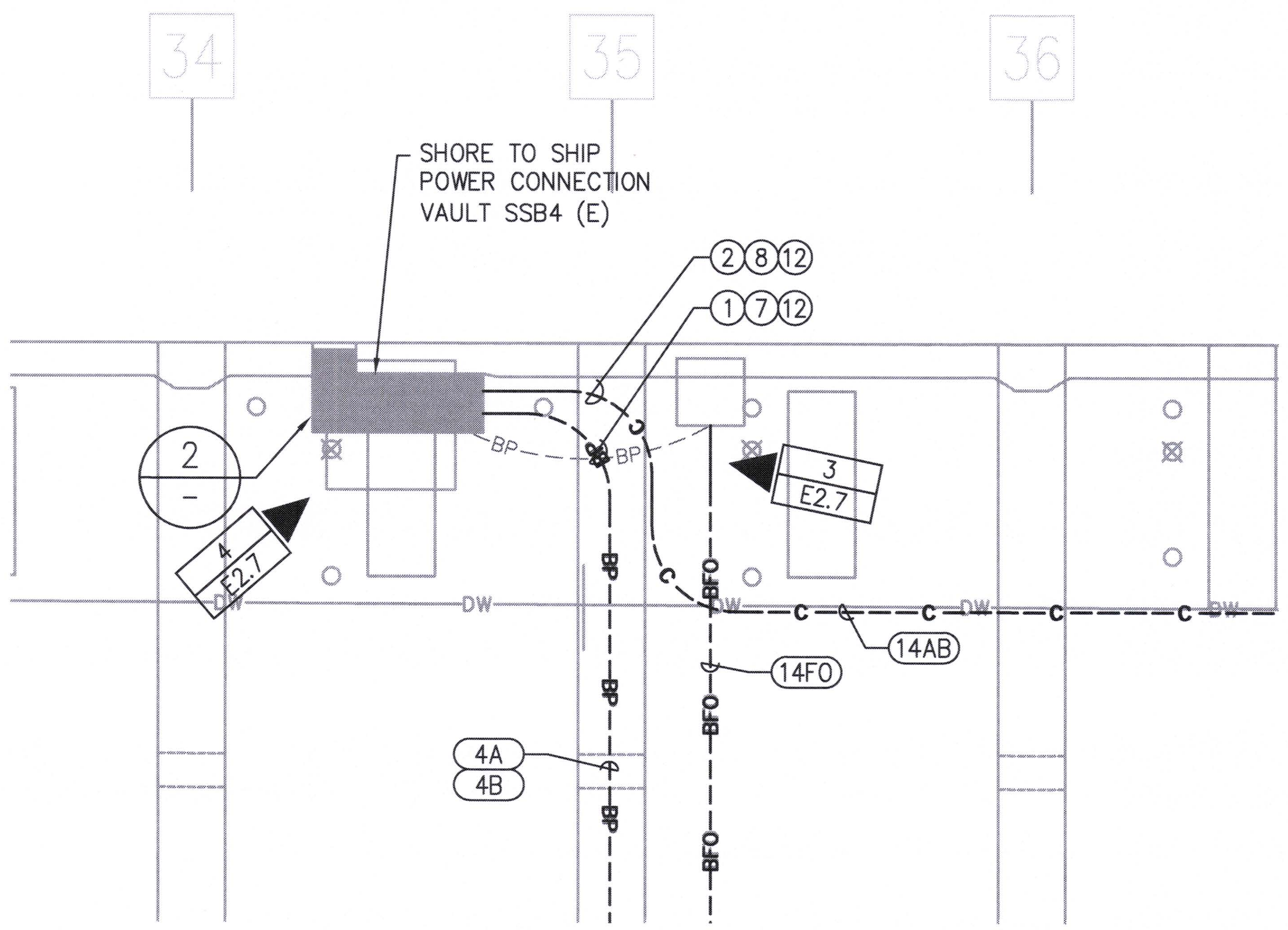
(13) PROVIDE SEALING LOCK-NUTS INSIDE AND OUTSIDE TO PROVIDE WATERTIGHT CONDUIT ENTRY INTO SHORE POWER OUTLET ENCLOSURE.

(14) PROVIDE WATERPROOF INTERIOR CONDUIT SEAL TO PREVENT ENTRY OF WATER THRU THE CONDUIT SYSTEM. PROVIDE ROXTEC CONDUIT SEAL, EMERSON(O-Z/GEDNEY) 'CSB', OR ENGINEER APPROVED EQUAL, SIZED FOR CONDUIT AND CABLES.

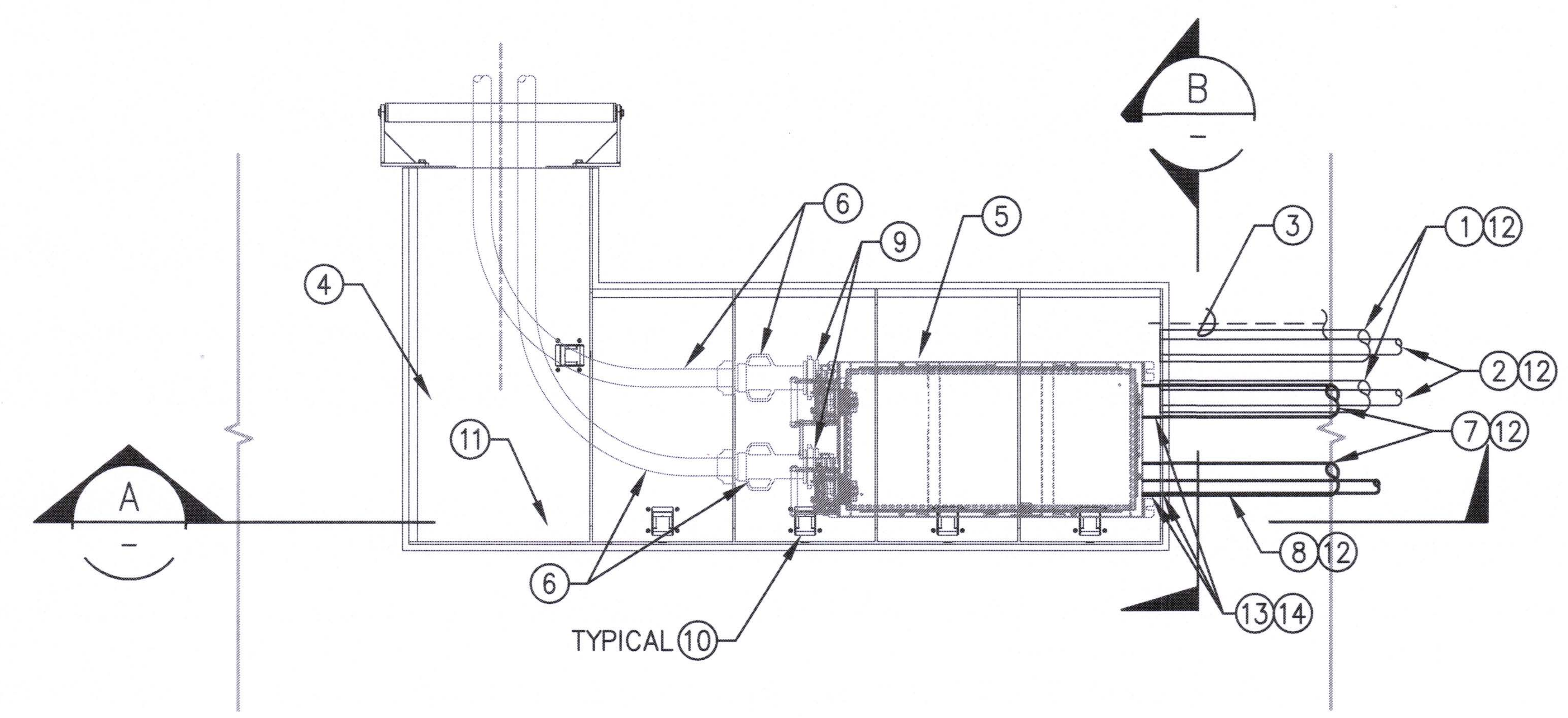
(15) PROVIDE STAINLESS STEEL EXPANSION ANCHORS TO SECURE ENCLOSURE TO VAULT FLOOR, SLOPE ENCLOSURE TO ENCLOSURE VENT/DRAIN.

GENERAL NOTES

1. SCOPE OF WORK: PROVIDE RECEPTACLE BOX AND THREADED CONDUIT CONNECTIONS, SPLICE THREADED CONDUITS TO EXISTING CONDUITS AS SHOWN. POSITIONING OF RECEPTACLE BOX WITHIN VAULT MAY WARRANT DEMOLITION OF EXISTING CONDUITS AND/OR POSITIONING KIRK KEY ACCESS TO AVOID CONFLICTS WITH VAULT LID HINGES OR OTHER EXISTING CONSTRAINTS, SEE KEYED NOTES FOR FURTHER DETAILS. RECEPTACLE BOX SIZING AND PLACEMENT SHALL NOT INTERFERE WITH VAULT LID.
2. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.
3. VAULT PLANS AND SECTIONS ARE BASED ON HISTORICAL DOCUMENTS, DIMMENSIONS HAVE BEEN SPOT CHECKED IN THE FIELD TO BE ACCURATE WITHIN ±1". CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS THAT MAY AFFECT RECEPTACLE BOX PLACEMENT/INSTALLATION PRIOR TO EQUIPMENT SUBMITTALS.

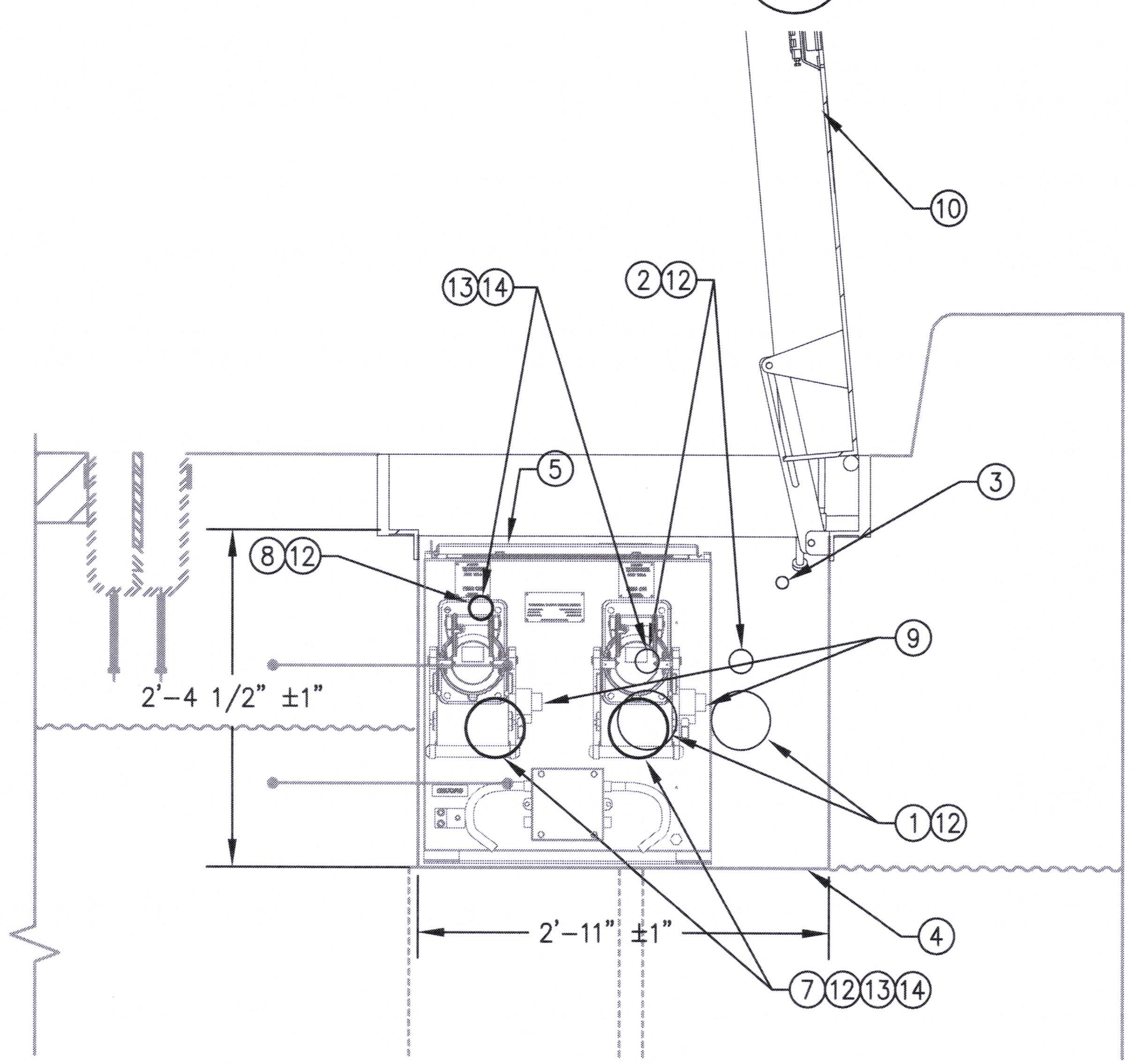


SHORE POWER VAULT SSB4 ENLARGED PLAN (1 / E1.3) — scale 0 8 16 feet

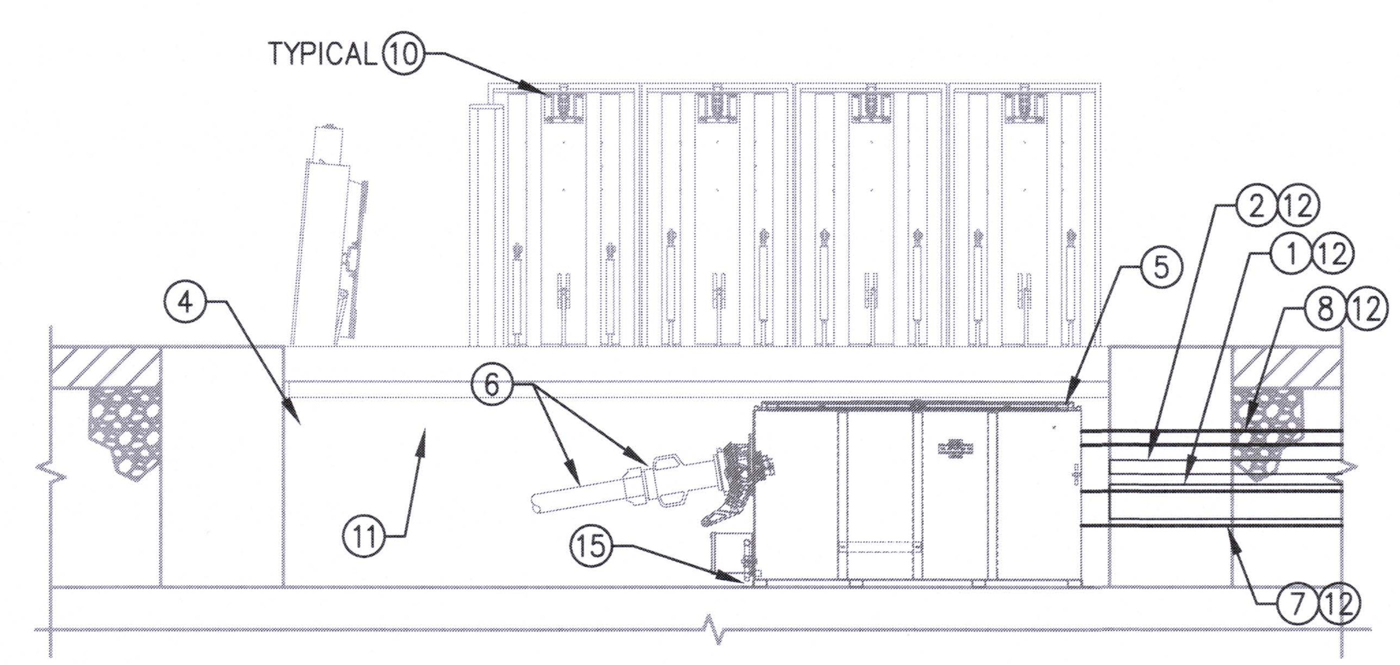


SHORE POWER OUTLET SSB4 ASSEMBLY PLAN (2 / –) — scale 0 2 4 feet

RECEPTACLE KEY-INTER-LOCK	
VAULT ID	LOCATION
SSB0	RIGHT
SSB1	RIGHT
SSB2	LEFT
SSB3	LEFT
SSB4	LEFT
SSB5	LEFT
KEY ACCESS IS THE SAME FOR RED AND BLUE RECEPTACLES, ACCESS IS DETERMINED WHILE FACING RECEPTACLE	



SHORE POWER OUTLET SSB4 ASSEMBLY SECTION (B / –) — scale 0 1 2 feet



SHORE POWER OUTLET SSB4 ASSEMBLY SECTION (A / –) — scale 0 2 4 feet

PROJECT NORTH

6658 E2.5 42 OF 83	TERMINAL 3 / TERMINAL 4 SHORE POWER ENLARGED SHORE POWER VAULT SSB4	APPROVED: XXX / XXX [signature] 2/1/22 DIRECTOR ENG. DATE	CHECKED BY DATE / PROJ. ENGR DATE	ELCON ASSOCIATES, INC. ENGINEERS - CONSULTANTS 18300 CHRISTENSEN ROAD, SUITE 330 SEATTLE, WASHINGTON 98188 TEL (206) 243-5022 www.elcon.com
CONT/CONS: 071357	TOWNSHIP: / RANGE: / SECTION:	PRINTED BY: curtis Feb 02, 2022		MARK: / REVISION: / BY: / APPR: / DATE:
M. ID: 201100.01	DAT-HRZ: / VERT:	PORT ADDRESS: ONE SITCUM PLAZA		
PHASE: BID SET	PARCEL: / DRAWING SCALE: AS NOTED	TACOMA, WA 98401-1837		

DIMITRIOS K. SIATERLIS, STATE OF WASHINGTON, 23791 REGISTERED PROFESSIONAL ENGINEER 2/2/22

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PORT OF TACOMA FILE: R:\5650-099.00\Dwgs\201119.01-E25

KEY NOTES

1. DEMOLISH PORTION OF EXISTING 5" SHORE POWER CONDUIT, BACK TO AND POSSIBLY INCLUDING 90° SWEEP IF NECESSARY, FOR INSTALLATION OF CONDUIT INTO NEW ENTRY POINT WITHIN VAULT.
2. DEMOLISH PORTION OF EXISTING 2" CONTROLS/FIBER OPTIC CONDUIT FOR INSTALLATION OF CONDUIT INTO RECEPTACLE NEW ENTRY POINT WITHIN VAULT.
3. EXISTING 3/4" CONDUIT WITH GROUND WIRE TO REMAIN. RELOCATE GROUND WIRE AND/OR GROUND BUS WITHIN VAULT SHOULD SUBMITTED SIZE OF RECEPTACLE BOX INTERFERE WITH GROUND BUS ACCESS.
4. EXISTING SHORE POWER VAULT.
5. PROVIDE SHORE POWER RECEPTACLE BOX WITH (2) SHORE POWER RECEPTACLES (HVSC B5–A,B).
6. SHORE POWER CABLE AND PLUG BY OTHERS.
7. PROVIDE 5" SHORE POWER CONDUIT AND WIRE PER CONDUIT AND CONDUCTOR SCHEDULE. END OF CONDUIT SHALL BE THREADED FOR CONNECTION INTO RECEPTACLE BOX AND MATCH RECEPTACLE'S CONDUIT ENTRY.
8. PROVIDE 2" CONTROLS/FIBER OPTIC CONDUIT AND WIRE PER CONDUIT AND CONDUCTOR SCHEDULE. END OF CONDUIT SHALL BE THREADED FOR CONNECTION INTO RECEPTACLE BOX.
9. SHORE POWER RECEPTACLE KIRK KEY, SEE TABLE.
10. EXISTING SHORE POWER VAULT LID.
11. SEE DETAIL 1, SHEET E6.1 FOR LID LIMIT SWITCH CIRCUIT INTER–LOCK.
12. SEE SHEET S2.5 FOR WORK REQUIRED TO CORE DRILL EXISTING WALL FOR RELOCATED CONDUIT PENETRATIONS.
13. PROVIDE SEALING LOCK–NUTS INSIDE AND OUTSIDE TO PROVIDE WATERTIGHT CONDUIT ENTRY INTO SHORE POWER OUTLET ENCLOSURE.
14. PROVIDE WATERPROOF INTERIOR CONDUIT SEAL TO PREVENT ENTRY OF WATER THRU THE CONDUIT SYSTEM. PROVIDE ROXTEC CONDUIT SEAL, EMERSON(O–Z/GEDNEY) 'CSB', OR ENGINEER APPROVED EQUAL, SIZED FOR CONDUIT AND CABLES.
15. PROVIDE STAINLESS STEEL EXPANSION ANCHORS TO SECURE ENCLOSURE TO VAULT FLOOR, SLOPE ENCLOSURE TO ENCLOSURE VENT/DRAIN.

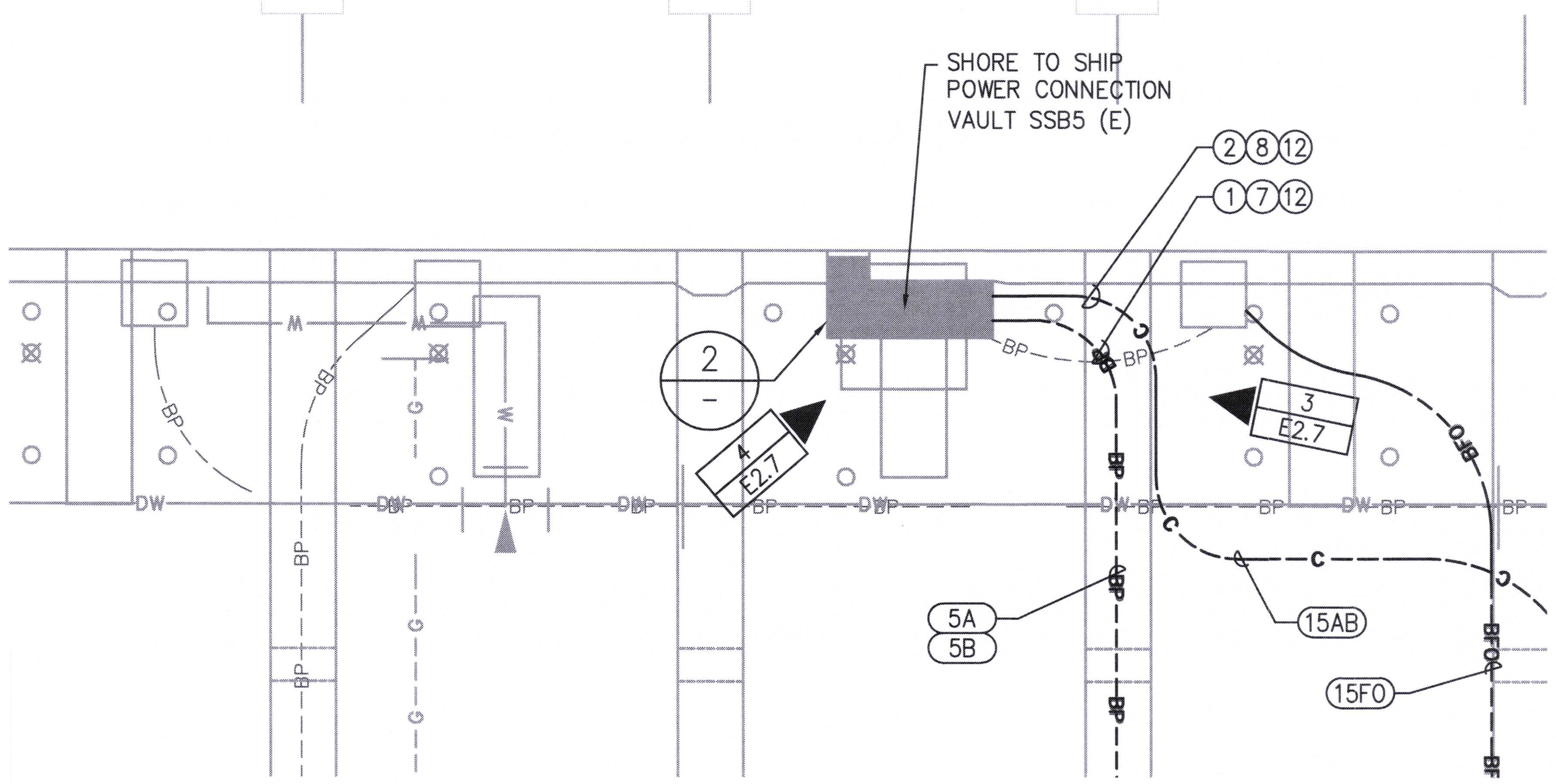
GENERAL NOTES

1. SCOPE OF WORK: PROVIDE RECEPTACLE BOX AND THREADED CONDUIT CONNECTIONS, SPLICE THREADED CONDUITS TO EXISTING CONDUITS AS SHOWN. POSITIONING OF RECEPTACLE BOX WITHIN VAULT MAY WARRANT DEMOLITION OF EXISTING CONDUITS AND/OR POSITIONING KIRK KEY ACCESS TO AVOID CONFLICTS WITH VAULT LID HINGES OR OTHER EXISTING CONSTRAINTS, SEE KEYED NOTES FOR FURTHER DETAILS. RECEPTACLE BOX SIZING AND PLACEMENT SHALL NOT INTERFERE WITH VAULT LID.
2. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.
3. VAULT PLANS AND SECTIONS ARE BASED ON HISTORICAL DOCUMENTS, DIMENSIONS HAVE BEEN SPOT CHECKED IN THE FIELD TO BE ACCURATE WITHIN ±1". CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS THAT MAY AFFECT RECEPTACLE BOX PLACEMENT/INSTALLATION PRIOR TO EQUIPMENT SUBMITTALS.

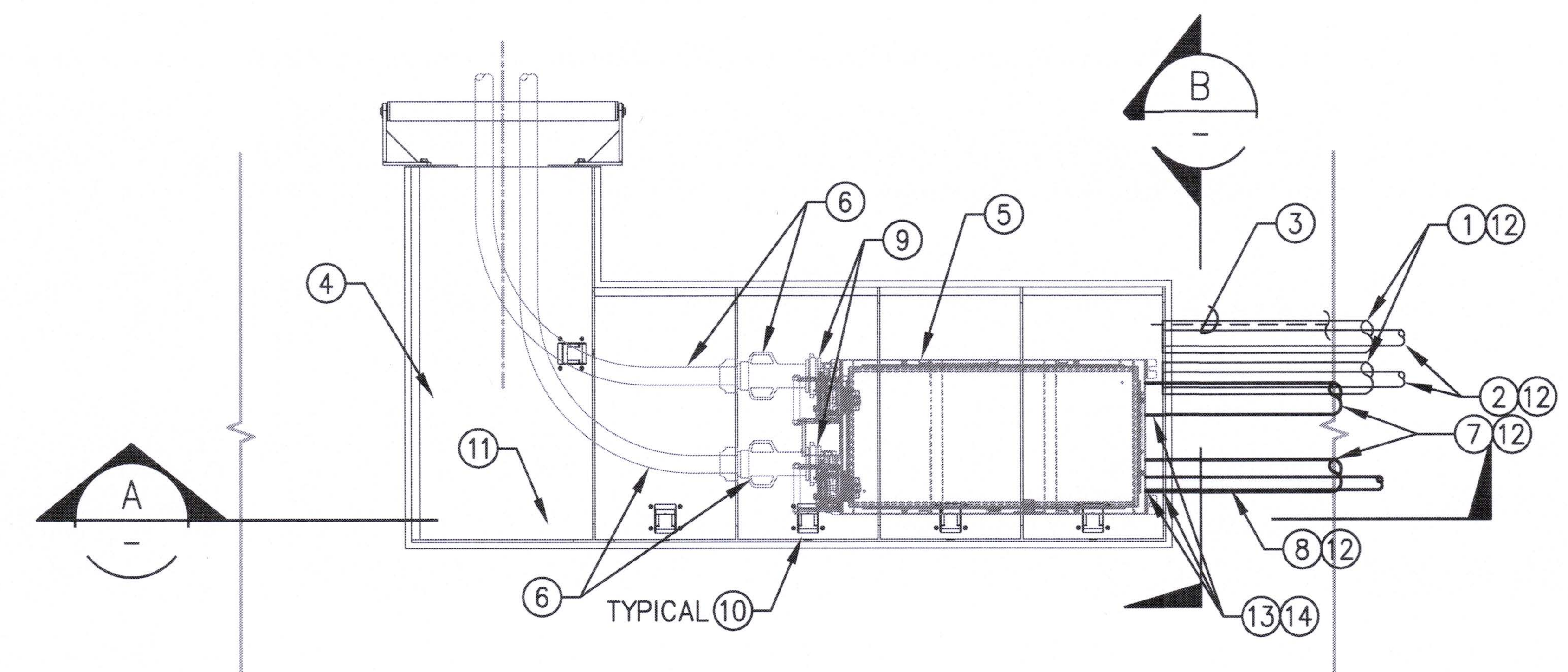
RECEPTACLE KEY–INTER–LOCK

VAULT ID	LOCATION
SSB0	RIGHT
SSB1	RIGHT
SSB2	LEFT
SSB3	LEFT
SSB4	LEFT
SSB5	LEFT

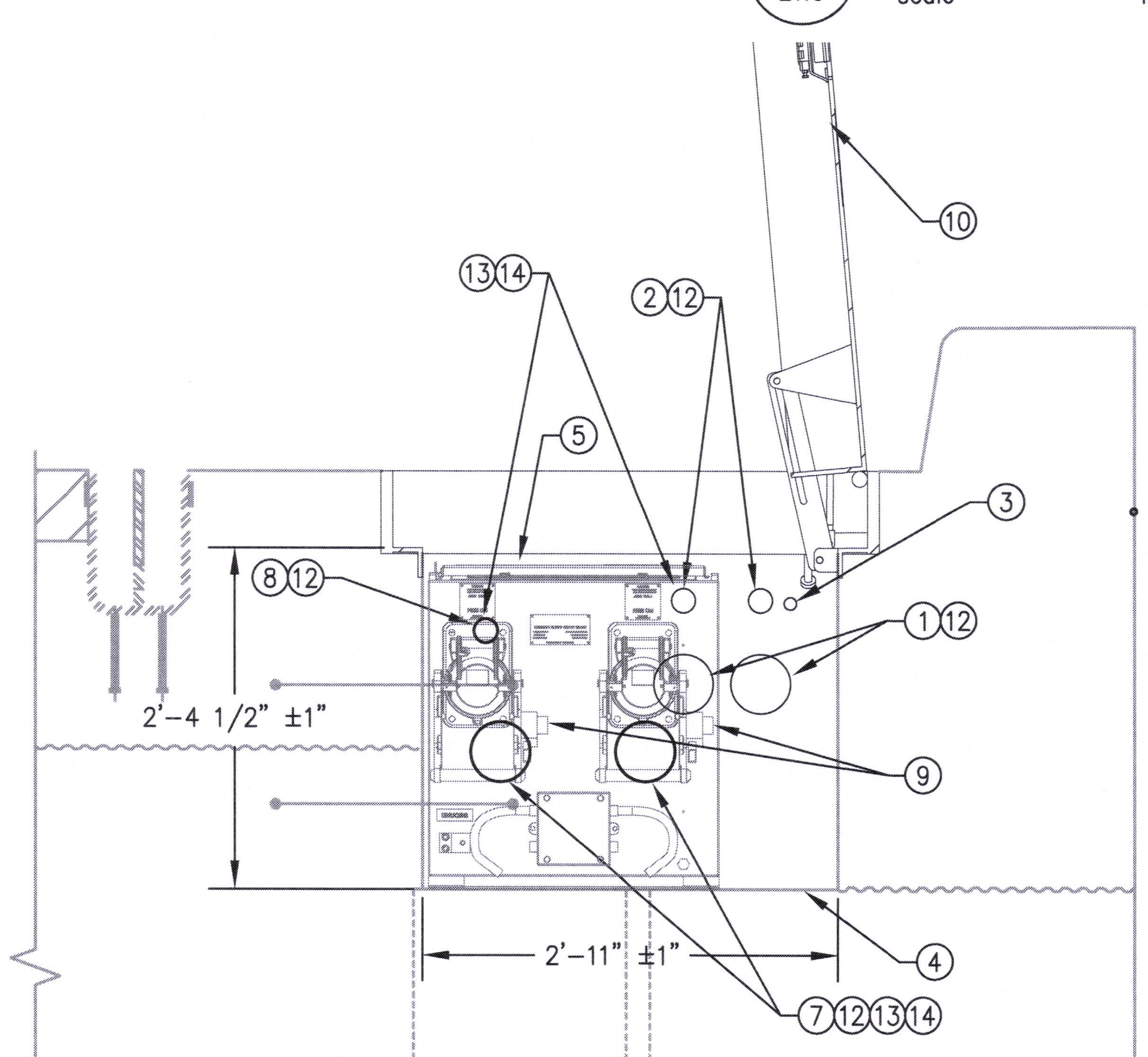
KEY ACCESS IS THE SAME FOR RED AND BLUE RECEPTACLES, ACCESS IS DETERMINED WHILE FACING RECEPTACLE



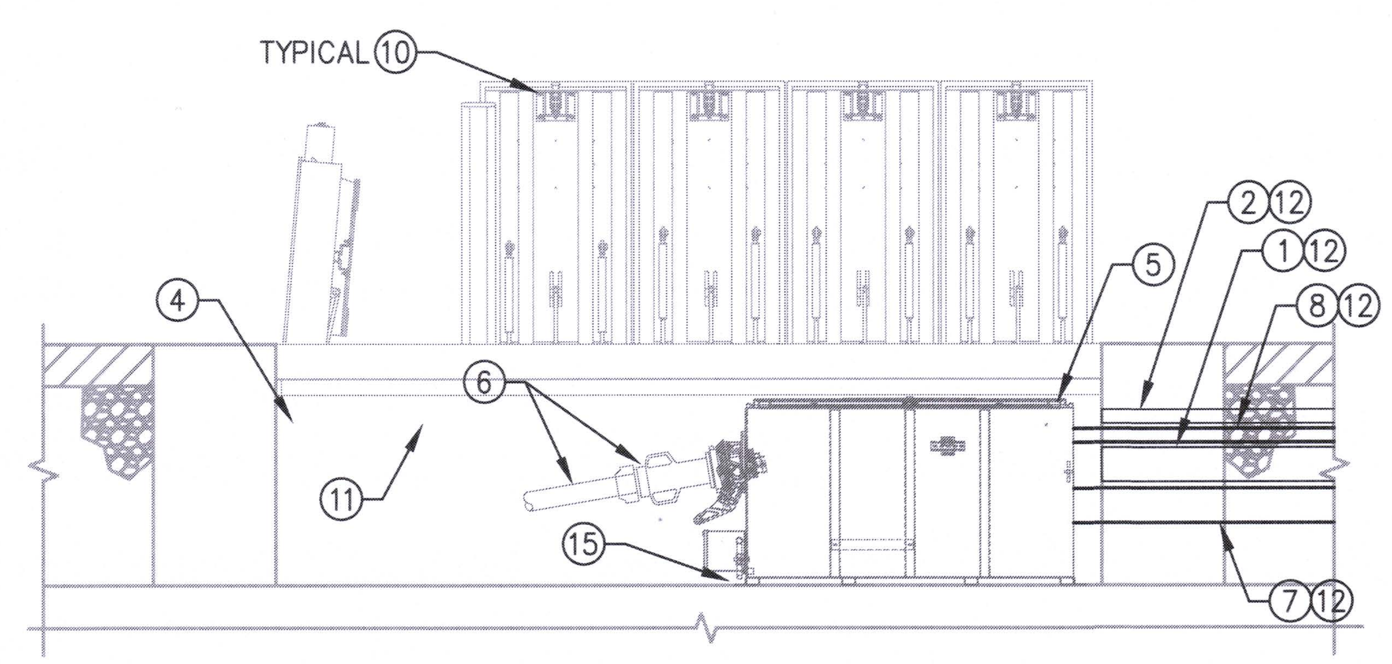
SHORE POWER VAULT SSB5 ENLARGED PLAN 1 / E1.3 — scale 0 8 16 feet



SHORE POWER OUTLET SSB5 ASSEMBLY PLAN 2 / – — scale 0 2 4 feet



SHORE POWER OUTLET SSB5 ASSEMBLY SECTION B / – — scale 0 1 2 feet



SHORE POWER OUTLET SSB5 ASSEMBLY SECTION A / – — scale 0 2 4 feet

PROJECT NORTH

BINDING EDGE

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DIRECTOR ENG. DATE | PROJ. ENGR DATE
PRINTED BY: curtis Feb 02, 2022
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TERMINAL 3 / TERMINAL 4
SHORE POWER
ENLARGED SHORE POWER VAULT SSB5

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

6658
E2.6
43 OF 83

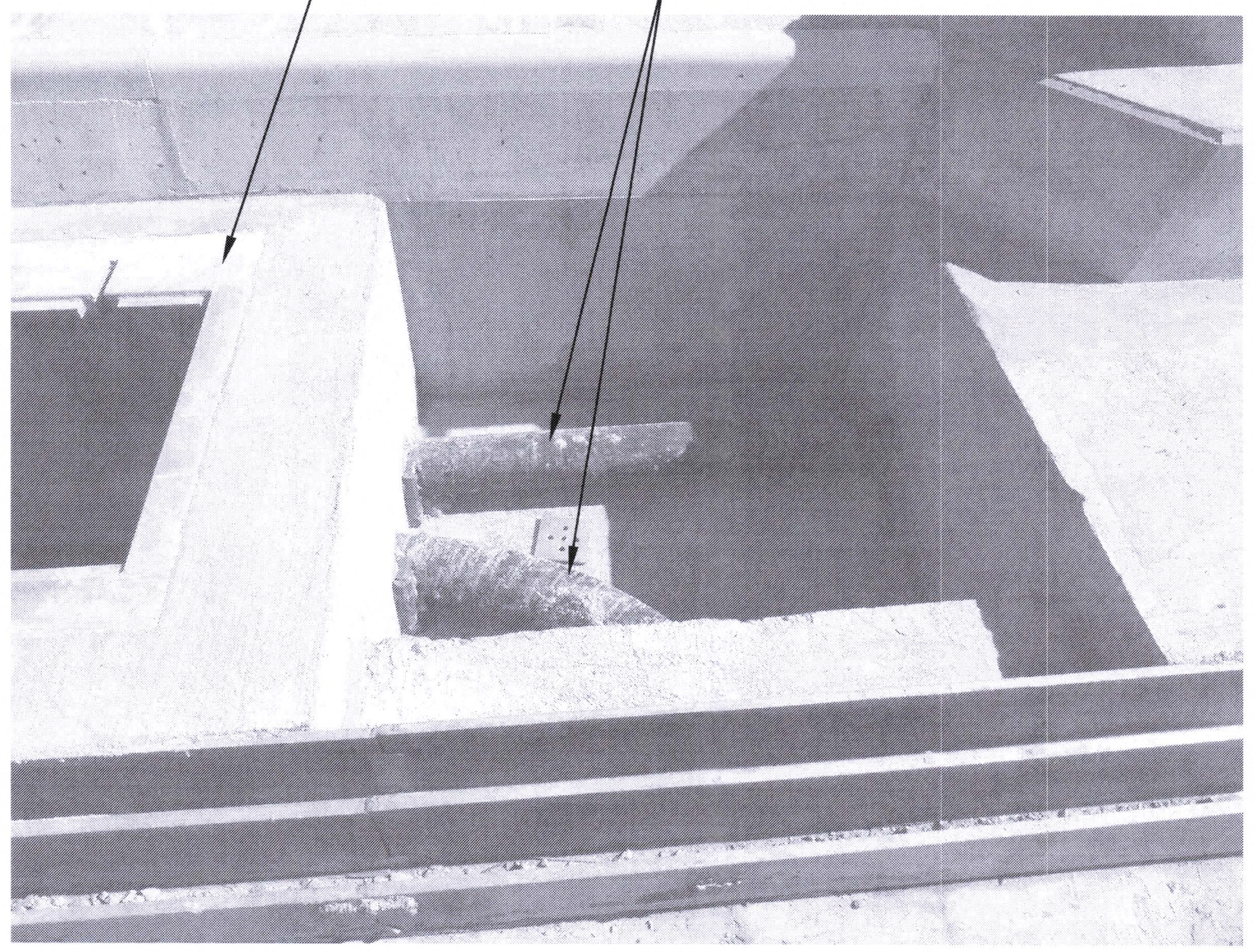
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

KEY NOTES

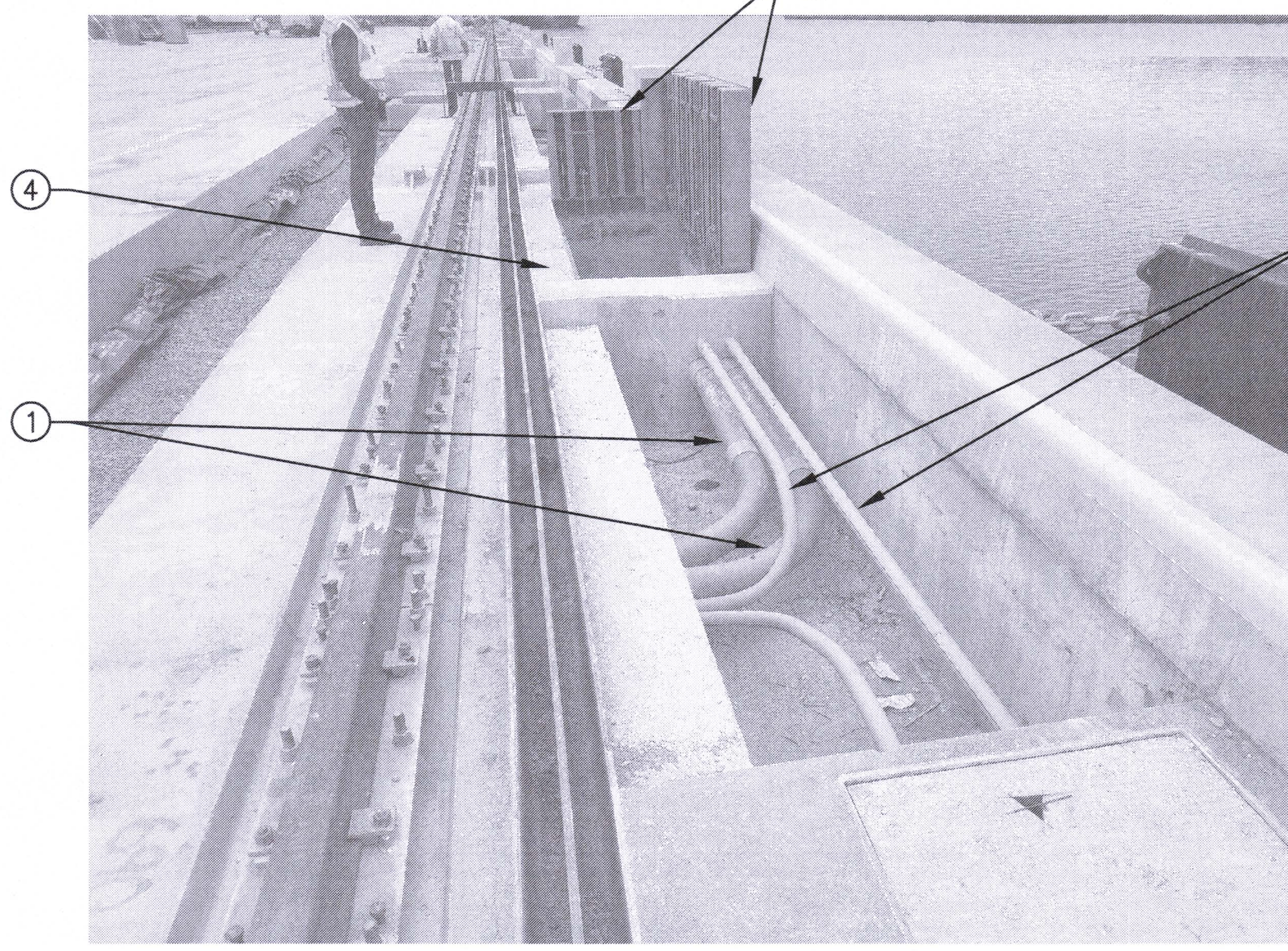
1. DEMOLISH PORTION OF EXISTING 5" SHORE POWER CONDUIT, BACK TO AND POSSIBLY INCLUDING 90° SWEEP IF NECESSARY, FOR INSTALLATION OF CONDUIT INTO NEW ENTRY POINT WITHIN VAULT.
2. DEMOLISH PORTION OF EXISTING 2" CONTROLS/FIBER OPTIC CONDUIT FOR INSTALLATION OF CONDUIT INTO NEW ENTRY POINT WITHIN VAULT.
3. EXISTING 3/4" CONDUIT WITH GROUND WIRE TO REMAIN.
4. EXISTING SHORE POWER VAULT.
5. EXISTING SHORE POWER VAULT LID.
6. SIMILAR FOR EXISTING SHORE POWER VAULTS AT PIER 4. SEE SHEETS E2.4, E2.5 AND E2.6.

GENERAL NOTES

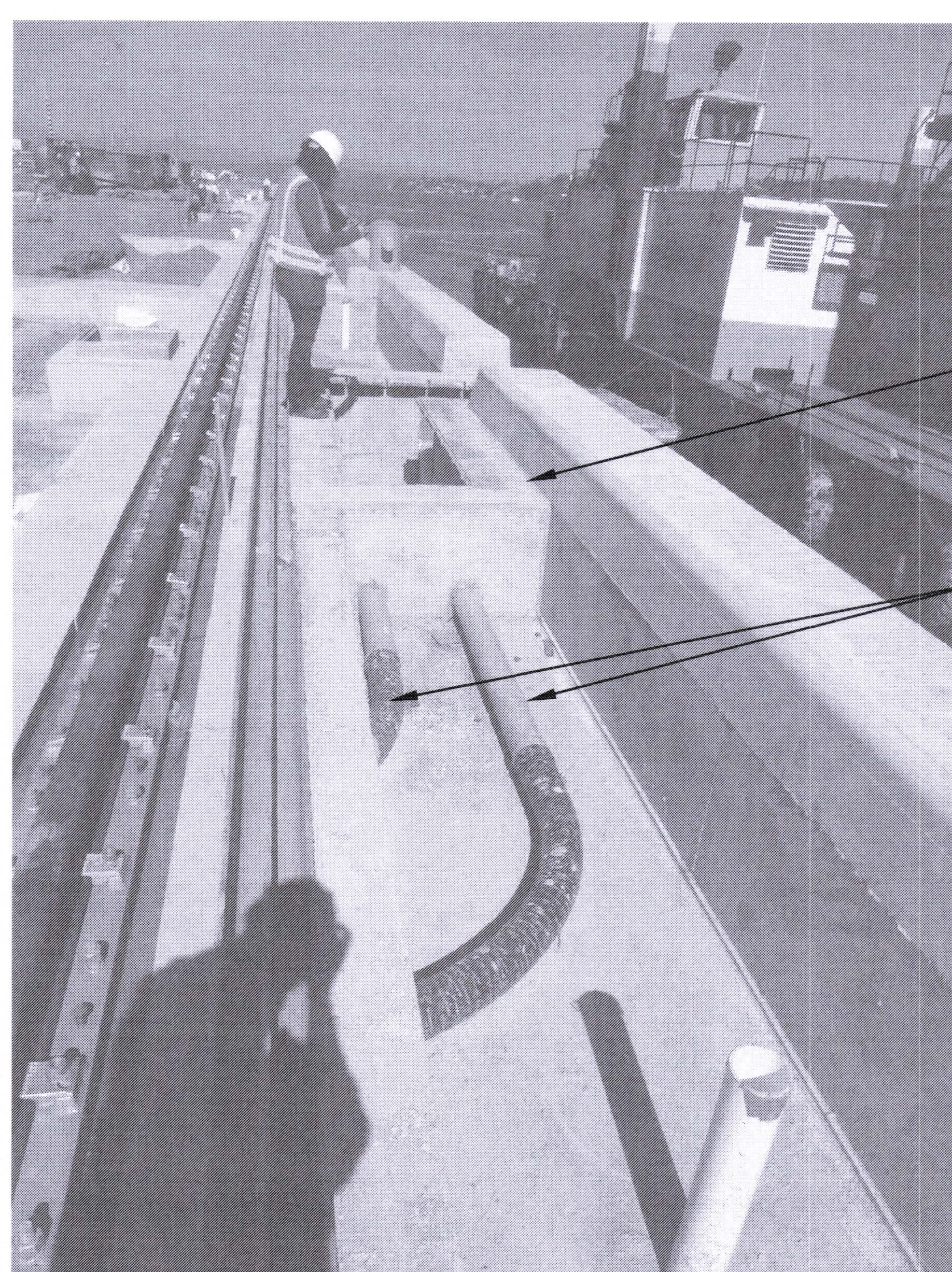
1. PHOTOS SHOWN ARE IN-PROGRESS CONSTRUCTION PHOTOS DURING ORIGINAL VAULT CONSTRUCTION AND DO NOT REPRESENT THE FINAL CONDITIONS OF EACH VAULT.



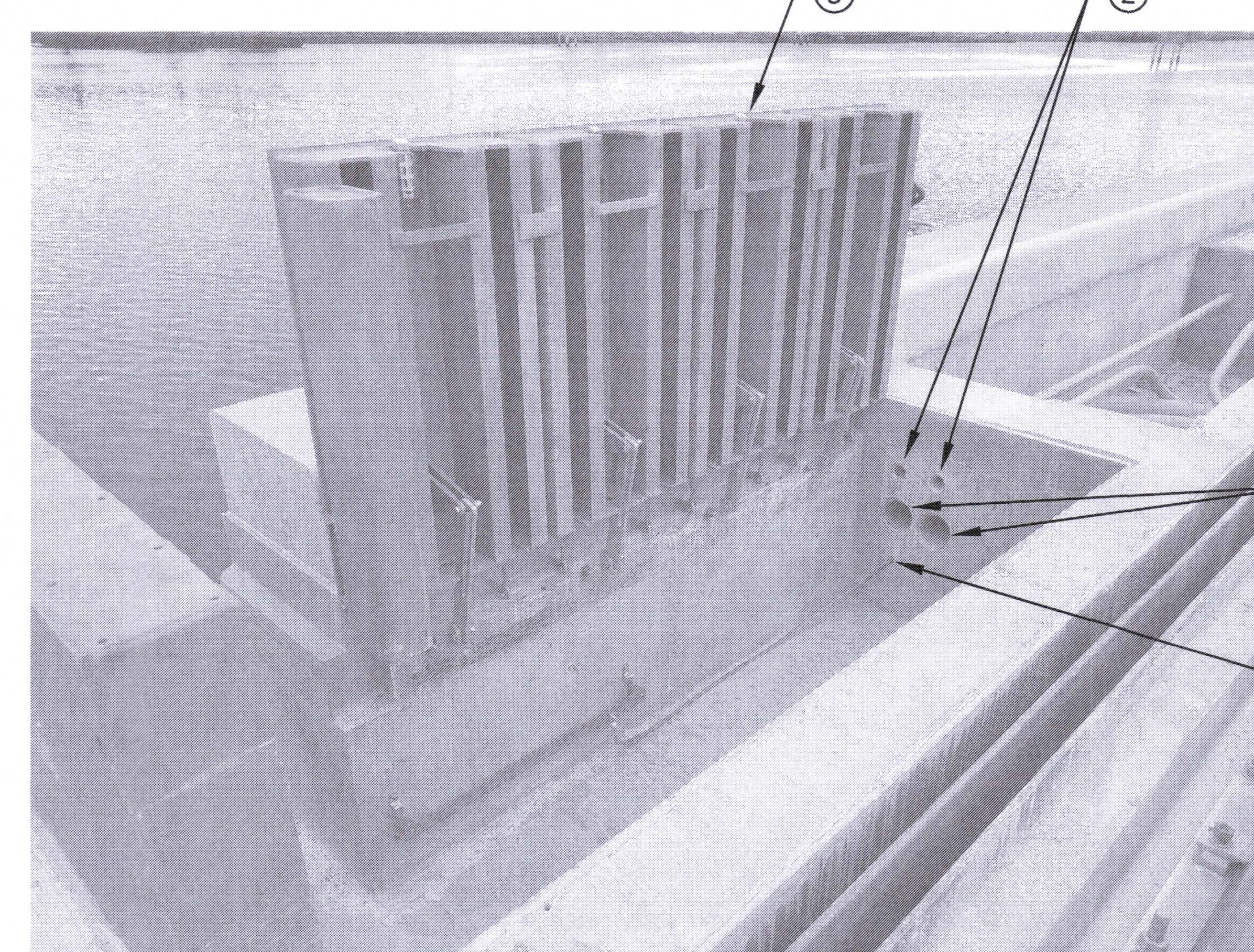
SHORE POWER VAULT SSB1 1 / E2.2
CONSTRUCTION PHOTO



SHORE POWER VAULT PIER 4 3
CONSTRUCTION PHOTO, EXACT VAULT UNKNOWN (6)



SHORE POWER VAULT SSB2 2 / E2.3
CONSTRUCTION PHOTO



SHORE POWER VAULT PIER 4 4
CONSTRUCTION PHOTO, EXACT VAULT UNKNOWN (6)

PROJECT NORTH

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DIMITRIOS K. SIATERLIS
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
2/2/22

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TERMINAL 3 / TERMINAL 4
SHORE POWER
SHORE POWER VAULT PHOTOS

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: NONE

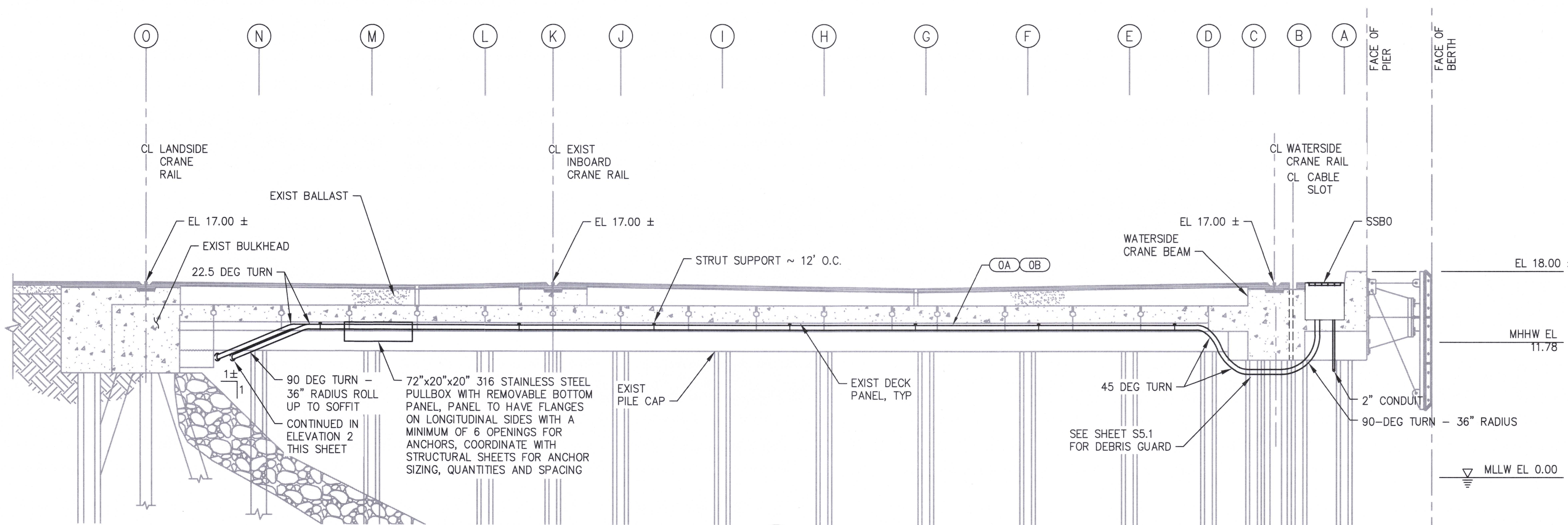
6658
E2.7
44 OF 83

CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

BINDING EDGE

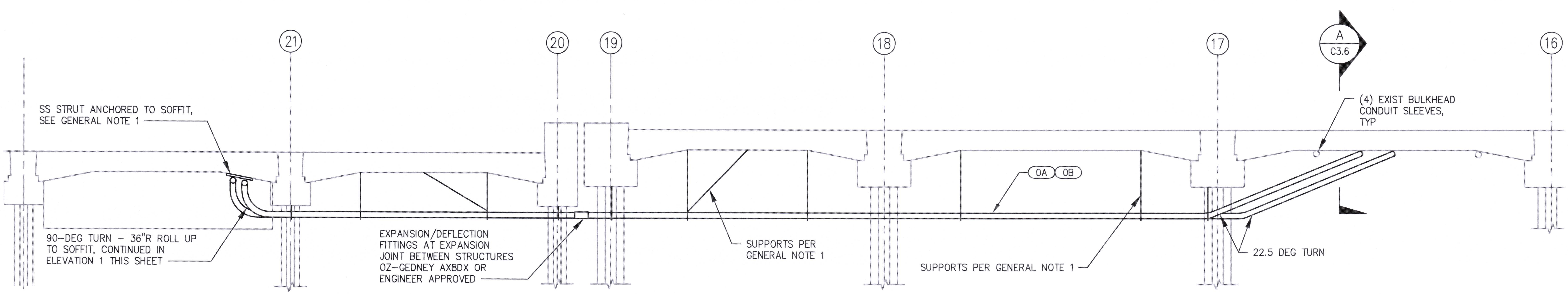
GENERAL NOTES

1. SEE SHEETS S5.1 AND S5.2 FOR ADDITIONAL CONDUIT SUPPORT DETAILS.



CONDUIT SUPPORT ELEVATION 1 E1.2

0 4 8
scale feet



CONDUIT SUPPORT ELEVATION 2 E1.2

0 4 8
scale feet

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TERMINAL 3 / TERMINAL 4
SHORE POWER
BELOW PIER CONDUIT ROUTING ELEVATIONS

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

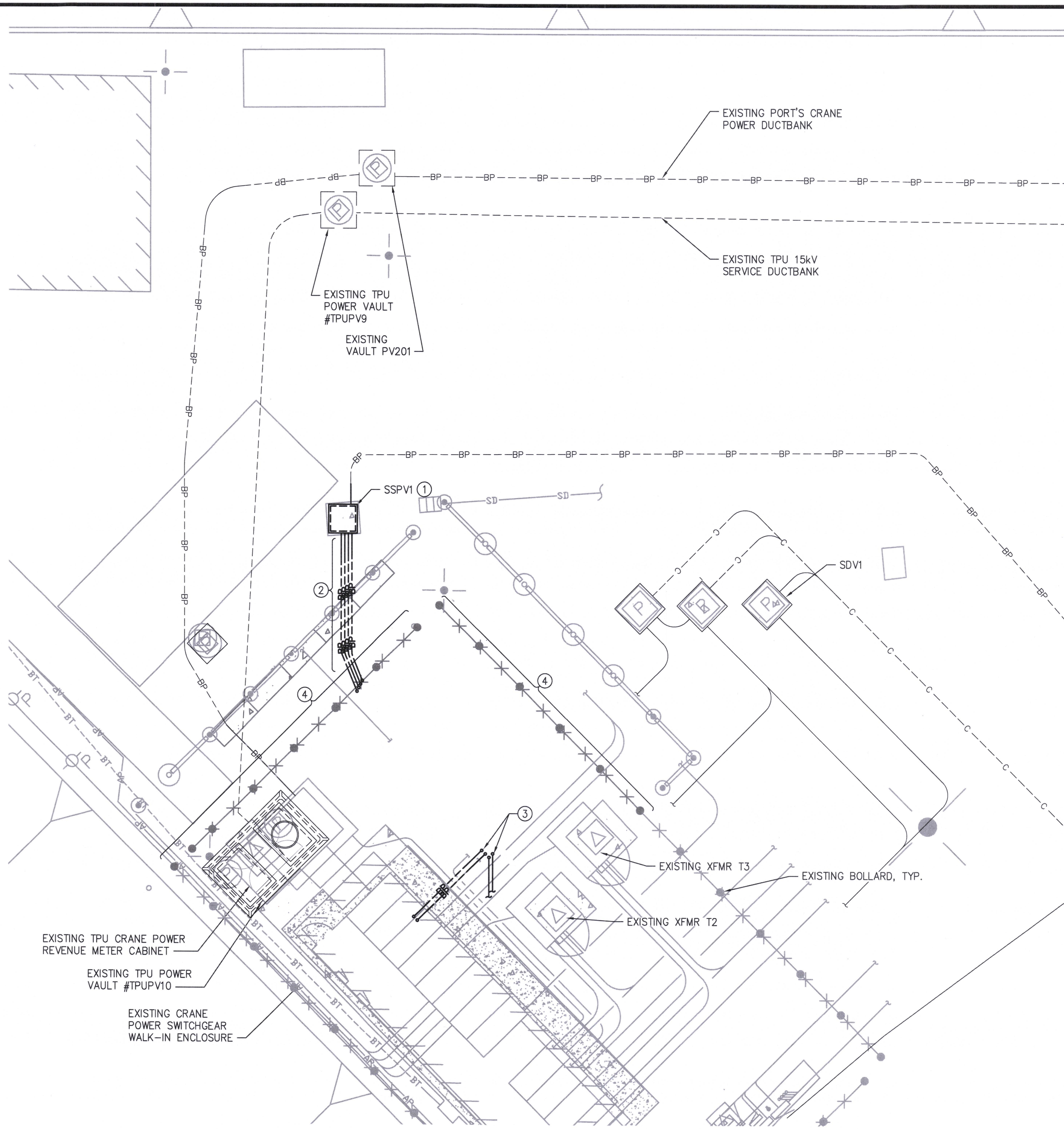
6658
E2.8
45 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

GENERAL NOTES

1. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.
2. EXISTING #2/0 GROUND GRID IS APPROXIMATELY 18" BELOW GRADE WITHIN BOLLARD ENCLOSURE, SPACED 4' APART. RESTORE ANY DAMAGED SECTIONS TO ORIGINAL CONDITION.
3. ALL EXISTING EQUIPMENT ON THIS DRAWING TO REMAIN IN PLACE UNLESS NOTED OTHERWISE.

