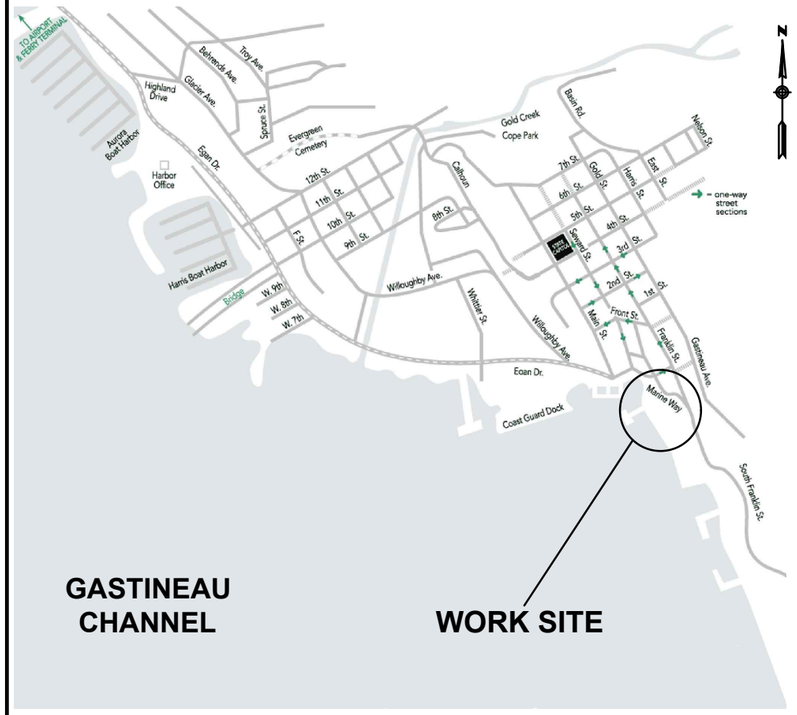
CITY & BOROUGH OF JUNEAU
DOWNTOWN WATERFRONT FACILITIES CORROSION CONTROL PROJECT
CBJ Contract No. DH18-027

Juneau, Alaska

SHEET INDEX

SOUTHEAST ALASKA MAP

JUNEAU VICINITY MAP



STATE OF ALASKA
49th
KERRI M. HOWELL
CE-9833
REGISTERED PROFESSIONAL ENGINEER

DATE 12/04/2017

Tinnea & Associates, LLC
2018 East Union Street
Seattle, WA 98122-2836
Phone: 206-328-7872
Fax: 206-328-7916
www.tinnea.net

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DOCKS AND HARBORS

C001

ABBREVIATIONS

&	AND
∠	ANGLE
@	AT
℄	CENTERLINE
Ø	DIAMETER
#	NUMBER
℔	PLATE
±	PLUS OR MINUS
AMP	AMPERE
ABV	ABOVE
AC	ALTERNATING CURRENT
AC	ARMORED CABLE
ADDL	ADDITIONAL
ADJ	ADJACENT
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPD	APPROVED
APPROX	APPROXIMATE
APPX	APPENDIX
ASM	ASM INTERNATIONAL
ASTM	ASTM INTERNATIONAL
AUX	AUXILLARY
AVG	AVERAGE
AWS	AMERICAN WELDING SOCIETY
BAT	BATTERY
BDRY	BOUNDARY
BF	BOTH FACES
BITUM	BITUMINOUS
BKG	BACKING
BLT	BUILT
BM	BEAM
BOT	BOTTOM
BRCG	BRACING
CBJ	CITY AND BOROUGH OF JUNEAU
CD	CONSTRUCTION DOCUMENTS
CERT	CERTIFY
CHK	CHECK
CIRC	CIRCULAR
℄	CENTERLINE
CLL	CONTRACT LIMIT LINE
CLR	COLOR
CMP	CORRUGATED METAL PIPE
CNCL	CONCEALED
CND	CONDUIT
CNR	CORNER
COL	COLUMN
COM	COMMON
COMPL	COMPLETE
CONC	CONCRETE
COND	CONDITION
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONSULT	CONSULTANT
CONT	CONTINUE / CONTINUOUS
CONTR	CONTRACTOR
CP	CATHODIC PROTECTION
CPLG	COUPLING
CSP	CONCRETE SEWER PIPE
CTD	COATED
CTG	COATING
CTR	CENTER
CU	COPPER
D&H	DOCKS AND HARBORS
DBL	DOUBLE
DC	DIRECT CURRENT
DEF	DEFINTION
DEG	DEGREE
DEG F	DEGREE FAHRENHEIT
DEL	DELETE
DEMO	DEMOLITION(S)
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFERENCE
DIM	DIMENSION
DIST	DISTANCE
DIV	DIVISION
DOC	DOCUMENT
DTR	DETOUR
DWG	DRAWING
E	EAST
EA	EACH
EE	EACH END
EF	EACH FACE
EL, ELEV	ELEVATION
ELAST	ELASTIC / ELASTOMERIC
ELEC	ELECTRICAL
EMBD	EMBEDDED
ENCL	ENCLOSURE
ENGR	ENGINEER
EP	ELECTRICAL PANEL
EPA	ENVIRONMENTAL PROTECTION AGENCY
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ	EQUAL
EQL SP	EQUALLY SPACED
ES	EACH SIDE
EST	ESTIMATE(D)
ETC	AND SO FORTH, ET CETERA
EW	EACH WAY
EXH	EXHIBIT
EXIST	EXISTING
EXT	EXTERIOR
FAB	FABRICATION
FHWA	FEDERAL HIGHWAY ADMINISTRATION
FIL	FILLET
FLEX	FLEXIBLE
FLG	FLANGE
FRG	FIBERGLASS
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FULL SCALE
FSTNR	FASTENER
FT	FOOT
FT-LB	FOOT-POUND
FWRK	FORMWORK
GA	GAGE
GACP	GALVANIC ANODE CP
GAL	GALLON
GALV	GALVANIZED
GEN COND	GENERAL CONDITIONS
GFCI	GROUND FAULT CURRENT INTERRUPTER
GOVT	GOVERNMENT
GRTG	GRATING
HAZ	HAZARD
HAZ MAT	HAZARDOUS MATERIALS
HEPA	HIGH EFFICIENCY PARTICULATE AIR (FILTER)
HEX	HEXAGON / HEXAGONAL
HD	HEAVY DUTY
HDPE	HIGH DENSITY POLYETHYLENE
HMWPE	HIGH MOLECULAR WEIGHT POLYETHYLENE
HORIZ	HORIZONTAL
HP	H-PILE
HVY	HEAVY
HZ	HERTZ
ICCP	IMPRESSED CURRENT CP
ID	INSIDE DIAMETER
ID NO	IDENTIFICATION NUMBER
IN	INCH
IN CU	CUBIC INCH
IN-LB	INCH-POUND
INCL	INCLUDED(ING)
INSTL	INSTALL
INT	INTERIOR
INV	INVERT
IRREG	IRREGULAR
IT	ISOLATION TRANSFORMER
J-BOX	JUNCTION BOX
JNT	JOINT
K	KILO (THOUSAND)
LAB	LABORATORY
LB	POUND (WEIGHT)
LF	LINEAR FEET (FOOT)
LIN	LINEAR
LOC	LOCATION
LONG	LONGITUNDIAL
LP	LIGHT POLE
LRG	LARGE
LS	LUMP SUM
mA	MILLIAMPERE
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MEAS	MEASURE(MENT)
MECH	MECHANICAL
MED	MEDIUM
MFD	MANUFACTURED
MFR	MANUFACTURER
MFR REC	MANUFACTURER'S
MGT	MANAGEMENT
MH	MANHOLE
MHHW	MEAN HIGH HIGH WATER
MHW	MEAN HIGH WATER
MID	MIDDLE
MIL	0.001 INCH
MIN	MINIMUM
MKR	MARKER
MLLW	MEAN LOW LOW WATER
MLW	MEAN LOW WATER
MOD	MODEL
ms	MILLISECOND
MSDS	MFR SAFETY DATA SHEET
MSL	MEAN SEA LEVEL
MTG	MEETING
MTL	MATERIAL
MULT	MULTIPLE
mV	MILLIVOLT
N	NORTH
NA	NOT APPLICABLE
NACE	NACE INTERNATIONAL
NEC	NATIONAL ELECTRIC CODE
NEG	NEGATIVE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NM	NON-METALLIC
NO	NUMBER
NOM	NOMINAL
NORM	NORMAL
NP	NO PAINT
NPT	NATIONAL PIPE THREAD
NTP	NOTICE TO PROCEED
NTS	NOT TO SCALE
NUM	NUMERAL
OC	ON CENTER
OPNG	OPENING
OPP	OPPOSITE
ORD	ORDNANCE
ORIG	ORIGINAL
ORNT	ORIENTATE(ION)
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OZ	OUNCE
PART	PARTIAL
PB	PANELBOARD
PB	PULL BOX
PCT	PERCENT
PED	PEDISTAL
PERM	PERMINATE
PERP	PERPENDICULAR
PL	PROPERTY LINE
PN	PART NUMBER
PNL	PANEL
PO	PURCHASE ORDER
POS	POSITIVE
POW LN	POWER LINE
PPM	PARTS PER MILLION
PPT	PARTS PER THOUSAND
PREFAB	PREFABRICATE
PRELIM	PRELIMINARY
PREP	PREPARE / PREPARTION
PREV	PREVIOUS
PRI	PRIMARY
PRIN	PRINCIPAL
PRKG	PARKING
PROJ	PROJECT
PROP	PROPERTY
PROV	PROVISIONAL
PSI	POUNDS PER SQUARE INCH
PU	POLYURETHANE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QA	QUALITY ASSURANCE
QC	QUALITY CONTROL
QCR	QUALITY CONTROL REVIEW
QM	QUALITY MANAGEMENT
QTR	QUARTER
QTY	QUANTITY
QUAL	QUALITY
R/C	REINFORCED CONCRETE
RBR	RUBBER
REBAR	REINFORCING STEEL BARS
REF	REFERENCE
REG	REGULATION
REINF	REINFORCED
REM	REMOVABLE
REP	REPAIR
REPL	REPLACE
REQ	REQUIRE
REQD	REQUIRED
REV	REVISION
RFI	REQUEST FOR INFORMATION
RFP	REQUEST FOR PROPOSAL
RHW	RUBBER HEAT RESISTANT WET
RND	ROUND
ROW	RIGHT-OF-WAY
RT	RIGHT
RTRC	REINF THERMOSET RESIN CONDUIT
S	SOUTH
SAMP	SAMPLE
SBSTR	SUBSTRATE
SCHED	SCHEDULE
SCHEM	SCHEMATIC
SD	SHOP DRAWINGS
SDBL	SANDBLAST (ABRASIVE BLAST)
SECT	SECTION
SEG	SEGMENT
SEP	SEPARATE
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SL	SEA LEVEL
SLNT	SEALANT
SM	SMALL
SNSR	SENSOR
SPC	SPACE(ING)
SPCL	SPECIAL
SPEC	SPECIFICATION
SQ	SQUARE
SQ-IN	SQUARE INCH
SQ-YD	SQUARE YARD
SS	SANITARY SEWER
SSPC	SOCIETY FOR PROTECTIVE COATINGS
STD	STANDARD
STA	STATION
STAG	STAGGERED
SSTL	STAINLESS STEEL
STL	STEEL
SUB	SUBSTITUTE
SURF	SURFACE
SUP	SUPPLEMENTARY
SUPVR	SUPERVISOR
SUSP	SUSPEND
SWR	SEWER
SYM	SYMETRICAL
SYS	SYSTEM
T/R	TRANSFORMER/RECTIFIER
TAB	TABULATE
TCP	TRAFFIC CONTROL PLAN
TEMP	TEMPERATURE
TEMP	TEMPORARY
THRU	THROUGH
TOC	TABLE OF CONTENTS
TEL	TELEPHONE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
USE	UNDERGROUND SERVICE ENTRANCE
UV	ULTRAVIOLET
VERT	VERTICAL
V	VOLT
VAR	VARIES
VIC	VICINITY
VID	VIDEO
VIF	VERIFY IN FIELD
VOC	VOLITAL ORGANIC COMPOUND
VOL	VOLUME
VRFY	VERIFY
W	WEST
W/	WITH
W/O	WITHOUT
WARR	WARRANTY
WF	WIDE FLANGE
WL	WATER LINE
WLD	WELDED
WO	WORK ORDER
WP	WORK POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD

REVISIONS

No.	DATE	DESCRIPTION	BY

SYMBOLS

PROJECT NORTH

PLAN, ELEVATION, OR DETAIL REFERENCE NUMBER, SECTION REFERENCE LETTER

C### REFERENCE DRAWING WHERE DETAIL IS SHOWN,

C### ELEVATION AND SECTION REFERENCE

PLAN, ELEVATION OR DETAIL REFERENCE NUMBER, SECTION REFERENCE NUMBER

C### TITLE OF VIEW / DETAIL
SCALE: ###

REFERENCE DRAWING WHERE DETAIL WAS CITED

\# GRID LINE

EXIST GACP HMWPE SLED CABLE

E-CDT EXISTING CP SYSTEM CONDUIT

RTRC ICCP CABLE IN RTRC CONDUIT

HMWPE CP BOND CABLE

VP CP VENT PIPE

W ICCP ANODE WELL, SEE A CP101

TS C CP TEST STATION / COUPON, SEE 2 CP102 4 CP102

EXOTHERMIC WELD, SEE 1 CP104

EXISTING GACP ANODE SLED

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JUNEAU, ALASKA

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DOCKS AND HARBORS

SHEET TITLE:
ABBREVIATIONS AND SYMBOLS

DATE:
12/04/17

TAllc PROJ. No.:
1712401

CONTRACT No.:
DH18-027

SHEET 2 OF 15

C002

CORROSION CONTROL NOTES

SCOPE OF WORK

A. A COMPLETE AND OPERATING IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM ON THE SOIL SIDE OF SHEET PILING.

THE IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM WILL REQUIRE DRILLING TWO WELLS EACH TO A DEPTH OF APPROXIMATELY 80 FEET BELOW GRADE, INSTALLING INERT ANODES, BACKFILLING THE ANODES WITH A CARBON-BASED FILL, SEALING THE WELL, INSTALLING AN AC POWER DROP AND A CATHODIC PROTECTION RECTIFIER.

THE IMPRESSED CURRENT CATHODIC PROTECTION SYSTEMS WILL REQUIRE RUNNING ELECTRICAL WIRES AND CABLE.

GENERAL

FIELD VERIFY EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS. THESE TABLES AND DRAWINGS ARE BASED IN PART ON 'AS BUILT' DRAWINGS AND RECORD INFORMATION AND ACTUAL CONDITIONS MAY VARY. NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR VARIANCES PRIOR TO ORDERING MATERIALS.

FIELD VERIFY WHERE POWER WILL BE PROVIDED TO THE IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM, WHERE THE RECTIFIER WILL BE LOCATED, AND WHERE CABLES AND WIRES WILL BE RUN. PROVIDE THE OWNER'S REPRESENTATIVE WITH SHOP DRAWINGS SHOWING THIS LAYOUT AND SECURE APPROVAL PRIOR TO ORDERING ANY MATERIALS.

SUBMITTALS

SUBMITTALS ARE REQUIRED FOR THE FOLLOWING:

A. A WORK PLAN AND SCHEDULE FOR INSTALLATION OF THE AC SEVICE/DISCONNECT, IMPRESSED CURRENT ANODE WELLS, CABLES, TEST STATIONS, INSPECTIONS, AND OTHER TASKS
B. MANUFACTURER'S CERTIFICATION OF ANODE ALLOY CONFORMING TO REQUIREMENTS. LIST ALLOY COMPOSITION, CONSUMPTION RATE, DIMENSIONS, AND RECTIFIER CUT SHEETS.
C. COPIES OF TWIC CARDS FOR ALL EMPLOYEES WHO WILL BE ON SITE.
D. COPIES OF INSURANCE CERTIFICATIONS INCLUDING GENERAL LIABILITY, WORKMAN'S COMPENSATION, US HARBOR AND LONGSHOREMAN'S ACT COVERAGE
E. COPY OF CONSTRUCTION PERFORMANCE SURETY BOND

ANODE INSTALLATION

A. GENERAL:
1. INSTALLATION SHALL NOT PROCEED WITHOUT THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
2. ANODES SHALL BE INSTALLED AT THE LOCATIONS AND ELEVATIONS SHOWN
3. THE LOCATIONS AND/OR ELEVATIONS MAY BE CHANGED TO AVOID OBSTACLES OR OBSTRUCTIONS WITH THE PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.

B. TIDES AND OTHER SPECIAL CONDITIONS:
1. THIS WORK WILL BE PERFORMED AT A FACILITY THAT SEES HEAVY TOURIST ACTIVITY AND THE DOCKING OF LARGE CRUISE SHIPS THROUGHOUT THE SUMMER.
2. THE CONTRACTOR WILL NEED TO MINIMIZE AND/OR AVOID INTERFERING WITH THE OPERATIONS OF THE FACILITY AT ALL TIMES.

NOAA TIDE DATA (FEET)	
MWWH	16.30
MHW	15.34
MLS	8.56
MLW	1.60
MLLW	0.00

3. THE WORK WILL BE PERFORMED ON STRUCTURAL ELEMENTS THAT ARE SUBMERGED, OR ARE IN THE TIDAL AND SPLASH ZONES THAT WILL BE SUBMERGED IN SEAWATER SEVERAL TIMES A DAY. PORTIONS OF THE WORK WILL BE SUBMERGED SOON AFTER SURFACE PREPARATION.
5. WORK IS TAKING PLACE IN AN ACTIVE PORT FACILITY REQUIRING THE FOLLOWING:
a. WORK OVER WATER REQUIRES THE USE OF A PERSONAL FLOTATION DEVICE (PFD).
b. WORK ON SCAFFOLDING REQUIRES THE USE OF HARNESSES AND LIFE LINES, AND ALL SCAFFOLD WORKERS MUST BE TRAINED IN FALL PROTECTION.
c. CONSTRUCTION WORK MAY BE TEMPORARILY HALTED ON SHORT NOTICE. CLOSE COORDINATION WITH CBJ DOCKS AND HARBORS IS REQUIRED.

REVISIONS

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Tinnea & Associates, LLC
2018 E. Union St. Phone: 206-328-7872
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www.tinnea.net

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DATE 12/04/17

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CORROSION CONTROL PROJECT
JUNEAU, ALASKA

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DOCKS AND HARBORS

SHEET TITLE:
CORROSION CONTROL GENERAL NOTES

DATE: 12/04/17

TAllc PROJ. No.: 1712401

CONTRACT No.: DH18-027

SHEET 3 OF 15

C003

CORROSION CONTROL SCHEDULES

MARINE PARK IMPRESSED CURRENT ANODE WELLS[A]

ITEM	NUMBER PER WELL	UNITS	TOTAL
ANODES - OPTION 1: 1"Ø x 39.4" TUBULAR MIXED METAL OXIDE - OR	3	EA	6
ANODES - OPTION 2: 3.7"Ø x 84" HIGH SILICON CAST IRON	3	EA	6
ANODE CABLE - AWG #8 W/ KYNAR OR HALAR INSULATION & HMWPE SHEATHING	3 (LENGTH VARIES)	LF	600
AWG #6 CABLE WITH HMWPE INSULATION	COMBINED	LF	500
AWG #10 CABLE WITH HMWPE INSULATION	COMBINED	LF	200
NEW 30A / 120 V BREAKER IN EXISTING PANEL	1 FOR BOTH	EA	2
AIR COOLED 10A / 40V PEDESTAL MOUNTED ICCP RECTIFIER	1 FOR BOTH	EA	2
AC WIRE & CONDUIT FROM EXIST. PANEL TO NEW ICCP RECTIFIER	1 FOR BOTH	LF	25
1¼" Ø RTRC CONDUIT FOR CP CABLES	COMBINED	LF	300
1½" Ø RTRC CONDUIT FOR CP CABLES	COMBINED	LF	100
2" Ø RTRC CONDUIT FOR CP CABLES	COMBINED	LF	80
RTRC CONDUIT FITTINGS, AND MOUNTING HARDWARE	COMBINED	LUMP	1
1" Ø SLOTTED PVC VENT PIPE	COMBINED	LF	100
1" Ø PVC VENT PIPE	COMBINED	LF	60
1½" Ø PVC VENT PIPE AND FITTINGS	COMBINED	LF	140
PVC VENT PIPE FITTINGS, AND MOUNTING HARDWARE	COMBINED	LUMP	1
COKE BREEZE	COMBINED	LBS	6700
WELL SEAL	COMBINED	LBS	900
ICCP JUNCTION BOX - PLUS HARDWARE, PANEL, AND MOUNTINGS	1 FOR BOTH	EA	1
ICCP PULL BOX - PLUS PANEL AND MOUNTINGS	1 FOR BOTH	EA	1
ICCP/GACP BOND BOX - PLUS HARDWARE, PANEL, AND MOUNTING HARDWARE	COMBINED	EA	3
UNDERGROUND COUPON, REFERENCE ELECTRODE, WITH MAGNETIC SWITCH	1 FOR BOTH	EA	1
FLUSH-MOUNTED TEST STATION	COMBINED	EA	1
SHEET PILE BOND EXOTHERMIC WELDERS	COMBINED	EA	3
SHEET PILE BOND EXOTHERMIC CHARGES	COMBINED	EA	40
EXOTHERMIC WELD CAPS	COMBINED	EA	10

NOTES:

A. THE CONTRACTOR SHALL VERIFY ALL CABLE LENGTHS AND LENGTHS OF CONDUIT RUNS PRIOR TO ORDERING MATERIALS

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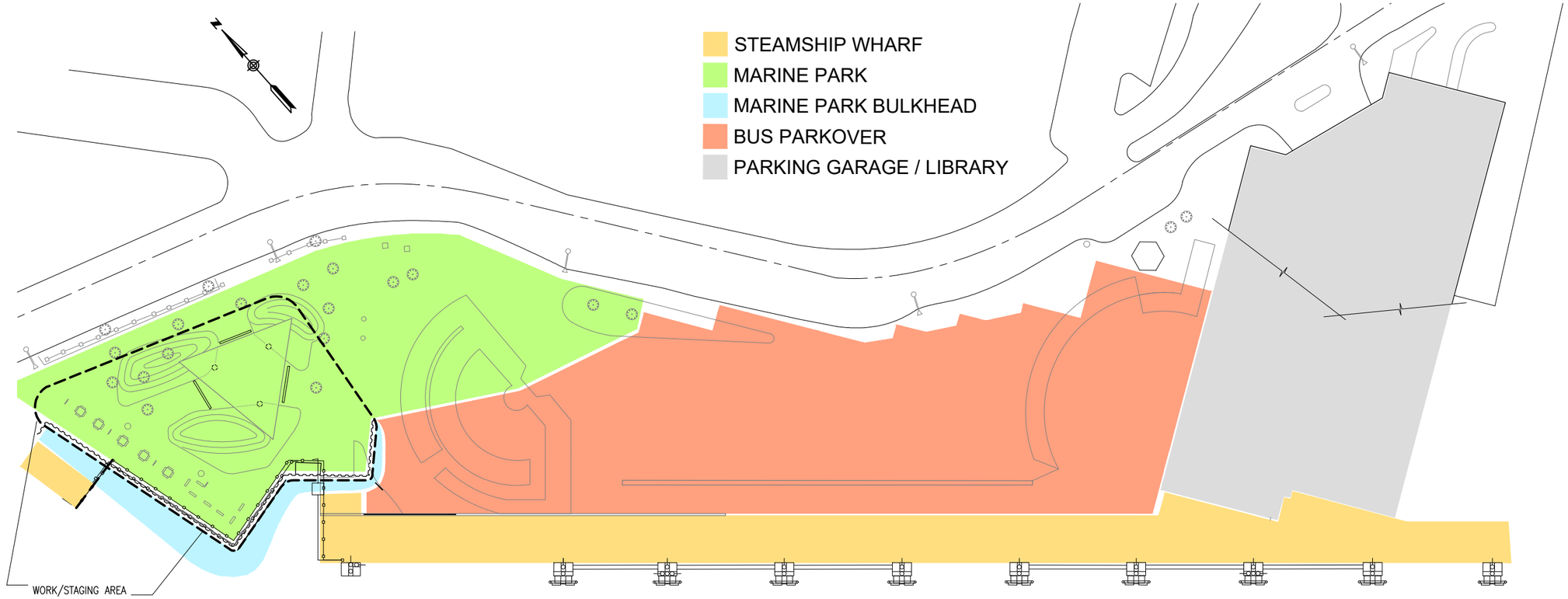
C004



