US Army Corps of Engineers®
JAPAN DISTRICT

TSURUMI, YOKOHAMA, JAPAN

DESC1904 MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE

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FRANCIS T. HINO LICENSED PROFESSIONAL ENGINEER No. 5499-C HAWAII, U.S.A.
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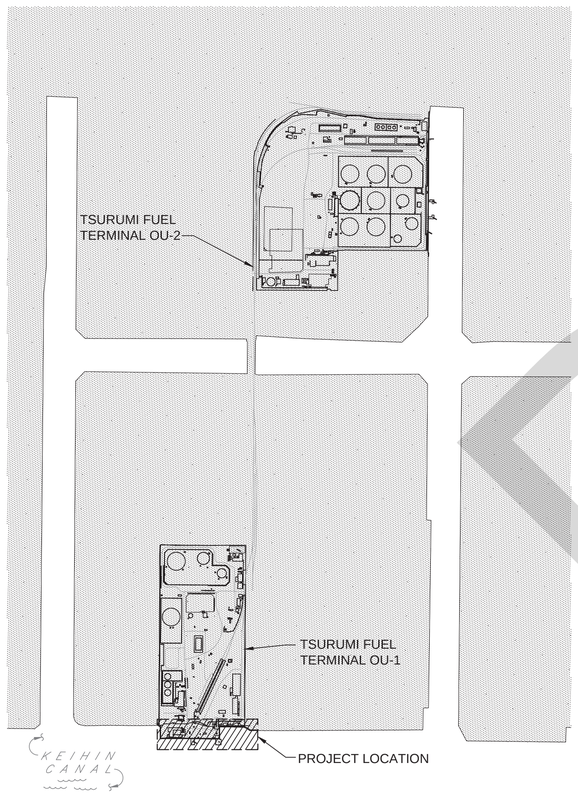
VICINITY MAP



VICINITY MAP
SCALE: 1:2500 0 50 100m NORTH

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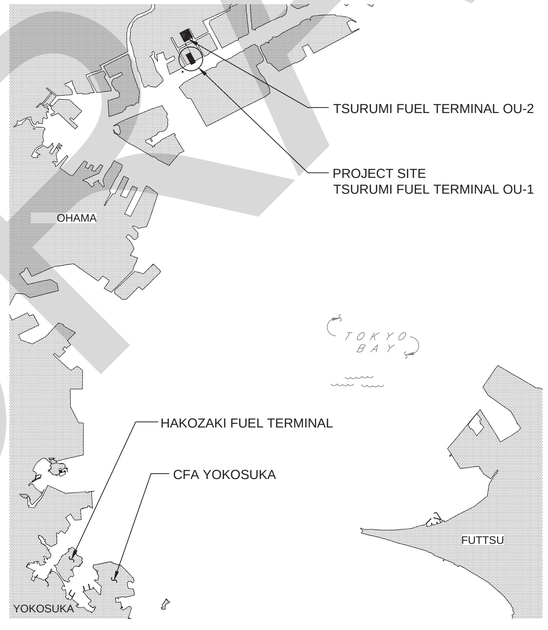
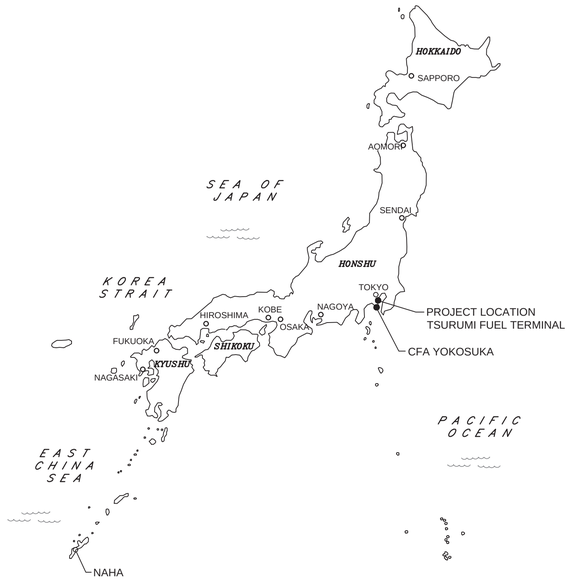


LOCATION MAP
SCALE: 1:50,000 0 1000 2000m NORTH

MAP OF JAPAN



MAP OF JAPAN
SCALE: NTS NORTH

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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TITLE SHEET

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REVISIONS

MARK	DESCRIPTION	DATE

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MODERNIZE FUELING WHARVES T-1 TANKER CAPABLE,
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DESC1904

DRAWING INDEX

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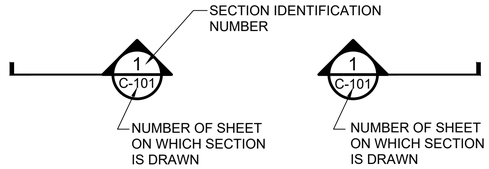
LIST OF ABBREVIATIONS

AC	ASPHALT CONCRETE
AS	ASPHALT
℄	BASE LINE
Bq	BECQUEREL
BLDG	BUILDING
BM	BENCHMARK
℄	CENTER LINE
CDL	CHART DATUM LEVEL
CI	CAST IRON
CO,CONC	CONCRETE
CP	CONCRETE PIPE
D	DIAMETER OR DRAIN
DEFL	DEFLECTION
DEG	DEGREE
DI	DRAIN INLET
DIP	DUCTILE IRON PIPE
DL	DATUM LEVEL
D.L.	DETECTION LIMIT
DMH	STORM DRAIN MANHOLE
DWGS	DRAWINGS
E	EASTING
ELEV	ELEVATION
EMH	ELECTRICAL MANHOLE
EP	ELECTRIC POLE
EXST, E/	EXISTING
FH	FIRE HYDRANT
FG	FINISH GRADE
FL	FLOW LINE
FWD	FORWARD
g	GRAM
GCMS	GAS CHROMATOGRAPHY- MASS SPECTROMETRY
GOJ	GOVERNMENT OF JAPAN
GSP	GALVANIZED STEEL PIPE
H	HEIGHT
Hz	HERTZ
HORIZ	HORIZONTAL
HWL	HIGH WATER LEVEL
INV	INVERT
JEA	JAPAN ENVIRONMENTAL AGENCY
JIS	JAPAN INDUSTRIAL STANDARD
KPa	KILOPASCAL
kg	KILOGRAM
KW	KILOWATT
LP	LIGHT POLE
l	LITER
lpm	LITERS PER MINUTE
LT	LEFT
LLWL	LOWEST LOW WATER LEVEL
LWL	LOW WATER LEVEL
m	METER
MAX	MAXIMUM
ME	MATCH EXISTING
MECH	MECHANICAL
MH	MANHOLE
mg	MILLIGRAM
MIN	MINIMUM
mm	MILLIMETER
MOE	MINISTRY OF THE ENVIRONMENT
MSL	MEAN SEA LEVEL
MT	METRIC TON
N	NORTHING
ND	NOT DETECTED
NE	NORTHEAST
NEC	NATIONAL ELECTRIC CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NTS	NOT TO SCALE
NW	NORTHWEST
OC, O.C.	ON CENTER
OS&Y	OUTSIDE STEM AND YOKE
OU	OPERATING UNIT
O/S	OFFSET
O/W	OIL/WATER
PAV'T	PAVEMENT
PCB	POLYCHLORINATED BIPHENYL
PED	PEDESTRIAN
pg	PICOGRAM
PI	POINT OF INTERSECTION
ppm	PARTS PER MILLION

RCP	REINFORCED CONCRETE PIPE
RT	RIGHT
S	SEWER OR SPREAD
SDA	STATIC DISSIPATER ADDITIVE
SE	SOUTHEAST
SLP	SLOPE
SM	SQUARE METERS
SMH	SEWER MANHOLE
SQ	SQUARE
SST	STAINLESS STEEL
STA.	STATION
STRUCT	STRUCTURAL
SW	SOUTHWEST
TEQ	TOXIC EQUIVALENCY
THK	THICK
TMH	TELEPHONE MANHOLE
TP	TELEPHONE POLE
TYP	TYPICAL
V	VOLTS
VERT	VERTICAL
VP	POLYVINYL CHLORIDE PIPE
W	WATER
WMH	WATER MANHOLE
WV	WATER VALVE

SYMBOLS

EXISTING		NEW
2451	BUILDING	
Co	CONCRETE PAVEMENT	
AS	ASPHALT PAVEMENT	
	ASPHALT BOUNDARY LINE	
	BLOCK WALL	
	FENCE	
	OUTCROP	
	SLOPE	
	KENCHI BLOCK	
	RETAINING WALL	
	L-TYPE DITCH	
	STONE FLAGGE CH	
	OPEN H	
	TING	
	UARDRAIL	
	NISTER	
	E	
1	TR	
	TURF ARE	
	WASTE LAND	
	EGETATION BOUNDARY	
L	POLE	
FH	E H	
WIRE EP	ELECTRIC POLE (WIRE = TENSION WIRE)	
TP	TELEPHONE POLE	
	TRAFFIC SIGN	
WV	WATER VALVE	
TMH	TELEPHONE MANHOLE	
	ELECTRIC MANHOLE	
SM	SEWER MANHOLE	
DMH	STORM DRAINAGE MANHOLE	
WV	WATER MANHOLE	
TSU-201	SURVEY MONUMENT	
401	BENCHMARK	
F	DOMESTIC FIRE PIPE	
W x	WATER PIPE	W40
EUx	ELECTRIC LINE	
C x	TELEPHONE LINE	
SS x	SEWER PIPE	
D40	DRAIN PIPE	D75
SD x	STORM DRAIN PIPE	
E x	OVERHEAD ELECTRICAL LINE	
×3.40	SPOT ELEVATION	3.500
	BALL VALVE	
	UNION	
	REDUCER	
	GEOTECHNICAL BORING LOCATION	
	GEOTECHNICAL AND SEDIMENT SAMPLING BORING LOCATION	
	SEDIMENT SAMPLING BORING LOCATION	



SYMBOL WHERE SECTION IS TAKEN

1 SECTION
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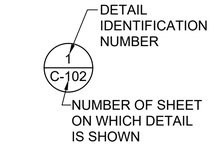
SUBTITLE FOR SECTION / ELEVATION DRAWING



SYMBOL FOR CONDITION FOR WHICH THERE IS A DETAIL

1 DETAIL
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SUBTITLE FOR DETAIL DRAWING

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DESC1904
MODERNIZE FUELING WHARF NO.5 T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

ABBREVIATIONS AND SYMBOLS

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RTA SUBMITTAL

GENERAL NOTES:

1. DIMENSIONS TAKE PRECEDENCE OVER SCALE.
2. AZIMUTHS MEASURED FROM TRUE NORTH = 0 DEGREES, 00 MINUTES, 00 SECONDS AND INCREASE CLOCKWISE.
3. ALL WORK PERFORMED SHALL COMPLY WITH U.S. ARMY CORPS OF ENGINEERS EM 385-1-1, SAFETY AND HEALTH REQUIREMENTS, 29 CFR 1910, NFPA 70 (NEC), NFPA 101 (LIFE SAFETY CODE) AND WITH ALL FEDERAL AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH AND SAFETY, OCCUPATIONAL HEALTH AND SAFETY, AND ENVIRONMENTAL QUALITY. WHERE REQUIREMENTS VARY, THE MOST STRINGENT REQUIREMENTS SHALL APPLY.
4. REMOVE ALL SILT AND DEBRIS RESULTING FROM HIS WORK DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS AND OTHER AREAS. THE COSTS INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE GOVERNMENT SHALL BE PAYABLE BY THE CONTRACTOR.
5. RESTORE TO THEIR ORIGINAL CONDITION ALL IMPROVEMENTS DAMAGED AS A RESULT OF THE CONSTRUCTION, INCLUDING BUT NOT LIMITED TO PAVEMENTS, EMBANKMENTS, CURBS, SIGNS, LANDSCAPING, STRUCTURES, UTILITIES, WALLS, FENCES, ETC.
6. PROVIDE AND MAINTAIN ALL SIGNS, CONES, BARRICADES, AND OTHER PROTECTIVE FACILITIES TO IDENTIFY AND DELINEATE CONSTRUCTION WORK AREAS.
7. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES AS SHOWN ON THE PLANS ARE BASED ON THE AVAILABLE DATA.
8. PRIOR TO COMMENCING EXCAVATION, NOTIFY THE CONTRACTING OFFICER.
9. IF CAVITIES OR VOIDS ARE ENCOUNTERED DURING EXCAVATION WORK, STOP WORK IMMEDIATELY AND NOTIFY THE CONTRACTING OFFICER.
10. PROVIDE FIRE EXTINGUISHER AND FIRE WATCH AT EACH LOCATION OF HOT WORK. KEEP ONE SPARE EXTINGUISHER AT EACH FIRE WATCH AT ALL TIMES.
11. SMOKING IS STRICTLY PROHIBITED WITHIN THE WORK AREAS.
12. TAKE ALL PRECAUTIONS TO MINIMIZE STATIC IGNITION HAZARDS.
13. MONITOR THE AIR IN ALL HAZARDOUS WORK ZONES DURING WORK PERIODS FOR HAZARDS DUE TO THE PRESENCE OF COMBUSTIBLE VAPORS.
14. NOTIFY CONTRACTING OFFICER AND FACILITY FIRE CHIEF IN WRITING PRIOR TO DOING ANY HOT WORK. OBTAIN A HOT WORK PERMIT PRIOR TO BEGINNING ANY HOT WORK.
15. EMPLOY ALL ENERGY ISOLATION BEST PRACTICES (LOCK-OUT/TAG-OUT, ETC.) TO ENSURE SAFETY.
16. COORDINATE ALL WORK WITH THE FACILITY AND COMPLY WITH ALL RESTRICTED ACCESS POLICIES. THE CONTRACTOR'S WORK SHALL NOT INTERFERE WITH ONGOING OPERATIONS AT THE FACILITY.
17. WORK PLANS AND SCHEDULES SHALL BE SUBMITTED AND APPROVED BY THE CONTRACTING OFFICER PRIOR TO BEGINNING WORK WHICH REQUIRES SHUTDOWNS. SCHEDULES SHALL INDICATE WORK AND DOWNTIME DURATION FOR EACH PHASE OR PORTION OF THE PROPOSED WORK. SCHEDULE SHALL BE COORDINATED WITH THE FACILITY'S OPERATIONAL REQUIREMENTS.
18. COORDINATE ALL PUBLIC ROADWAY CLOSURES WITH THE CONTRACTING OFFICER. PROVIDE NOTIFICATION OF ROAD CLOSURE TO THE CONTRACTING OFFICER. PROVIDE ALL NECESSARY TRAFFIC BARRIERS, SIGNAGE AND WARNING LIGHTS AS REQUIRED DURING ROAD CLOSURE.
19. FACILITY ROADWAYS SHALL BE KEPT CLEAR AND ACCESSIBLE AT ALL TIMES DURING CONSTRUCTION. IF ROAD BLOCKAGE IS REQUIRED, NOTIFY THE FIRE DEPARTMENT.
20. IMMEDIATELY NOTIFY THE CONTRACTING OFFICER OR CONTRACTING OFFICER'S REPRESENTATIVE IN WRITING OF ANY DISCREPANCIES OR CONDITIONS WHICH PREVE CONTRACTOR FROM FULFILLING THE TERMS OF THE CONTRACT.
21. NO BURYING OF DEBRIS OR WASTE MATERIAL, EXCEPT FOR MATERIALS WHICH SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS AS SUITABLE FOR KFILL, SHALL BE PERMITTED.
22. THE MISSION OF THE TSURUMI TERMINAL IS TO SUPPLY YOKOTA AIR BASE JET FUEL (JP-8) VIA RAIL CARS (PRIMARY MODE OF TRANSPORTATION) AND TANK TRU ONDARY MODE). WORK AT THE TERMINAL SHALL NOT COMPROMISE THE ABILITY OF THE ITY TO PERFORM ITS MISSION.
23. THE TSURUMI TERMINAL'S OPERATING UNIT (OU-1) AND OPERATING UNIT 2 (OU-2) ARE CONSTRUCTED AND OPERATED AS ESSENTIALLY INDEPENDENT FACILITIES. THE RAIL RA OU-1 IS THE PRIMARY POINT OF JP-8 ISSUE FOR THE FACILITY. BOTH OU-1 AND OU-2 HAVE TRUCK FILL STANDS WHICH CAN ISSUE JP-8 TO TANK TRUCKS. THE PRIMARY FUNCTION OF OU-2 IS TO SERVE AS ADDITIONAL STORAGE FOR OU-1. THE TWO OPERATING UNITS ARE TIED TOGETHER BY TWO 8-INCH INTER-TERMINAL PIPELINES.
24. HOT WORK IS PROHIBITED IN THE CONSTRUCTION AREA DURING FUELING OR FUEL TRANSFER OPERATIONS.

BEST MANAGEMENT PRACTICE (BMP) NOTES:

1. CONTAMINATED SOIL RETURNED TO THE SAME SITE SHALL BE COVERED BY A MINIMUM OF 0.61-METER LAYER OF CLEAN FILL.
2. PLACE SOIL STOCKPILES IN CLOSE PROXIMITY TO THE EXCAVATION SITE. STOCKPILES SHALL BE COVERED WITH A PLASTIC TARP OR OTHER IMPERVIOUS LAYER TO PREVENT LEACHING.
3. IF A SOIL STOCKPILE NEEDS TO BE MOVED OR PLACED AWAY FROM THE EXCAVATION SITE, AN IMPERVIOUS LAYER SHALL BE PLACED BELOW AND ABOVE THE STOCKPILE TO PREVENT LEACHING.
4. THERE WILL BE NO SOIL DISPOSAL AT THE INSTALLATION; EXCESS SOIL SHALL BE TESTED AND DISPOSED OFFSITE.
5. IF GROUNDWATER LEVELS INCREASE DURING EXCAVATION DUE TO TIDAL FLUCTUATIONS, GROUNDWATER SHALL BE TREATED BY AN OIL/WATER SEPARATOR.
6. CONTAMINATED SOIL HAS BEEN ENCAPSULATED IN A BELOW GRADE CONCRETE STRUCTUR AVOID EXCAVATION IN THIS AREA. AREA IS SHOW ON SHEET G-005.

ENVIRONMENTAL NOTES:

1. TAKE ALL PRECAUTIONS TO MINIMIZE ENVIRONMENTAL POLLUTION AND D E THAT MAY OCCUR AS A RESULT OF CONSTRUCTION OPERATIONS AND SHALL PERF HE WORK IN COMPLIANCE WITH ALL APPLICABLE JEGS ENVIRONMENTAL AND LOC S AND REGULATIONS.
2. DURING EXECUTION OF THE WORK, THE CONTRACTOR IS REQU TO INSTALL AND MAINTAIN REQUIRED SEDIMENTATION AND EROSION CONTROL MEASU O PROTECT ADJACENT WATERWAYS, STREETS AND PROPERTIES. MEASURES IN BUT ARE NOT LIMITED TEMPORARY BERMS, HAY BALES, SILT FENCES, CONTAINME OMS AND TURBID CURTAINS IN ACCORDANCE WITH LOCAL REGULATORY REQUI TS.
3. ALL CONSTRUCTION DEBRIS OR OTHER MATERIALS DURING DEMO OR ALLATION SHALL BE CAPTURED AND PREVENTED FROM ENTERING THE OPEN W AT A MINIMUM, PREVENTATIVE MEASURES SHALL INCLUDE THE USE OF FLOATING BOO H SUSPENDED SILT/TURBIDITY CURTAINS.
4. LEAD BASED PAINT HAS BEEN DETE R TO 2016 HAZARDOUS MATER RVEY INCLUDED IN "FINAL ENVIRONMENTA PO MI FUEL TERMINAL OU-1 FLE LOGISTICS CENTER YOKOSUKA, JAPA Y EA EN G SCIENCE, AND TECHN INC.
   A. THE CONTRACTOR SHALL BE RESP BLE FOR ALL SA ENVIRONMENTAL PRECAUTIONS IN HANDLING AND DIS NG OF PIPING WI D COATINGS IN ACCORDANCE WITH ALL FEDERAL AN CAL REGULAT
   B. PIPING REQUIRING REMOVAL OF EXISTI OATIN ALL BE TESTED FOR LEAD. SURFACE PREPARATION OF PIPING SHAL HA D ACCORDINGLY.
   C. PROV OPE INMENT TO CAPT LL PARTICULATES WHEN BLASTING OR RE NG COATING CH HAVE BEEN ID IED AS CONTAINING LEAD.
   D PERLY SAMPLE, A ZE, LABEL, STORE A ISPOSE OF ALL MATERIALS WITH EAD-CONTAINING CO GS.

OILS AT THE SITE ARE SIDERED CONTAMINATED NTRACTOR TO DISPOSE OF ALL SOIL QUIRING REMOVAL T T AN APPROVE DISPOSAL SITE.

GENE PH ING NOTES:

1. IT IS THE ACTOR'S RESPONSIBILITY TO DEVELOP WORK PLANS FOR PHASING OF ALL REQUIRED W ND TO WORK WITHIN THE IDENTIFIED RESTRICTIONS. THE WORK PLAN MUST ENSURE TSURUMI TERMINAL OPERATIONS ARE NOT IMPACTED BY THE NTRACTOR'S A IES WITH THE EXCEPTIONS OF APPROVED SERVICE OUTAGES AND CONNECTION UPTIONS. THE CONTRACTOR MUST VERIFY THE FEASIBILITY OF THE P SED CONSTRU SEQUENCE.
2. ALL MUST BE COORDINATED WITH FACILITY PERSONNEL DAILY.
3. THE FA Y WILL CONTINUE FUELING OPERATIONS IN THE CONSTRUCTION AREA EXCEPT DURIN NNED OUTAGES. THE CONTRACTOR MUST GIVE RIGHT OF WAY TO ALL MISSION CRITIC UELING OPERATIONS.
4. A WR N ADVANCE NOTICE MUST BE PROVIDED TO THE CONTRACTING OFFICER PRIOR TO AN RVICE INTERRUPTIONS. THE EXACT TIME AND DAY AND DURATION OF THE REQUESTED CE INTERRUPTIONS WILL BE COORDINATED WITH THE CONTRACTOR UPON SUBMISSION HE REQUEST. NUMBER AND LENGTH OF ALL SERVICE OUTAGES MUST BE MINIMIZED TO HE GREATEST EXTENT POSSIBLE.
. PLANNED SERVICE OUTAGE REQUIREMENTS SHALL BE AS FOLLOWS:
   A. A SERVICE OUTAGE SHALL BE DEFINED AS AN INTERRUPTION IN THE ABILITY FOR THE FACILITY TO ISSUE FUEL FROM AT LEAST ONE STORAGE TANK TO ANY OF THE FOLLOWING: THE OU-1 RAIL RACK, OU-1 TRUCK FILL STAND, OU-2 TRUCK FILL STAND, OR RECEIVE FROM OU-1 PIER 111. AN INTERRUPTION IN THE ABILITY TO TRANSFER FUEL BETWEEN THE TWO OPERATING UNITS SHALL ALSO BE CONSIDERED SERVICE OUTAGE.
   B. PLANNED SERVICE OUTAGES AT EITHER OU-1 OR OU-2 SHALL BE COORDINATED WITH THE FACILITY.
6. FOR SPECIFIC PHASED CONSTRUCTION REQUIREMENTS, SEE SHEETS M-002 AND M-003.
7. THE CONTRACTOR MUST PROVIDE A TEMPORARY INTER-TERMINAL PIPELINE CONNECTING OU-1 AND OU-2. SEE SHEET M-111 FOR PROPOSED LAYOUT OF TEMPORARY PIPELINE. THE MAXIMUM DURATION THE TEMPORARY PIPELINE WILL BE IN SERVICE IS 20 MONTHS.

DEMOLITION AND DISPOSAL NOTES:

1. DO NOT BEGIN DEMOLITION OR REMOVALS UNTIL AUTHORIZATION IS RECEIVED FROM THE CONTRACTING OFFICER.
2. COMPLY WITH FEDERAL AND LOCAL HAULING AND DISPOSAL REGULATIONS.
3. ALL WASTE GENERATED FROM DEMOLITION OR CONSTRUCTION ACTIVITIES SHALL BE PROPERLY COLLECTED, STORED, LABELED, MARKED, SAMPLED AND ANALYZED FOR APPROPRIATE DISPOSAL.
4. TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING ITEMS TO REMAIN IN PLACE, TO BE REUSED, OR TO REMAIN THE PROPERTY OF THE GOVERNMENT. REPAIR OR REPLACE DAMAGED ITEMS AS APPROVED BY THE CONTRACTING OFFICER. CONSTRUCT AND MAINTAIN SHORING, BRACING AND SUPPORTS AS REQUIRED. ENSURE THAT STRUCTURAL ELEMENTS ARE NOT OVERLOADED.
5. CAREFULLY DISMANTLE PIPING THAT PREVIOUSLY CONTAINED FUEL, OR OTHER DANGEROUS FLUID, WITH PRECAUTIONS TAKEN TO PREVENT INJURY TO PERSONS AND PROPERTY. CLEAN PIPING BY SWABBING.

   PROVIDE APPROPRIATE SPILL CONTAINMENT AND SPILL RESPONSE/CLEAN-UP MATERIALS. ROVIDE PROPER CATCHMENT/CONTAINTMENT WHEN DISMANTLING PIPING TO PREVENT ANY LS OR RELEASE OF FUEL.
7. AS EXISTING FLANGE GASKETS CONTAIN ASBESTOS. TEST GASKETS FOR ASBESTOS. COLL SEBSTOS-CONTAINING GASKETS INTO PROPER PACKAGING. LABEL AND DISPOSE OF APP ATELY.
8. ALL DEBRIS WASTE MATERIAL, INCLUDING HAZARDOUS WASTE MATERIAL, SHALL BE DISPOSED OF Y THE CONTRACTOR IN ACCORDANCE WITH LOCAL DISPOSAL REGULATIONS.

LIST OF TREES

1	KYOUTHIKUTOU	11	NEZUMIMOCHI	21	SOMEIYOSHINO	31	SOMEIYOSHINO
H	6.00	H	2.80	H	7.00	H	8.00
S	5.00	S	1.00	S	7.00	S	7.00
D	0.20	D	0.05	D	0.50	D	0.60
2	SHIMATONERIKO	12	MUKUNOKI	22	HANAMIZUKI	32	SOMEIYOSHINO
H	10.00	H	9.00	H	8.00	H	8.00
S	8.00	S	7.00	S	4.00	S	4.00
D	0.40	D	0.60	D	0.30	D	0.60
3	KARATANEOGATAMA	13	ISUNOKI	23	HANAMIZUKI	33	SOMEIYOSHINO
H	4.00	H	1.60	H	7.00	H	3.00
S	5.00	S	1.80	S	3.00	S	2.00
D	0.30	D	0.15	D	0.20	D	0.10
4	HAKONEUTSUGI	14	SHIMATONERIKO	24	IBUKI	34	TAMUSHIBA
H	2.50	H	4.00	H	7.00	H	3.00
S	3.00	S	4.00	S	3.00	S	3.00
D	0.20	D	0.20	D	0.25	D	0.20
5	SYURO	15	MOKKOKU	25	IBUKI	35	SOMEIYOSHINO
H	5.00	H	5.00	H	7.00	H	4.00
S	1.00	S	4.00	S	3.00	S	2.00
D	0.15	D	0.30	D	0.25	D	0.30
6	KIRI	16	NEZUMIMOCHI	26	IBUKI	36	MATEBASHII
H	4.00	H	5.00	H	4.00	H	10.00
S	5.00	S	6.00	S	1.00	S	7.00
D	0.30	D	0.60	D	0.10	D	0.60
7	PIRAKANSA	17	NEZUMIMOCHI	27	IBUKI	37	ISUNOKI
H	3.00	H	5.00	H	7.00	H	8.00
S	3.00	S	4.00	S	3.00	S	5.00
D	0.25	D	0.40	D	0.25	D	0.40
8	ISUNOKI	18	TABUNOKI	28	SYARINBAI	38	KUROMATSU
H	2.00	H	7.00	H	12.00	H	7.00
S	2.00	S	9.00	S	4.00	S	4.00
D	0.20	D	0.30	D	0.40	D	0.30
9	ISUNOKI	19	MUKUNOKI	29	URINOKI	39	KUROMATSU
H	1.80	H	8.00	H	3.50	H	10.00
S	1.80	S	4.00	S	2.50	S	8.00
D	0.15	D	0.20	D	0.20	D	0.50
10	MASAKI	20	SOMEIYOSHINO	30	SOMEIYOSHINO	40	KUROMATSU
H	1.60	H	5.00	H	6.00	H	10.00
S	1.60	S	3.00	S	4.00	S	7.00
D	0.15	D	0.40	D	0.50	D	0.50

41	KAEDE	46	SHIKIMI	51	SOMEIYOSHINO	56	BIWA
H	4.00	H	5.00	H	6.00	H	4.00
S	4.00	S	4.00	S	6.00	S	1.20
D	0.20	D	0.20	D	0.60	D	0.10
42	KUSUNOKI	47	TOBERA	52	SOTETSU		
H	4.00	H	2.00	H	3.00		
S	3.00	S	2.00	S	2.00		
D	0.15	D	0.15	D	0.40		
43	KAIZUKAIBUKI	48	TOBERA	53	KUROMATSU		
H	7.00	H	2.00	H	2.00		
S	1.50	S	2.00	S	2.00		
D	0.20	D	0.15	D	0.15		
44	KINMOKUSEI	49	BIWA	54	KUROMATSU		
H	2.30	H	4.00	H	5.00		
S	1.50	W	3.00	S	3.00		
D	0.15	D	0.30	D	0.20		
45	KINMOKUSEI	50	BIWA	55	KUROMATSU		
H	2.30	H	3.50	H	5.00		
S	1.50	S	2.50	S	4.00		
D	0.15	D	0.30	D	0.30		

NOTES:

1. UNITS IN METERS.
2. LIST OF TREES FOR INFORMATIONAL PURPOSES ONLY.

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MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C. KIM
CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
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CONTRACT NO.: -
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SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
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APO AP 96944-5010

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DESC1904
MODERNIZE FUELING WHARVES O T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

GENERAL NOTES, LIST OF TREES

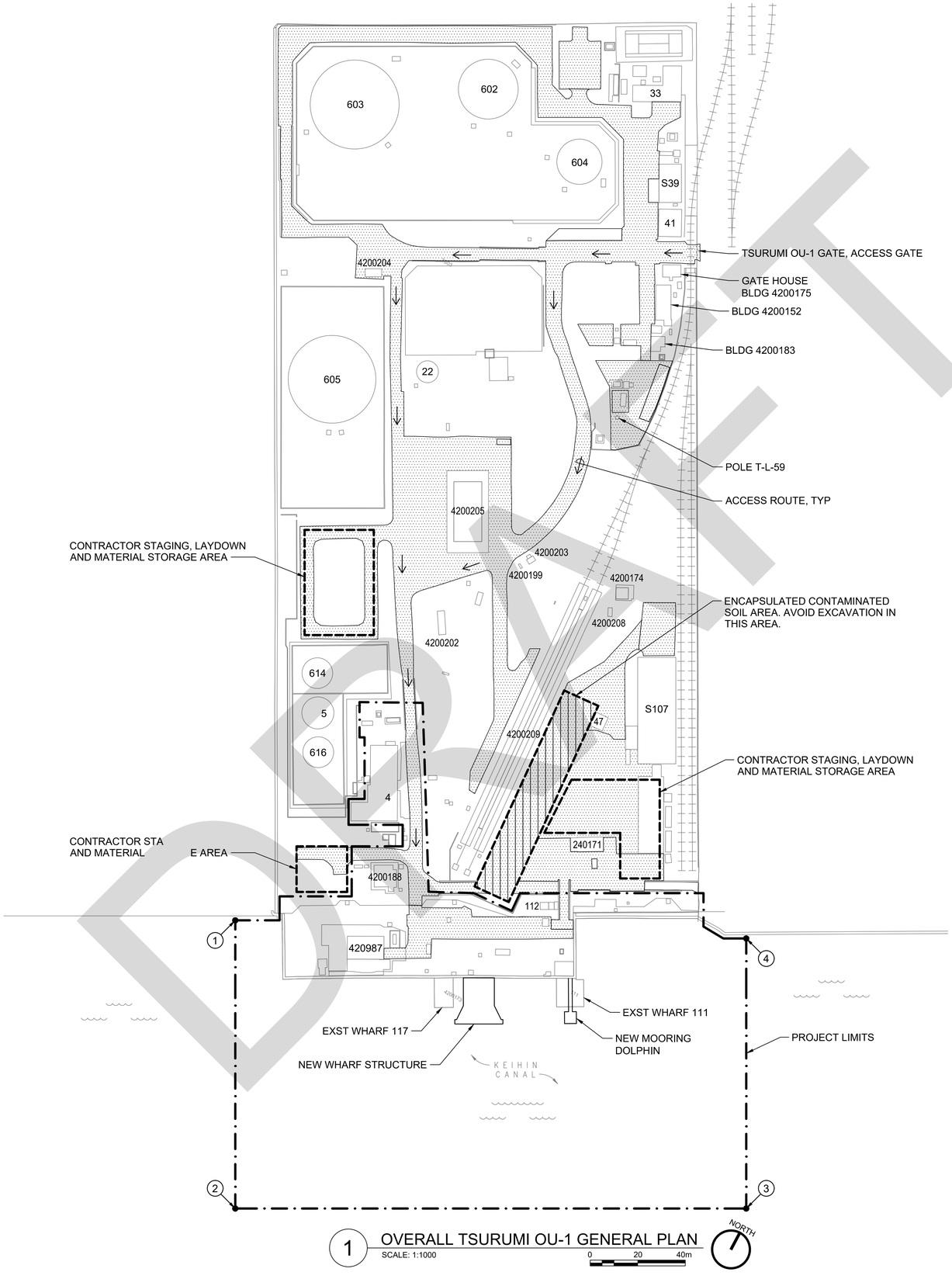
SHEET ID
G-004

COORDINATES TABLE

POINT NO.	NORTHING	EASTING
1	(-)56775.008	(-)11593.375
2	(-)56885.107	(-)11534.179
3	(-)56783.294	(-)11344.815
4	(-)56679.897	(-)11400.407

NOTES:

1. TOPOGRAPHIC SURVEY COORDINATE SYSTEM IS THE JAPAN GEODETIC DATUM (JGD) 2011, ZONE 9 AND IS IN INTERNATIONAL METRIC UNITS.
2. VEHICLES MUST NOT ENTER OR EXIT OU-1 TERMINAL WHILE RAIL CAR IS IN OPERATION.