KEY NOTES

1. DEMOLISH 4'x4'x4' CONCRETE VAULT.
2. DEMOLISH CONDUITS WEST OF CONCRETE VAULT. SEE CIVIL FOR ASPHALT RESTORATION REQUIREMENTS.
3. DEMOLISH ABOVE GRADE PORTION OF EMPTY CONDUITS AND CAP.
4. SEE CIVIL FOR EXISTING BOLLARDS TO BE DEMOLISHED. FOR EACH BOLLARD TO BE REMOVED, DEMOLISH #2/0 GROUND WIRE BETWEEN BOLLARD AND EXISTING GROUND GRID.



DEMOLITION PLAN - PIER 3 (1 / E1.2)

scale 0 8 16 feet

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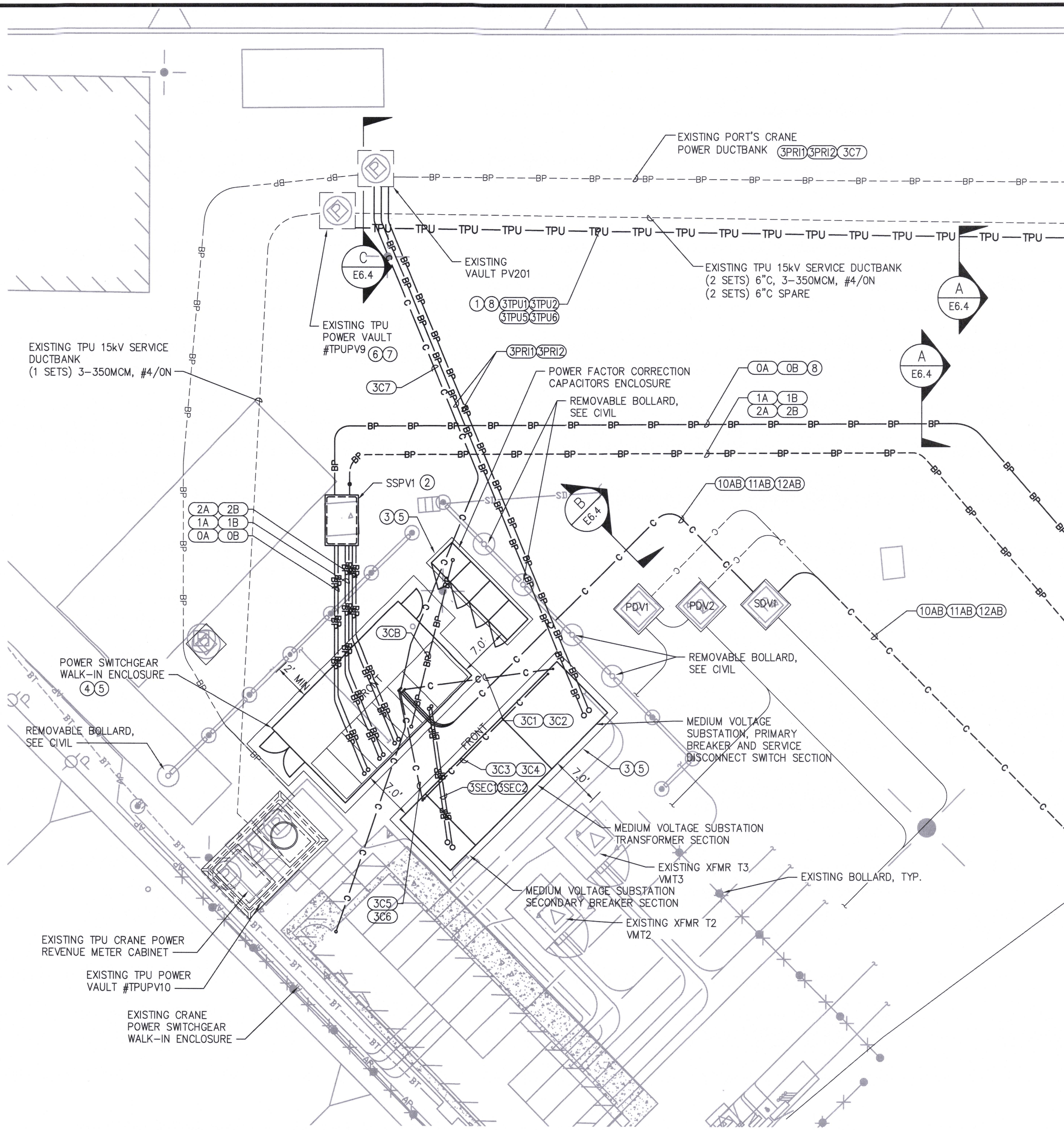
TERMINAL 3 / TERMINAL 4
SHORE POWER
ENLARGED ELECTRICAL DEMOLITION PLAN
SUBSTATION - PIER 3

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

6658
E3.1
46 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

PORT OF TACOMA FILE: R:\5650-099.00\Dwgs\201119.01-E31

BINDING EDGE



SUBSTATION PLAN - PIER 3 (1) E1.2

0 8 16 scale feet

PROJECT NORTH

GENERAL NOTES

1. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.
2. BOLLARD LAYOUTS PER CIVIL AND ARE BASED ON ANTICIPATED EQUIPMENT SIZES. CONTRACTOR SHALL CONFIRM MINIMUM CLEARANCES SHOWN BASED ON ACTUAL EQUIPMENT PROVIDED.
3. ONLY ELECTRICAL SUBCONTRACTORS THAT ARE ON TPU'S PRE-QUALIFIED LIST SHALL WORK ON TPU'S DUCT BANKS AND VAULTS.
4. SEE SHEET E7.1 FOR GROUNDING PLAN.

KEY NOTES

(1) COORDINATE WITH TACOMA POWER FOR SHORE POWER ELECTRICAL SERVICE CONNECTION INCLUDING INSTALLATION OF 15kV SWITCH BY UTILITY.

(2) PROVIDE 7'x5'x4' CONCRETE VAULT. SPLICE EXISTING 5" CONDUITS AND EXTEND INTO NEW VAULT.

(3) CONCRETE PAD, SEE STRUCTURAL SHEET S4.1 FOR DETAILS.

(4) PROVIDE MINIMUM 9" ABOVE FINISHED GRADE, RE-BAR REINFORCED, CONCRETE PAD BELOW WALK-IN SWITCHGEAR ENCLOSURE. SEE SPECIFICATION 33 77 00, PARAGRAPH 2.04, FOR WALK-IN ENCLOSURE REQUIREMENTS. PROVIDE BLOCK-OUTS IN CONCRETE PAD BELOW SWITCHGEAR FOR CONDUIT ACCESS. CONTRACTOR AS PART OF THE SHOP DRAWINGS SHALL PROVIDE CONCRETE PAD SUBMITTAL THAT HAS BEEN DESIGNED AND STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. SEE SPECIFICATIONS 03 30 00 FOR CONCRETE SLAB AND REINFORCING CONSTRUCTION REQUIREMENTS.

(5) SEE CIVIL FOR EARTHWORK DETAILS BELOW SLAB.

(6) TPU WILL INTERCEPT EXISTING 15kV CABLES IN VAULT AND PROVIDE NEW 15kV CABLES TO 15kV POWER SWITCH AND SHORE POWER SUBSTATION. TPU WILL ALSO PROVIDE NEW 15kV CABLES TO RESTORE 15kV SERVICE TO EXISTING CRANE POWER SWITCHGEAR. SEE ONE-LINE DIAGRAM ON DWG E5.1.

(7) COORDINATE WITH TPU FOR DUCT BANK CONNECTION TO VAULT.

(8) MAINTAIN 3' MINIMUM CLEARANCE BETWEEN EXISTING AND NEW PARALLEL DUCT BANKS.

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TERMINAL 3 / TERMINAL 4
SHORE POWER
ENLARGED ELECTRICAL CONSTRUCTION PLAN
SUBSTATION - PIER 3

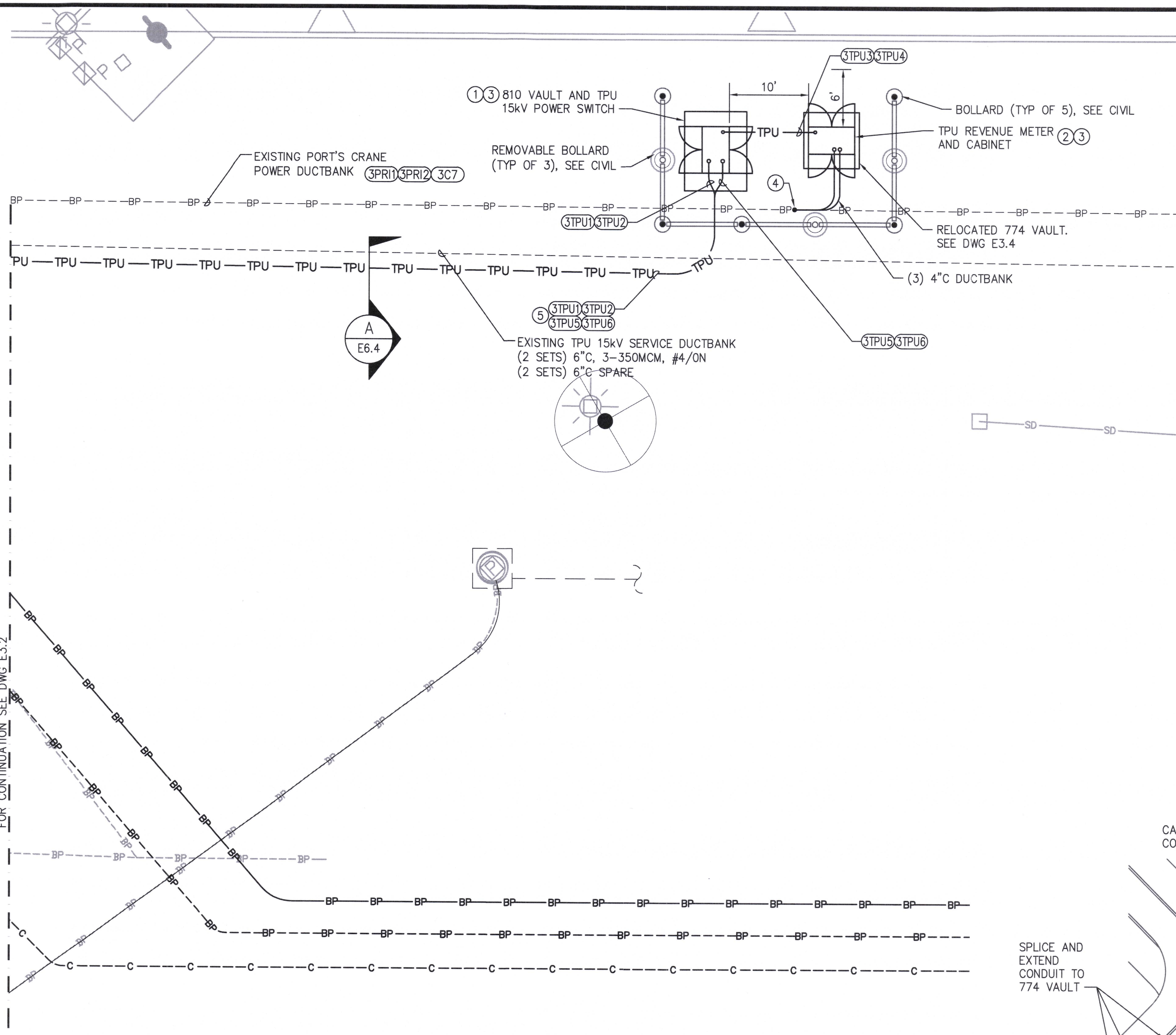
TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT: |
PARCEL: | DRAWING SCALE: AS NOTED

6658
E3.2
47 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

BINDING EDGE

PORT OF TACOMA FILE: R:\5650-099.00\Dwgs\201119.01-E32

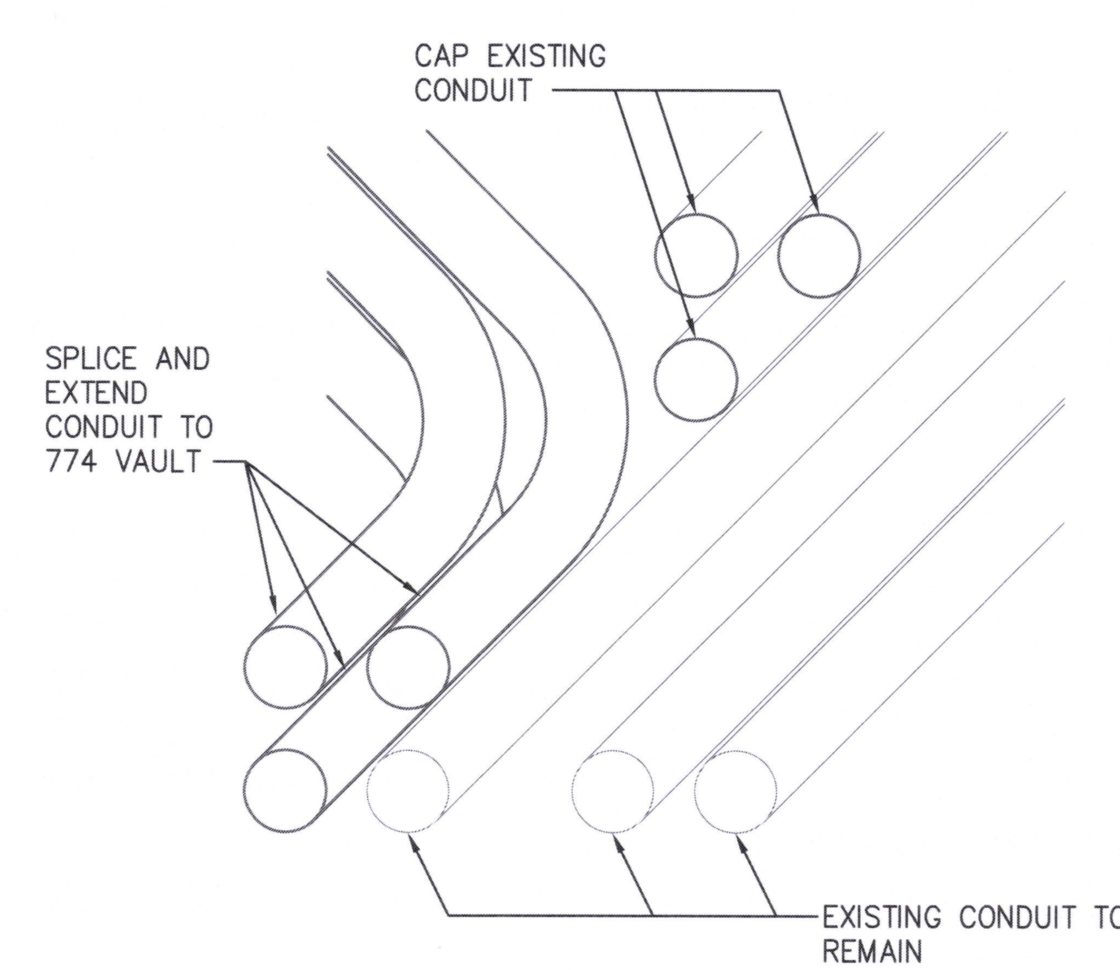
BINDING EDGE



TPU SERVICE EQUIPMENT PLAN - PIER 3

1
E1.2

0 8 16
scale feet



EXISTING DUCT BANK MODIFICATIONS

2
-

PROJECT NORTH

GENERAL NOTES

1. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.
2. ONLY ELECTRICAL SUBCONTRACTORS THAT ARE ON TPU'S PRE-QUALIFIED LIST SHALL WORK ON TPU'S DUCT BANKS AND VAULTS.
3. SEE SHEET E7.1 FOR GROUNDING PLAN.

KEY NOTES

1. COORDINATE WITH TACOMA POWER FOR SHORE POWER ELECTRICAL SERVICE CONNECTION INCLUDING INSTALLATION OF 15kV SWITCH BY UTILITY. PROVIDE 810 VAULT PER TACOMA POWER PRECAST CONCRETE VAULT STANDARDS.
2. COORDINATE WITH TACOMA POWER FOR INSTALLATION OF NEW CABINET AND REVENUE METER BY UTILITY.
3. VAULT INSTALLED BY CONTRACTOR.
4. PARTIALLY DEMOLISH EXISTING DUCTBANK, SPLICE AND EXTEND (3) EXISTING 4" CONDUITS TO TPU REVENUE METER AND CABINET. CAP (3) REMAINING 4" CONDUITS PER DETAIL 2 THIS SHEET.
5. MAINTAIN 3' MINIMUM CLEARANCE BETWEEN EXISTING AND NEW PARALLEL DUCT BANKS.

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DIRECTOR ENG. DATE
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TERMINAL 3 / TERMINAL 4
SHORE POWER
ENLARGED ELECTRICAL CONSTRUCTION PLAN
PIER 3 TPU SERVICE EQUIPMENT

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED

6658
E3.3
48 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

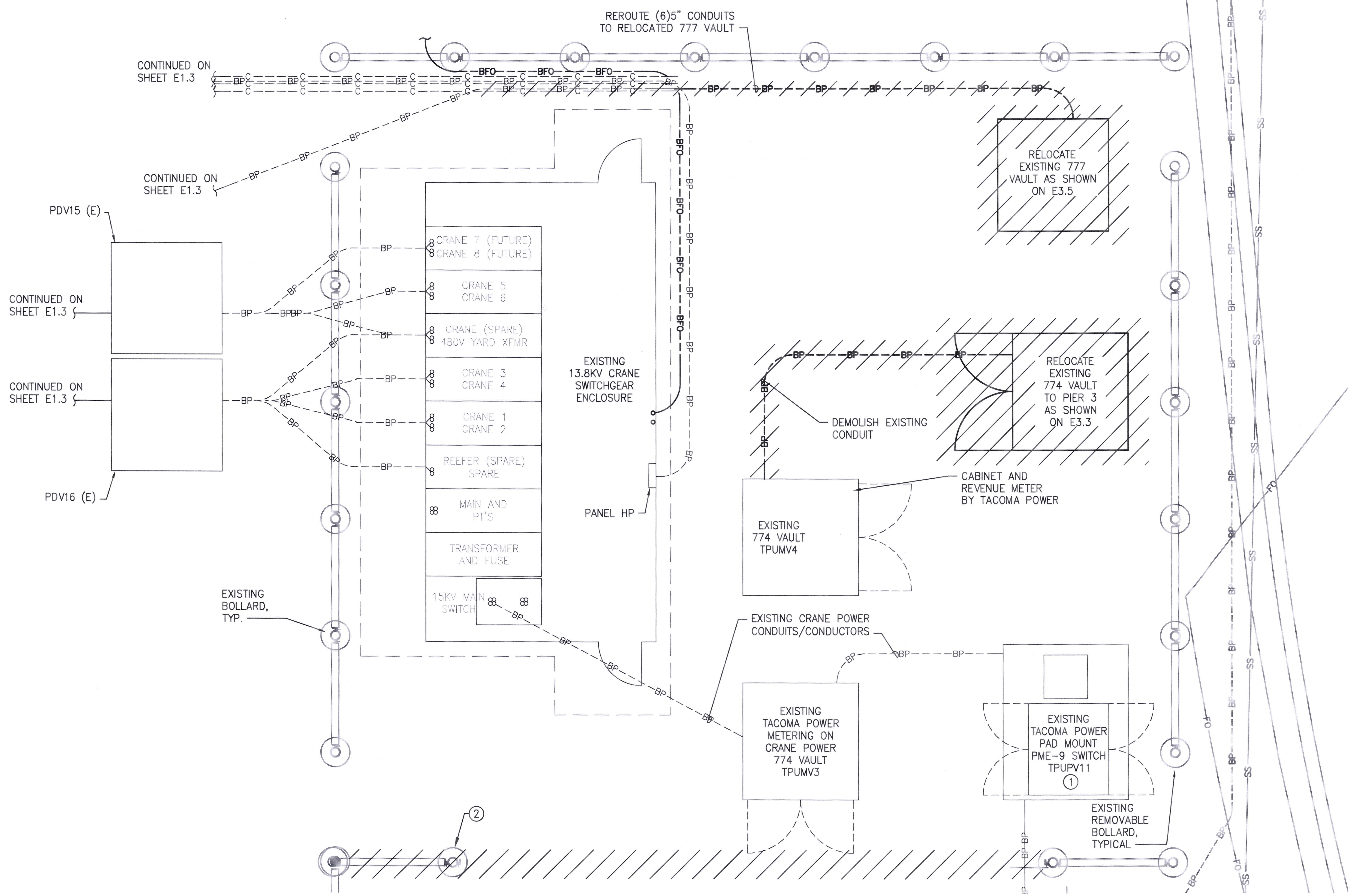
PORT OF TACOMA FILE: R:\5650-099.00\Dwgs\201119.01-E33

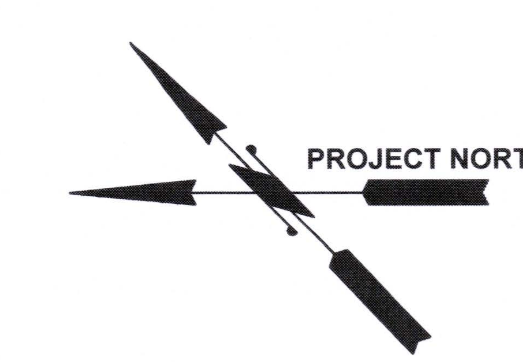
GENERAL NOTES

1. EXISTING #2/0 GROUND GRID IS APPROXIMATELY 18" BELOW GRADE WITHIN BOLLARD ENCLOSURE, SPACED 4' APART. RESTORE ANY DAMAGED SECTIONS TO ORIGINAL CONDITION.
2. ALL EXISTING EQUIPMENT ON THIS DRAWING TO REMAIN IN PLACE UNLESS NOTED OTHERWISE.
3. ONLY ELECTRICAL SUBCONTRACTORS THAT ARE ON TPU'S PRE-QUALIFIED LIST SHALL WORK ON TPU'S DUCT BANKS AND VAULTS.

KEY NOTES

1. COORDINATE WITH TACOMA POWER FOR SHORE POWER ELECTRICAL SERVICE CONNECTION.
2. SEE CIVIL DRAWINGS FOR EXISTING BOLLARDS TO BE DEMOLISHED. FOR EACH BOLLARD TO BE REMOVED, DEMOLISH EXISTING #2/0 GROUND WIRE BETWEEN BOLLARD AND EXISTING GRID.





ENLARGED DEMOLITION PLAN - PIER 4 SUBSTATION

1
E1.3

0 4 8
scale feet

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DIMITRIOS K. SIATERLIS — STATE OF WASHINGTON — 23791 — REGISTERED PROFESSIONAL ENGINEER
2/2/22

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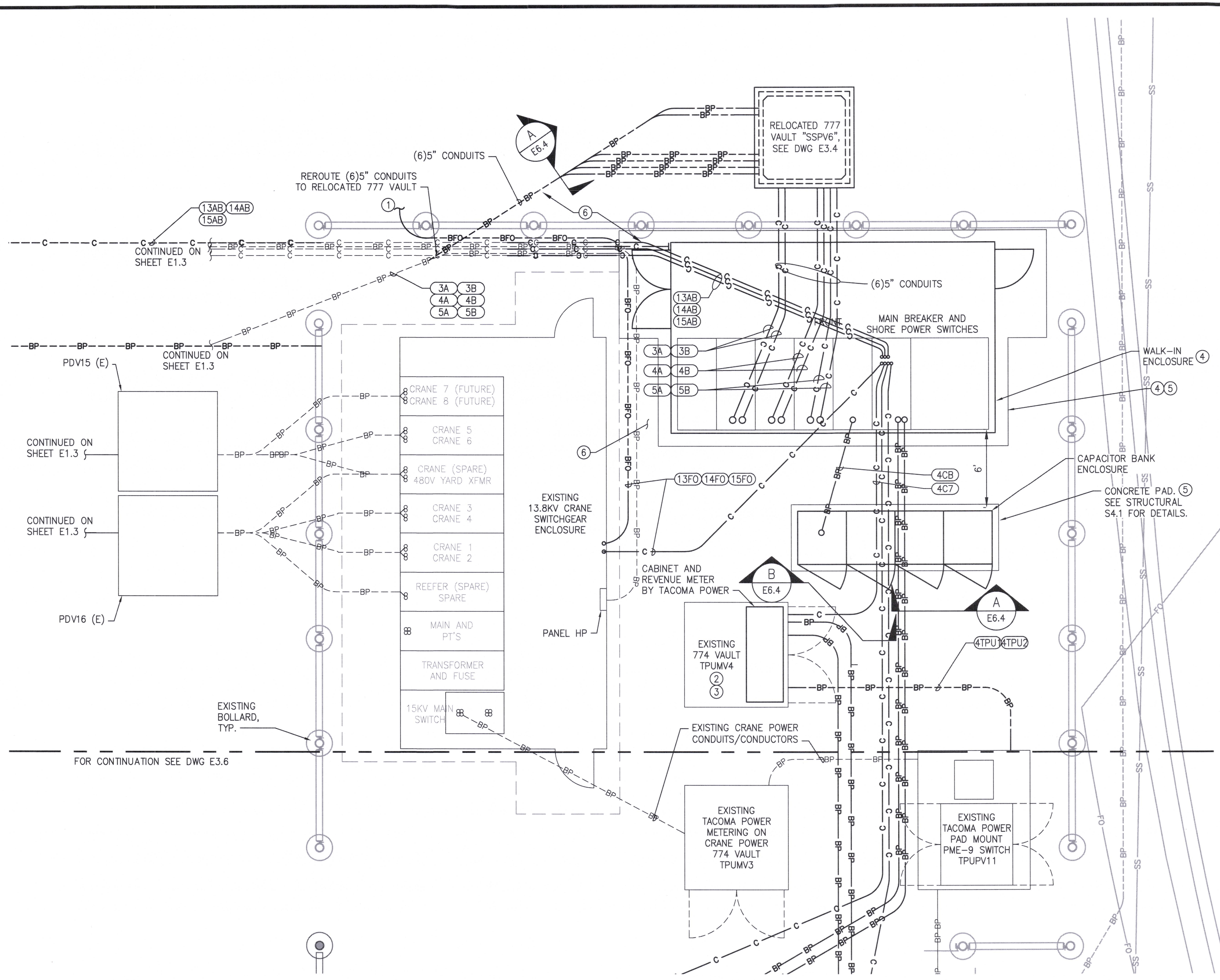
TERMINAL 3 / TERMINAL 4
SHORE POWER
ENLARGED ELECTRICAL DEMOLITION PLAN
SUBSTATION-PIER 4

TOWNSHIP:	RANGE:	SECTION:
DAT-HRZ:	VERT:	
PARCEL:	DRAWING SCALE: AS NOTED	

6658
E3.4
49 OF 83

CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

BINDING EDGE



ENLARGED ELECTRICAL PLAN - PIER 4 SUBSTATION

1 E1.3

0 4 8 scale feet

GENERAL NOTES

1. LIGHT OR SCREEN LINES INDICATE EXISTING ELECTRICAL EQUIPMENT. HEAVY LINE INDICATE NEW OR RELOCATED EQUIPMENT AND MATERIALS.
2. ONLY ELECTRICAL SUBCONTRACTORS THAT ARE ON TPU'S PRE-QUALIFIED LIST SHALL WORK ON TPU'S DUCT BANKS AND VAULTS.
3. BOLLARD LAYOUTS PER CIVIL AND ARE BASED ON ANTICIPATED EQUIPMENT SIZES. CONTRACTOR SHALL CONFIRM MINIMUM CLEARANCES SHOWN BASED ON ACTUAL EQUIPMENT PROVIDED.
4. SEE SHEET E7.2 FOR GFOUNDING PLAN.

KEY NOTES

1. TO SV225, CONTINUED ON SHEET E1.3.
2. COORDINATE WITH TACOMA POWER FOR INSTALLATION OF NEW CABINET AND REVENUE METER BY UTILITY.
3. PROVIDE 6" CONCRETE RISER TO RAISE EXISTING 774 VAULT 6" FROM EXISTING ELEVATION. SEE CIVIL GRADING PLAN.
4. PROVIDE MINIMUM 9" ABOVE FINISHED GRADE, RE-BAR REINFORCED, CONCRETE PAD BELOW WALK-IN SWITCHGEAR ENCLOSURE. SEE SPECIFICATION 33 77 00, PARAGRAPH 2.04, FOR WALK-IN ENCLOSURE REQUIREMENTS. PROVIDE BLOCK-OUTS IN CONCRETE PAD BELOW SWITCHGEAR FOR CONDUIT ACCESS. CONTRACTOR AS PART OF THE SHOP DRAWINGS SHALL PROVIDE CONCRETE PAD SUBMITTAL THAT HAS BEEN DESIGNED AND STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. SEE SPECIFICATIONS 03 30 00 FOR CONCRETE SLAB AND REINFORCING CONSTRUCTION REQUIREMENTS.
5. SEE CIVIL FOR EARTHWORK DETAILS BELOW SLAB.
6. SEE SHEETS C3.3 AND C3.12 FOR NEW CATCH BASIN AND STORM DRAIN PIPING. COORDINATE CONDUIT ROUTING WITH NEW GRAVITY PIPING.

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TERMINAL 3 / TERMINAL 4
SHORE POWER
ENLARGED ELECTRICAL CONSTRUCTION PLAN
SUBSTATION-PIER 4

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT: | DRAWING SCALE: AS NOTED
PARCEL:

6658
E3.5
50 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

PORT OF TACOMA FILE: R:\5650-099.00\Dwgs\201119.01-E35

GENERAL NOTES

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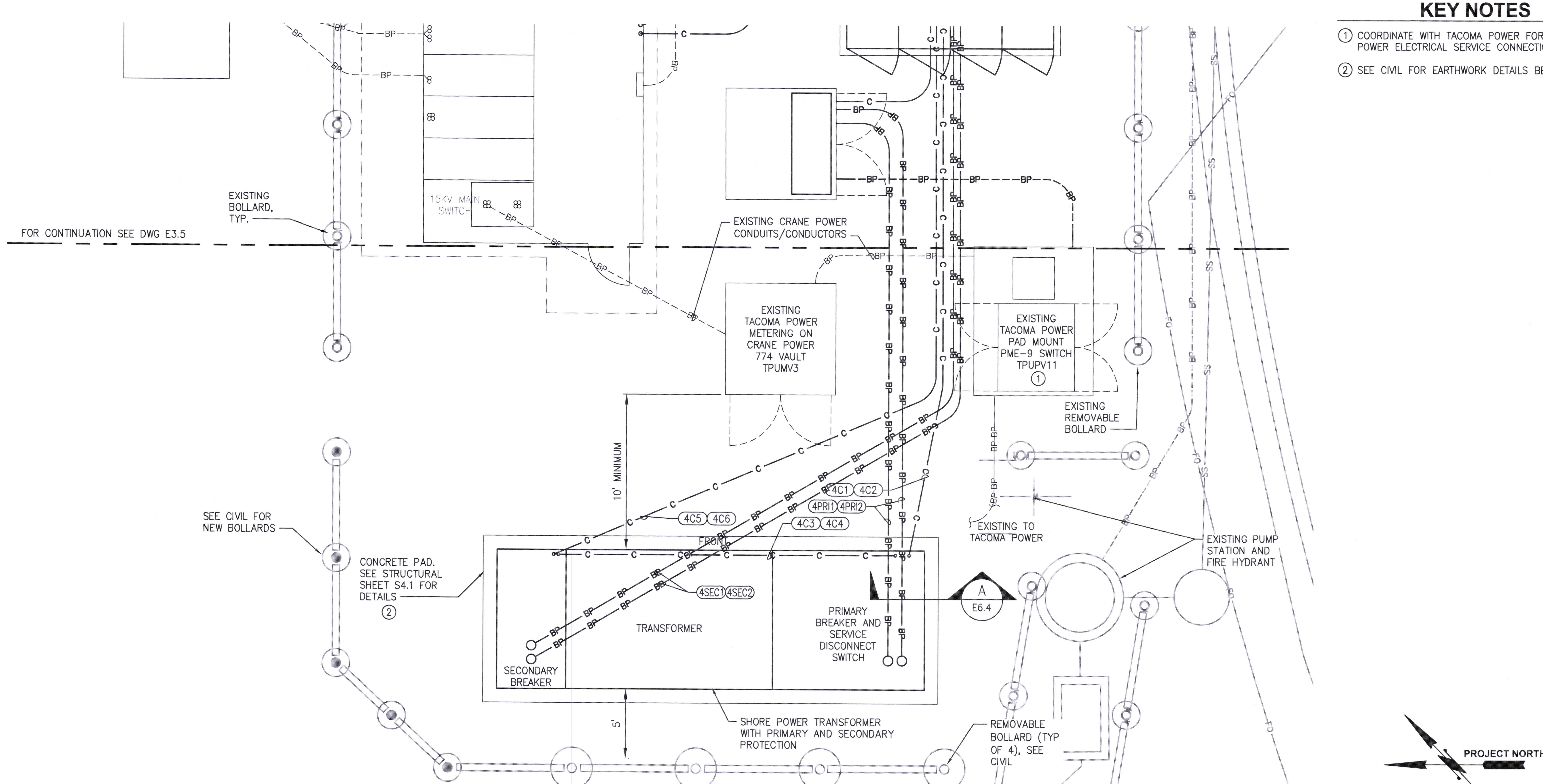
3. BOLLARD LAYOUTS PER CIVIL AND ARE BASED ON ANTICIPATED EQUIPMENT SIZES. CONTRACTOR SHALL CONFIRM MINIMUM CLEARANCES SHOWN BASED ON ACTUAL EQUIPMENT PROVIDED.

KEY NOTES

1. COORDINATE WITH TACOMA POWER FOR SHORE POWER ELECTRICAL SERVICE CONNECTION.
2. SEE CIVIL FOR EARTHWORK DETAILS BELOW SLAB.



ENLARGED ELECTRICAL PLAN - PIER 4 SUBSTATION 1 / E1.3

0 4 8
scale feet

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TERMINAL 3 / TERMINAL 4
SHORE POWER
ENLARGED ELECTRICAL CONSTRUCTION PLAN
SUBSTATION-PIER 4

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT: | DRAWING SCALE: AS NOTED
PARCEL:

6658
E3.6
51 OF 83
CONT/CONS: 071357
M. ID: 201100.01
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BINDING EDGE

LEGEND

BOLD TEXT = NEW WORK
THIN TEXT = EXISTING CONDITIONS
(*) = REFER TO NOTES COLUMN

PIER 3 CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT			CONDUCTORS					
ID	SIZE	N/E	SIZE	GROUND	FROM	TO	VIA VAULTS	NOTES (*)
3TPU1	6"	NEW	BY TPU	BY TPU	TPUPV9	TPU 810 VAULT		ONE RUN OF 3#350 CU 15kV CABLE WITH #4/0 CU NEUTRAL BY TPU
3TPU2	6"	NEW	NONE	NONE	TPUPV9	TPU 810 VAULT		SPARE CONDUIT
3TPU3	6"	NEW	BY TPU	BY TPU	TPU 810 VAULT	774 VAULT		ONE RUN OF 3#350 CU 15kV CABLE WITH #4/0 CU NEUTRAL BY TPU
3TPU4	6"	NEW	NONE	NONE	TPU 810 VAULT	774 VAULT		SPARE CONDUIT
3TPU5	6"	NEW	BY TPU	BY TPU	TPUPV9	TPU 810 VAULT		ONE RUN OF 3#350 CU 15kV CABLE WITH #4/0 CU NEUTRAL BY TPU
3TPU6	6"	NEW	BY TPU	BY TPU	TPUPV9	TPU 810 VAULT		SPARE CONDUIT
3PRI1	4"	NEW (*)	3#350kcmil, 15kV	1#4/0	774 VAULT	PRI BREAKER		PORTION OF CIRCUIT REUSES EXISTING DUCT BANK
3PRI2	4"	NEW (*)	NONE	NONE				PORTION OF CIRCUIT REUSES EXISTING DUCT BANK, SPARE CONDUIT
3SEC1	4"	NEW	3#350kcmil, 15kV	1#4/0	SEC BREAKER	WALK-IN ENCLOSURE		
3SEC2	4"	NEW	3#350kcmil, 15kV	1#4/0	SEC BREAKER	WALK-IN ENCLOSURE		
0A	5"	NEW	3#350kcmil, 15kV	1#1/0	SWITCH-0A	HVSC B0-A	SSPV1, SSPV2, SSPV10	
0B	5"	NEW	3#350kcmil, 15kV	1#1/0	SWITCH-0B	HVSC B0-B	SSPV1, SSPV2, SSPV10	
1A	5"	EXIST (*)	3#350kcmil, 15kV	1#1/0	SWITCH-1A	HVSC B1-A	SSPV1, SSPV2, SSPV3	ADJUST CONDUIT ROUTING TO SWITCH 1 - ADD CONDUIT AS REQ'D
1B	5"	EXIST (*)	3#350kcmil, 15kV	1#1/0	SWITCH-1B	HVSC B1-B	SSPV1, SSPV2, SSPV3	ADJUST CONDUIT ROUTING TO SWITCH 1 - ADD CONDUIT AS REQ'D
2A	5"	EXIST (*)	3#350kcmil, 15kV	1#1/0	SWITCH-2A	HVSC B2-A	SSPV1, SSPV2, SSPV3, SSPV4, SSPV5	ADJUST CONDUIT ROUTING TO SWITCH 2 - ADD CONDUIT AS REQ'D
2B	5"	EXIST (*)	3#350kcmil, 15kV	1#1/0	SWITCH-2B	HVSC B2-B	SSPV1, SSPV2, SSPV3, SSPV4, SSPV5	ADJUST CONDUIT ROUTING TO SWITCH 2 - ADD CONDUIT AS REQ'D
10AB	2"	NEW	7/C #10 AWG, 600V 5/C #10 AWG, 600V 1 FIBER OPTIC (*)	1#10 1#10	WALK-IN ENCL	HVSC B0-AB	SDV1, SDV2, SDV3, WPV1	3-PAIR FIBER OPTIC CABLE
11AB	4", 2"	EXIST (*)	7/C #10 AWG, 600V 5/C #10 AWG, 600V 1 FIBER OPTIC (*)	1#10 1#10	WALK-IN ENCL	HVSC B1-AB	SDV1, SDV2, SDV3, SDV4, WPV2	NEW 2" C FROM SDV1 TO WALK-IN ENCL & FROM WPV2 TO HVSC B1-AB 3-PAIR FIBER OPTIC CABLE
12AB	4", 2"	EXIST (*)	7/C #10 AWG, 600V 5/C #10 AWG, 600V 1 FIBER OPTIC (*)	1#10 1#10	WALK-IN ENCL	HVSC B2-AB	SDV1, SDV2, SDV3, SDV4, SDV5, SDV6, SDV7, WPV5	NEW 2" C FROM SDV1 TO WALK-IN ENCL & FROM WPV5 TO HVSC B2-AB 3-PAIR FIBER OPTIC CABLE
3CB	4"	NEW	1#1/0 AWG, 15kV	1#2	CAP BANK	CAP BANK BREAKER		
3C1	2"	NEW	#10 AWG, 600V (*)	1#10	PRI BREAKER	WALK-IN ENCLOSURE		NUMBER OF CONTROLS CONDUCTORS PER VENDOR
3C2	2"	NEW	INSTR CABLE (*)		PRI BREAKER	WALK-IN ENCLOSURE	PROVIDE GRS CONDUIT	NUMBER OF INSTRUMENTATION CABLES PER VENDOR
3C3	2"	NEW	#10 AWG, 600V (*)	1#10	PRI BREAKER	SEC BREAKER		NUMBER OF CONTROLS CONDUCTORS PER VENDOR
3C4	2"	NEW	INSTR CABLE (*)		PRI BREAKER	SEC BREAKER	PROVIDE GRS CONDUIT	NUMBER OF INSTRUMENTATION CABLES PER VENDOR
3C5	2"	NEW	#10 AWG, 600V (*)	1#10	SEC BREAKER	WALK-IN ENCLOSURE		NUMBER OF CONTROLS CONDUCTORS PER VENDOR
3C6	2"	NEW	INSTR CABLE (*)		SEC BREAKER	WALK-IN ENCLOSURE	PROVIDE GRS CONDUIT	NUMBER OF INSTRUMENTATION CABLES PER VENDOR
3C7	4"	NEW	INSTR CABLE (*)		REVENUE METER	WALK-IN ENCLOSURE		CABLES FOR DEMAND METERING

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TERMINAL 3 / TERMINAL 4
SHORE POWER
PIER 3 CONDUIT AND CONDUCTOR SCHEDULE

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: NONE

6658
E4.1
52 OF 83

CONT/CONS: 071357
M. ID: 201100.01
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BINDING EDGE

LEGEND

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THIN TEXT = EXISTING CONDITIONS
(*) = REFER TO NOTES COLUMN

PIER 4 CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT			CONDUCTORS					
ID	SIZE	N/E	SIZE	GROUND	FROM	TO	VIA VAULTS	NOTES (*)
4TPU1	5"	EXIST (*)	BY TPU	BY TPU	TPUPV11	TPUMV4 VAULT		EXISTING CONDUIT
4TPU2	5"	EXIST (*)	NONE	NONE	TPUPV11	TPUMV4 VAULT		EXISTING SPARE CONDUIT
4PRI1	**4"**	**NEW**	**3#350kcmil, 15kV**	**1#4/0**	**TPUMV4 VAULT**	**PRI BREAKER**		
4PRI2	**4"**	**NEW**	**NONE**	**NONE**	**TPUMV4 VAULT**	**PRI BREAKER**		**SPARE CONDUIT**
4SEC1	**4"**	**NEW**	**3#350kcmil, 15kV**	**1#4/0**	**SEC BREAKER**	**WALK-IN ENCLOSURE**		
4SEC2	**4"**	**NEW**	**3#350kcmil, 15kV**	**1#4/0**	**SEC BREAKER**	**WALK-IN ENCLOSURE**		
3A	5"	**EXIST (*)**	**3#350kcmil, 15kV**	**1#1/0**	**SWITCH-3A**	**HVSC B3-A**	SSPV6, SSPV7, SSPV8, SSPV9	**NEW CONDUIT ONLY TO SSPV6 VAULT AND TO WALK-IN ENCLOSURE - SEE DWG E3.5**
3B	5"	**EXIST (*)**	**3#350kcmil, 15kV**	**1#1/0**	**SWITCH-3B**	**HVSC B3-B**	SSPV6, SSPV7, SSPV8, SSPV9	**NEW CONDUIT ONLY TO SSPV6 VAULT AND TO WALK-IN ENCLOSURE - SEE DWG E3.5**
4A	5"	**EXIST (*)**	**3#350kcmil, 15kV**	**1#1/0**	**SWITCH-4A**	**HVSC B4-A**	SSPV6, SSPV7, SSPV8	**NEW CONDUIT ONLY TO SSPV6 VAULT AND TO WALK-IN ENCLOSURE - SEE DWG E3.5**
4B	5"	**EXIST (*)**	**3#350kcmil, 15kV**	**1#1/0**	**SWITCH-4B**	**HVSC B4-B**	SSPV6, SSPV7, SSPV8	**NEW CONDUIT ONLY TO SSPV6 VAULT AND TO WALK-IN ENCLOSURE - SEE DWG E3.5**
5A	5"	**EXIST (*)**	**3#350kcmil, 15kV**	**1#1/0**	**SWITCH-5A**	**HVSC B5-A**	SSPV6, SSPV7	**NEW CONDUIT ONLY TO SSPV6 VAULT AND TO WALK-IN ENCLOSURE - SEE DWG E3.5**
5B	5"	**EXIST (*)**	**3#350kcmil, 15kV**	**1#1/0**	**SWITCH-5B**	**HVSC B5-B**	SSPV6, SSPV7	**NEW CONDUIT ONLY TO SSPV6 VAULT AND TO WALK-IN ENCLOSURE - SEE DWG E3.5**
13AB	2"	**EXIST (*)**	**7/C #10 AWG, 600V** **5/C #10 AWG, 600V**	**1#10** **1#10**	**WALK-IN ENCL**	**HVSC B3-AB**	SDV15, SDV14, SDV12, SDV10, SDV9, SDV8, SDV16, SDV17, SDV23	**NEW 2" C FROM 233 LA VAULT TO WALK-IN ENLOSURE - SEE DWG E3.5**
14AB	2"	**EXIST (*)**	**7/C #10 AWG, 600V** **5/C #10 AWG, 600V**	**1#10** **1#10**	**WALK-IN ENCL**	**HVSC B4-AB**	SDV15, SDV14, SDV12, SDV10, SDV9	**NEW 2" C FROM 233 LA VAULT TO WALK-IN ENLOSURE - SEE DWG E3.5**
15AB	2"	**EXIST (*)**	**7/C #10 AWG, 600V** **5/C #10 AWG, 600V**	**1#10** **1#10**	**WALK-IN ENCL**	**HVSC B5-AB**	SDV15, SDV14, SDV12	**NEW 2" C FROM 233 LA VAULT TO WALK-IN ENLOSURE - SEE DWG E3.5**
13FO	2"	EXIST (*)	**1 3-PR FIBER OPTIC**		**WALK-IN ENCL**	**HVSC B3-AB**	SV225, SV224, SV210, SV212, SV213, SV214, SV216, SV218	**3-PAIR FIBER OPTIC CABLE**
14FO	2"	EXIST (*)	**1 3-PR FIBER OPTIC**		**WALK-IN ENCL**	**HVSC B4-AB**	SV225, SV224, SV210, SV212, SV213, SV214, SV216	**3-PAIR FIBER OPTIC CABLE**
15FO	2"	EXIST (*)	**1 3-PR FIBER OPTIC**		**WALK-IN ENCL**	**HVSC B5-AB**	SV225, SV224, SV210	**3-PAIR FIBER OPTIC CABLE**
4CB	**4"**	**NEW**	**1#1/0 AWG, 15kV**	**1#2**	**CAP BANK**	**CAP BANK BREAKER**		
4C1	**2"**	**NEW**	**#10 AWG, 600V (*)**	**1#10**	**PRI BREAKER**	**WALK-IN ENCLOSURE**		**NUMBER OF CONTROLS CONDUCTORS PER VENDOR**
4C2	**2"**	**NEW**	**INSTR CABLE (*)**		**PRI BREAKER**	**WALK-IN ENCLOSURE**	**PROVIDE GRS CONDUIT**	**NUMBER OF INSTRUMENTATION CABLES PER VENDOR**
4C3	**2"**	**NEW**	**#10 AWG, 600V (*)**	**1#10**	**PRI BREAKER**	**SEC BREAKER**		**NUMBER OF CONTROLS CONDUCTORS PER VENDOR**
4C4	**2"**	**NEW**	**INSTR CABLE (*)**		**PRI BREAKER**	**SEC BREAKER**	**PROVIDE GRS CONDUIT**	**NUMBER OF INSTRUMENTATION CABLES PER VENDOR**
4C5	**2"**	**NEW**	**#10 AWG, 600V (*)**	**1#10**	**SEC BREAKER**	**WALK-IN ENCLOSURE**		**NUMBER OF CONTROLS CONDUCTORS PER VENDOR**
4C6	**2"**	**NEW**	**INSTR CABLE (*)**		**SEC BREAKER**	**WALK-IN ENCLOSURE**	**PROVIDE GRS CONDUIT**	**NUMBER OF INSTRUMENTATION CABLES PER VENDOR**
4C7	**2"**	**NEW**	**INSTR CABLE (*)**		**REVENUE METER**	**WALK-IN ENCLOSURE**		**CABLES FOR DEMAND METERING**

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TERMINAL 3 / TERMINAL 4
SHORE POWER
PIER 4 CONDUIT AND CONDUCTOR SCHEDULE

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DRAWING SCALE: NONE

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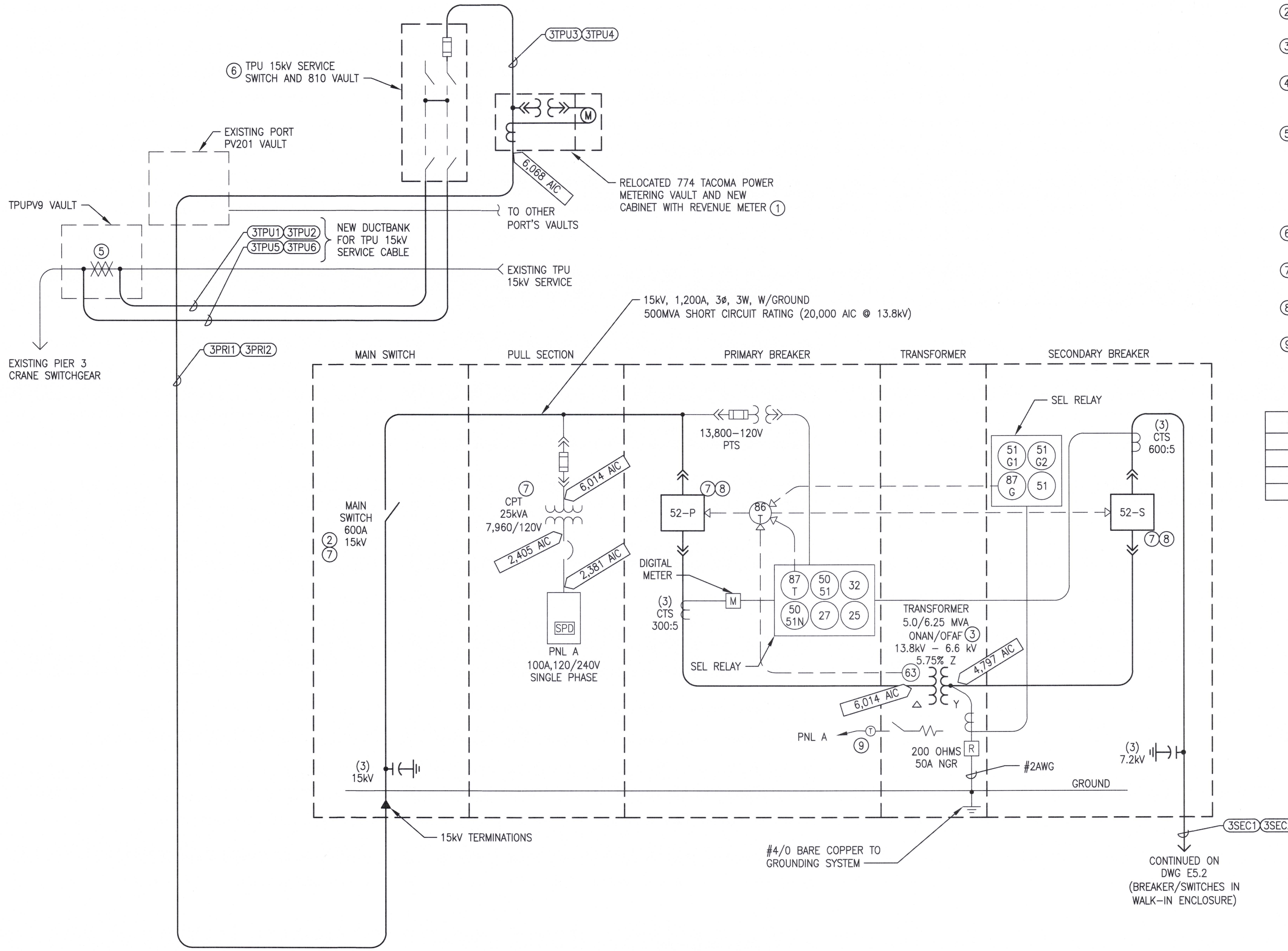

PIER 3 SHORE POWER ONE-LINE DIAGRAM - SHEET 1

NO SCALE

KEY NOTES

1. VAULT RELOCATION BY ELECTRICAL CONTRACTOR, CABINET AND REVENUE METER BY TACOMA POWER.
2. MAIN SERVICE SWITCH SHALL HAVE VISIBLE BLADES TO CONFIRM SWITCH IS IN THE OFF POSITION.
3. INCLUDE PROVISIONS FOR FUTURE FANS ON THE TRANSFORMER, SEE SPECIFICATIONS.
4. VESSEL MAXIMUM DEMAND WAS OBTAINED FROM PORT OF LOS ANGELES ACTUAL DEMAND READINGS OF 74 VESSELS (APRIL 2019).
5. TPU WILL HAVE AN OUTAGE TO INTERCEPT EXISTING 15kV SERVICE AND INSTALL NEW 15kV POWER SWITCH AND REVENUE CABINET/METER. WORK BY CONTRACTOR AND TPU BEFORE OUTAGE SHALL BE PRIORITIZED TO MINIMIZE OUTAGE DURATION. CONTRACTOR SHALL COORDINATE WITH TPU TO ACCOMPLISH THIS WORK.
6. VAULT BY ELECTRICAL CONTRACTOR, 15kV SERVICE SWITCH BY TPU.
7. PROVIDE 15kV IR WINDOWS (MINIMUM 4"ø) AT EACH 15kV CUBICLE OF THE MEDIUM VOLTAGE SUBSTATION.
8. PROVIDE SIEMENS WINPM POWER MONITORING SYSTEM.
9. PROVIDE SPACE HEATER, THERMOSTAT AND DISCONNECT.

DESIGN BASIS LOAD CALCULATIONS (4)

VESSEL MAXIMUM DEMAND		
2.59 MW @	0.8 PF	3.24 MVA
CONTINUOUS DEMAND +	125%	4.05 MVA
AMPERAGE @	6.6 kV	354.01 A

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SHORE POWER
PIER 3 SHORE POWER
ONE-LINE DIAGRAM - SHEET 1

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6658
E5.1
54 OF 83

CONT/CONS: 071357
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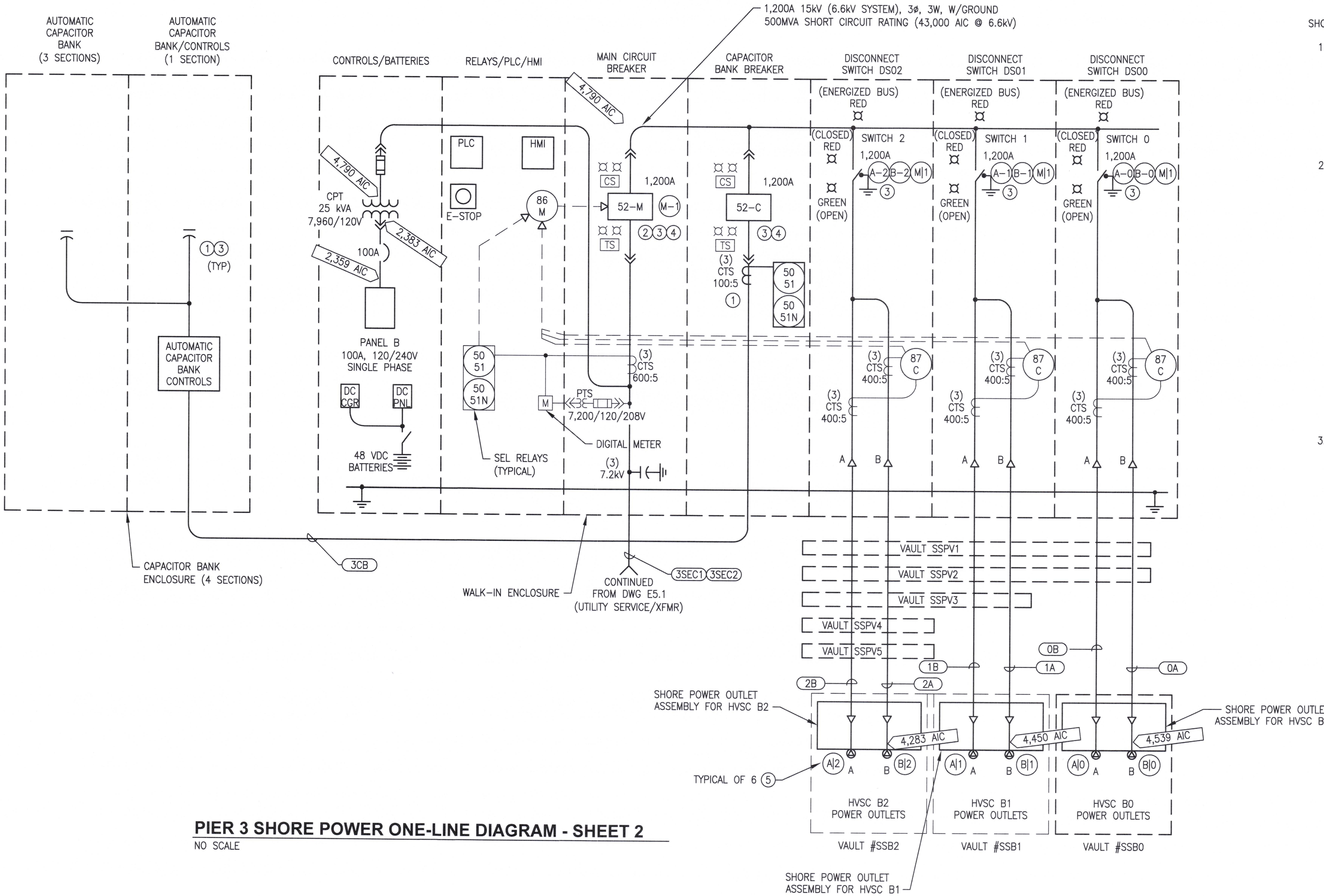
KEY NOTES

1. 900 kVAR AUTOMATIC CAPACITOR BANK (5 STEPS OF 150kVAR TO 200kVAR EACH)
2. TACOMA POWER CAN SUPPORT A TOTAL OF 5 MVA VESSEL LOADS AT PIER 3 AND PIER 4. WHEN A SECOND VESSEL NEEDS TO BE CONNECTED TO THE SYSTEM, PORT OPERATIONS SHOULD OBTAIN THE LOAD OF THE SECOND VESSEL AND ONLY ALLOW CONNECTION IF THE TOTAL LOAD OF BOTH VESSELS IS UNDER 5 MVA.
3. PROVIDE 15kV IR WINDOWS (MINIMUM 4"ø) AT EACH 15kV CUBICLE OF THE MEDIUM VOLTAGE SUBSTATION.
4. PROVIDE SIEMENS WINPM POWER MONITORING SYSTEM.
5. KEY INTERLOCK SHALL BE OUTDOOR WEATHERPROOF RATED.