1 SITE PLAN - TRAFFIC & SAFETY PLAN
SCALE: NTS

LEGEND

- TREE
- BANNER POLE
- TABLE AND BENCH
- PARK LIGHT
- STREET LIGHT

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SHEET TITLE:
TRAFFIC CONTROL & PHASING REQUIREMENTS

DATE: 12/04/17

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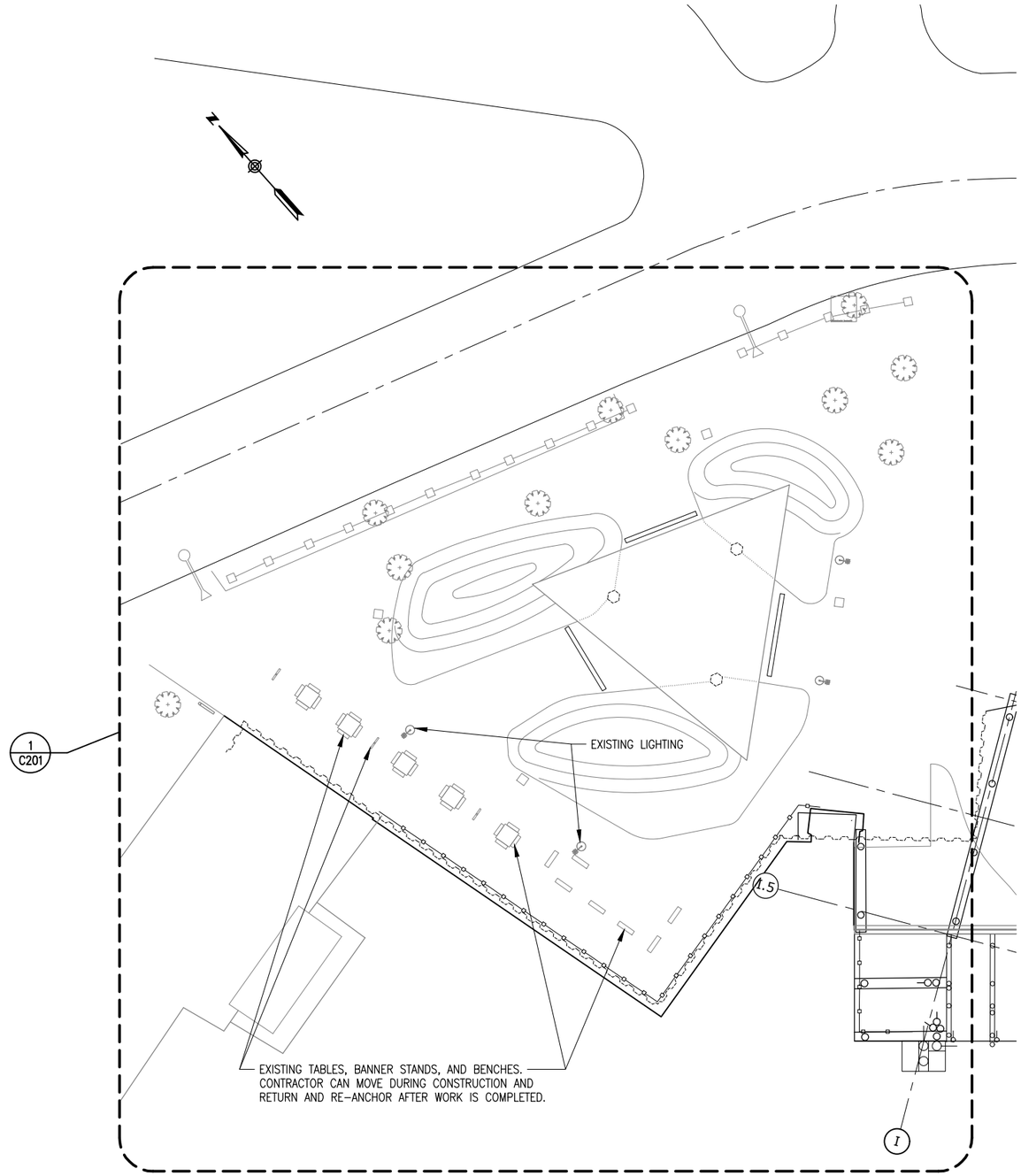
SHEET 5 OF 15

C101



1 — SITE PLAN - OVERALL ARRANGEMENT
SCALE: NTS

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OVERALL SITE PLAN

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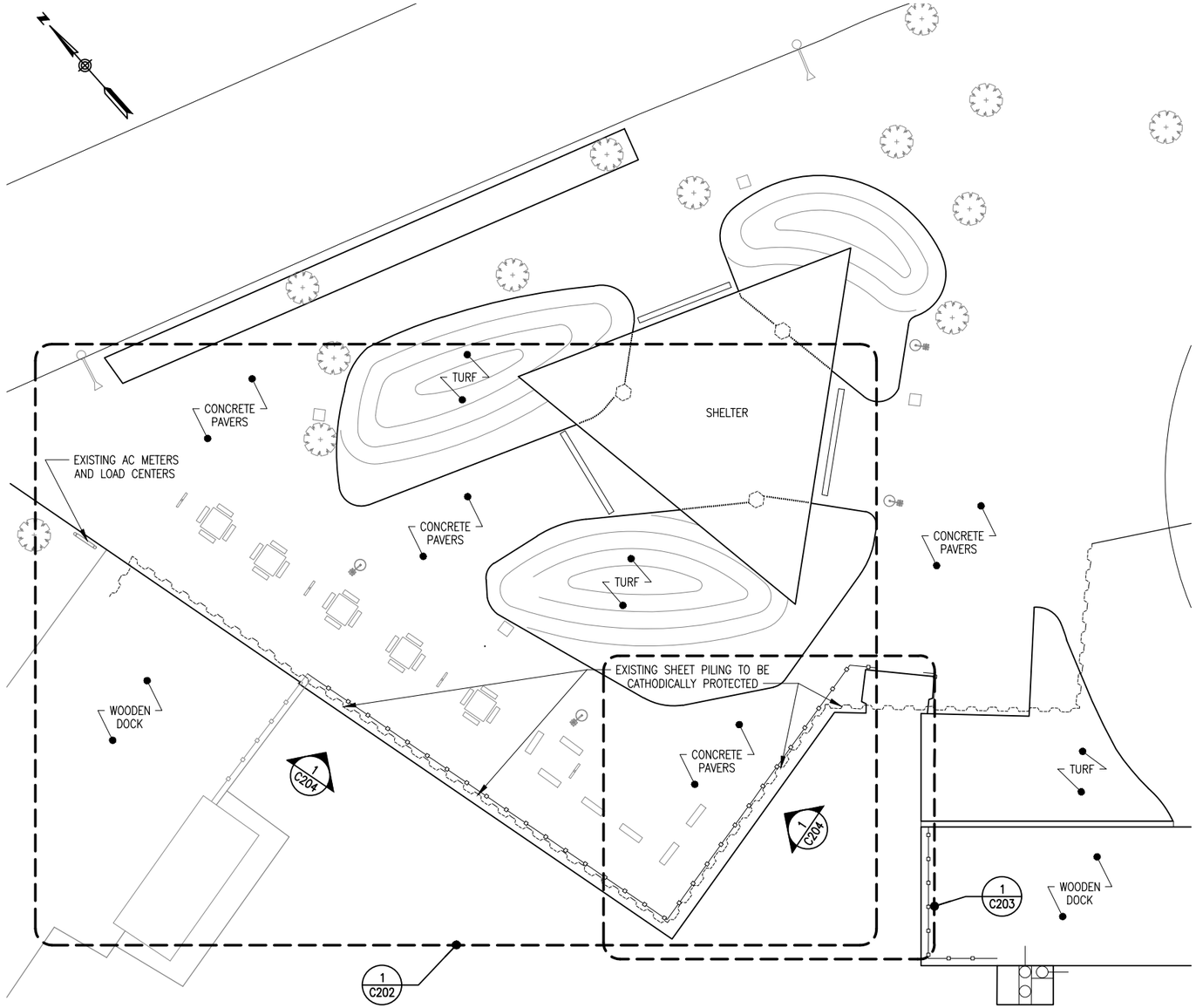

1 C102 MARINE PARK PLAN VIEW
SCALE: NTS

NOTES

BULKHEAD ICCP SYSTEM

TWO IMPRESSED CURRENT CATHODIC PROTECTION (ICCP) ANODE WELLS, A RECTIFIER, CABLES, CONDUIT, AND TEST COUPONS WILL BE INSTALLED.

A. INFORMATION ON UTILITIES AND SHEET PILE TIE-BACKS AND ANCHORS IS APPROXIMATE. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL THE UTILITIES, TIE-BACKS, AND ANCHORS BEFORE DIGGING OR DRILLING/AUGERING ANODE WELLS.
B. THE CONTRACTOR SHALL CALL (800) 478-3121 (OR DIAL 811 ANYWHERE IN ALASKA) A MINIMUM OF TWO BUSINESS DAYS (48 HOURS) AND NOT MORE THAN 14 DAYS BEFORE THE START OF WORK.
C. THE CONTRACTOR SHALL LABEL CABLE PHASE AND NEUTRALS.
D. CONTRACTOR SHALL PROVIDE A NEW CIRCUIT BREAKER FOR THE ICCP RECTIFIER.
E. NOTIFY CBJ DOCKS AND HARBORS 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
F. BURY ALL CABLES A MINIMUM OF 24-INCHES AND MARK WITH YELLOW WARNING TAPE.
G. WHERE PAVEMENT OR PAVERS ARE PRESENT:
   1. PRIOR TO TRENCHING, SAW CUT EXISTING PAVEMENT/PAVERS TO PROVIDE TWO STRAIGHT AND PARALLEL EDGES TO THE EXCAVATION.
   2. AFTER INSTALLATION OF THE ANODE CABLES, CONDUIT, VENT PIPE, AND MARKER TAPE BACKFILL THE TRENCH AND FULLY CONSOLIDATE THE FILL TO THE LEVEL OF THE SOIL UNDER THE ADJACENT CONCRETE/PAVERS
   3. FULLY CLEAN THE SURROUNDING CONCRETE, INSTALL ANY NECESSARY FORMS, COVER ALL EXPOSED BACKFILL WITH A VAPOR BARRIER, REPAVE WITH CONCRETE SO THAT THE FINISHED PATCH SURFACE IS FLUSH WITH THE SURROUNDING PAVEMENT/PAVERS
H. IN TURF AREAS RESTORE PREVIOUS GRADE AND RE-SEED ALL DISTURBED TURF AREAS.
I. PATCH ANY DISTURBED CONCRETE IN AND AROUND RECESSED J-BOX AREA.