1 OVERALL TSURUMI OU-1 GENERAL PLAN
SCALE: 1:1000 0 20 40m

LEGEND:

- PROJECT LIMITS
- CONTRACTOR STAGING, LAYDOWN AND MATERIAL STORAGE AREA
- CONSTRUCTION ACCESS ROUTE
- ENCAPSULATED CONTAMINATED SOIL AREA

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HDR - WTNA JV
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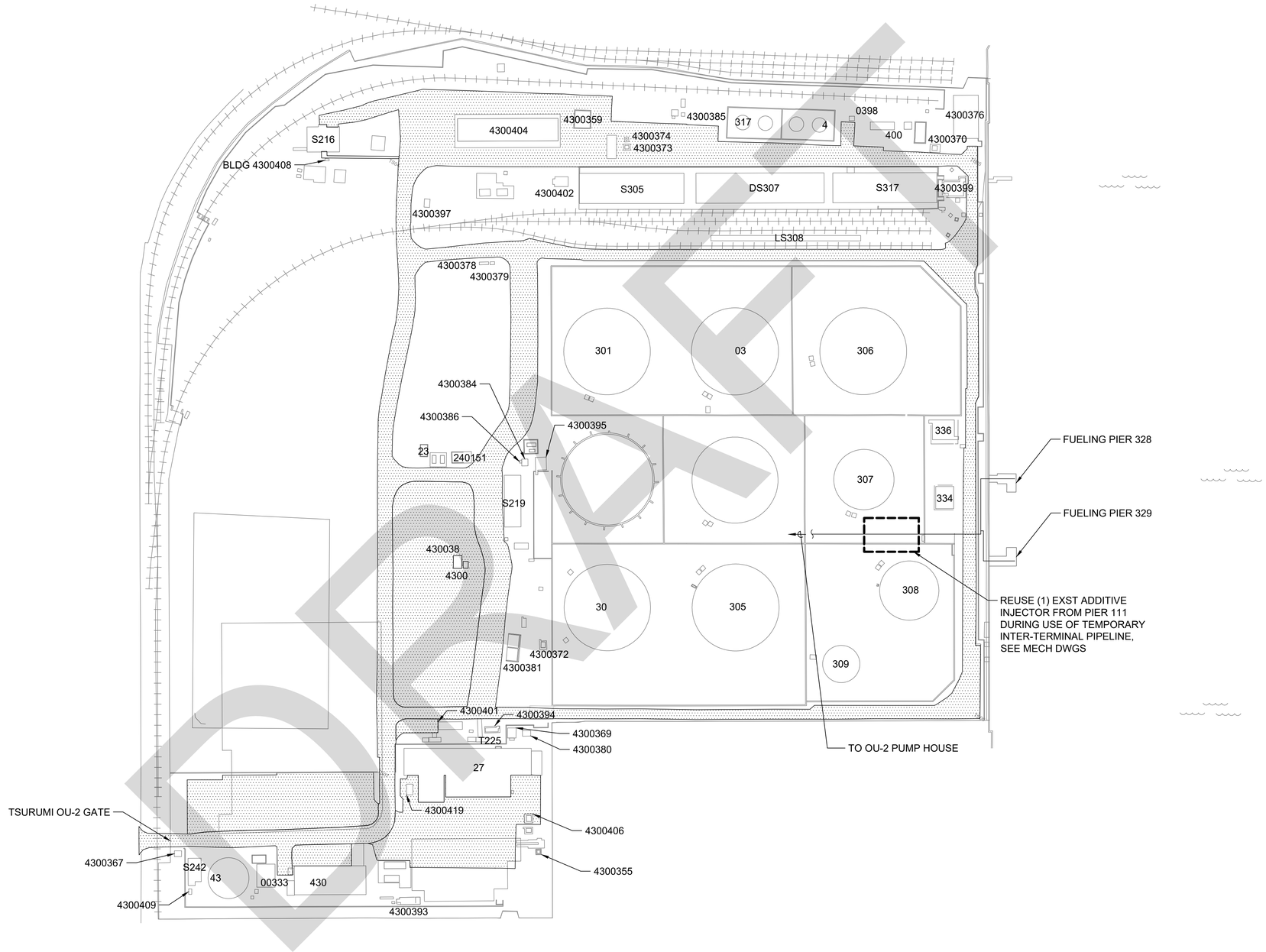
DESC1904
MODERNIZE FUELING WHARVES FOR T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

OVERALL TSURUMI OU-1 GENERAL PLAN

SHEET ID
G-005



1 OVERALL TSURUMI OU-2 GENERAL PLAN

SCALE: 1:1000 0 20 40m

NORTH

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FILE NAME: DESC1904G-005.dwg

U.S. ARMY CORPS OF ENGINEERS
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DESC1904
MODERNIZE FUELING WHARVES T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

OVERALL TSURUMI OU-2 GENERAL PLAN

SHEET ID

G-006

FILE: DESC1904G-006.dwg
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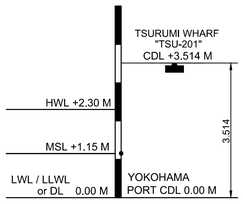
TOPOGRAPHIC SURVEY NOTES:

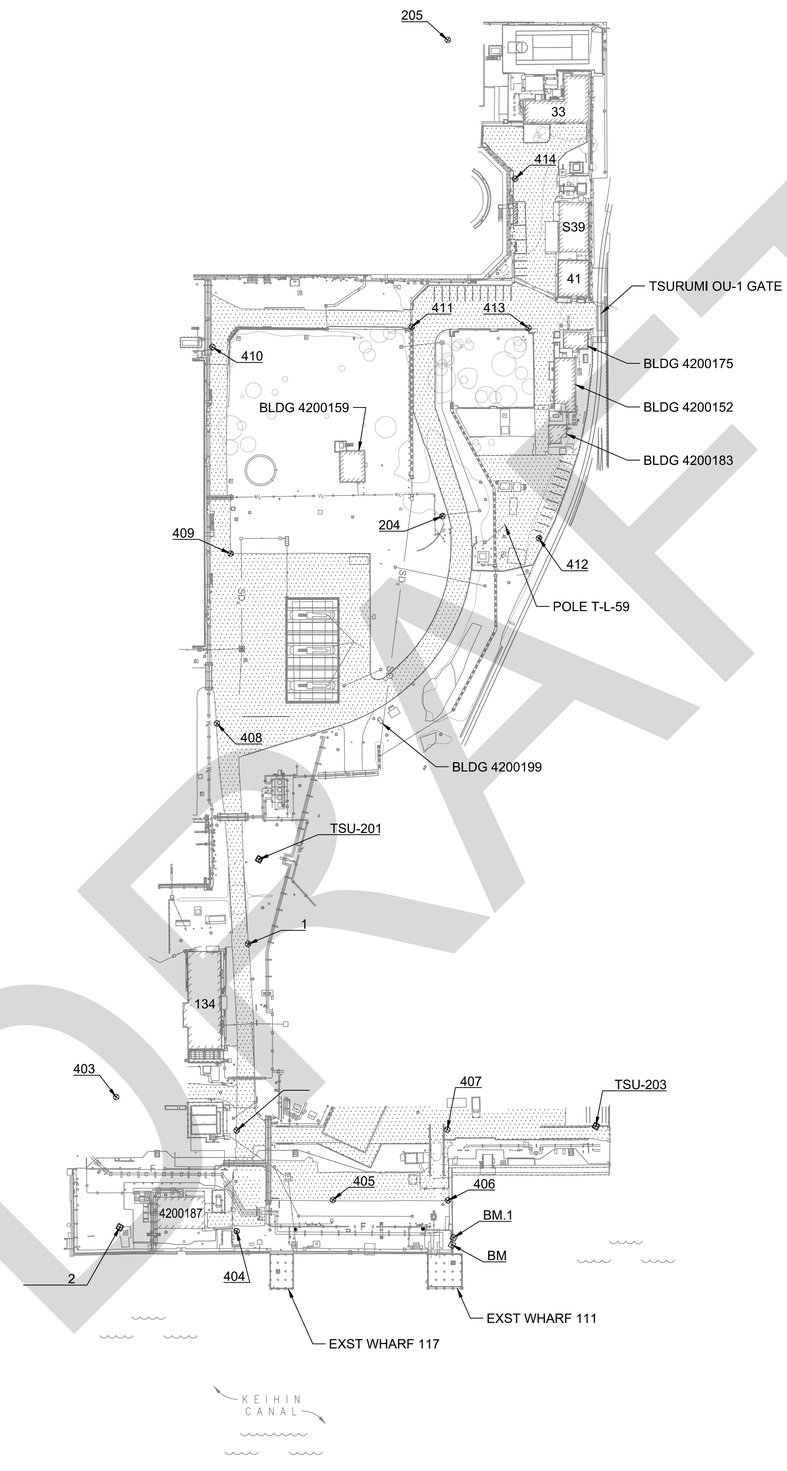
1. TOPOGRAPHIC SURVEY COORDINATE SYSTEM IS THE JAPAN GEODETIC DATUM (JGD) 2011, ZONE 9.
2. THE ELEVATION DATUM IS THE YOKOHAMA PORT CONSTRUCTION DATUM LEVEL (CDL) AND IS BASED ON TIDAL INFORMATION FROM THE YOKOHAMA SHINKO TIDE OBSERVATION STATION ADMINISTERED BY THE JAPAN COAST GUARD (JCG).
3. TOPOGRAPHIC SURVEY UNITS: METERS
4. THE "CONTROL POINTS SUMMARY TABLE" SHOWS THE INFORMATION FOR THE MONUMENTS AND BENCHMARKS ESTABLISHED AROUND THE ENTIRE PERIMETER OF THE SITE IN TSURUMI FUELING WHARF, JAPAN.
5. SURVEY CONDUCTED BY:
   ENVIRONMENTAL SCIENCE CORPORATION
   ESC BUILDING 1553-231 ISHIKAWA IHA, URUMA CITY, OKINAWA,
   JAPAN 904-1115 JAPAN TEL. 011-81-098-989-0426
   REGISTERED SURVEYOR: MR. KOJI CHINEN
   JAPAN REGISTERED SURVEYOR, REGISTRATION NO: H7-724
6. DATE OF TOPOGRAPHIC SURVEY: APRIL 2018 AND SEPTEMBER 2019
7. LOCATION OF EXISTING MAINS AND SERVICE LATERAL LINES FOR WATER, ELECTRICAL AND COMMUNICATION SYSTEMS SHOWN ON THE SURVEY MAP ARE APPROXIMATE AND BASED ON BEST AVAILABLE INFORMATION PROVIDED BY OTHERS. PIPE DIAMETERS ARE SHOWN IN MILLIMETERS.

YOKOHAMA PORT CDL TIDAL DATUMS



NOTES:
DL: DATUM LINE
LWL: LOW WATER LEVEL
LLWL: LOWEST LOW WATER LEVEL
MSL: MEAN SEA LEVEL
HWL: HIGH WATER LEVEL

SOURCE: YOKOHAMA SHINKO TIDE OBSERVATION STATION. JAPAN COAST GUARD, 2018



CONTROL POINTS SUMMARY TABLE

No.	COORDINATES N	COORDINATES E	ELEVATION
TSU-201	-56645.698	-11570.056	3.514
TSU-202	-56773.080	-11553.697	3.334
TSU-203	-56670.861	-11432.057	3.671
401	-56671.791	-11560.205	3.634
402	-56727.276	-11534.878	3.553
403	-56736.167	-11574.693	3.859
404	-56756.304	-11519.397	3.331
405	-56732.450	-11496.457	3.377
406	-56714.989	-11463.307	3.319
407	-56694.685	-11474.326	3.653
408	-56613.014	-11603.051	3.557
409	-56562.013	-11625.203	3.420
410	-56505.295	-11662.147	3.279
411	-56468.877	-11607.768	2.961
204	-56518.692	-11569.897	3.166
412	-56510.275	-11538.705	3.079
413	-56451.294	-11573.998	2.809
414	-56410.345	-11600.758	3.154
205	-56380.714	-11641.489	3.783
BM	-56727.139	-11455.319	3.226
BM.1	-56724.789	-11455.920	2.921

1 GENERAL SURVEY CONTROL POINT LOCATION PLAN
SCALE: 1:1000
0 20 40m
NORTH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C. KIM
CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
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CONTRACT NO.: -
DRAWING CODE: -
SIZE: ISO A1
FILE NAME: DESC1904G-006.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

GENERAL SURVEY CONTROL POINT LOCATION PLAN

SHEET ID
G-007

FILE: DESC1904G-007.dwg
DATE: 6/25/2018 5:05 PM
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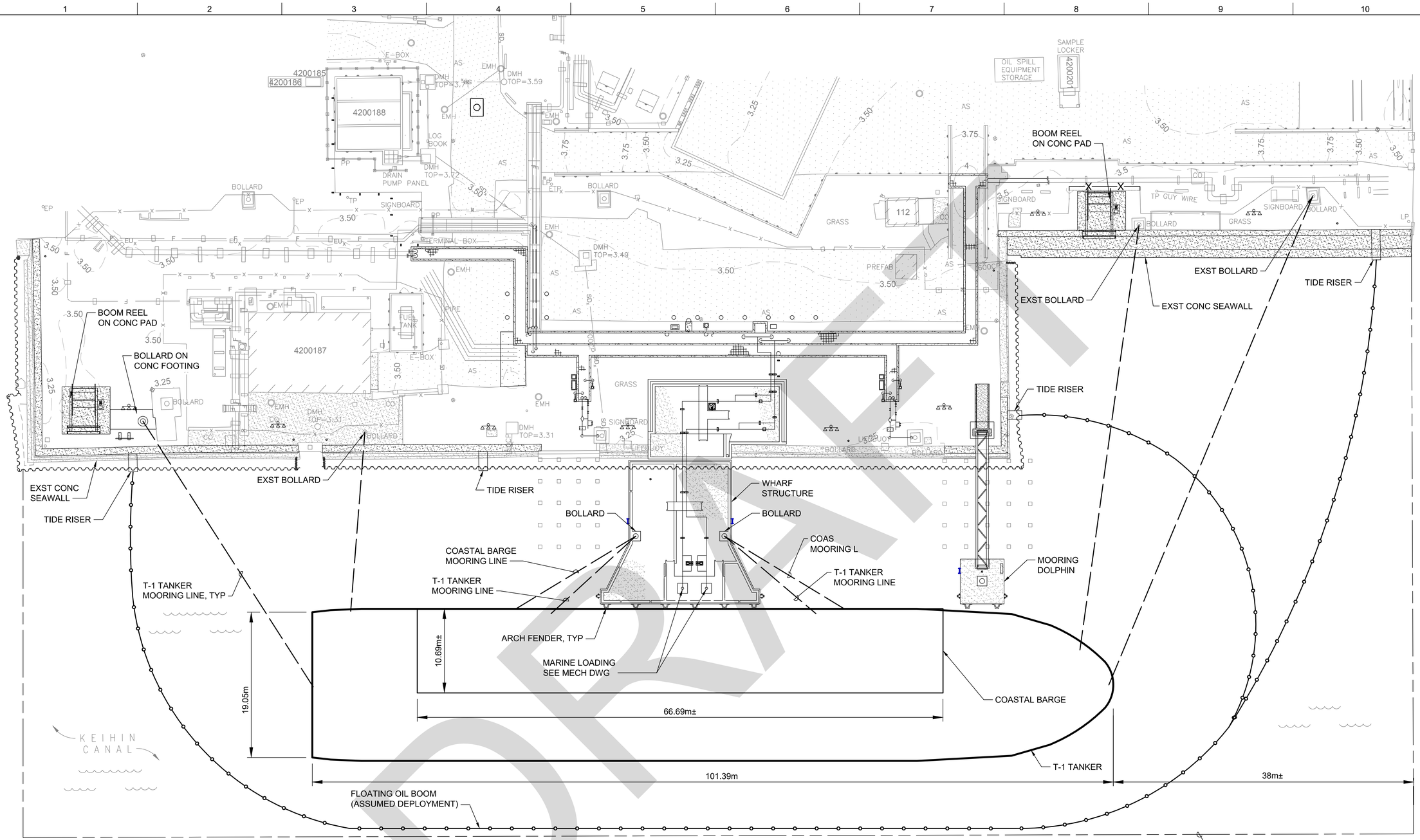

1 MOORING LAYOUT PLAN
SCALE: 1:250

LOADLINE INFORMATION				
LOADLINE	FREEBOARD	DRAFT	DEADWEIGHT	DISPLACEM
TROPICAL	3.353 M	7.158 M	6998 MT	10233.94 MT
NORMAL	5.263 M	5.248 M	2874.5 MT	7114.60 MT
LIGHTSHIP	8.083 M	2.428 M		2991.10 MT

MOORING						
	LOCATION	NO.	DIAMETER	MATERIAL	LENGTH	BREAKING STRENGTH
ROPES (ON DRUMS)	FORECASTLE	4	48 mm	POLYESTER-NIKASTEEL	222 M	44 MT
	MAIN DECK FWD	3	48 mm	POLYESTER-NIKASTEEL	222 M	44 MT
	MAIN DECK AFT	1	48 mm	POLYESTER-NIKASTEEL	222 M	44 MT
	POOP DECK	2	48 mm	POLYESTER-NIKASTEEL	222 M	44 MT
OTHER LINES	FORECASTLE	2	48 mm	POLYESTER-NIKASTEEL	222 M	44 MT
	MAIN DECK FWD	2	48 mm	POLYESTER-POLYOLEFIN	222 M	44 MT
	MAIN DECK AFT	3	48 mm	POLYESTER-NIKASTEEL	222 M	44 MT
	POOP DECK	4	48 mm	POLYESTER-NIKASTEEL	222 M	44 MT

BITTS, CLOSED CHOCKS/FAIRLEADS				
LOCATION	NO. BITTS	SWL BITTS	NO. CLOSED CHOCKS	SWL CLOSED CHOCKS
FORECASTLE	8	34 MT	6	45 MT
MAIN DECK FWD	4	34 MT	4	45 MT
MAIN DECK AFT	4	34 MT	10	45 MT
POOP DECK	8	34 MT	10	45 MT

TANKER INFORMATION
FROM INTERTANKO Q88 FORM

VESSEL NAME: SLNC PAX
TYPE OF VESSEL: OIL TANKER
TYPE OF HULL: DOUBLE HULL
LENGTH OVERALL: 101.39 M
LENGTH BETWEEN PERPENDICULARS: 94.96 M
BEAM: 19.05 M
MOULDED DEPTH: 10.50 M
NET TONNAGE: 2422 MT
GROSS TONNAGE: 5720 MT
REDUCED GROSS TONNAGE: 4786 MT

LEGEND:
MOORING LINE
OIL BOOM LINE

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MARK	DESCRIPTION	DATE

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DRAWN BY: C. KIM
CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
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SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904G-008.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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SUITE 400
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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

MOORING LAYOUT PLAN

SHEET ID
G-008

FILE: DESC1904G-008.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
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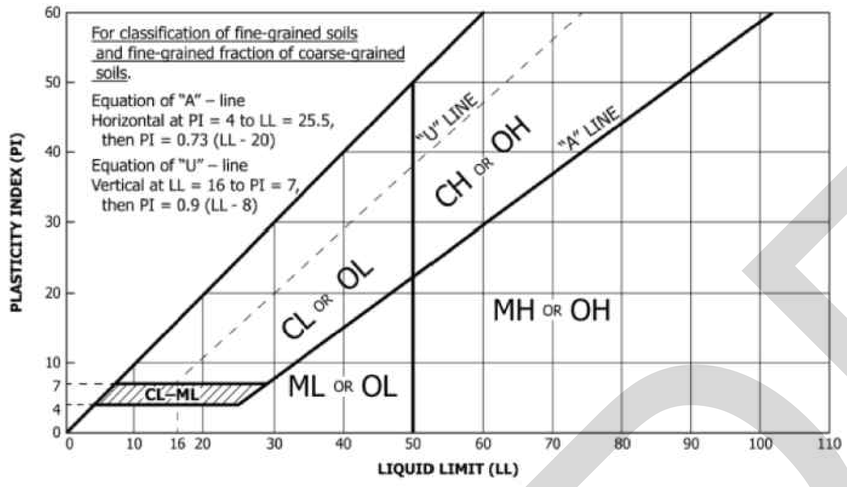
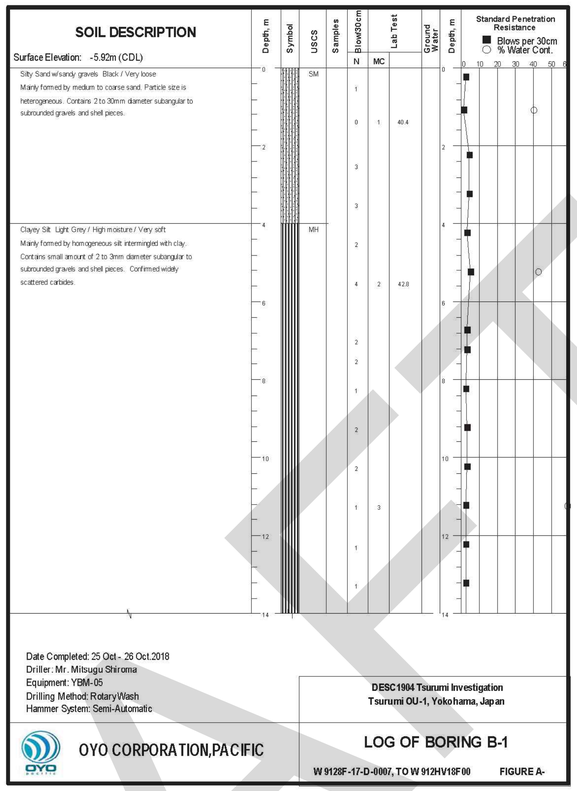
UNIFIED SOIL CLASSIFICATION SYSTEM

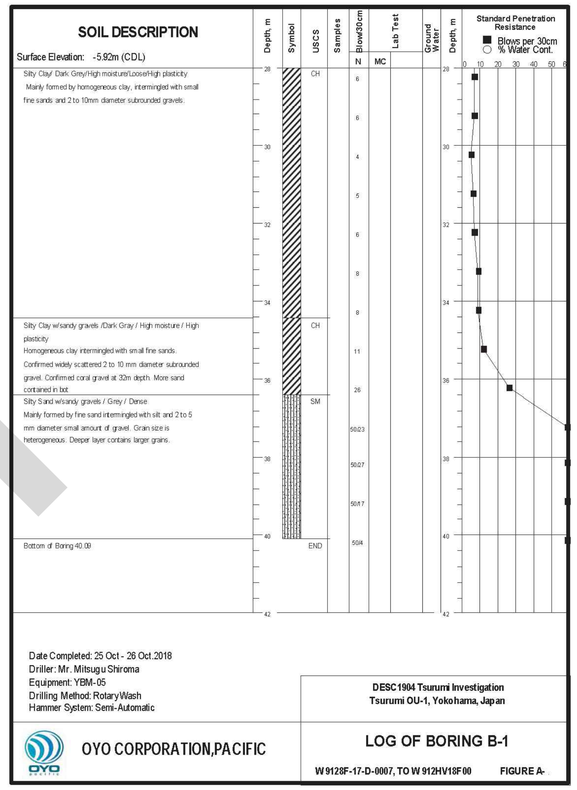
MAJOR DIVISIONS		SYMBOL	CODE	TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of soil > no. 200 sieve size)	GRAVELS (More than 50% of coarse fraction > no. 4 sieve size)	GW		Well graded gravels or gravel - sand mixtures, little or no fines
		GP		Poorly graded gravels or gravel - sand mixtures, little or no fines
		GM		Silty gravels, gravel - sand - silt mixtures
		GC		Clayey gravels, gravel - sand - silt mixtures
	SANDS (50% or more of coarse fraction < no. 4 sieve size)	SW		Well graded sands or gravelly sands, little or no fines
		SP		Poorly graded sands or gravelly sands, little or no fines
		SM		Silty sands, sand - silt mixtures
		SC		Clayey sands, sand clay mixtures
FINE GRAINED SOILS (More than 50% of soil < no. 200 sieve size)	SILTS & CLAYS LL< 50	ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL		Organic silts and organic silty clays of low plasticity
	SILTS & CLAYS LL ≥ 50	MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH		Inorganic clays of high plasticity, fat clays
		OH		Organic clays of medium to high plasticity, organic silty clays, organic silts
HIGHLY ORGANIC SOILS		Pt		Peat and other highly organic soils
ROCK		RX		Rocks, weathered to fresh
FILL		FILL		Artificially placed fill material

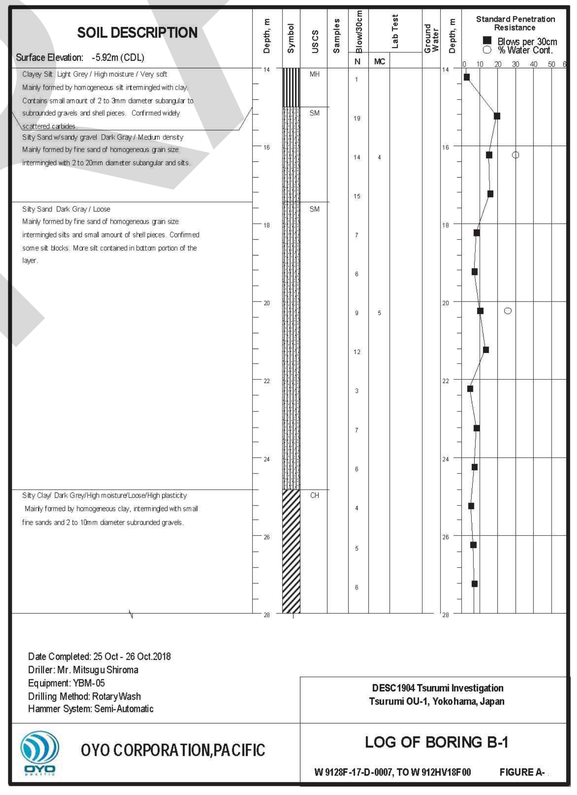


Relative Density of Sand		Strength of Clay		
Penetration Resistance N (blows/ft)	Relative Density	Penetration Resistance N (blows/ft)	Unconfined Compressive Strength (tons/ft²)	Consistency
0–4	Very loose	<2	<0.25	Very soft
4–10	Loose	2–4	0.25–0.50	Soft
10–30	Medium	4–8	0.50–1.00	Medium
30–50	Dense	8–15	1.00–2.00	Stiff
>50	Very dense	15–30	2.00–4.00	Very stiff
		>30	>4.00	Hard

From Terzaghi and Peck, 1948.







NOTE:

BORING LOCATIONS SHOWN ON SHEETS V-101 AND C-101.

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MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C. KIM
CHECKED BY: F. HINO
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SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904G-007.dwg

U.S. ARMY CORPS OF ENGINEERS
PACIFIC OCEAN DIVISION
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 470
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

UNIFIED SOIL CLASSIFICATION SYSTEM, PLASTICITY INDEX CHART, LIQUID LIMIT TABLE, AND BORING LOGS

SHEET ID

G-009

FILE: DESC1904G009.dwg
DATE: 6/22/2019 8:56 AM
OPER: CDK
SCALE: NTS

IF SHEET IS LESS THAN 594 X 841 MM
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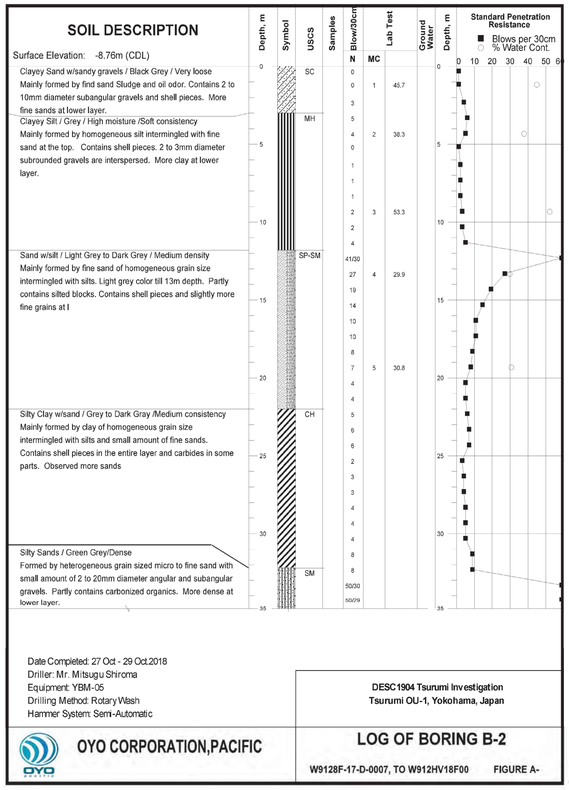
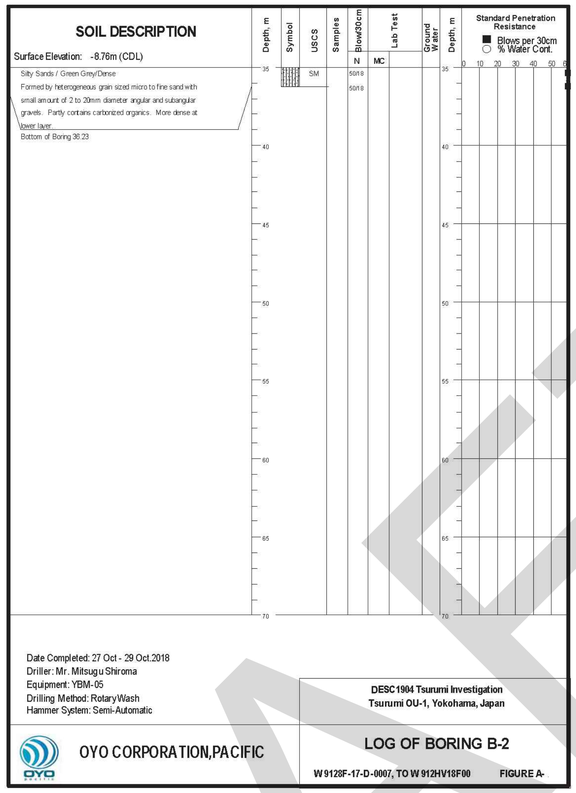
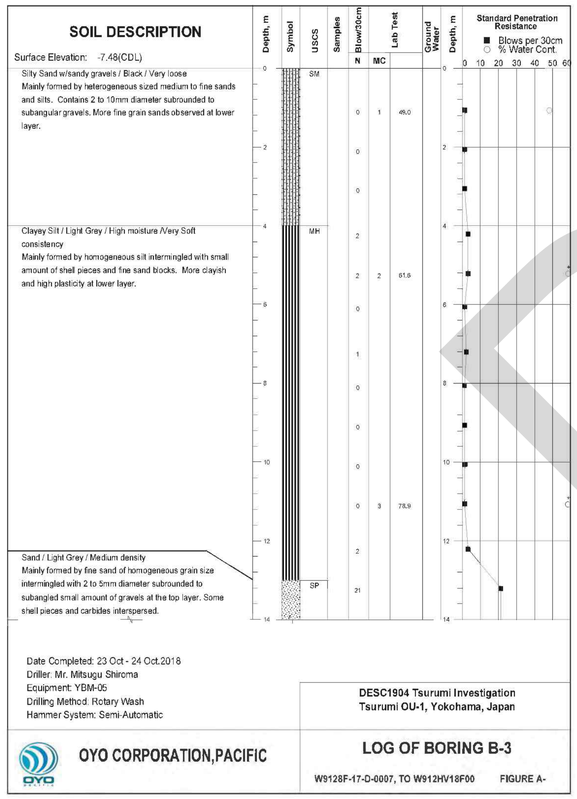
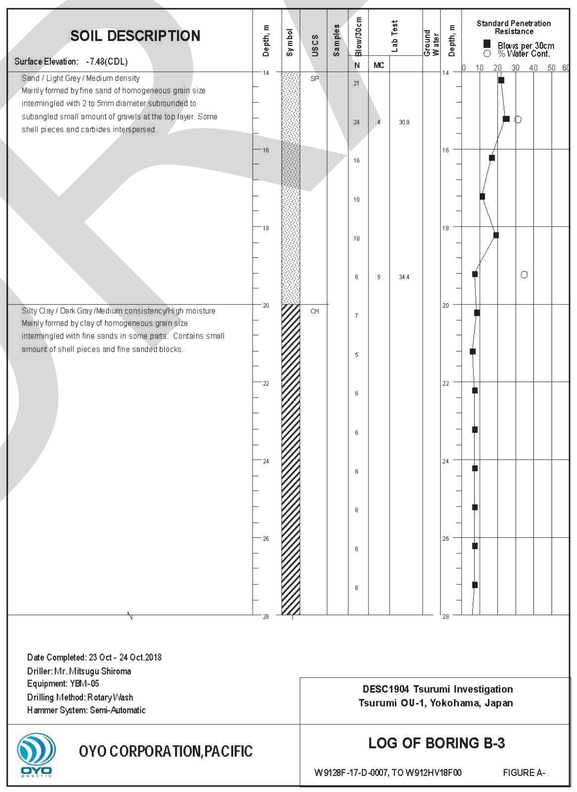


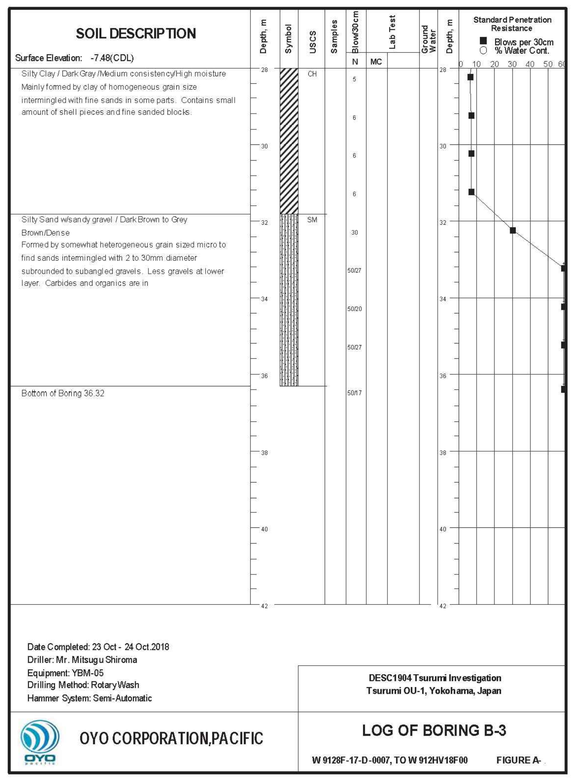


NOTE:

BORING LOCATIONS SHOWN ON SHEETS V-101 AND C-101.