PIER 3 SHORE POWER ONE-LINE DIAGRAM - SHEET 2
NO SCALE

SHORE POWER SEQUENCE OF OPERATION OF KEY INTERLOCKS

1. THERE IS NO VESSEL AT BERTH:
   a. INTERLOCK KEYS ARE INSIDE EACH OF THE TWO SHORE POWER RECEPTACLES
   b. SHORE POWER SWITCH INSIDE WALK-IN ENCLOSURE IS OPEN
   c. SHORE POWER SWITCH INSIDE WALK-IN ENCLOSURE IS GROUNDED
   d. MAIN CIRCUIT BREAKER INSIDE WALK-IN ENCLOSURE IS OPEN
2. THERE IS A VESSEL AT BERTH
   a. VERIFY SHORE POWER SWITCH IS OFF AND GROUNDED INSIDE WALK-IN ENCLOSURE
   b. VERIFY SHORE POWER MAIN CIRCUIT BREAKER IS OFF INSIDE WALK-IN ENCLOSURE
   c. VERIFY VESSEL PLUG CONDITION IS SAFE (OFF)
   d. INSERT VESSEL LOWERS CABLES AND PLUGS IN SHORE POWER RECEPTACLES
   e. REMOVE INTERLOCK KEYS A(X), B(X) FROM SHORE POWER RECEPTACLES
   f. GO INSIDE THE WALK-IN ENCLOSURE AND INSERT BOTH KEYS A(X), B(X) TO SHORE POWER SWITCH
   g. CLOSE SHORE POWER SWITCH
   h. REMOVE INTERLOCK KEY M1 FROM SHORE POWER SWITCH
   i. INSERT INTERLOCK KEY M1 TO MAIN CIRCUIT BREAKER 52-M AND CLOSE MAIN CIRCUIT BREAKER 52-M BY REMOTE CLOSE SWITCH
   j. VERIFY POWER IS "ON" AT SHORE POWER SWITCH
   k. ADVICE VESSEL PERSONNEL THAT POWER IS "ON"
   l. VESSEL TRANSFERS FROM SHIP-BOARD POWER TO SHORE-POWER SOURCE
3. VESSEL LEAVING BERTH
   a. ADVICE VESSEL PERSONNEL THAT POWER WILL BE TURNED "OFF"
   b. VERIFY THAT VESSEL HAS TRANSFERRED TO SHIP-BOARD POWER
   c. OPEN MAIN CIRCUIT BREAKER 52-M BY REMOTE TRIP SWITCH
   d. VERIFY SHORE POWER SWITCH LIVE LINE INDICATOR IS "OFF"
   e. REMOVE INTERLOCK KEY M1 FROM MAIN CIRCUIT BREAKER 52-M
   f. INSERT INTERLOCK KEY M1 TO SHORE POWER SWITCH
   g. OPEN SHORE POWER SWITCH AND GROUND (GROUNDING CONDUCTORS TO SHORE-POWER RECEPTACLES)
   h. REMOVE INTERLOCK KEYS A(X), B(X) FROM SHORE POWER SWITCH
   i. GO TO SHORE POWER VAULT AT THE BULLRAIL AND INSERT INYERLOCK KEYS A(X), B(X) INTO RECEPTACLES A AND B
   j. REMOVE VESSEL PLUGS
   k. VESSEL RETRIEVES SHORE-POWER CABLES FOR DEPARTURE

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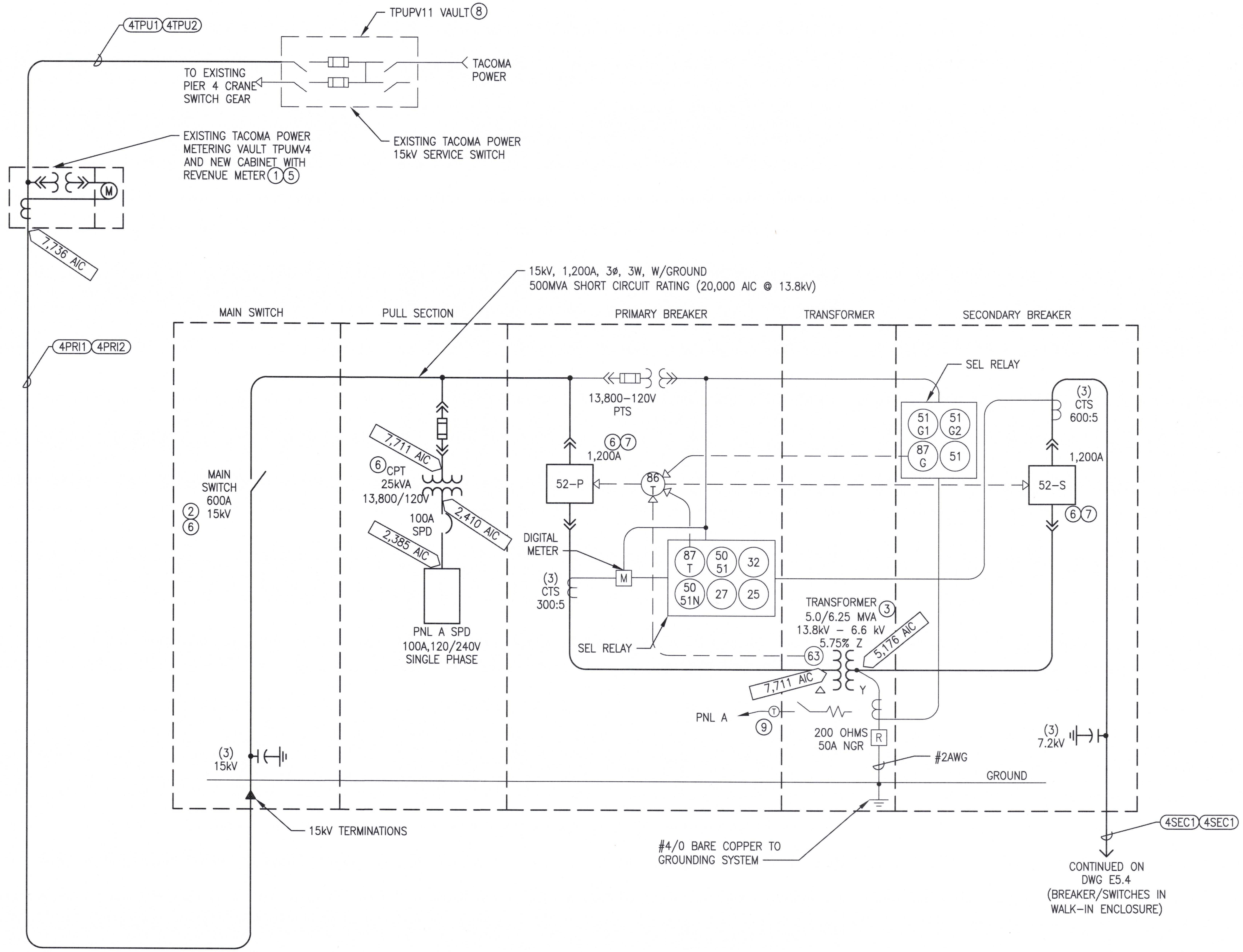
TERMINAL 3 / TERMINAL 4 SHORE POWER
PIER 3 SHORE POWER ONE-LINE DIAGRAM - SHEET 2
DRAWING SCALE: AS NOTED
6658
E5.2
55 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET



PIER 4 SHORE POWER ONE-LINE DIAGRAM - SHEET 1

NO SCALE

KEY NOTES

1. CABINET AND REVENUE METER BY TACOMA POWER.
2. MAIN SERVICE SWITCH SHALL HAVE VISIBLE BLADES TO CONFIRM SWITCH IS IN THE OFF POSITION.
3. INCLUDE PROVISIONS FOR FUTURE FANS ON THE TRANSFORMER, SEE SPECIFICATIONS.
4. VESSEL MAXIMUM DEMAND WAS OBTAINED FROM PORT OF LOS ANGELES ACTUAL DEMAND READINGS OF 74 VESSELS (APRIL 2019).
5. COORDINATE WITH TPU AND PROVIDE ALL MATERIALS AND LABOR PER TPU STANDARDS AND REQUIREMENTS.
6. PROVIDE 15kV IR WINDOWS (MINIMUM 4"ø) AT EACH 15kV CUBICLE OF THE MEDIUM VOLTAGE SUBSTATION.
7. PROVIDE SIEMENS WINPM POWER MONITORING SYSTEM.
8. TPU WILL HAVE AN OUTAGE TO PROVIDE CONNECTION TO EXISTING 15kV SERVICE SWITCH.
9. PROVIDE SPACE HEATER, THERMOSTAT AND DISCONNECT.

DESIGN BASIS LOAD CALCULATIONS 4

VESSEL MAXIMUM DEMAND		
2.59 MW @	0.8 PF	3.24 MVA
CONTINUOUS DEMAND +	125%	4.05 MVA
AMPERAGE @	6.6 kV	354.01 A

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TERMINAL 3 / TERMINAL 4
SHORE POWER
PIER 4 SHORE POWER
ONE-LINE DIAGRAM - SHEET 1

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

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E5.3
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CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

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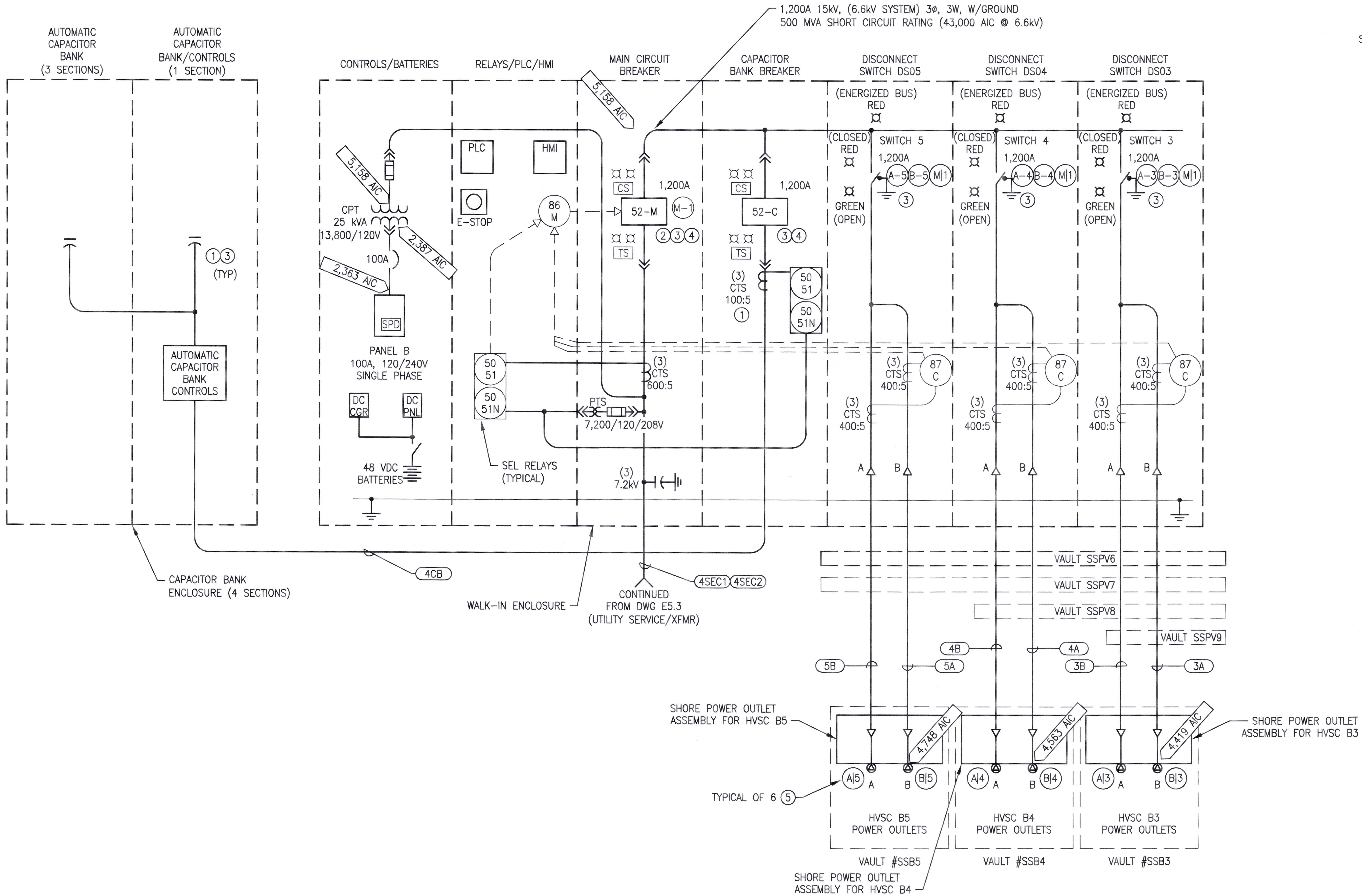
KEY NOTES

1. 900 kVAR AUTOMATIC CAPACITOR BANK (5 STEPS OF 150kVAR TO 200kVAR EACH)
2. TACOMA POWER CAN SUPPORT A TOTAL OF 5 MVA VESSEL LOADS AT PIER 3 AND PIER 4. WHEN A SECOND VESSEL NEEDS TO BE CONNECTED TO THE SYSTEM, PORT OPERATIONS SHOULD OBTAIN THE LOAD OF THE SECOND VESSEL AND ONLY ALLOW CONNECTION IF THE TOTAL LOAD OF BOTH VESSELS IS UNDER 5 MVA.
3. PROVIDE 15kV IR WINDOWS (MINIMUM 4"ø) AT EACH 15kV CUBICLE OF THE MEDIUM VOLTAGE SUBSTATION.
4. PROVIDE SIEMENS WINPM POWER MONITORING SYSTEM.
5. KEY INTERLOCK SHALL BE OUTDOOR WEATHERPROOF RATED.



PIER 4 SHORE POWER ONE-LINE DIAGRAM - SHEET 2

NO SCALE

SHORE POWER SEQUENCE OF OPERATION OF KEY INTERLOCKS

1. THERE IS NO VESSEL AT BERTH:
   a. INTERLOCK KEYS ARE INSIDE EACH OF THE TWO SHORE POWER RECEPTACLES
   b. SHORE POWER SWITCH INSIDE WALK-IN ENCLOSURE IS OPEN
   c. SHORE POWER SWITCH INSIDE WALK-IN ENCLOSURE IS GROUNDED
   d. MAIN CIRCUIT BREAKER INSIDE WALK-IN ENCLOSURE IS OPEN
2. THERE IS A VESSEL AT BERTH
   a. VERIFY SHORE POWER SWITCH IS OFF AND GROUNDED INSIDE WALK-IN ENCLOSURE
   b. VERIFY SHORE POWER MAIN CIRCUIT BREAKER IS OFF INSIDE WALK-IN ENCLOSURE
   c. VERIFY VESSEL PLUG CONDITION IS SAFE (OFF)
   d. INSERT VESSEL lowers cables and PLUGS IN SHORE POWER RECEPTACLES
   e. REMOVE INTERLOCK KEYS A(X), B(X) FROM SHORE POWER RECEPTACLES
   f. GO INSIDE THE WALK-IN ENCLOSURE AND INSERT BOTH KEYS A(X), B(X) TO SHORE POWER SWITCH
   g. CLOSE SHORE POWER SWITCH
   h. REMOVE INTERLOCK KEY M1 FROM SHORE POWER SWITCH
   i. INSERT INTERLOCK KEY M1 TO MAIN CIRCUIT BREAKER 52-M AND CLOSE MAIN CIRCUIT BREAKER 52-M BY REMOTE CLOSE SWITCH
   j. VERIFY POWER IS "ON" AT SHORE POWER SWITCH
   k. ADVICE VESSEL PERSONNEL THAT POWER IS "ON"
   l. VESSEL TRANSFERS FROM SHIP-BOARD POWER TO SHORE-POWER SOURCE
3. VESSEL LEAVING BERTH
   a. ADVICE VESSEL PERSONNEL THAT POWER WILL BE TURNED "OFF"
   b. VERIFY THAT VESSEL HAS TRANSFERRED TO SHIP-BOARD POWER
   c. OPEN MAIN CIRCUIT BREAKER 52-M BY REMOTE TRIP SWITCH
   d. VERIFY SHORE POWER SWITCH LIVE LINE INDICATOR IS "OFF"
   e. REMOVE INTERLOCK KEY M1 FROM MAIN CIRCUIT BREAKER 52-M
   f. INSERT INTERLOCK KEY M1 TO SHORE POWER SWITCH
   g. OPEN SHORE POWER SWITCH AND GROUND (GROUNDING CONDUCTORS TO SHORE-POWER RECEPTACLES)
   h. REMOVE INTERLOCK KEYS A(X), B(X) FROM SHORE POWER SWITCH
   i. GO TO SHORE POWER VAULT AT THE BULLRAIL AND INSERT INYERLOCK KEYS A(X), B(X) INTO RECEPTACLES A AND B
   j. REMOVE VESSEL PLUGS
   k. VESSEL RETRIEVES SHORE-POWER CABLES FOR DEPARTURE

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TERMINAL 3 / TERMINAL 4
SHORE POWER
PIER 4 SHORE POWER
ONE-LINE DIAGRAM - SHEET 2

TOWNSHIP:	RANGE:	SECTION:
DAT-HRZ:	VERT:	DRAWING SCALE: AS NOTED
PARCEL:		

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E5.4
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CONT/CONS: 071357
M. ID: 201100.01
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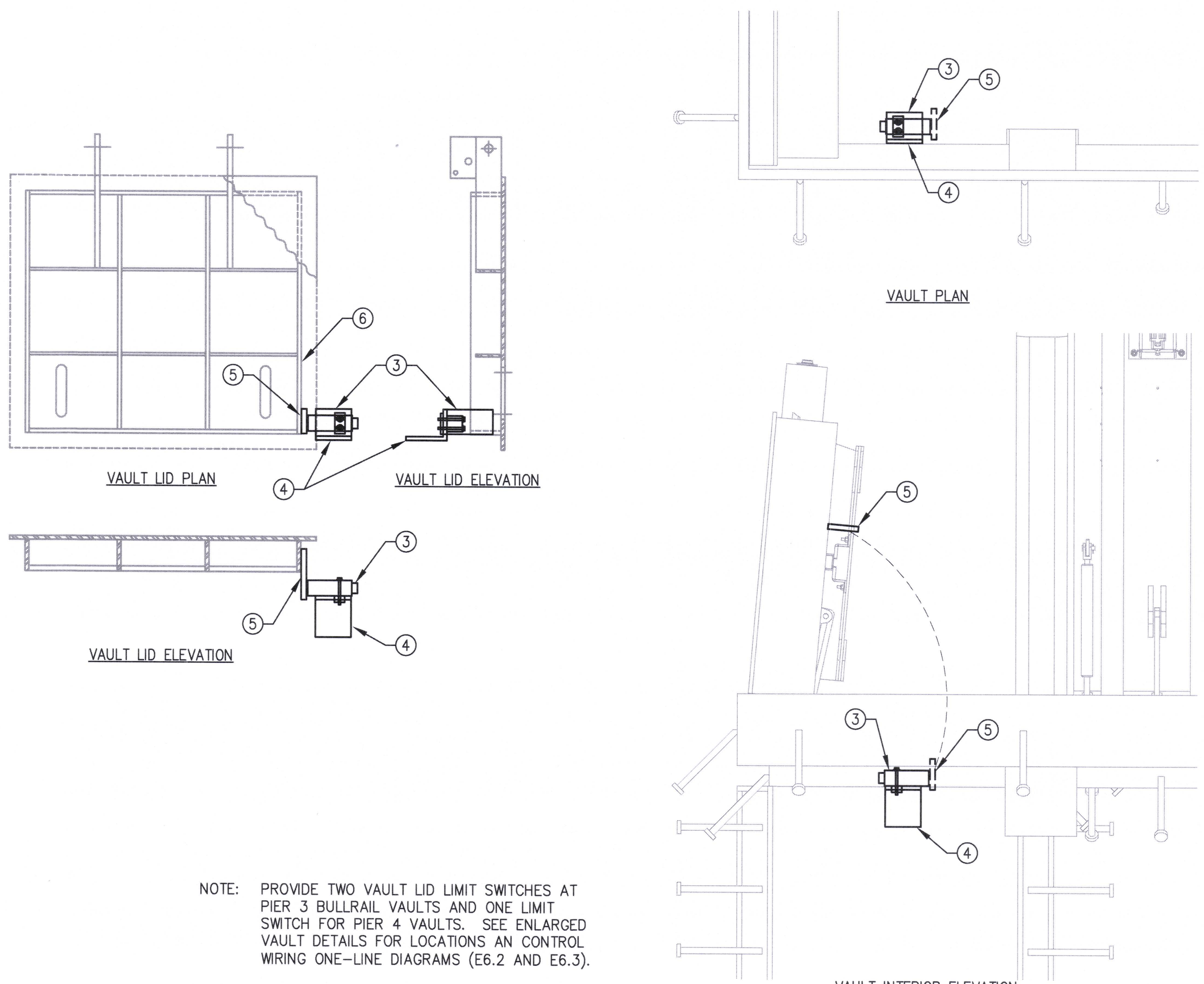
KEY NOTES

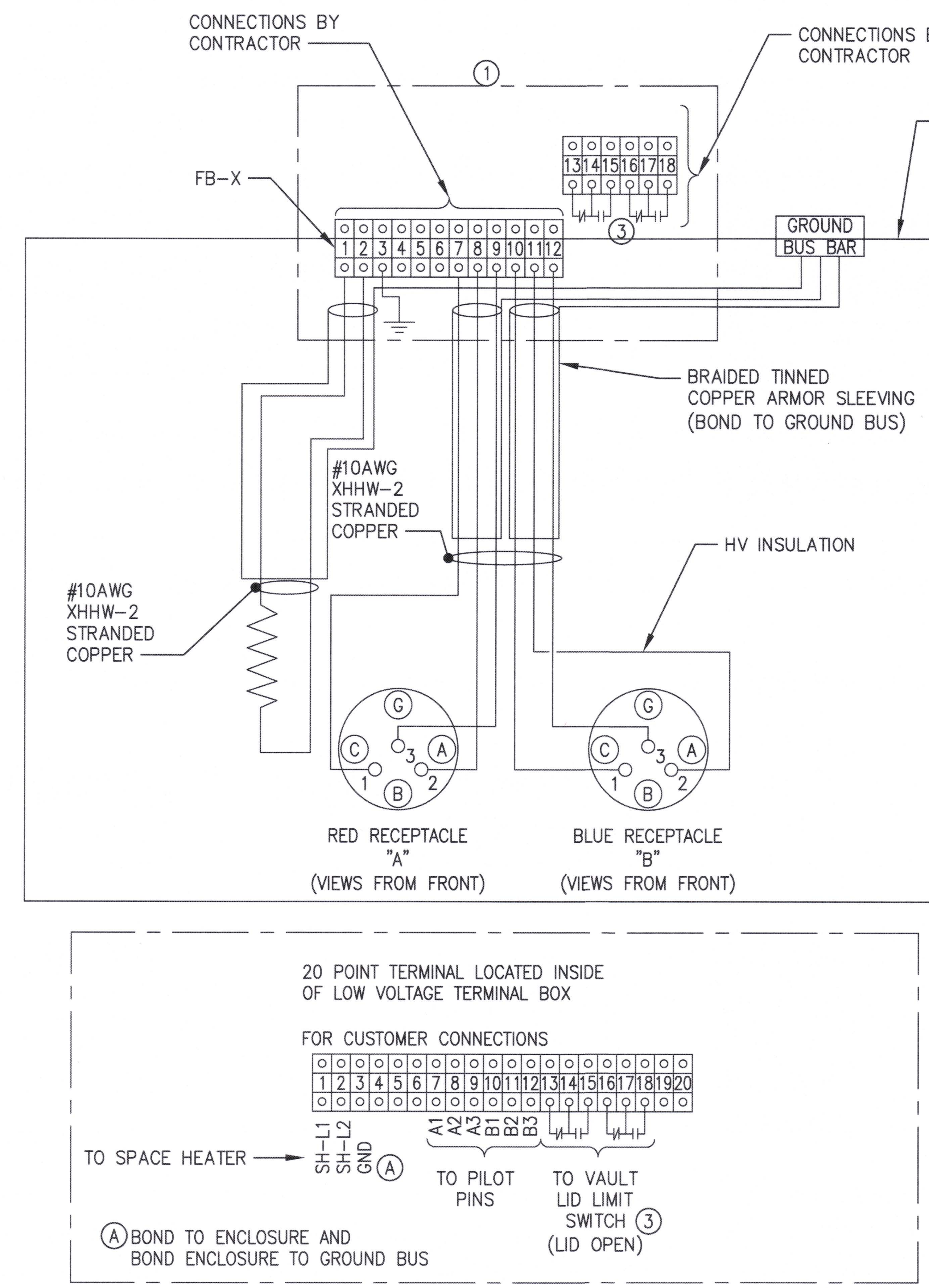
1. PROVIDE 2" CONDUIT FOR SHORE POWER CONTROL CABLES. SEE E2.x DWG SERIES FOR ROUTING OF CONDUIT.
2. PROVIDE TWO (2) SHORE POWER RECEPTACLES IN A SHORE POWER OUTLET ASSEMBLY.
3. PROVIDE VAULT LID LIMIT SWITCH, DOUBLE-POLE/DOUBLE-THROW AND FERROUS TARGET MOUNTED TO PRIMARY (OPEN FIRST) LID, 'EMERSON/TOPWORX GO-SWITCH, MODEL 81' STAINLESS STEEL OR APPROVED EQUAL
4. PROVIDE ALL NECESSARY HARDWARE FOR MOUNTING LIMIT SWITCH IN ORIENTATION AS SHOWN. ANCHOR TO CONCRETE USING POST-INSTALLED ANCHORS PER SHEET S1.1
5. PROVIDE SUFFICIENT FERROUS MATERIAL ATTACHED TO VAULT LID TO TRIGGER LIMIT SWITCH WHEN LID IS CLOSED. ATTACH FERROUS MATERIAL TO VAULT LID USING TYPE 316 STAINLESS STEEL BOLTS, NUTS AND WASHERS SIMILAR TO SECTION A ON SHEET S2.3. WELDING TO EXISTING LIDS IS NOT PERMITTED.
6. SEE SHEET S2.3 FOR DETAILS REQUIRED TO PROVIDE INTERLOCKING COVERS AT EXISTING SHORE POWER VAULTS SSB1 AND SSB2.



NOTE: PROVIDE TWO VAULT LID LIMIT SWITCHES AT PIER 3 BULLRAIL VAULTS AND ONE LIMIT SWITCH FOR PIER 4 VAULTS. SEE ENLARGED VAULT DETAILS FOR LOCATIONS AN CONTROL WIRING ONE-LINE DIAGRAMS (E6.2 AND E6.3).

TYPICAL SHORE POWER VAULT LIMIT SWITCH
NO SCALE

1 / –



TYPICAL SHORE POWER RECEPTACLE
NO SCALE

2 / –

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TERMINAL 3 / TERMINAL 4
SHORE POWER
ELECTRICAL DETAILS

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

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E6.1
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M. ID: 201100.01
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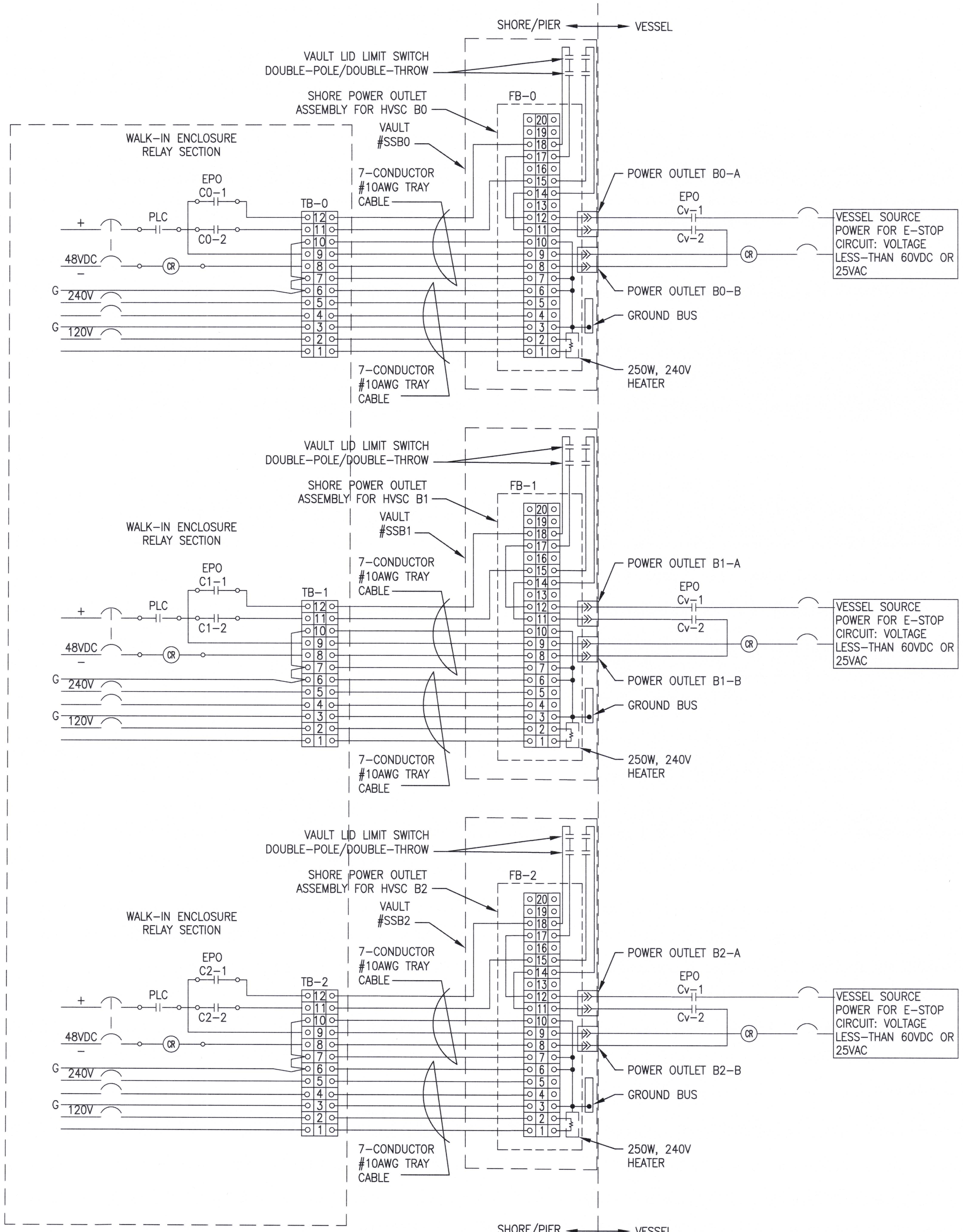
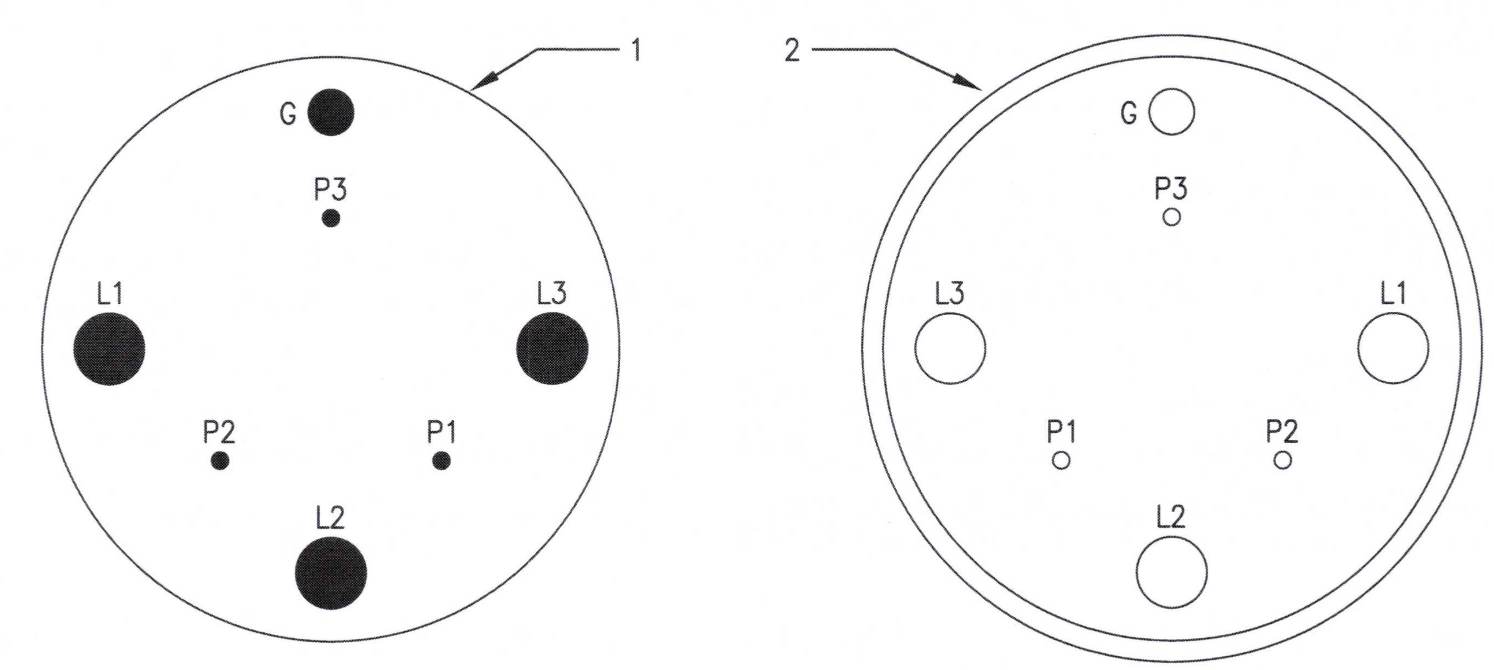


PIER 3 SHORE POWER CONTROL WIRING

NO SCALE

EACH SHIP PLUG AND SHORE SOCKET-OUTLET SHALL BE FITTED WITH THREE PILOT CONTACTS

GENERAL ARRANGEMENT OF SHIP PLUG AND SHORE SOCKET-OUT SHALL BE IN ACCORDANCE WITH ICE 62613-2:2016, ANNEX II, AND FIGURE BELOW.



KEY

1	SHIP PLUG FACE	2	SHORE SOCKET-OUTLET FACE
G	GROUND	P1	PILOT LINE 1
L1	PHASE A-PHASE R	P2	PILOT LINE 2
L2	PHASE B-PHASE S	P3	PILOT LINE 3
L3	PHASE C-PHASE T		

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TERMINAL 3 / TERMINAL 4 SHORE POWER

PIER 3 SHORE POWER CONTROL WIRING

TOWNSHIP: | RANGE: | SECTION:

DAT-HRZ: | VERT:

PARCEL: | DRAWING SCALE: AS NOTED

6658

E6.2

CONT/CONS: 071357

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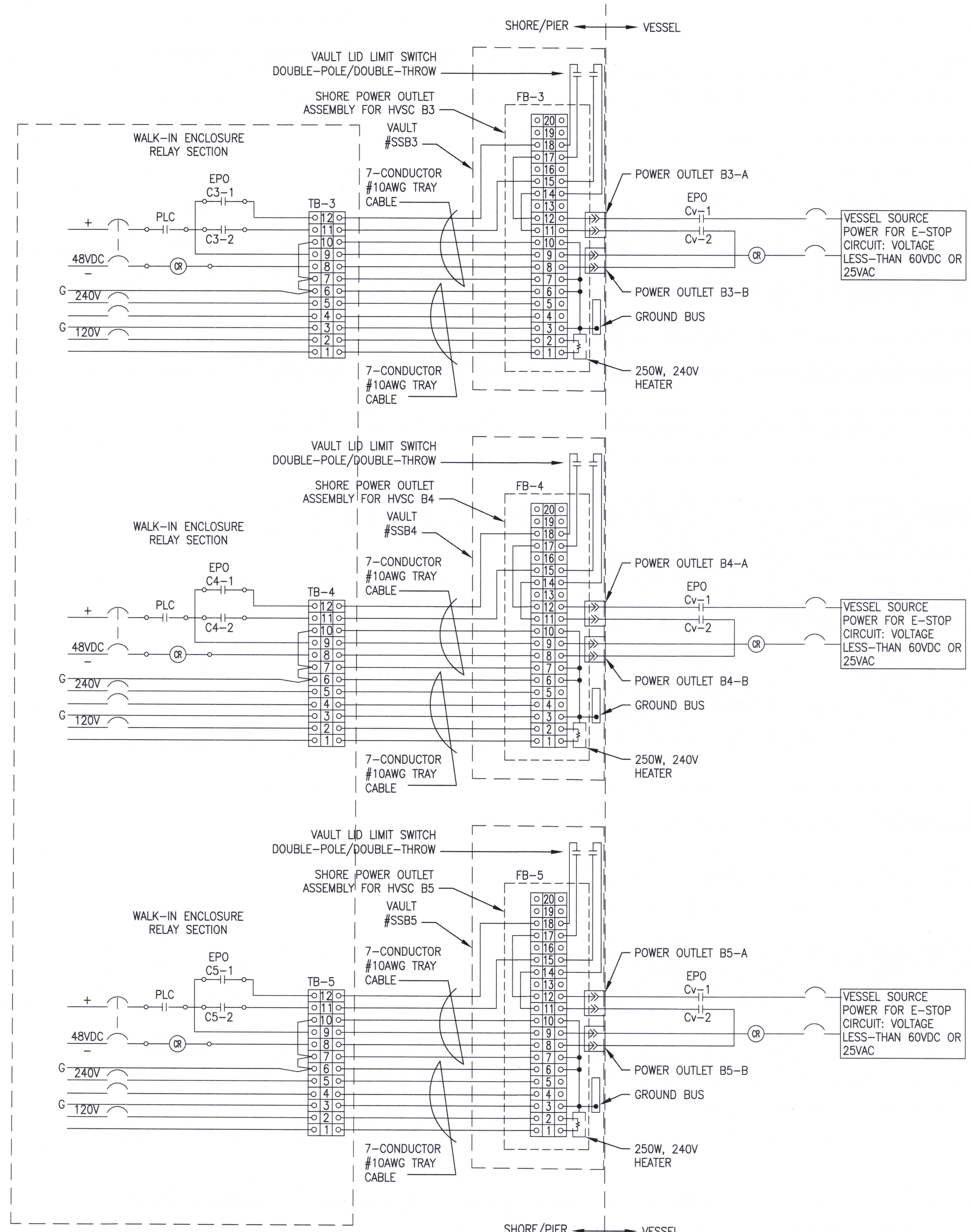
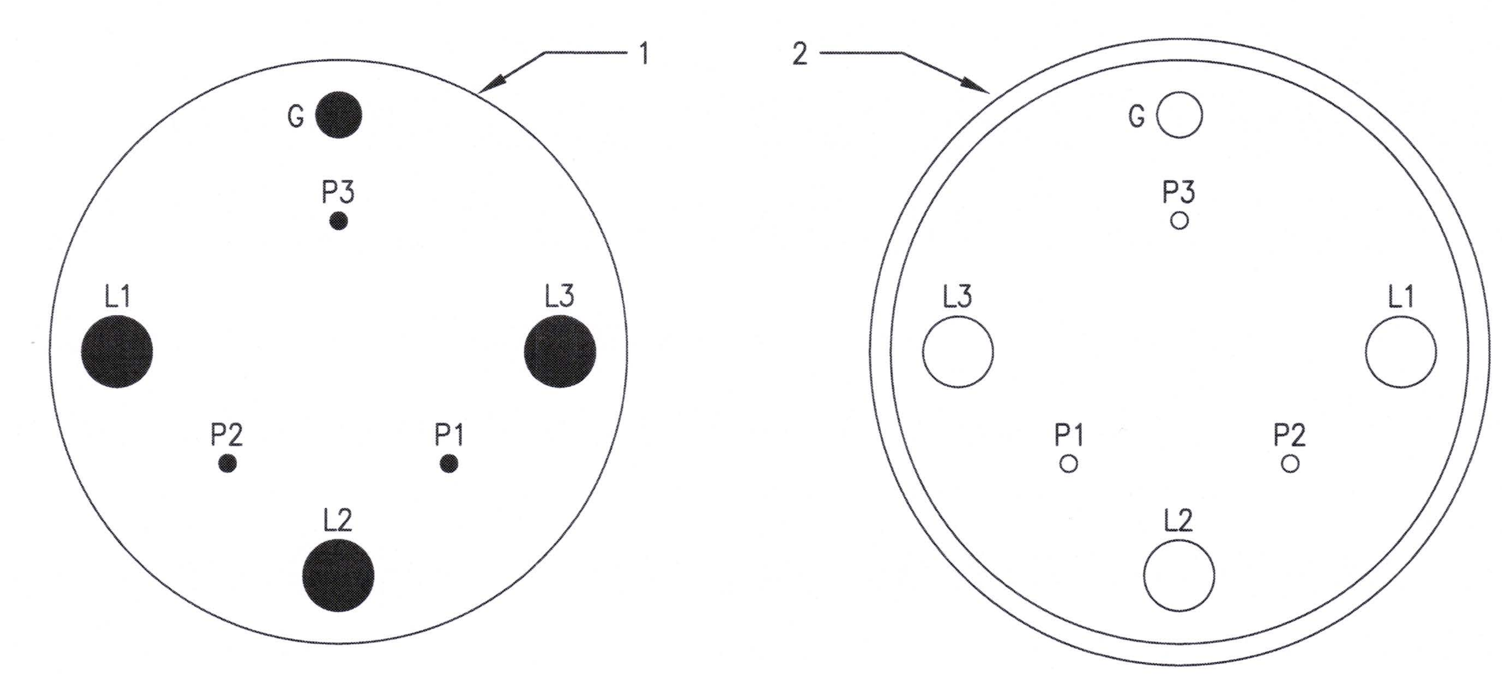


PIER 4 SHORE POWER CONTROL WIRING

NO SCALE

EACH SHIP PLUG AND SHORE SOCKET-OUTLET SHALL BE FITTED WITH THREE PILOT CONTACTS

GENERAL ARRANGEMENT OF SHIP PLUG AND SHORE SOCKET-OUT SHALL BE IN ACCORDANCE WITH ICE 62613-2:2016, ANNEX II, AND FIGURE BELOW.



KEY

1	SHIP PLUG FACE	2	SHORE SOCKET-OUTLET FACE
G	GROUND	P1	PILOT LINE 1
L1	PHASE A-PHASE R	P2	PILOT LINE 2
L2	PHASE B-PHASE S	P3	PILOT LINE 3
L3	PHASE C-PHASE T		

BINDING EDGE

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TERMINAL 3 / TERMINAL 4
SHORE POWER
PIER 4 SHORE POWER CONTROL WIRING

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TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

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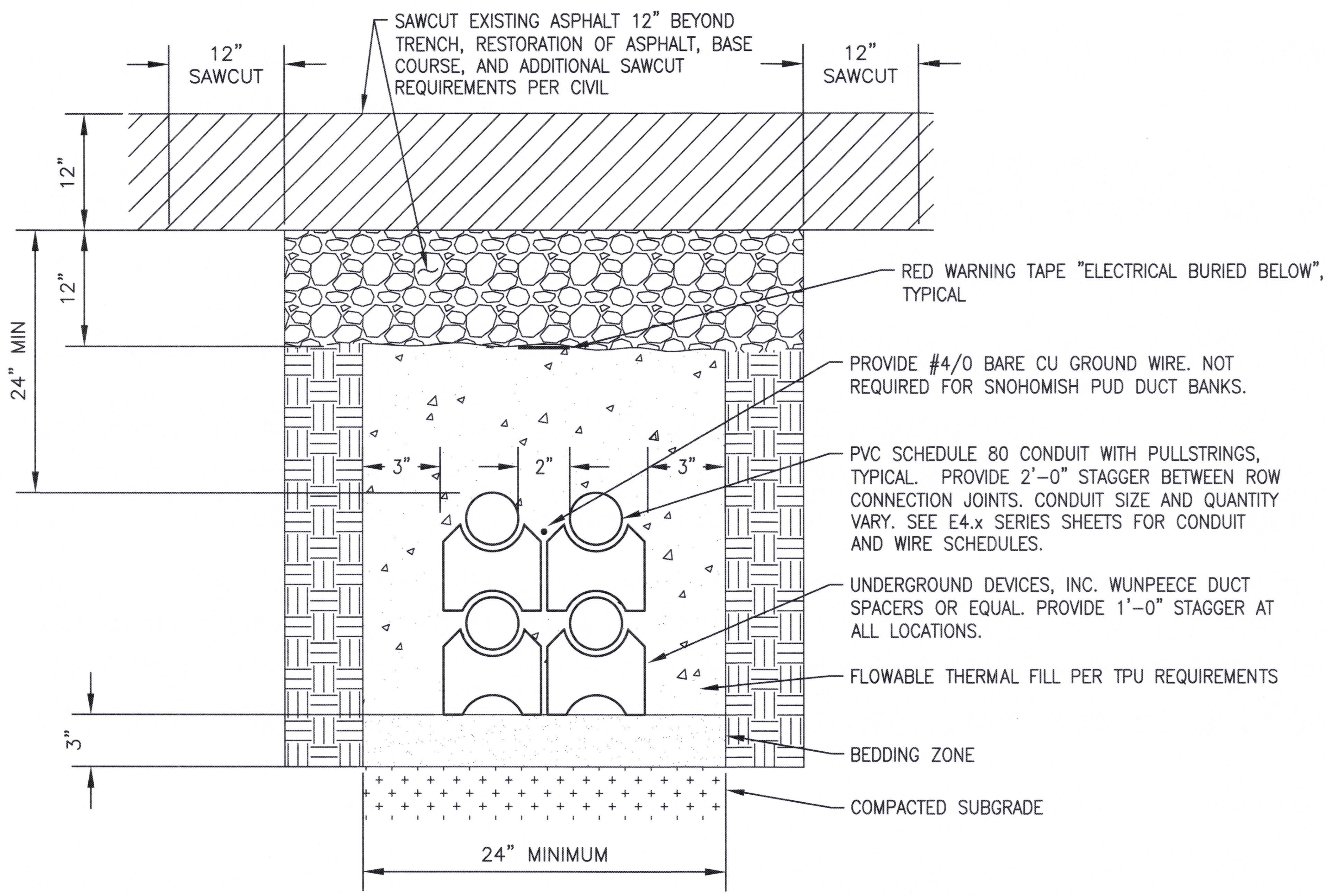
E6.3
60 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

GENERAL NOTES

1. SEE ELECTRICAL PLANS FOR NEW DUCT BANK LOCATIONS.

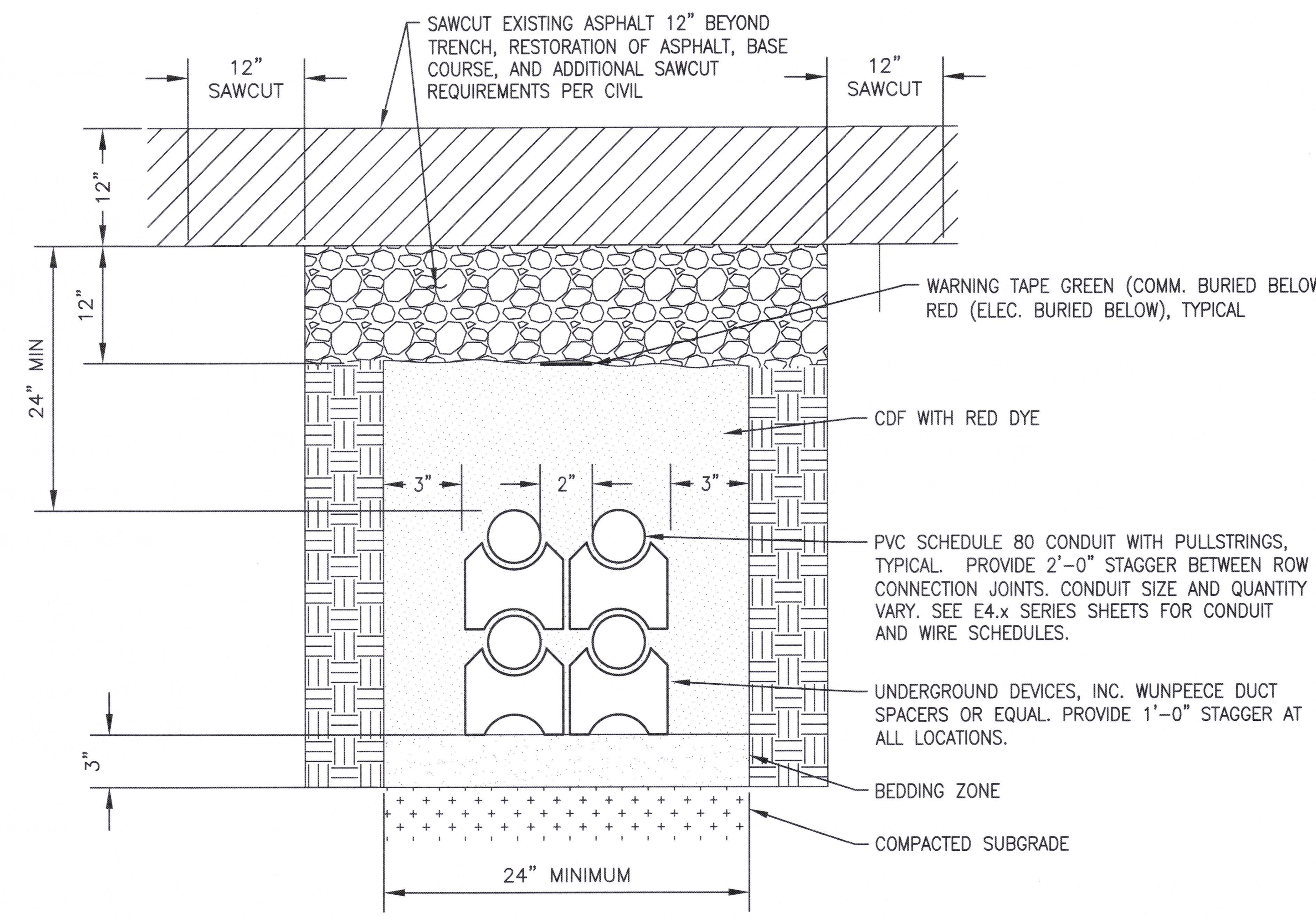


TYPICAL 5-15KV CONDUIT TRENCHING

NO SCALE

A

E1.2, E3.2, E3.3, E3.5

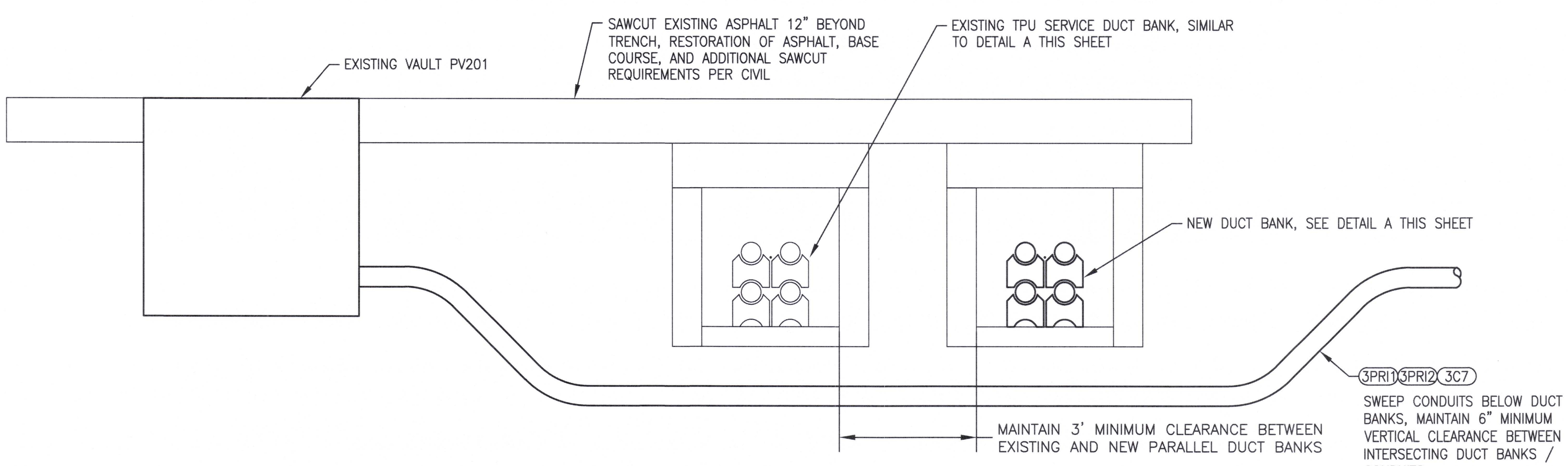


TYPICAL COMMUNICATIONS & 600V CONDUIT TRENCHING

NO SCALE

B

E3.2



CONDUITS CROSSING TPU SERVICE DUCT BANKS

NO SCALE, CROSSING SHORE POWER CIRCUIT DUCT BANKS SIMILAR

C

E3.2

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TERMINAL 3 / TERMINAL 4
SHORE POWER
DUCTBANK SECTIONS

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT: DRAWING SCALE: AS NOTED
PARCEL:

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E6.4
61 OF 83
CONT/CONS: 071357
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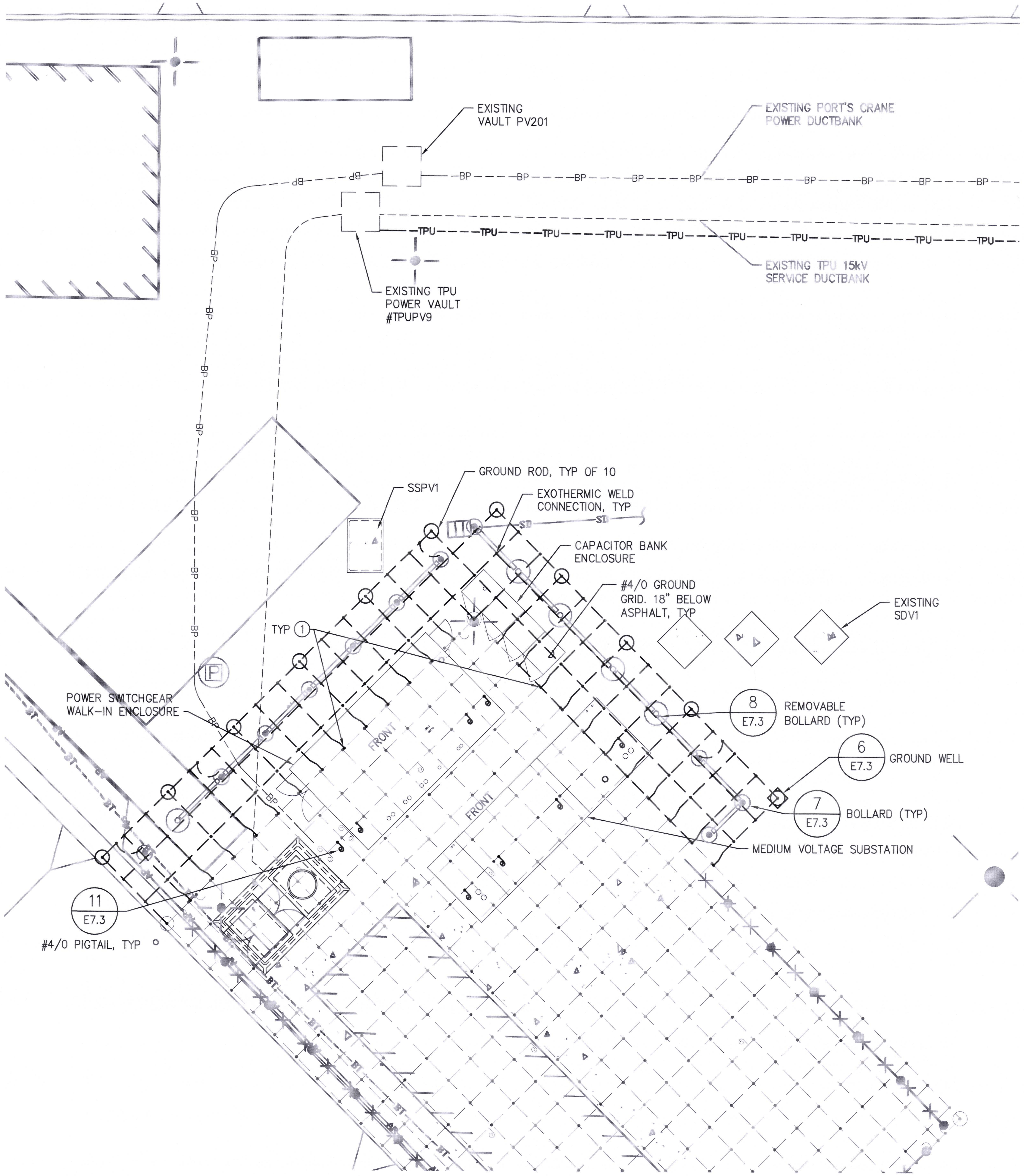
PHASE: BID SET

GENERAL NOTES

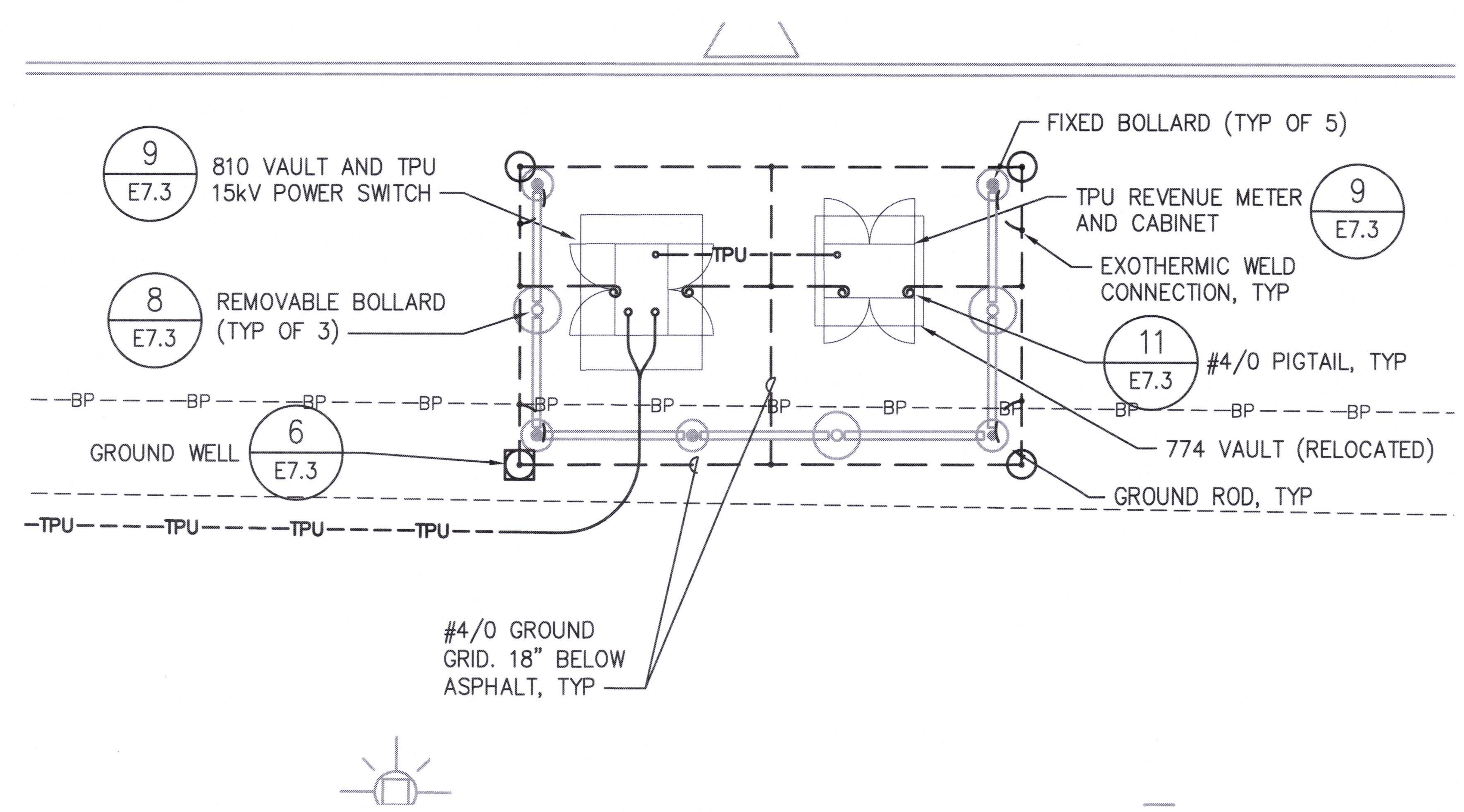
1. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.
2. EXPOSE EXISTING GROUND GRID UNDER SUBSTATION AND WALK-IN ENCLOSURE AND PROVIDE PIGTAILS FOR GROUND CONNECTIONS TO NEW EQUIPMENT.
3. SEE DWG E7.3 FOR GROUNDING INSTALLATION DETAILS.