CP TEST STATION AND COUPON

A. INSTALL CP TEST STATION AND COUPON AFTER COATING WORK IS COMPLETE.
B. SET TEST STATION SO THAT IT IS ACCESSIBLE FROM SIDEWALK
C. SET COUPON AT 1' ABOVE FILL.
D. RUN TEST LEADS FROM COUPON TO TEST STATION IN RTRC.
E. RUN LEAD FROM ANODE J-BOX TO COUPON IN NEW REINFORCED THERMO RESIN CONDUIT (RTRC).

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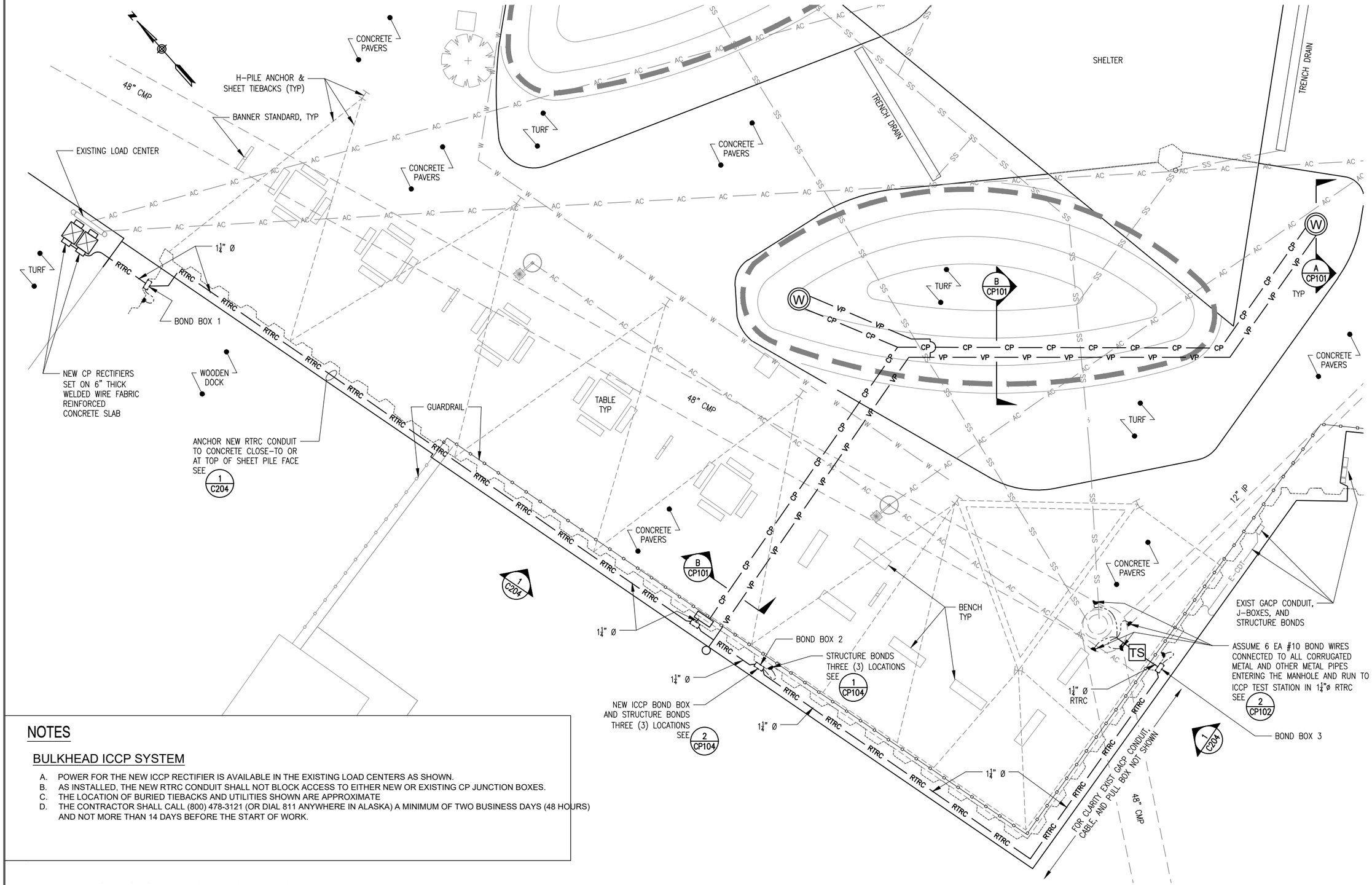
SHEET 7 OF 15

C201



NOTES

BULKHEAD ICCP SYSTEM

A. POWER FOR THE NEW ICCP RECTIFIER IS AVAILABLE IN THE EXISTING LOAD CENTERS AS SHOWN.
B. AS INSTALLED, THE NEW RTRC CONDUIT SHALL NOT BLOCK ACCESS TO EITHER NEW OR EXISTING CP JUNCTION BOXES.
C. THE LOCATION OF BURIED TIEBACKS AND UTILITIES SHOWN ARE APPROXIMATE
D. THE CONTRACTOR SHALL CALL (800) 478-3121 (OR DIAL 811 ANYWHERE IN ALASKA) A MINIMUM OF TWO BUSINESS DAYS (48 HOURS) AND NOT MORE THAN 14 DAYS BEFORE THE START OF WORK.

REVISIONS

No.	DATE	DESCRIPTION	BY

1/C201 MARINE PARK PARTIAL PLAN
SCALE: NTS

Tinnea & Associates, LLC
2018 E. Union St. Phone: 206-328-7872
Seattle, WA 98122 Fax: 206-328-7916
www.tinnea.net

STATE OF ALASKA 49th KERRI M. HOWELL CE-9833 REGISTERED PROFESSIONAL ENGINEER

DATE 12/04/17

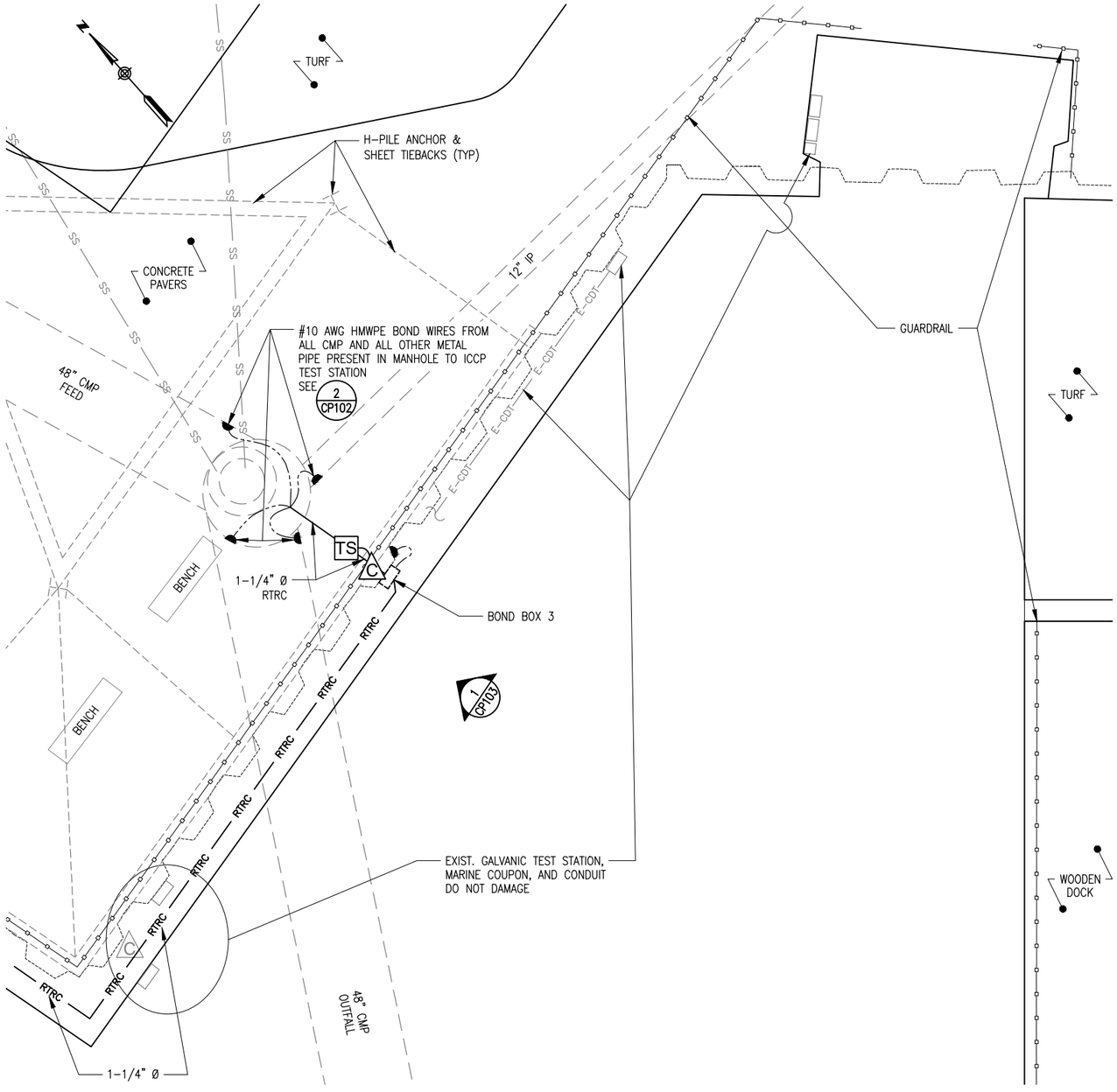
DOWNTOWN WATERFRONT FACILITIES
CORROSION CONTROL PROJECT
JUNEAU, ALASKA

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DOCKS AND HARBORS

SHEET TITLE:
MARINE PARK
ICCP PLAN VIEW

DATE: 12/04/17
TAllc PROJ. No.: 1712401
CONTRACT No.: DH16-027
SHEET 8 OF 15

C202



1 C201 MARINE PARK PARTIAL PLAN
SCALE: NTS

NOTES

EXISTING GACP SYSTEM

A. THROUGHOUT WORK, CONTRACTOR TO PROTECT EXISTING GACP CONDUIT AND BOXES LOCATED ALONG THE SOUTHERN SHEET PILE WALL.

REVISIONS

No.	DATE	DESCRIPTION	BY

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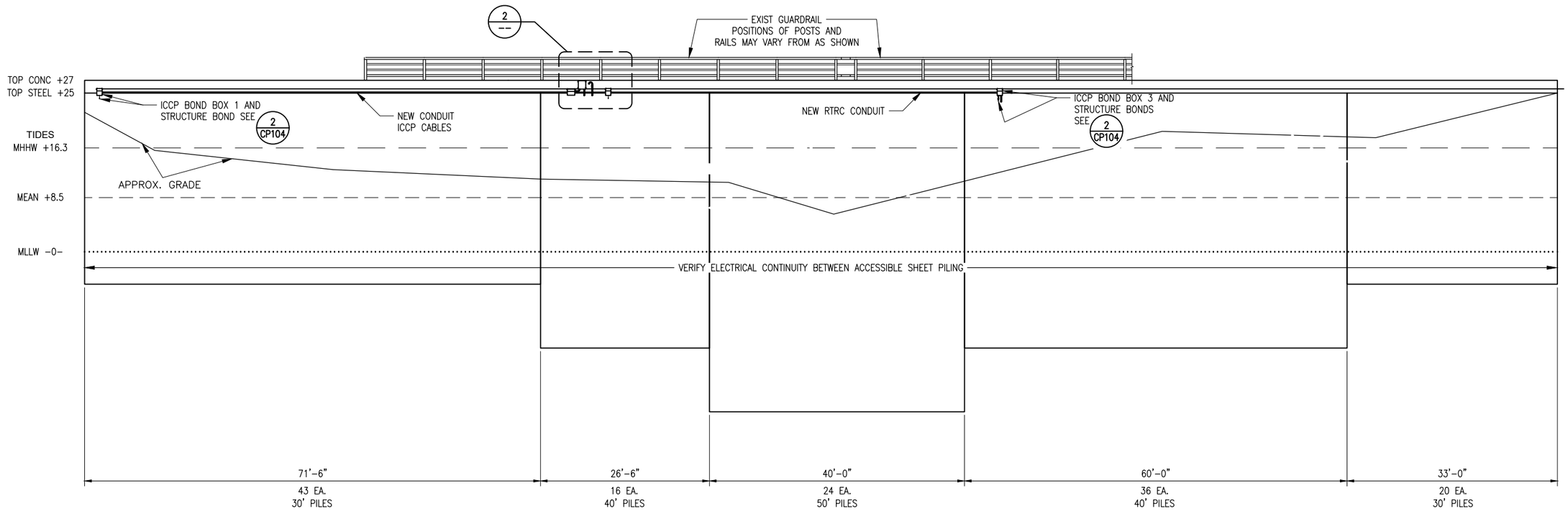
JUNEAU, ALASKA