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SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904G-008.dwg

U.S. ARMY CORPS OF ENGINEERS
FAR EAST DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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SUITE 1400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING HYDRANT SYSTEM AT T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

BORING LOGS

SHEET ID
G-010

FILE: DESC1904G-010.dwg
DATE: 8/29/2019 8:06 AM
OPER: CDK
SCALE: NTS

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL

SEDIMENT SAMPLING RESULTS SUMMARY

No	Test Analyte	Test Method	Units	D.L.	Sample B-2	Sample B-3	Sample B-4
Elution Testing Method							
1	Mercury and its Compounds (elution)	Table 1 JEA Guidance No. 59	mg/l	0.0005	<0.0005	<0.0005	<0.0005
2	Cadmium and its Compounds (elution)	JIS K 0102 55	mg/l	0.001	<0.001	<0.001	<0.001
3	Lead and its Compounds (elution)	JIS K 0201 54	mg/l	0.001	0.012	<0.001	0.019
4	Chromium Hexavalent Compounds (elution)	JIS K 0102 65.2	mg/l	0.01	<0.01	<0.01	<0.01
5	Arsenic and its Compounds (elution)	JIS K 0102 61	mg/l	0.001	0.002	0.005	0.031
6	Cyanide Compounds (elution)	JIS K 0102 38	mg/l	0.1	<0.1	<0.1	<0.1
7	Alkyl mercury and its compounds (elution)	Table 2 JEA Guidance No. 59	mg/l	0.0005	ND	ND	ND
8	Organic phosphorus and its compounds (elution)	Table 1 JEA Guidance No. 64	mg/l	0.1	<0.1	<0.1	<0.1
9	PCBs (elution)	Table 3 JEA Guidance No. 59	mg/l	0.0005	<0.0005	<0.0005	<0.0005
10	Copper and its Compounds (elution)	JIS K 0102 52	mg/l	0.3	<0.3	<0.3	<0.3
11	Zinc and its Compounds (elution)	JIS K 0102 53	mg/l	0.2	<	<0.2	<0.2
12	Fluoride	JIS K 0102 34	mg/l	0.08		0.11	0.26
13	Trichloroethylene (elution)	JIS K 0125 5	mg/l	0.003	.003	<0.003	<0.003
14	Tetrachloroethylene (elution)	JIS K 0125 5	mg/l	0.001	<0.001	0 001	<0.001
15	Beryllium and its Compounds (elution)	Table 7 JEA Guidance No. 13	mg/l	0.25	<0.25	5	<0.25
16	Chromium and its Compounds (elution)	JIS K 0102 65.1	mg/l	0.2	<0.2		<0.2
17	Nickel and its Compounds (elution)	JIS K 0102 59	mg/l	0.12	<0.12	<0.1	<0.12
18	Vanadium and its Compounds (elution)	JIS K 0102 70	mg/l	0	<0.15	<0.15	0.16
19	Dichloromethane	JIS K 0125 5	mg/l		<0 002	<0.002	<0.002
20	Carbon Tetrachloride	JIS K 0125 5	mg/l	002	2	<0.0002	<0.0002
21	Chloroethylene	Method defined in Notification No.10, MoE, GoJ	mg/l	2	0002	<0.0002	<0.0002
22	1,2-Dichloroethane	JIS K 0125 5	mg/l	0	<0.0004	<0.0004	<0.0004
23	1,1-Dichloroethylene	JIS K 0125 5	mg/l	0.0	<0.01	<0.01	<0.01
24	cis-1,2-Dichloroethylene	JIS K 0125 5	mg/l	0.004	<0.004	<0.004	<0.004
25	1,1,1-Trichloroethane	JIS K 0125 5	mg/l	0.03	<0.03	<0.03	<0.03
26	1,1,2-Trichloroethane	JIS K 0125 5	/l	0.0006	<0.0006	<0.0006	<0.0006
27	1,3-Dichloropropane	JIS K 0125 5		0.0002	0.0002	<0.0002	<0.0002
28	Thiuram	Table 4 JEA Guidance No. 59	g/l	0.0006	006	<0.0006	<0.0006
29	Simazine	Table 5 JEA Guidance No. 59		3	3	<0.0003	<0.0003
30	Thiobencarb	Table 5 JEA Guidance No. 59			<0.002	<0.002	<0.002
31	Benzene	JIS K 0125 5	m	01	0.002	<0.001	<0.001
32	Selenium and its Compounds	JIS K 0102 67	mg/	0.001	<0.001	<0.001	0.001
33	1,4-Dioxane	Table 7 JEA Guidance No. 59	pg-TEQ	0.005	<0.005	<0.005	<0.005
34	Dioxins (leaching test)	GCMS	pg-TEQ/l	*Note 1	0.009	0.003	0.0031
35	Oil content	Rumaru hexane extraction weig od define Notification No. 64 (rev , MoE, GoJ	mg/l	1.5	4.6	2.1	1.7
36	Boron	JIS K 47	mg/l	0.1	0.2	0.2	0.2
37	Chloroform	125 5	mg/l	0.006	<0.006	<0.006	<0.006
38	Formaldehyde	Manual for i nt investigation analytes	mg/l	0.3	<0.3	<0.3	<0.3
39	Surfactant (ionic)	0102 30	/l	0.05	0.26	0.1	<0.05
40	Surfactant (non-ionic)	J 2 30		1	<1	<1	<1
41	Benzo(a)pyrene	G	mg/l	0.00001	<0.00001	<0.00001	<0.00001
42	Tributyltin compound	GCM	mg/l	0.000002	<0.000002	<0.000002	<0.000002
43	Total Organic Carbon	In Method for Bottom D Environmental ment Bureau, Mo	mg/l	0.05	39	3.7	23
Content Method Testing							
1	Organic Chlorinated Compounds	Method in Test No. 14	mg/kg	4	<4	<4	<4
2	Mercury	Sediment Survey Method, tice No. 120725 Mgmt. Bu MoE	ppm	0.1	0.6	2	<0.1
3	PCBs	Sediment Survey Method, 2012 No. 120725002, Env. Mgmt. Burea E	ppm	0.1	<0.1	<0.1	<0.1
4	Dioxin (content test)	GCMS	pq-TEQ/g	*Note 1	9.9	23	0.49
5	Cadmium and its compounds	JIS K 010	mg/kg	15	<15	<15	<15
6	Hexavalent Chromium compounds	JIS K 01 2	mg/kg	25	<25	<25	<25
7	Cyanide compounds	JIS 38	mg/kg	5	<5	<5	<5
8	Selenium and its compounds	102 67	mg/kg	15	<15	<15	<15
9	Lead and its compounds	K 0201 54	mg/kg	15	220	54	<15
10	Arsenic and its compounds	JIS K 0102 61	mg/kg	15	<15	<15	<15
11	Fluoride	JIS K 0102 34	mg/kg	400	<400	<400	<400
12	Boron and its compounds	JIS K 0102 47	mg/kg	400	<400	<400	<400
Others							
1	Cesium 134 & 137	ɣ-ray spectrometer with germanium semiconductor detector or NaI(Tl) scintillation spectrometer	Bq/kg	*Note 2	N.D.	N.D.	N.D.
2	External appearance (visual, smell)	Visual	NA	-	-	-	-

NOTES:

1. DETECTION LIMIT (D.L.) VARIES BETWEEN VARIOUS ANALYTE CONSTITUENTS.
2. DETECTION LIMIT VARIES BETWEEN EACH INDIVIDUAL TEST.

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MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C. KIM
CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904G-009.dwg
SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
POHONOLULU DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 1000
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-4 TANKER CAPABLE.
TSURUMI, YOKOHAMA, JAPAN

SEDIMENT SAMPLING RESULTS SUMMARY

SHEET ID

G-011

FILE: DESC1904G-011.dwg
DATE: 8/29/2019 8:06 AM
OPER: CDK
SCALE: NTS

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

MATCH LINE (SEE SHEET V-102)

BENCHMARK 403
SURVEY PIN
ELEV = 3.859m

BENCHMARK 402
SURVEY PIN
ELEV = 3.553m

BENC K 407
SURV IN
ELEV = 3.653m

MONUMENT TSU-203
BRASS DISK
ELEV = 3.671m

BENCHMARK 406
SURVEY PIN
ELEV = 3.319m

BENCHMARK BM.1
SURVEY PIN
ELEV = 2.921m

BENCHMARK BM
SURVEY PIN
ELEV = 3.226m

MONUMENT TSU-202
BRASS DISK
ELEV = 3.334m

BENCHMARK 405
SURVEY PIN
ELEV = 3.377m

NCHMARK 404
URVEY PIN
V = 3.331m

GEOTECHNICAL
BORING B-1

EXST WHARF 1

GEOTECHNICAL AND
SEDIMENT SAMPLING
BORING B-2

EXST WHARF 111

GEOTECHNICAL AND
SEDIMENT SAMPLING
BORING B-3

SEDIMENT SAMPLING
BORING B-4

KEIHIN CANAL

LEGEND:

- GEOTECHNICAL BORING
- GEOTECHNICAL AND SEDIMENT SAMPLING BORING
- SEDIMENT SAMPLING BORING

NOTES:

1. FOR GEOTECHNICAL BORING LOGS, SEE SHEETS G-009 AND G-010.
2. FOR SEDIMENT SAMPLING TESTING RESULTS, SEE SHEET G-011.

TSURUMI
OU-1 GATE

KEY PLAN
SCALE: NTS

1 EXISTING CONDITIONS PLAN 1
SCALE: 1:250 0 5 10m

NORTH

DRAFT

US Army Corps of Engineers®

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SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904V-101.dwg

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JAPAN DISTRICT
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HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

EXISTING CONDITIONS PLAN 1

SHEET ID
V-101

FILE: DESC1904V-101-104.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

IF SHEET IS LESS THAN 594 X 841 MM
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RTA SUBMITTAL

MATCH LINE (SEE SHEET V-103)

MATCH LINE (SEE SHEET V-101)

BENCHMARK 408
SURVEY PIN
ELEV = 3.557m

MONUMENT TSU-201
BRASS DISK
ELEV = 3.514m

BENCHMARK 401
SURVEY PIN
ELEV = 3.634m

1 EXISTING CONDITIONS PLAN 2
SCALE: 1:250 0 5 10m

NORTH

KEY PLAN
SCALE: NTS

TSURUMI
OU-1 GATE

NORTH

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SIZE: ISO A1
FILE NAME: DESC1904V-102.dwg

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SUITE 400
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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

EXISTING CONDITIONS PLAN 2

SHEET ID
V-102

FILE: DESC1904V-101-104.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

MATCH LINE (SEE SHEET V-104)

MATCH LINE (SEE SHEET V-102)

BENCHMARK 409
SURVEY PIN
ELEV = 3.420m

BENCHMARK 412
SURVEY PIN
ELEV = 3.079m

BENCHMARK 204
SURVEY PIN
ELEV = 3.166m

1 EXISTING CONDITIONS PLAN 3
SCALE: 1:250 0 5 10m

NORTH

KEY PLAN
SCALE: NTS

TSURUMI
OU-1 GATE

NORTH

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SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904V-103.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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HONOLULU, HAWAII 96813

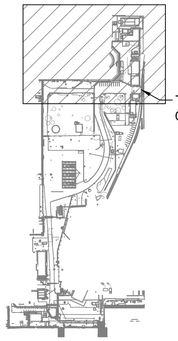
DESC1904
MODERNIZE FUELING WHARVES TO T-AT TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

EXISTING CONDITIONS PLAN 3

SHEET ID
V-103

FILE: DESC1904V-101-104.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES



KEY PLAN
SCALE: NTS

NORTH

BENCHMARK 205
SURVEY PIN
ELEV = 3.783m

BENCHMARK 414
SURVEY PIN
ELEV = 3.154m

BENCHMARK 411
SURVEY PIN
ELEV = 2.961m

BENCHMARK 413
SURVEY PIN
ELEV = 2.809m

BENCHMARK 410
SURVEY PIN
ELEV = 3.279m

MATCH LINE (SEE SHEET V-103)

1 EXISTING CONDITIONS PLAN 4
SCALE: 1:250 0 5 10m

NORTH

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CONTRACT NO.: -
DRAWING CODE: -
SIZE: ISO A1
FILE NAME: DESC1904V-101-104.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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DESC1904
MODERNIZE FUELING WHARVES T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

EXISTING CONDITIONS PLAN 4

SHEET ID
V-104

FILE: DESC1904V-101-104.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

PROJECT LIMITS

VEHICLE ACCESS, SEE DETAIL 3 / C-507

BENCHMARK 403
SURVEY PIN
ELEV = 3.859m

BENCHMARK
SURVEY PI
ELEV = 3.553

VEHICLE ACCESS,
SEE DETAIL 3

HMARK 407
S PIN
ELE 3m

MONUMENT TSU-203
BRASS DISK
ELEV = 3.671m

EXST O/W SEPARATOR

SILT SOCK, TYP, SEE
DETAIL

BENCHMARK 405
SURVEY PIN
ELEV = 3.377m

OCK, TYP, SEE
2 / C-508

BENCHMARK 406
SURVEY PIN
ELEV = 3.319m

MONUMENT TSU-202
BRASS DISK
ELEV = 3.334m

BENCHMARK BM.1
SURVEY PIN
ELEV = 2.921m

BENCHMARK BM
SURVEY PIN
ELEV = 3.226m

SILT FENCE, SEE
DETAIL 1 / C-508

SILT SOCK, SEE
DETAIL 2 / C-508

BENCH 4
SURVEY
ELEV = 3.331m

LEGEND:

- PROJECT LIMITS
- SILT FENCE
- SILT SOCK
- DRAINAGE FLOW DIRECTION

NOTES:

1. FOR EROSION CONTROL AND BMP NOTES, SEE SHEETS G-004 AND S-001.
2. USE FULL WATER DEPTH SILT CURTAINS TO ENCLOSE WORK AREA TO CONTROL TURBIDITY DURING ALL IN-WATER AND OVER-WATER WORK.
3. WORK AREAS WILL BE WATERED AND KEPT MOIST OR A GRANULAR BLANKET PROVIDED FOR DUST CONTROL.

1 EROSION CONTROL AND BMP PLAN
SCALE: 1:400
0 8 16m

NORTH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

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CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
SIZE: ISO A1
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904C-100.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

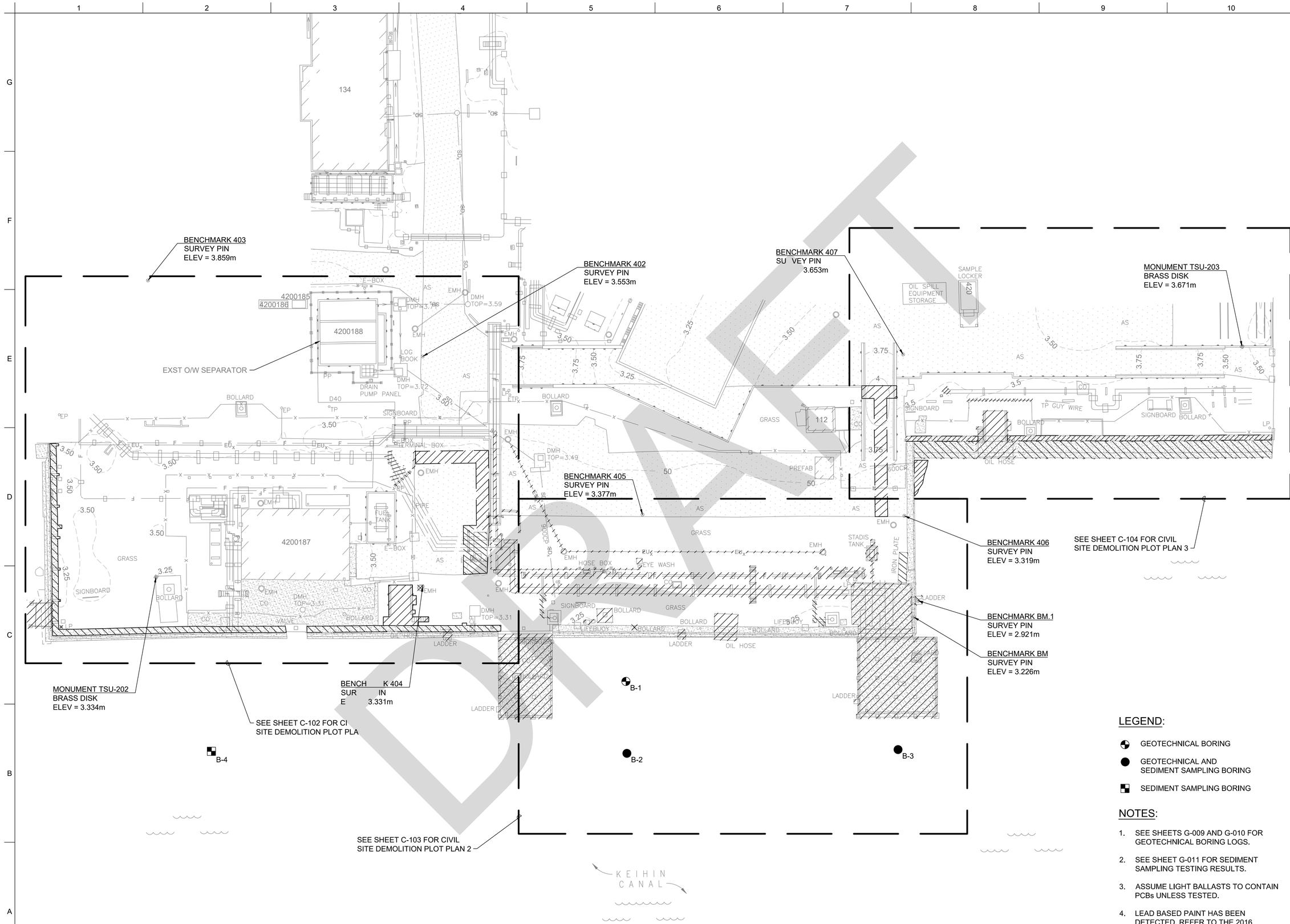
DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

EROSION CONTROL AND BMP PLAN

SHEET ID
C-100

FILE: DESC1904C-100.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES



1 CIVIL SITE DEMOLITION GENERAL PLAN
SCALE: 1:250

LEGEND:

- GEOTECHNICAL BORING
- GEOTECHNICAL AND SEDIMENT SAMPLING BORING
- SEDIMENT SAMPLING BORING

NOTES:

1. SEE SHEETS G-009 AND G-010 FOR GEOTECHNICAL BORING LOGS.
2. SEE SHEET G-011 FOR SEDIMENT SAMPLING TESTING RESULTS.
3. ASSUME LIGHT BALLASTS TO CONTAIN PCBs UNLESS TESTED.
4. LEAD BASED PAINT HAS BEEN DETECTED. REFER TO THE 2016 HAZARDOUS MATERIAL SURVEY.
5. ASSUME ALL PIPE GASKETS ARE ASBESTOS CONTAINING.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C.KIM
CHECKED BY: F.HINO
SUBMITTED BY: F.HINO
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904C-101.dwg
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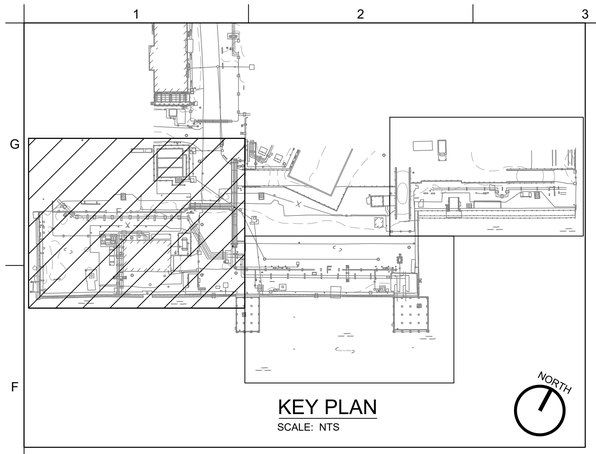
U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

CIVIL SITE DEMOLITION GENERAL PLAN

SHEET ID
C-101



KEY PLAN
SCALE: NTS

INSET 1
SCALE: NTS

NOTES:

1. ASSUME LIGHT BALLASTS TO CONTAIN PCBs UNLESS TESTED.
2. LEAD BASED PAINT HAS BEEN DETECTED. REFER TO THE 2016 HAZARDOUS MATERIAL SURVEY.
3. ASSUME ALL PIPE GASKETS ARE ASBESTOS CONTAINING.

4200186
4200185
4200188
4200187
BENCHMARK 402
SURVEY PIN
ELEV = 3.553m
BENCHMARK 404
SURVEY PIN
ELEV = 3.331m
MONUMENT TSU-202
BRASS DISK
ELEV = 3.334m
EXST O/W SEPARATOR
EXST BARRICADE, TYP
EXST FENCE
EXST ELEC DUCT
EXST PIPE SUPPORTS, TYP
EXST DRAIN PUMP PIPING
EXST FIRE PROTECTION UTILIDOR TO REMAIN
EXST 40mm WATER LINE TO REMAIN
SAWCUT AND REM EXST AC PAVEMENT
REMOVE EXST CONC BARRICADE, TYP
REMOVE APPROX 12m OF EXST 150mm FIRE PROTECTION WATER PIPING IN EXST UTILIDOR
REMOVE APPROX 12m OF EXST 150mm FIRE PROTECTION FOAM PIPING IN EXST UTILIDOR
CUT EXST 40mm WATER LINE
REMOVE EXST CONC VAULT
REMOVE EXST STEEL PLATE, TYP
EXST 300mm FIRE PROTECTION PIPING
REMOVE EXST FUEL PIPING AND CONC PIPE SUPPORTS UP TO FLANGE, SEE SHEET MD-101
ABANDON FUEL PIPING IN PLACE, SEE SHEET MD-101
EXST ABANDONED IN PLACE FUEL PIPING, TYP, SEE SHEET MD-101
REMOVE EXST BARRICADE, TYP
REMOVE EXST CONTROL BOX
REMOVE CONC PIPE SUPPORT, TYP
REMOVE EXST ELEC MANHOLE
EXST ELEC MANHOLE TO REMAIN, TYP OF 2
REMOVE CONC BLOCKS AS REQUIRED FOR SHEET PILE WALL
EXST CONC BLOCKS BELOW EXST SEAWALL TO REMAIN
REMOVE EXST SIGN
REMOVE TOP PORTION OF EXST SEAWALL, SEE SHEET S-603
REMOVE EXST FIRE HOSE STEEL FRAME, SEE SHEET SD501
REMOVE AND REPLACE EXST PIPE SUPPORTS, SEE SHEET SD502
SEE INSET 1 FOR DEMOLITION LIMITS
EXST VALVE TO REMAIN
EXST STORM DRAIN MANHOLE TO REMAIN
EXST CONC PAD TO REMAIN
EXST BOLLARD TO REMAIN
REMOVE EXST TIDE RISER, SEE SHEET SD501
REMOVE EXST BOOM REEL AND CONC SUPPORTS
EXST TANK CONC PAD
EXST ACCESS WALKWAY
EXST FIRE PROTECTING AND PIPE SUPPOR
EXST FUEL PIPING
EXST PROTECTING
EXST FIRE PIPING
EXST FENCE
BOLLARD
SIGNBOARD
GRASS
TANK CONC PAD
FUEL TANK
GROUND WIRE
TERMINAL BOX
OIL HOSE
LADDER
SPEAKER
FAN MONITOR LOCAL PANEL
DRAIN PUMP PANEL
LOG BOOK
VALVE
DMH TOP=3.71
DMH TOP=3.59
DMH TOP=3.72
DMH TOP=3.31
EMH
E-BOX
PP
LP
ETP
CO
PIPE
PIPEO
EP
TP
D40
AS
F
SD
3.50
3.25

MATCH LINE
(SEE SHEET C-103)

1 CIVIL SITE DEMOLITION PLOT PLAN 1
SCALE: 1:100
0 2 4m

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
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CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
SIZE: ISO A1
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FILE NAME: DESC1904C-102-104.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
UNIT #45304
APO AP 96343-5010

HDR - WTNA JV
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SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

CIVIL SITE DEMOLITION PLOT PLAN 1

SHEET ID
C-102

MATCH LINE
(SEE SHEET C-102)

MATCH LINE
(SEE SHEET C-104)

REMOVE EXST FIRE HOSE CABINET
REMOVE EXST PIPING, VALVE, AND APPURTENANCES
BENCHMARK 405
SURVEY PIN
ELEV = 3.377m
REMOVE EXST ELEC CONDUIT, SEE ELEC DWGS
REMOVE EXST FIRE HYDRANT
REMOVE EXST PIPING, VALVE, AND APPURTENANCES
SAWCUT AND REMOVE EXST AC PAVEMENT
BENCHMARK 406
SURVEY PIN
ELEV = 3.319m
REMOVE EXST ELEC MANHOLE, TYP OF 2
REMOVE EXST FIRE HYDRANT
REMOVE EXST FIRE PUMP START STATION
REMOVE EXST FIRE PUMP START STATION AND 25mm CONDUIT, UP TO EXST METAL GRATE
REMOVE EXST CONC CONTAINMENT STRUCTURE
REMOVE EXST STEP LADDER
REMOVE AND REUSE EXST SDA TANK, SEE SHEET MD-102
REMOVE EXST PIPE BOLLARD, TYP
REMOVE APPROX 28m OF EXST 40mm ABOVE GROUND WATER LINE
REMOVE APPROX 61m OF EXST 150mm FIRE PROTECTION WATER PIPING
REMOVE EXST FIRE HOSE CABINET
REMOVE EXST SDA TANK PIPING
REMOVE EXST CONC FLOODLIGHT POLE, TYP
REMOVE EXST EMERGENCY EYEWASH/SHOWER AND HOSE BIBB
REMOVE APPROX 61m OF EXST 150mm FIRE PROTECTION FOAM PIPING
REMOVE EXST STEEL PLATE
REMOVE EXST CONC PAD
REMOVE EXST CONC PAD
REMOVE APPROX 65m OF EXST 200mm ABOVE GROUND FUEL PIPE
REMOVE ACCESS WALKWAY
REMOVE CONC PI PPORT, TYP
BENCHMARK BM.1
SURVEY PIN
ELEV = 2.921m
BENCHMARK BM
SURVEY PIN
ELEV = 3.226m
EXST SIGN TO REMAIN
REMOVE APPROX 64m OF EXST 200mm ABOVE GROUND FUEL PIPE
REMOVE EXST VALVES FITTINGS, PIPING AND APPURTENANCES, SEE SHEET FD101
REMOVE EXST FUEL VALVES FITTINGS, PIPING AND APPURTENANCES, SEE SHEET MD-102
REMOVE EXST CONC RAMP
REMOVE EXST BOLLARD, TYP
REMOVE EXST BOLLARD AND CONC PAD
EXST LIFE BUOY REMAIN
EXST CONTROL PAD
EXST FIR MONITOR TO REMAIN, T P OF 2
REMOVE EXST GROUNDING CONC PAD
MOVE EXS RISER, TYP OF SEE SHEET SD5
REMOVE T BOOM REEL
EXST CONC PAD TO REMAIN
EXST BOLLARD TO REMAIN, TYP
REMOVE EXST CONTROL BOX AND CONC PAD
EXST LIFE BUOY TO REMAIN
REMOVE EXST VALVES FITTINGS, PIPING AND APPURTENANCES, SEE SHEET FD101
REMOVE EXST CONC RAMP
REMOVE EXST WHARF 111, SEE SHEET SD102
REMOVE EXST WHARF 117, SEE SHEET SD103
B-1
B-2
B-3
KEIHIN CANAL

LEGEND:

- GEOTECHNICAL BORING
- GEOTECHNICAL AND SEDIMENT SAMPLING BORING

NOTES:

1. SEE SHEETS G-009 AND G-010 FOR GEOTECHNICAL BORING LOGS.
2. SEE SHEET G-011 FOR SEDIMENT SAMPLING TESTING RESULTS.
3. ASSUME LIGHT BALLASTS TO CONTAIN PCBs UNLESS TESTED.
4. LEAD BASED PAINT HAS BEEN DETECTED. REFER TO THE 2016 HAZARDOUS MATERIAL SURVEY.
5. ASSUME ALL PIPE GASKETS ARE ASBESTOS CONTAINING.