KEY NOTES

(1) EXPOSE EXISTING GROUND GRID UNDER SUBSTATION AND CONNECT NEW GROUND GRID ALONG THESE LINES.



SUBSTATION GROUNDING PLAN - PIER 3 (1 / E3.2)



SERVICE GROUNDING PLAN - PIER 3 (2 / E3.3)

0 8 16
scale feet

PROJECT NORTH

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TERMINAL 3 / TERMINAL 4
SHORE POWER
ENLARGED ELECTRICAL PLAN
SUBSTATION - PIER 3 GROUNDING

TOWNSHIP:	RANGE:	SECTION:
DAT-HRZ:	VERT:	
PARCEL:	DRAWING SCALE: AS NOTED	

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E7.1
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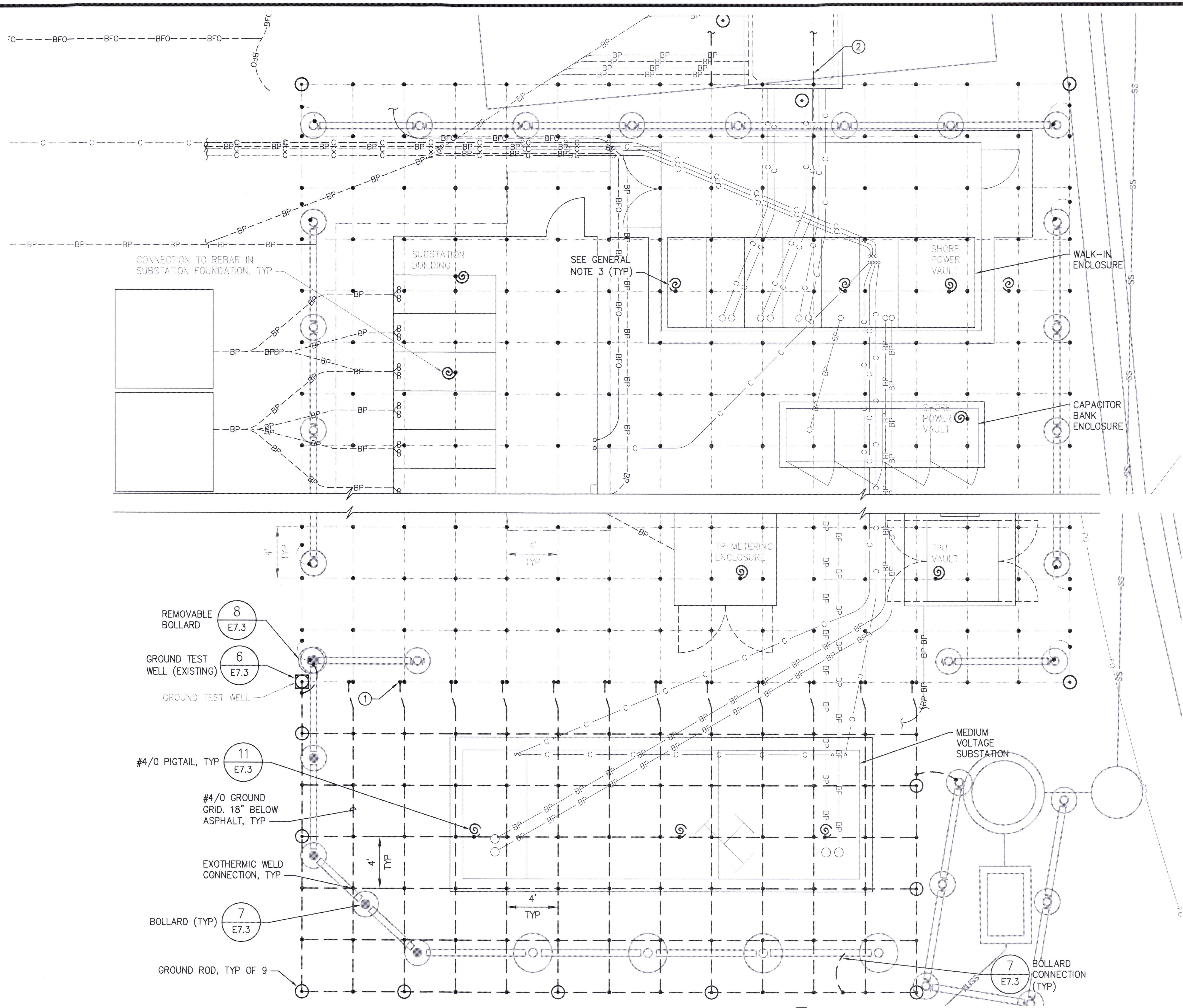
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET



SUBSTATION GROUNDING PLAN - PIER 4

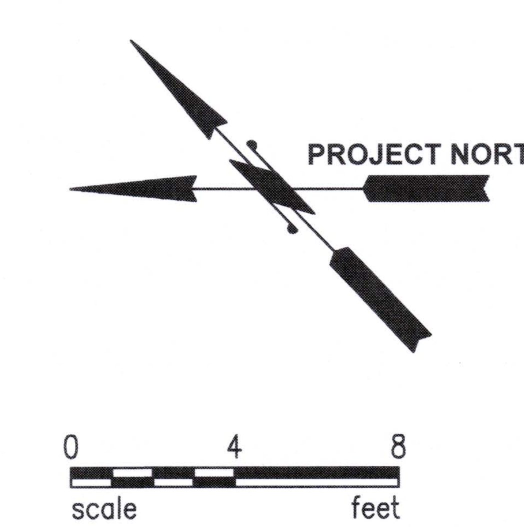
1 E3.6

GENERAL NOTES

1. ELECTRICAL UTILITY INFRASTRUCTURE SHOWN IS BASED ON HISTORICAL DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED.
2. EXPOSE EXISTING GROUND GRID UNDER SUBSTATION AND WALK-IN ENCLOSURE AND PROVIDE PIGTAILS FOR GROUND CONNECTIONS TO NEW EQUIPMENT.
3. SEE DWG E7.3 FOR GROUNDING INSTALLATION DETAILS.

KEY NOTES

1. EXPOSE EXISTING GROUND GRID AND CONNECT NEW GROUND GRID ALONG THIS LINE.
2. EXTEND GROUND GRID TO RELOCATED VAULT.



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TERMINAL 3 / TERMINAL 4
SHORE POWER
ENLARGED ELECTRICAL PLAN
SUBSTATION - PIER 4 GROUNDING

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT: |
PARCEL: | DRAWING SCALE: AS NOTED

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CONT/CONS: 071357
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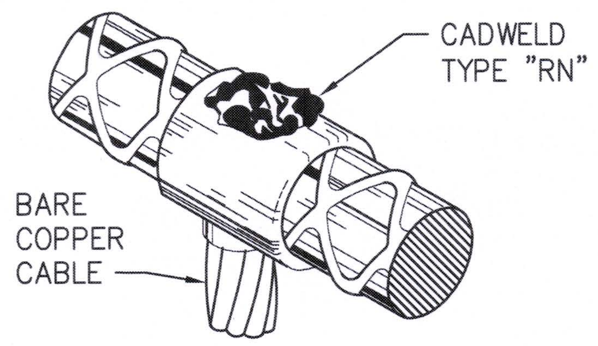
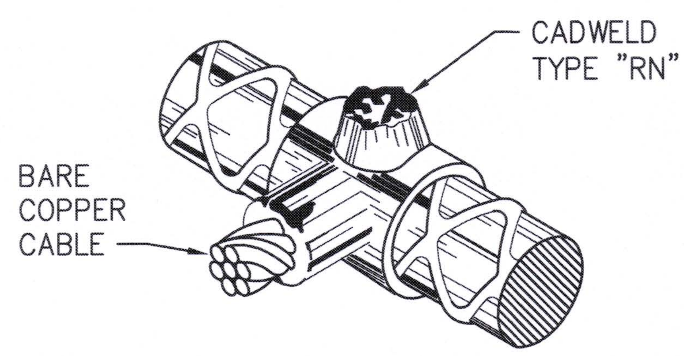
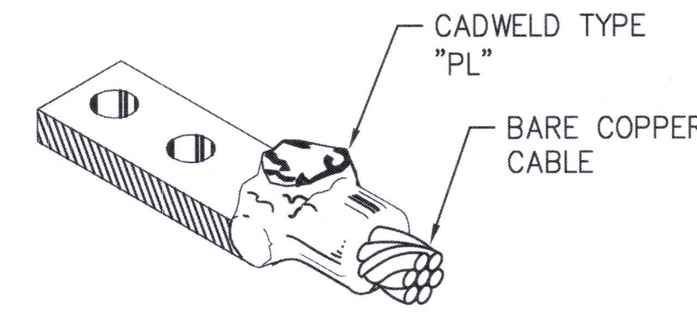


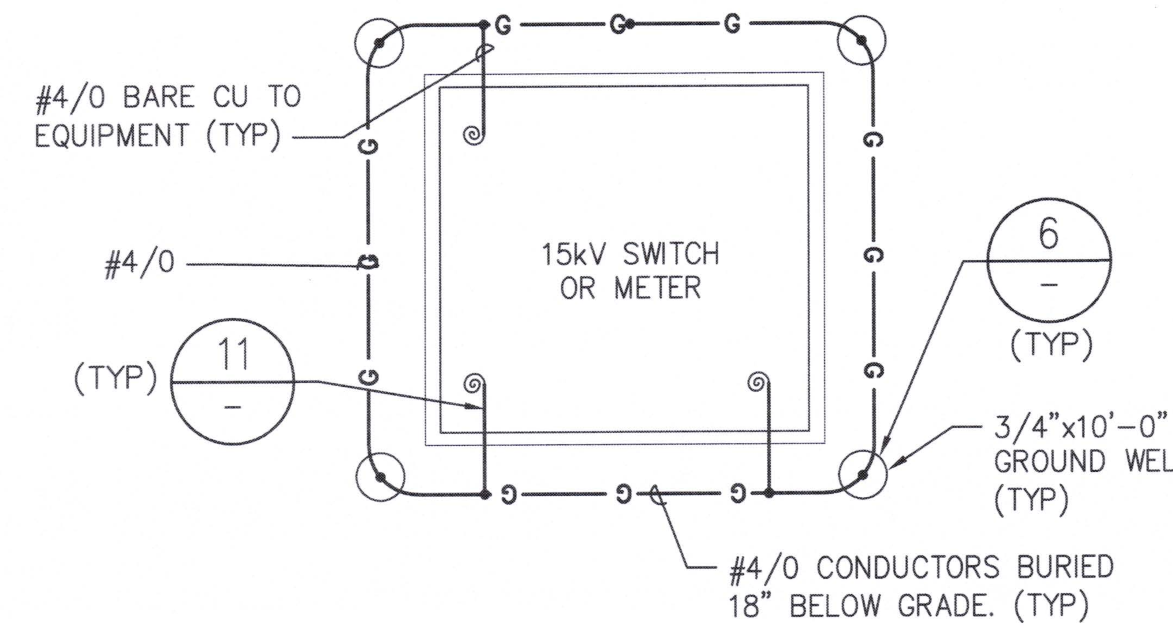
1 DETAIL
GROUND CABLE TO REBAR CONNECTION / VERTICAL
SCALE: NTS



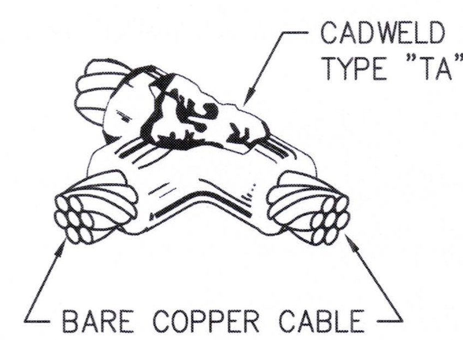
2 DETAIL
GROUND CABLE TO REBAR CONNECTION / HORIZONTAL
SCALE: NTS



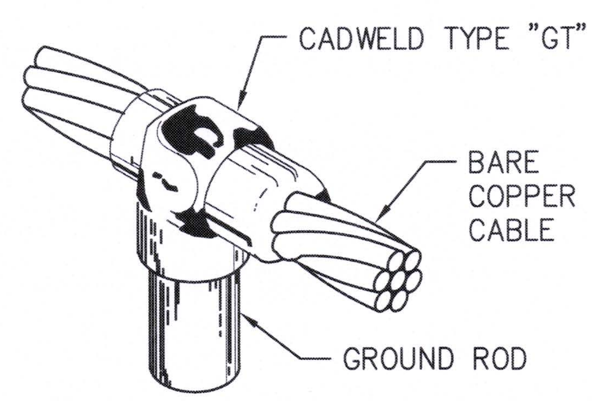
3 DETAIL
GROUND CABLE TO LUG 2-HOLE TERMINAL CONNECTION
SCALE: NTS



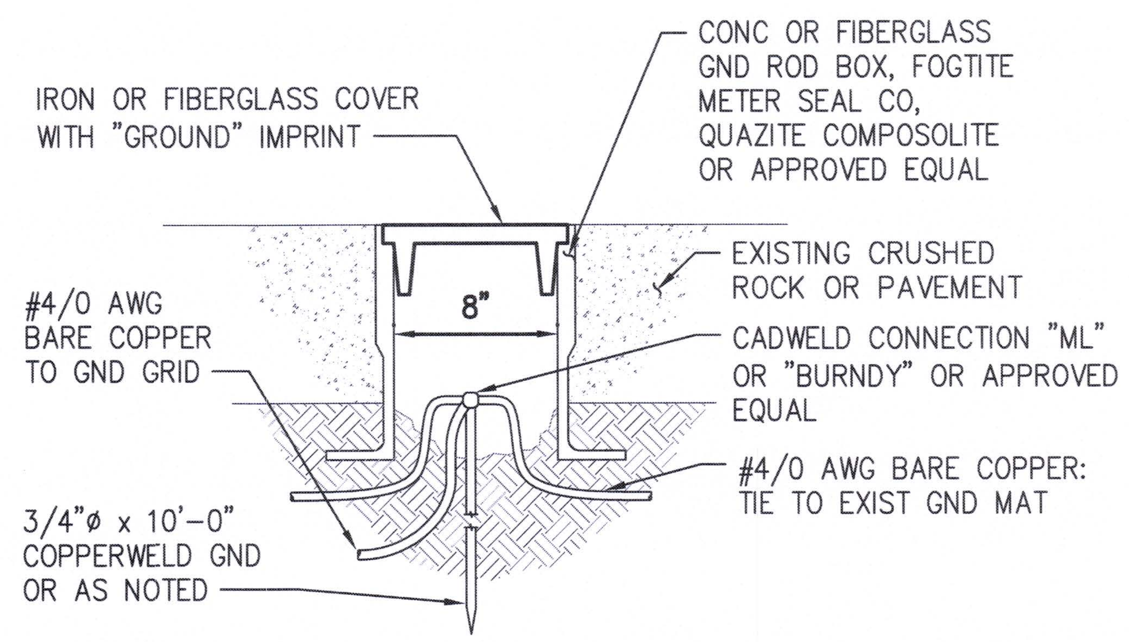
9 DETAIL E7.1
TYPICAL 15kV SWITCH OR METER GROUNDING PLAN
SCALE: NTS



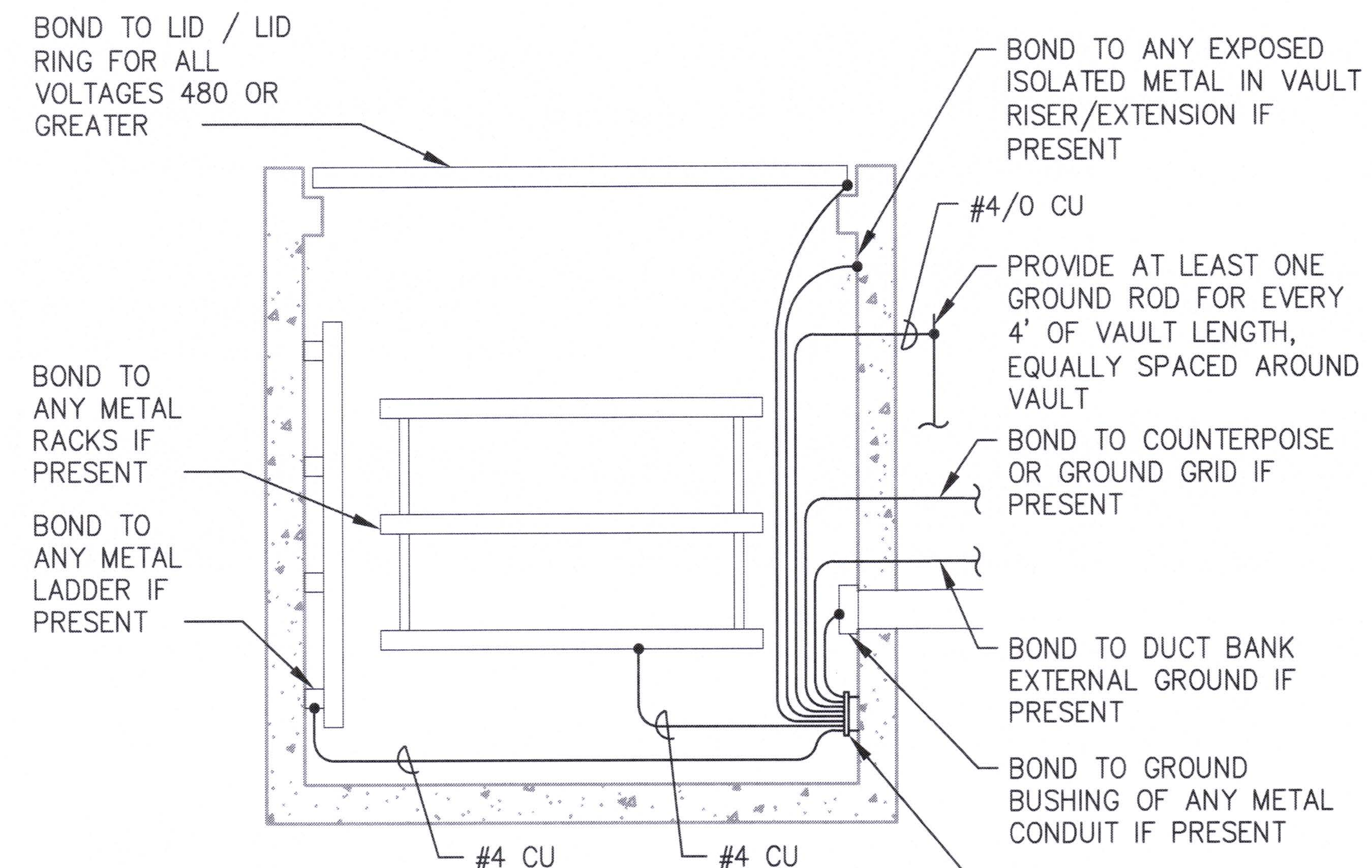
4 DETAIL
GROUND CABLE TEE CONNECTION
SCALE: NTS



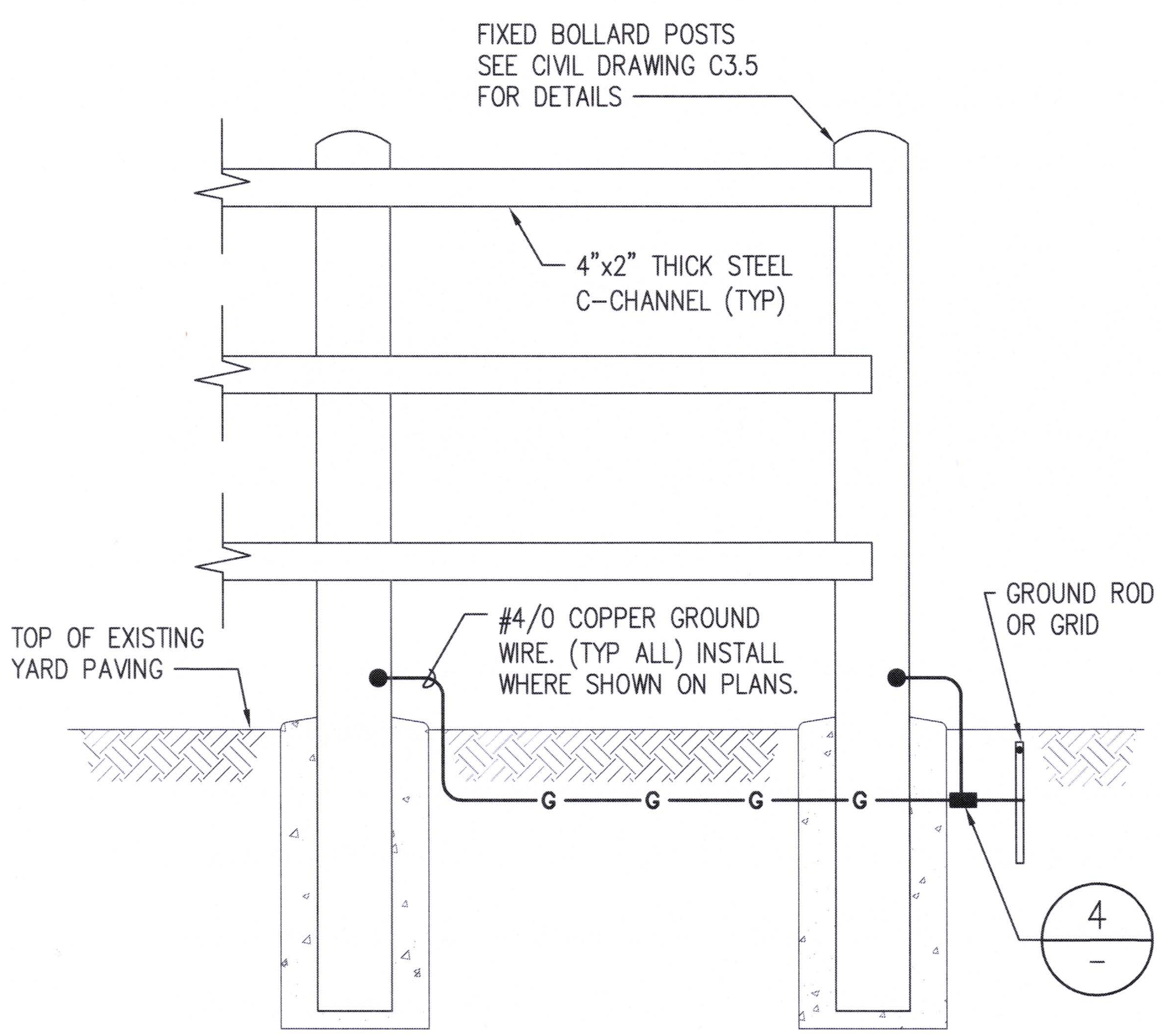
5 DETAIL
GROUND ROD CONNECTION
SCALE: NTS



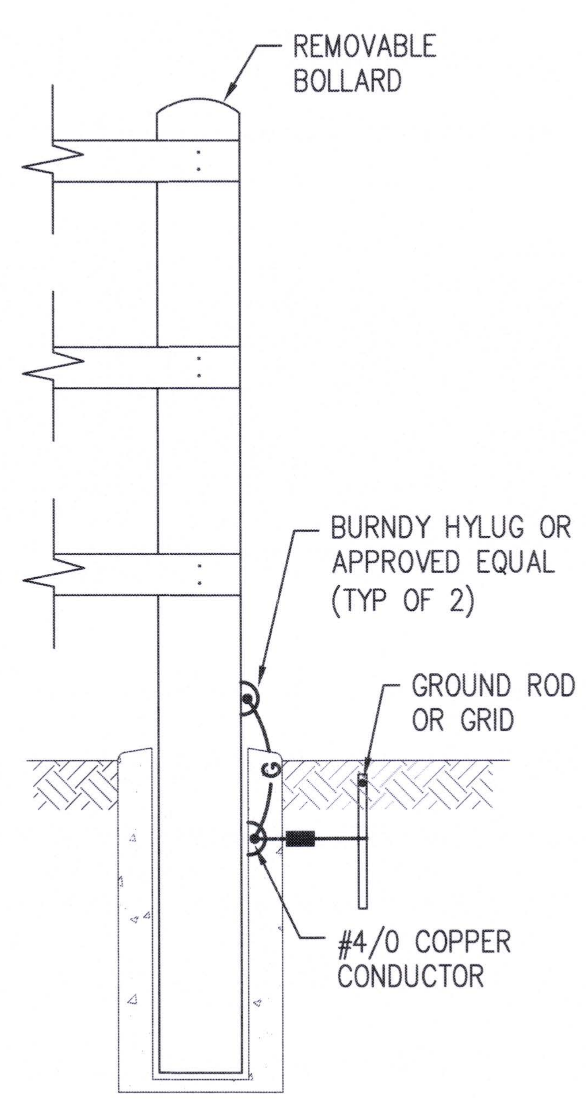
6 DETAIL E7.1,E7.2
GROUND WELL
SCALE: NTS



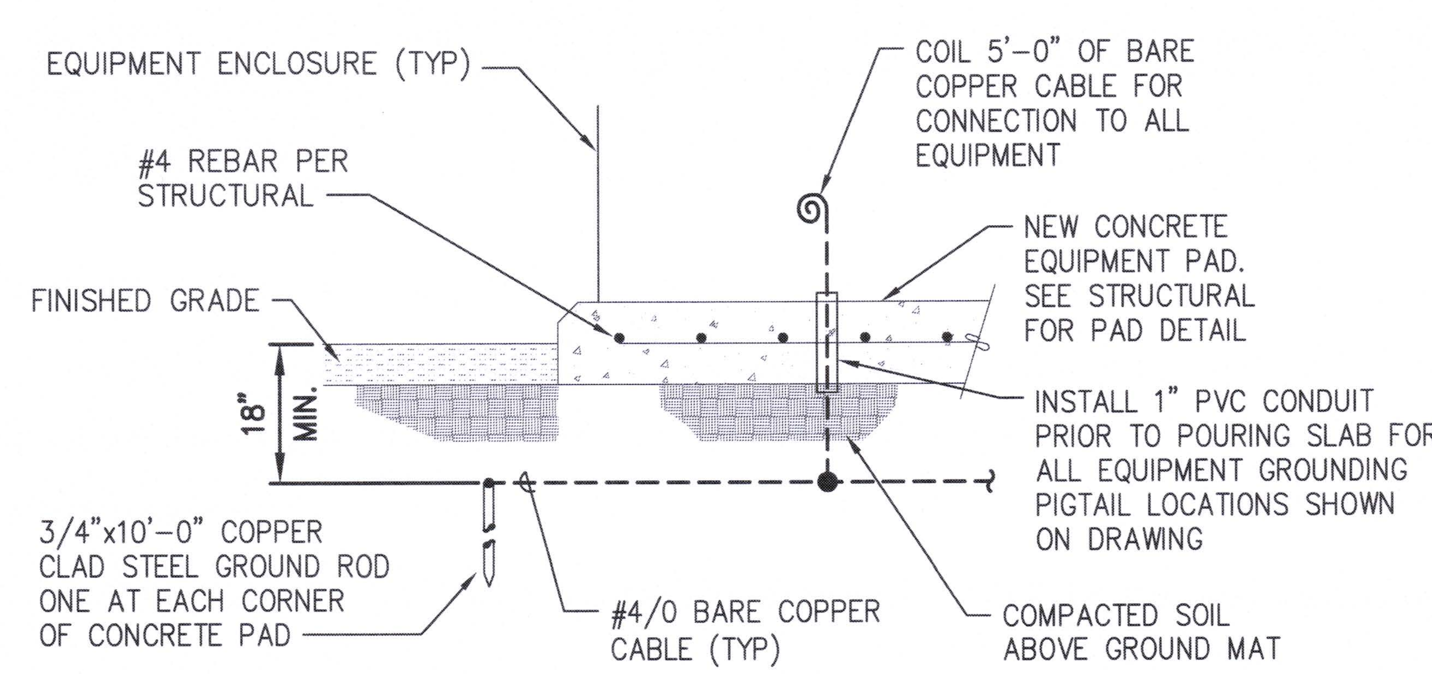
10 DETAIL
TYPICAL MV MANHOLE GROUNDING
SCALE: NTS



7 DETAIL E7.1,E7.2
TYPICAL BOLLARD WITH CHANNELS
SCALE: NTS



8 DETAIL E7.1,E7.2
TYPICAL REMOVABLE BOLLARD WITH CHANNELS
SCALE: NTS



11 DETAIL E7.1,E7.2
TYPICAL GROUND SLEEVE AND EQUIPMENT PIGTAIL
SCALE: NTS

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PRINTED BY: curtis Feb 02, 2022
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TERMINAL 3 / TERMINAL 4
SHORE POWER
GROUNDING INSTALLATION DETAILS

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED

6658
E7.3
64 OF 83

CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

BINDING EDGE

GENERAL

1. THESE NOTES CONTAIN GENERAL INFORMATION AND ARE NOT COMPLETE FOR CONSTRUCTION PURPOSES. CONTRACTOR SHALL VERIFY INFORMATION GIVEN HERE WITH SPECIFICATIONS AND OTHER DOCUMENTS AND BRING ANY CONFLICTS TO THE ATTENTION OF THE PORT BEFORE BEGINNING AFFECTED WORK. THE ENGINEER WILL RESOLVE ANY SUCH CONFLICT.
2. CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS, AND EXISTING CONDITIONS IN THE FIELD BEFORE PROCEEDING. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR FIELD CHANGES PRIOR TO INSTALLATION OR FABRICATION. IN CASE OF DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN DIRECTION FROM THE ENGINEER BEFORE PROCEEDING. NOTIFY THE ENGINEER IMMEDIATELY OF CONFLICTS OR EXCESSIVE VARIATIONS FROM INDICATED DIMENSIONS. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS--DO NOT SCALE DRAWINGS.
3. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. NO REINFORCING BARS IN EXISTING CONSTRUCTION SHALL BE CUT UNLESS DIRECTED TO BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

CODES AND STANDARDS

1. ALL METHODS AND MATERIALS SHALL CONFORM TO THE INTERNATIONAL BUILDING CODE, 2018 EDITION, AS AMENDED AND ADOPTED BY THE CITY OF TACOMA.
2. REINFORCED CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
3. STRUCTURAL AND MISCELLANEOUS STEEL FABRICATION AND ERECTION SHALL CONFORM TO THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" 2016.
4. WELDING OF STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE AWS D1.1, 2010.

DESIGN LOADS

DEAD LOADS:
SELF WEIGHT OF ALL MATERIAL
ELECTRICAL EQUIPMENT

TRANSFORMER	40 KIPS
PRIMARY BREAKER	3.5 KIPS
SECONDARY BREAKER	4 KIPS
CAPACITOR BANK	8 KIPS

LIVE LOADS:
40 PSF PEDESTRIAN LOAD ON EQUIPMENT SLAB
SEE G1.2 FOR VAULT LOAD CRITERIA
2 KIP IMPACT LOAD ON DEBRIS GUARD
2 KIP CONDUIT PULLING LOAD

SEISMIC LOADS:
SITE CLASS D

SEISMIC DESIGN CATEGORY D
COMPONENT IMPORTANCE FACTOR I_p =1.5

Ss = 1.354g   Sds = 0.903g
S1 = 0.467g   SD1 = 0.311g

SOIL LOADS:

ALLOWABLE BEARING PRESSURE	1500 PSF
ALLOWABLE PASSIVE RESISTANCE	250 PCF
SLIDING FRICTION COEFFICIENT	0.35

GEOTECHNICAL:

SEE "GEOTECHNICAL ENGINEERING REPORT: PORT OF TACOMA TERMINAL 3 AND TERMINAL 4 SHORE POWER UPGRADES" BY GEOENGINEERS FOR COMPLETE INFORMATION. EARTHWORK MATERIAL, BACK FILL, COMPACTION, AND STRUCTURAL FILL SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.

REINFORCED CONCRETE

1. CONCRETE MIXTURES SHALL CONFORM TO THE MOST RESTRICTIVE REQUIREMENTS OF ACI 318-14 FOR EXPOSURE CLASSES F2, S1, W1, AND C2.
2. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4 IN.

REINFORCED CONCRETE (CONT)

3. REINFORCING STEEL

A. ALL REINFORCING STEEL SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A 615-GRADE 60.

B. LAP ALL REINFORCING BARS AS NOTED ON THE DRAWINGS. DEFORMED BAR LAP SPLICES SHALL CONFORM TO THE FOLLOWING, UNLESS OTHERWISE SHOWN.

SCHEDULE OF MINIMUM LAP SPLICE LENGTHS

BAR SIZE	f'c = 5000 PSI	
	TOP BARS	OTHER BARS
#4	2'-5"	1'-10"
#5	3'-0"	2'-4"
#6	3'-7"	2'-9"
#7	5'-3"	4'-1"
#8	6'-0"	4'-7"
#9	6'-9"	5'-3"
#10	7'-7"	5'-10"
#11	8'-5"	6'-6"

NOTES:
1. LENGTHS ARE BASED ON CLASS "B", CASE 1 SPLICES (MAX OF 50% OF BARS 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. STAGGER ALL LAP SPLICES IN ADJACENT BARS BY ONE LAP LENGTH +1'-0" MINIMUM.
4. NO MORE THAN 50% OF THE REINFORCING BARS IN ANY LAYER SHALL BE SPLICED AT ONE LOCATION.

C. REINFORCING SHALL BE SUPPORTED AS SPECIFIED BY THE PROJECT SPECIFICATIONS AND THE CRSI "MANUAL OF STANDARD PRACTICE," (MSP). REINFORCING STEL SHALL BE DETAILED IN ACCORDANCE WITH "ACI DETAILING MANUAL," ACI SP-66.

D. CLEAR COVER TO REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

CAST AGAINST EARTH:	3"
ALL OTHER:	2"

E. REINFORCEMENT AT DISCONTINUITIES AND CORNERS SHALL END WITH STANDARD 90° HOOKS AS NOTED IN ACCORDANCE WITH ACI SP-66.

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

4. CAST-IN-PLACE CONCRETE

	MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS
A. ELECTRICAL EQUIPMENT PAD	5000 PSI
B. NEW SHORE POWER VAULT	5000 PSI

STAINLESS STEEL

1. ALL METALS BELOW THE WHARF, UNLESS OTHERWISE NOTED, SHALL BE TYPE 316L STAINLESS STEEL.
2. ALL MISCELLANEOUS STAINLESS STEEL SHAPES AND PLATES SHALL CONFORM TO THE FOLLOWING AND SHALL MEET MINIMUM Fy = 30 KSI, Fu = 75 KSI.

PLATES: ASTM A 240, TYPE 316L
ANGLES: A 276, TYPE 316L
BOLTS, NUTS, COUPLING NUTS AND WASHERS: ASTM F 593 AND F 594, TYPE 316L
THREADED ROD: ASTM F 593 TYPE 316L
WELDED HEADED STUDS: ASTM A 276 OR A 493
HOLLOW STRUCTURAL STEEL TUBE (HSS): ASTM A 554

STAINLESS STEEL THREADED ROD COUPLING NUTS SHALL BE CAPABLE OF DEVELOPING THE YIELD AND TENSILE STRENGTH OF THE CONNECTED THREADED COMPONENTS.

3. STAINLESS STEEL STRUT CHANNELS SHALL BE BY UNISTRUT OR EQUAL. SECTION AND MATERIAL PROPERTIES SHALL BE EQUAL TO OR GREATER THAN THOSE SHOWN ON THESE DRAWINGS.

MISCELLANEOUS STEEL

1. ALL MISCELLANEOUS STEEL SHAPES AND PLATES, EXCEPT AS NOTED BELOW, SHALL CONFORM TO ASTM A 36.
2. ALL CARBON STEEL WELDED HEADED STUDS SHALL CONFORM TO ASTM A 108.
3. ALL CARBON STEEL SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SPECIFICATIONS.
4. HIGH STRENGTH BOLTS FOR STEEL-TO-STEEL CONNECTIONS SHALL BE ASTM A325.
5. ALL NUTS SHALL BE ASTM A563, UNLESS NOTED OTHERWISE.
6. ALL WASHERS SHALL BE ASTM F436, UNLESS NOTED OTHERWISE.

WELDING

1. ALL WELDING SHALL BE PERFORMED BY WELDERS QUALIFIED FOR THE WELD AND POSITION SHOWN IN ACCORDANCE WITH AWS.
2. ALL WELDS SHALL BE PERFORMED WITH PROCEDURES PREQUALIFIED OR QUALIFIED IN ACCORDANCE WITH AWS D1.1, D1.4 AD D1.6.
3. THE WELDS SHOWN ARE FOR THE FINAL CONNECTIONS. FIELD WELD SYMBOLS ARE SHOWN WHERE FIELD WELDS ARE REQUIRED BY THE STRUCTURAL DESIGN. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF A WELD SHOULD BE SHOP- OR FIELD-WELDED IN ORDER TO FACILITATE THE STRUCTURAL STEEL ERECTION.
4. WELDING ELECTRODE CLASSIFICATION FOR CARBON STEEL SHALL BE E70XX AND SHALL BE "LOW HYDROGEN" ELECTRODES.
5. WELDING ELECTRODE CLASSIFICATION FOR STAINLESS STEEL SHALL BE E316L-XX.
6. THE CONTRACTOR SHALL NOT WELD DURING SHIP REFUELING OPERATIONS AND SHALL COMPLY WITH ALL FIRE REGULATIONS DURING WELDING OPERATIONS WHERE FLAMMABLE ELEMENTS EXIST.

POST-INSTALLED ANCHORS AND DOWELS

1. USE OF DRILLED ADHESIVE CONCRETE ANCHORS, UNDERCUT ANCHORS, OR DOWELS WHERE NOT SPECIFIED IN THE DOCUMENTS, SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.
2. ADHESIVE ANCHORS, UNDERCUT ANCHORS, AND DOWELS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATION. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION ANCHORS, UNDERCUT ANCHORS, ADHESIVE ANCHORS, AND DOWELS.
3. ACCEPTABLE ADHESIVES ARE HILTI HIT-RE 500 V3, SIMPSON SET-XP OR APPROVED EQUAL. ICBO OR ICC REPORTS SHALL BE SUBMITTED FOR ALL ADHESIVE ANCHOR AND DOWEL PRODUCTS.
4. ACCEPTABLE UNDERCUT ANCHORS ARE HILTI HDA-PR OR APPROVED EQUAL. ICBO OR ICC REPORTS SHALL BE SUBMITTED FOR ALL UNDERCUT ANCHOR PRODUCTS.
5. ALL POST-INSTALLED DOWELS SHALL BE ASTM A615 REINFORCING BAR.
6. HOLES FOR POST-INSTALLED ANCHORS AND DOWELS SHALL BE DRILLED BY HAMMER DRILL ONLY - CORE DRILLING NOT ALLOWED.
7. CONTRACTOR SHALL FIELD LOCATE EXISTING SURFACE REINFORCING USING NDT METHODS, MARK LOCATIONS OF SURFACE REINFORCING, AND OBTAIN PORT APPROVAL PRIOR TO DRILLING. EXISTING REINFORCING SHALL NOT BE CUT WITHOUT PRIOR APPROVAL FROM THE PORT.

UNDER WHARF CONDUIT SUPPORT SYSTEM

1. SPACING OF CONDUIT SUPPORTS AND BRACING SHOWN ON THESE PLANS IS BASED ON RECOMMENDATIONS FROM FRP CONDUIT SUPPLIER. FOR 5" EXTRA HEAVY WALL (EX) CONDUIT. CONDUIT SUPPORT LAYOUT MAY REQUIRE REVISION IF AN ALTERNATE CONDUIT IS PROVIDED, AT NO ADDITIONAL COST TO THE PORT.
2. THE CONTRACTOR SHALL VERIFY THE HEIGHTS OF THE CONDUIT SUPPORTS TO PROVIDE A LEVEL PLANE PRIOR TO CONDUIT INSTALLATION.
3. SUBSEQUENT TO CONDUIT INSTALLATION AND CABLE PULLING, THE CONTRACTOR SHALL INSPECT THE CONDUIT SUPPORTS FOR STABILITY AND CORRECT HEIGHT. THE CONDUITS SHALL REST ON THE CROSS BEAMS OF EACH CONDUIT SUPPORT WITH ZERO VERTICAL GAP BETWEEN THE CONDUIT AND CROSS BEAM. IF ANY OF THE CONDUITS ARE NOT RESTING ON THE CROSS BEAMS, THE CONTRACTOR SHALL ADJUST THE HEIGHT OF THE CONDUIT SUPPORT ACCORDINGLY TO PROVIDE SUPPORT FOR THE CONDUITS.

SPECIAL INSPECTION SCHEDULE
ESTABLISHED PER IBC 2018 CHAPTER 17

ITEMS	CONTINUOUS INSPECTION	PERIODIC INSPECTION	COMMENTS
CONCRETE			
REINFORCING PLACEMENT		X	
ANCHOR BOLTS & INSERTS		X	
ADHESIVE ANCHOR PLACEMENT		X	REF. NOTE 3
MECHANICAL ANCHOR PLACEMENT		X	REF. NOTE 3
PREPARATION OF TEST SPECIMENS	X		
CONCRETE PLACEMENT	X		
CURING		X	
STRUCTURAL STEEL			
SINGLE PASS FILLET WELDS < = 5/16"		X	SEE NOTE 5
PARTIAL/COMPLETE PENETRATION WELD	X		
OTHER WELDING			
WELDING OF ANCHORS AND STUDS		X	

SPECIAL INSPECTION SCHEDULE NOTES

1. THE ITEMS CHECKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO PROJECT SPECIFICATIONS, THE STRUCTURAL NOTES AND THE NOTES BELOW. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ENGINEER. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
2. CONTINUOUS SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON THE SITE AT ALL TIMES OBSERVING THE WORK REQUIRING SPECIAL INSPECTION (IBC 1702). PERIODIC SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON SITE AT TIME INTERVALS NECESSARY TO CONFIRM THAT ALL WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE.
3. INSPECTION OF DRILLED CONCRETE ANCHORS, INCLUDING EXPANSION, UNDERCUT AND ADHESIVE ANCHORS, SHALL INCLUDE VISUAL VERIFICATION OF DRILLED HOLE DEPTH, SPACING, EDGE DISTANCES AND HOLE CLEANING. FOR ADHESIVE ANCHORS, ADHESIVE INSTALLATION SHALL BE OBSERVED AND PRODUCT SPECIFICATION AND PREPARATION SHALL BE VERIFIED.
4. THE PORT WILL EMPLOY AND PAY FOR SPECIAL INSPECTION & TESTING SERVICES TO ENSURE COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
5. ALL WELDS SHALL BE VISUALLY INSPECTED.

STRUCTURAL DRAWING ABBREVIATIONS

ADD'L	ADDITIONAL	K	KIP (1,000 LBS)
B/	BOTTOM OF	KSF	KIPS PER SQ. FT.
BOT	BOTTOM	KSI	KIPS PER SQ. INCH
CC	CENTER TO CENTER	LF	LINEAL FOOT
CL OR ℄	CENTERLINE	L	LENGTH
CLR	CLEAR	MAX	MAXIMUM
CONC	CONCRETE	MECH	MECHANICAL
CONN	CONNECTION	MIN	MINIMUM
CONST	CONSTRUCTION	MISC	MISCELLANEOUS
CONT	CONTINUOUS	NDT	NON DESTRUCTIVE TESTING
CONTR	CONTRACTOR	NTS	NOT TO SCALE
CTR	CENTER	OC	ON CENTER
DET	DETAIL	PL OR ℘	PLATE
DIA	DIAMETER	PSI	POUNDS PER SQ. IN.
DIAG	DIAGONAL	PSF	POUNDS PER SQ. FT.
DIM	DIMENSION	R	RADIUS
DWG	DRAWING	REQ'D	REQUIRED
EA	EACH	SECT	SECTION
EF	EACH FACE	SHT	SHEET
EL	ELEVATION	SIM	SIMILAR
EMBED	EMBEDMENT	SS	STAINLESS STEEL
EQ	EQUAL	STL	STEEL
EX, EXIST	EXISTING	STRUCT	STRUCTURAL
FT	FEET	SYM	SYMMETRICAL
GALV	GALVANIZED	T/	TOP OF
GEN	GENERAL	T&B	TOP AND BOTTOM
HORIZ	HORIZONTAL	TR	THREADED ROD
HSS	HOLLOW STRUCTURAL SECTIONS	TYP	TYPICAL
		UNO	UNLESS NOTED OTHERWISE
IBC	INTERNATIONAL BUILDING CODE	VERT	VERTICAL
		W/	WITH
ID	INSIDE DIAMETER	WHS	WELDED HEADED STUD
IN	INCH	W/O	WITHOUT

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DIRECTOR ENG. DATE 2/1/22
TAH 02/02/2022 CHECKED BY DATE
PEY 02/02/2022 PROJ. ENGR DATE
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TERMINAL 3 / TERMINAL 4
SHORE POWER
STRUCTURAL NOTES

TOWNSHIP:	RANGE:	SECTION:
DAT-HRZ:	VERT:	
PARCEL:	DRAWING SCALE: AS NOTED	

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S1.1
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CONT/CONS: 071357
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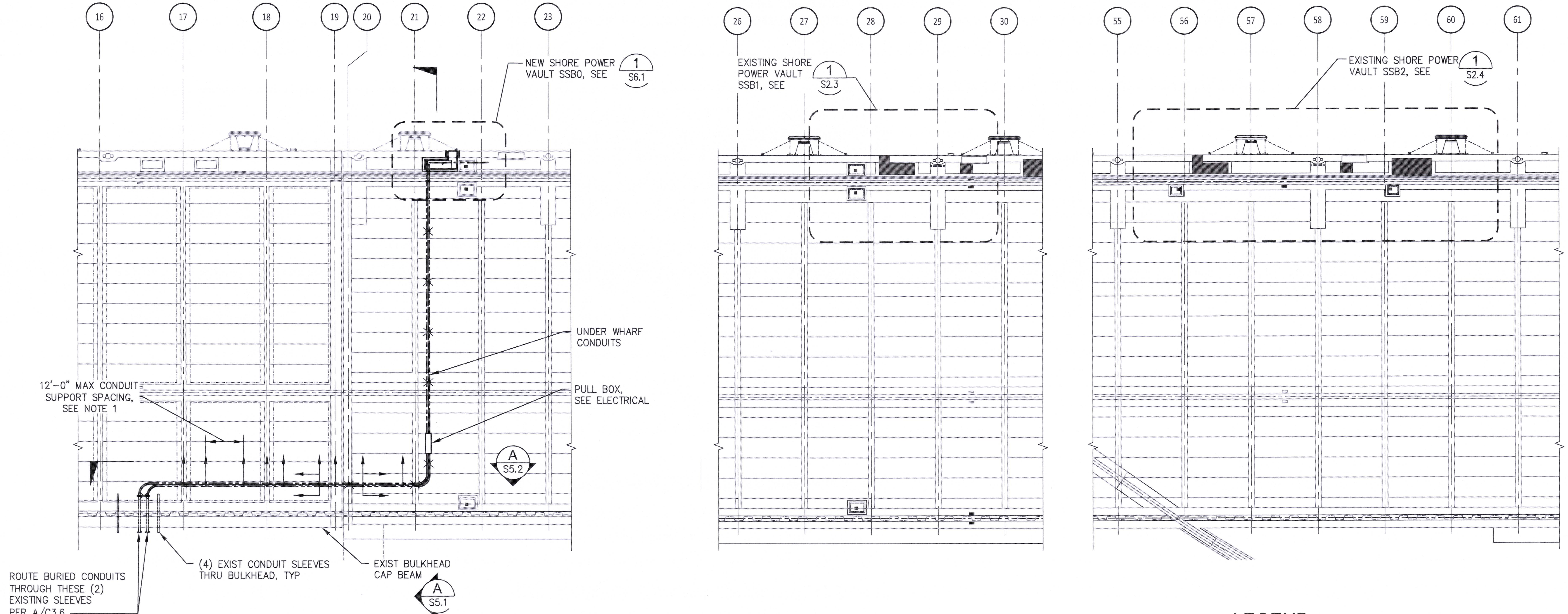

PLAN - SHORE POWER VAULTS SSB0, SSB1 AND SSB2 ON PIER 3

SCALE: 1/16" = 1'–0"

NOTE

1. CONDUIT SUPPORT BRACES SHALL BE PROVIDED AT APPROXIMATE LOCATIONS SHOWN. CONTRACTOR SHALL DETERMINE FINAL LOCATION OF EACH ELEMENT TO AVOID CONFLICTS BETWEEN ANCHOR BOLTS AND EXISTING REINFORCING, AND TO MAINTAIN MAXIMUM SPACING.
2. SEE E2.1, E2.8 AND E4.1 FOR CONDUIT SIZE QUANTITY AND INSTALLATION DETAILS.

LEGEND

- UNISTRUT SUPPORT PER B/S5.1
- INDICATES TRANSVERSE BRACE B/S5.2
- INDICATES LONGITUDINAL BRACE E/S5.3
- EXIST BOLLARD
- EXIST CRANE TIE DOWN VAULT
- EXIST FENDER
- EXIST BULKHEAD WALL
- EXIST LADDER

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TERMINAL 3 / TERMINAL 4
SHORE POWER
PLAN - SHORE POWER VAULTS SSB0, SSB1, AND SSB2 ON PIER 3

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

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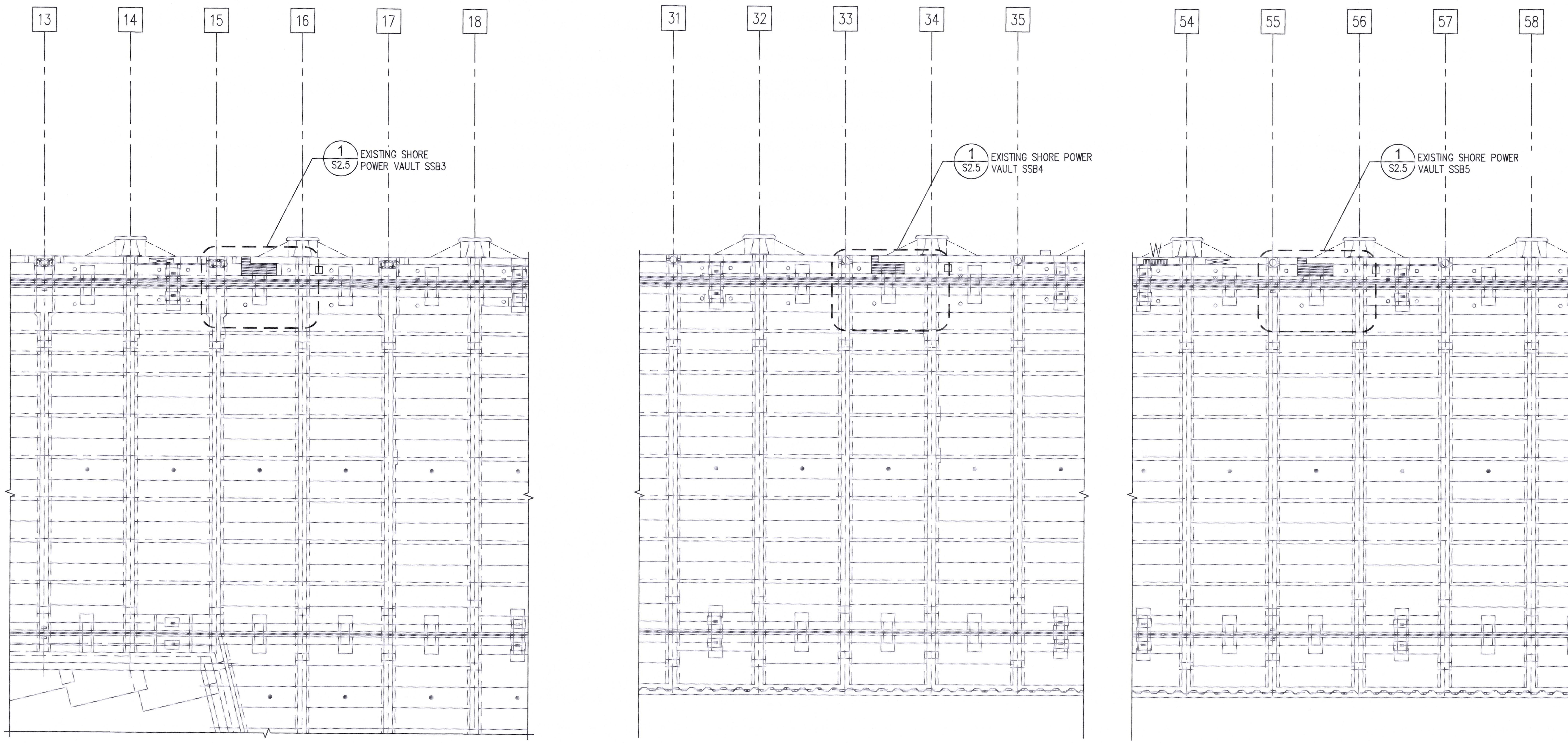
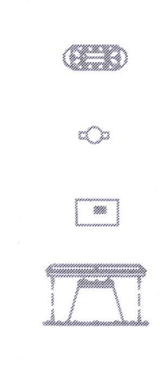


PLAN - SHORE POWER VAULTS SSB3, SSB4, AND SSB5 ON PIER 4

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

LEGEND



EXIST 200 TON BOLLARD

EXIST 100 TON BOLLARD

EXIST CRANE TIE DOWN VAULT

EXIST FENDER

EXIST BULKHEAD WALL

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TERMINAL 3 / TERMINAL 4

SHORE POWER

PLAN - SHORE POWER VAULTS SSB3, SSB4 AND SSB5 ON PIER 4

TOWNSHIP:	RANGE:	SECTION:
DAT-HRZ:	VERT:	
PARCEL:	DRAWING SCALE: AS NOTED	

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S2.2

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M. ID: 201100.01

PHASE: BID SET

BINDING EDGE

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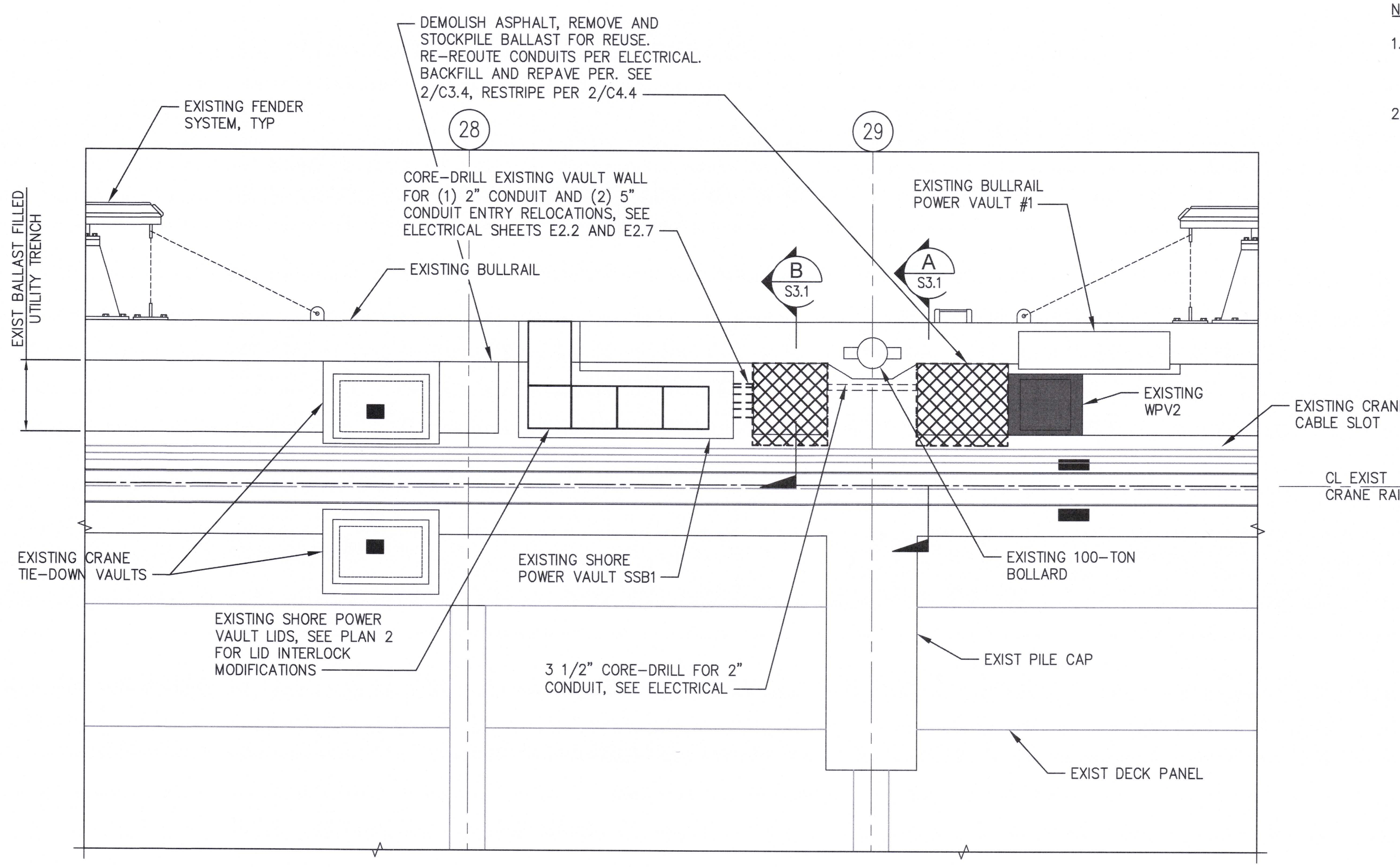
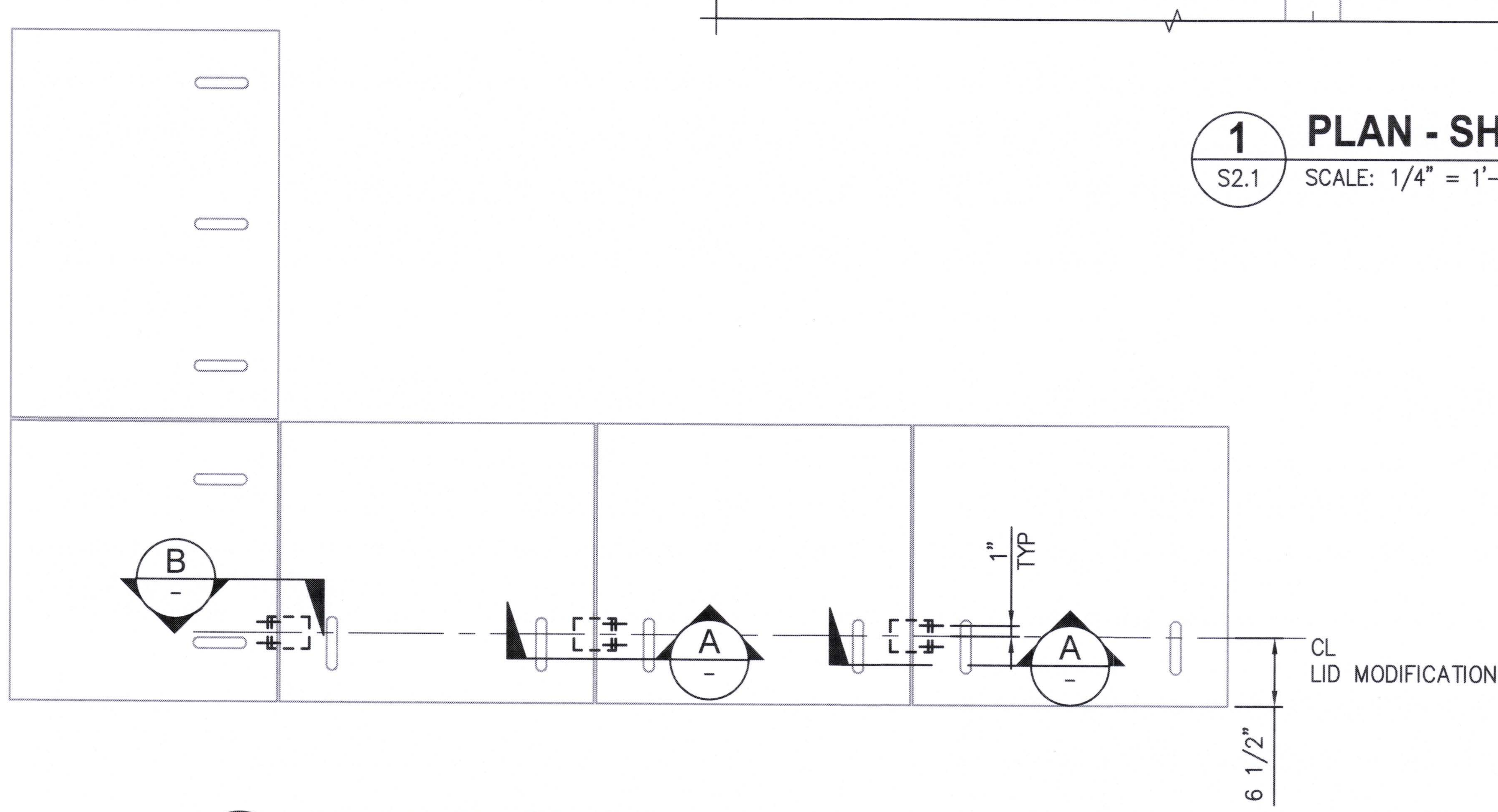
BINDING EDGE

NOTES:

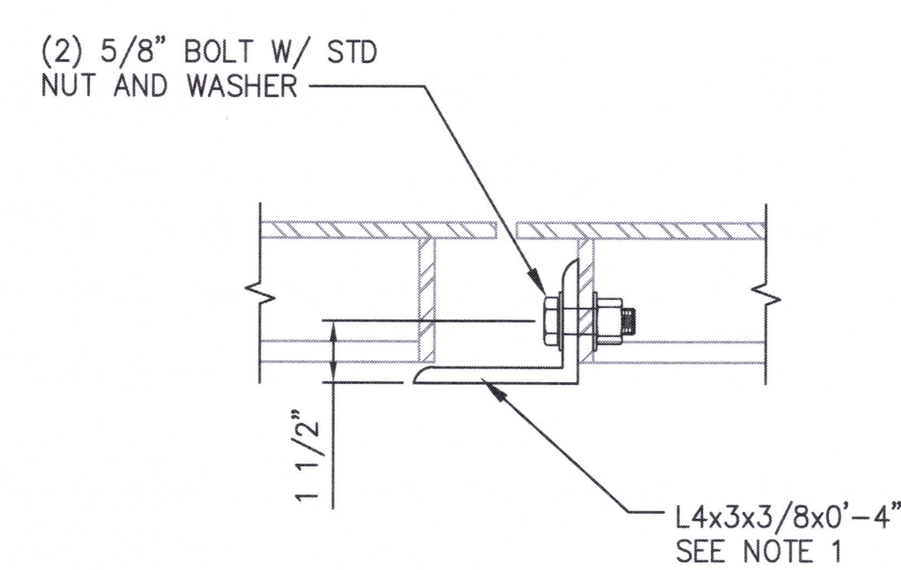
1. POSITION ANGLE VERTICALLY SUCH THAT ADJACENT LID HAS 1/8" CLEARANCE FROM TOP FACE OF ANGLE TO BOTTOM OF STIFFENER.
2. SEE SHEET G2.2 PHASING AND CONSTRAINTS, AND SPECIFICATIONS FOR REQUIREMENTS FOR PROTECTING AND COVERING OPENINGS IN PAVEMENT TO MAINTAIN VESSEL BERTHING.