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DOCKS AND HARBORS

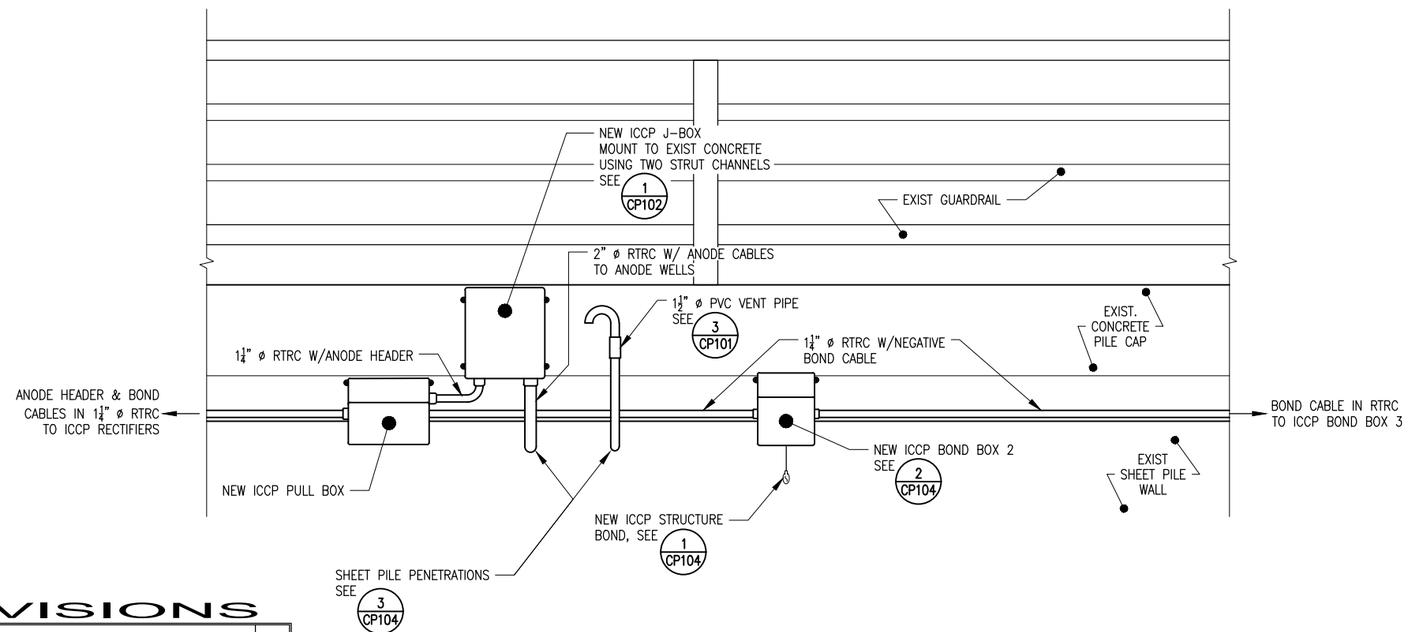
SHEET TITLE:
MARINE PARK SOUTH PARTIAL PLAN VIEW

DATE: 12/04/17
TAllc PROJ. No.: 1712401
CONTRACT No.: DH18-027
SHEET 9 OF 15

C203



1 C201 **MARINE PARK ELEVATION**
SCALE: NTS
C202, C203



2 -- **MARINE PARK ELEVATION DETAIL**
SCALE: NTS

NOTES

GENERAL

A. THIS DRAWING WAS DEVELOPED FROM 'AS BUILT' DRAWINGS FROM EARLIER WORK. THE CONTRACTOR SHOULD VERIFY DIMENSIONS PRIOR TO ORDERING ANY EQUIPMENT OR MATERIALS NEEDED FOR THIS WORK.
B. VERIFY THE ELECTRICAL CONTINUITY BETWEEN VISIBLE MARINE PARK SHEET PILES (SEE SPECIFICATIONS).
C. THE CONTRACTOR WILL BE RESPONSIBLE TO PROTECT THE EXISTING GACP SYSTEM HARDWARE, CABLES, AND ANODE SLEDS FROM DAMAGE DURING ALL CONSTRUCTION ACTIVITIES.
D. IF THE CONTRACTOR OR THE CONTRACTOR'S SUBCONTRACTORS DAMAGE EXISTING MARINE PARK GACP EQUIPMENT OR HARDWARE, THE CONTRACTOR WILL BE RESPONSIBLE TO REPAIR SUCH DAMAGE AT NO COST TO THE OWNER.
E. THIS WORK WILL BE PERFORMED AT A FACILITY THAT SEES HEAVY TOURIST ACTIVITY AND DOCKING OF LARGE CRUISE SHIPS THROUGHOUT THE SUMMER.
F. THE CONTRACTOR SHALL MINIMIZE AND/OR AVOID INTERFERING WITH THE OPERATIONS OF THE FACILITY AT ALL TIMES.

REVISIONS

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Tinnea & Associates, LLC
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Seattle, WA 98122 Fax: 206-328-7916
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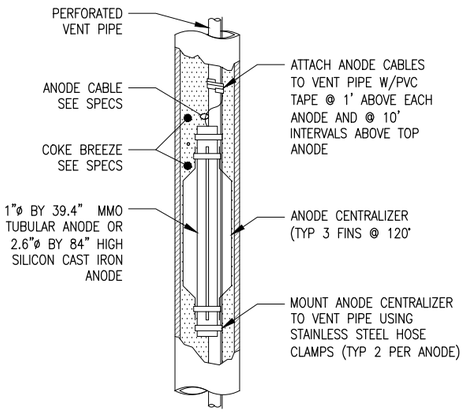
JUNEAU, ALASKA