1 CIVIL SITE DEMOLITION PLOT PLAN 2
SCALE: 1:100
0 2 4m
NORTH

KEY PLAN
SCALE: NTS
NORTH

US Army Corps of Engineers®

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SUBMITTED BY: F. HINO
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JAPAN DISTRICT
APO AP 96343-5010

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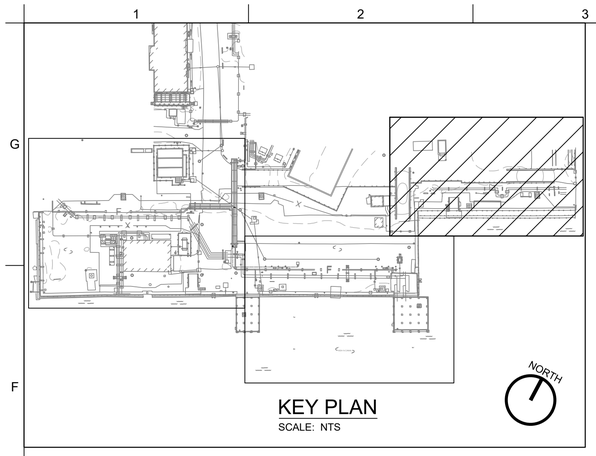
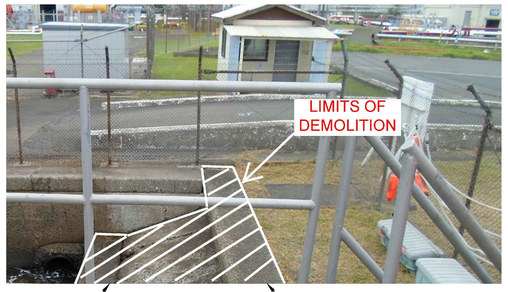
DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
TSURUMI, YOKOHAMA, JAPAN

CIVIL SITE DEMOLITION PLOT PLAN 2

SHEET ID
C-103



KEY PLAN
SCALE: NTS



REMOVE FACE OF
EXST CONC SEAWALL,
SEE STRUCT DWGS

REMOVE TOP PORTION OF
EXST CONC SEAWALL,
SEE STRUCT DWGS

INSET 1
SCALE: NTS

BENCHMARK 407
SURVEY PIN
ELEV = 3.653m

MONUMENT TSU-203
BRASS DISK
ELEV = 3.671m

OIL SPILL EQUIPMENT STORAGE

SAMPLE
LOCKER

4200201

REMOVE EXST CONC
CURB AND WALL

REMOVE EXST FUEL PIPING
FITTINGS UP TO FLANGE,
SEE SHEET MD-102

REMOVE APPROX 9m OF FENCE

EXST 200mm FUEL PIPI

EX PE
SU TS, TYP

E-BOX GROUND WIRE

TP GUY WIRE

EXST FENCE

SIGNBOARD

BOLLARD

GRASS

SAWCUT AND REMOVE
EXST AC PAVEMENT

EXST CONC PAD

REMOVE TOP PORTION OF
EXST CONC SEAWALL,
SEE SHEET SD501

EXST BOLLARD
TO REMAIN

EXST BOLLARD
TO REMAIN

OIL HOSE

SEE INSET 1 F
DEMOLITION LIM

REM EXST BOOM REEL
A NC SUPPORTS

REMOVE CONC OVERPO
STONE DEBRIS AS REQUIR
TYP ALONG SEAWALL

EMOVE FACE OF EXST
SEAWALL, SEE SHEET SD501

MATCH LINE
(SEE SHEET C-103)

1 CIVIL SITE DEMOLITION PLOT PLAN 3
SCALE: 1:100 0 2 4m

NOTES:

1. ASSUME LIGHT BALLASTS TO CONTAIN PCBs UNLESS TESTED.
2. LEAD BASED PAINT HAS BEEN DETECTED. REFER TO THE 2016 HAZARDOUS MATERIAL SURVEY.
3. ASSUME ALL PIPE GASKETS ARE ASBESTOS CONTAINING.

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SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
TSURUMI, YOKOHAMA, JAPAN

CIVIL SITE DEMOLITION PLOT PLAN 3

SHEET ID
C-104

FILE: DESC1904C-102-104.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

BENCHMARK 403
SURVEY PIN
ELEV = 3.859m

BENCHMARK 402
SURVEY PIN
ELEV = 3.553m

TIE: 94° 31' 10"
12.408 (BENCHMARK
TO NW CORNER OF
BOOM REEL C NC PAD)

BENCHMA
SURVEY
ELEV 3m

MONUMENT TSU-203
BRASS DISK
ELEV = 3.671m

61° 56' 44"
6.111 (NW CORNER OF
CONC PAD TO NE
CORNER)

EXST O/W SEPARATOR

TIE: 171° 16' 39"
15.199 (BENCHMARK 402
TO BEGIN ℄ CONC
UTILITY TRENCH)

TIE: 164° 49' 14"
5.503 (BENCHMARK 4
TO END ℄ CONC UT
TRENCH)

1° 56' 44"
1 (PI D ℄
Y TRENCH)

BE RK 405
SURV
ELEV =

61° 56' 44"
13.594 (FROM
BEGIN ℄ CONC
UTILITY TRENCH
TO PI)

151° 56' 44"
10.704 (PI TO PI)

61° 56' 44"
57.106 (PI T

6
(B
5 TO NW S
CORNER)

331° 56' 44"
19.965 (PI TO PI)

151° 56' 44"
4.949 (NE CORNER OF CONC
PAD TO SE CORNER)

TIE: 245° 55' 10"
5.353 (MONUMENT
TSU-202 TO NE
CORNER OF BOOM
REEL CONC PAD)

4200187
BENCHMARK 404
SURVEY PIN
ELEV = 3.331m

1.500m

10.017m

SEE SHEET C-108 FOR
CIVIL SITE LAYOUT AND
UTILITY PLOT PLAN 3

BENCHMARK 406
SURVEY PIN
ELEV = 3.319m

440m

BENCHMARK BM.1
SURVEY PIN
ELEV = 2.921m

BENCHMARK BM
SURVEY PIN
ELEV = 3.226m

241° 56' 44"
6.111 (SE CORNER
OF CONC PAD TO
SW CORNER)

MONUMENT TSU-202
BRASS DISK
ELEV = 3.334m

TIE: 168° 23' 37"
4.172 (MONUMENT
TSU-202 TO BOLLARD)

151° 56' 44"
6.000 (NE CORNER
OF CONC PAD TO
SE CORNER)

B-4

SEE SHEET C-106 FOR
CIVIL SITE LAYOUT AND
UTILITY PLOT PLAN 1

TIE: 193° 28' 52"
10.164 (BENCHMARK 405
TO NW CORNER OF
WHARF RAMP AND SLAB)

151° 56' 44"
10.133 (NW CORNER
F WHARF RAMP AND
B TO SW CORNER)

61
10.600 ORNER
WHARF ND
TO SE COR

331° 56' 44"
8.238 (NE CORNER OF WHARF RAMP
AND SLAB TO NORTH CORNER)

241° 56' 44"
17.564 (NORTH CORNER OF WHARF
RAMP AND SLAB TO NW CORNER)

61° 56' 44"
6.964 (INNER CORNER OF
WHARF RAMP AND SLAB TO NE
CORNER)

331° 56' 44"
1.895 (SE CORNER OF WHARF RAMP
AND SLAB TO INNER CORNER)

B-1
B-2
B-3

SEE SHEET C-107 FOR
CIVIL SITE LAYOUT AND
UTILITY PLOT PLAN 2

KEIHIN
CANAL

LEGEND:

- GEOTECHNICAL BORING
- GEOTECHNICAL AND SEDIMENT SAMPLING BORING
- SEDIMENT SAMPLING BORING

NOTES:

1. SEE SHEETS G-009 AND G-010 FOR GEOTECHNICAL BORING LOGS.
2. SEE SHEET G-011 FOR SEDIMENT SAMPLING TESTING RESULTS.
3. SEE SHEETS C-109, C-110 AND C-111 FOR GRADING PLOT PLANS.

1 CIVIL SITE LAYOUT AND GENERAL UTILITY PLAN
SCALE: 1:250

NORTH

0 5 10m

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MARK	DESCRIPTION	DATE

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U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

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HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

CIVIL SITE LAYOUT AND UTILITY GENERAL PLAN

SHEET ID
C-105

FILE: DESC1904C-105.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

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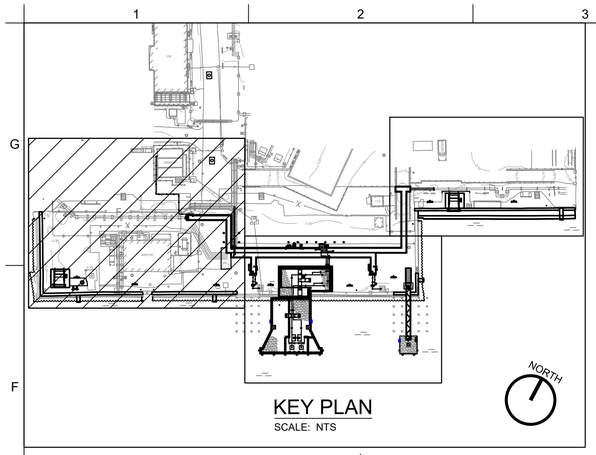

1. DRAIN LINE "A"
STA 0+029.263
1 - 75mm 90-DEG BEND

2. DRAIN LINE "A"
STA 0+039.967
1 - 75mm 90-DEG BEND

3. DRAIN LINE "A"
STA 0+052.291
1 - 75mm 90-DEG BEND

4. DRAIN LINE "A"
STA 0+052.902
1 - 75mm 90-DEG BEND

5. DRAIN LINE "A"
STA 0+057.461
1 - 75mm 90-DEG BEND

6. DRAIN LINE "A"
STA 0+063.900
1 - 75mm 90-DEG BEND

7. DRAIN LINE "A"
STA 0+071.340
1 - 75mm 90-DEG BEND

8. DRAIN LINE "A"
STA 0+083.857
1 - 75mm 90-DEG BEND

9. END DRAIN LINE "A"
STA 0+084.384
SEE DETAIL 3/C-504

4200186 | 4200185

4200188

4200187

61° 56' 44"
0.527

TIE: 263° 16' 33"
15.796 (BENCHMARK 4
TO END OF DRAIN L

EXST O/W SEPARATOR

EXST BARRICADE, TYP

CONC PIPE SUPPORT,
TYP, SEE DETAIL 4/C-505

331° 56' 44"
12.517

241° 56' 44"
7.440

DRAIN LINE "A"

FENCE OPENING,
SEE DETAIL 4/C-507

331° 56' 44"
6.439

1° 56' 44"
4.559

331° 56' 44"
0.611

331° 56' 44"
10.704

241° 56' 44"
12.324

CONC UTILITY TRENCH
WITH GRADING,
SEE SHEET S-541

ELEC MANHOLE, SEE
ELEC DWGS

BENCHMARK 402
SURVEY PIN
ELEV = 3.553m

TIE: 134° 23' 34"
25.408 (BENCHMARK 402
TO NE CORNER OF AC
PAVEMENT)

EXST FIRE
PROTECTION
UTILIDOR

DRAIN
PIPING

EXST GATE

TIE: 177° 51' 20"
28.376 (BENCHMARK
403 TO TEST STATION)

EXST ELEC DUCT

EXST PIPE
SUPPORTS, TYP

EXST 300mm FIRE
PROTECTION PIPIN

EXST FENCE

CATHODIC
PROTECTION TEST
STATION, SEE DETAIL 2/C-511

SHEET PILE WALL, TYP,
SEE SHEET S-531

EXST 300mm FIRE
PROTECTION PIPING

TOP OF CONC SEAWALL,
SEE SHEET S-603

EXST FIRE PROTECTION PIPING
AND PIPE SUPPORTS, TYP

EXST CONC BLOCKS
AND DEBRIS

MONUMENT TS
BRASS DISK
ELEV = 3.3

TIE: 165° 23' 48"
8.370 (MONUMENT TSU-202 TO
NE CORNER OF TIDE RISER)

TANK
CONC PAD

FLOOD LIGHT POLE, TYP
OF 3, SEE SHEET E-505

EXST A CESS
WALKWAY

LLARD ON
SHEET

AP,

ABANDONED IN
PLACE FUEL PIPING,
SEE SHEET MD-101

BENCHMARK 404
SURVEY PIN
ELEV = 3.331m

EXST ABANDONED IN
PLACE FUEL PIPING,
TYP, SEE SHEET MD-101

CONNECT TO EXST
40mm WATER LINE

AC PAVEMENT,
SEE DETAIL 1/C-501

BOLLARD, TYP OF 4,
SEE DETAIL 3/C-501

EXST ELEC
MANHOLE

EXST STORM
DRAIN MANHOLE

EXST
CONC PAD

CATHODIC
PROTECTION TEST
STATION, SEE DETAIL 2/C-511

EXST VALVE

2.10m±

0.95m±

BOOM REEL
ON CONC PAD

TIDE RISER, SEE
SHEET S-537

SIGN, SEE
DETAIL 1/C-506

TIDE RISER, SEE
SHEET S-537

TIE: 210° 10' 32"
31.872 (BENCHMARK
405 TO NE CORNER
OF TIDE RISER)

MATCH LINE
(SEE SHEET C-107)

1 CIVIL SITE LAYOUT AND UTILITY PLOT PLAN 1
SCALE: 1:100

NORTH

0 2 4m

US Army Corps of Engineers®

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U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
TSURUMI, YOKOHAMA, JAPAN

CIVIL SITE LAYOUT AND UTILITY PLOT PLAN 1

SHEET ID
C-106

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SCALE: NTS

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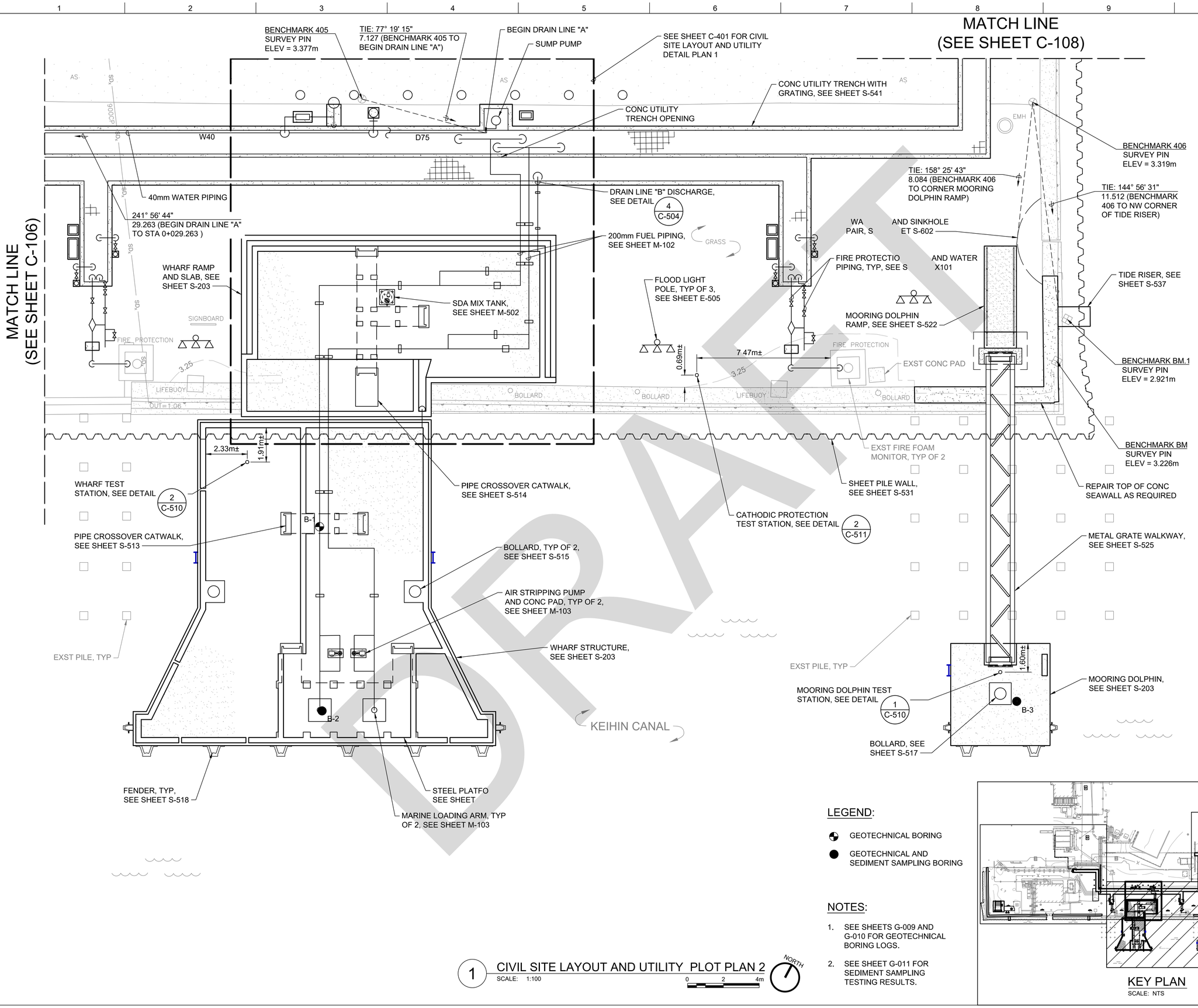


1 CIVIL SITE LAYOUT AND UTILITY PLOT PLAN 2
SCALE: 1:100 0 2 4m

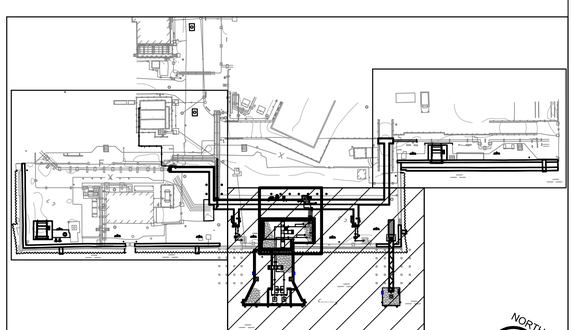
NORTH

LEGEND:

- GEOTECHNICAL BORING
- GEOTECHNICAL AND SEDIMENT SAMPLING BORING

NOTES:

1. SEE SHEETS G-009 AND G-010 FOR GEOTECHNICAL BORING LOGS.
2. SEE SHEET G-011 FOR SEDIMENT SAMPLING TESTING RESULTS.



KEY PLAN
SCALE: NTS

NORTH

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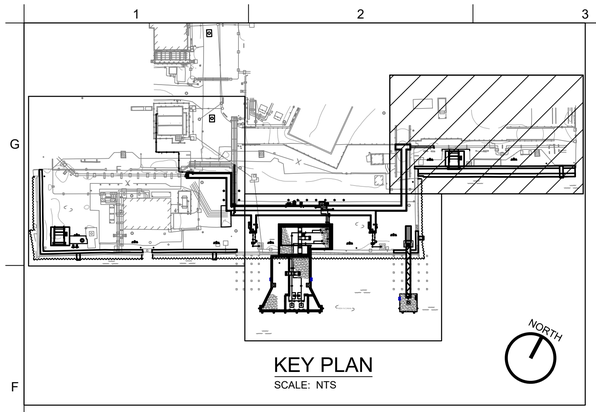
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

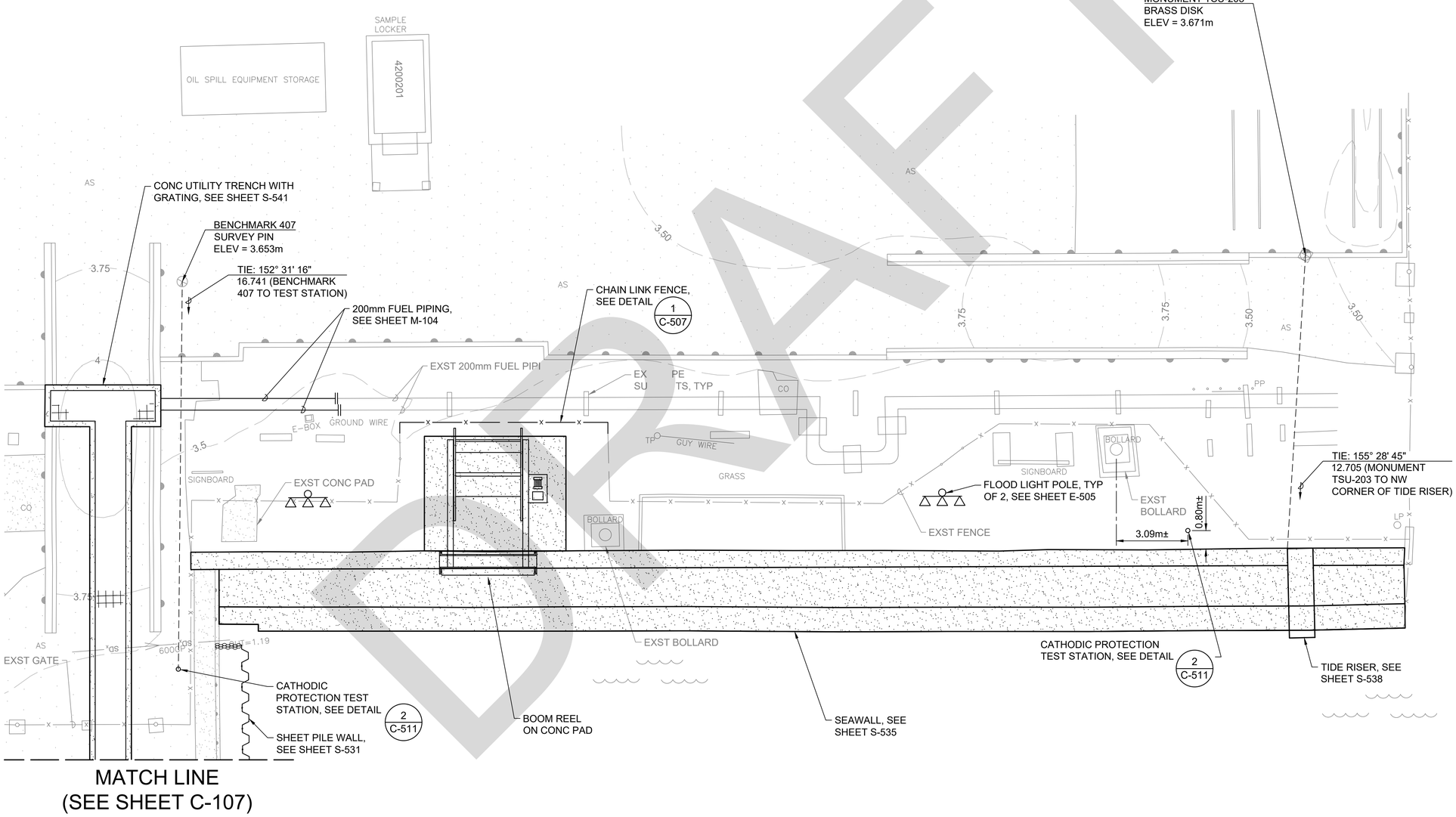
DESC1904
MODERNIZE FUELING WHARVES 1 TO 7 AT TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

CIVIL SITE LAYOUT AND UTILITY PLOT PLAN 2

SHEET ID
C-107



KEY PLAN
SCALE: NTS



MATCH LINE
(SEE SHEET C-107)

1 CIVIL SITE LAYOUT AND UTILITY PLOT PLAN 3
SCALE: 1:100
0 2 4m
NORTH

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MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C. KIM
CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
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DRAWING CODE: -
FILE NAME: DESC1904C-106-108.dwg

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HDR - WTNA JV
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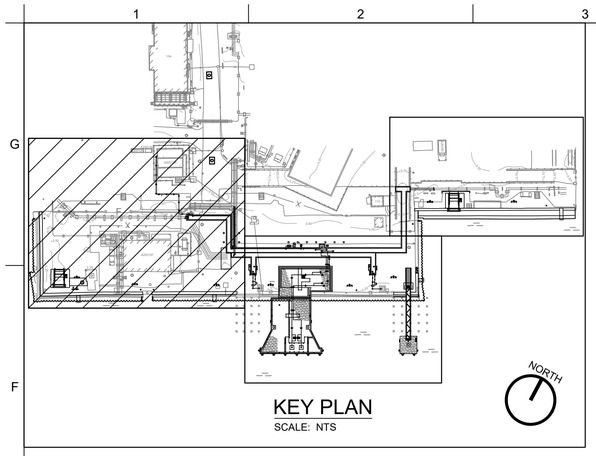
SUITE 1400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
YSURUMI, YOKOHAMA, JAPAN

CIVIL SITE LAYOUT AND UTILITY PLOT PLAN 3

SHEET ID
C-108



KEY PLAN
SCALE: NTS

LEGEND:

3.500 TOP	TOP OF TRENCH WALL ELEV
3.500 FG	FINISHED GRADE ELEV
3.500 INV	TRENCH INV ELEV
3.500 ME	MATCH EXST ELEV
3.500 TC	TOP OF CONC ELEV
←ω—	FLOW DIRECTION

1 CIVIL GRADING PLOT PLAN 1
SCALE: 1:100 0 2 4m

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DESIGNED BY: R. KIKUCHI
DRAWN BY: D.KIM
CHECKED BY: F.HINO
SUBMITTED BY: F.HINO
SIZE: ISO A1
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904C-109-111.dwg

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1001 BISHOP STREET
SUITE 400
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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

CIVIL GRADING PLOT PLAN 1

SHEET ID
C-109

FILE: DESC1904C-109-111.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

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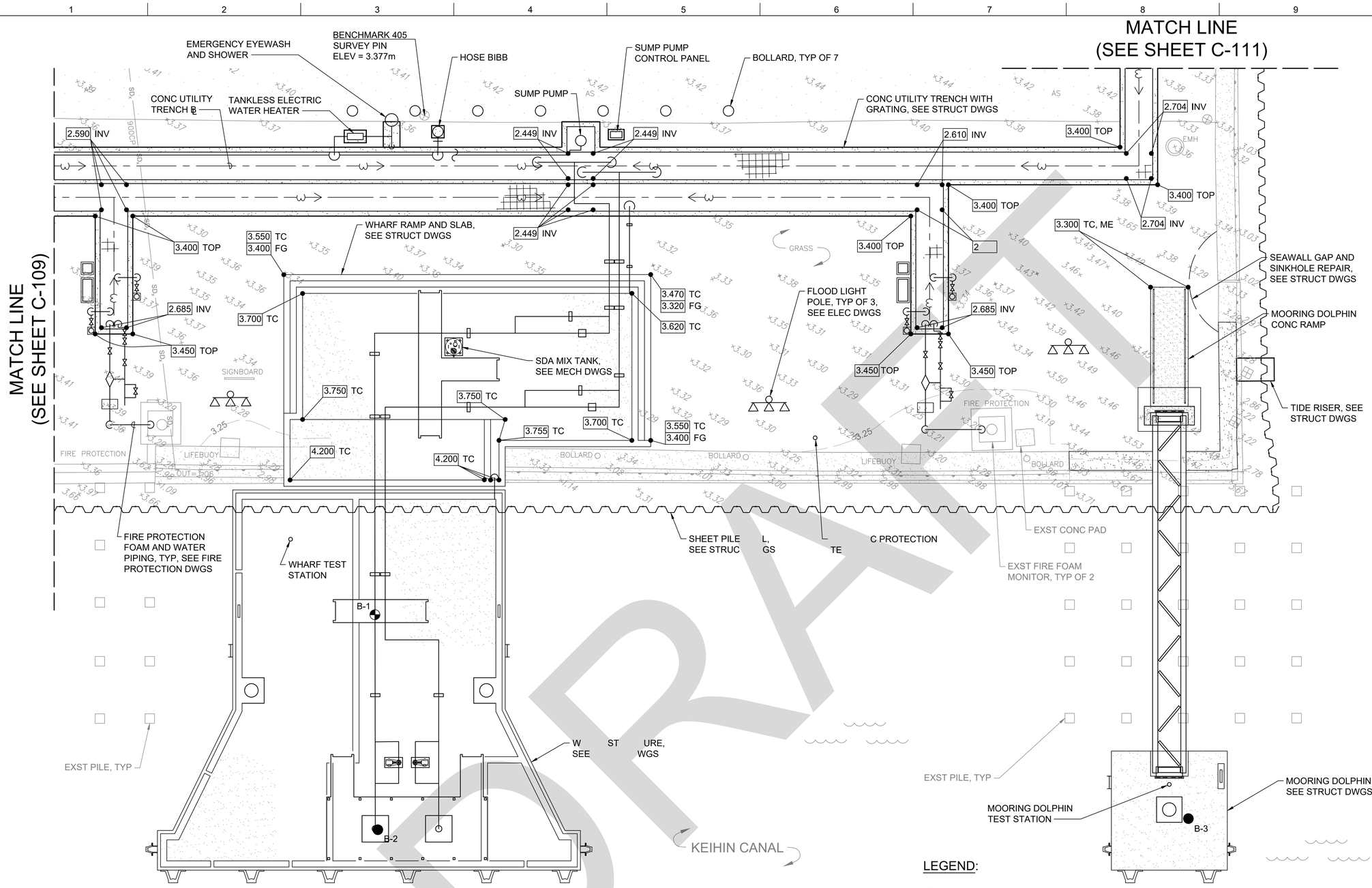
RTA SUBMITTAL



1 CIVIL GRADING PLOT PLAN 2
SCALE: 1:100 0 2 4m

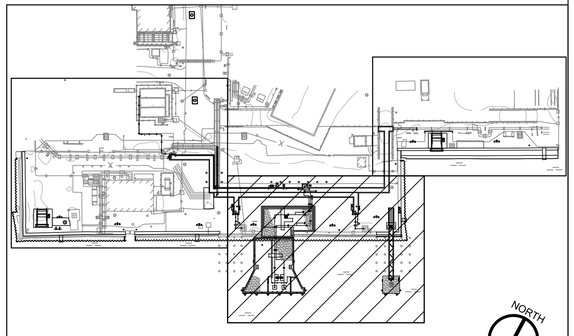
NORTH

LEGEND:

- GEOTECHNICAL BORING
- GEOTECHNICAL AND SEDIMENT SAMPLING BORING
- 3.500 TOP — TOP OF TRENCH WALL ELEV
- 3.500 FG — FINISHED GRADE ELEV
- 3.500 INV — TRENCH INV ELEV
- 3.500 TC — TOP OF CONC ELEV
- FLOW DIRECTION

NOTES:

1. SEE SHEETS G-009 AND G-010 FOR GEOTECHNICAL BORING LOGS.
2. SEE SHEET G-011 FOR SEDIMENT SAMPLING TESTING RESULTS.



KEY PLAN
SCALE: NTS

NORTH

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HDR - WTNA JV
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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
TSURUMI, YOKOHAMA, JAPAN

CIVIL GRADING PLOT PLAN 2

SHEET ID
C-110

FILE: DESC1904C-109-111.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

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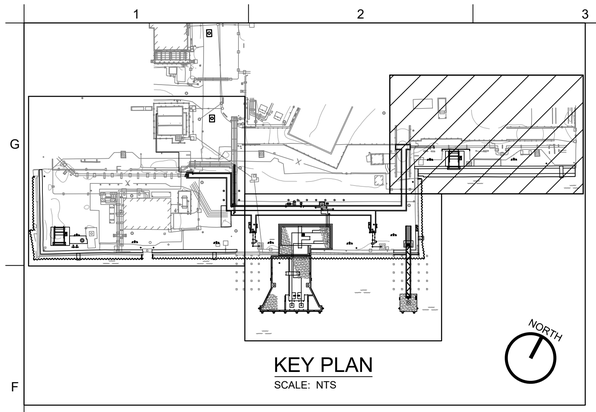