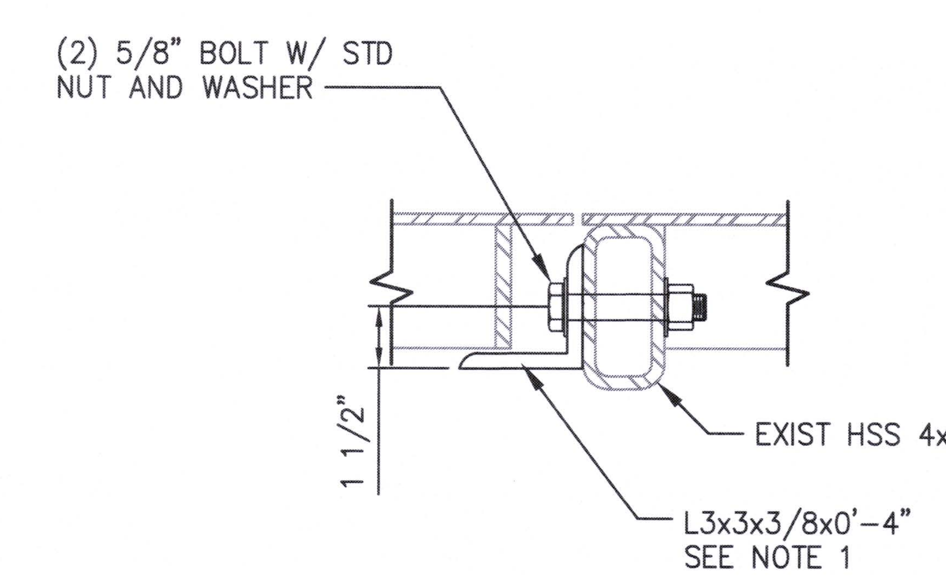
1 PLAN - SHORE POWER VAULT SSB1 ON PIER 3
S2.1 SCALE: 1/4" = 1'-0"



2 PLAN - EXISTING VAULT LIDS
SCALE: 3" = 1'-0"



A SECTION - EXISTING LIDS MODIFICATION
SCALE: 3" = 1'-0"



B SECTION - EXISTING LIDS MODIFICATION
SCALE: 3" = 1'-0"

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TERMINAL 3 / TERMINAL 4
SHORE POWER
PLAN - SHORE POWER VAULT SSB1 ON PIER 3
TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

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S2.3
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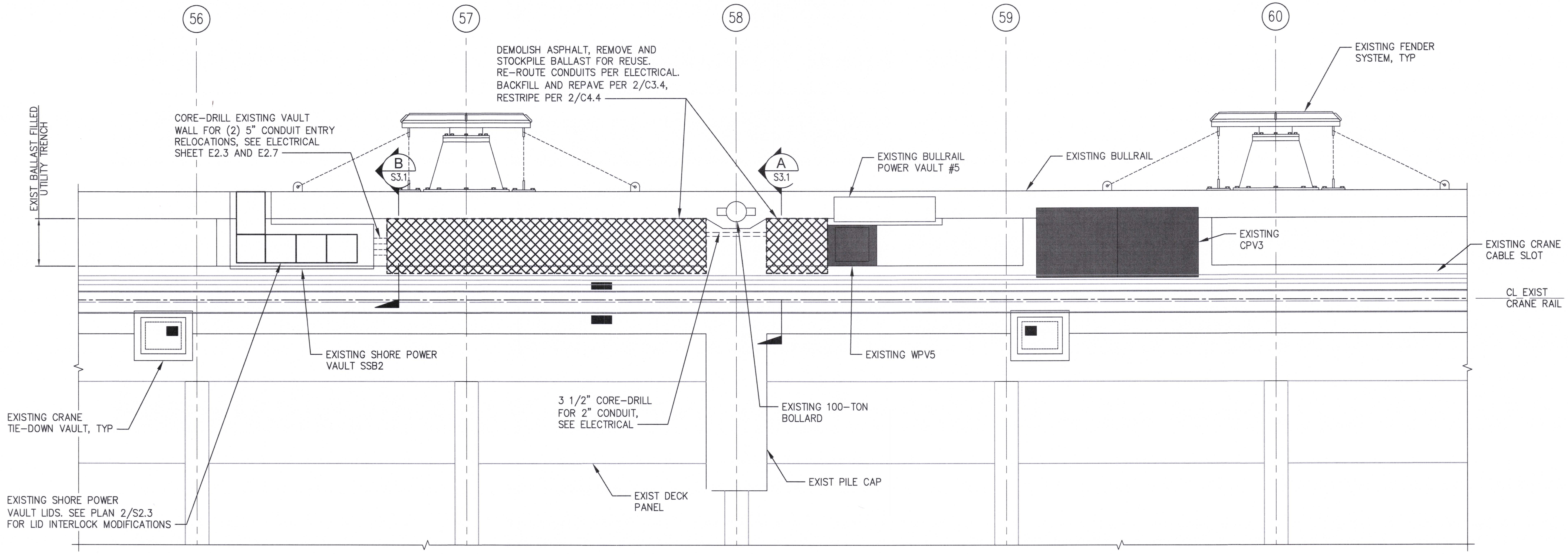
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\S2.3 - DETAIL 1

NOTES:

1. SEE SHEET G2.2 PHASING AND CONSTRAINTS, AND SPECIFICATIONS FOR REQUIREMENTS FOR PROTECTING AND COVERING OPENINGS IN PAVEMENT TO MAINTAIN VESSEL BERTHING.



1 S2.1 **PLAN - SHORE POWER VAULT SSB2 ON PIER 3**

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

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TERMINAL 3 / TERMINAL 4
SHORE POWER

PLAN - SHORE POWER VAULT SSB2 ON PIER 3

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

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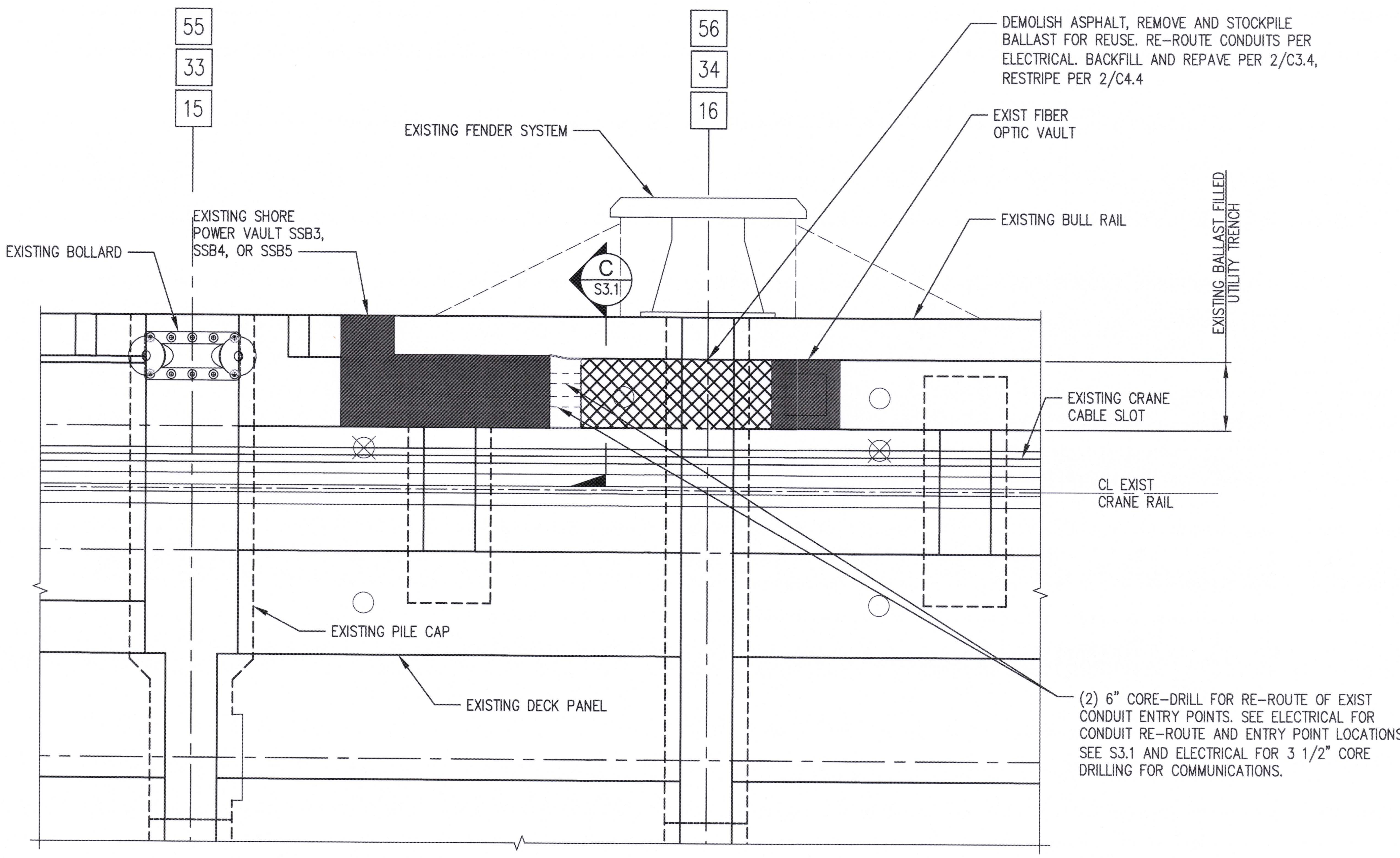
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

NOTES:

1. SEE SHEET G2.2 PHASING AND CONSTRAINTS, AND SPECIFICATIONS FOR REQUIREMENTS FOR PROTECTING AND COVERING OPENINGS IN PAVEMENT TO MAINTAIN VESSEL BERTHING.



1
S2.2

PLAN - TYPICAL SHORE POWER VAULT ON PIER 4

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

NOTE:
SSB3 SHOWN.
SSB4 AND SSB5 SIM.

BINDING EDGE

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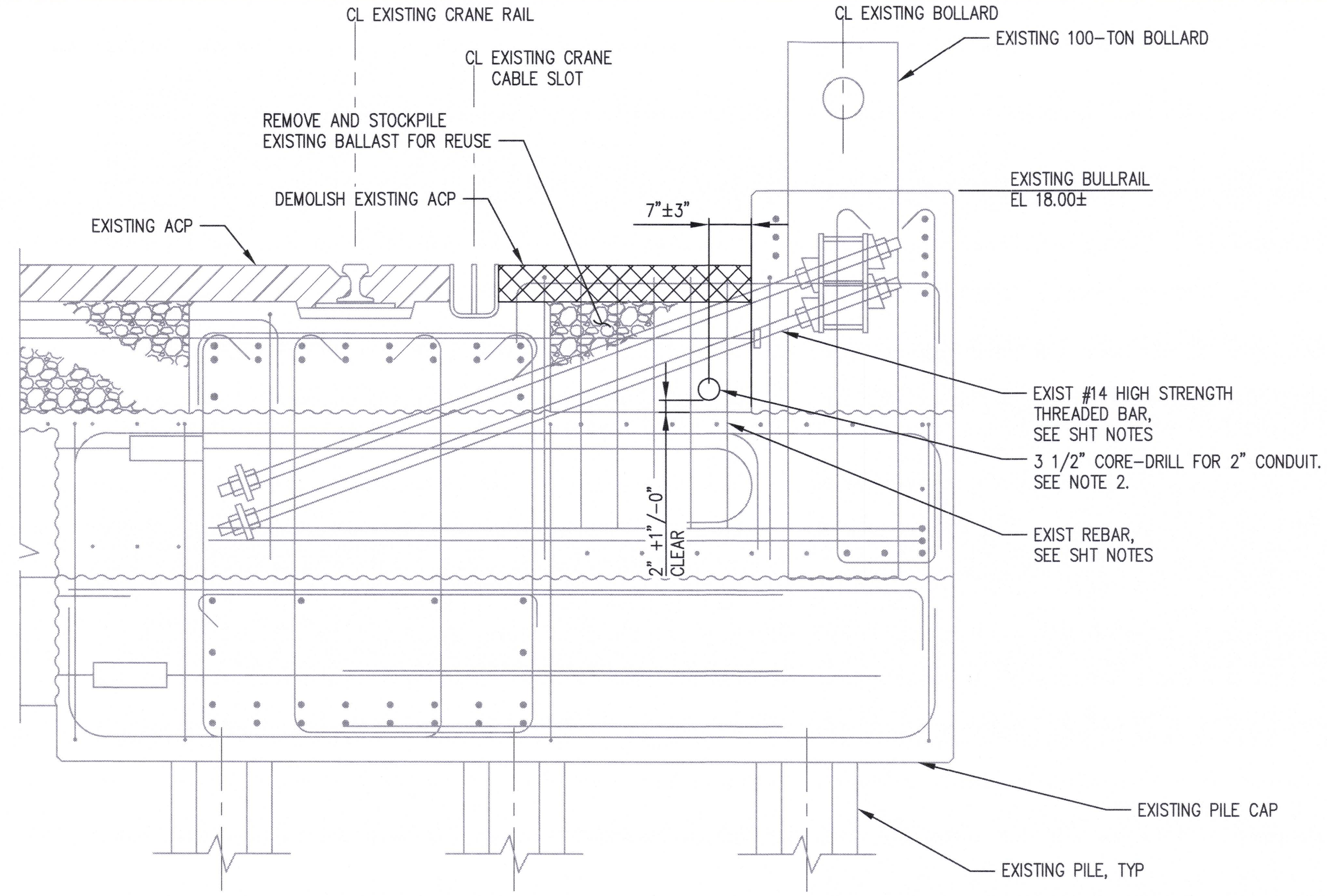
TERMINAL 3 / TERMINAL 4
SHORE POWER

PLAN - TYPICAL SHORE POWER VAULT ON PIER 4

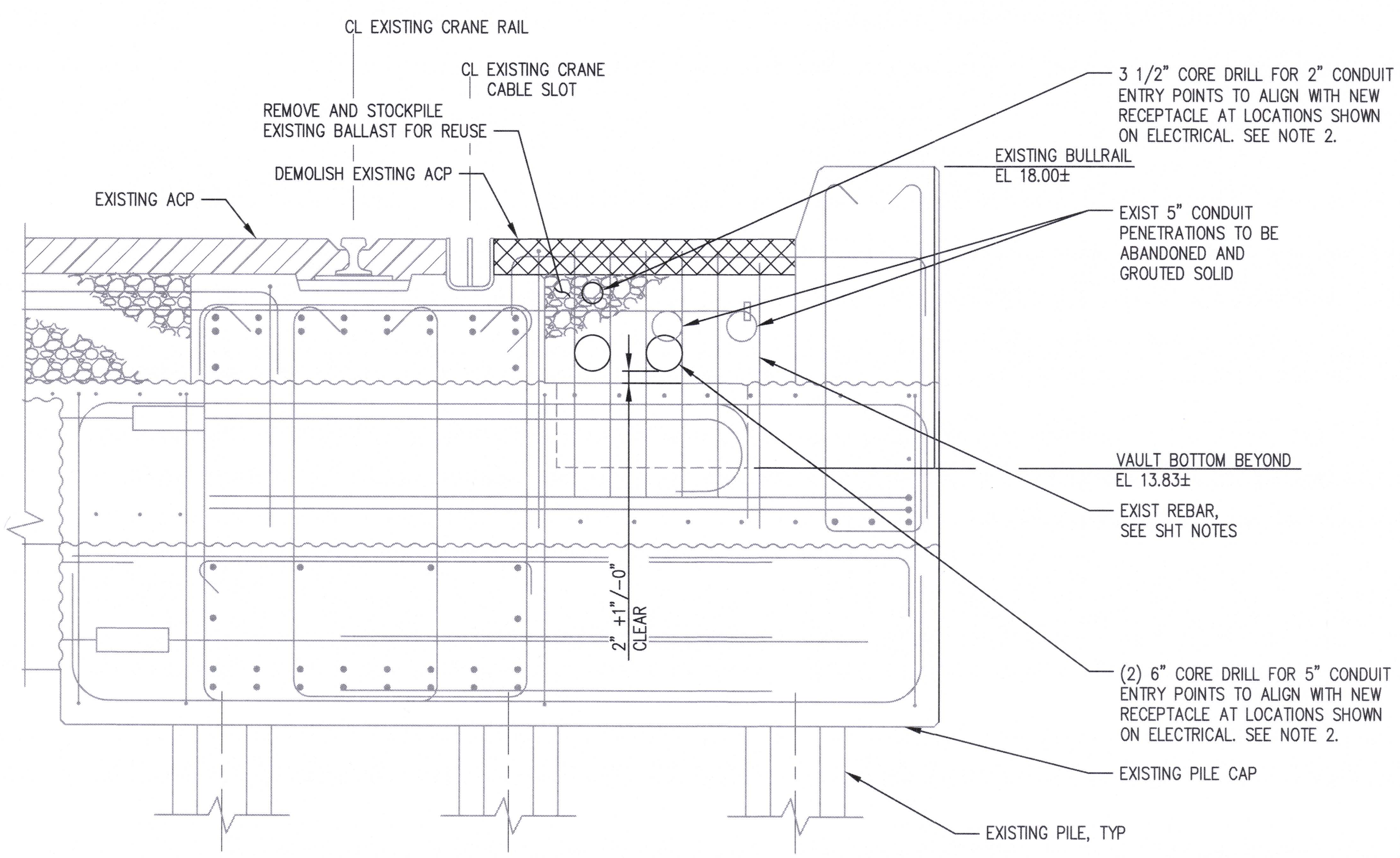
CONT/CONS: 071357	TOWNSHIP:	RANGE:	SECTION:
M. ID: 201100.01	DAT-HRZ:	VERT:	
PHASE: BID SET	PARCEL:		DRAWING SCALE: AS NOTED



DETAIL - CORE-DRILL AT BENTS 29 AND 58 ON PIER 3

A
S2.3, S2.4

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



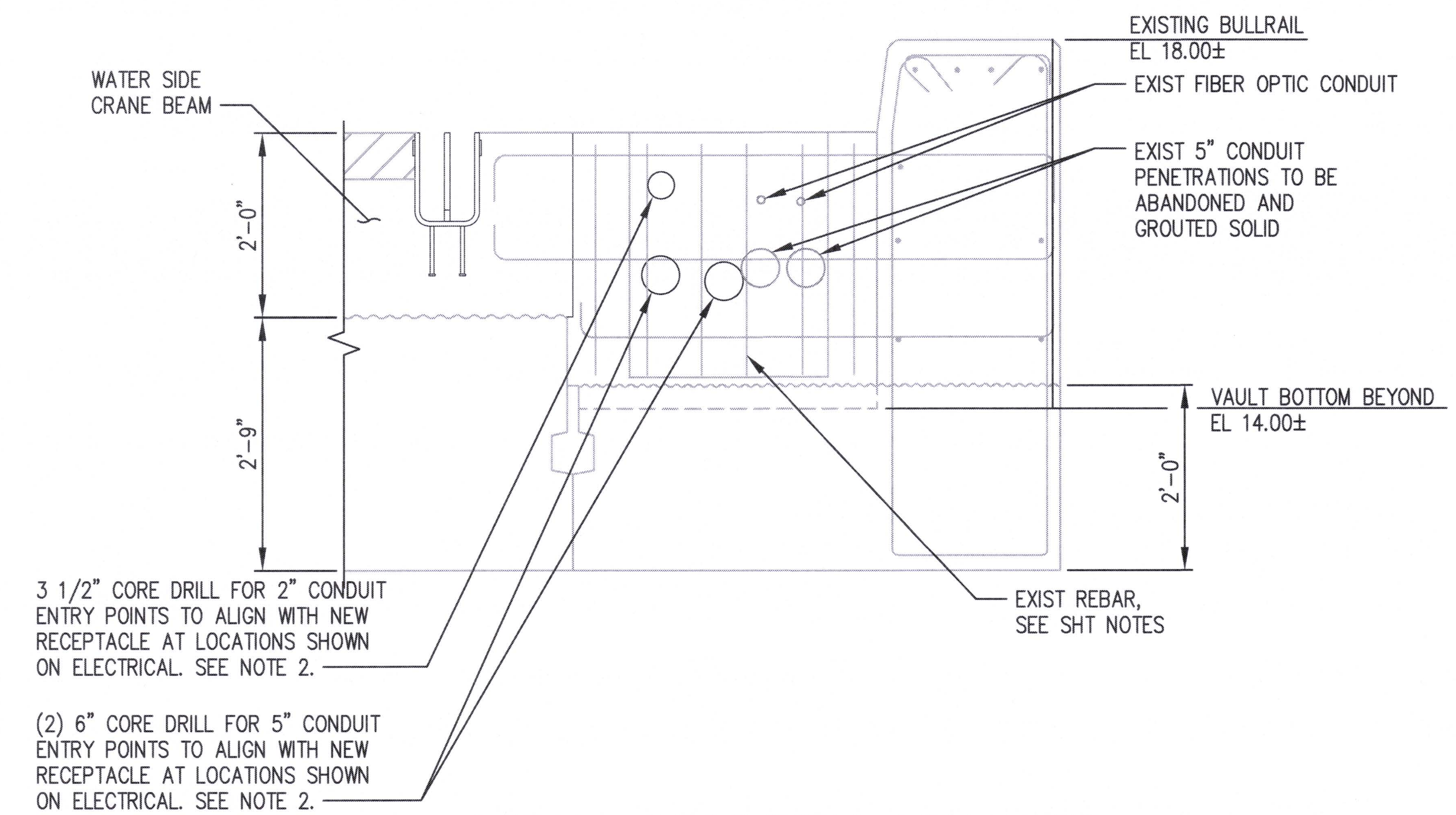
DETAIL - CORE-DRILL AT VAULTS SSB1 AND SSB2 ON PIER 3

B
S2.3, S2.4

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

NOTES

1. REINFORCING BARS AND HIGH-STRENGTH ALL THREAD RODS SHOWN AS EXISTING ARE PER PORT RECORD DRAWINGS. ACTUAL CONDITIONS MAY VARY. CORE-DRILL LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS SHALL BE DETERMINED BY CONTRACTOR.
2. THE CONTRACTOR SHALL FIELD VERIFY EXISTING REINFORCING BAR AND HIGH-STRENGTH ALL THREAD ROD LOCATIONS PRIOR TO CORE-DRILLING UTILIZING GROUND-PENETRATING RADAR (GPR) METHODS. CORE DRILLS SHALL BE LOCATED SUCH THAT EXISTING REINFORCING BARS AND HIGH-STRENGTH ALL THREAD RODS ARE NOT CUT.
3. CONTRACTOR SHALL SUBMIT CERTIFICATION THAT GPR LOCATING PERSONNEL HAVE EXPERIENCE-BASED TRAINING THAT MEETS OR EXCEEDS THE GUIDELINES DETAILED IN AMERICAN SOCIETY OF NONDESTRUCTIVE TESTING (ASNT) DOCUMENT 'RECOMMENDED PRACTICE SNT-TC-1A, PERSONNEL QUALIFICATION AND CERTIFICATION IN NONDESTRUCTIVE TESTING LEVEL 1'.
4. HIGH-STRENGTH ALL THREAD RODS ARE CRITICAL ITEMS AND IF DAMAGED DURING CORE DRILLING SHALL BE REPAIRED BY CONTRACTOR AT NO ADDITIONAL COST TO THE PORT.
5. EXISTING AND PROPOSED CONDUIT LOCATIONS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY. REFER TO ELECTRICAL SHEETS FOR ACTUAL EXISTING AND PROPOSED CONDUIT LOCATIONS.



DETAIL - CORE-DRILL AT VAULTS SSB3, SSB4, AND SSB5 ON PIER 4

C
S2.5

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

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TERMINAL 3 / TERMINAL 4 SHORE POWER

CORE-DRILL DETAILS

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED

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CONT/CONS: 071357
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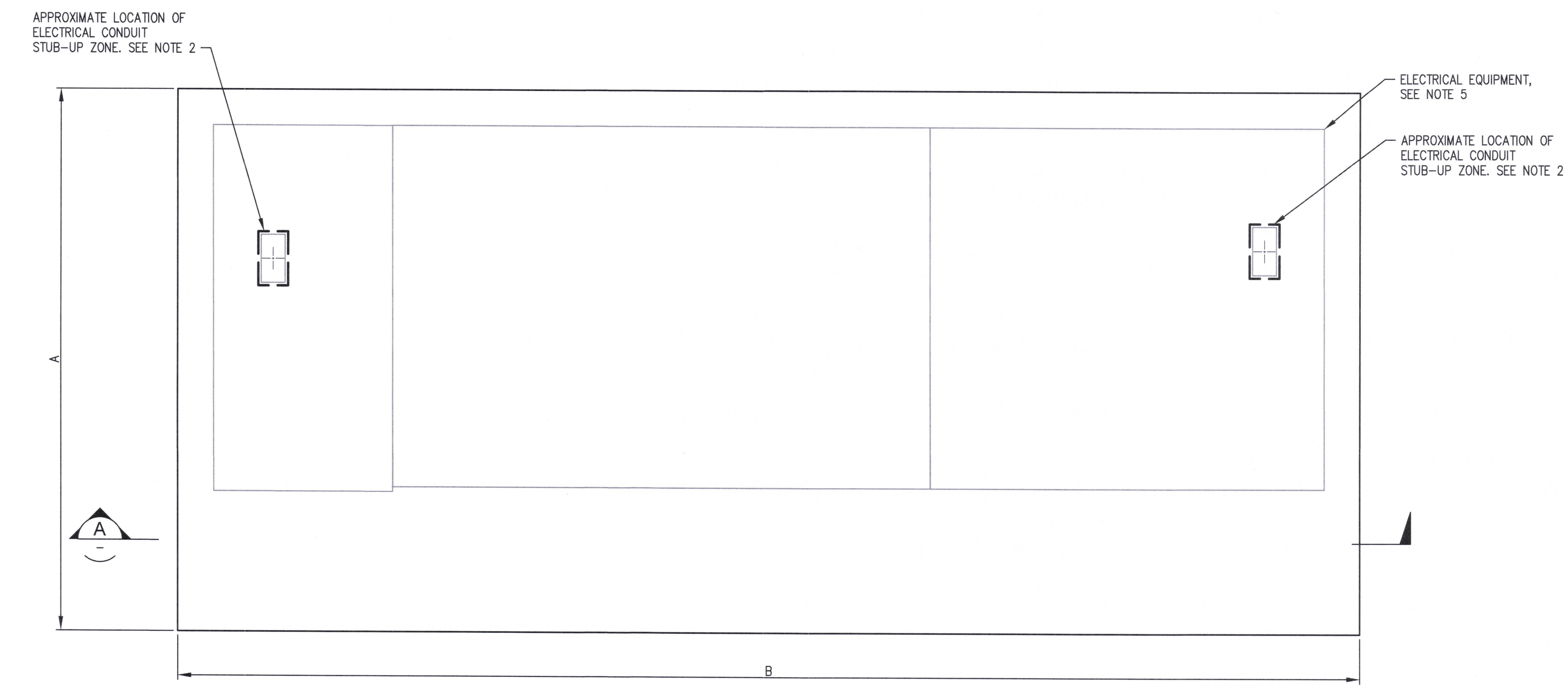


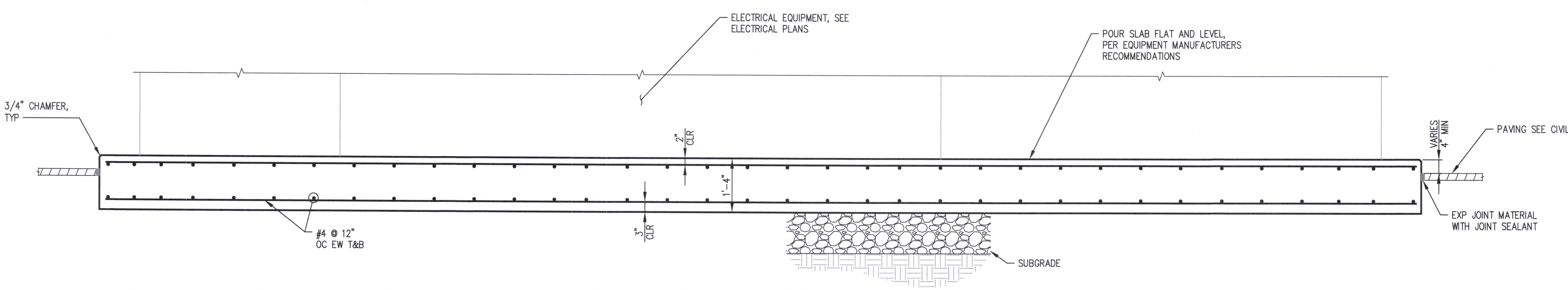
1 PLAN - ELECTRICAL EQUIPMENT PAD
E3.2, E3.5, E3.6 SCALE: 1/2" = 1'-0"

NOTES:

1. CONCRETE FOUNDATION IS SIZED BASED ON ANTICIPATED EQUIPMENT SIZES. SUBMITTED EQUIPMENT MAY VARY FROM DIMENSIONS SHOWN. CONTRACTOR SHALL COORDINATE EQUIPMENT SHOP DRAWINGS WITH PAD DIMENSIONS AND ALERT ENGINEER TO ANY DISCREPANCY PRIOR TO CONSTRUCTING PAD.
2. THE CONTRACTOR SHALL COORDINATE REINFORCING SPACING WITH EQUIPMENT CONDUIT PENETRATION LOCATIONS WITHIN STUB-UP ZONE. REINFORCING BARS SHALL NOT BE INTERRUPTED.
3. THE CONTRACTOR SHALL FURNISH AND INSTALL EQUIPMENT ANCHORS PER MANUFACTURERS RECOMMENDATIONS. DO NOT CUT REINFORCING BARS WHEN INSTALLING EQUIPMENT ANCHORS.
4. CONTRACTOR SHALL COORDINATE CONDUIT PENETRATIONS WITH ELECTRICAL AND EQUIPMENT SUBMITTALS. SUBMIT A PAD PLAN TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
5. ELECTRICAL EQUIPMENT SHALL BE SITED TO MAINTAIN THE MINIMUM CLEARANCES BETWEEN ELECTRICAL EQUIPMENT, EXISTING BOLLARDS, AND EXISTING ADJACENT ELECTRICAL EQUIPMENT.
6. SEE C3.1 AND C3.3 FOR LOCATION OF SLABS AND TOP OF SLAB ELEVATIONS.
7. SEE E3.2, E3.5 AND E3.6 FOR SLAB IDENTIFICATION.

	TRANSFORMER PAD	CAPACITOR BANK PAD
A	15'-0"	5'-1"
B	33'-0"	16'-0"

SEE NOTE 1



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

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TERMINAL 3 / TERMINAL 4
SHORE POWER
ELECTRICAL EQUIPMENT PAD

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT: DRAWING SCALE: AS NOTED
PARCEL:

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CONT/CONS: 071357
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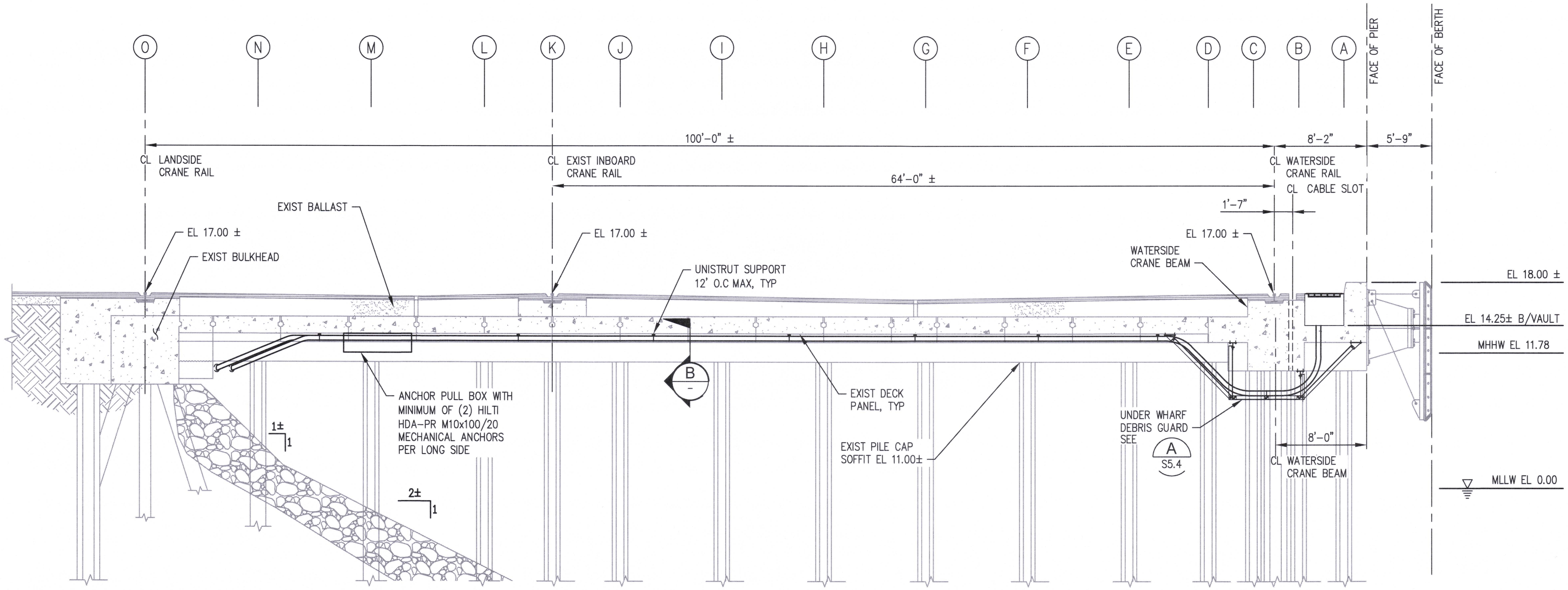
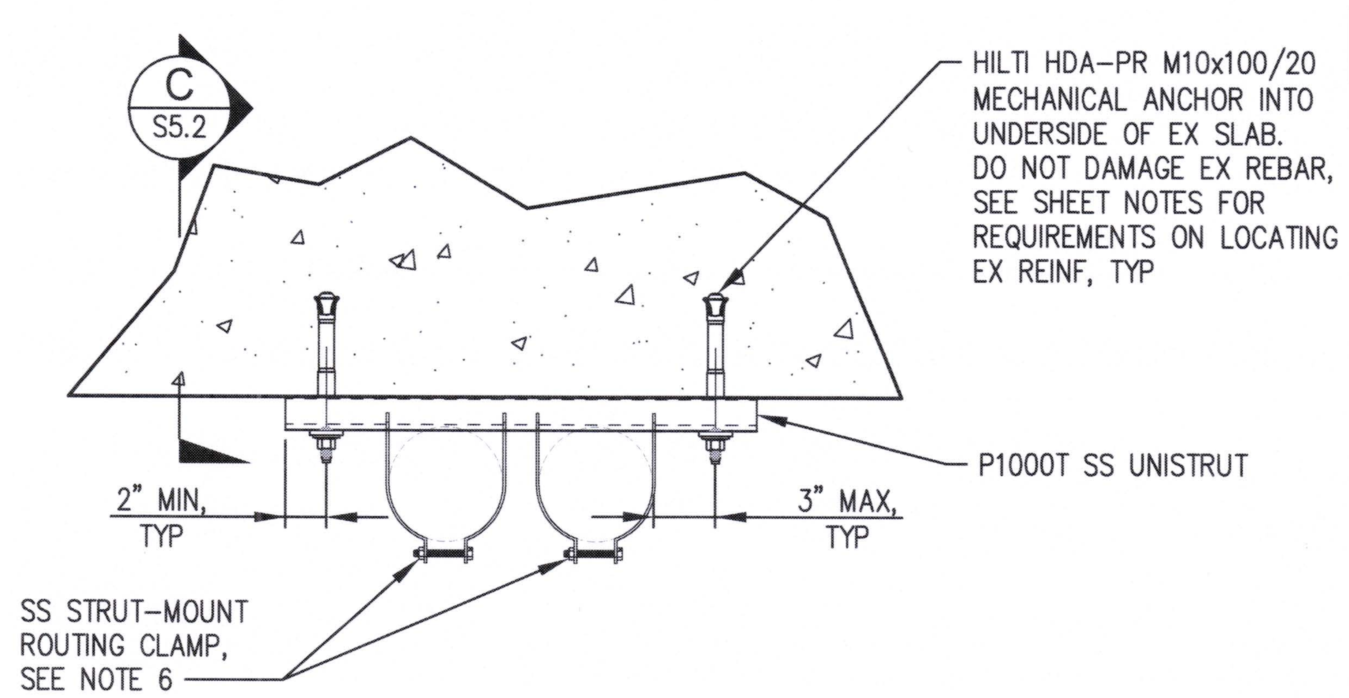


A S2.1 **SECTION - CONDUITS ALONG BENT 21**
SCALE: 3/16" = 1'-0"



B S5.2 **UNISTRUT SUPPORT DETAIL**
SCALE: 1 1/2" = 1'-0"

NOTES

1. EXISTING CONCRETE REINFORCEMENT SHALL NOT BE CUT DURING INSTALLATION OF CONCRETE ANCHORS. CONTRACTOR SHALL LOCATE AND MAP EXISTING REINFORCEMENT TO THE MAXIMUM DEPTH TO BE DRILLED USING A NON-DESTRUCTIVE METHOD PRIOR TO START OF DRILLING. DRILLING SHALL BE DONE WITH BITS THAT WILL NOT DAMAGE EXISTING REBAR. CORE DRILLING WILL NOT BE ALLOWED FOR INSTALLATION OF CONCRETE ANCHORS.
2. CONTRACTOR SHALL COORDINATE EXISTING REBAR LOCATIONS WITH CONDUIT SUPPORT ANCHORAGE PRIOR TO FABRICATION.
3. ALL METALS BELOW THE WHARF SHALL BE STAINLESS STEEL.
4. DRILLED HOLES THAT ARE ABANDONED SHALL BE PATCHED WITH EPOXY ADHESIVE. ANCHORS SHALL BE INSTALLED A MINIMUM DISTANCE OF 2 ANCHOR DIAMETERS FROM ANY ABANDONED HOLE.
5. ALL HDA-PR ANCHORS SHALL BE INSTALLED INTO THE BOTTOM OF THE DECK PANELS OR BOTTOM OF THE CONCRETE SOFFIT AS SHOWN.
6. CONDUIT ROUTING CLAMP SHALL BE RATED FOR THE FOLLOWING LOAD CAPACITIES

VERTICAL LOAD = 2090 LBS
TRANSVERSE LOAD = 360 LBS
LONGITUDINAL LOAD = 525 LBS

TERMINAL 3 / TERMINAL 4
SHORE POWER
UNDER WHARF CONDUIT SUPPORT DETAILS - SHEET 1

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DAT-HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED
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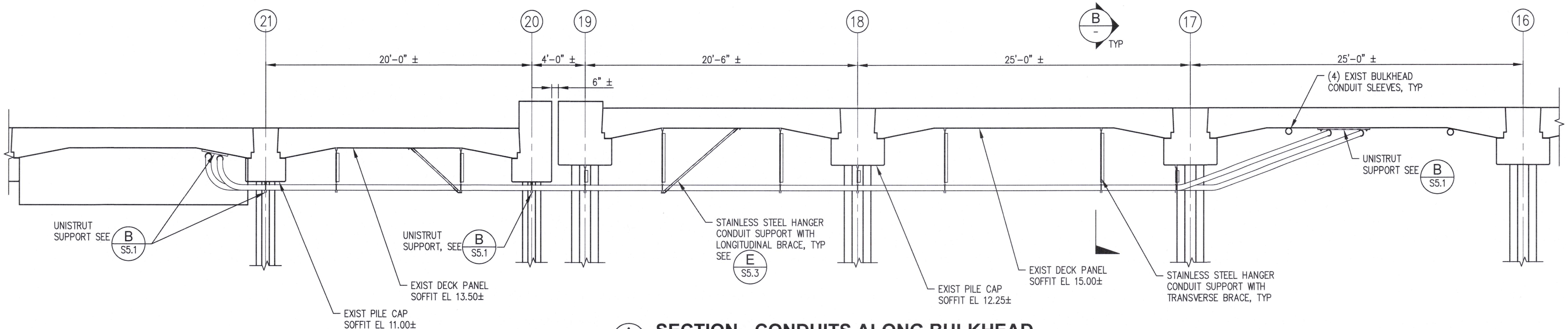
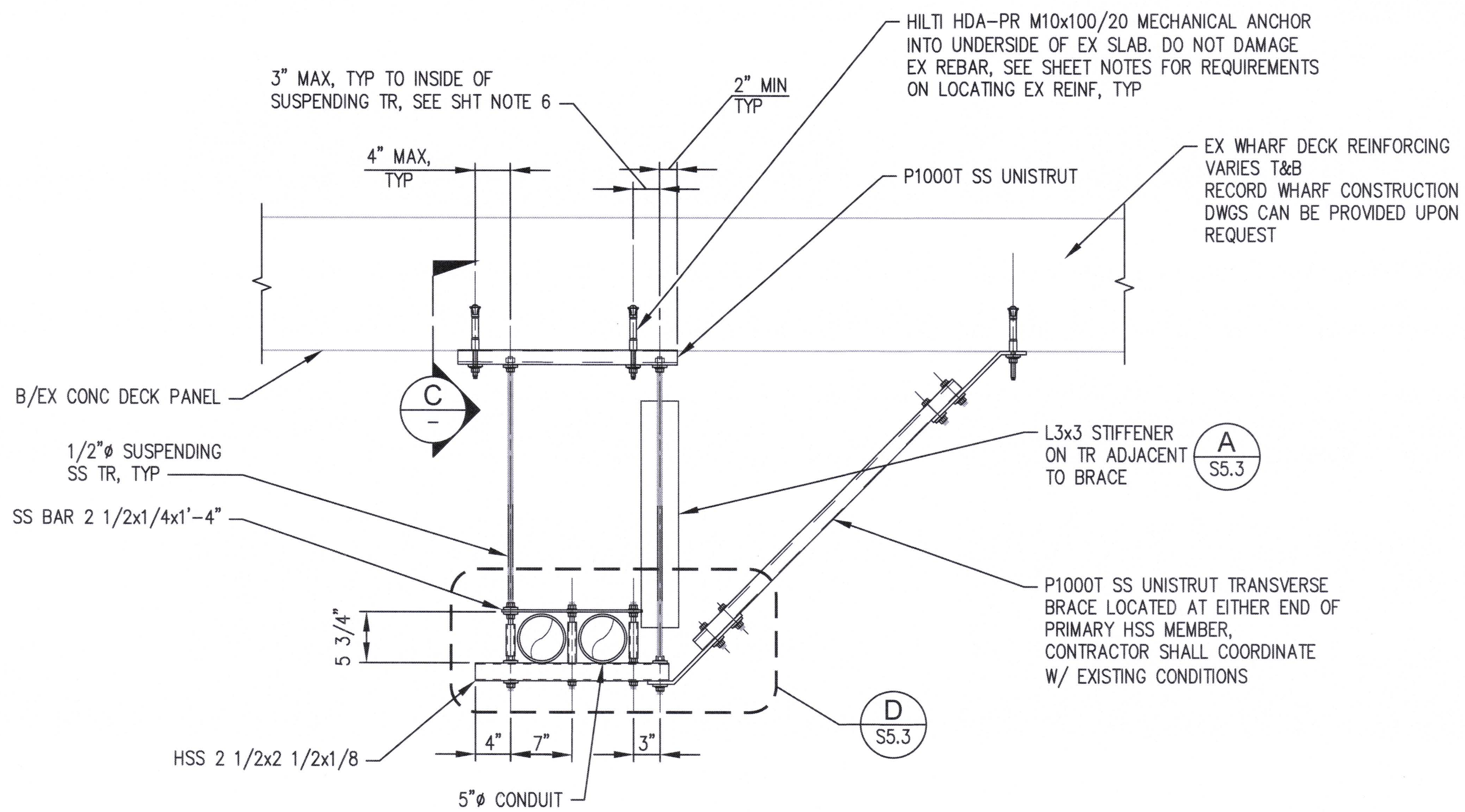


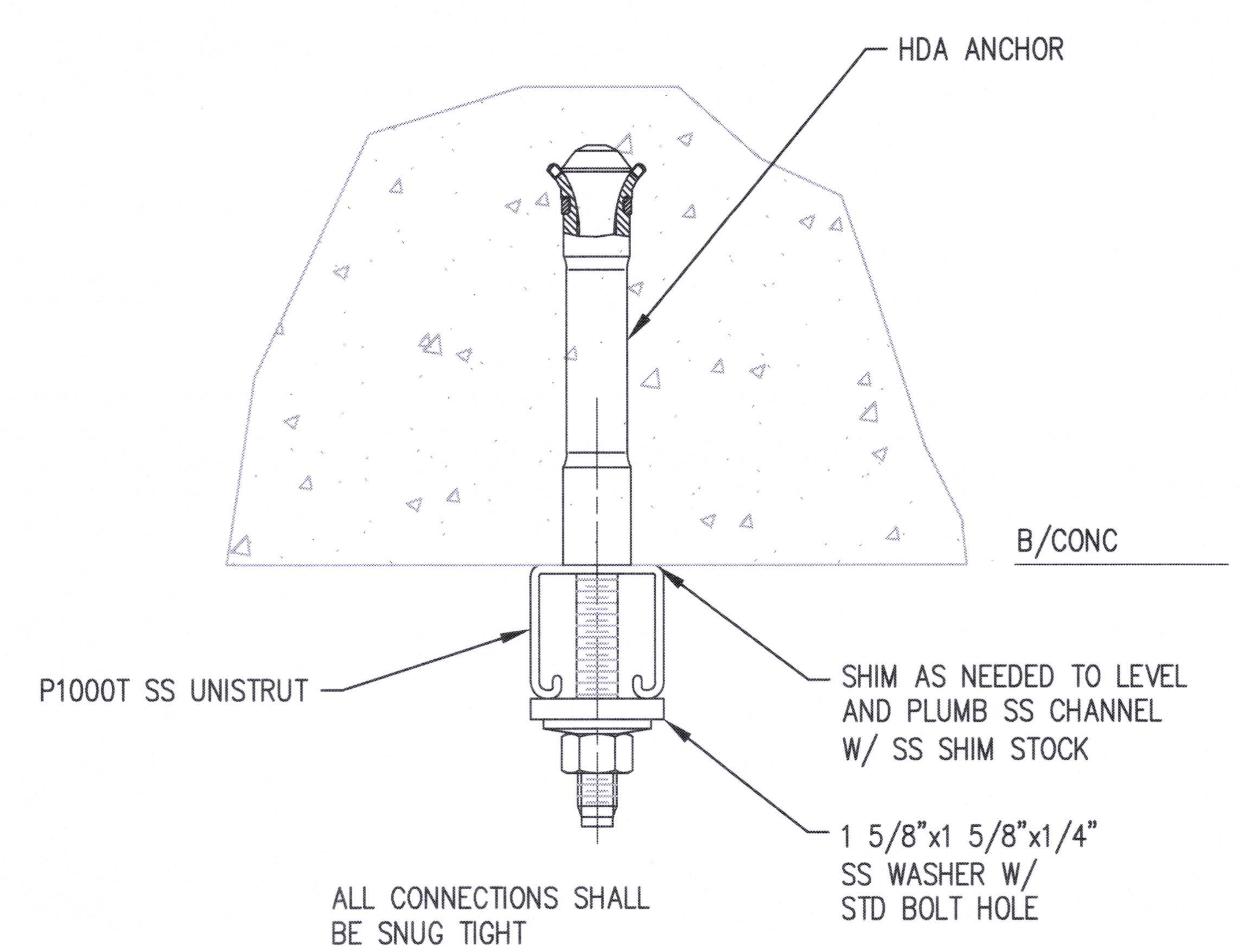
A S2.1 SECTION - CONDUITS ALONG BULKHEAD

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



B SECTION - CONDUIT SUPPORT SYSTEM

SCALE: 1" = 1'-0"



C S5.1 SECTION - UNISTRUT ANCHORAGE

SCALE: 1" = 1'-0"

NOTES

1. EXISTING CONCRETE REINFORCEMENT SHALL NOT BE CUT DURING INSTALLATION OF CONCRETE ANCHORS. CONTRACTOR SHALL LOCATE AND MAP EXISTING REINFORCEMENT TO THE MAXIMUM DEPTH TO BE DRILLED USING A NON-DESTRUCTIVE METHOD PRIOR TO START OF DRILLING. DRILLING SHALL BE DONE WITH BITS THAT WILL NOT DAMAGE EXISTING REBAR. CORE DRILLING WILL NOT BE ALLOWED FOR INSTALLATION OF CONCRETE ANCHORS.
2. CONTRACTOR SHALL COORDINATE EXISTING REBAR LOCATIONS WITH CONDUIT SUPPORT ANCHORAGE PRIOR TO FABRICATION.
3. ALL METALS BELOW THE WHARF SHALL BE STAINLESS STEEL.
4. DRILLED HOLES THAT ARE ABANDONED SHALL BE PATCHED WITH EPOXY ADHESIVE. ANCHORS SHALL BE INSTALLED A MINIMUM DISTANCE OF 2 ANCHOR DIAMETERS FROM ANY ABANDONED HOLE.
5. ALL HDA-PR ANCHORS SHALL BE INSTALLED INTO THE BOTTOM OF THE DECK PANELS OR BOTTOM OF THE CONC SOFFIT AS SHOWN.
6. IF END HDA-PR ANCHORS ARE INSTALLED TO THE INSIDE OF THE OUTERMOST SUSPENDING TR, MAX SPACING IS 3" AS SHOWN.