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DOCKS AND HARBORS

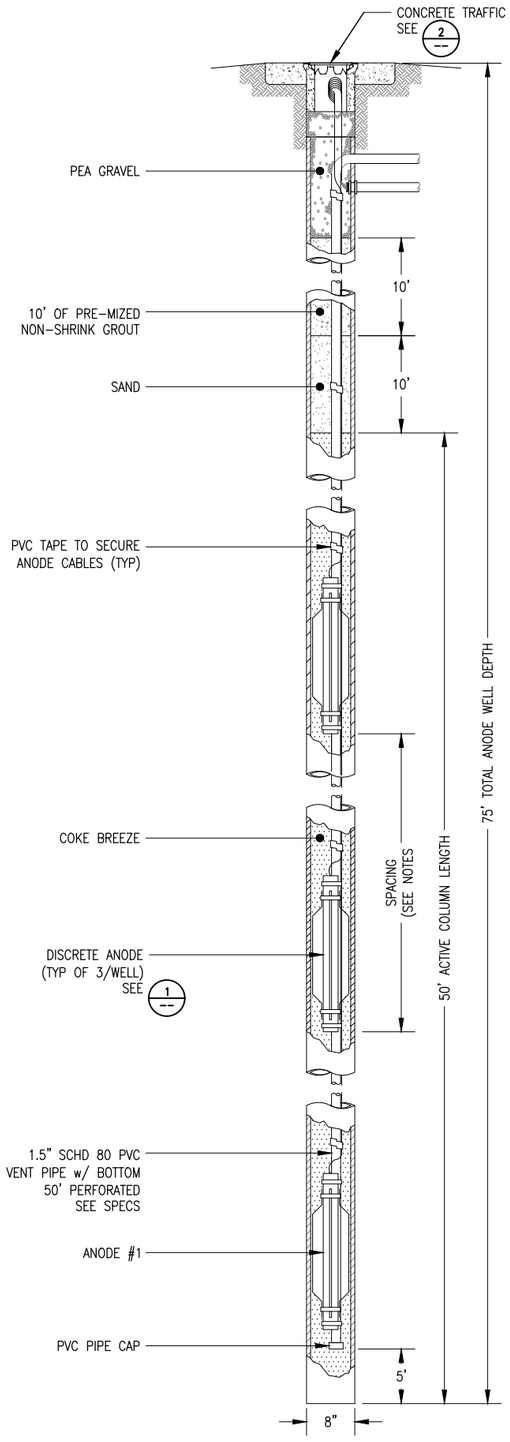
SHEET TITLE:
MARINE PARK
ICCP ELEVATION

DATE: 12/04/17
TAllc PROJ. No.: 1712401
CONTRACT No.: DH18-027
SHEET 10 OF 15

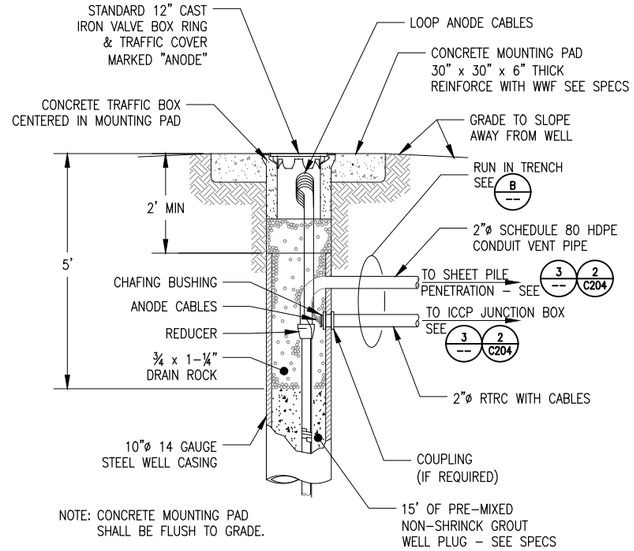
C204



1 — DETAIL - DISCRETE ANODE
SCALE: NTS

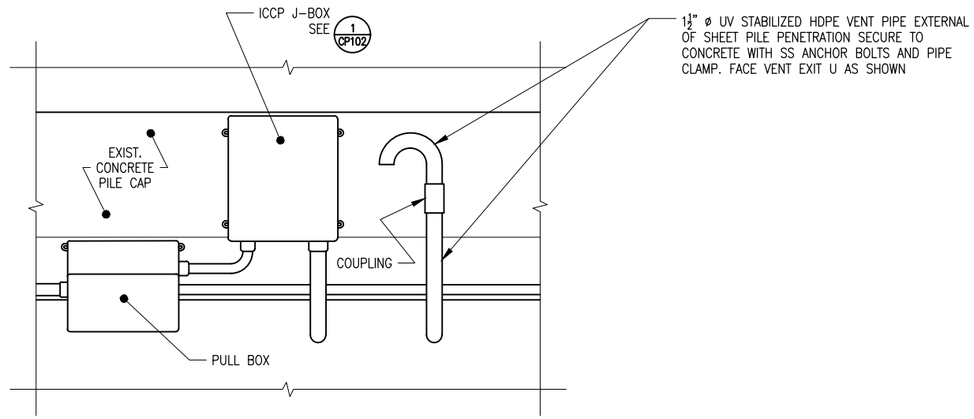


A C002 — SECTION - ANODE WELL
SCALE: NTS
C202, C203



2 — DETAIL - WELL CAP
SCALE: NTS

B C202 — SECTION - CONDUIT TRENCH
SCALE: NTS
C203



3 C204 — DETAIL - VENT PIPE
SCALE: NTS
C204

NOTES

ALTERNATE: SHEET PILE ICCP SYSTEM

A. TWO SHEET PILE ICCP ANODE WELLS WILL BE INSTALLED AT THE LOCATIONS SHOWN IN THE DRAWINGS.
B. THESE ANODE WELLS WILL PROTECT THE SOIL-SIDE OF THE SHEET PILES.
C. THE TOTAL WELL DEPTH WILL BE 75 FEET.
D. TO PREVENT GROUNDWATER CONTAMINATION A 10-FOOT CEMENTITIOUS GROUT PLUG WILL BE INSTALLED NEAR THE TOP OF EACH WELL (SEE DETAIL).
E. EACH WELL WILL HAVE THREE (3) ANODES.
F. THERE ARE TWO ANODE OPTIONS FOR THE ICCP ANODE WELLS:
   1. HIGH SILICON CAST IRON OPTION:
      a. 2.6" DIAMETER × 84" LONG
      b. ANODE SPACING OF 14 FEET
   2. MIXED METAL OXIDE OPTION:
      a. 1" DIAMETER × 39.4" LONG
      b. ANODE SPACING OF 15.9 FEET
G. DO NOT MOVE, HANDLE, OR LOWER THE ANODES BY THEIR CABLES. INSTEAD SECURE THE ANODES TO THE VENT PIPE FOR PLACEMENT.
H. ANODE VENT PIPES MUST SLOPE DOWNWARD AT A SLOPE OF ¼ IN PER FT FROM THE SHEET PILE WALL PENETRATION TO THE WELL CAP OF EACH WELL.
I. AFTER INSTALLATION OF THE ANODE WELLS, CABLES, AND VENT PIPING IS COMPLETE, THE CONTRACTOR SHALL RESTORE ALL AREAS, INCLUDING LAWN, VEGETATION, PAVEMENT, AND FENCING TO PRE-CONSTRUCTION CONDITIONS.
J. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL NECESSARY ELECTRICAL AND WELL DRILLING PERMITS.
K. IF THE CONTRACTOR DAMAGES EXISTING MARINE PARK EQUIPMENT OR HARDWARE, THE CONTRACTOR WILL BE RESPONSIBLE TO REPAIR SUCH DAMAGE AT NO COST TO THE OWNER.

MARINE PARK

A. THE PUBLIC WILL HAVE ACCESS TO MARINE PARK DURING CONSTRUCTION WORK EXCEPT IN SPECIFIC AREAS WHERE THE ENGINEER HAS APPROVED CONSTRUCTION CLOSURE SUBMITTALS.
B. OTHER THAN WITHIN APPROVED CONSTRUCTION WORK AREAS, THE CONTRACTOR SHALL MINIMIZE AND/OR AVOID INTERFERING WITH OTHER OPERATIONS OF THE FACILITY AT ALL TIMES.

REVISIONS

No.	DATE	DESCRIPTION	BY

Tinnea & Associates, LLC
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Seattle, WA 98122 Fax: 206-328-7916
www.tinnea.net

STATE OF ALASKA 49th
KERRI M. HOWELL
CE-9833
REGISTERED PROFESSIONAL ENGINEER

DATE 12/04/17

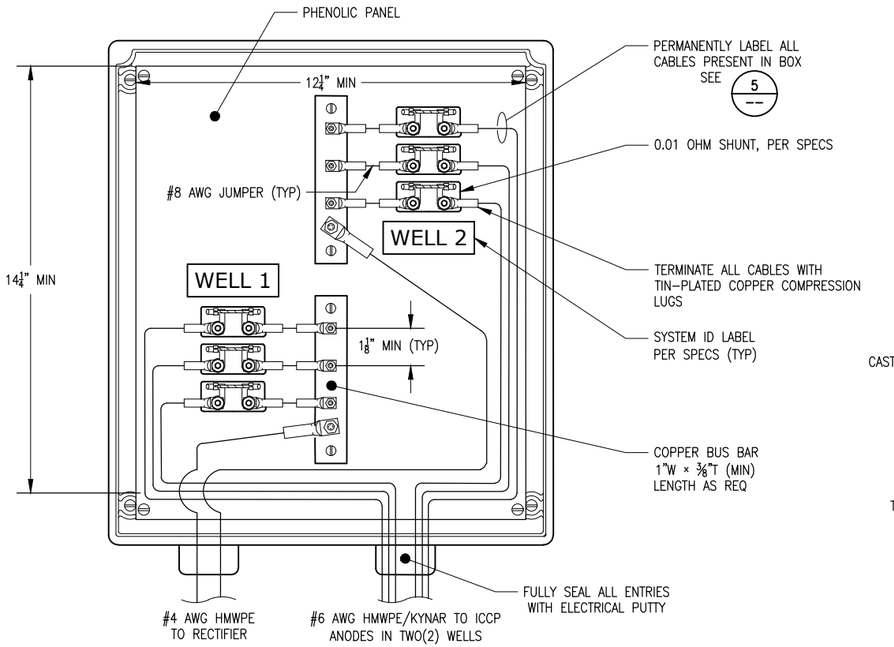
DOWNTOWN WATERFRONT FACILITIES
CORROSION CONTROL PROJECT
JUNEAU, ALASKA

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DOCKS AND HARBORS

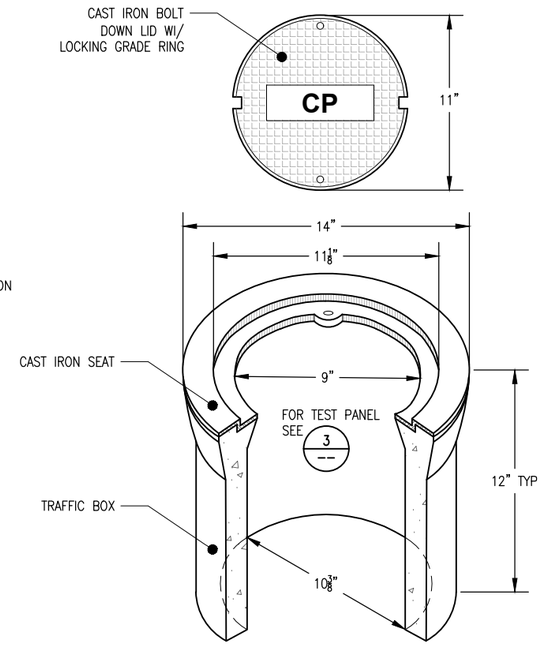
SHEET TITLE: CATHODIC PROTECTION DETAILS

DATE: 12/04/17
TAllc PROJ. No.: 1712401
CONTRACT No.: DH18-027
SHEET 11 OF 15

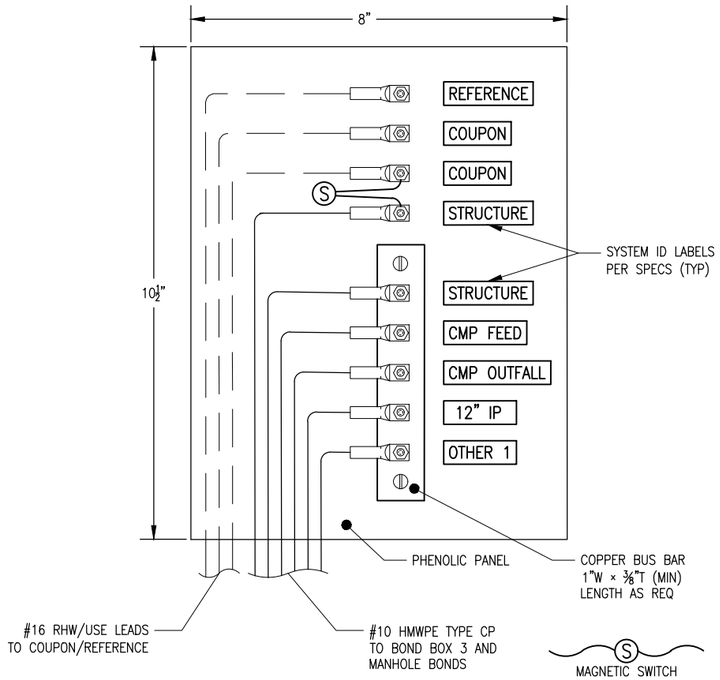
CP101



1/C204 **DETAIL - ICCP JUNCTION BOX**
SCALE: NTS
CP101



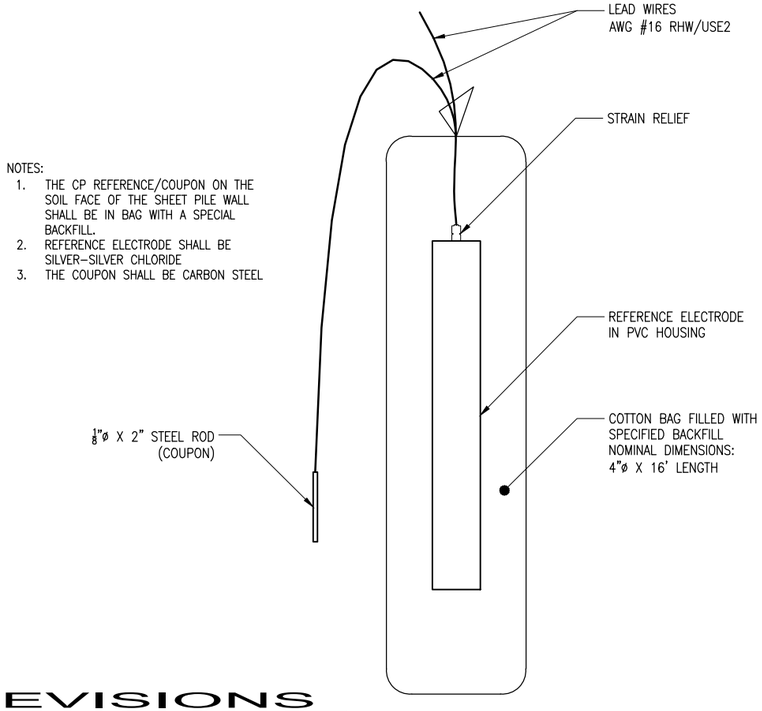
2/C002 **ELEVATION - FLUSH-MOUNT TEST STATION**
SCALE: NTS
C202, C203, CP103, CP104



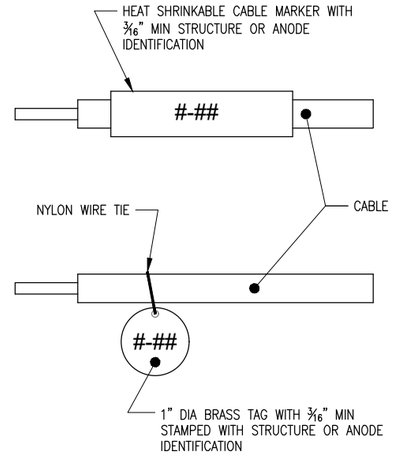
NOTES:
1. ABOVE IS A PLAN VIEW OF THE SPECIFIED FLUSH-MOUNT TEST STATION.
2. LABEL THE MARINE PARK TEST STATION AS SHOWN ABOVE.
3. PROVIDE 2' MIN EXTRA LENGTH OF ALL CABLES TO ALLOW PANEL TO BE COMPLETELY REMOVED FROM THE TEST STATION WITH THE CABLES ATTACHED
4. TERMINATE A #6 AWG BOND CABLE TO THE TERMINAL AT THE TOP OF THE PANEL BOARD LABELED 'STRUCT BOND'.
5. TERMINATE THE COUPON LEAD TO THE TERMINAL LABELED 'COUPON'.
6. TERMINATE THE REFERENCE LEAD TO THE TERMINAL(S) LABELED 'REF'.
7. CONNECT THE COUPON TO ONE STRUCTURE BOND USING THE SPECIFIED MAGNETIC SWITCH
8. MAKE ALL TERMINATIONS USING TIN-PLATED COPPER COMPRESSION-LUGS PER THE SPECIFICATIONS.