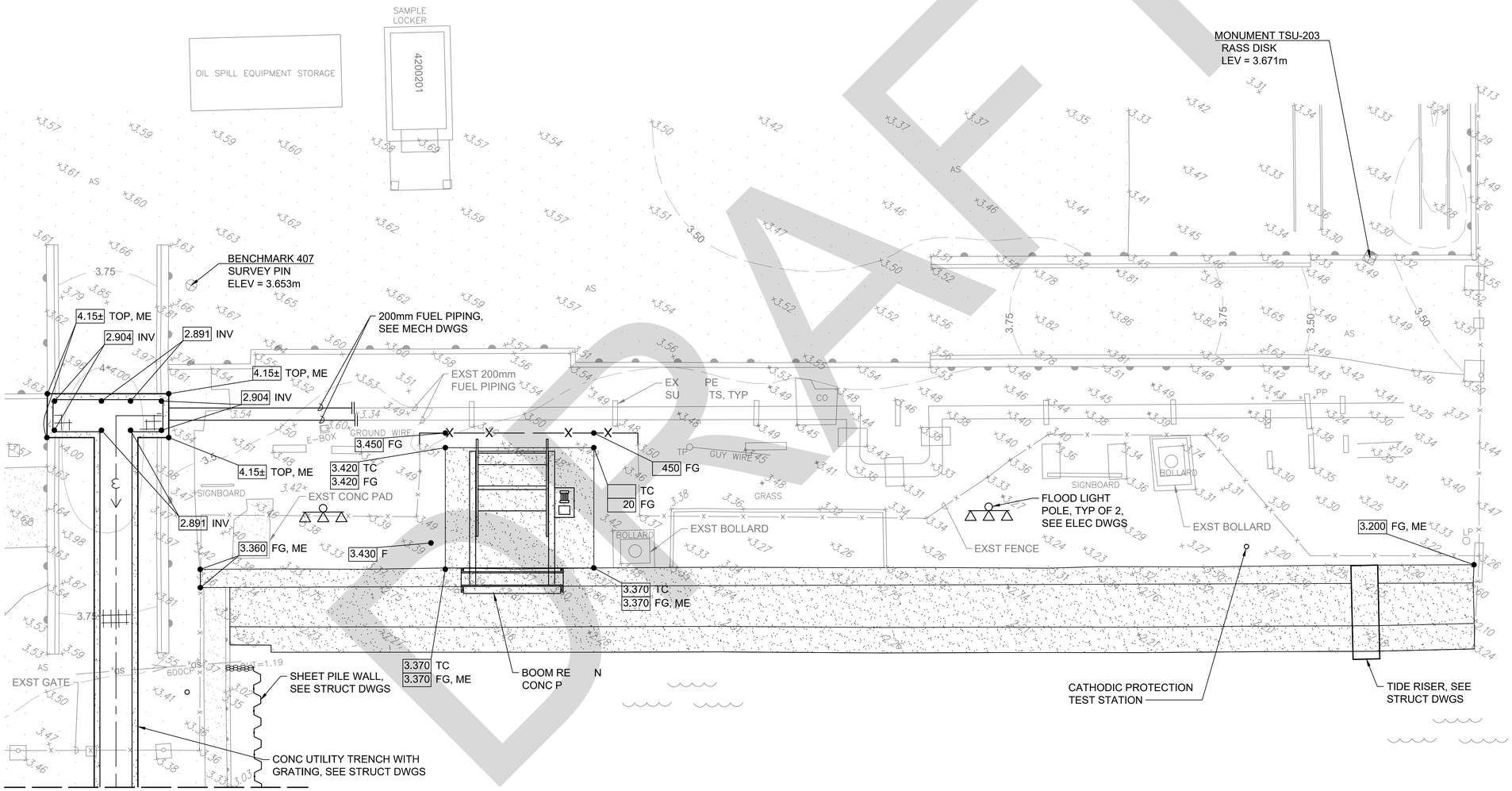

LEGEND:

3.500	TOP	TOP OF TRENCH WALL ELEV
3.500	FG	FINISHED GRADE ELEV
3.500	INV	TRENCH INV ELEV
3.500	ME	MATCH EXST ELEV
3.500	TC	TOP OF CONC ELEV
		FLOW DIRECTION

1 CIVIL GRADING PLOT PLAN 3
SCALE: 1:100 (0, 2, 4m)

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C.KIM
CHECKED BY: F.HINO
SUBMITTED BY: F.HINO
SIZE: ISO A1
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CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904C-109-111.dwg

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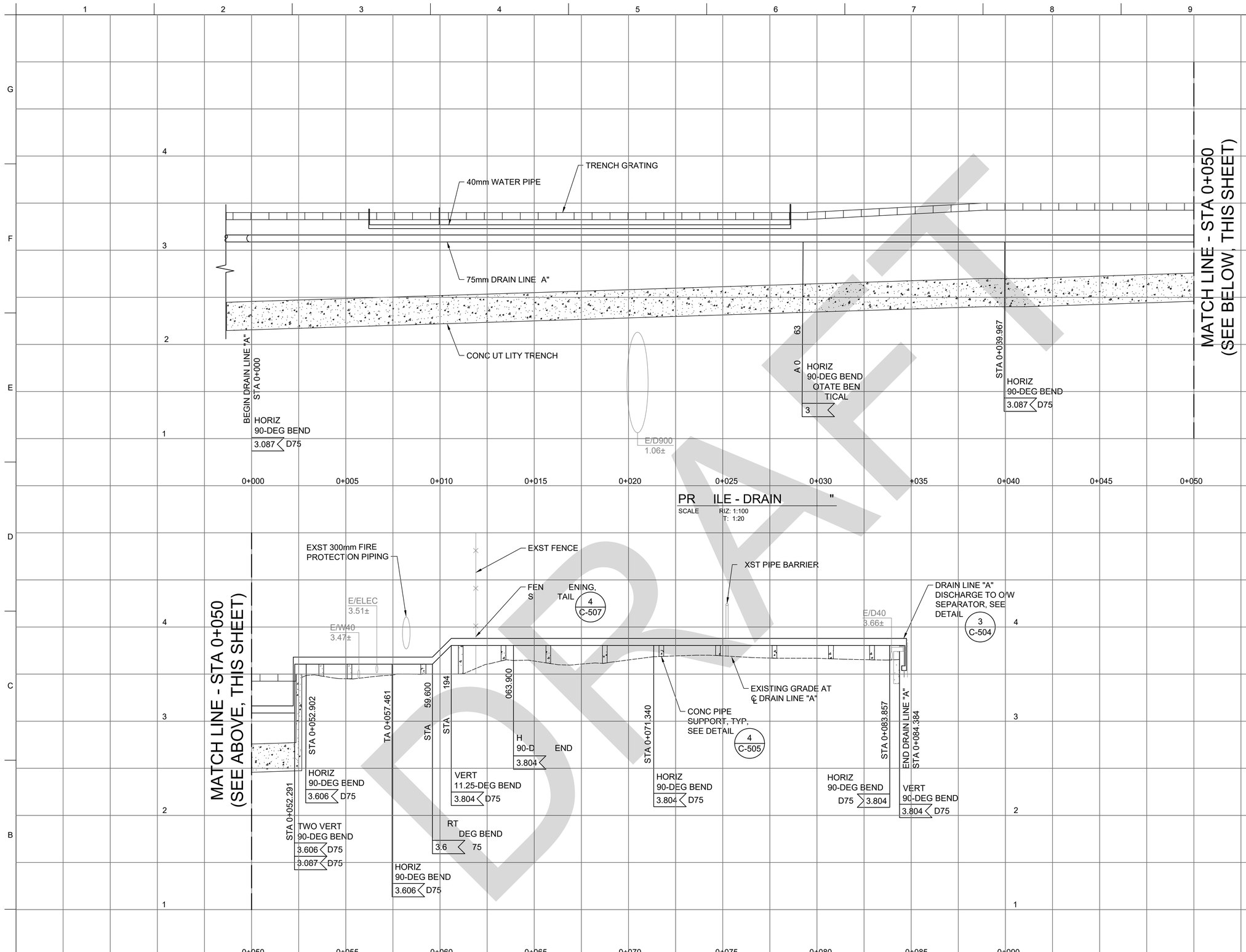
DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

CIVIL GRADING PLOT PLAN 3

SHEET ID
C-111



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ISSUE DATE: -	SOLICITATION NO.: -
DESIGNED BY: R. KIKUCHI	CONTRACT NO.: -
DRAWN BY: C. KIM	DRAWING CODE: -
CHECKED BY: F. HINO	FILE NAME: DESC1904C-301.dwg
SUBMITTED BY: F. HINO	SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

DRAIN LINE "A" PROFILE

SHEET ID
C-301

FILE: DESC1904C-301.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

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EMERGENCY EYEWASH AND SHOWER, SEE DETAIL 1/C-502

40mm x 32mm REDUCER

BOLLARD, TYP OF 7, SEE DETAIL 3/C-501

BENCHMARK 405
SURVEY PIN
ELEV = 3.377m

TIE: 71° 03' 23"
7.577 (BENCHMARK 405
TO SUMP PUMP)

SUMP PUMP, SEE DETAIL 1/C-504

TIE: 77° 19' 15"
7.127 (BENCHMARK 405
TO BEGIN DRAIN LINE "A")

HOSE BIBB, SEE DETAIL 1/C-503

PUMP CONTROL
NEL

TANKLESS ELECTRIC WATER HEATER

32mm UNION, TYP OF 3

32mm BALL VALVE, TYP OF 2

40mm WATER PIPE

32mm 90-DEG BEND, TYP OF 3

40mm WASTE DISCHARGE

CONC UTILITY TRENCH OPENING, 600mm WIDE x 300mm HIGH

TIE: 209° 39' 05"
1.867 (BENCHMARK 405
TO EMERGENCY
EYEWASH AND SHOWER)

75mm DRAIN
CONTINU
WATER LI

E "A"

200mm FUEL
SEE SHEET M-

TIE: 233° 23' 12"
27.969 (BENCHMARK 406
TO END DRAIN LINE "B")

20mm 90-DEG BEND

TIE: 112° 01' 02"
0.999 (BENCHMARK 405
TO HOSE BIBB)

TIE: 102° 52' 56"
12.985 (BENCHMARK 40
BEGIN DRAIN LINE "B")

DRAIN LINE "B" DISCHARGE, SEE DETAIL 4/C-504

DRAIN PIPE SUPPORT, SEE DETAIL 5/C-505

100mm DRAIN LINE "B"
APPROX 4.2m DI PIPE

WHARF RAMP AND SLAB, SEE SHEET S-203

INV = 3.620m

PS-3V FUEL PIPE SUPPORT, TYP, SEE DETAIL 3/M-503

MIX TANK, SEE T M-502

PIPE CROSSOVER CATWALK, SEE DETAIL 1/S-514

PS-2A FUEL PIPE SUPPORT, SEE DETAIL 5/M-503 AND 6/S-536

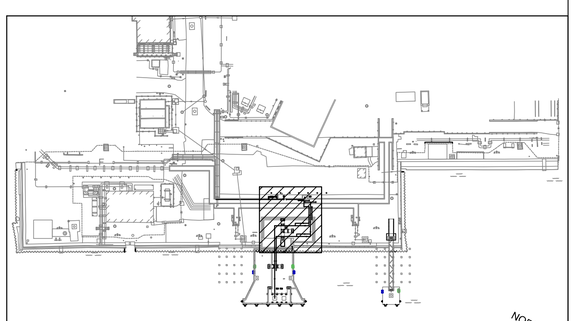
100mm DI 90-DEG BEND
INV = 4.190m

INV = 4.200m

100mm DRAIN PIPE
APPROX 1.0m DI PIPE

1 CIVIL SITE LAYOUT AND UTILITY DETAIL PLAN 1
SCALE: 1:50
0 1 2m

NORTH



KEY PLAN
SCALE: NTS

NORTH

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DRAWING CODE: -
FILE NAME: DESC1904C-401.dwg

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SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO C-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

CIVIL SITE LAYOUT AND UTILITY DETAIL PLAN 1

SHEET ID
C-401

FILE: DESC1904C-401.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

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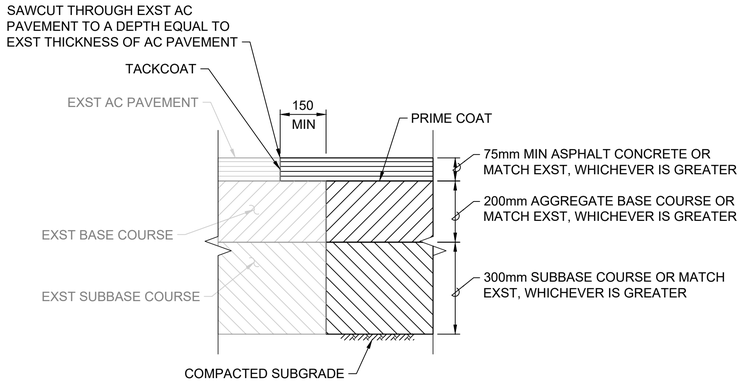
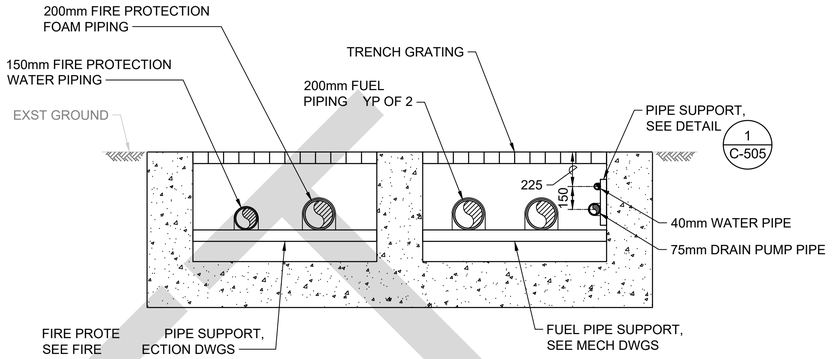


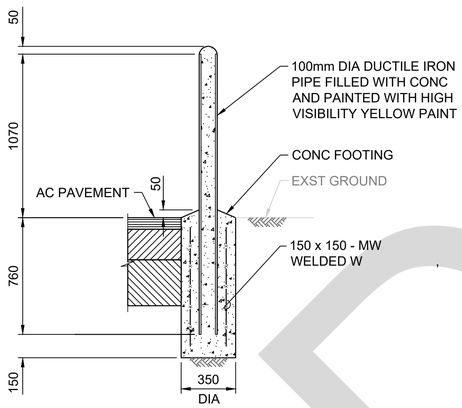
1 AC PAVEMENT
SCALE: 1:10 0 200 400mm



2 CONC UTILITY TRENCH
SCALE: 1:20 0 400 800mm

NOTES:

1. CONC UTILITY TRENCH SECTION FACING WEST.
2. SEE SHEET S-543 FOR CONC UTILITY TRENCH REINFORCING.



3 BOLLARD
SCALE: 1:20 0 400 800mm

NOTE:

1. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

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ISSUE DATE: -
SOLICITATION NO.: -
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DRAWING CODE: -
FILE NAME: DESC1904C-501.dwg

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1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

MISCELLANEOUS CIVIL DETAILS 1

SHEET ID
C-501

FILE: DESC1904C-501.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
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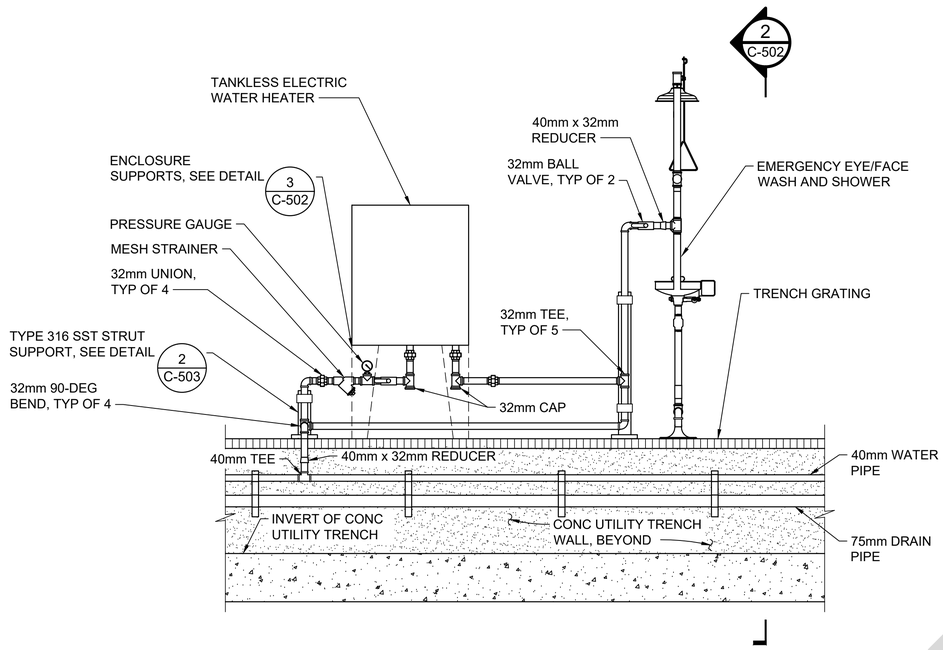


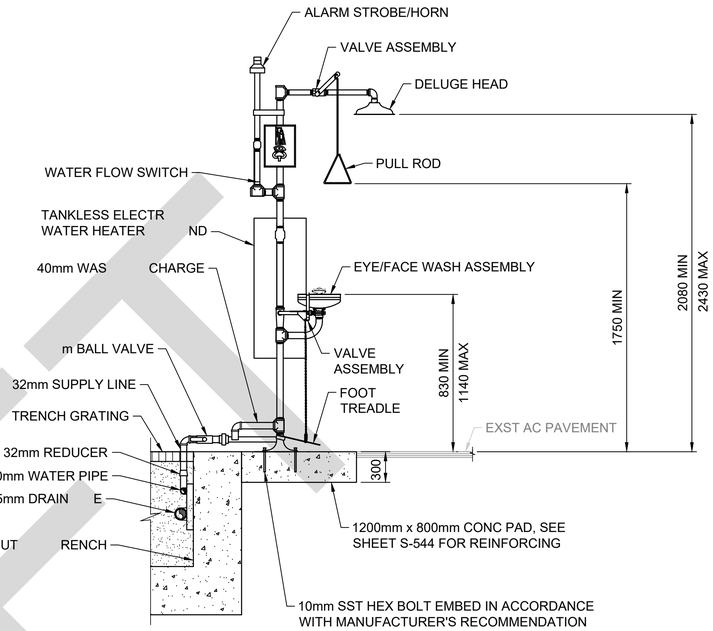
EMERGENCY EYE/FACE WASH AND SHOWER SCHEDULE				
EQUIPMENT	DESCRIPTION	WATER CONNECTION SIZE (mm)	ELECTRICAL (V/Hz/PHASE)	POWER (kW)
EMERGENCY EYE/FACE WASH AND SHOWER	COMBINATION DRENCH SHOWER AND EYE/FACE WASH UNIT. PROVIDE PULL HANDLE TO OPERATE SHOWER HEAD. PROVIDE PUSH BUTTON/FLAG TO OPERATE EYE/FACE WASH UNIT.	40	N/A	N/A
TANKLESS ELECTRIC WATER HEATER	WATER HEATER TO SUPPLY TEPID WATER FOR EMERGENCY EYE/FACE WASH AND SHOWER.	32	8/50/3	36
STROBE ALARM	ALARM ACTIVATED WHEN SHOWER OR EYE/FACE WASH IS IN USE.	32	120/50/1	0.1

NOTES:

1. EMERGENCY EYE/FACE WASH AND SH SHALL BE SUITABLE FOR OUTDO TALLATION.
2. TANKLESS ELECTRIC WATER HEATE L BE SUITABLE FOR OUTDOOR INSTA ON.
3. EYE/FACE WASH UNIT SHALL PROVIDE A M FLOW RATE OF 0.19 LITERS/SEC DRENCH SHOWER SHALL PROVIDE A MIMIM W RATE OF 1.26 LITERS/SECON
4. TANKLESS ELECTRIC WATER HEATER SHALL HA NIMUM FLOW RATE OF 5.7 LITERS/MINUTE AND A MAXIMUM FLOW RATE O ERS/MINUTE. MAXIMU TEMPERATURE RISE SHALL BE 22 DEGREES CELSIUS GREES FAHRENH MAXIMUM OUTLET TEMPERATURE OF UNIT SHALL BE 32 DEGREES US (90 DEGR AHRENHEIT).

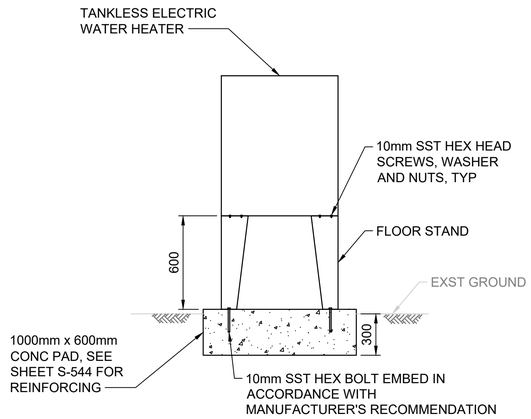
1 EMERGENCY EYE/FACE WASH AND HOWER ELEVATION

SCALE: NTS



2 SECTION

SCALE: NTS



3 ENCLOSURE SUPPORTS

SCALE: NTS

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DRAWING CODE: -
FILE NAME: DESC1904C-502.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
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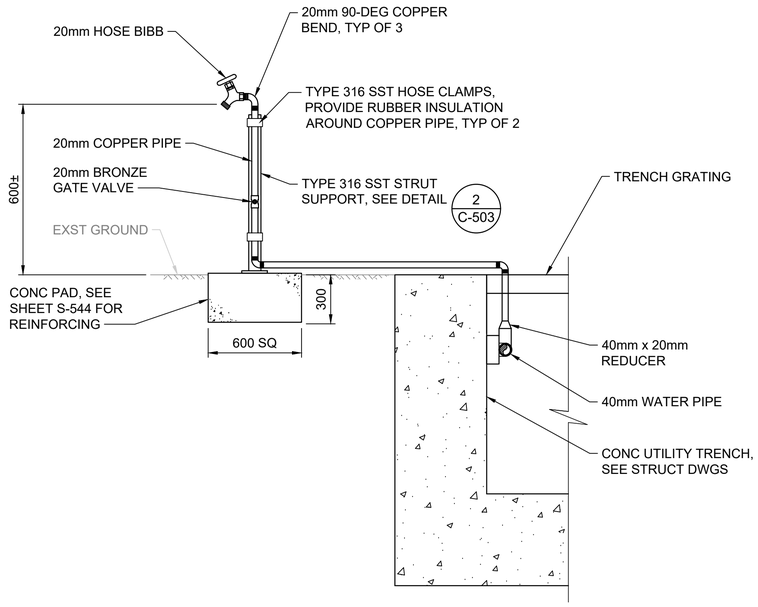
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
YSURUMI, YOKOHAMA, JAPAN

MISCELLANEOUS CIVIL DETAILS 2

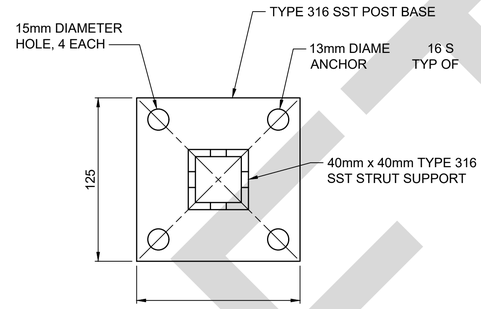
SHEET ID

C-502

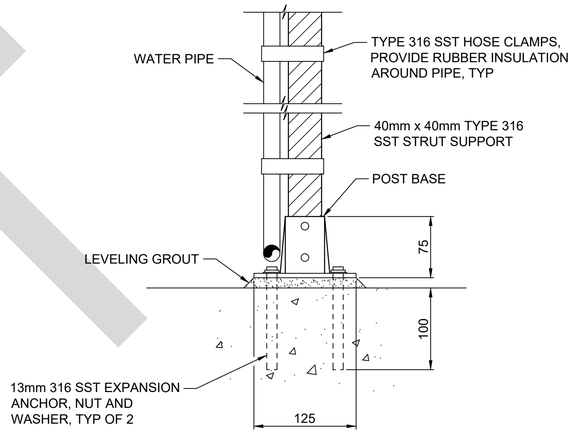


1 HOSE BIBB

SCALE: NTS



PLAN



ELEVATION

2 STRUT SUPPORT

SCALE: NTS

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CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904C-503.dwg

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JAPAN DISTRICT
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SUITE 400
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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE, TSURUMI, YOKOHAMA, JAPAN

MISCELLANEOUS CIVIL DETAILS 3

SHEET ID

C-503

FILE: DESC1904C-503.dwg
DATE: 6/25/2018 5:05 PM
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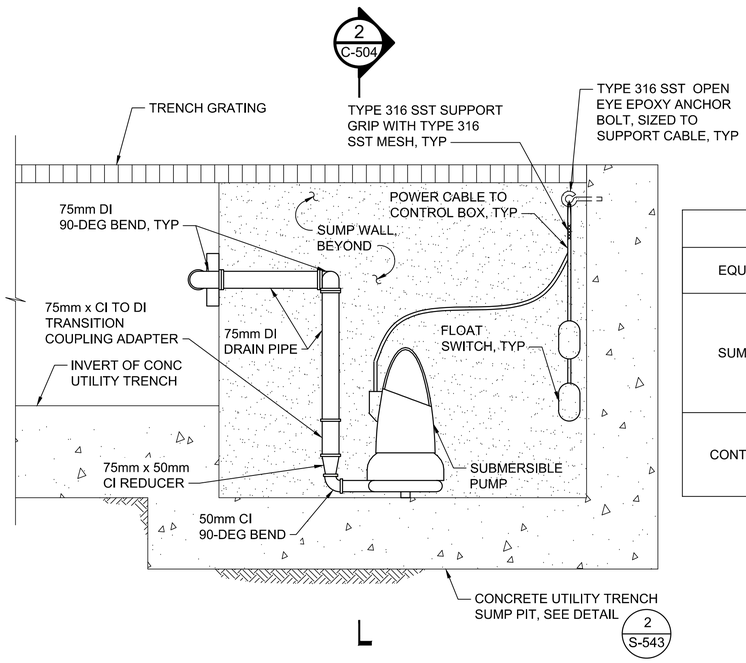
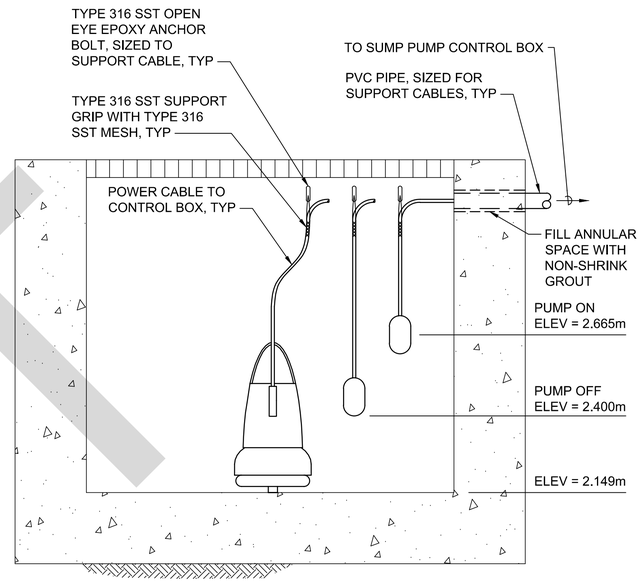
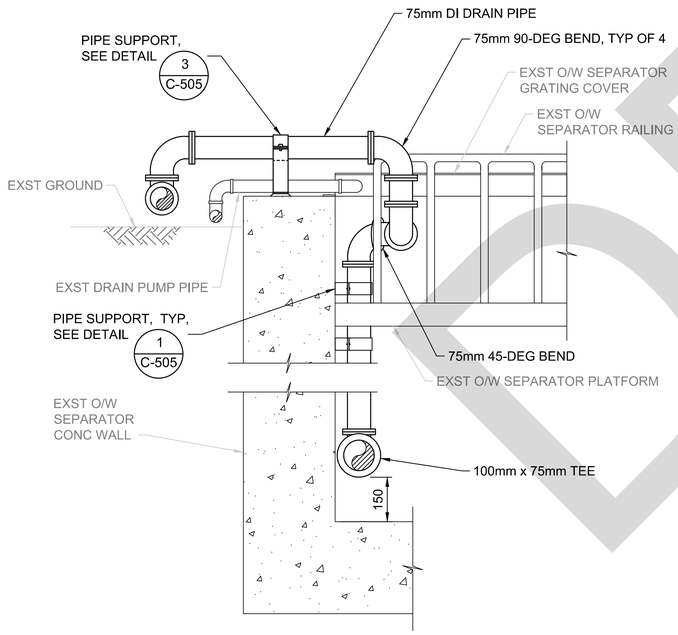


SUMP PUMP SCHEDULE				
EQUIPMENT	DESCRIPTION	DISCHARGE CONNECTION SIZE (mm)	ELECTRICAL (V/Hz/PHASE)	POWER (kW)
SUMP PUMP	SUMP PUMP TO PUMP WATER FROM CONC UTILITY TRENCH TO EXST O/W SEPARATOR.	50	415/50/3	
CONTROL BOX	CONTROL BOX TO START AND STOP PUMP	N/A	400	1

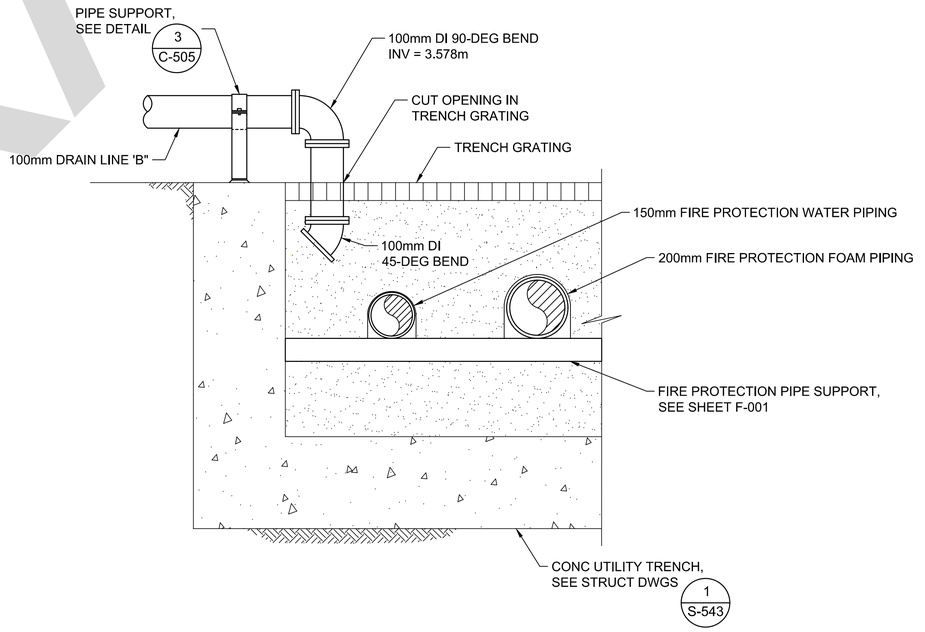
1 SUMP PUMP
SCALE: NTS



2 SECTION
SCALE: NTS



3 DRAIN LINE "A" DISCHARGE
SCALE: NTS



4 DRAIN LINE "B" DISCHARGE
SCALE: NTS

NOTE:

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CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904C-504.dwg

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HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES T-1, T-4 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

MISCELLANEOUS CIVIL DETAILS 4

SHEET ID
C-504

FILE: DESC1904C-504.dwg
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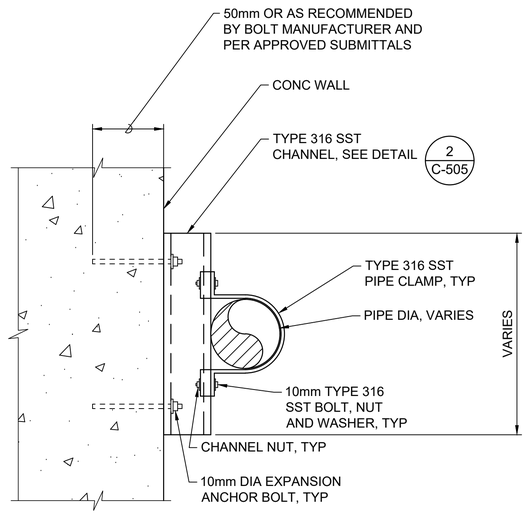
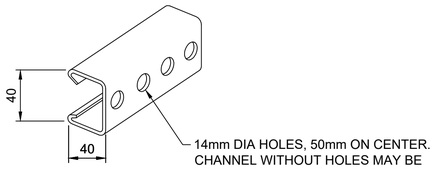
IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES



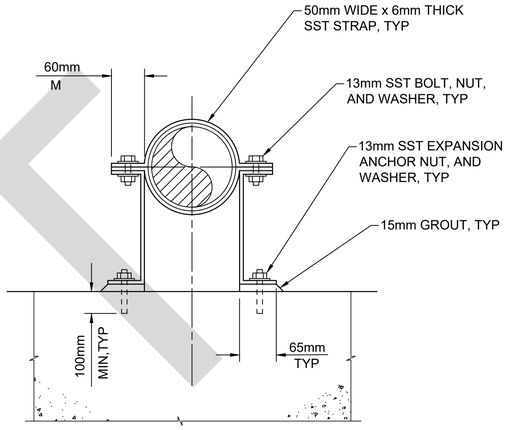
NOTES:

1. MAXIMUM SPACING BETWEEN SUPPORTS SHALL BE 2m.
2. MINIMUM CLEARANCE BETWEEN FITTINGS AND VALVES SHALL BE 100mm

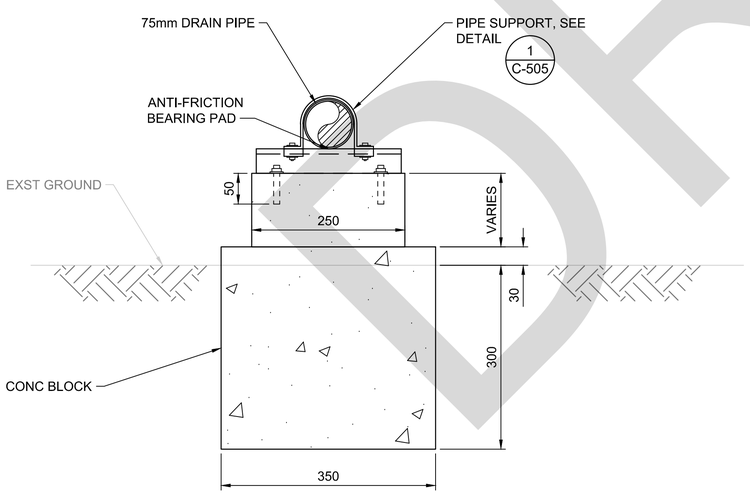
1 PIPE SUPPORT "A"
SCALE: NTS



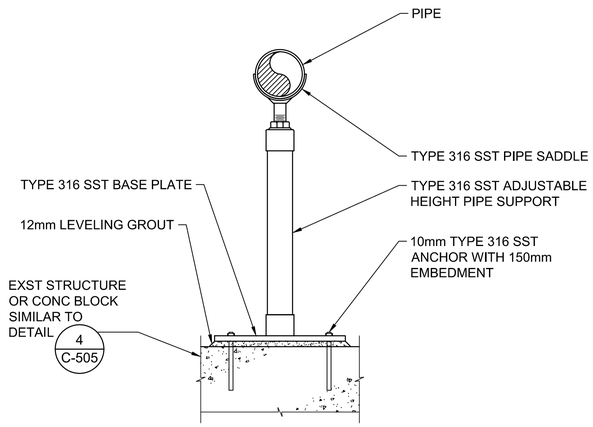
2 CHANNEL
SCALE: NTS



3 PIPE SUPPORT "B"
SCALE: NTS



4 CONC PIPE SUPPORT
SCALE: NTS



5 DRAIN PIPE SUPPORT
SCALE: NTS

NOTE:

1. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

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FILE NAME: DESC1904C-505.dwg

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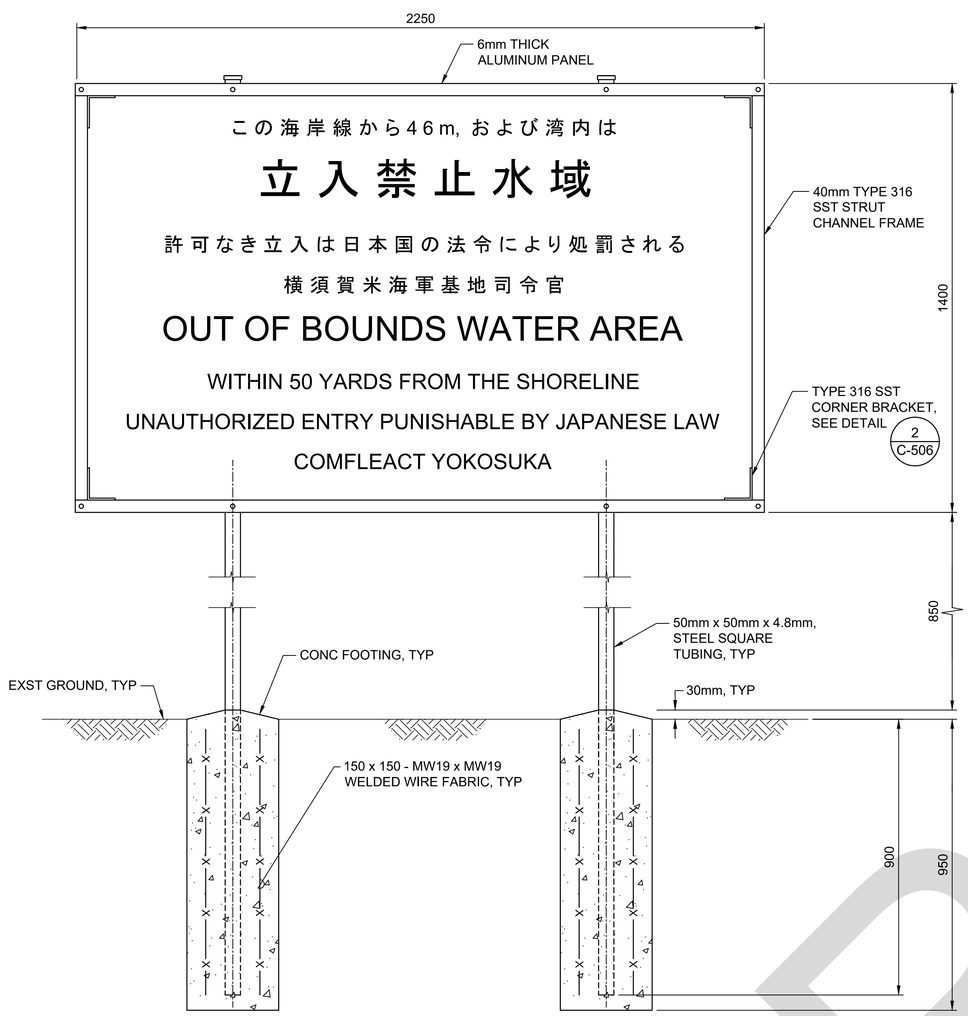
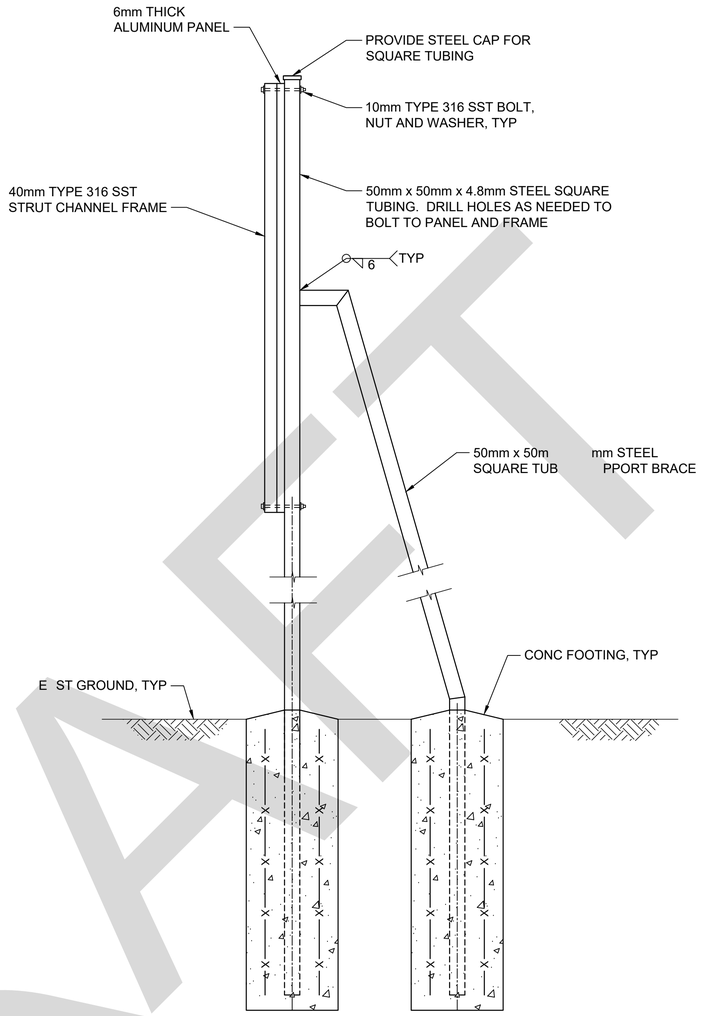
DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

MISCELLANEOUS CIVIL DETAILS 5

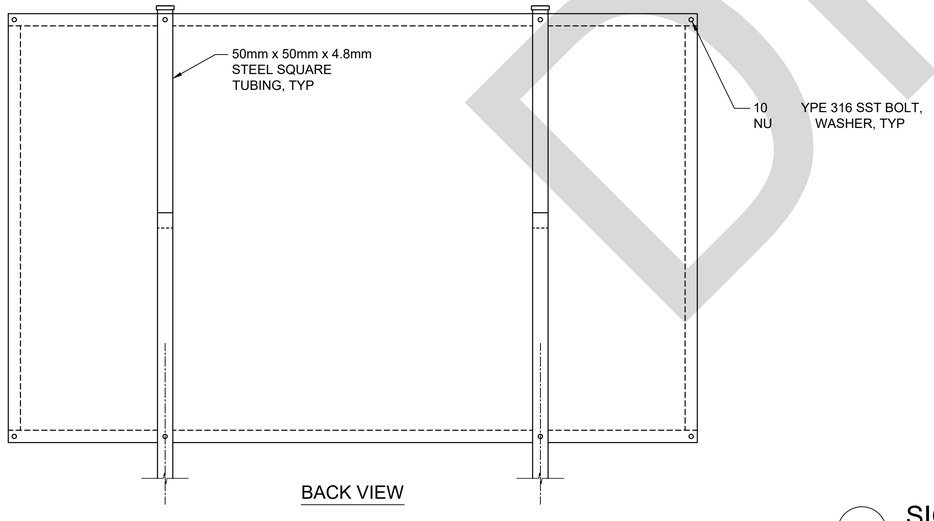
SHEET ID
C-505



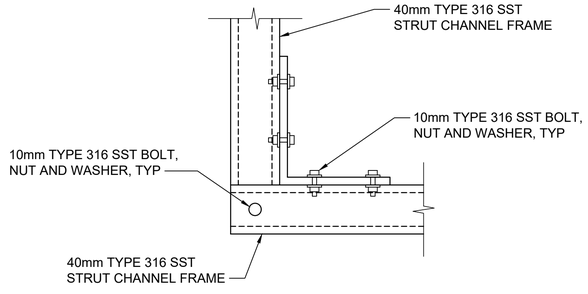
FRONT VIEW



SIDE VIEW



BACK VIEW



2 CORNER BRACKET
SCALE: NTS

1 SIGNBOARD DETAIL
SCALE: 1:10 0 200 400mm

NOTE:

1. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

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MISCELLANEOUS CIVIL DETAILS 5

SHEET ID
C-506

FILE: DESC1904C-506.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

IF SHEET IS LESS THAN 594 X 841 MM
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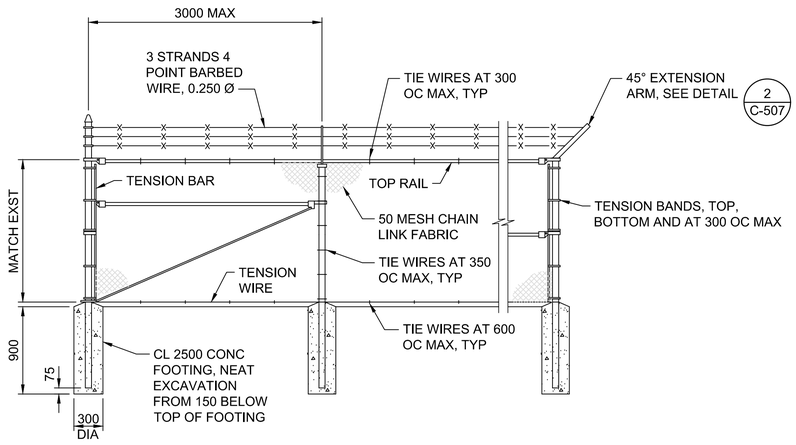
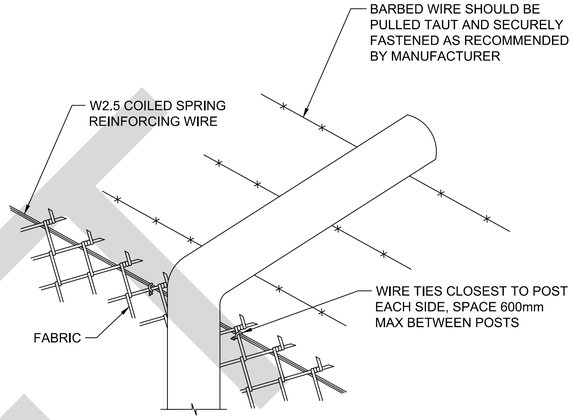
RTA SUBMITTAL



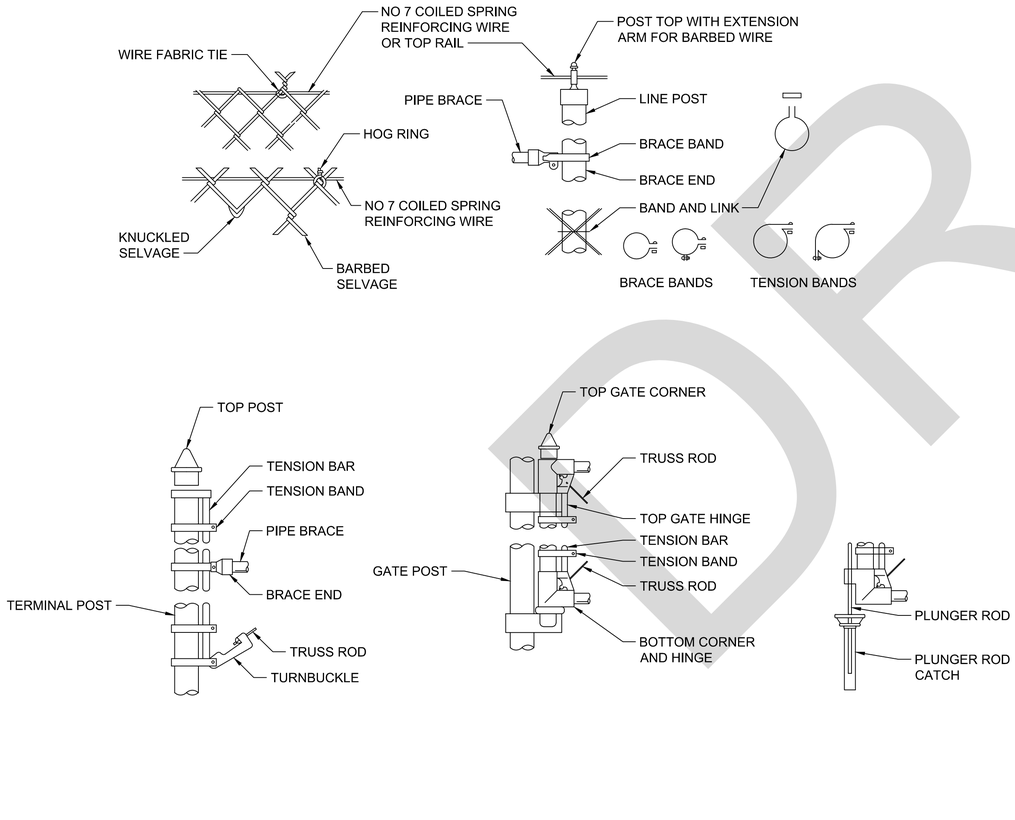
1 FENCE DETAIL

SCALE: NTS



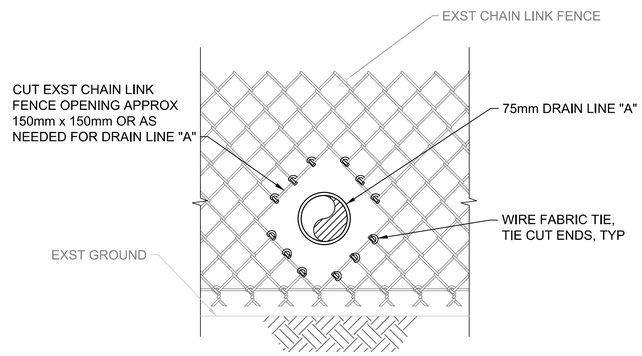
2 EXTENSION ARM FOR BARBED WIRE

SCALE: NTS



3 TYPICAL ACCESSORIES DETAILS

SCALE: NTS



4 FENCE OPENING

SCALE: NTS

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MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

MISCELLANEOUS CIVIL DETAILS 7

SHEET ID

C-507

FILE: DESC1904C-507.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

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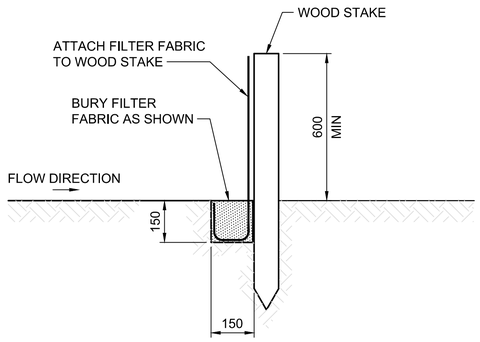
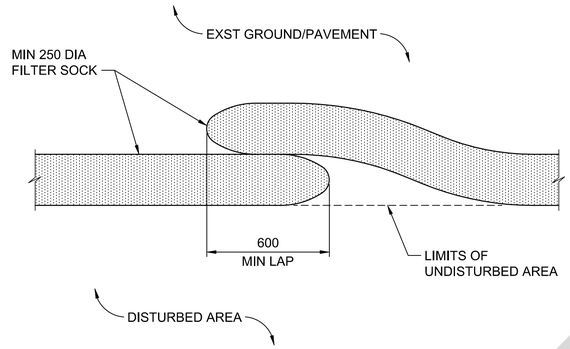


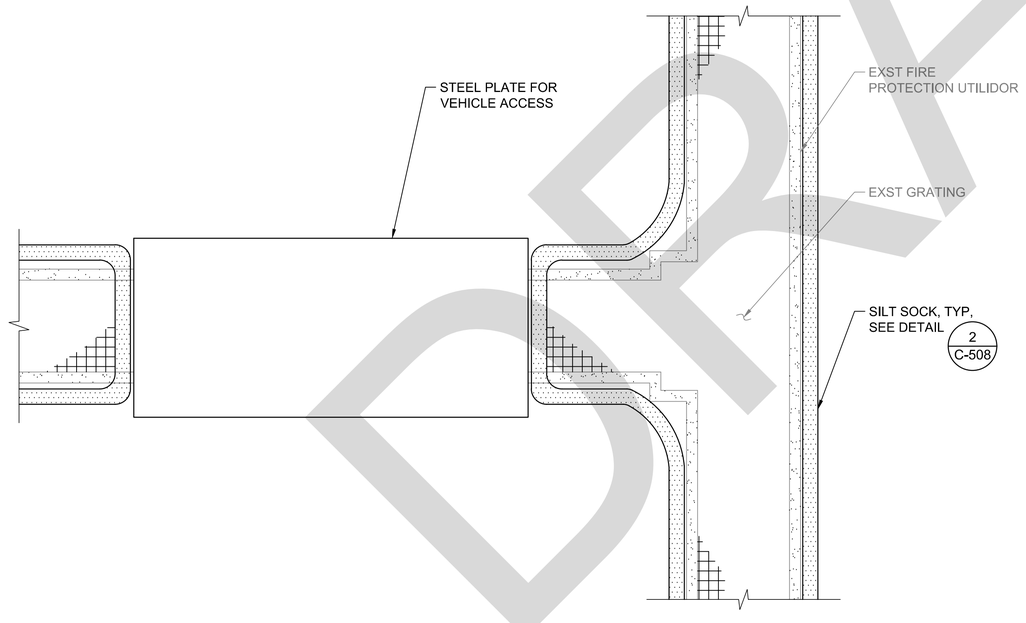
1 SILT FENCE
SCALE: NTS



2 SILT CK
SCALE: NTS

NOTE:

1. OVE OCK A MINIMUM OF 600mm.
2. CONTRA HALL REMOVE ANY DEBRIS IN THE PATH THE SILT SO ENSURE CONTACT WITH THE GROUND.
3. NO STAKING OF SILT SHALL BE ALLOWED.
4. REMOVE ACCUMULATED NT WHEN DEPTH REACHES 1/2 BARRIER HEIGHT.
5. AT COMPLETION OF THE PROJEC OMPOSITE FILTER SOCKS INCLUDING THE COMPOST M AL SHALL BE REMOVED FROM SITE AND DISPOSED PROPERLY.



3 VEHICLE ACCESS
SCALE: NTS

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MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
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MISCELLANEOUS CIVIL DETAILS 8

SHEET ID

C-508

FILE: DESC1904C-508.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

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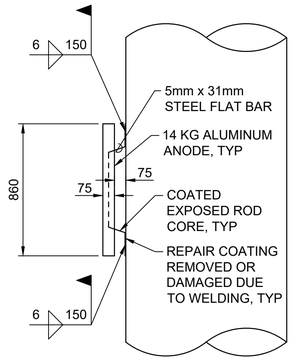
REDUCED PRINT = USE GRAPHIC SCALES

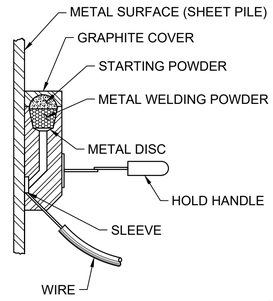


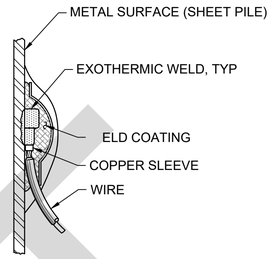
NOTE:

1. THE SAME ANODE AND METHOD OF INSTALLATION WILL BE USED FOR THOSE ANODES BEING INSTALLED ON THE SHEET PILES.

1 ANODE FIXTURE DETAIL

SCALE: NTS





STEP 1: FILE STRUCTURE CONNECTION AREA 75mm x 75mm TO BARE SHINY METAL AND CLEAN

STEP 2: STRIP INSULATION FROM WIRE. ATTACH SLEEVE.

STEP 3: HOLD FIRMLY WITH OPENING AWAY FROM OPERATOR AND IGNITE WITH FLINT GUN.

STEP 4: REMOVE SLAG FROM CONNECTION AND PEEN WELD FOR SOUNDNESS.

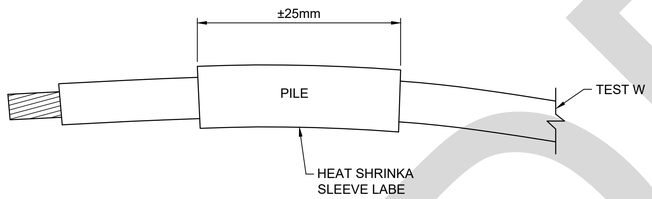
STEP 5: COVER CONNECTION AND EXPOSED STRUCTURE SURFACE WITH A BITUMINOUS COATING COMPOUND.

NOTE:

1. PROCEDURE DESCRIBED ABOVE IS ONLY TO BE USED AS A GENERAL GUIDE. CONSULT MANUFACTURERS LITERATURE FOR SPECIFIC INSTALLATION INSTRUCTIONS.

2 EX ERMIC WELD DETAIL

SCA



NOTE:

1. LABEL LEADS EITHER "PIPE PILE" OR "SHEET PILE" TO IDENTIFY THE STRUCTURE CONNECTION.

3 HEAT SHRINKABLE TA S

SCALE: NTS

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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

CATHODIC PROTECTION DETAILS 1

SHEET ID

C-509

FILE: DESC1904C-509.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

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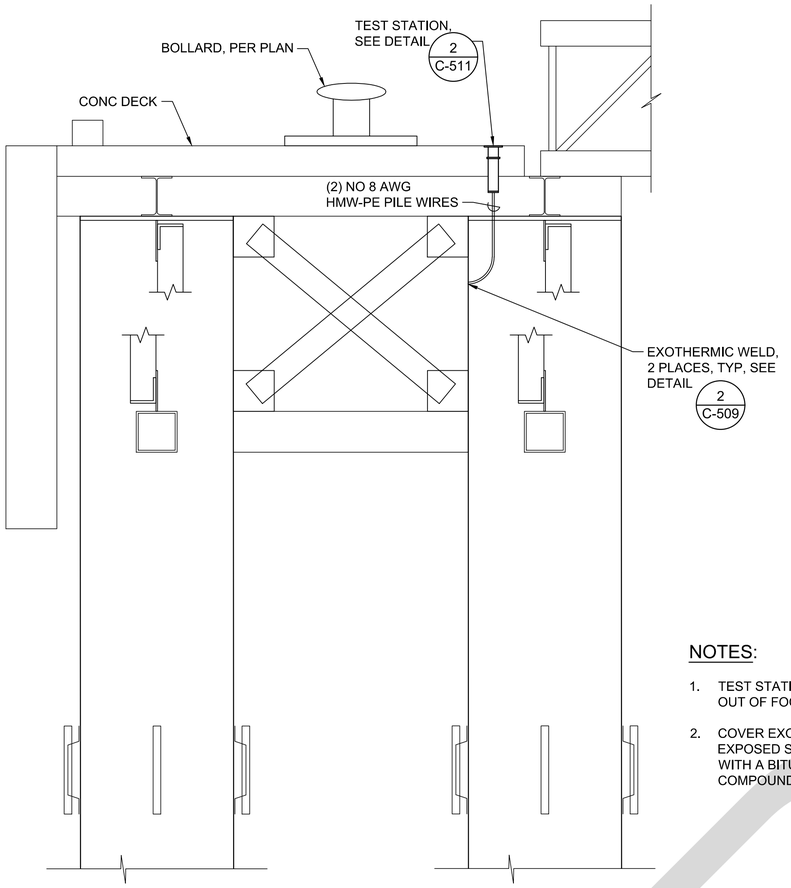
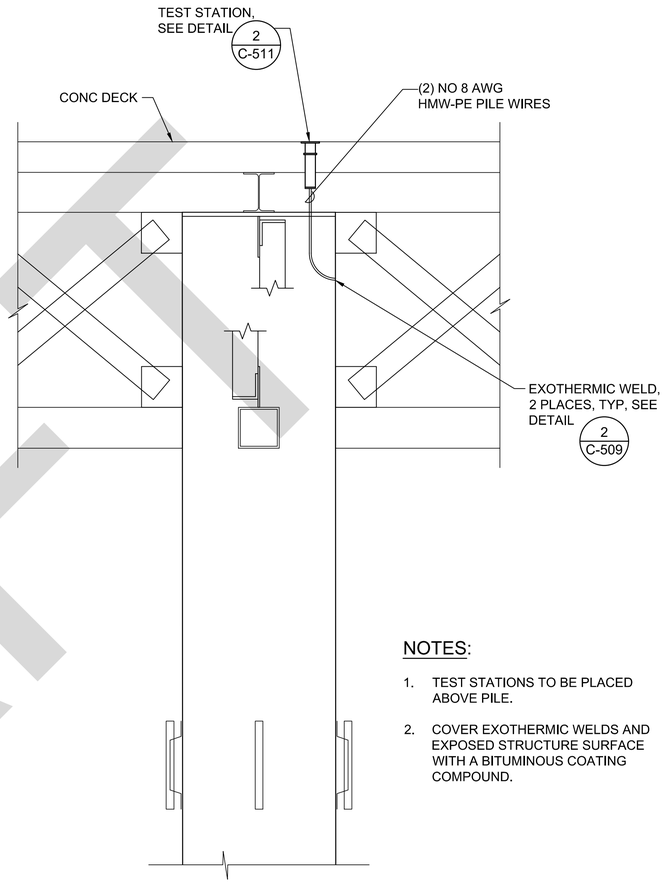


1 MOORING DOLPHIN TEST STATION DETA

SCALE: 1:30 0 600 1200mm

NOTES:

1. TEST STATIONS TO BE PLACED OUT OF FOOT TRAFFIC AREA.
2. COVER EXOTHERMIC WELDS AND EXPOSED STRUCTURE SURFACE WITH A BITUMINOUS COATING COMPOUND.



2 WHARF TEST STATION DETAIL

SCALE: 1:30 0 600 1200mm

NOTES:

1. TEST STATIONS TO BE PLACED ABOVE PILE.
2. COVER EXOTHERMIC WELDS AND EXPOSED STRUCTURE SURFACE WITH A BITUMINOUS COATING COMPOUND.

NOTE:

1. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

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ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904C-510.dwg

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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

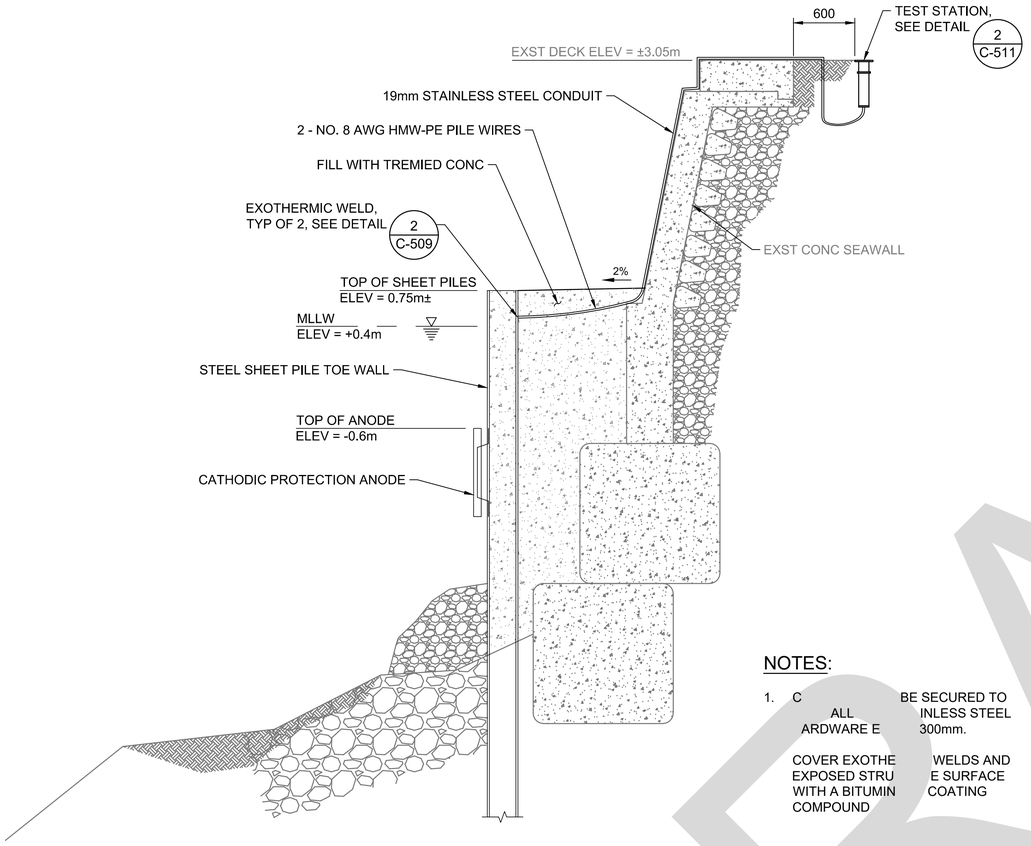
CATHODIC PROTECTION DETAILS 2

SHEET ID

C-510

FILE: DESC1904C-510.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES



1 SHEET PILE ANODE INST LLATION WITH ST STAT N

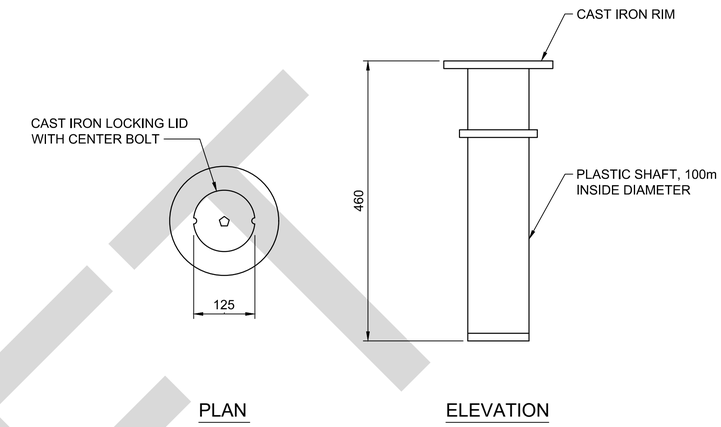
SCALE: 1:30

0 600 1200mm

NOTES:

1. C BE SECURED TO ALL INLESS STEEL ARDWARE E 300mm.

   COVER EXOTHE WELDS AND EXPOSED STRU E SURFACE WITH A BITUMIN COATING COMPOUND



2 CATHODIC PROTECTION TEST STATION

ALE: NTS

NOTE:

1. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

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MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
TSURUMI, YOKOHAMA, JAPAN

CATHODIC PROTECTION DETAILS 3

SHEET ID

C-511

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BENCHMARK 403
SURVEY PIN
ELEV = 3.859m

BENCHMARK 402
SURVEY PIN
ELEV = 3.553m

BENCHMARK 407
SURVEY PIN
ELEV = 3.653m

MONUMENT TSU-203
BRASS DISK
ELEV = 3.671m

MONUMENT TSU-202
BRASS DISK
ELEV = 3.334m

BENCHMARK 405
SURVEY PIN
ELEV = 3.377m

BENCHMARK 406
SURVEY PIN
ELEV = 3.319m

BENCHMARK BM.1
SURVEY PIN
ELEV = 2.921m

BENCHMARK BM
SURVEY PIN
ELEV = 3.226m

BENCHMARK 404
SURVEY PIN
ELEV = 3.331m

B-1

B-2

B-3

B-4

MAGNETIC ANOMALY
N = (-)56787.053
E = (-)11511.040

OUT OF BOUNDS
AREA BOUNDARY

LEGEND:

- GEOTECHNICAL BORING
- GEOTECHNICAL AND SEDIMENT SAMPLING BORING
- SEDIMENT SAMPLING BORING
- — 5 — EXST CONTOUR
- -12.4 EXST DEPTH POINT

NOTES:

1. ELEVATION DATUM FOR THIS PROJECT IS THE CHART DATUM LINE (C.D.L.).
2. BENCHMARK BM.1 USED AS REFERENCE FOR HYDROGRAPHIC SURVEY.
3. SEE SHEETS G-009 AND G-010 FOR GEOTECHNICAL BORING LOGS.
4. SEE SHEET G-011 FOR SEDIMENT SAMPLING TESTING RESULTS.
5. SEE SPECIFICATION SECTION 01 35 26 FOR INFORMATION REGARDING REMOVAL OF THE MAGNETIC ANOMALY.
6. DATE OF HYDROGRAPHIC SURVEY: 28 AUGUST 2018.