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TERMINAL 3 / TERMINAL 4
SHORE POWER

UNDER WHARF CONDUIT SUPPORT DETAILS - SHEET 2

TOWNSHIP: | RANGE: | SECTION:

DAT-HRZ: | VERT: | DRAWING SCALE: AS NOTED

PARCEL:

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CONT/CONS: 071357
M. ID: 201100.01
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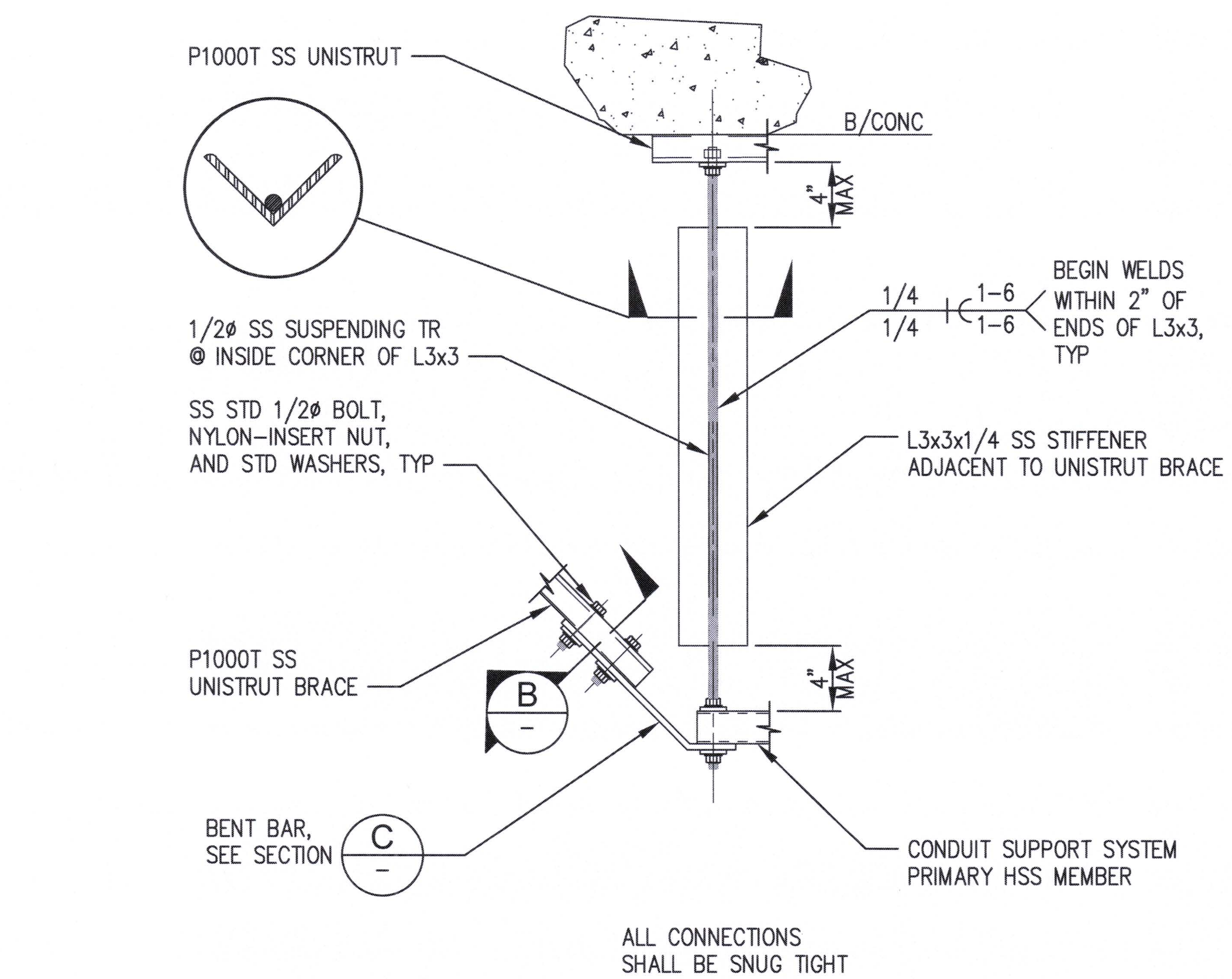
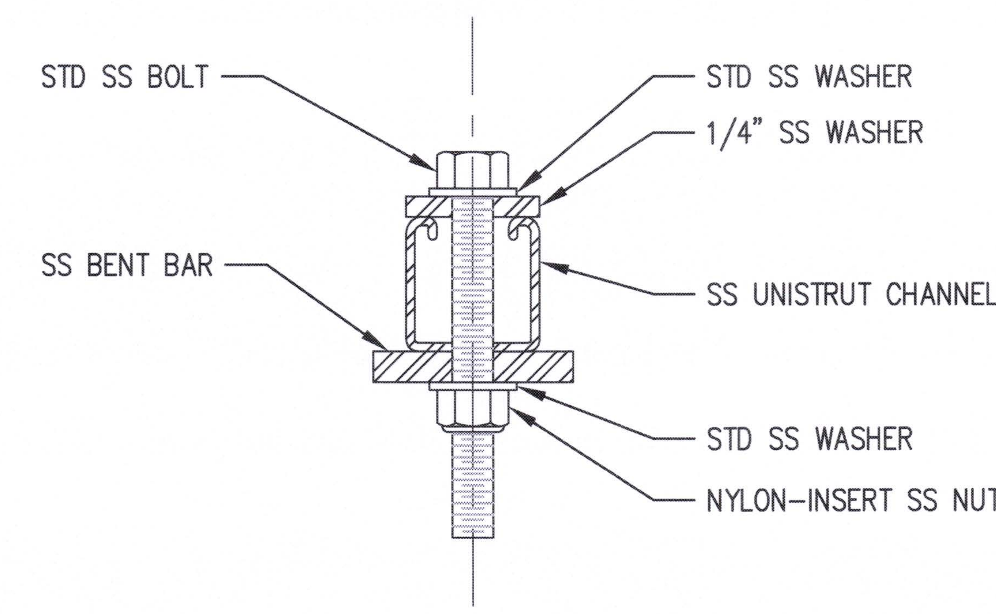


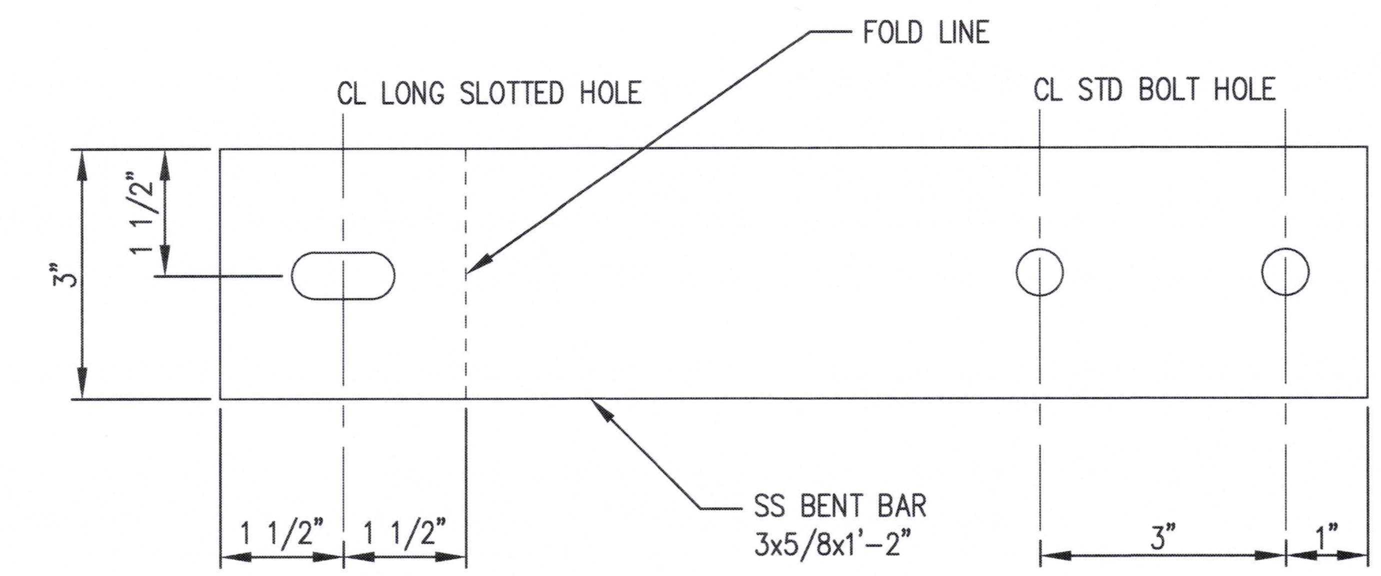
DETAIL - THREADED ROD STIFFENER

A S5.2 SCALE: 1 1/2" = 1'-0"



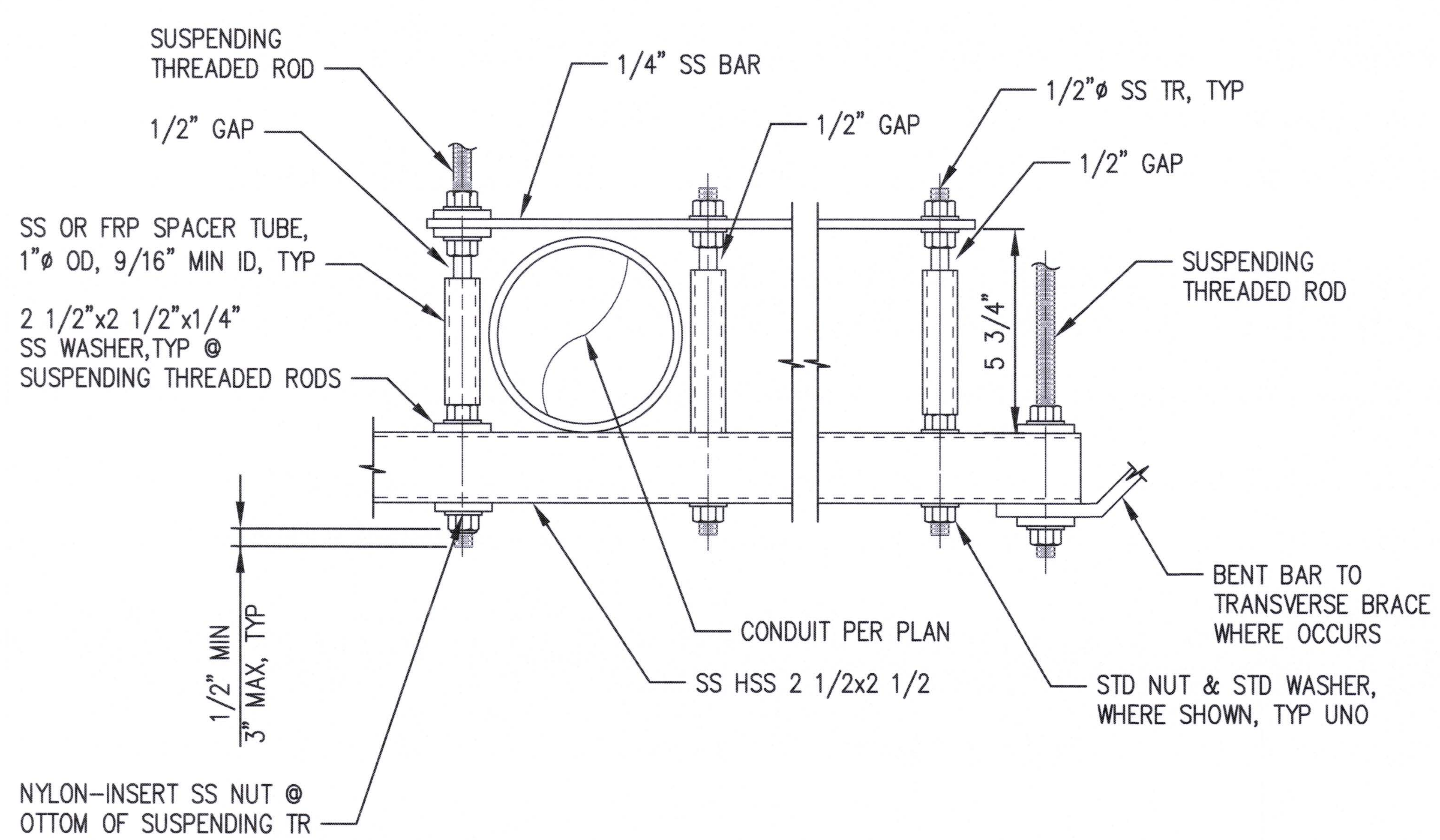
SECTION - BRACE/BENT PLATE

B – SCALE: 6" = 1'-0"



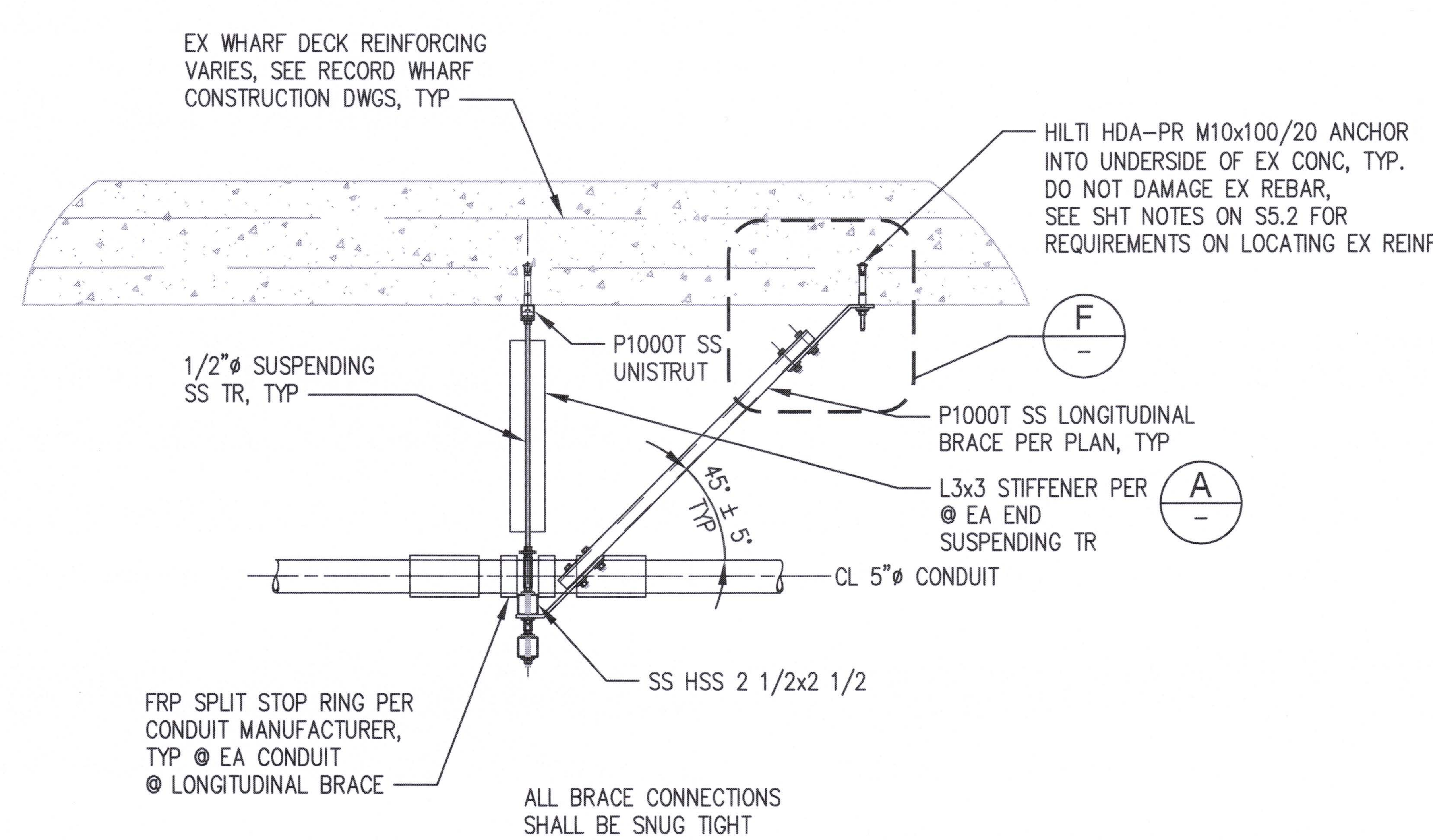
DETAIL - BRACE CONNECTION PLATE

C – SCALE: XX" = 1'-0"



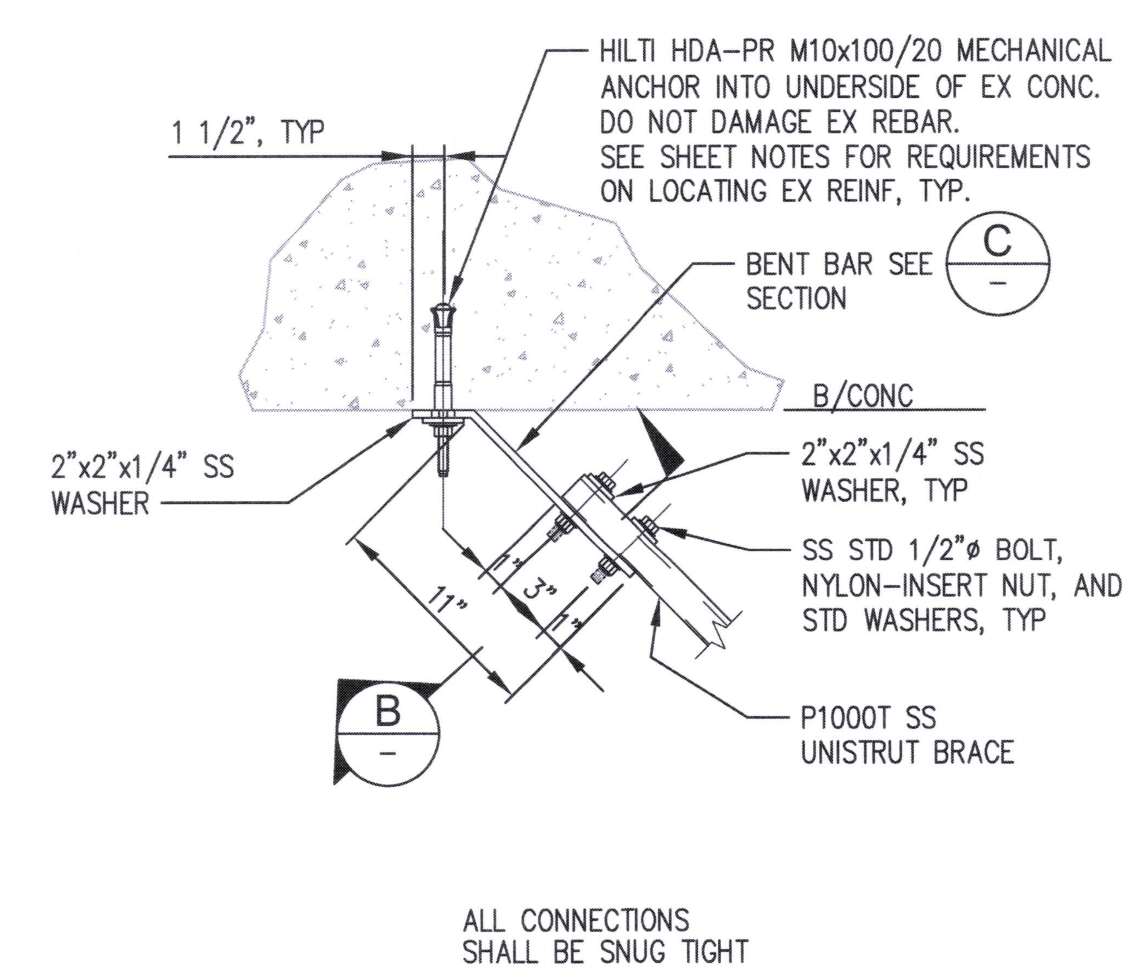
DETAIL - TYPICAL CONDUIT GRID ASSEMBLY

D S5.2 SCALE: 6" = 1'-0"



SECTION LONGITUDINAL BRACE

E S5.2 SCALE: 3/4" = 1'-0"



SECTION - ANGLE BRACE CONNECTION

F – SCALE: 3/4" = 1'-0"

BINDING EDGE

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TERMINAL 3 / TERMINAL 4 SHORE POWER

UNDER WHARF CONDUIT SUPPORT DETAILS - SHEET 3

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT: | DRAWING SCALE: AS NOTED
PARCEL:

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CONT/CONS: 071357
M. ID: 201100.01
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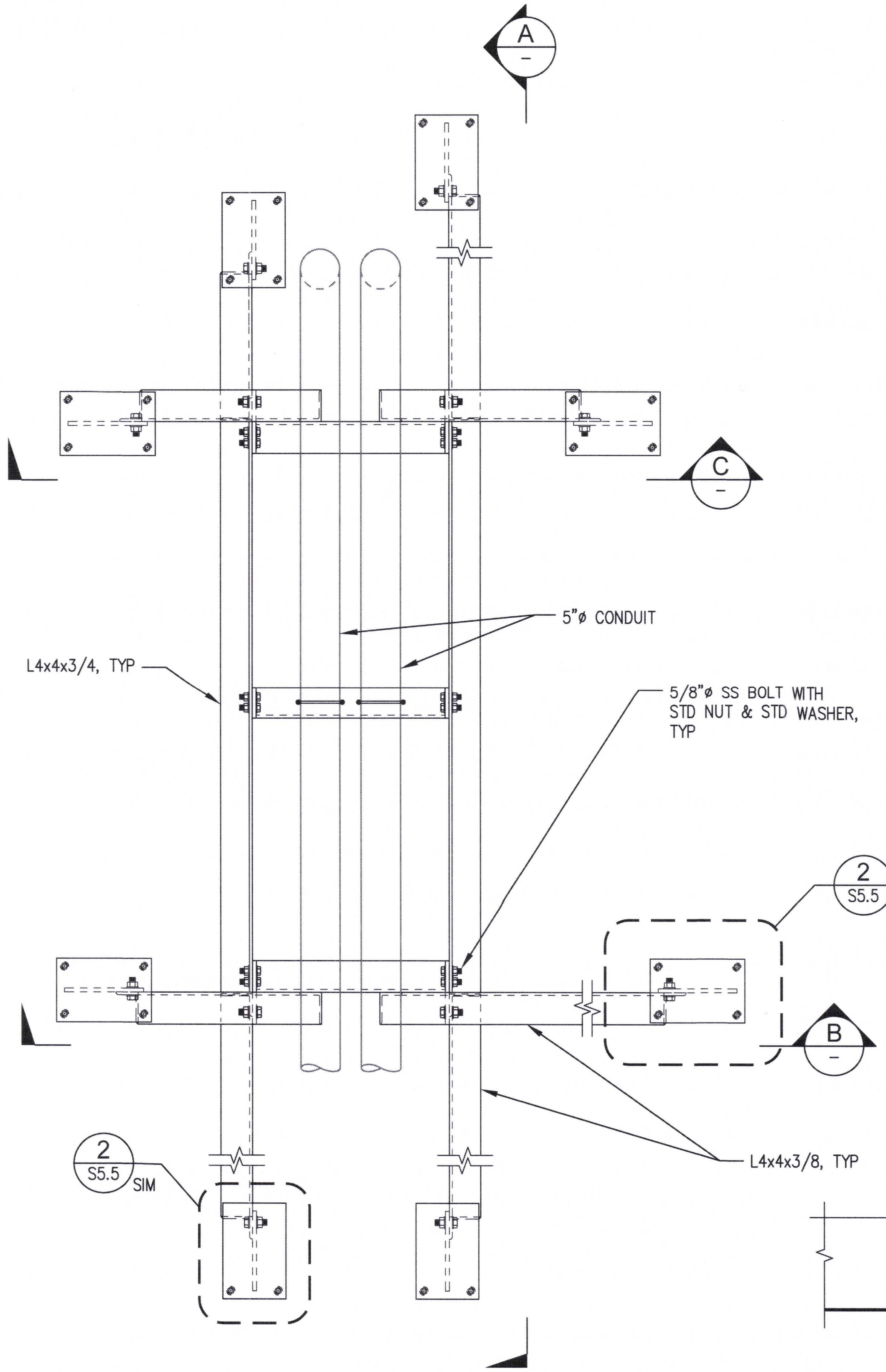
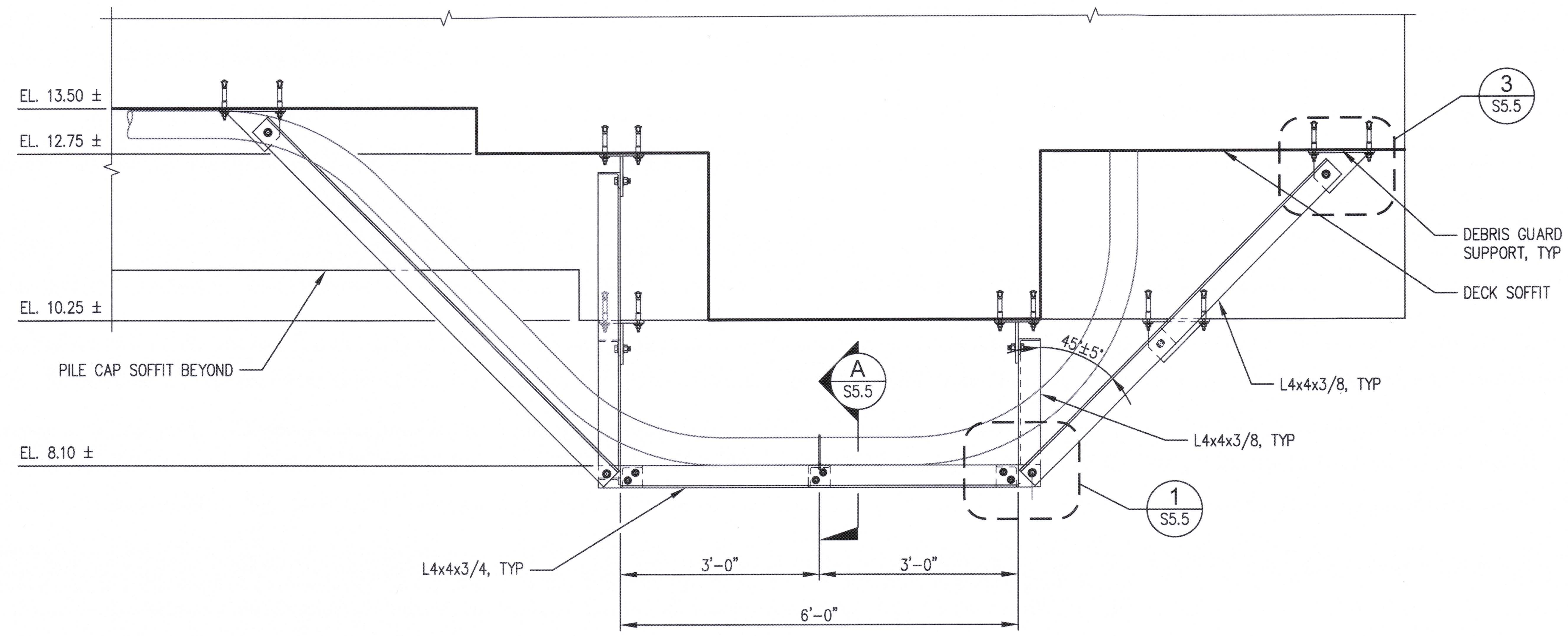


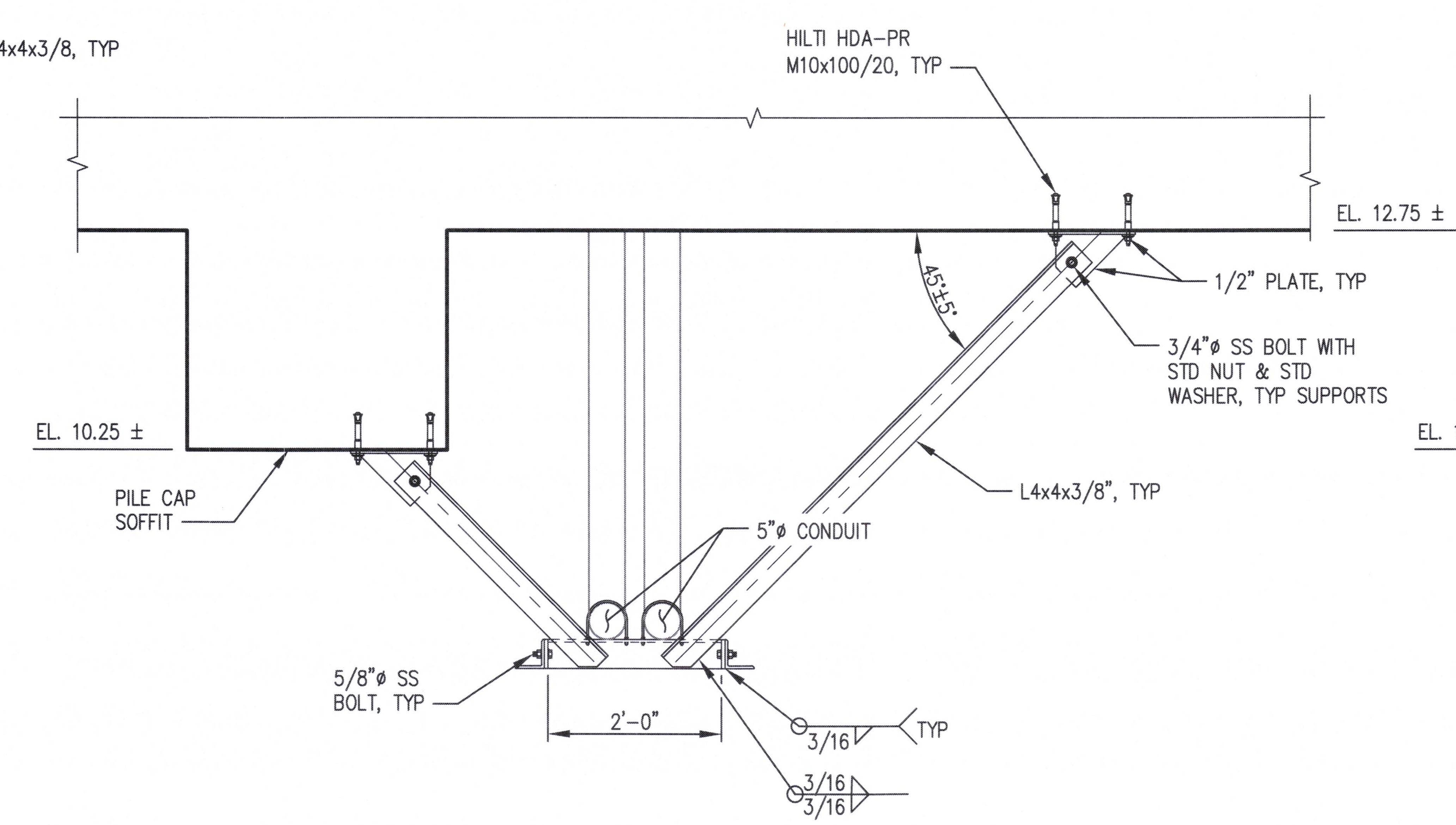
1 S6.1 **PLAN**
SCALE: 1" = 1'-0"



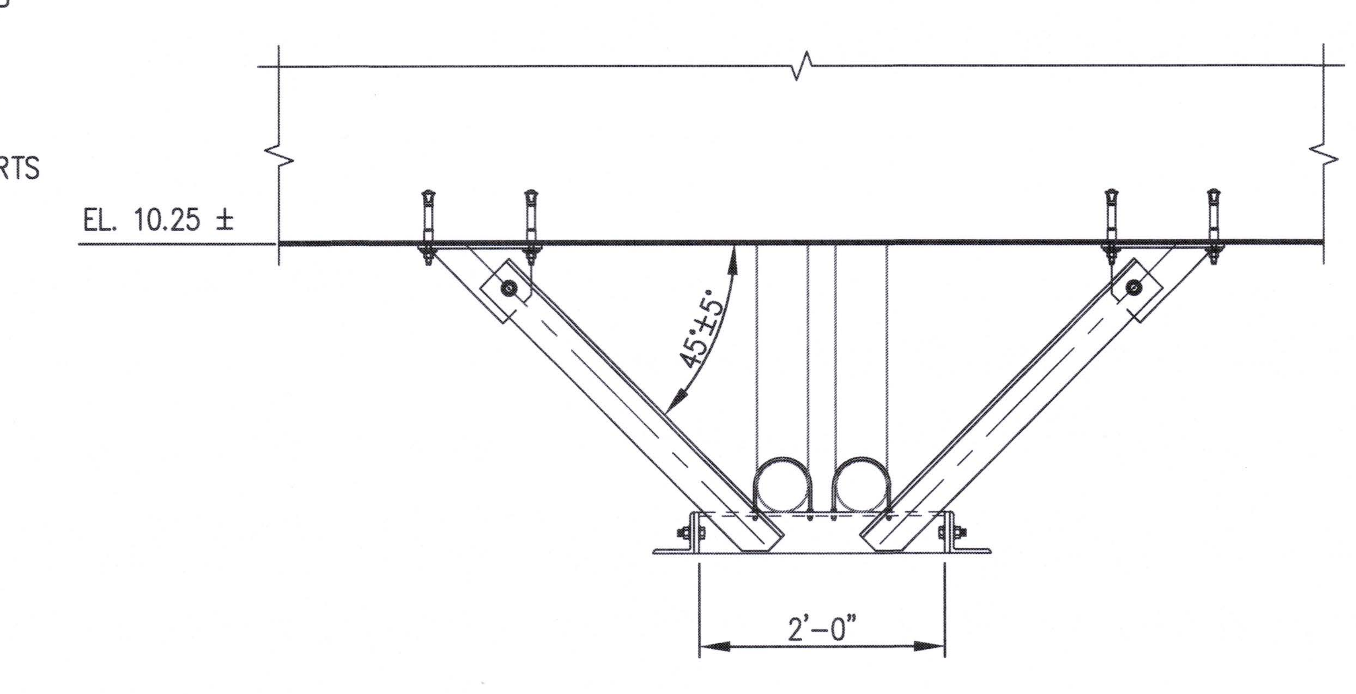
A S5.1 **SECTION**
SCALE: 3/4" = 1'-0"

NOTES

1. MINIMUM DISTANCE FROM EDGE OF BOLT HOLE TO EDGE OF ELEMENT SHALL BE 1".
2. DEBRIS GUARD GEOMETRY IS BASED ON PIER 3 RECORD DRAWINGS PROVIDED BY THE PORT OF TACOMA AND ON ANTICIPATED CONDUIT LOCATION. CONTRACTOR TO FIELD VERIFY REQUIRED GEOMETRY AND CONDUIT POSITIONING PRIOR TO DEBRIS GUARD FABRICATION.



B – **SECTION**
SCALE: 3/4" = 1'-0"



C – **SECTION**
SCALE: 3/4" = 1'-0"
FOR INFORMATION NOT SHOWN, SEE B –

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TERMINAL 3 / TERMINAL 4
SHORE POWER
UNDER WHARF CONDUIT SUPPORT DETAILS - SHEET 4

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED

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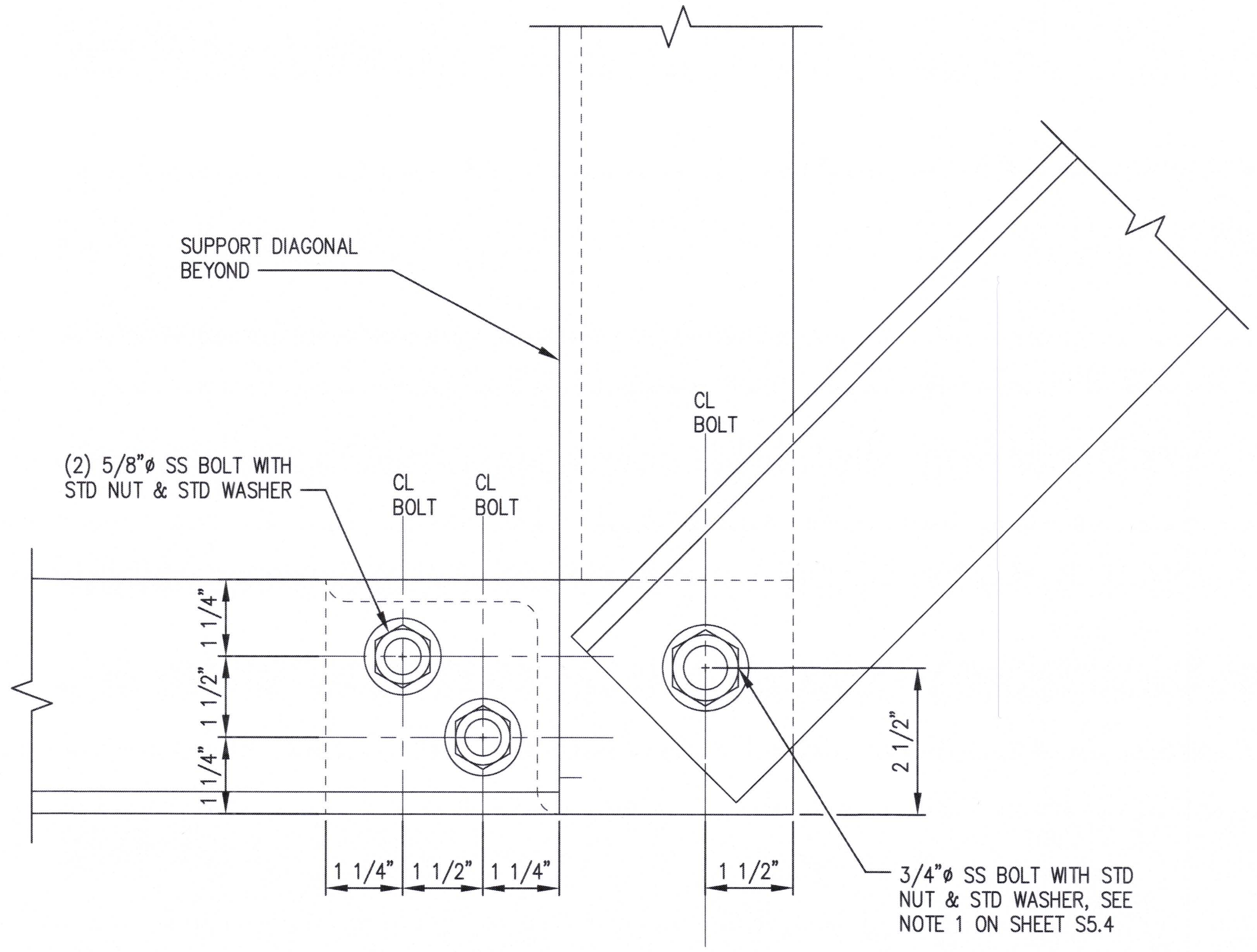
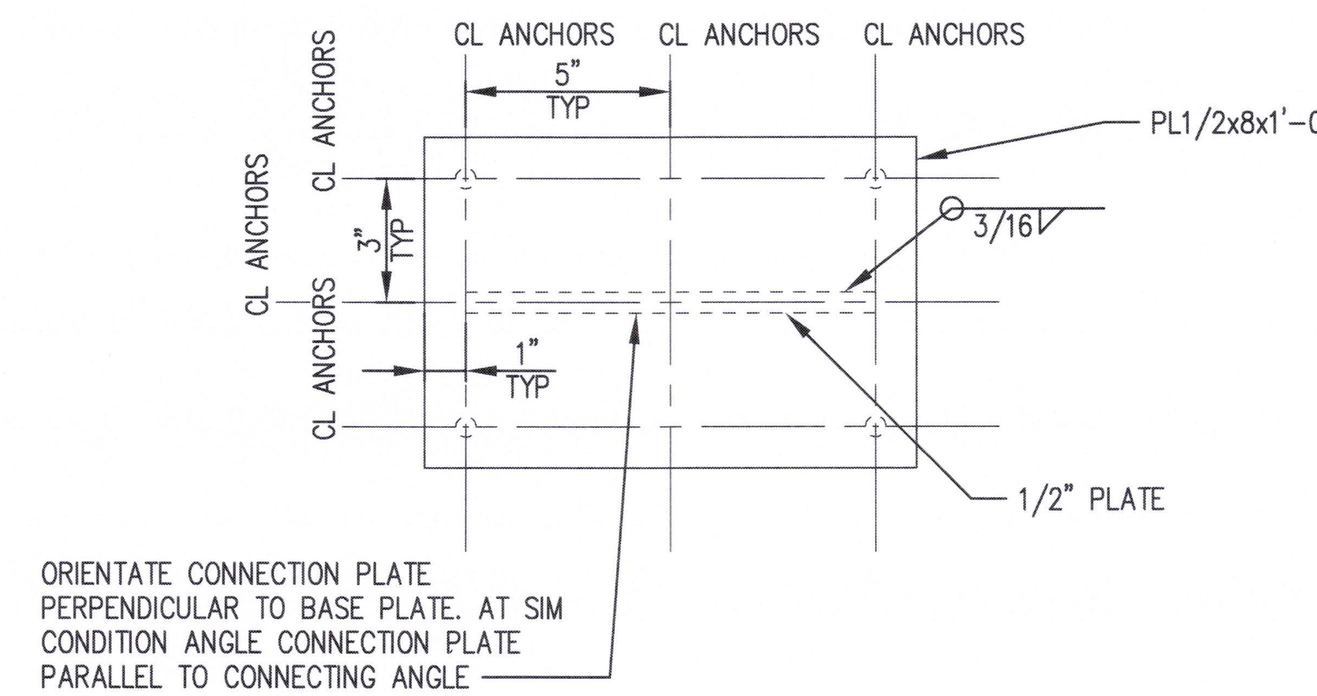
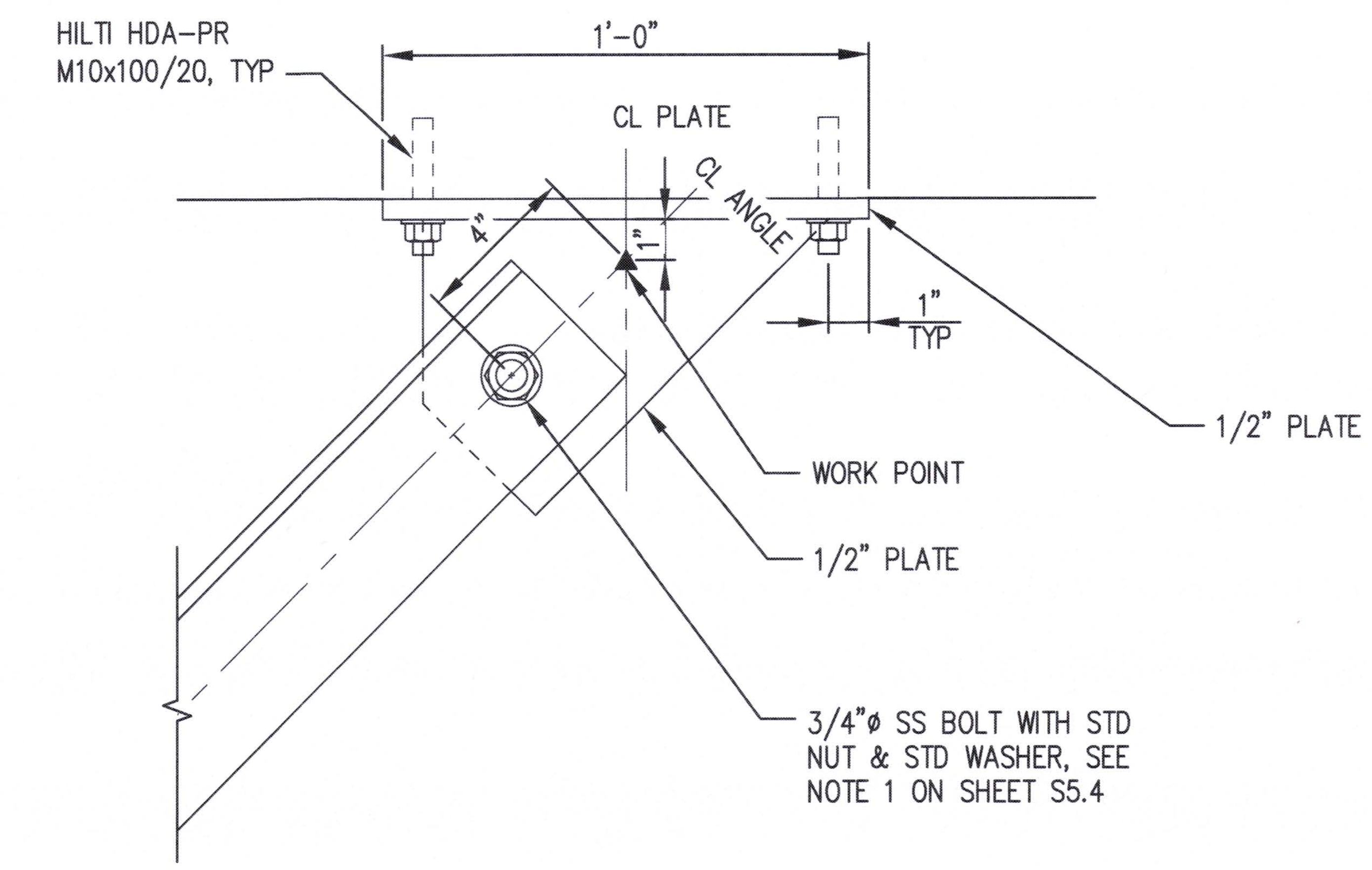
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET



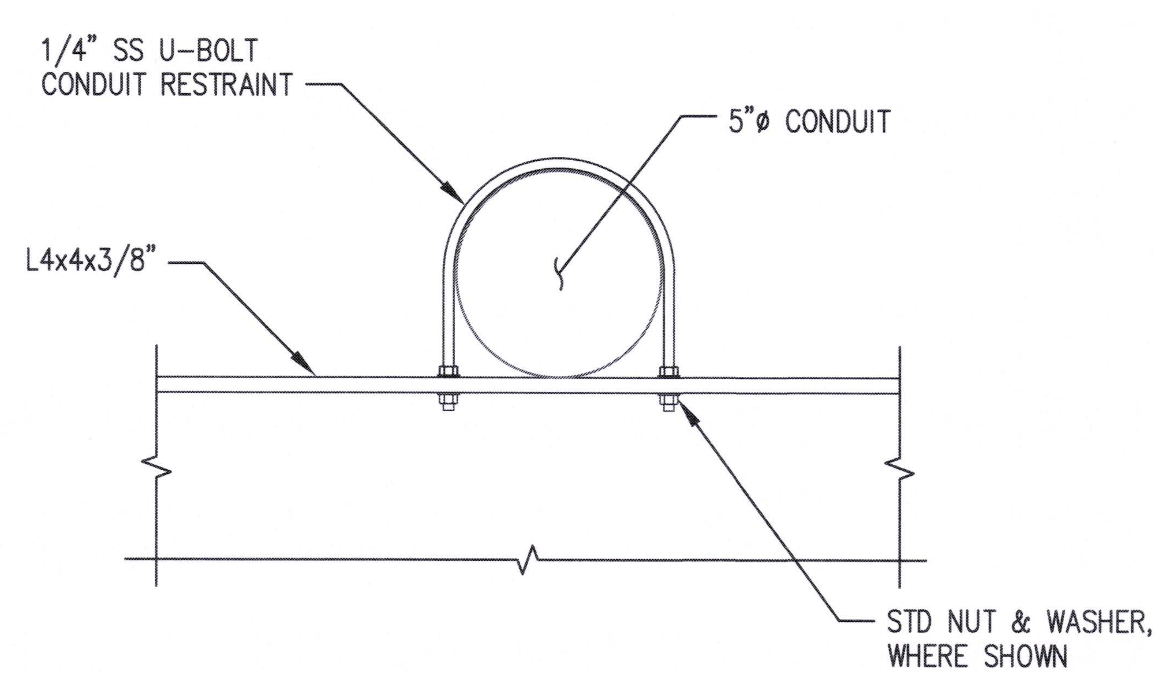
1 S5.4 **DETAIL**
SCALE: 6" = 1'-0"



2 S5.4 **DETAIL**
SCALE: 3" = 1'-0"



3 S5.4 **DETAIL**
SCALE: 3" = 1'-0"



A S5.4 **SECTION**
SCALE: 3" = 1'-0"

BINDING EDGE

PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\S5.5-Under Dock Conduit Support details - Sheet 5

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TERMINAL 3 / TERMINAL 4
SHORE POWER

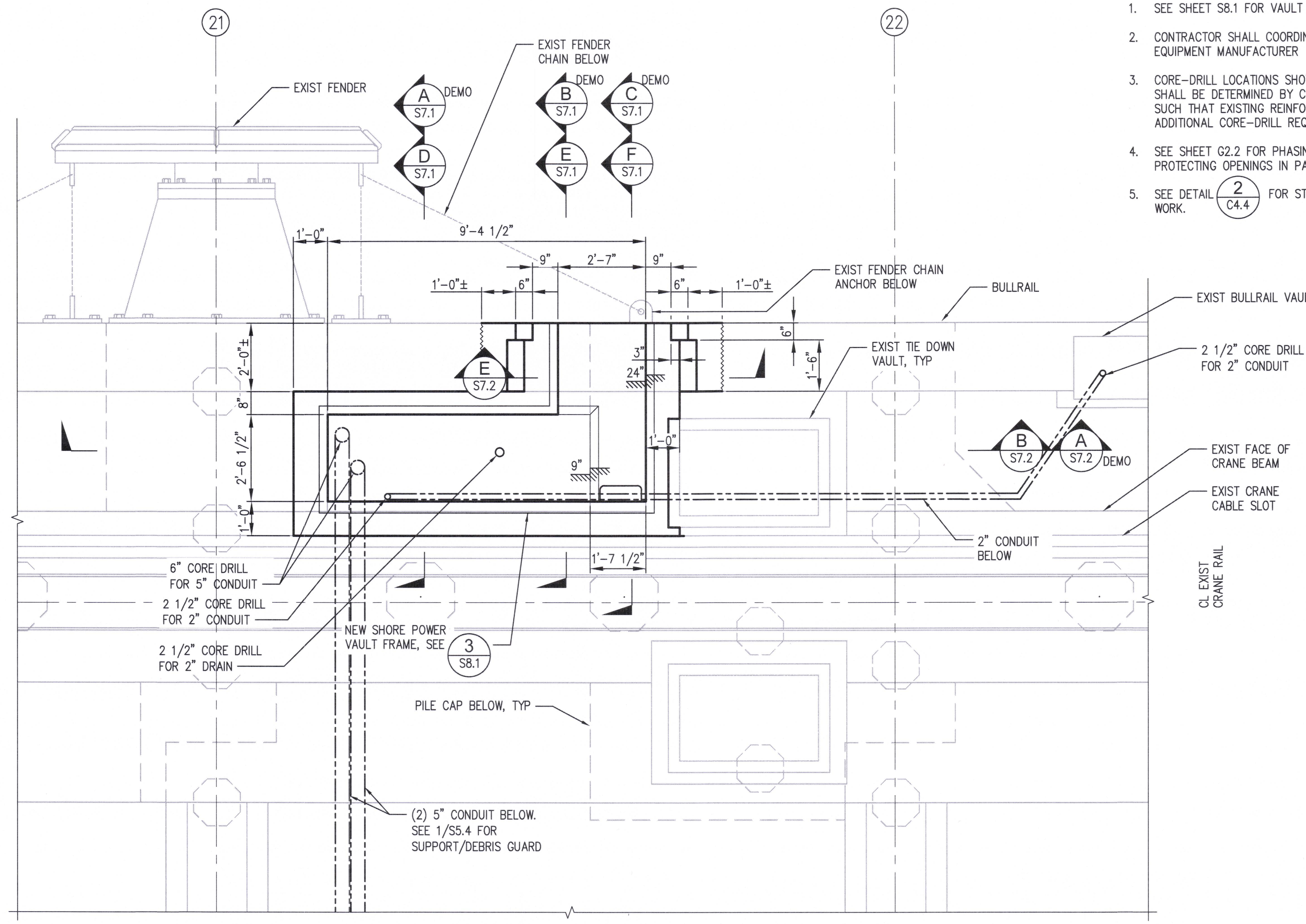
UNDER WHARF CONDUIT SUPPORT DETAILS - SHEET 5

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT:
PARCEL: DRAWING SCALE: AS NOTED

6658
S5.5
77 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

NOTES

1. SEE SHEET S8.1 FOR VAULT COVER DETAILS
2. CONTRACTOR SHALL COORDINATE CORE DRILL LOCATIONS WITH ELECTRICAL EQUIPMENT MANUFACTURER
3. CORE-DRILL LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS SHALL BE DETERMINED BY CONTRACTOR. CORE-DRILL SHALL BE LOCATED SUCH THAT EXISTING REINFORCING IS NOT CUT. SEE SHEET S3.1 FOR ADDITIONAL CORE-DRILL REQUIREMENTS.
4. SEE SHEET G2.2 FOR PHASING AND CONSTRAINTS, AND REQUIREMENTS FOR PROTECTING OPENINGS IN PAVEMENT.
5. SEE DETAIL 2/C4.4 FOR STRIPPING RESTORATION AFTER COMPLETION OF WORK.



1/S2.1 PLAN - NEW SHORE POWER VAULT SSB0 ON PIER 3

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

BINDING EDGE

PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\S6.1 - New Vault Plan

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TERMINAL 3 / TERMINAL 4
SHORE POWER

PLAN - NEW SHORE POWER VAULT ON PIER 3

TOWNSHIP: RANGE: SECTION:

DAT-HRZ: VERT:

PARCEL: DRAWING SCALE: AS NOTED

6658

S6.1

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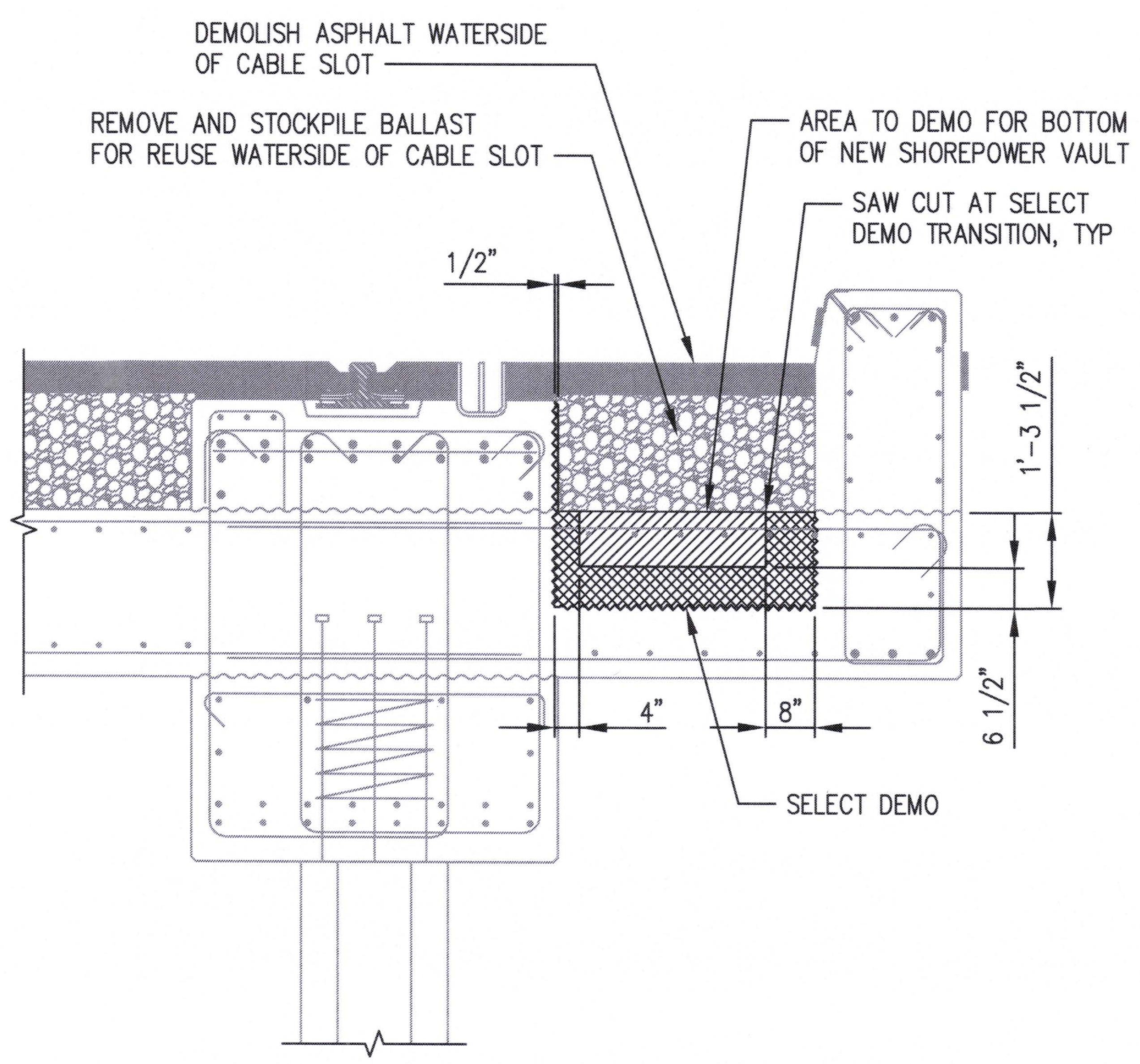
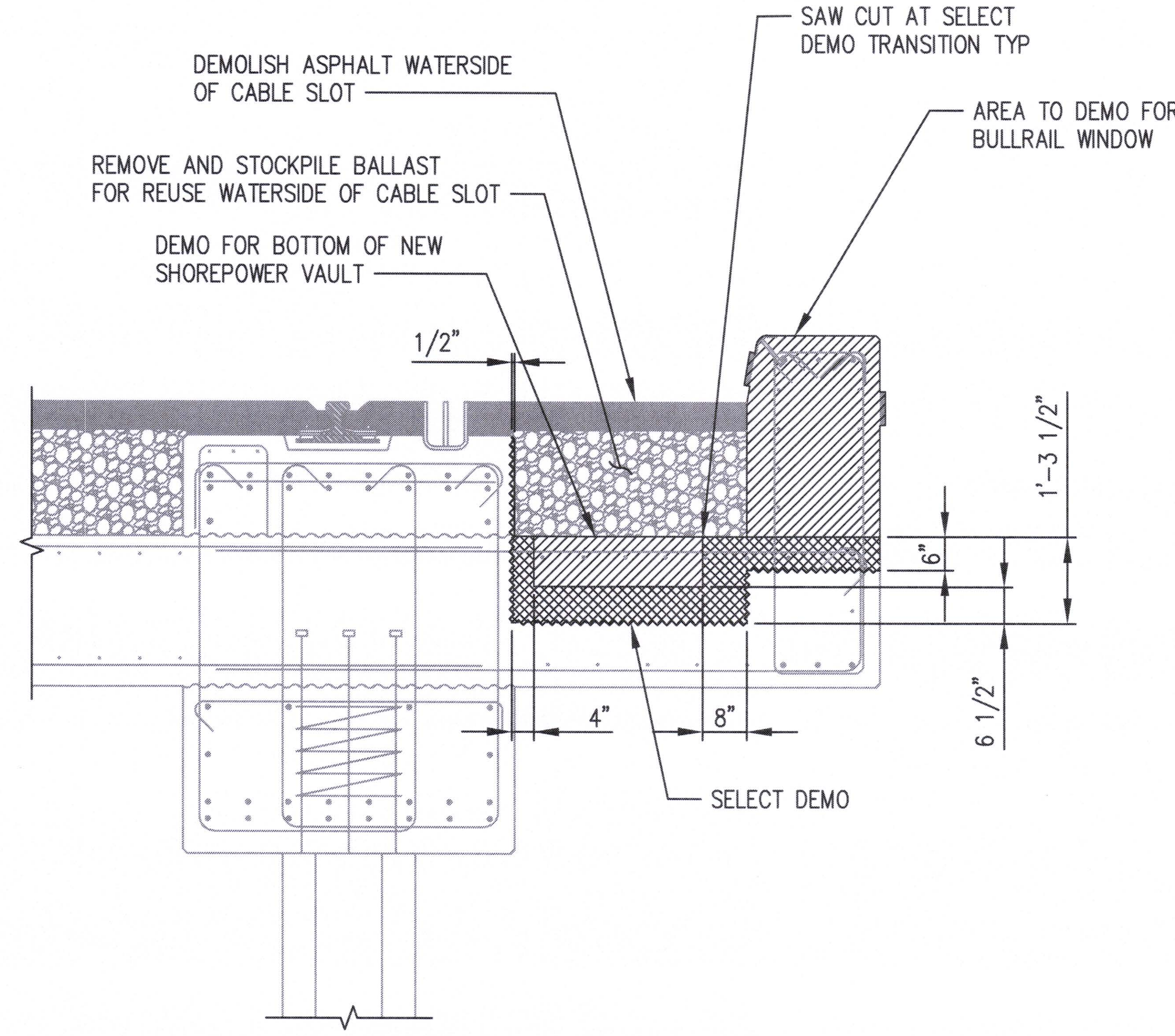
CONT/CONS: 071357

M. ID: 201100.01

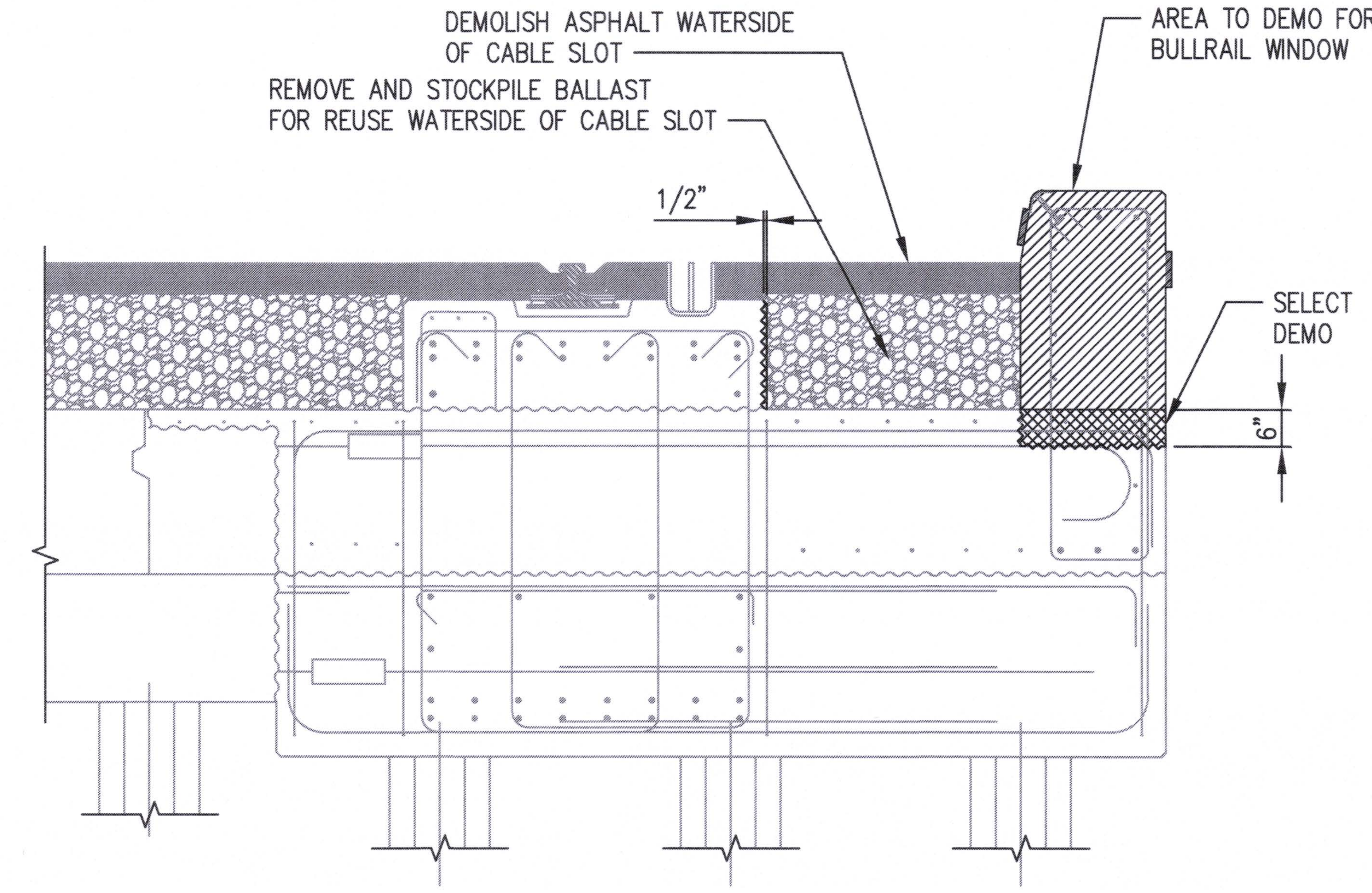
PHASE: BID SET



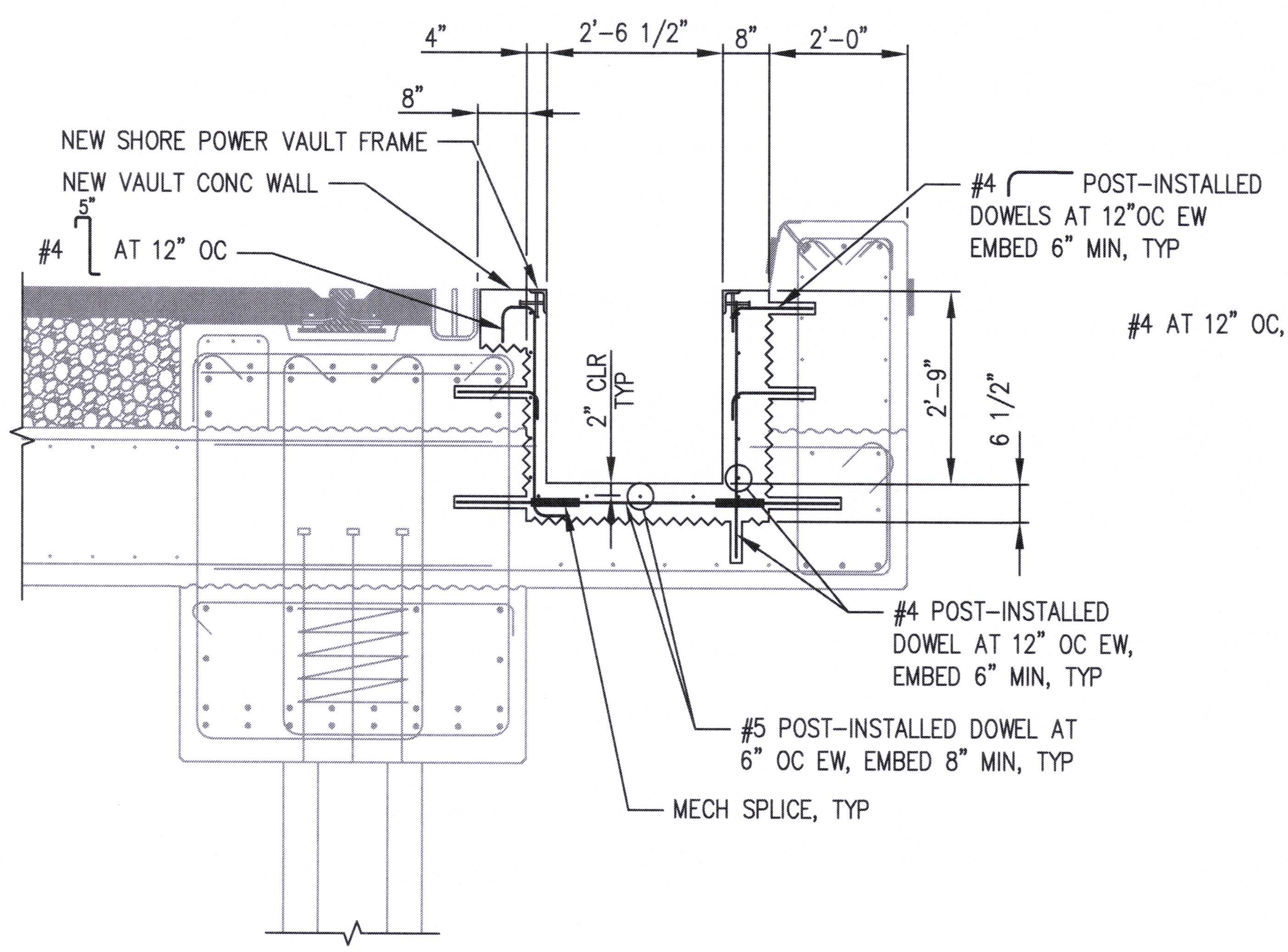
A DEMO SECTION
S6.1, S7.2 SCALE: 1/2" = 1'-0"