3/-- **DETAIL - TEST STATION PANEL**
SCALE: NTS

NOTES:
1. THE CP REFERENCE/COUPON ON THE SOIL FACE OF THE SHEET PILE WALL SHALL BE IN BAG WITH A SPECIAL BACKFILL.
2. REFERENCE ELECTRODE SHALL BE SILVER-SILVER CHLORIDE
3. THE COUPON SHALL BE CARBON STEEL



4/C002 **DETAIL - CP REF/COUPON**
SCALE: NTS
C202, C204, CP104



NOTES:
IDENTIFY ALL CABLES ENTERING J-BOXES WITH PERMANENT CABLE MARKERS. IDENTIFY EACH J-BOX WITH A UNIQUE IDENTIFICATION ON A ½" HIGH ENGRAVED PLASTIC ID PLAQUE

5/-- **DETAIL - CABLE IDENTIFICATION**
SCALE: NTS

REVISIONS

No.	DATE	DESCRIPTION	BY

Tinnea & Associates, LLC
2018 E. Union St. Phone: 206-328-7872
Seattle, WA 98122 Fax: 206-328-7916
www.tinnea.net

STATE OF ALASKA 49th KERRI M. HOWELL CE-9833 REGISTERED PROFESSIONAL ENGINEER

DATE 12/04/17

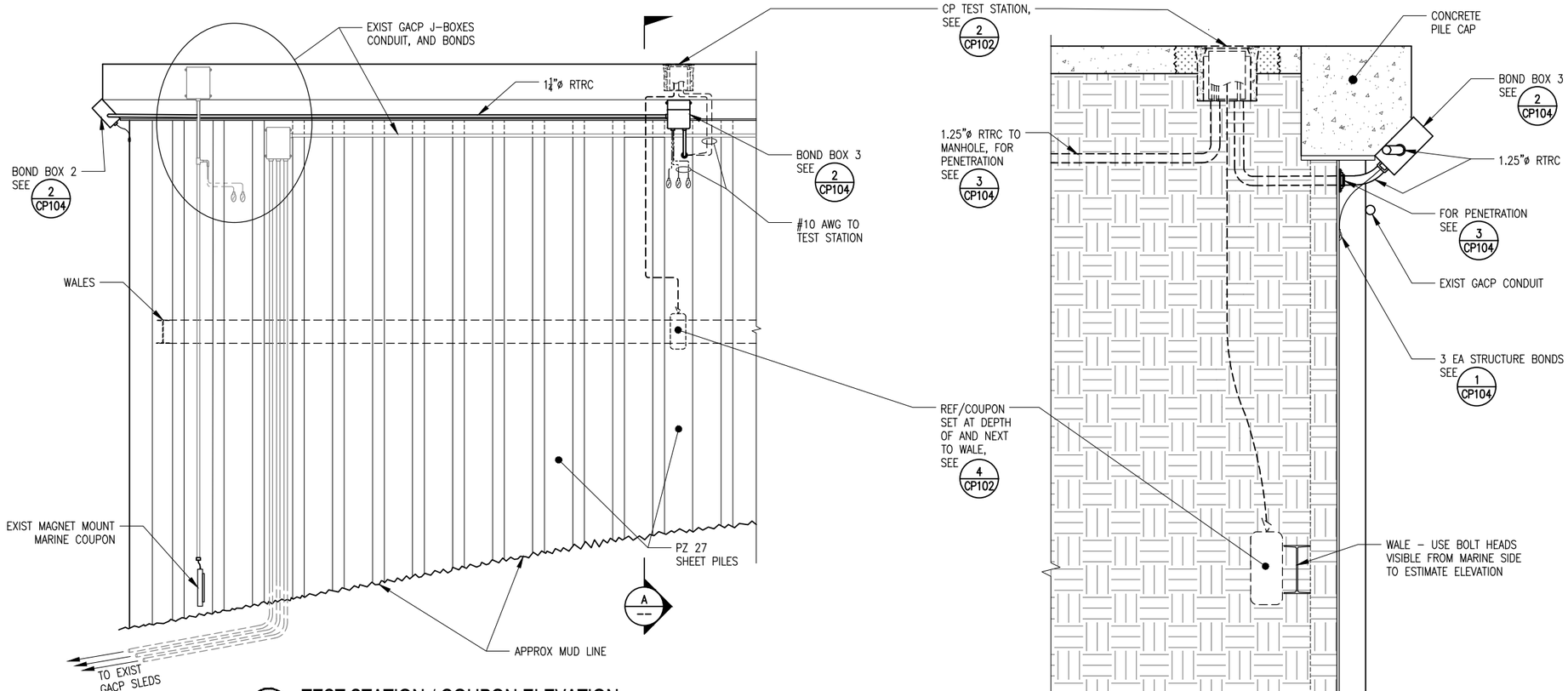
DOWNTOWN WATERFRONT FACILITIES
CORROSION CONTROL PROJECT
JUNEAU, ALASKA

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DOCKS AND HARBORS

SHEET TITLE:
CATHODIC PROTECTION DETAILS

DATE: 12/04/17
Tallc PROJ. No.: 1712401
CONTRACT No.: DH18-027
SHEET 12 OF 15

CP102



1 C203 **TEST STATION / COUPON ELEVATION**
SCALE: NTS

A C401 **SECTION - SHEET PILE ELEVATION**
SCALE: NTS

REVISIONS

No.	DATE	DESCRIPTION	BY

Tinnea & Associates, LLC
2018 E. Union St. Phone: 206-328-7872
Seattle, WA 98122 Fax: 206-328-7916
www.tinnea.net

STATE OF ALASKA 49th
KERRI M. HOWELL
CE-9833
REGISTERED PROFESSIONAL ENGINEER

DATE 12/04/17

DOWNTOWN WATERFRONT FACILITIES CORROSION CONTROL PROJECT

JUNEAU, ALASKA

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DOCKS AND HARBORS

SHEET TITLE:
CATHODIC PROTECTION ELEVATIONS

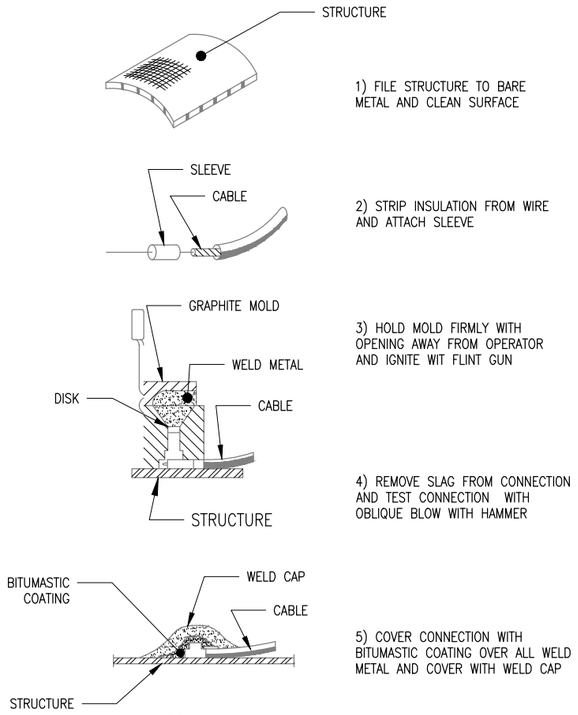
DATE: 12/04/17

TAllc PROJ. No.: 1712401

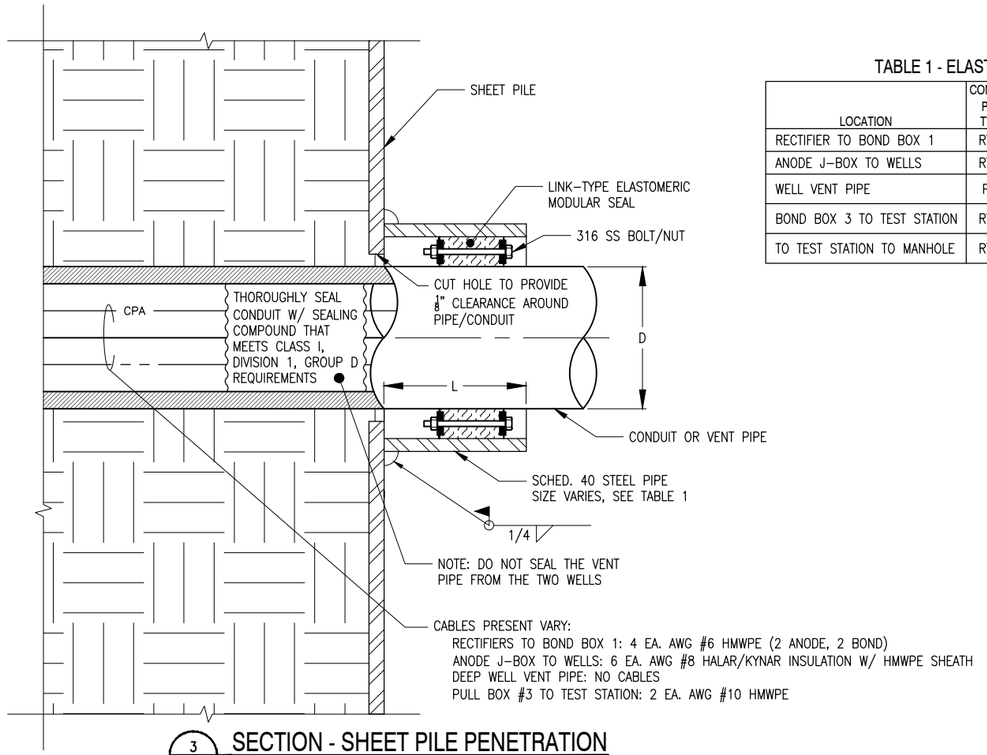
CONTRACT No.: DH18-027

SHEET 13 OF 15

CP103



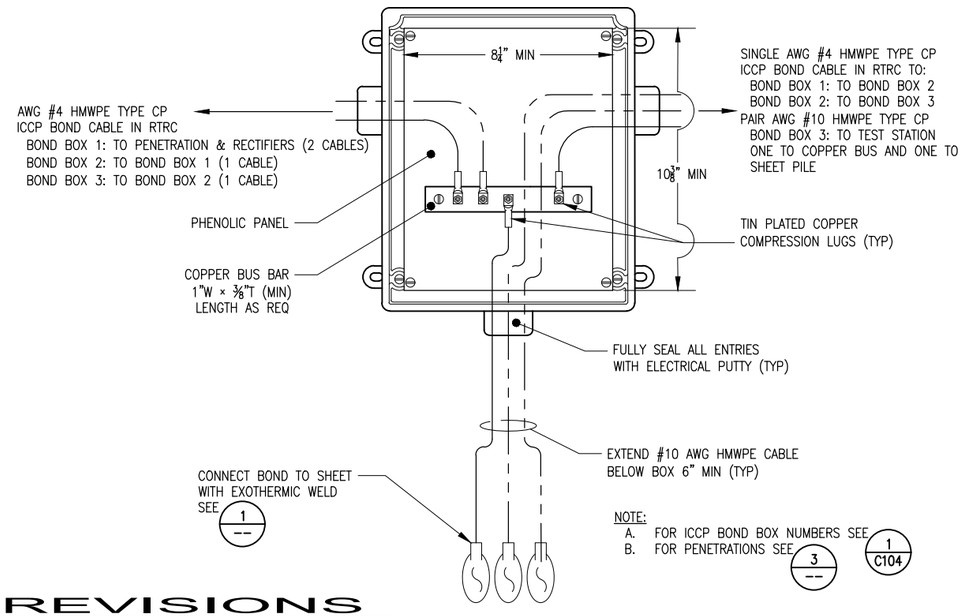
1 / C002 **DETAIL - THERMITE WELD**
SCALE: NTS
C202, C203, C204, C205, CP102, CP103