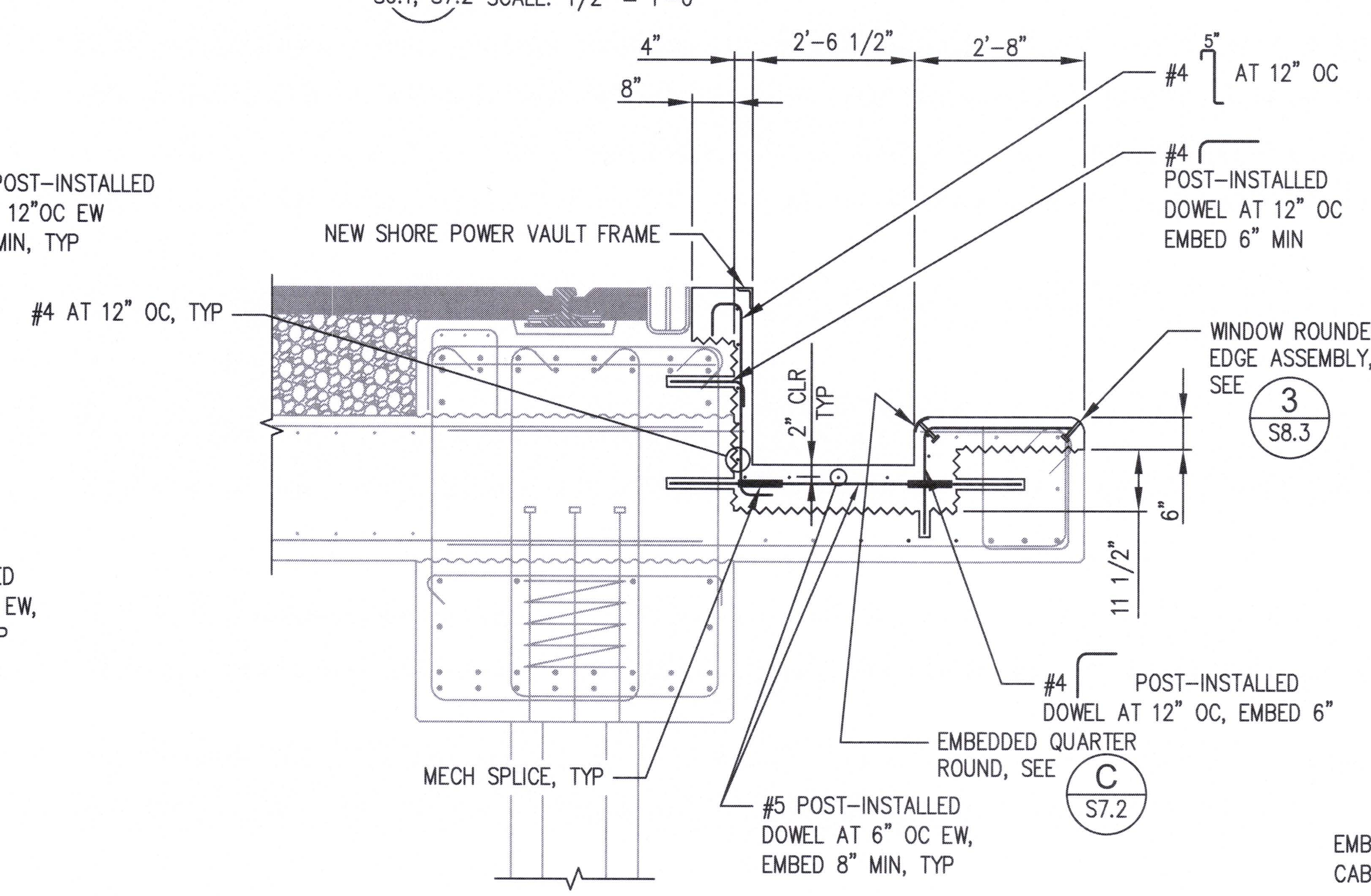
B DEMO SECTION AT BULLRAIL WINDOW
S6.1, S7.2 SCALE: 1/2" = 1'-0"

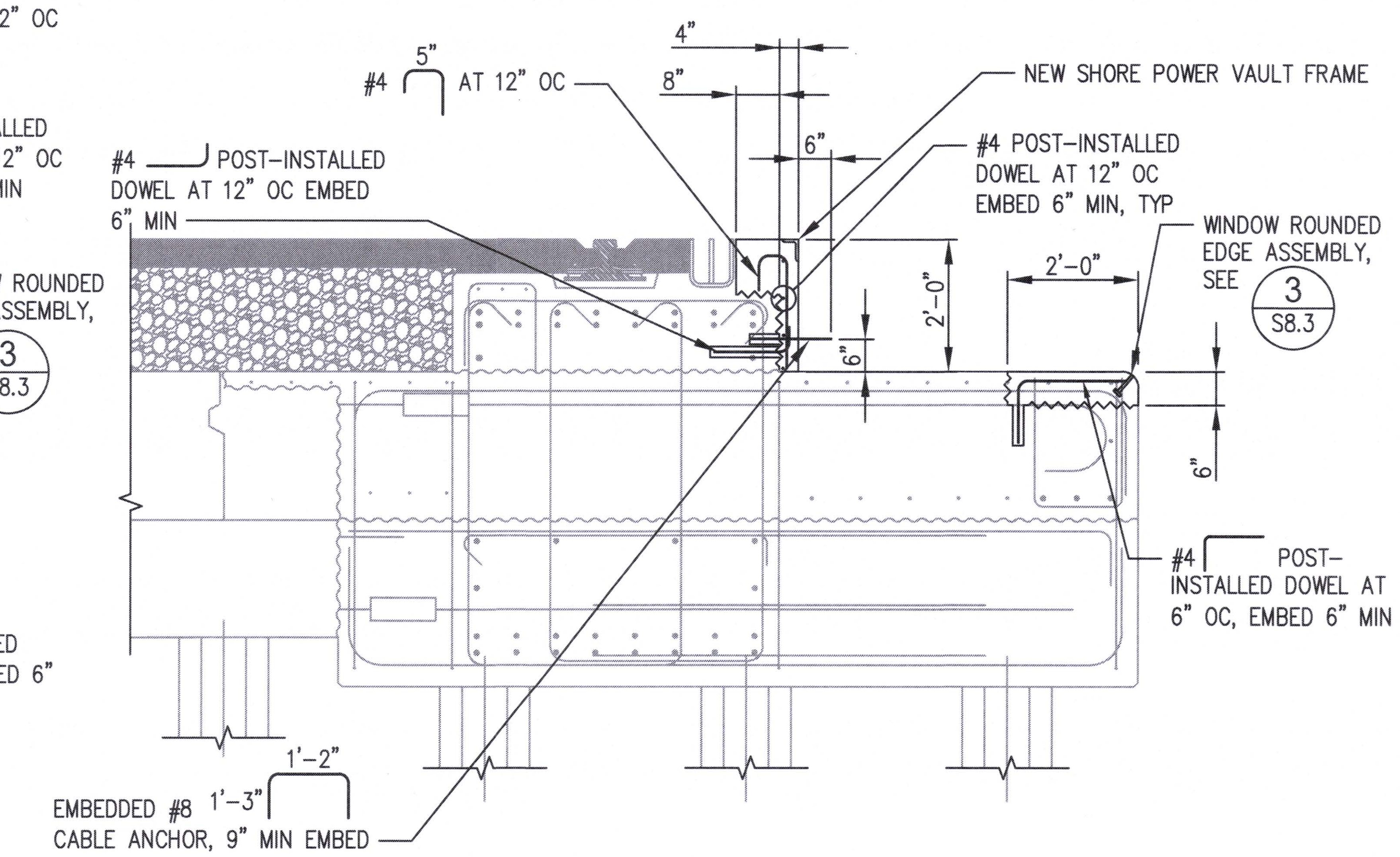


C DEMO SECTION AT BULLRAIL WINDOW AND PILE CAP
S6.1, S7.2 SCALE: 1/2" = 1'-0"



D SECTION WITH BULLRAIL
S6.1, S7.2 SCALE: 1/2" = 1'-0"





E SECTION AT BULLRAIL WINDOW
S6.1, S7.2 SCALE: 1/2" = 1'-0"

F SECTION AT BULLRAIL WINDOW AND PILE CAP
S6.1, S7.2 SCALE: 1/2" = 1'-0"

LEGEND

DEMO

SELECT DEMO

ROUGHEN EXIST EXPOSED CONC PER SPECS

BINDING EDGE

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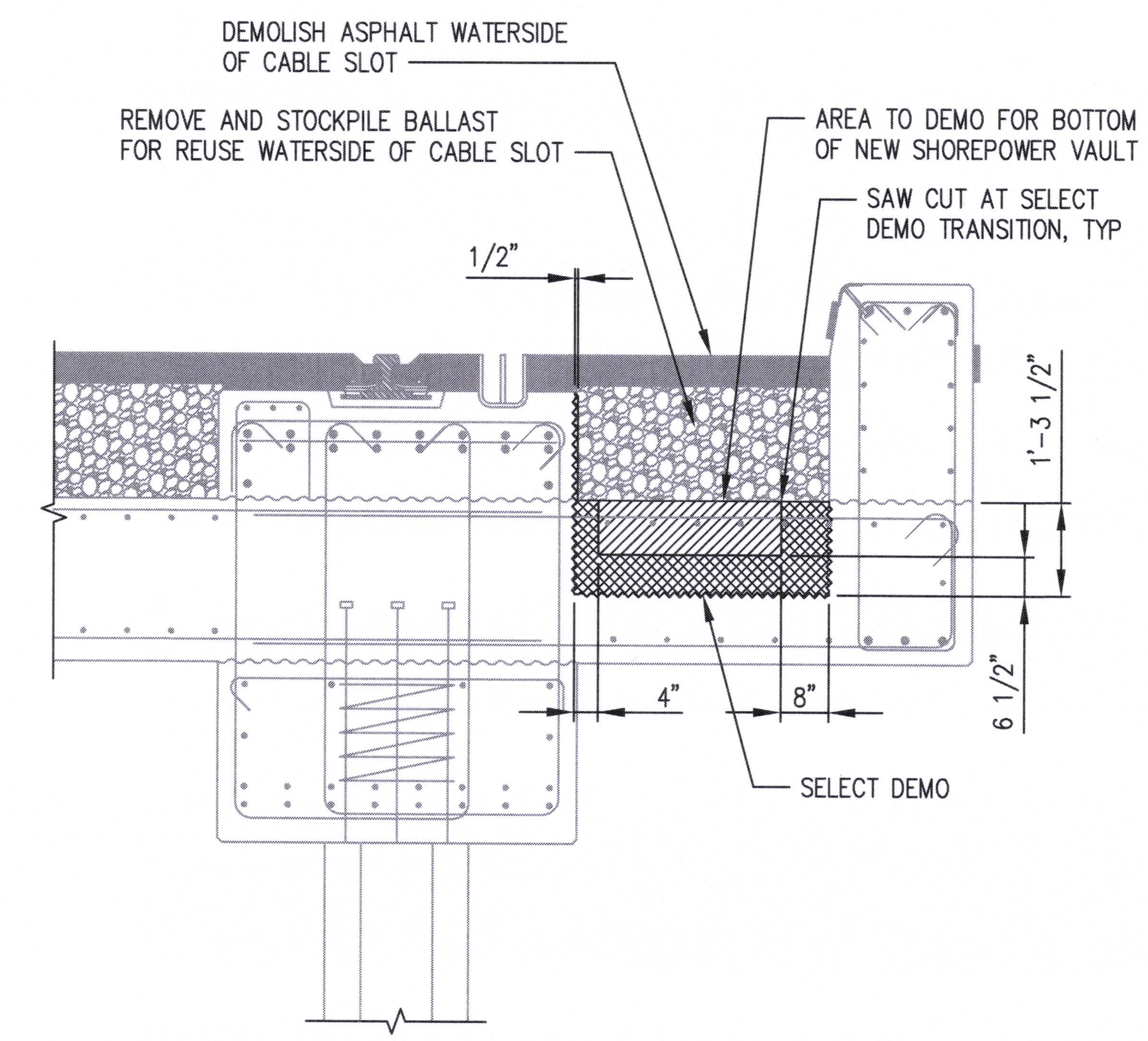
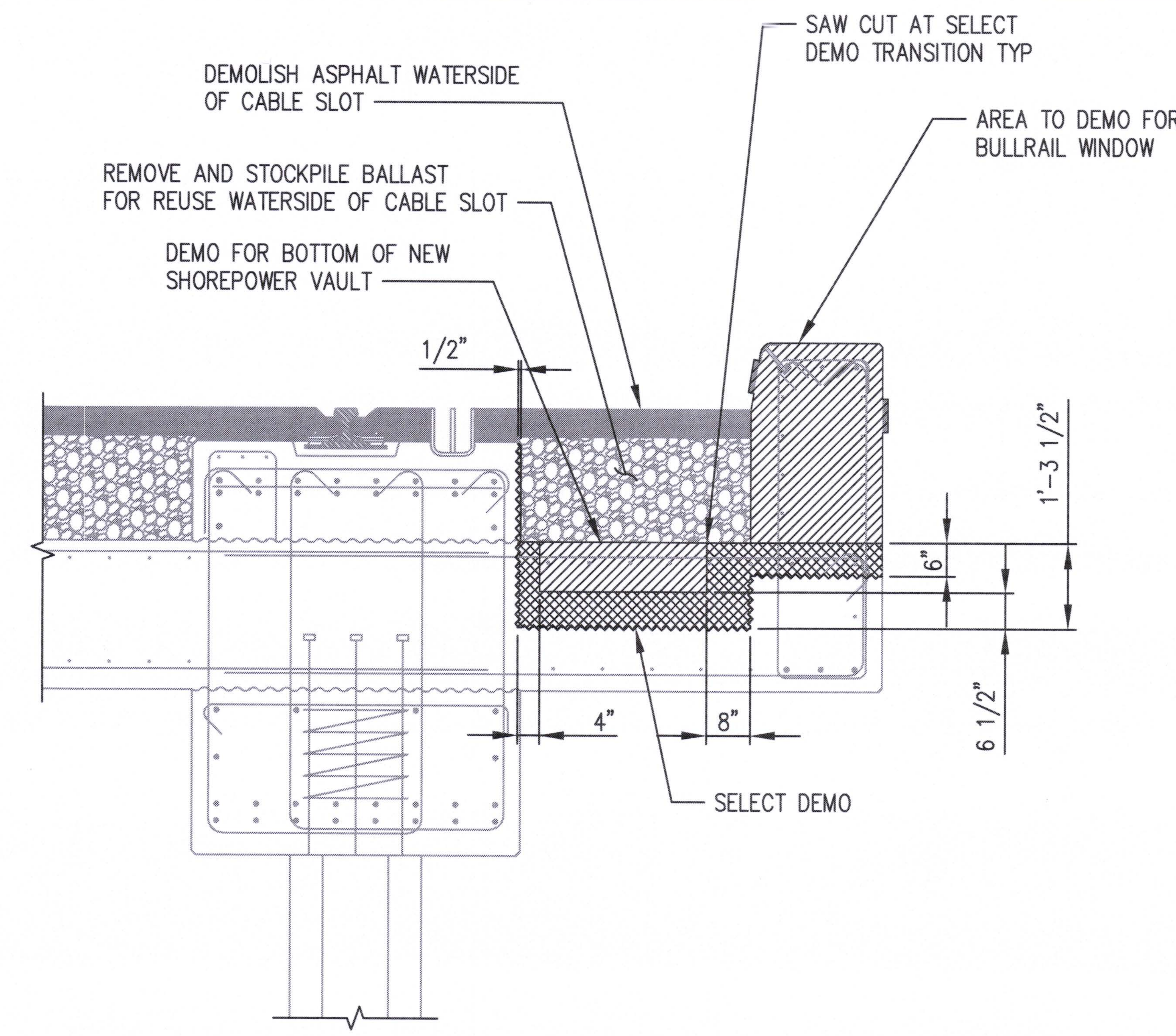
TERMINAL 3 / TERMINAL 4
SHORE POWER
NEW SHORE POWER VAULT SECTIONS
SHEET 1

TOWNSHIP:	RANGE:	SECTION:
DAT-HRZ:	VERT:	
PARCEL:	DRAWING SCALE:	AS NOTED

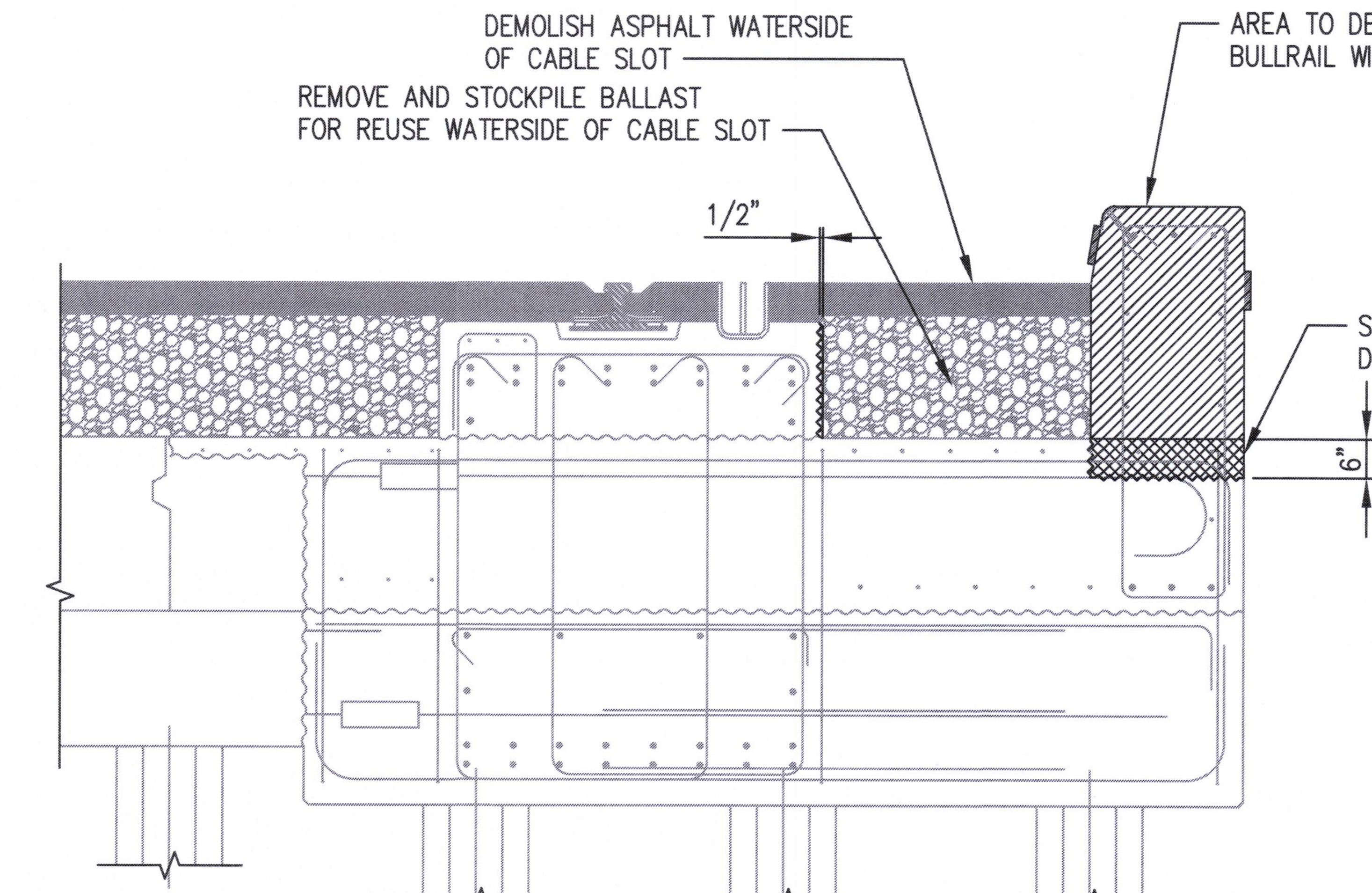
6658
S7.1
79 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET



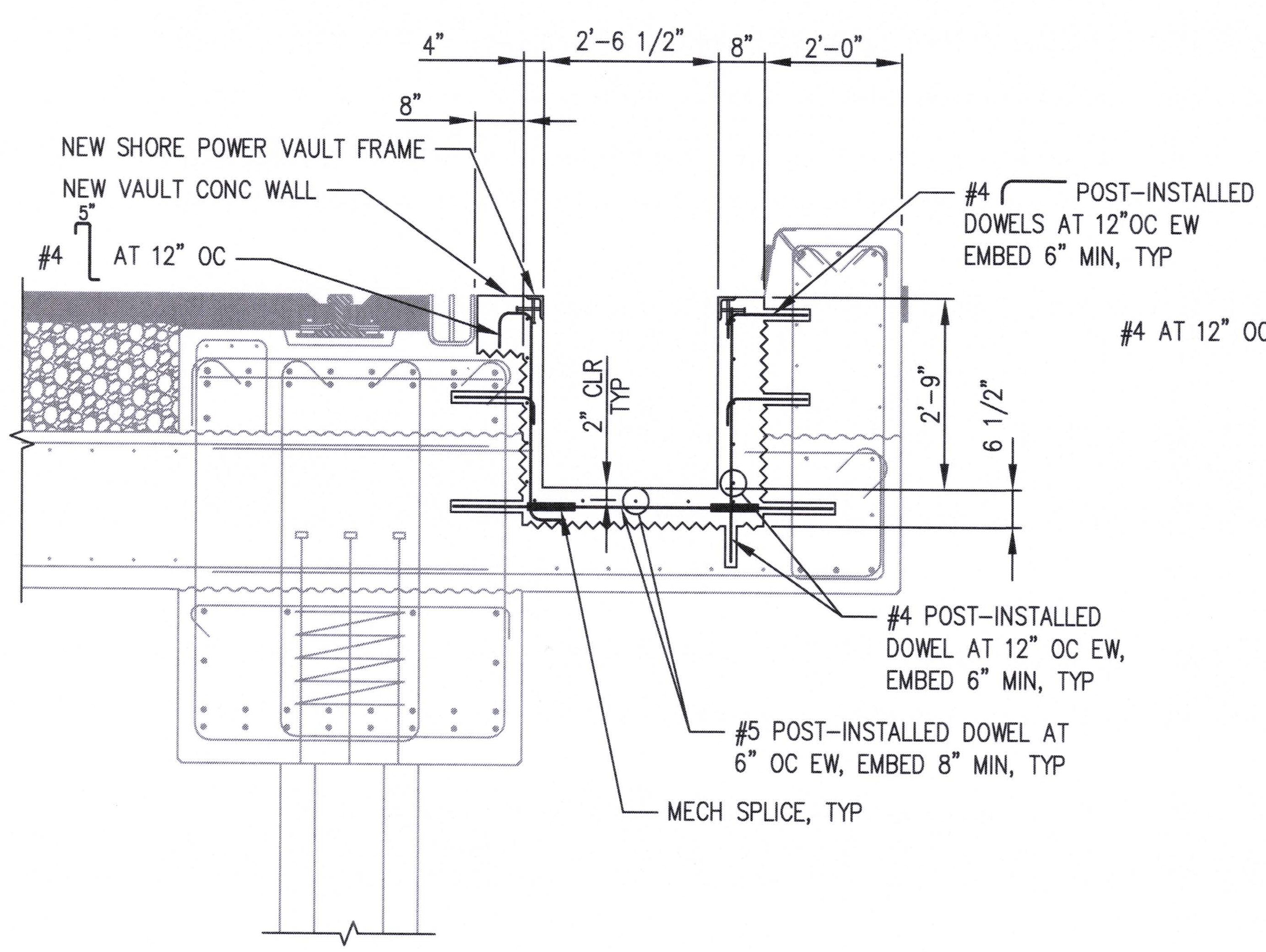
A DEMO SECTION
S6.1, S7.2 SCALE: 1/2" = 1'-0"



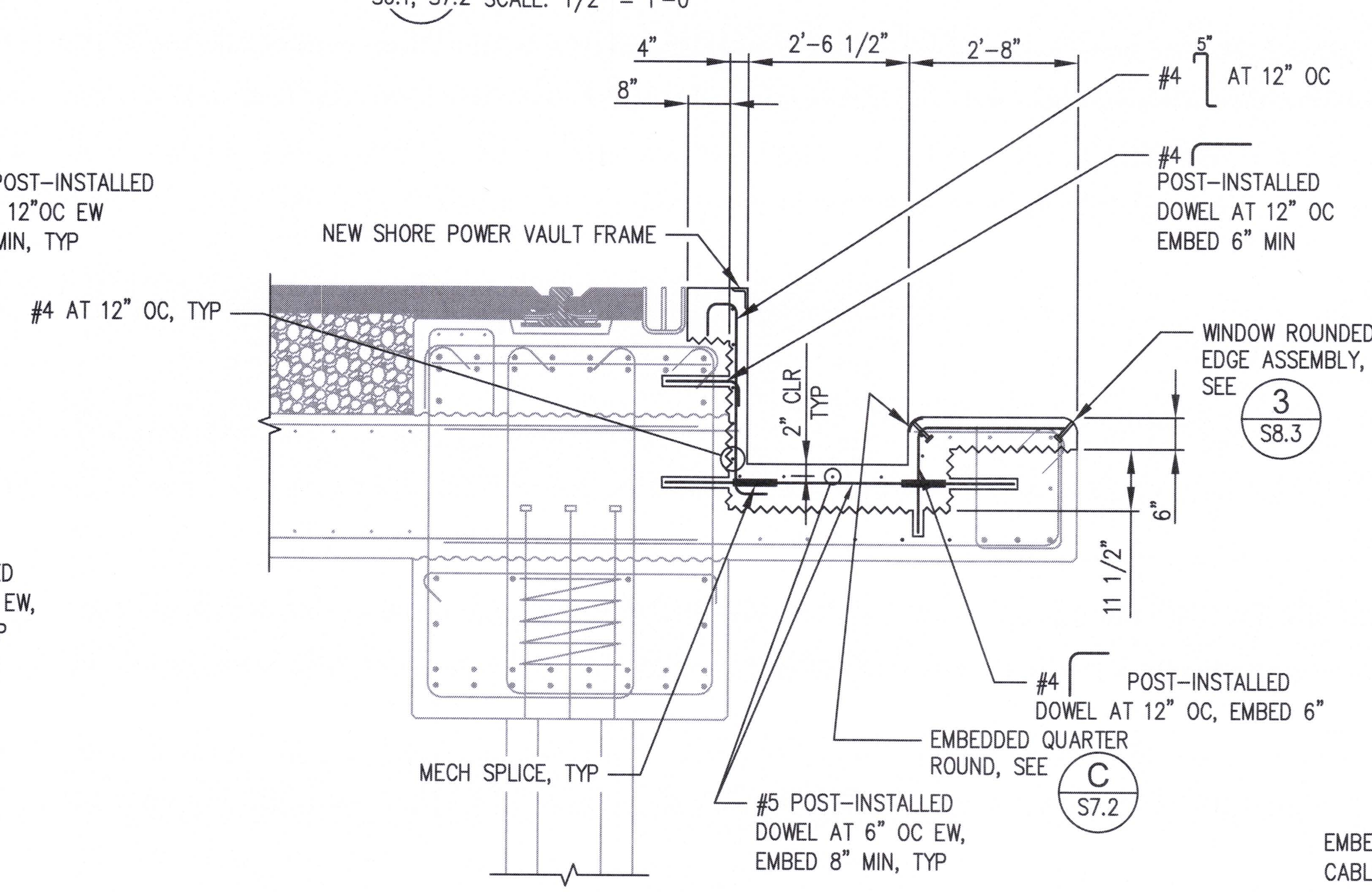
B DEMO SECTION AT BULLRAIL WINDOW
S6.1, S7.2 SCALE: 1/2" = 1'-0"



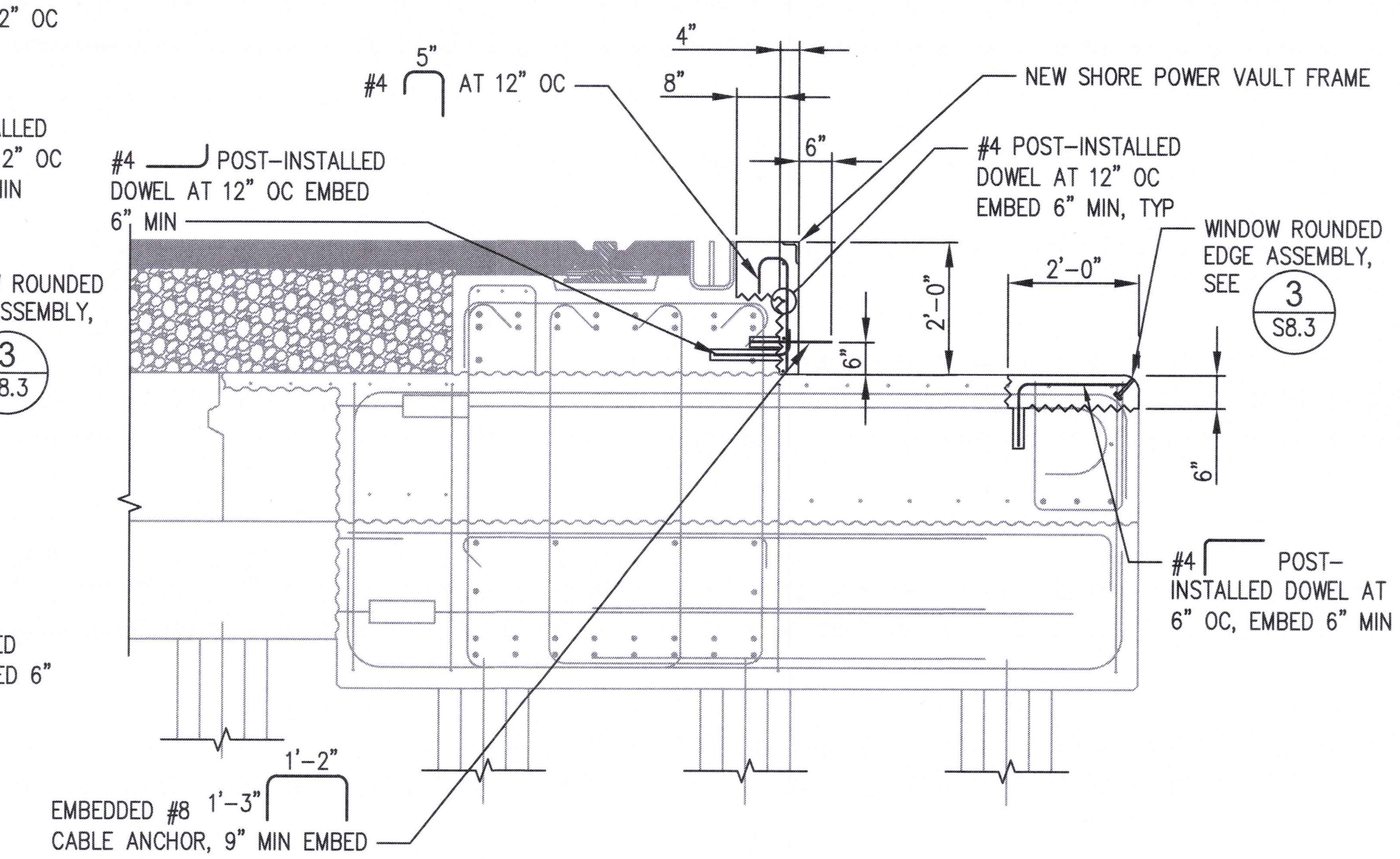
C DEMO SECTION AT BULLRAIL WINDOW AND PILE CAP
S6.1, S7.2 SCALE: 1/2" = 1'-0"



D SECTION WITH BULLRAIL
S6.1, S7.2 SCALE: 1/2" = 1'-0"



E SECTION AT BULLRAIL WINDOW
S6.1, S7.2 SCALE: 1/2" = 1'-0"



F SECTION AT BULLRAIL WINDOW AND PILE CAP
S6.1, S7.2 SCALE: 1/2" = 1'-0"

LEGEND

(hatch)	DEMO
(crosshatch)	SELECT DEMO
(wavy line)	ROUGHEN EXIST EXPOSED CONC PER SPECS

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TERMINAL 3 / TERMINAL 4
SHORE POWER
NEW SHORE POWER VAULT SECTIONS
SHEET 1

TOWNSHIP: RANGE: SECTION:
DAT-HRZ: VERT: DRAWING SCALE: AS NOTED
PARCEL:

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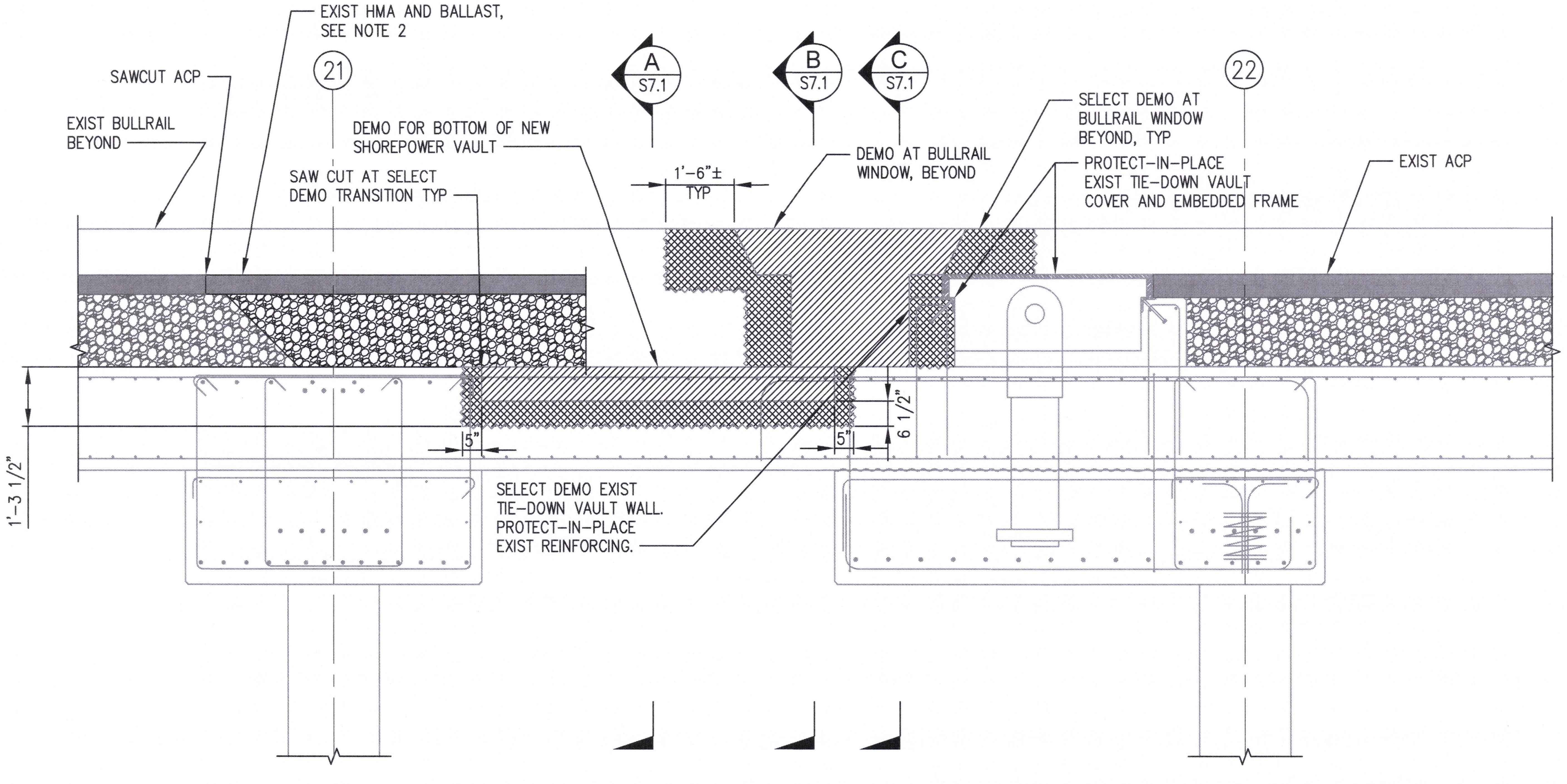
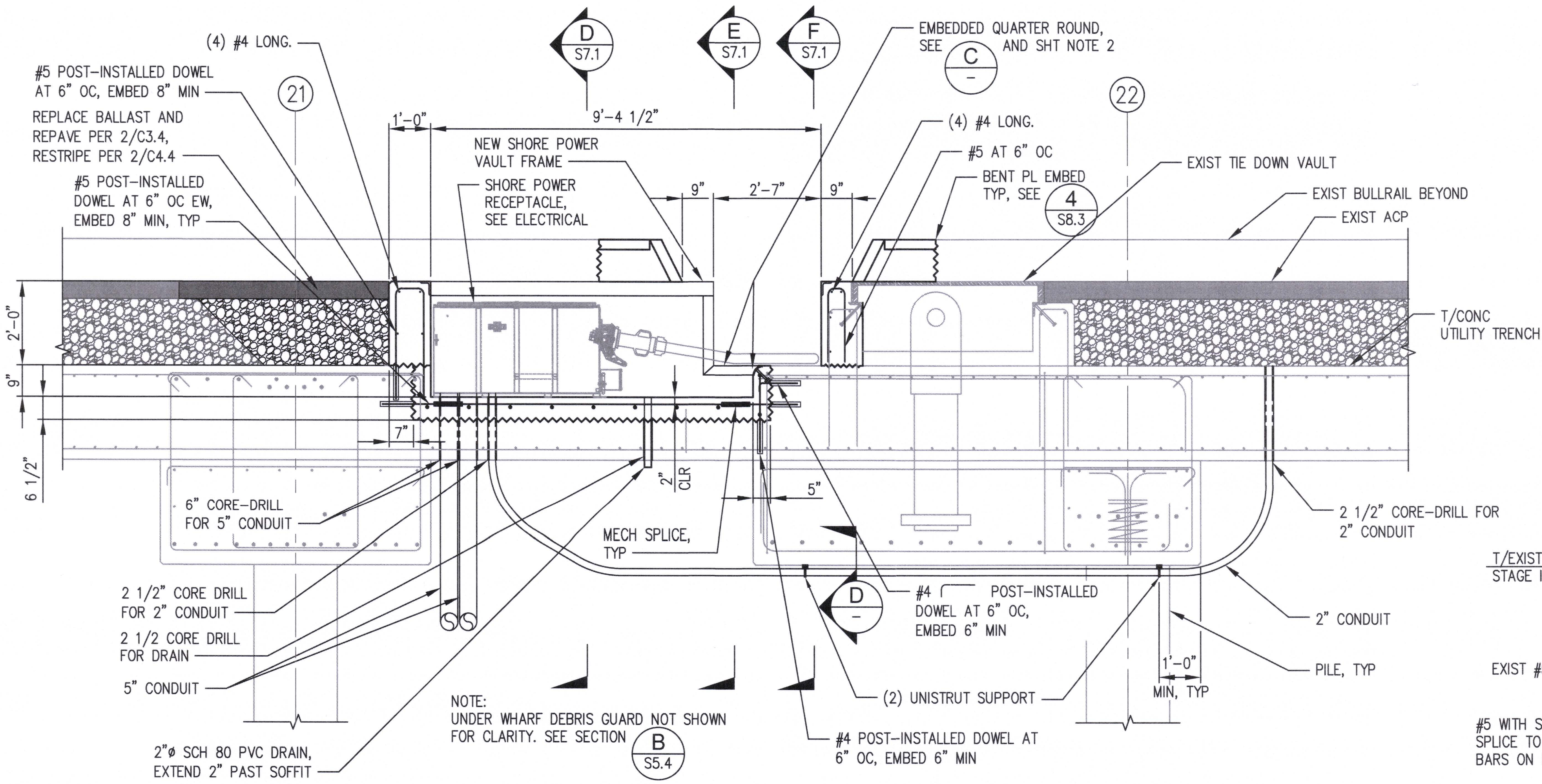
S7.1
79 OF 83
CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET

BINDING EDGE



A S6.1 **DEMOLITION SECTION**
SCALE: 1/2" = 1'-0"



B S6.1 **SECTION AT NEW SHORE POWER VAULT**
SCALE: 1/2" = 1'-0"

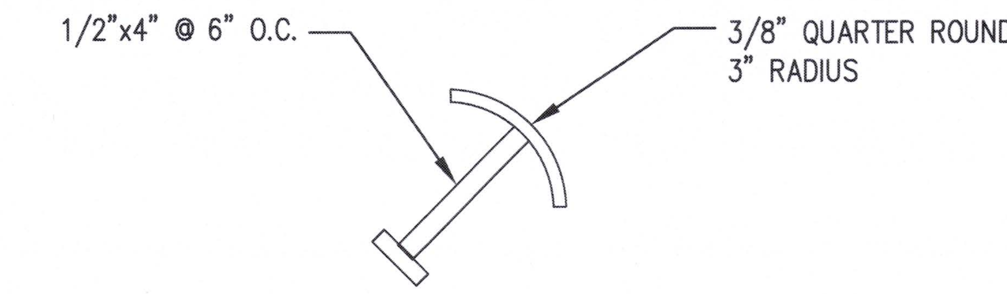
NOTES

1. MITER CONNECTION AT CORNERS.
2. EXIST HMA AND BALLAST EXTENDS TO EXIST TIE DOWN VAULT, HATCH NOT SHOWN FOR CLARITY. DEMO EXTENTS OF HMA AND BALLAST SHALL BE 3' FROM THE NORTH FACE OF THE NEW SHORE POWER VAULT WALL TO THE TOE OF THE BALLAST AND 6" FROM THE TOP OF THE BALLAST TO THE EDGE OF THE HMA SAWCUT. REPAVE PER DETAIL 2/C3.4

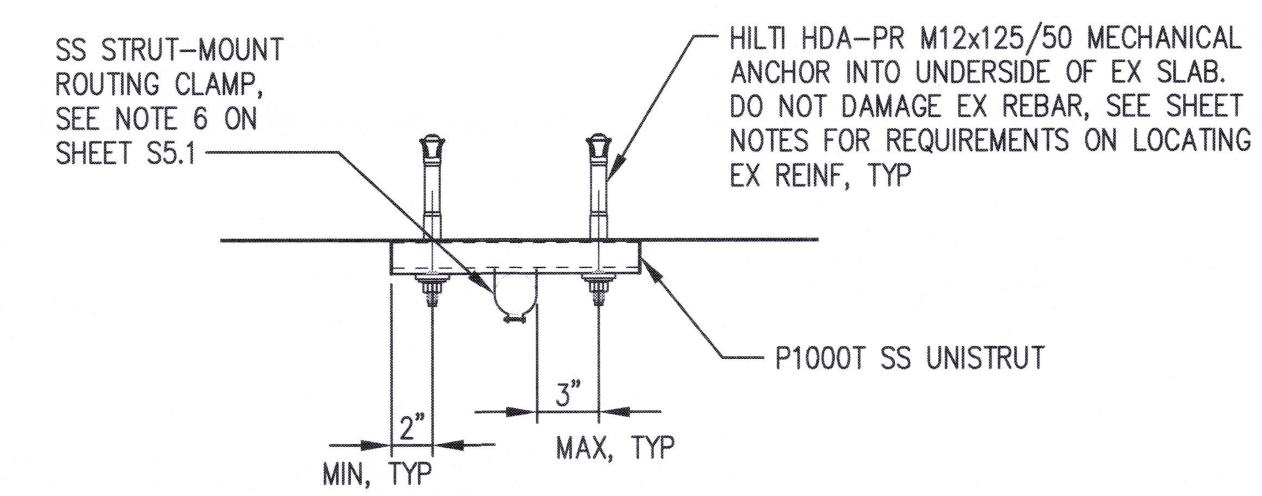
LEGEND

DEMO

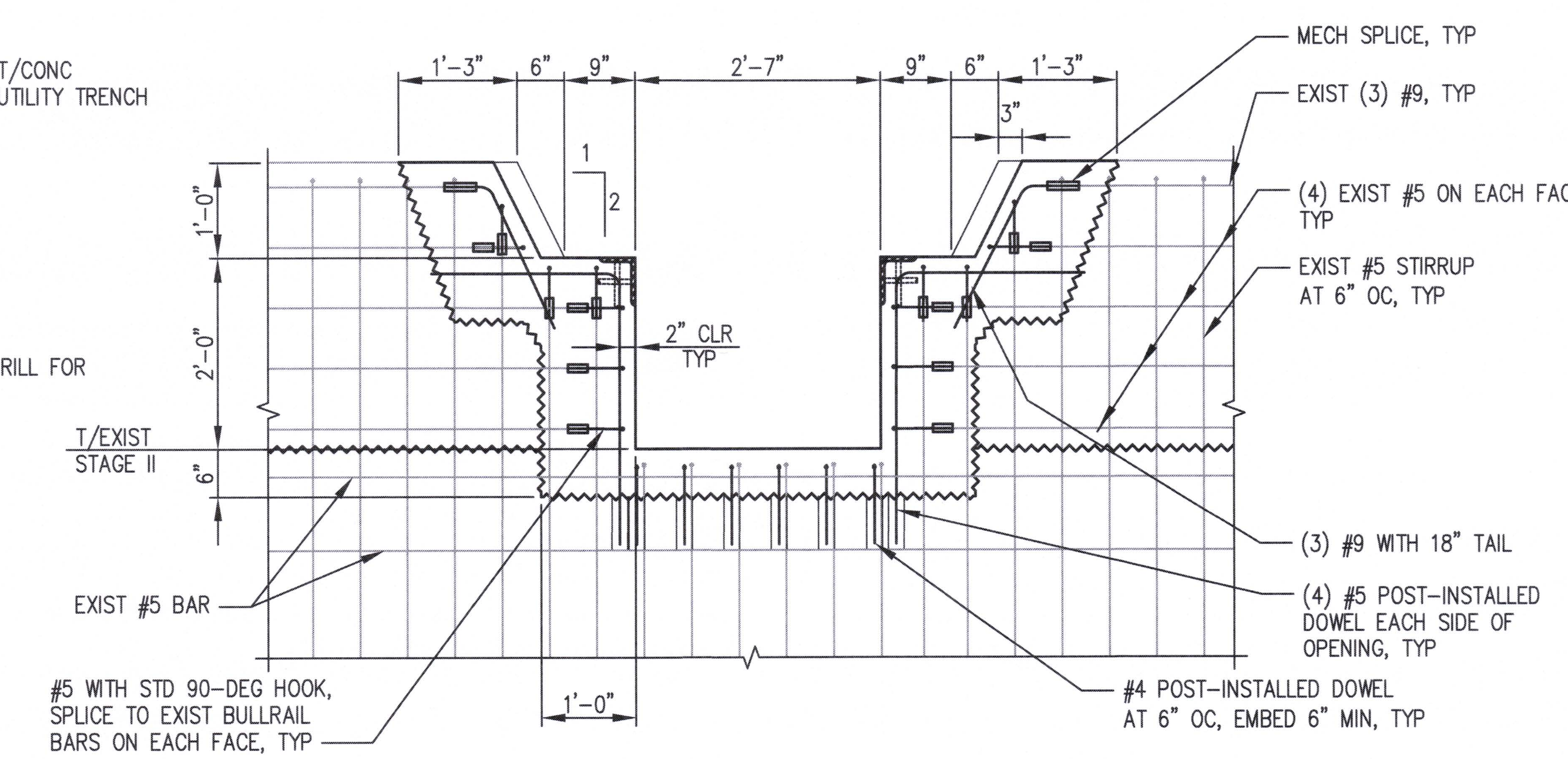
SELECT DEMO



C – **DETAIL - QUARTER ROUND EMBED**
SCALE: 3" = 1'-0"



D – **UNISTRUT SUPPORT DETAIL**
SCALE: 1 1/2" = 1'-0"



E S6.1 **SECTION - BULLRAIL BUILD BACK**
SCALE: 3/4" = 1'-0"

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TERMINAL 3 / TERMINAL 4
SHORE POWER
NEW SHORE POWER VAULT SECTIONS
SHEET 2

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT: | DRAWING SCALE: AS NOTED
PARCEL:

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S7.2
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CONT/CONS: 071357
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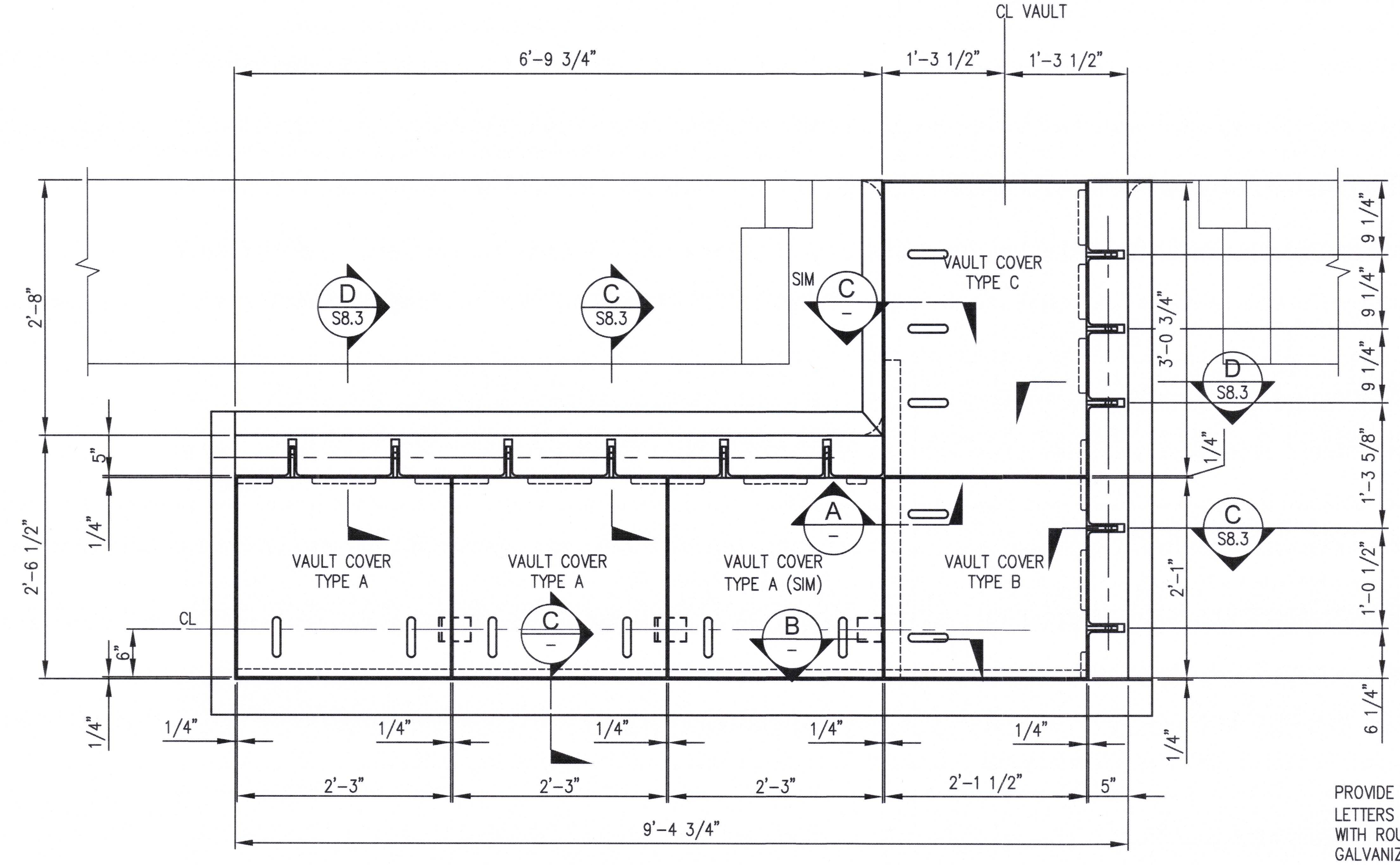
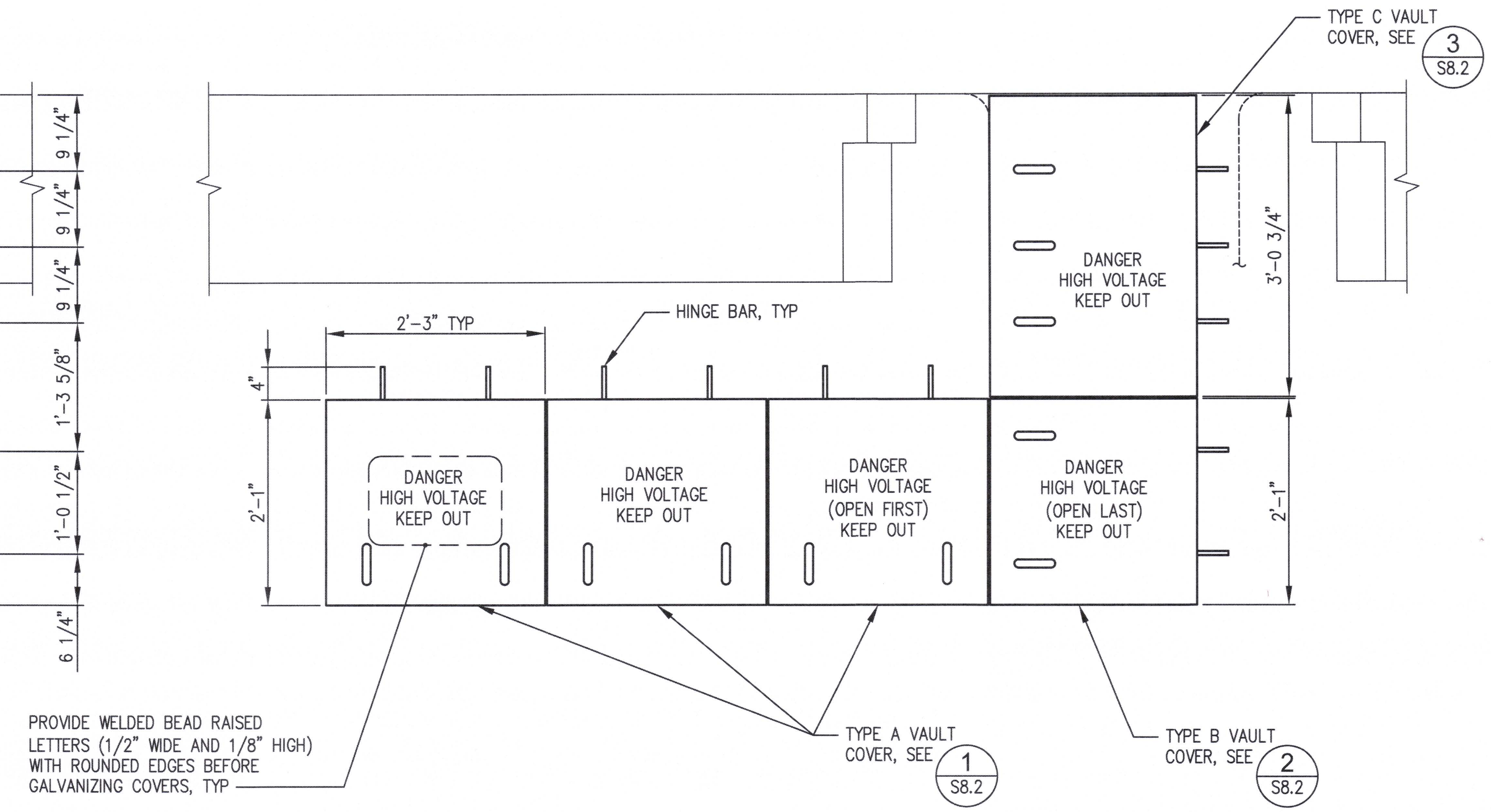
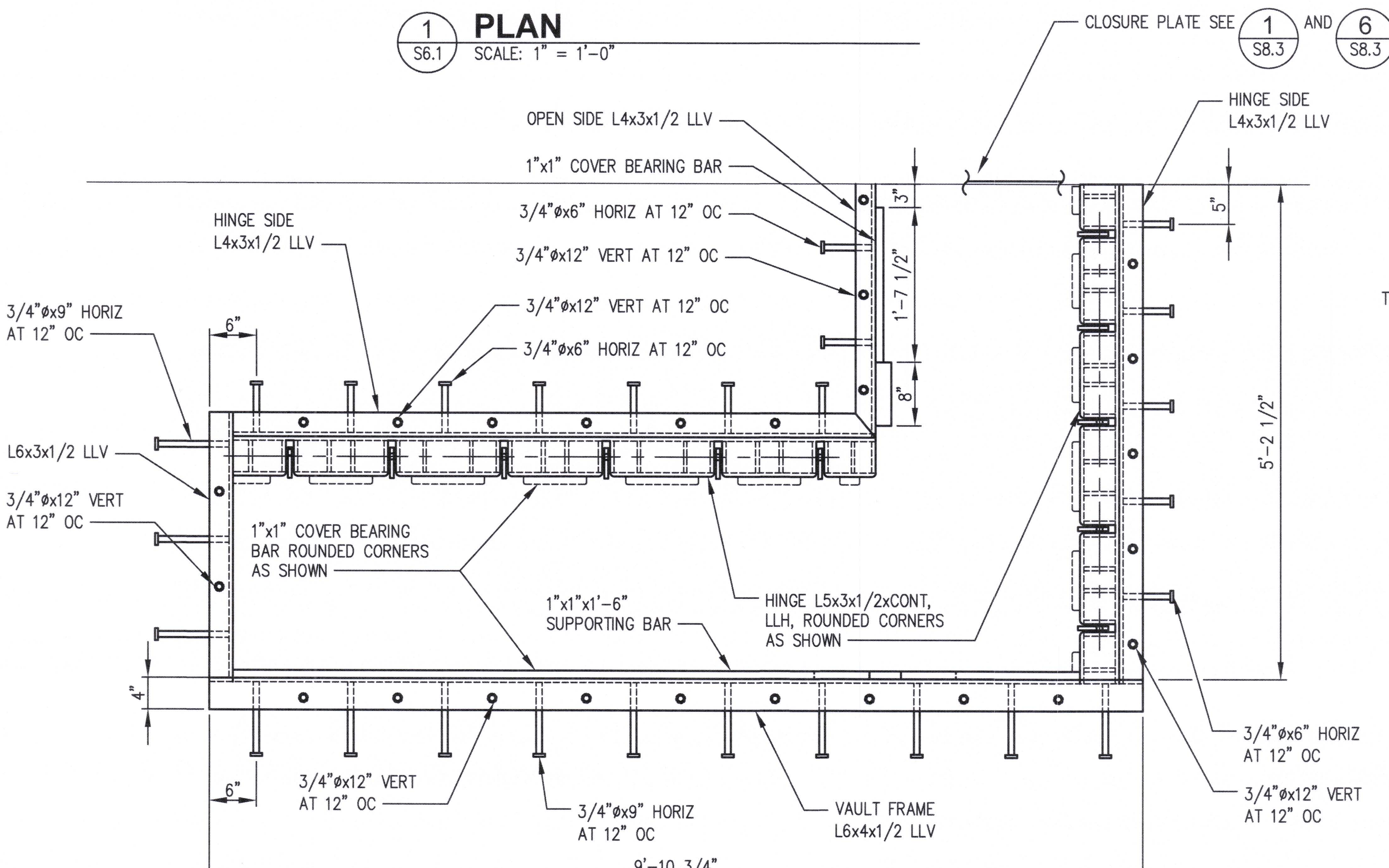


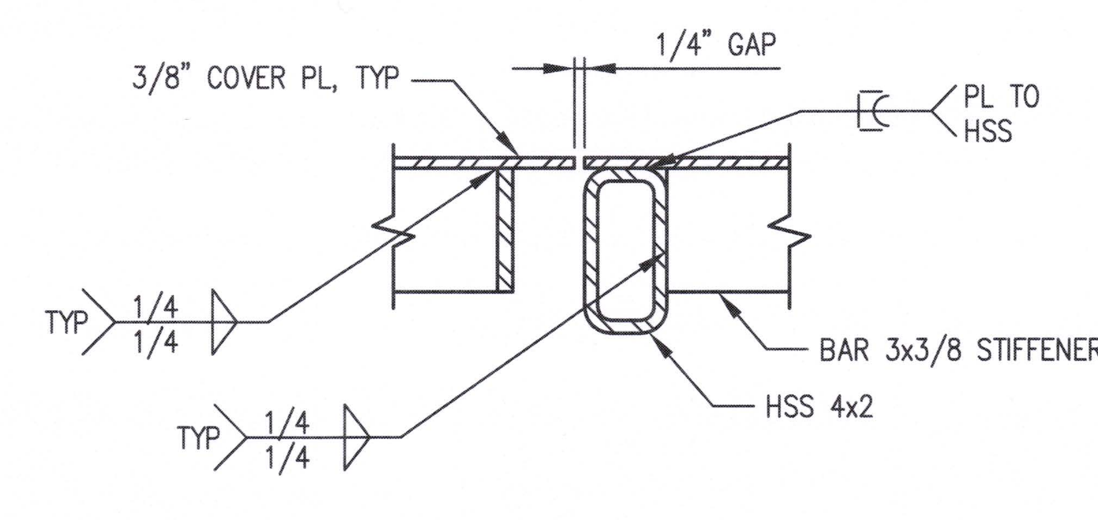
1 PLAN
S6.1 SCALE: 1" = 1'-0"



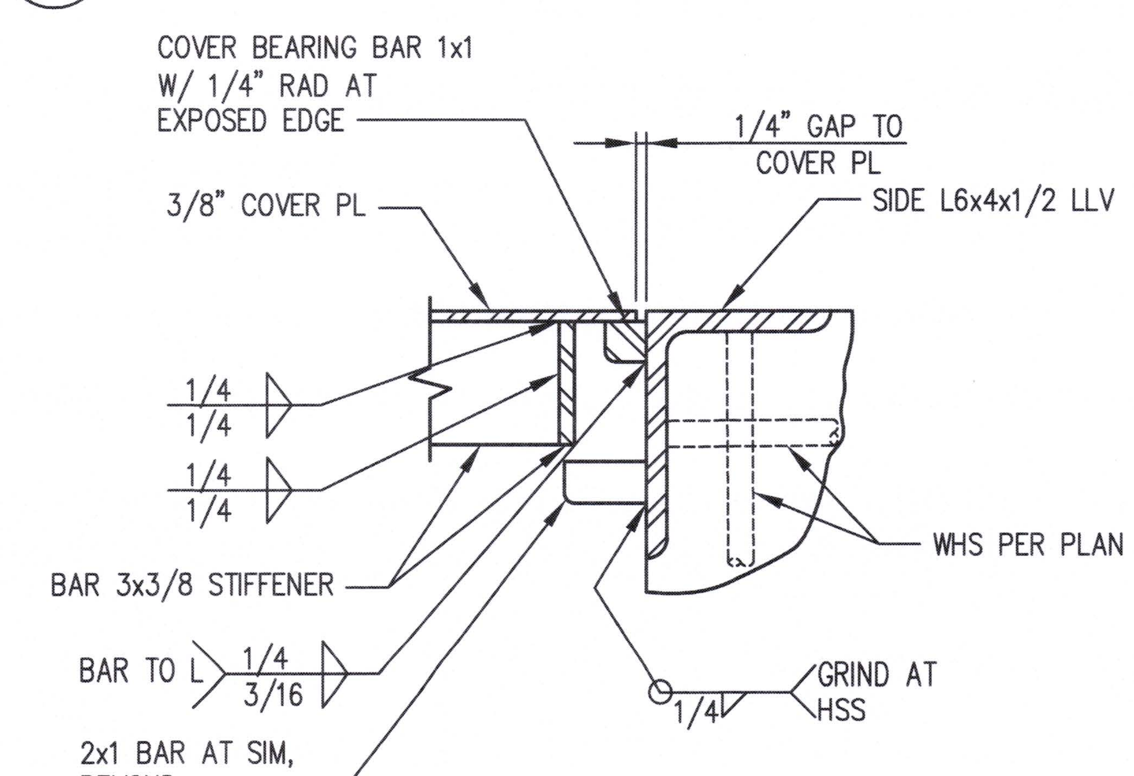
1 PLAN - COVERS
SCALE: 1" = 1'-0"



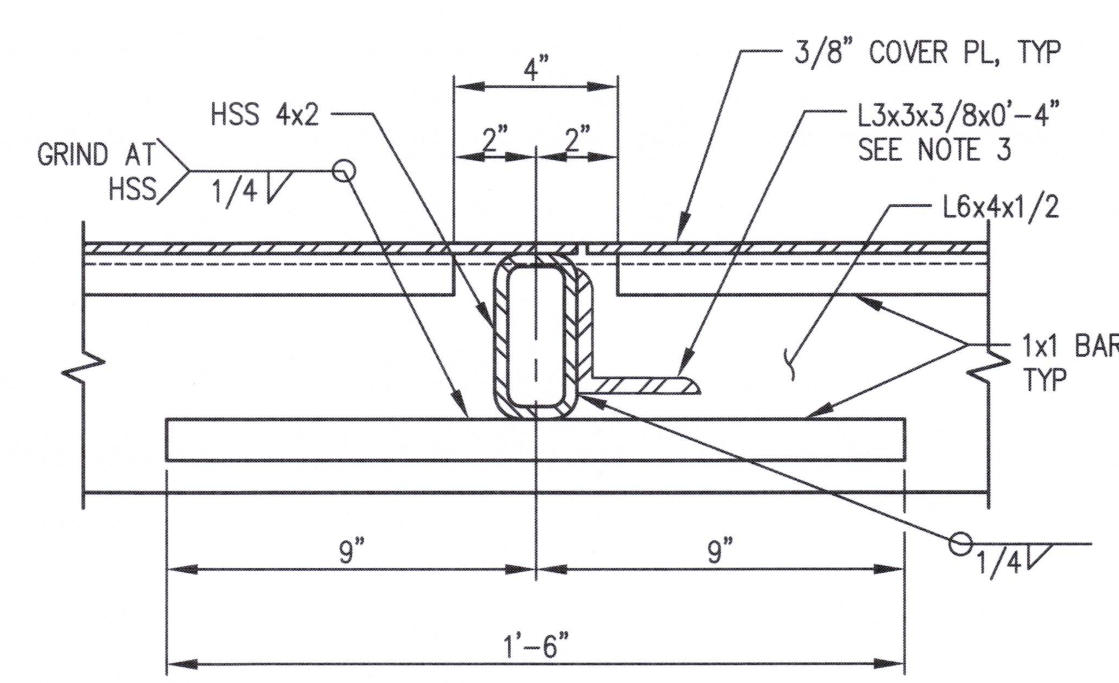
3 PLAN - FRAME
S6.1 SCALE: 1" = 1'-0"



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



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



B SECTION
SCALE: 3" = 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.
3. POSITION ANGLE VERTICALLY SUCH THAT ADJACENT LID HAS 1/8" CLEARANCE FROM TOP FACE OF ANGLE TO BOTTOM OF STIFFENER.

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TERMINAL 3 / TERMINAL 4
SHORE POWER
NEW SHORE POWER VAULT DETAILS
SHEET 1

SECTION: | TOWNSHIP: | RANGE:
DAT-HRZ: | VERT:
PARCEL:
DRAWING SCALE: AS NOTED

6658
S8.1
81 OF 83
CONT/CONS: 071357
M. ID: 201100.01
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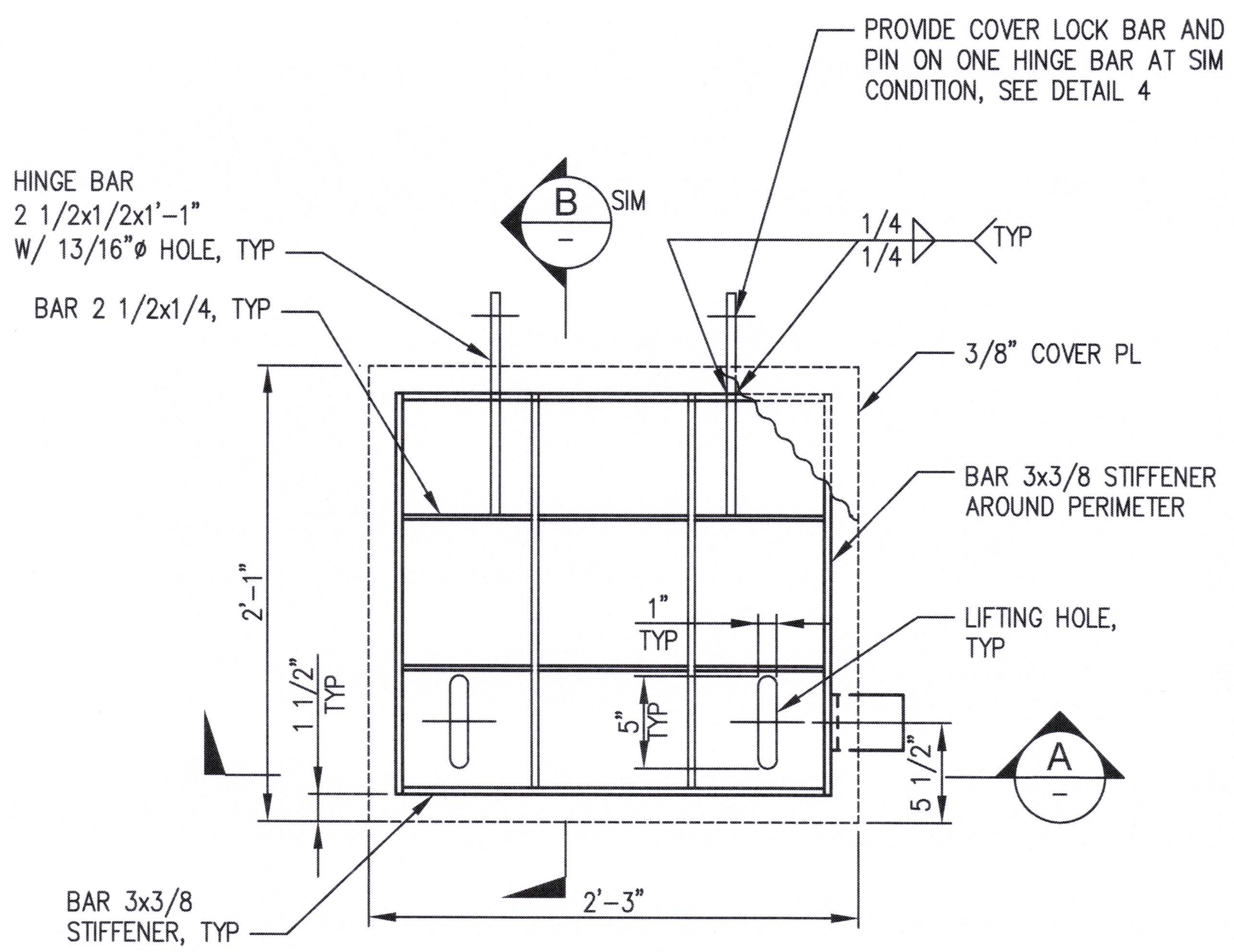
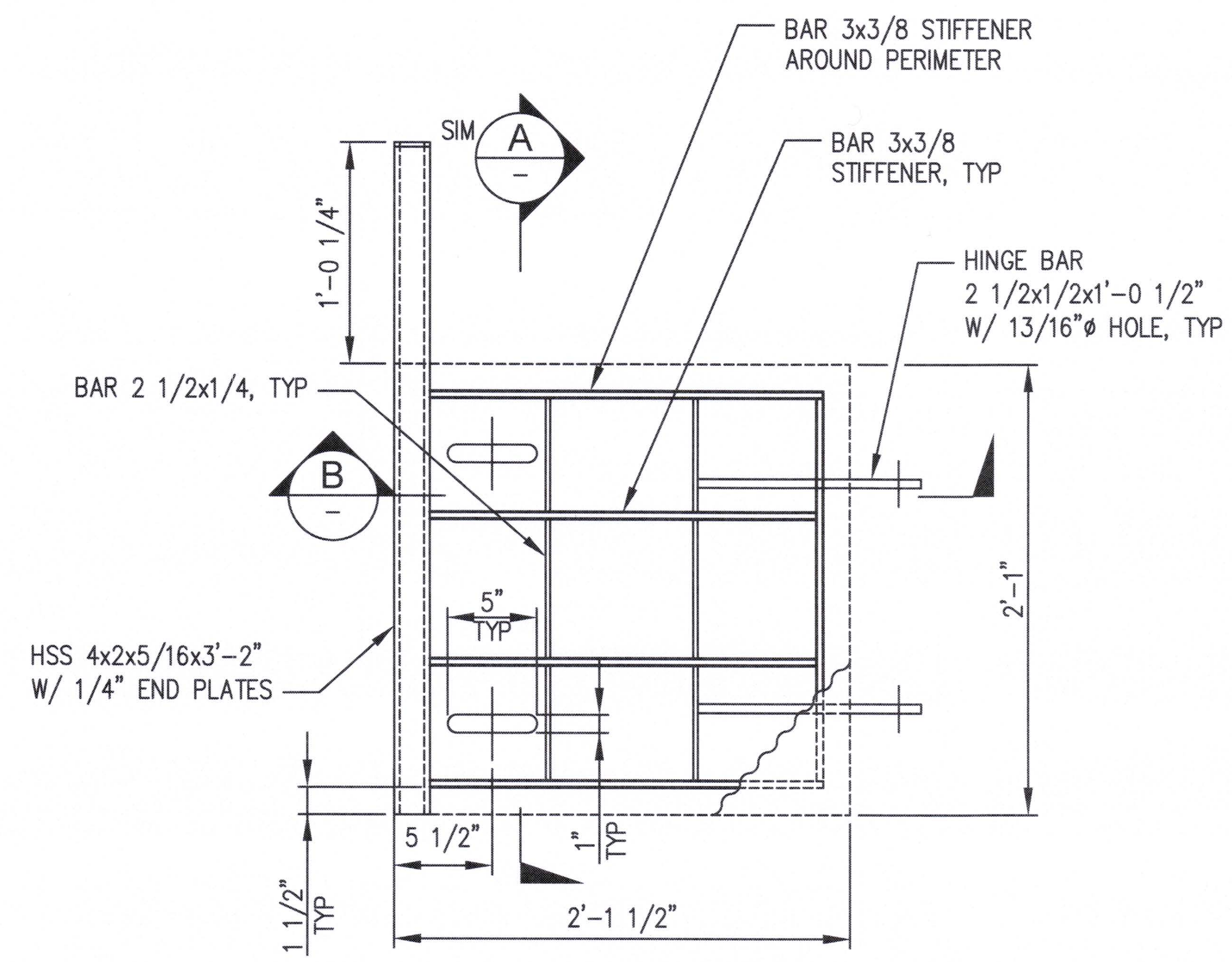
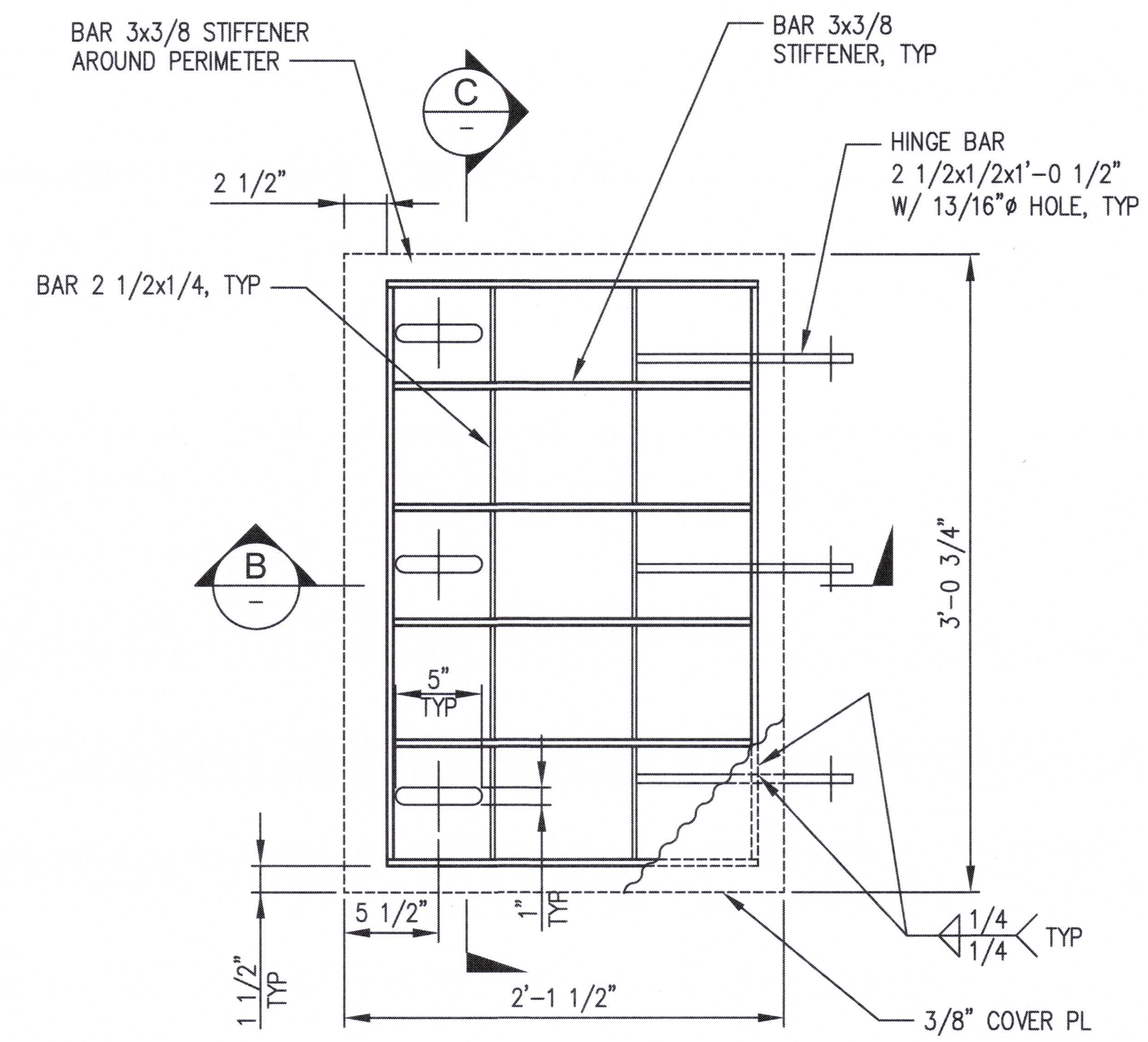


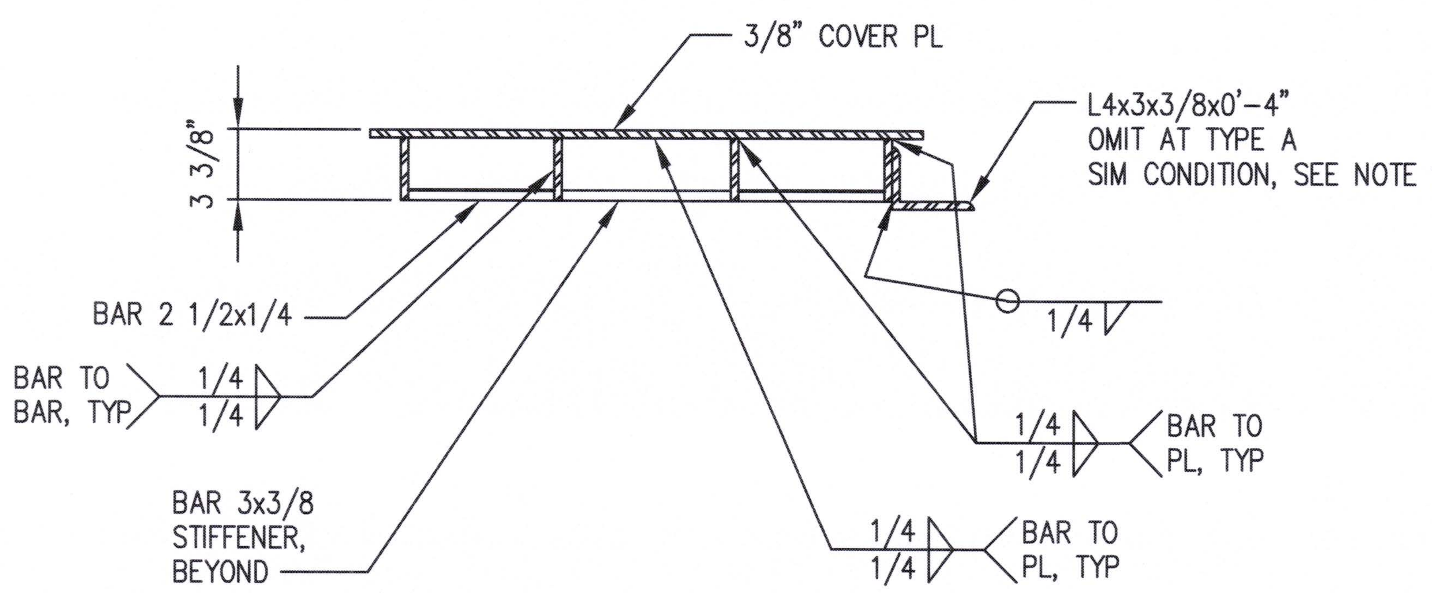
1 S8.1 **DETAIL - VAULT COVER (TYPE A)**
SCALE: 1 1/2" = 1'-0"



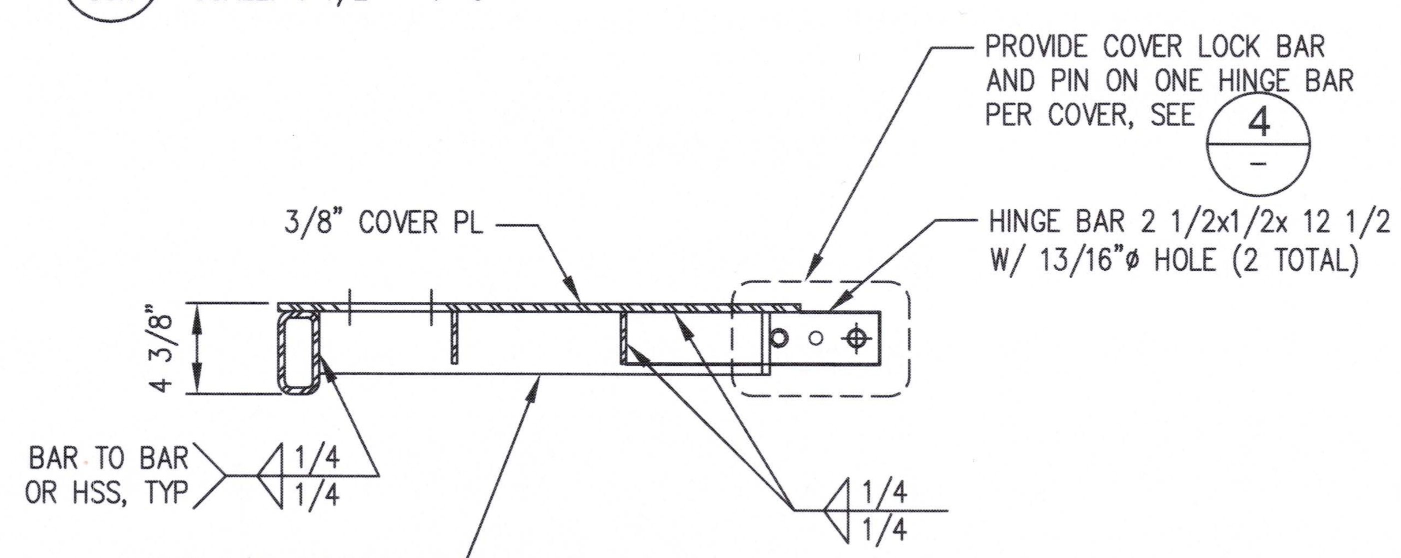
2 S8.1 **DETAIL - VAULT COVER (TYPE B)**
SCALE: 1 1/2" = 1'-0"



3 S8.1 **DETAIL - VAULT COVER (TYPE C)**
SCALE: 1 1/2" = 1'-0"

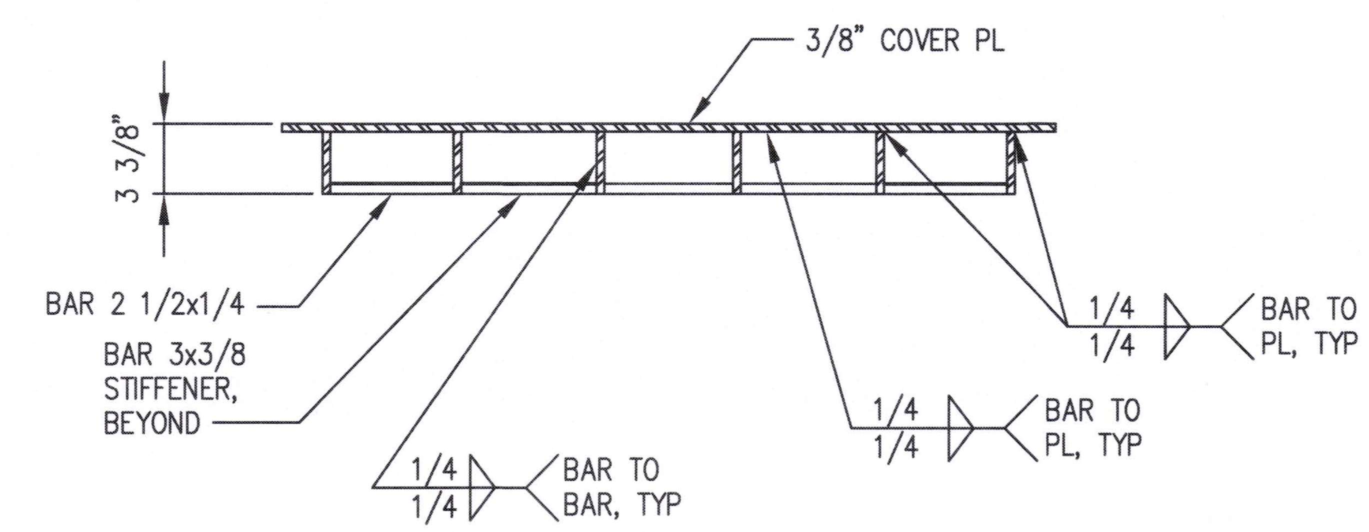


A **SECTION**
SCALE: 1 1/2" = 1'-0"

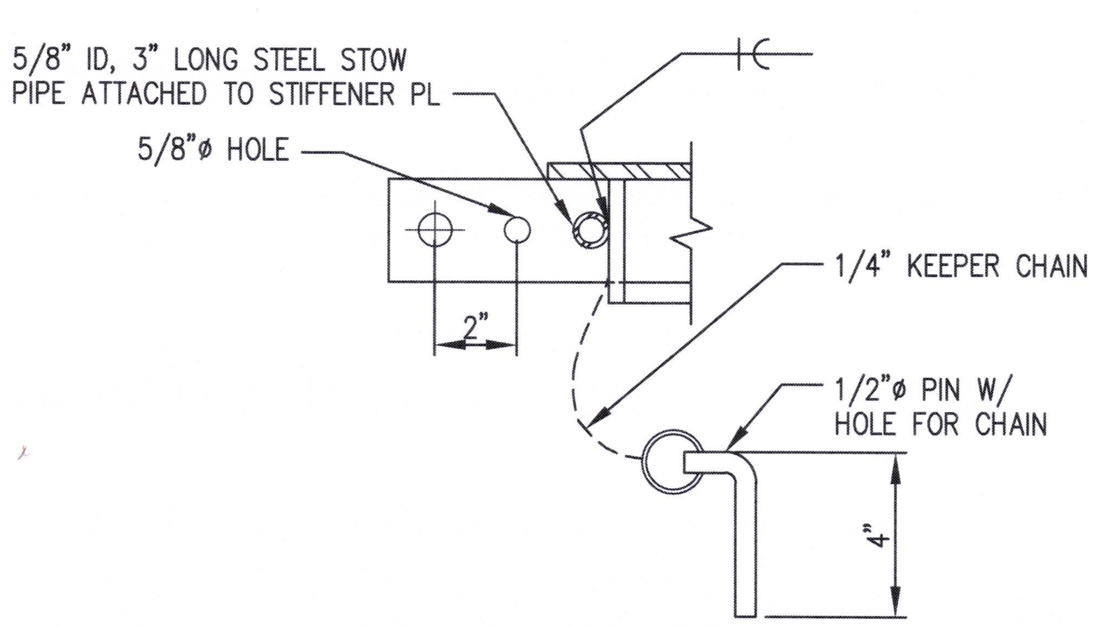


NOTE:
FOR INFORMATION NOT SHOWN, SEE 4

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



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



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

NOTES

1. POSITION ANGLE VERTICALLY SUCH THAT ADJACENT LID HAS 1/8" CLEARANCE FROM TOP FACE OF ANGLE TO BOTTOM OF STIFFENER.

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TERMINAL 3 / TERMINAL 4
SHORE POWER
NEW SHORE POWER VAULT DETAILS
SHEET 2

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: | VERT:
PARCEL: | DRAWING SCALE: AS NOTED

6658
S8.2
82 OF 83
CONT/CONS: 071357
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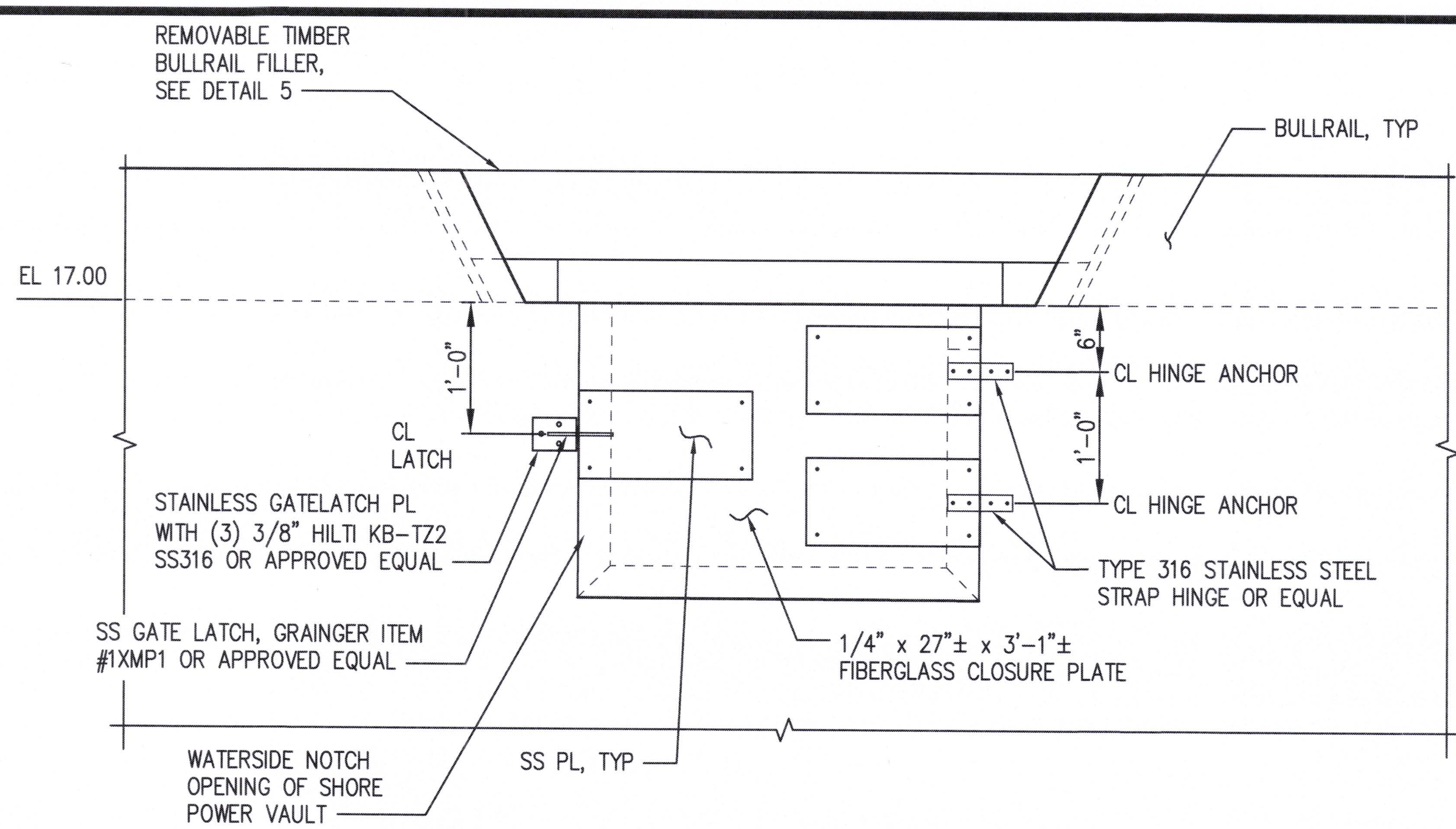
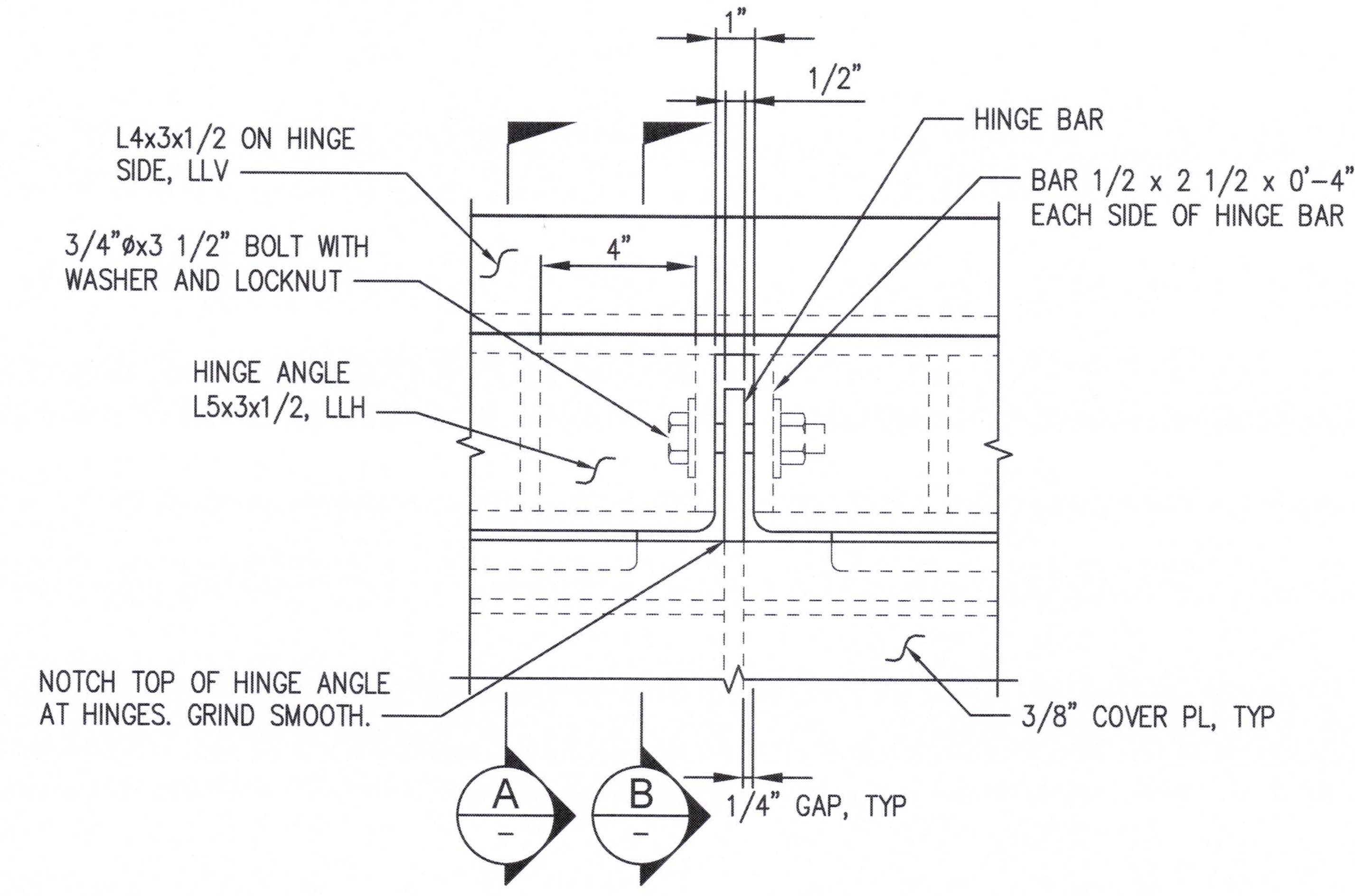
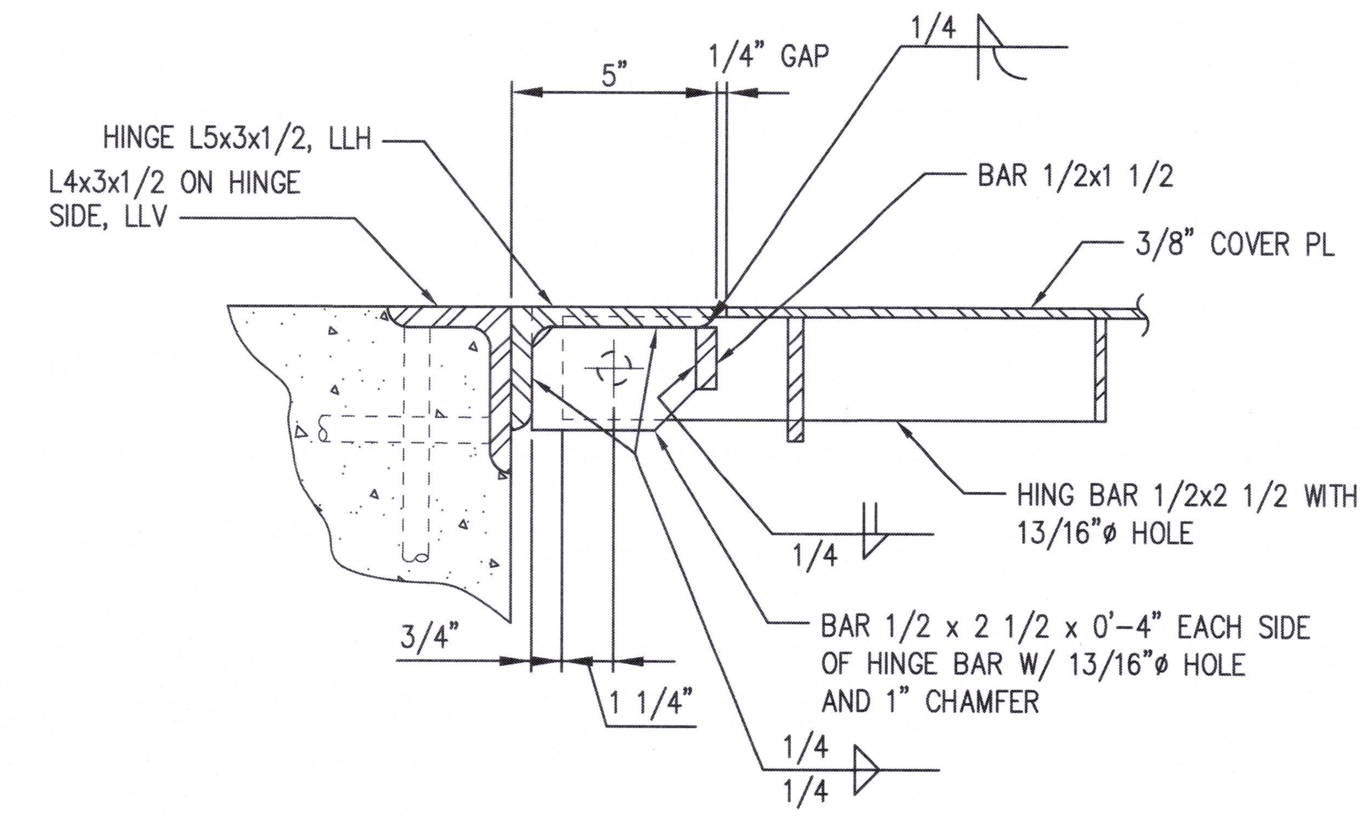
PHASE: BID SET



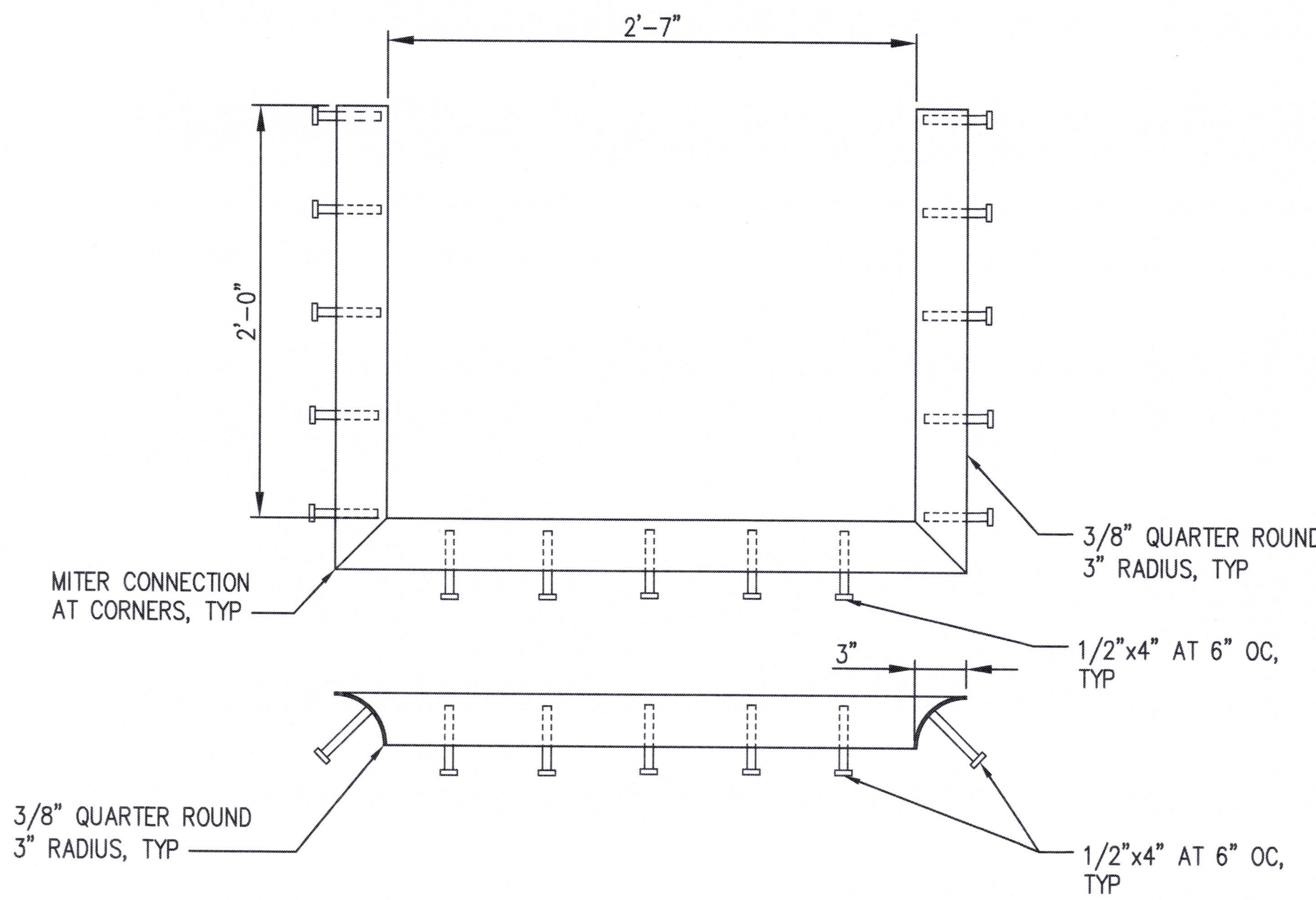
1 (S8.1) **DETAIL - CLOSURE PLATE**
SCALE: 1" = 1'-0"



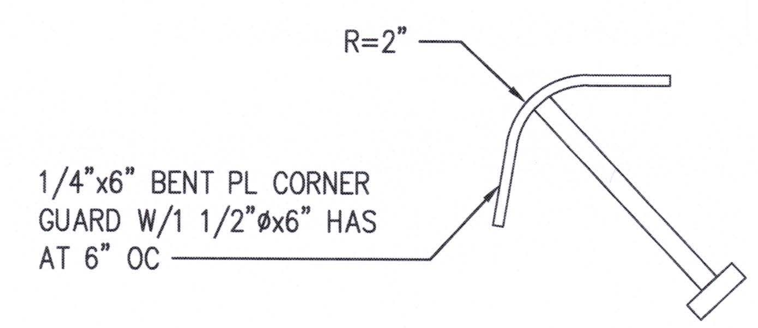
2 (-) **DETAIL - HINGE**
SCALE: 3" = 1'-0"



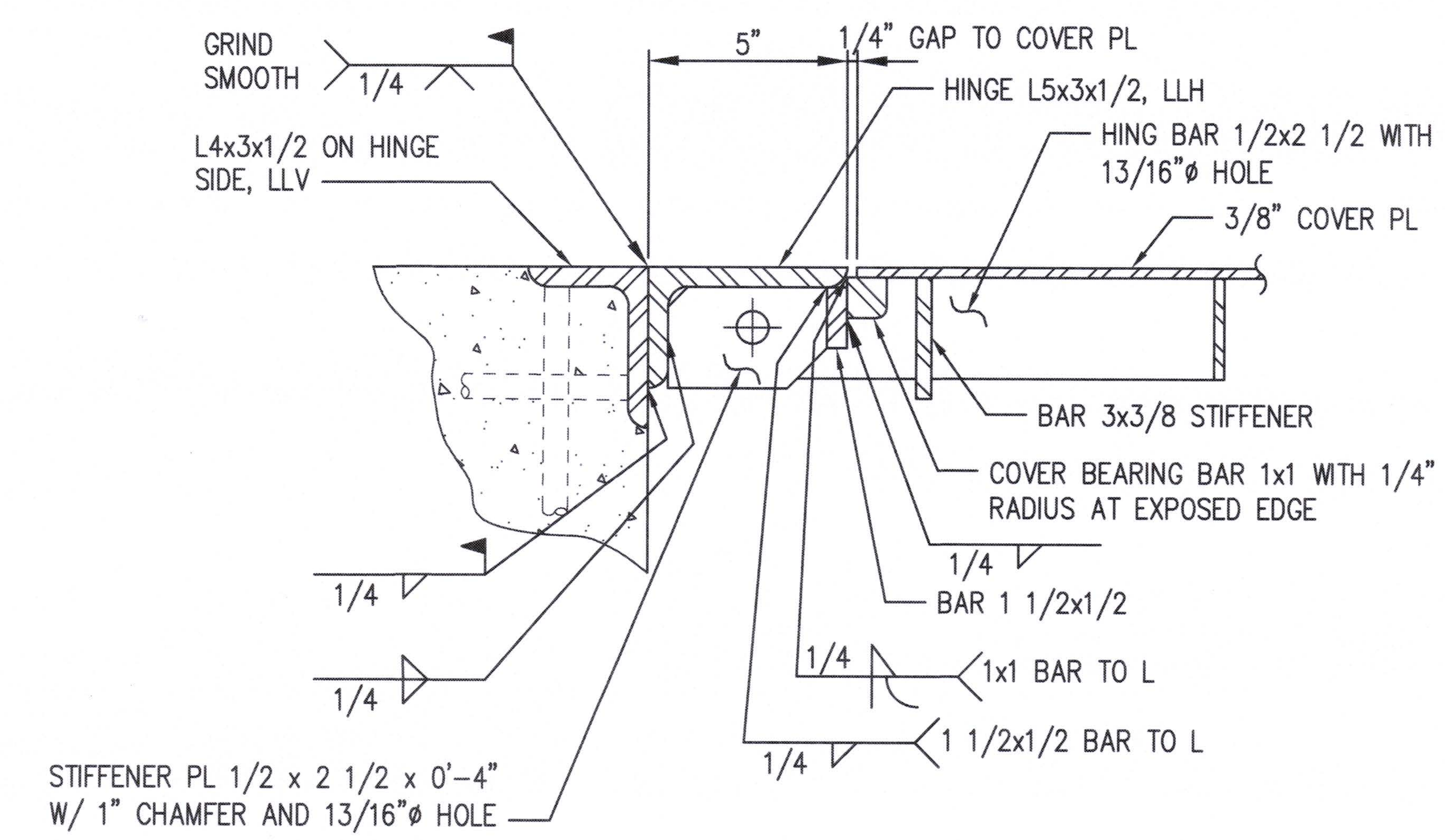
A (S8.1) **SECTION**
SCALE: 3" = 1'-0"



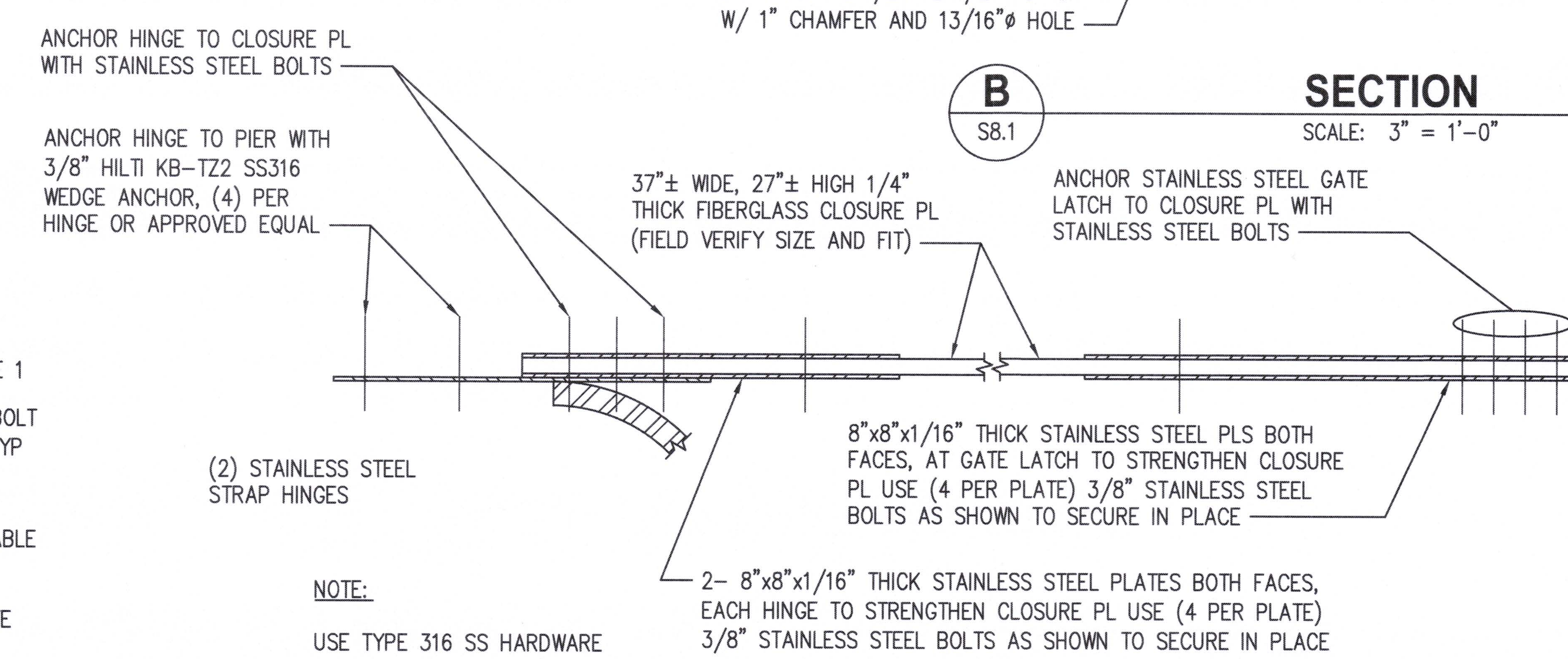
3 (S7.1) **WINDOW ROUNDED EDGE ASSEMBLY**
SCALE: 1 1/2" = 1'-0"



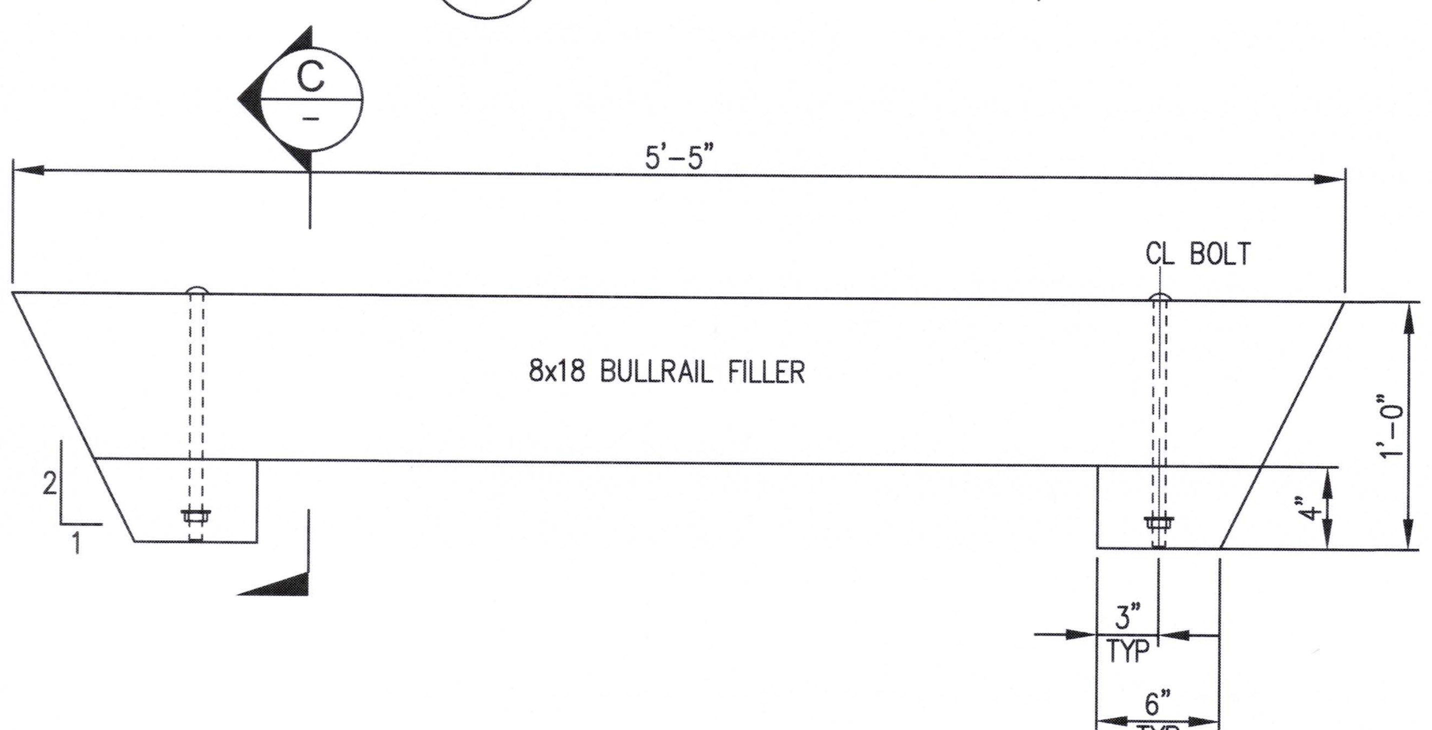
4 (S7.2) **DEATAIL - BENT PL CORNER GUARD**
SCALE: 3" = 1'-0"



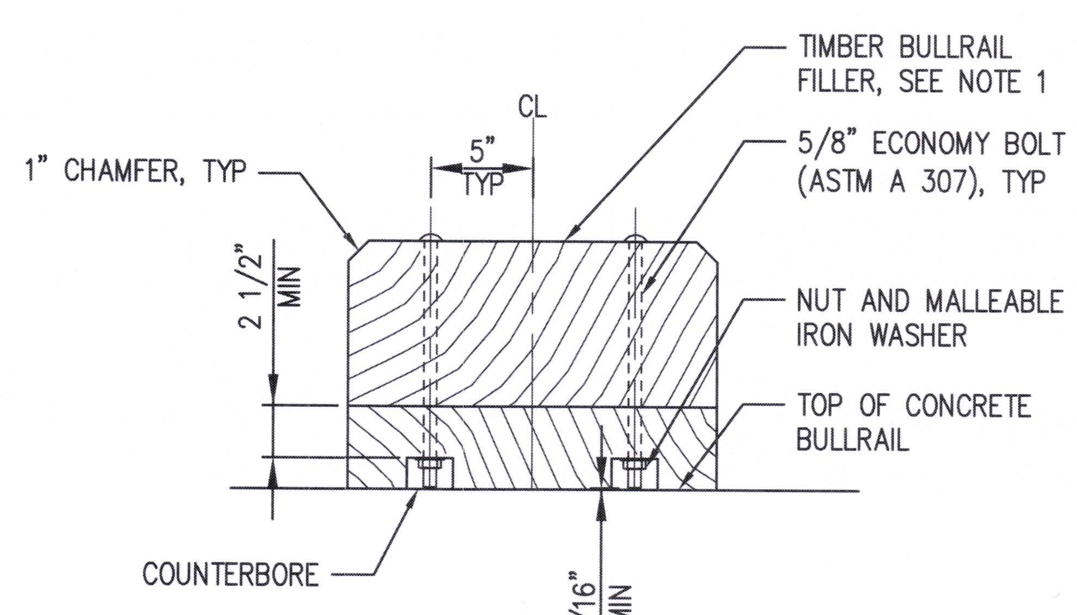
B (S8.1) **SECTION**
SCALE: 3" = 1'-0"



6 (S8.1) **DETAIL - CLOSURE PLATE**
SCALE: 3" = 1'-0"



5 (-) **DETAIL - REMOVABLE TIMBER BULLRAIL FILLER**
SCALE: 1 1/2" = 1'-0"



C (-) **SECTION - REMOVABLE TIMBER BULLRAIL FILLER**
SCALE: 1 1/2" = 1'-0"

NOTES:

1. REMOVABLE TIMBER BULRAIL FILLER SHALL BE ACZA TREATED DOUGLAS-FIR, GRADE NO. 1. ACZA WATERBORNE SALTS PRESERVATIVES SHALL RETAIN A MINIMUM OF 0.40 PCF.

BINDING EDGE

PORT OF TACOMA FILE: M:\2020\2000087 POT T3 T4 Shorepower\Drawings\Current\S8.3 - New Vault Lids

Port of Tacoma

kpff

2407 North 31st Street, Suite 100 Tacoma, Washington 98407 (253) 396-0150 Fax (253) 396-0162

SCOTT E. KUEBLER, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER 2-2-22

MARK:	REVISION:	BY:	APPR:	DATE:

APPROVED:

TAH 02/02/2022	CHECKED BY DATE
PEY 02/02/2022	PROJ. ENGR DATE
2/1/22	DIRECTOR ENG. DATE
PRINTED BY: dyu Feb 02, 2022	
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98421	

TERMINAL 3 / TERMINAL 4
SHORE POWER
NEW SHORE POWER VAULT DETAILS
SHEET 3

TOWNSHIP:	RANGE:	SECTION:
DAT-HRZ:	VERT:	
PARCEL:	DRAWING SCALE: AS NOTED	

6658
S8.3
83 OF 83

CONT/CONS: 071357
M. ID: 201100.01
PHASE: BID SET