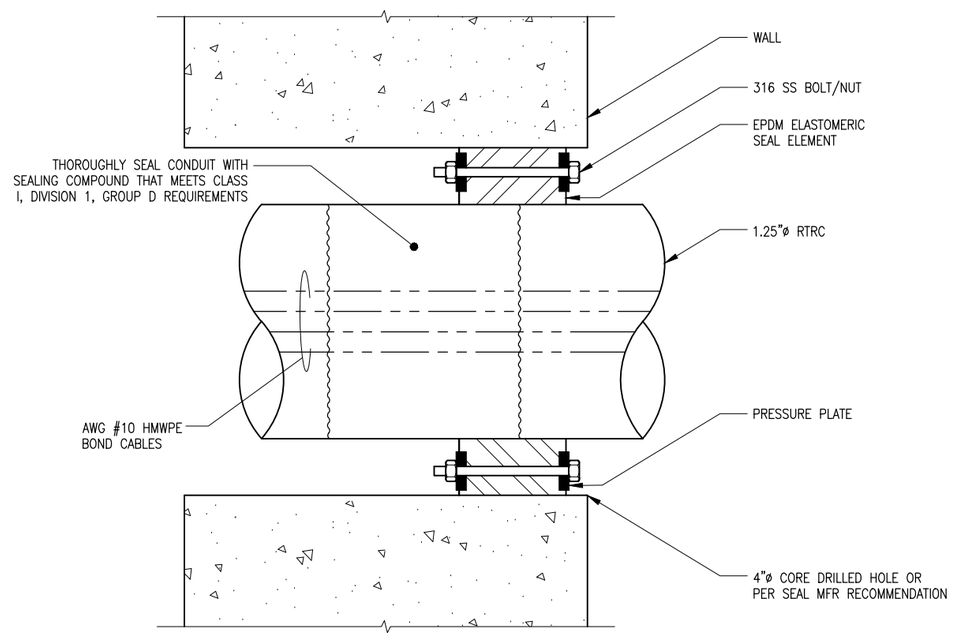
3 / C204 **SECTION - SHEET PILE PENETRATION**
SCALE: NTS
CP103

TABLE 1 - ELASTOMERIC PENETRATION SEALS

LOCATION	CONDUIT PIPE TYPE	NOMINAL ID	NOMINAL OD	STEEL PIPE D	STEEL PIPE L	LINK-SEAL (OR =) PART No.
RECTIFIER TO BOND BOX 1	RTRC	1¼"	2.02"	3"	2½"	LS-200-S-316-7
ANODE J-BOX TO WELLS	RTRC	2"	2.50"	4"	3½"	LS-300-S-316-6
WELL VENT PIPE	PVC	1½"	1.90"	3"	2½"	LS-200-S-316-7
BOND BOX 3 TO TEST STATION	RTRC	1¼"	2.02"	3"	2½"	LS-200-S-316-7
TO TEST STATION TO MANHOLE	RTRC	1¼"	2.02"	4"ø CORE		LS-315-S-316-6



2 / C203 **DETAIL - ICCP BOND BOX**
SCALE: NTS
C202, C204, C205



4 / C203 **SECTION - MANHOLE PENETRATION**
SCALE: NTS

REVISIONS

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2018 E. Union St. Phone: 206-328-7872
Seattle, WA 98122 Fax: 206-328-7916
www.tinnea.net

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JUNEAU, ALASKA

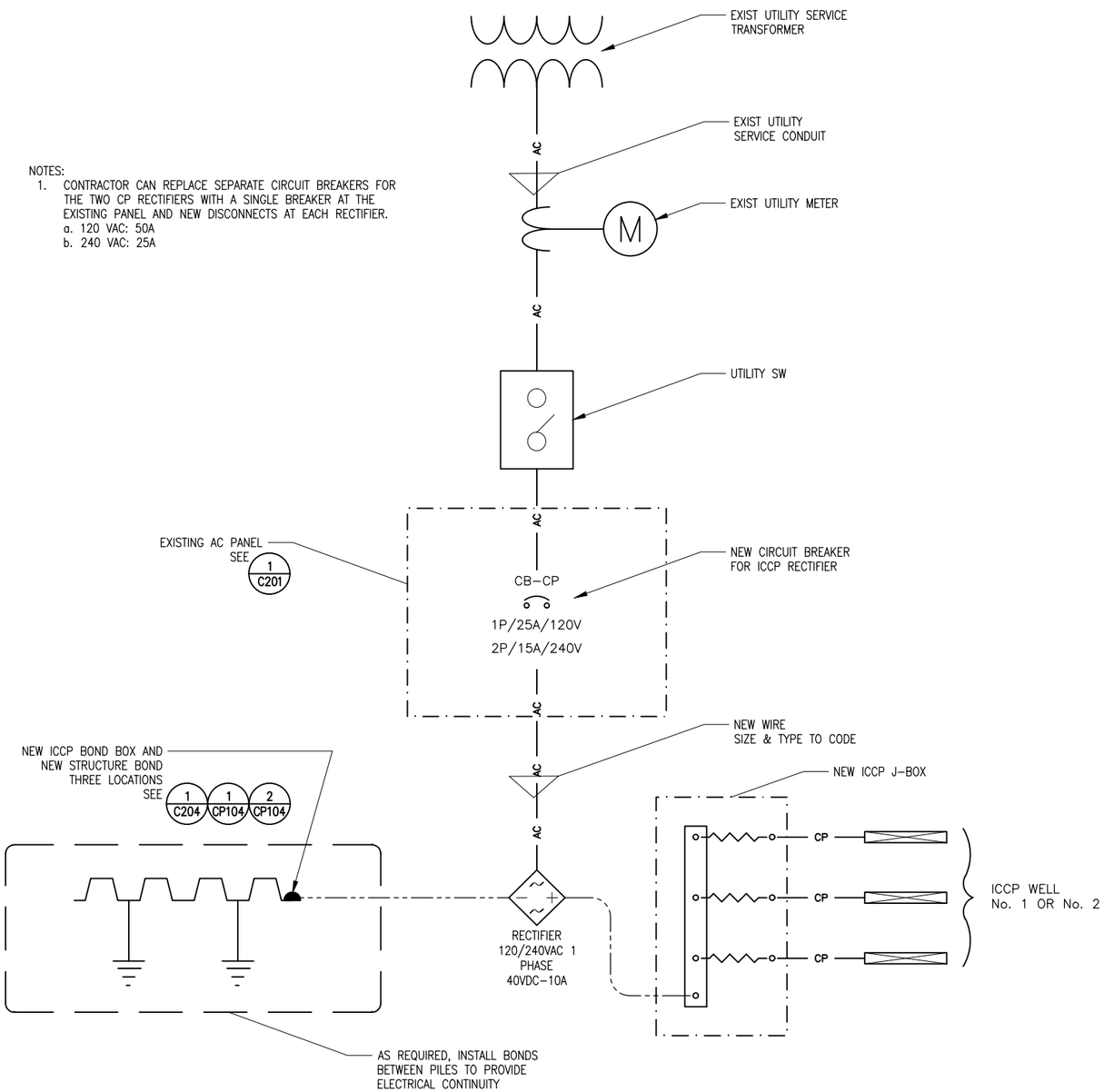
CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DOCKS AND HARBORS

SHEET TITLE:
CATHODIC PROTECTION DETAILS

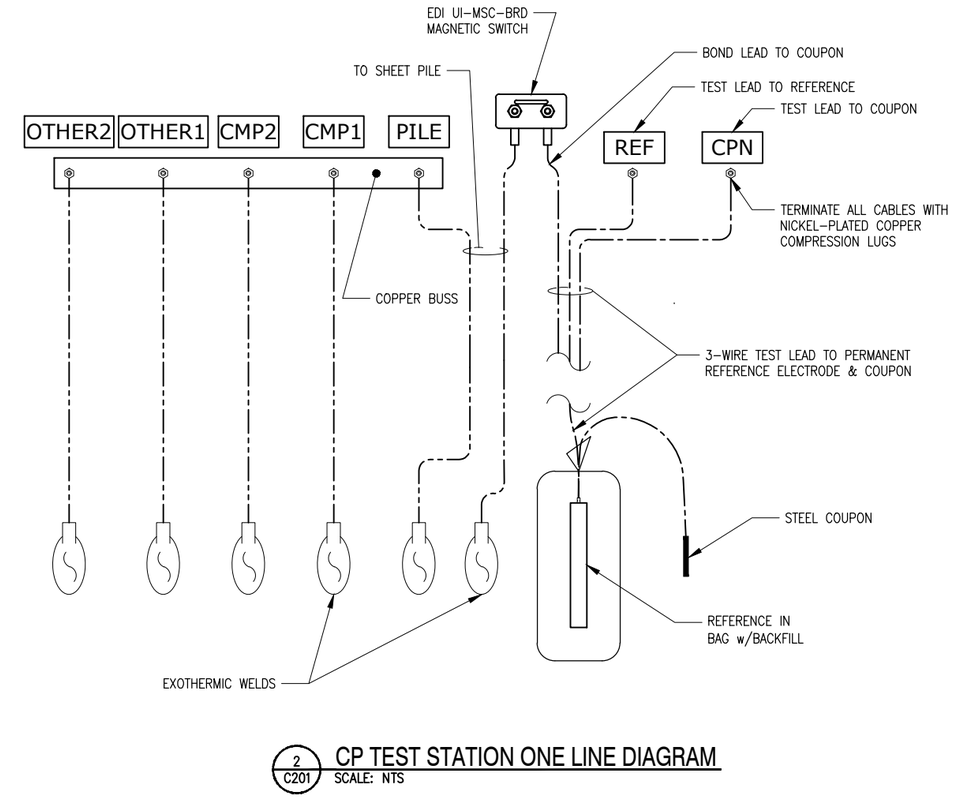
DATE: 12/04/17
TAllc PROJ. No.: 1712401
CONTRACT No.: DH18-027
SHEET 14 OF 15

CP104

NOTES:
1. CONTRACTOR CAN REPLACE SEPARATE CIRCUIT BREAKERS FOR THE TWO CP RECTIFIERS WITH A SINGLE BREAKER AT THE EXISTING PANEL AND NEW DISCONNECTS AT EACH RECTIFIER.
   a. 120 VAC: 50A
   b. 240 VAC: 25A



1/C201 ICCP ONE LINE DIAGRAM
SCALE: NTS



2/C201 CP TEST STATION ONE LINE DIAGRAM
SCALE: NTS

LEGEND

- AC — AC FEED TO RECTIFIER
- HMWPE TYPE CP CABLE
- CP — HMWPE/HALAR ANODE CABLES
- REF/COUPON LEAD WIRE
- RECTIFIER
- COPPER BUSS BAR
- CONNECTION
- SHUNT
- ANODE
- SEAWALL
- EXOTHERMIC WELD PLATE
- TO REMOTE EARTH (GROUND)

REVISIONS

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CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DOCKS AND HARBORS

SHEET TITLE:
CATHODIC PROTECTION 1-LINE DRAWINGS

DATE: 12/04/17
TAllc PROJ. No.: 1712401
CONTRACT No.: DH18-027
SHEET 15 OF 15

CP105