1 SOUNDING MAP
SCALE: 1:300 0 6 12m

NORTH

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FILE NAME: DESC1904CN101.dwg

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DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

SOUNDING MAP

SHEET ID
CN101

FILE: DESC1904CN101.dwg
DATE: 6/25/2018 5:05 PM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
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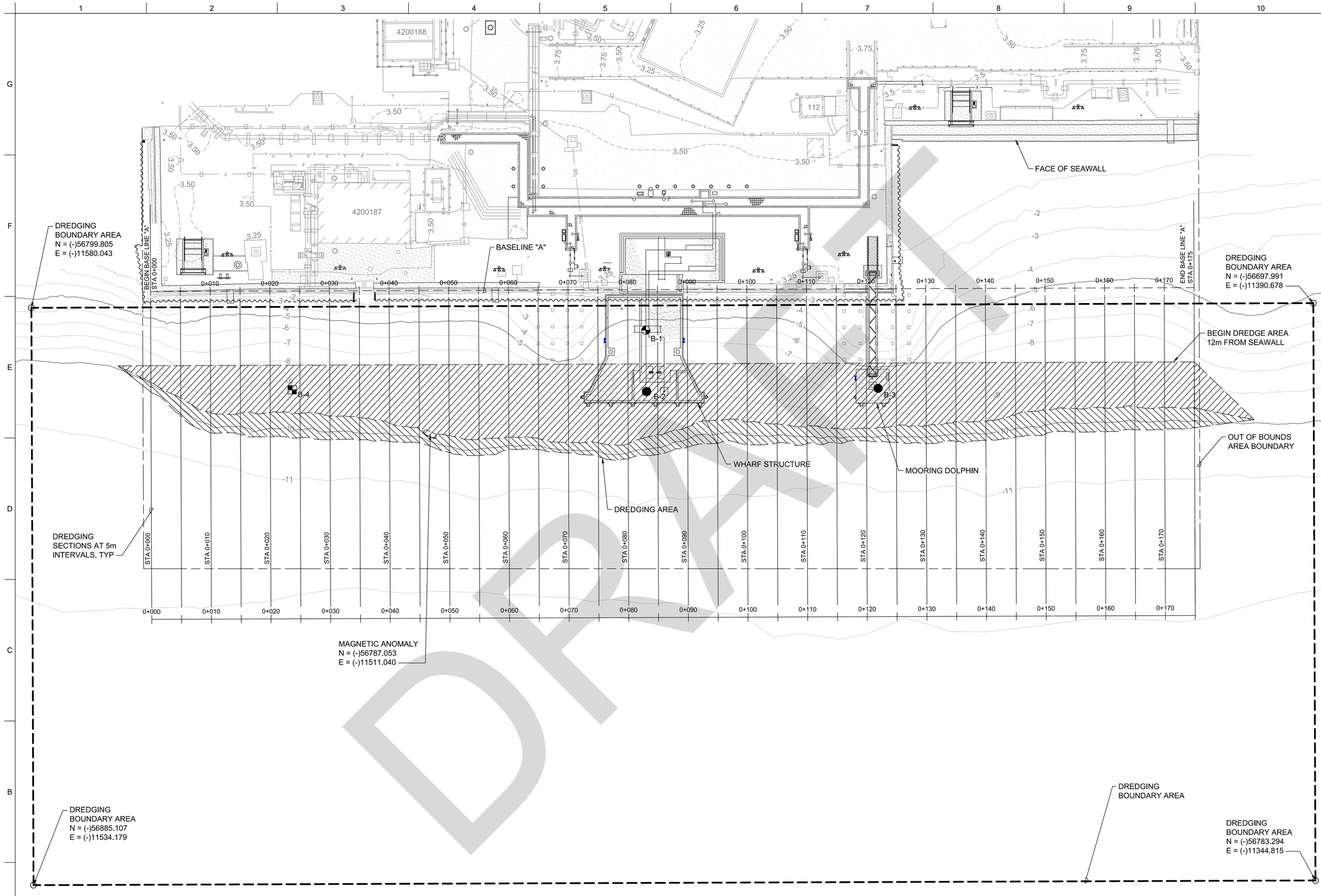
100%



LEGEND:

- GEOTECHNICAL BORING
- GEOTECHNICAL AND SEDIMENT SAMPLING BORING
- SEDIMENT SAMPLING BORING
- 5 EXST CONTOUR
- DREDGE AREA
- OVERDREDGE AREA

1 DREDGING PLAN
SCALE: 1:300 (0, 6, 12m)

NORTH

NOTES:

1. ELEVATION DATUM FOR THIS PROJECT IS THE CHART DATUM LINE (C.D.L.).
2. THE BASIS OF DESIGN ASSUMES THAT DREDGED MATERIAL IS SUITABLE FOR DISPOSAL AT THE YOKOSUKA HARBOR OFFSHORE FISHING GROUND IMPROVEMENT PROJECT (ISE CHO) LOCATED NEAR HASHIRIMIZU, YOKOSUKA CITY, KANAGAWA PREFECTURE, OPERATED BY DAISHIN DOBOKU CO, LTD. THE CONTRACTOR SHALL VERIFY THAT THE DREDGED MATERIAL WILL BE ACCEPTED BY THE DISPOSAL SITE. SEE SHEETS G-009 AND G-010 FOR GEOTECHNICAL BORING LOGS. SEE SHEET G-011 FOR SEDIMENT SAMPLING TESTING RESULTS.

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YSURUMI, YOKOHAMA, JAPAN

DREDGING PLAN

SHEET ID
CN102

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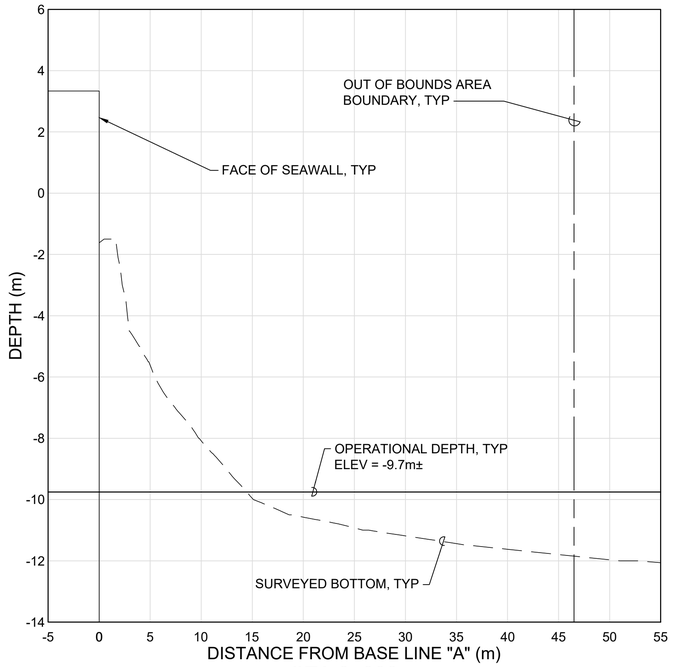
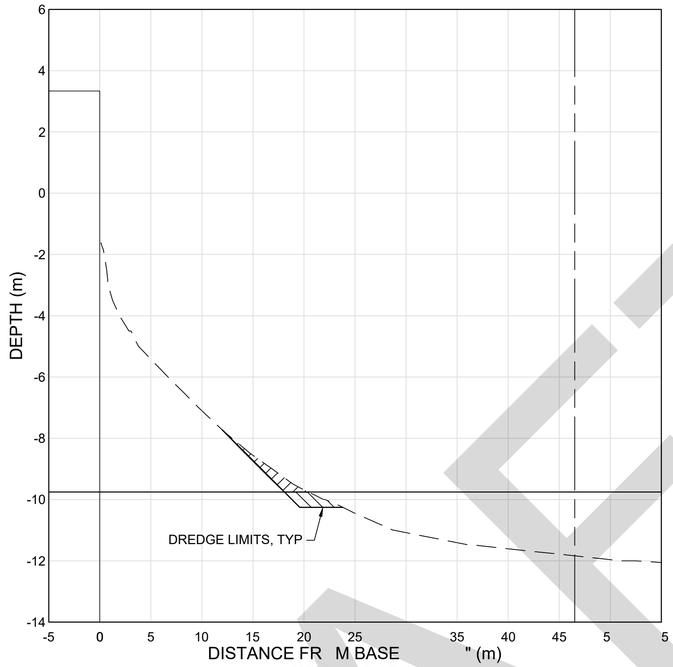
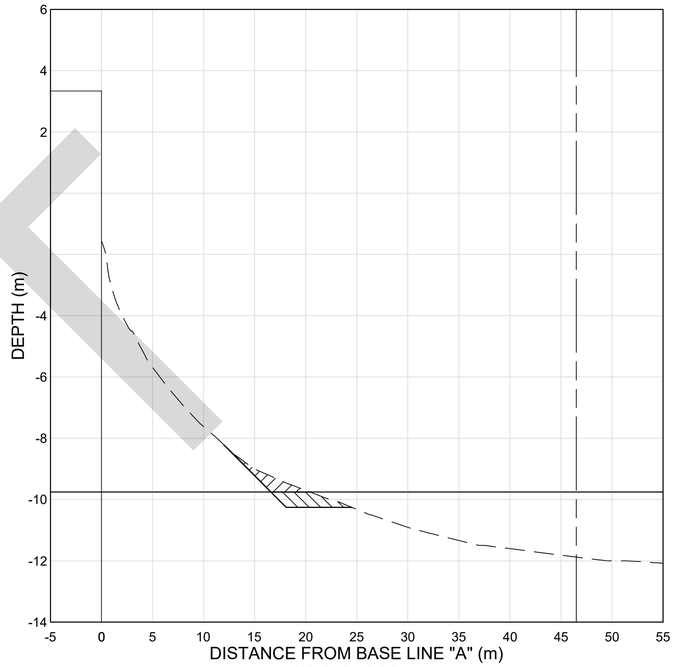
IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES



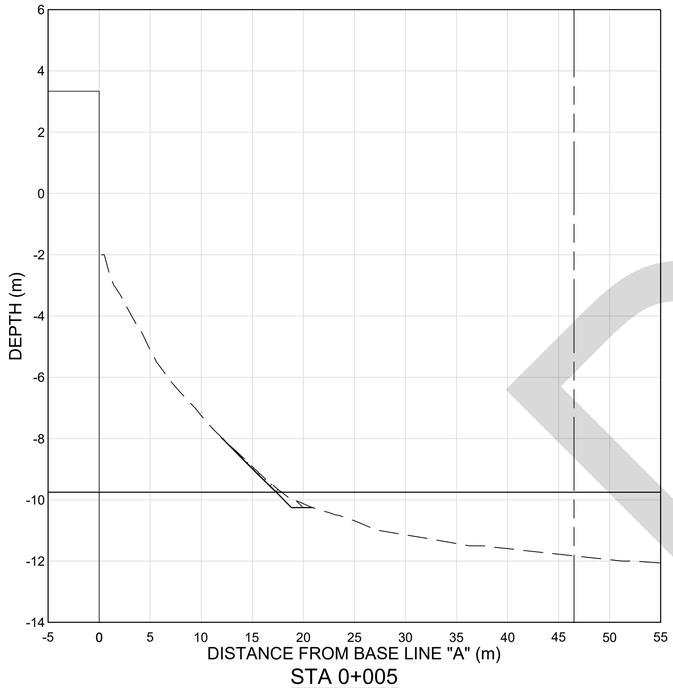
STA 0+000



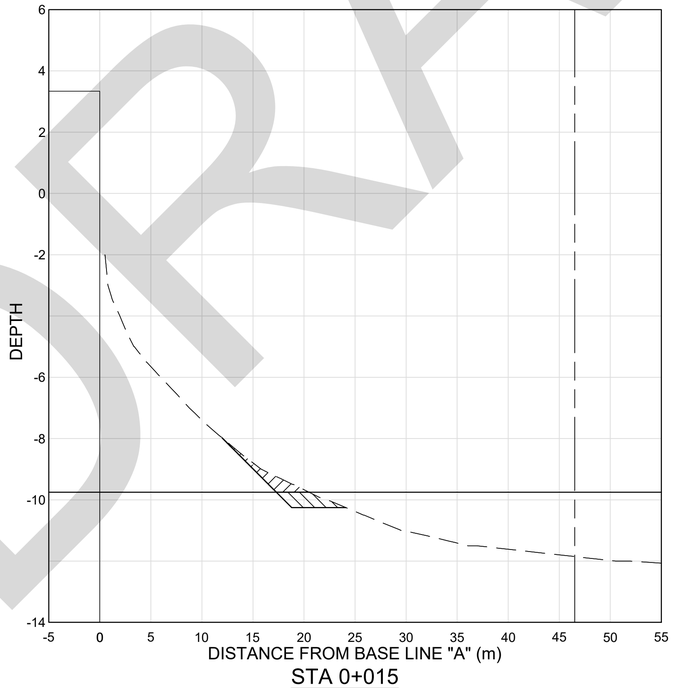
STA 010



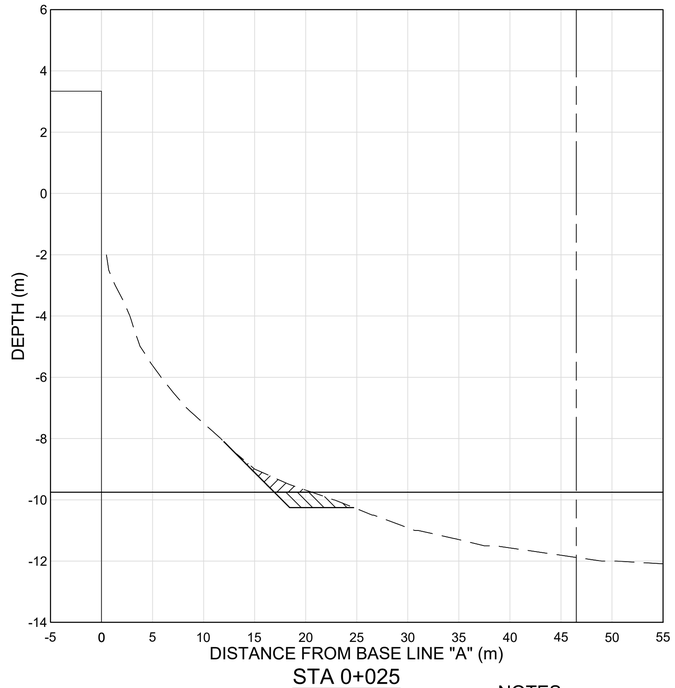
STA 0+020



STA 0+005



STA 0+015



STA 0+025

1 DREDGING SECTIONS STA 0+000 TO STA 0+025

SCALE: HORIZ: 1:300
VERT: 1:100

0 6 12m
SCALE: 1:300

0 2 4m
SCALE: 1:100

LEGEND:

- DREDGE AREA
- OVER DREDGE AREA

NOTES:

1. BEGIN DREDGE AT 12-METER OFFSET FROM FACE OF SEAWALL.
2. DREDGE SLOPE IS APPROXIMATELY 3H:1V.
3. SECTION VIEWS ARE FACING UPSTATION.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C. KIM
CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
SIZE: ISO A1
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904CN301-306.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
YSURUMI, YOKOHAMA, JAPAN

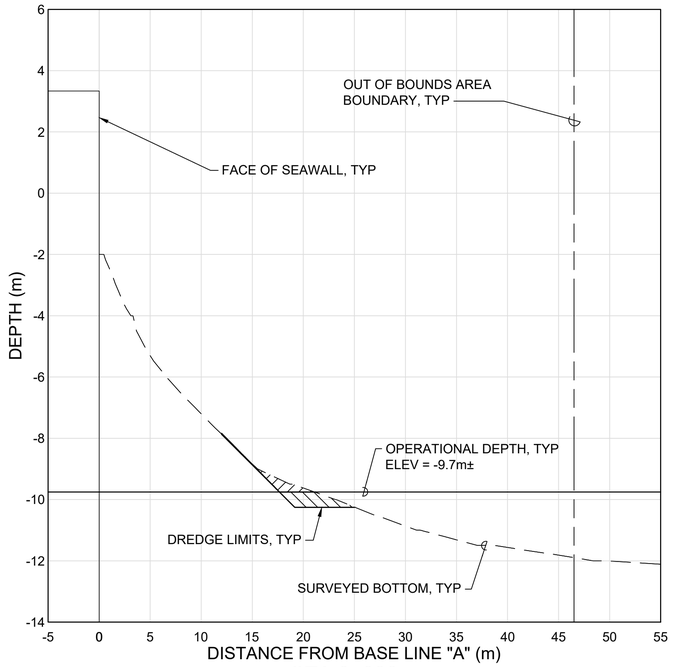
DREDGING SECTIONS 1

SHEET ID

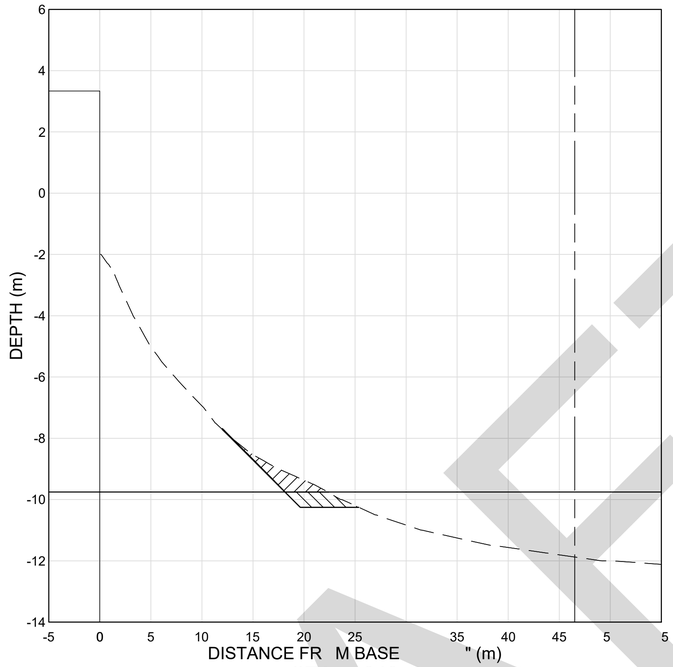
CN301

FILE: DESC1904CN301-306.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

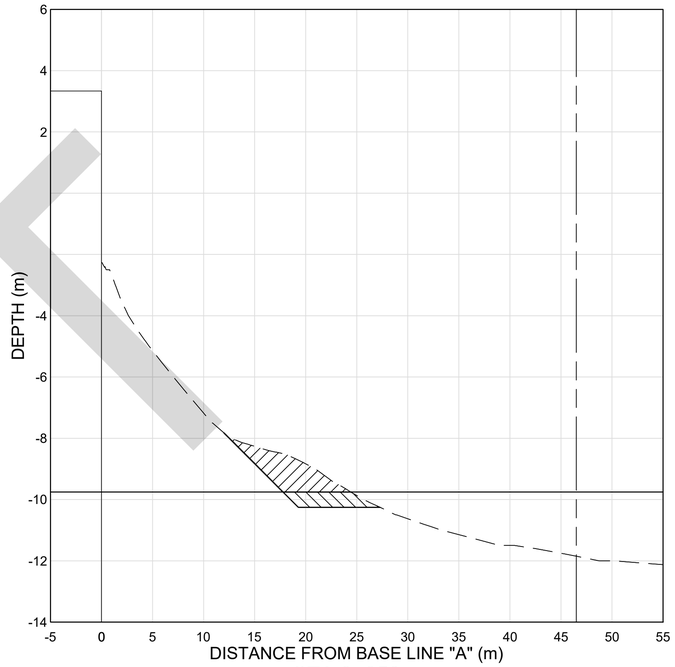
IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES



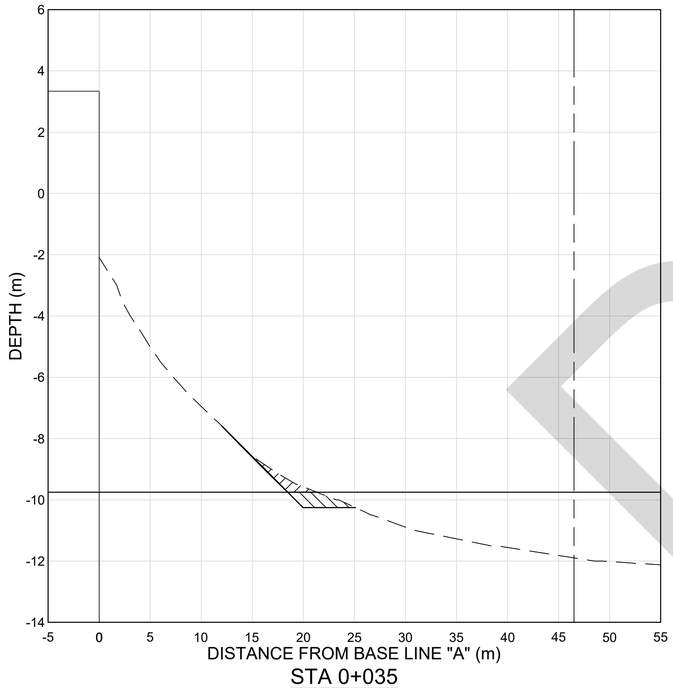
STA 0+030



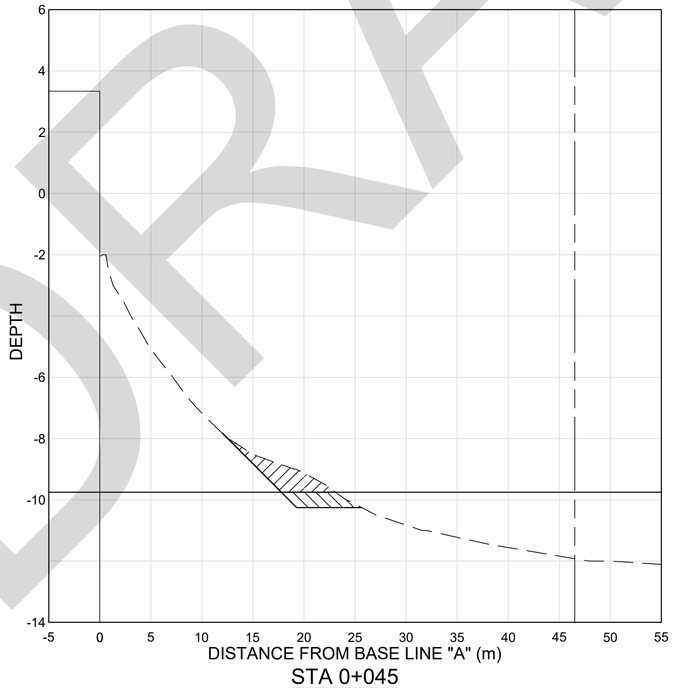
STA 040



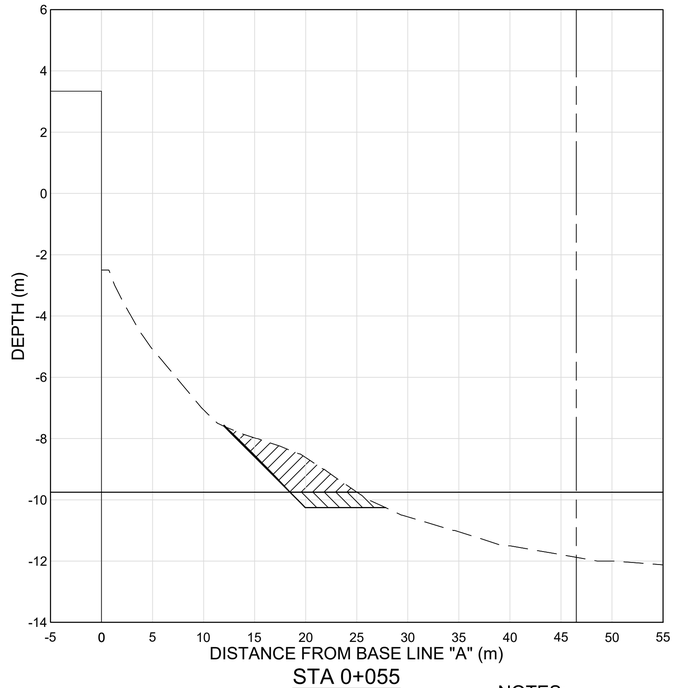
STA 0+050



STA 0+035



STA 0+045



STA 0+055

1 DREDGING SECTIONS STA 0+030 TO STA 0+055

SCALE: HORIZ: 1:300
VERT: 1:100

SCALE: 1:300

SCALE: 1:100

LEGEND:

- DREDGE AREA
- OVER DREDGE AREA

NOTES:

1. BEGIN DREDGE AT 12-METER OFFSET FROM FACE OF SEAWALL.
2. DREDGE SLOPE IS APPROXIMATELY 3H:1V.
3. SECTION VIEWS ARE FACING UPSTATION.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C. KIM
CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904CN301-306.dwg
SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
YSURUMI, YOKOHAMA, JAPAN

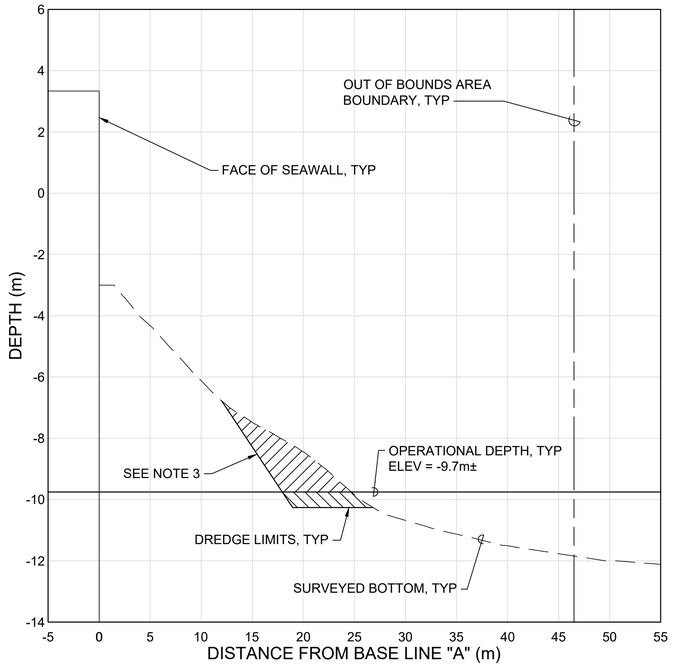
DREDGING SECTIONS 2

SHEET ID

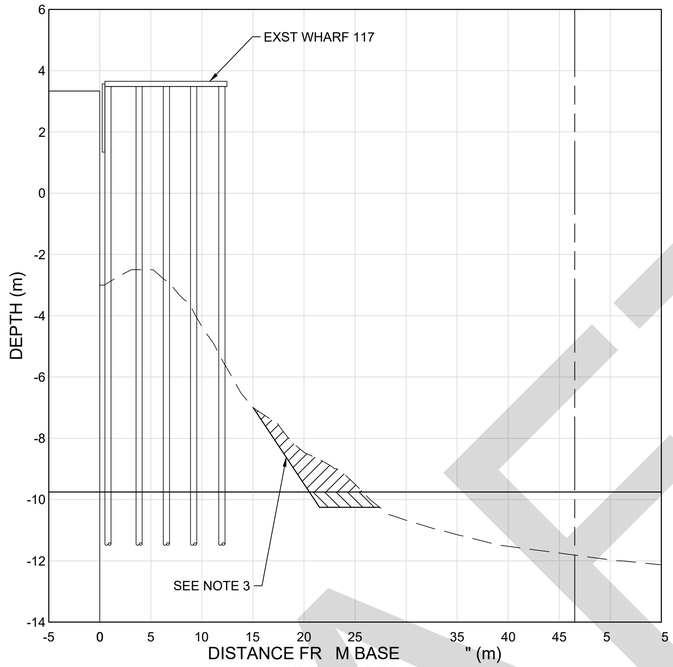
CN302

FILE: DESC1904CN301-306.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

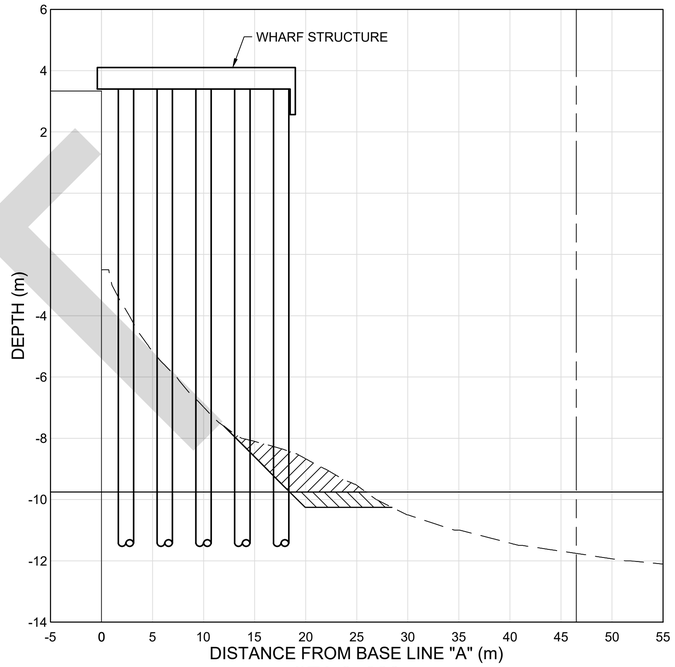
IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES



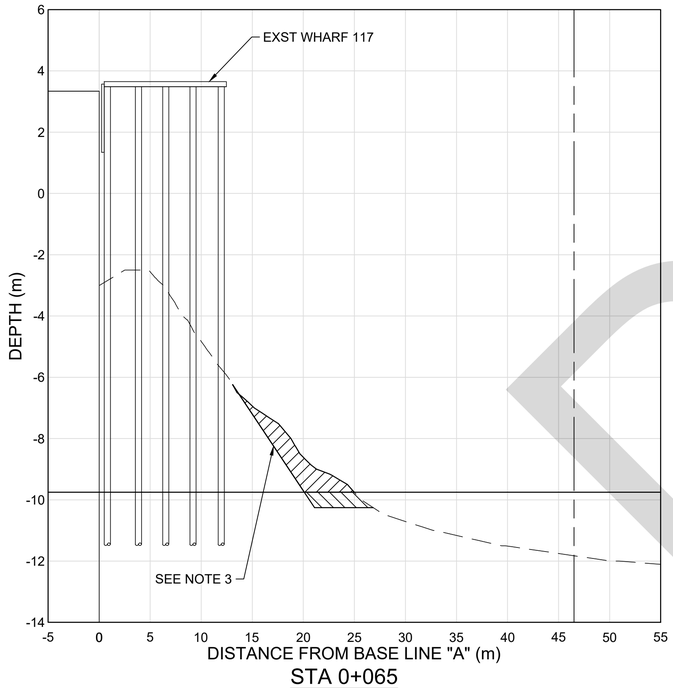
STA 0+060



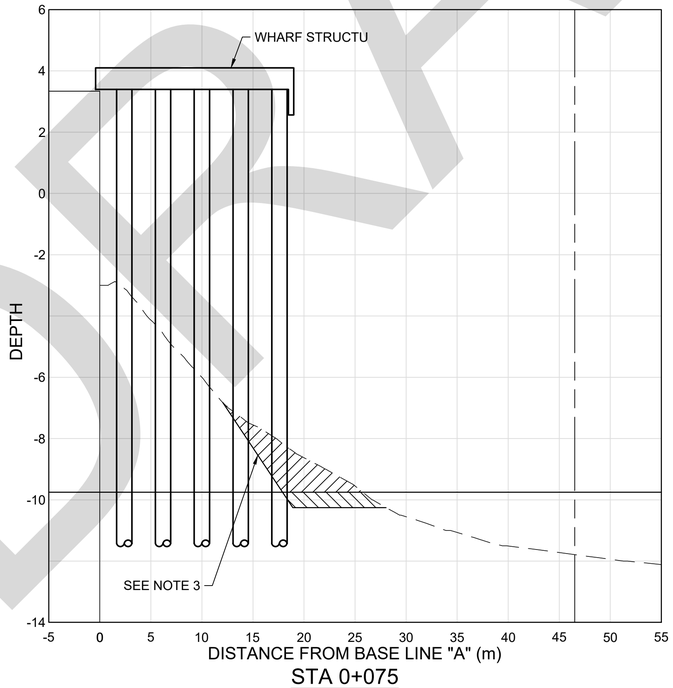
STA 070



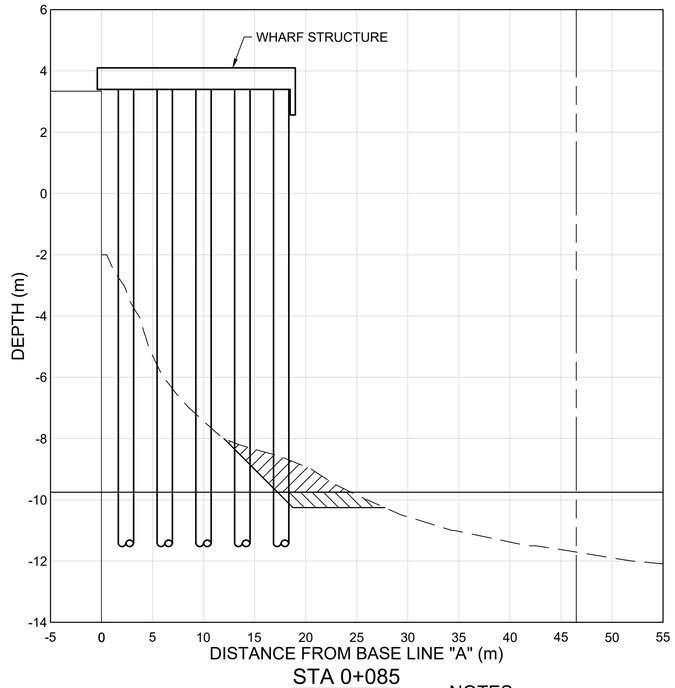
STA 0+080



STA 0+065



STA 0+075



STA 0+085

1 DREDGING SECTIONS STA 0+060 TO STA 0+085

SCALE: HORIZ: 1:300
VERT: 1:100

SCALE: 1:300

SCALE: 1:100

LEGEND:

- DREDGE AREA
- OVER DREDGE AREA

NOTES:

1. BEGIN DREDGE AT 12-METER OFFSET FROM FACE OF SEAWALL.
2. DREDGE SLOPE IS APPROXIMATELY 3H:1V.
3. DREDGE SLOPE IS APPROXIMATELY 2H:1V FOR STA 0+060 TO STA 0+075.
4. SECTION VIEWS ARE FACING UPSTATION.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C. KIM
CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
SIZE: ISO A1
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904CN301-306.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
YSURUMI, YOKOHAMA, JAPAN

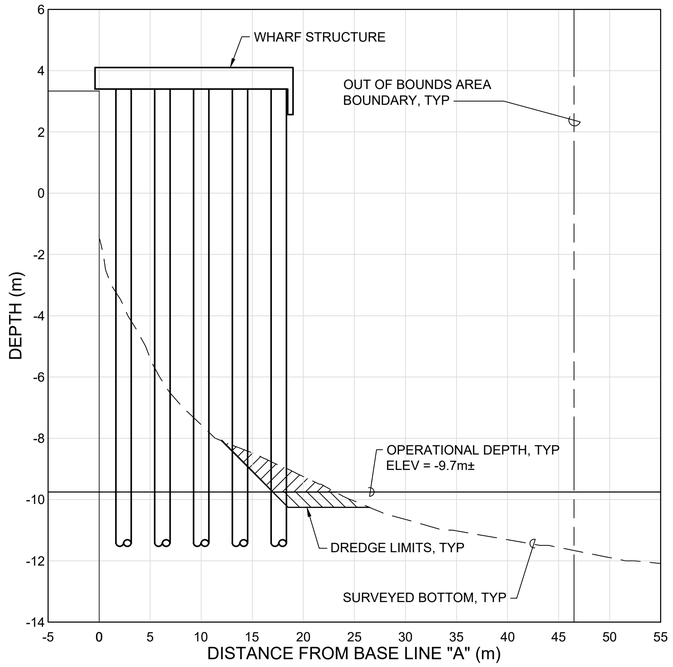
DREDGING SECTIONS 3

SHEET ID

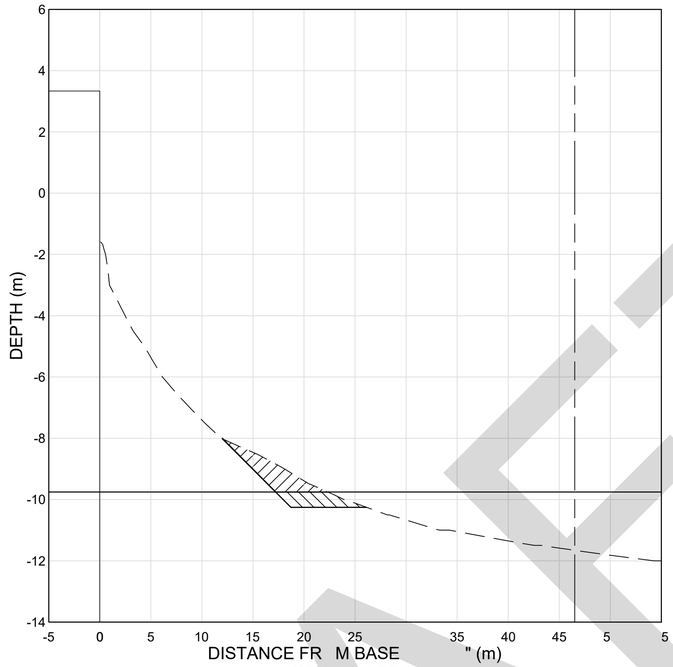
CN303

FILE: DESC1904CN301-306.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

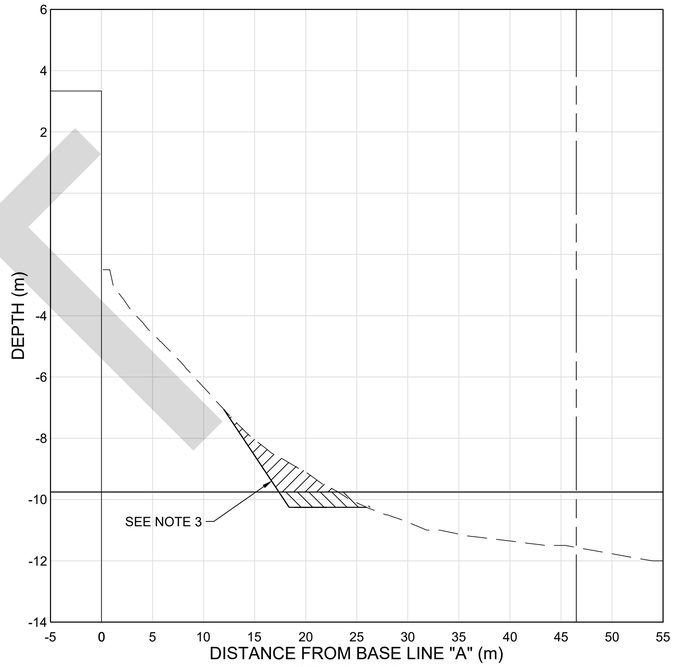
IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES



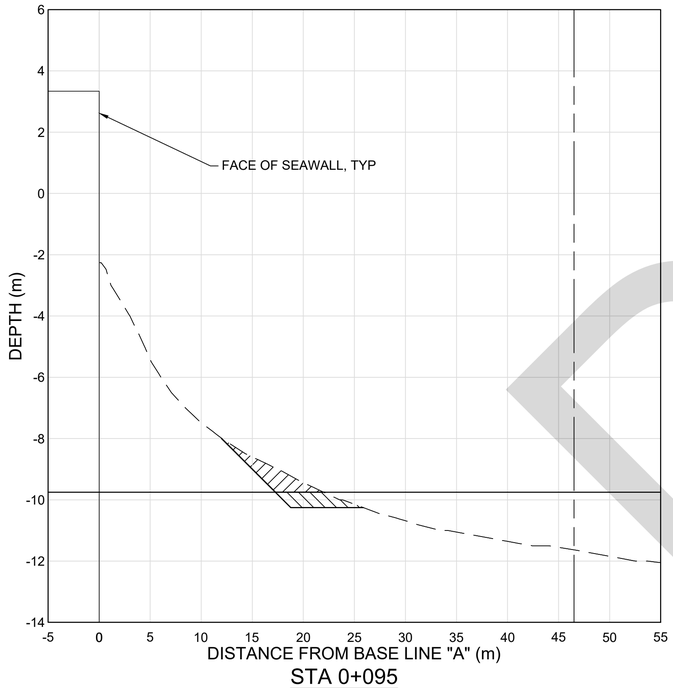
STA 0+090



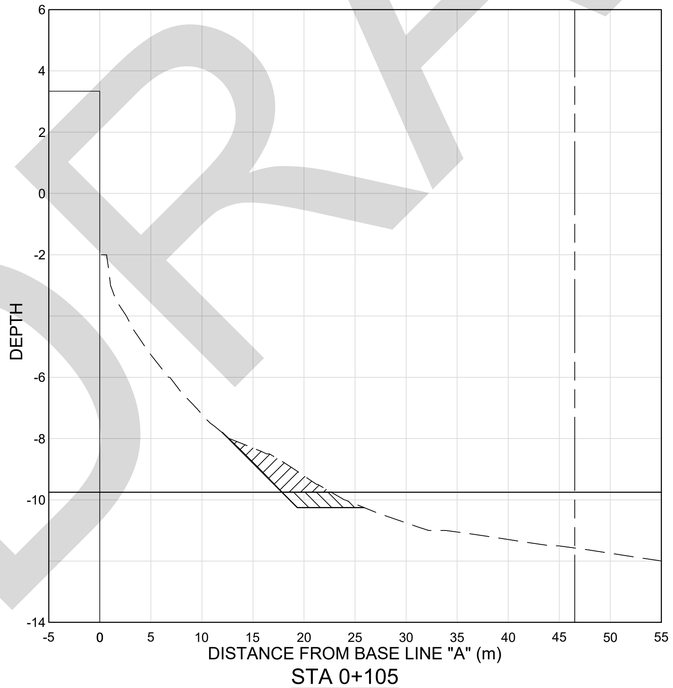
STA 100



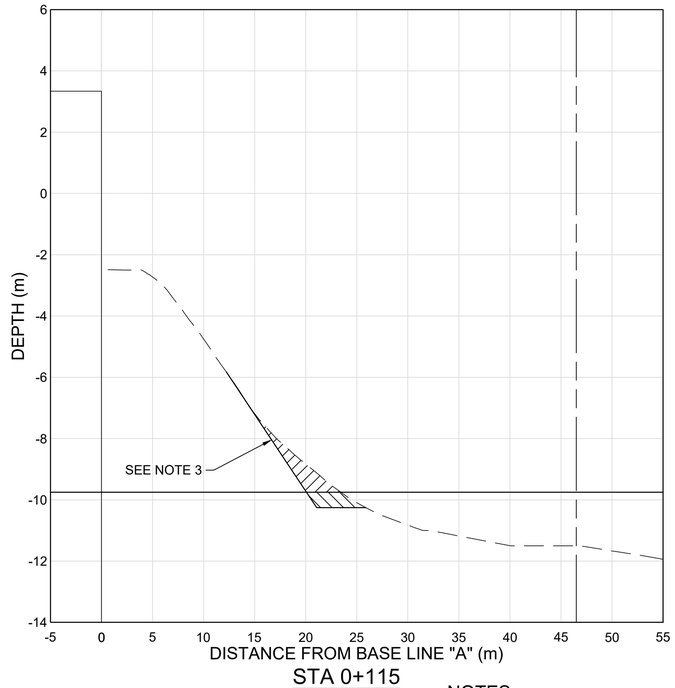
STA 0+110



STA 0+095



STA 0+105



STA 0+115

1 DREDGING SECTIONS STA 0+090 TO STA 0+115

SCALE: HORIZ: 1:300
VERT: 1:100

0 6 12m
SCALE: 1:300

0 2 4m
SCALE: 1:100

LEGEND:

- DREDGE AREA
- OVER DREDGE AREA

NOTES:

1. BEGIN DREDGE AT 12-METER OFFSET FROM FACE OF SEAWALL.
2. DREDGE SLOPE IS APPROXIMATELY 3H:1V.
3. DREDGE SLOPE IS APPROXIMATELY 2H:1V FOR STA 0+110 TO STA 0+115.
4. SECTION VIEWS ARE FACING UPSTATION.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C. KIM
CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
SIZE: ISO A1
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904CN301-306.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
YSURUMI, YOKOHAMA, JAPAN

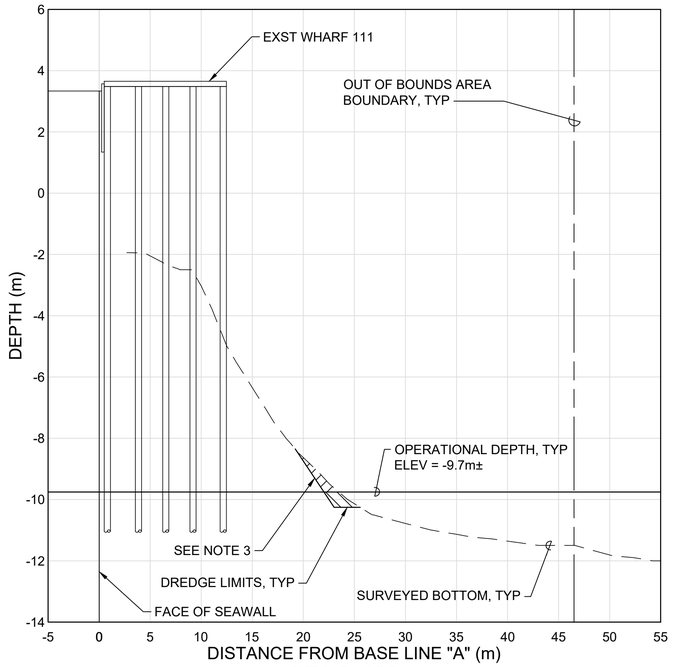
DREDGING SECTIONS 4

SHEET ID

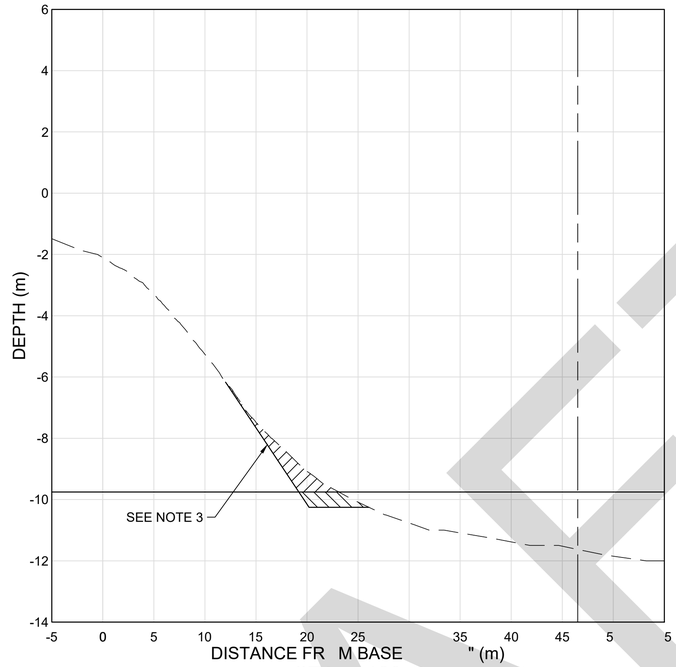
CN304

FILE: DESC1904CN301-306.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

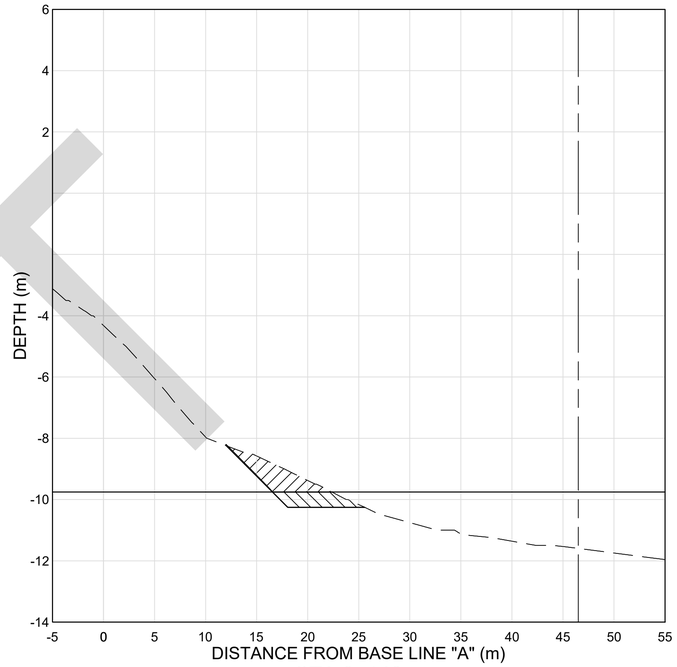
IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES



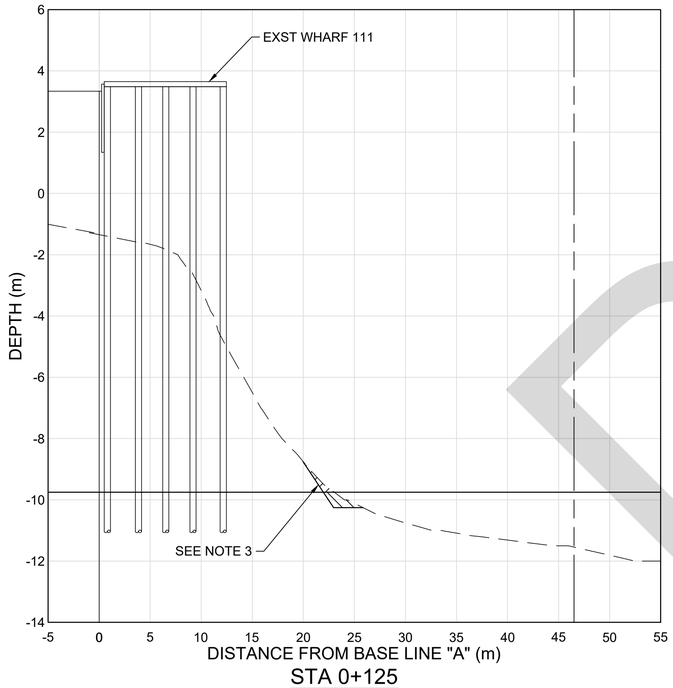
STA 0+120



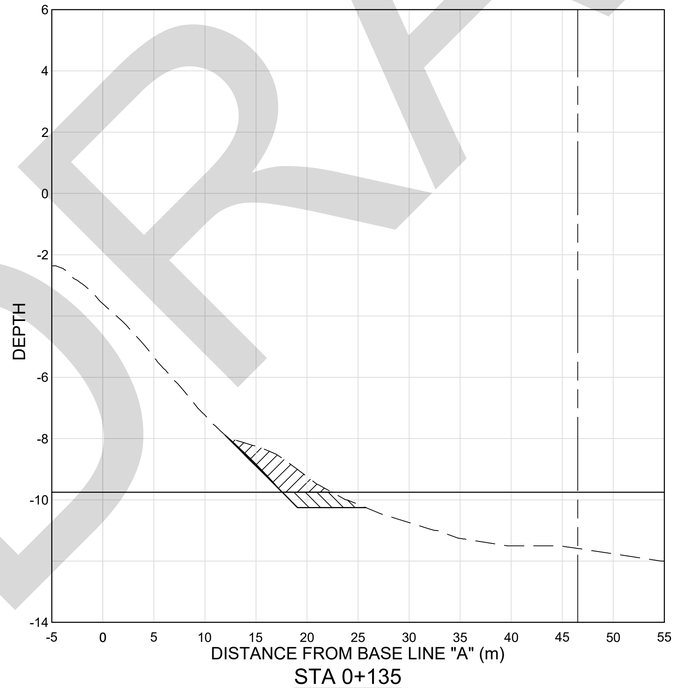
STA 130



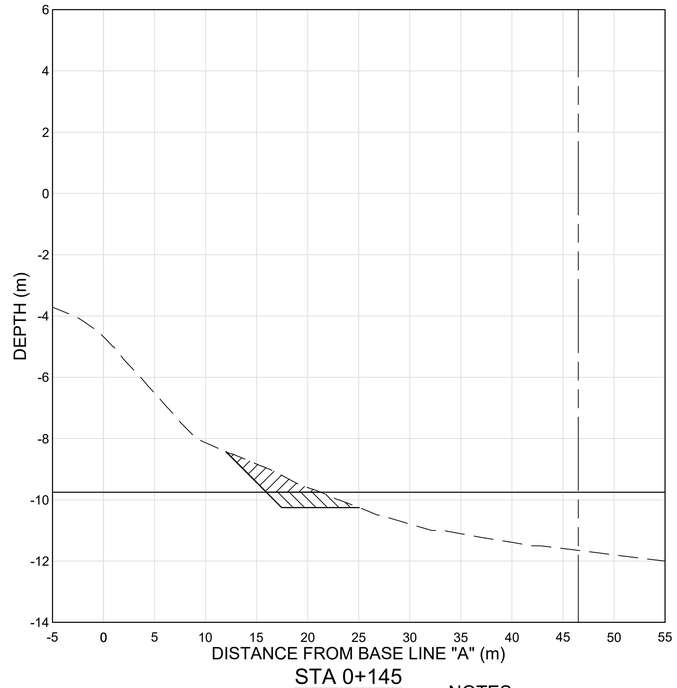
STA 0+140



STA 0+125



STA 0+135



STA 0+145

1 DREDGING SECTIONS STA 0+120 TO STA 0+145

SCALE: HORIZ: 1:300
VERT: 1:100

0 6 12m
SCALE: 1:300

0 2 4m
SCALE: 1:100

LEGEND:

- DREDGE AREA
- OVER DREDGE AREA

NOTES:

1. BEGIN DREDGE AT 12-METER OFFSET FROM FACE OF SEAWALL.
2. DREDGE SLOPE IS APPROXIMATELY 3H:1V.
3. DREDGE SLOPE IS APPROXIMATELY 2H:1V FOR STA 0+120 TO STA 0+130.
4. SECTION VIEWS ARE FACING UPSTATION.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C. KIM
CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
SIZE: ISO A1
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904CN301-306.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
YSURUMI, YOKOHAMA, JAPAN

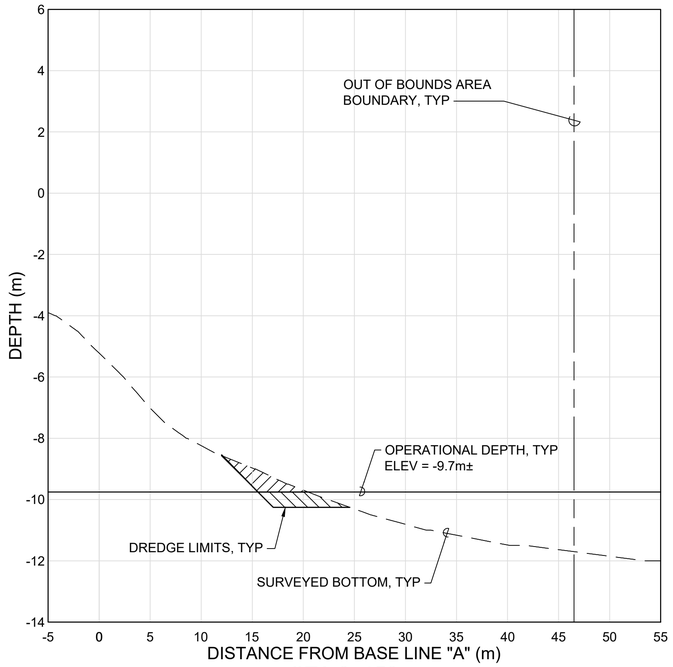
DREDGING SECTIONS 5

SHEET ID

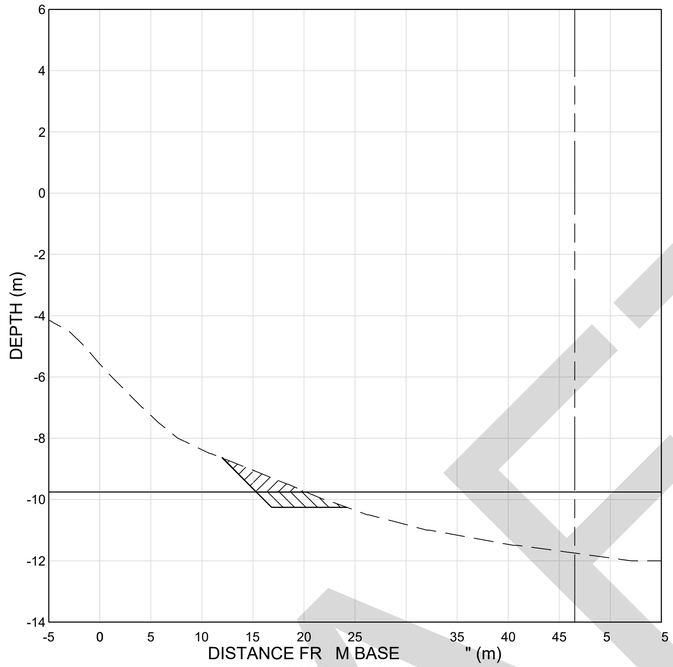
CN305

FILE: DESC1904CN301-306.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

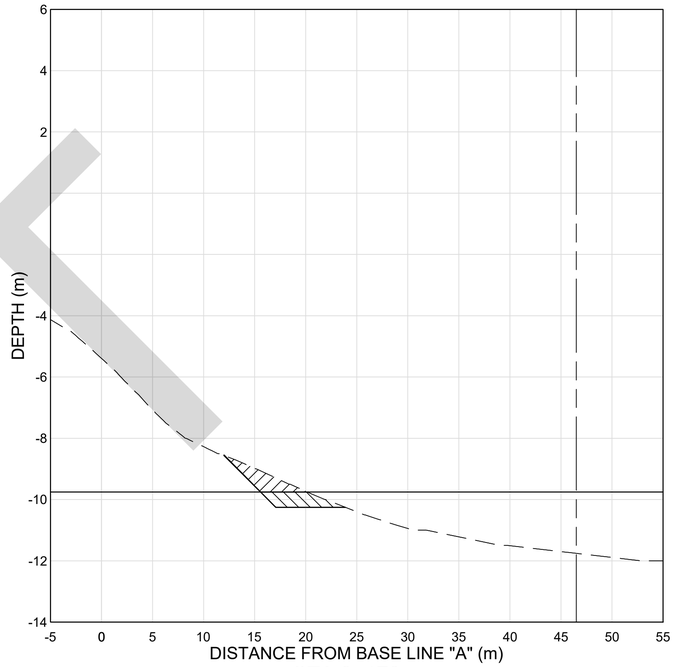
IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES



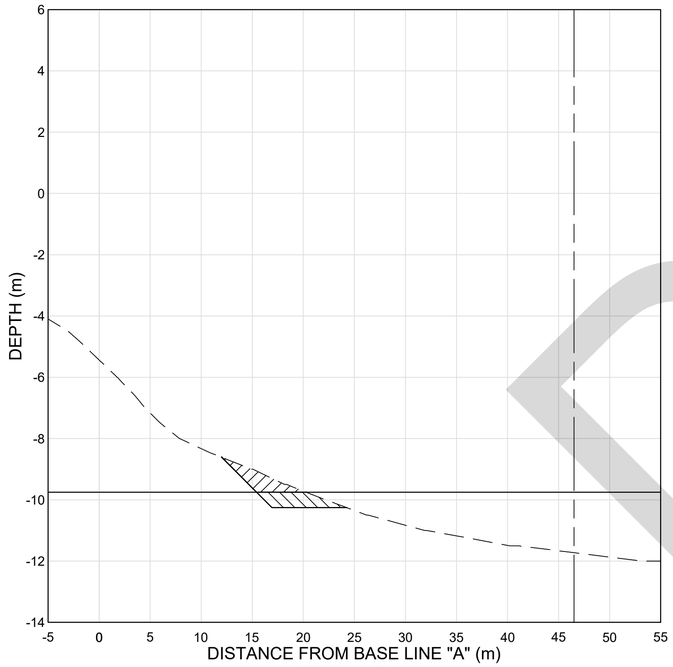
STA 0+150



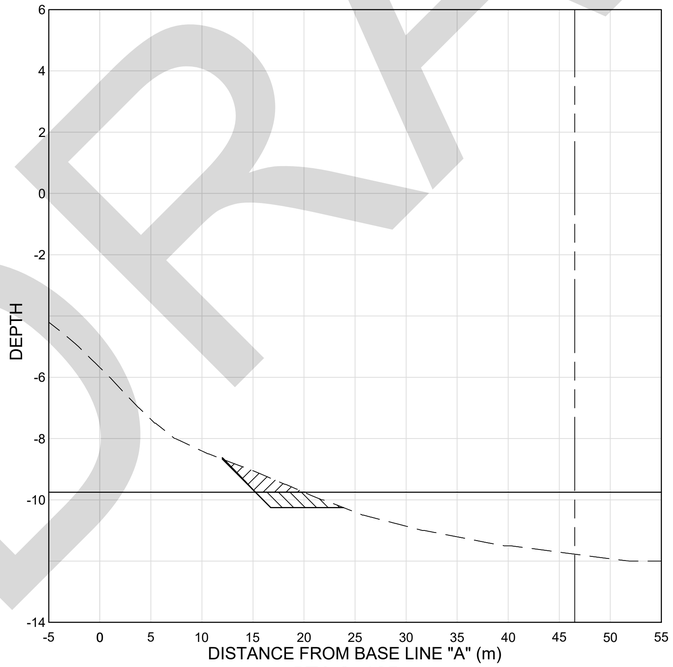
STA 160



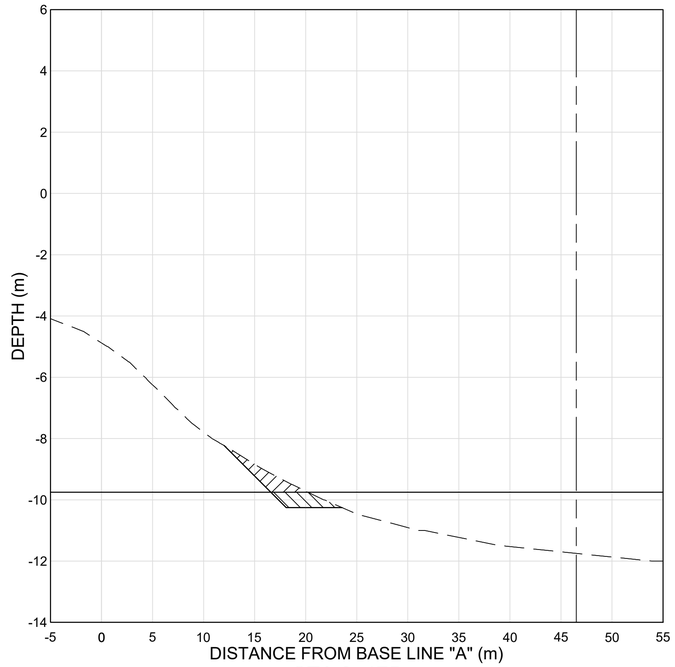
STA 0+170



STA 0+155



STA 0+165



STA 0+175

1 DREDGING SECTIONS STA 0+150 TO STA 0+175

SCALE: HORIZ: 1:300
VERT: 1:100

SCALE: 1:300

SCALE: 1:100

LEGEND:

- DREDGE AREA
- OVER DREDGE AREA

NOTES:

1. BEGIN DREDGE AT 12-METER OFFSET FROM FACE OF SEAWALL.
2. DREDGE SLOPE IS APPROXIMATELY 3H:1V.
3. SECTION VIEWS ARE FACING UPSTATION.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: R. KIKUCHI
DRAWN BY: C. KIM
CHECKED BY: F. HINO
SUBMITTED BY: F. HINO
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904CN301-306.dwg
SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
YSURUMI, YOKOHAMA, JAPAN

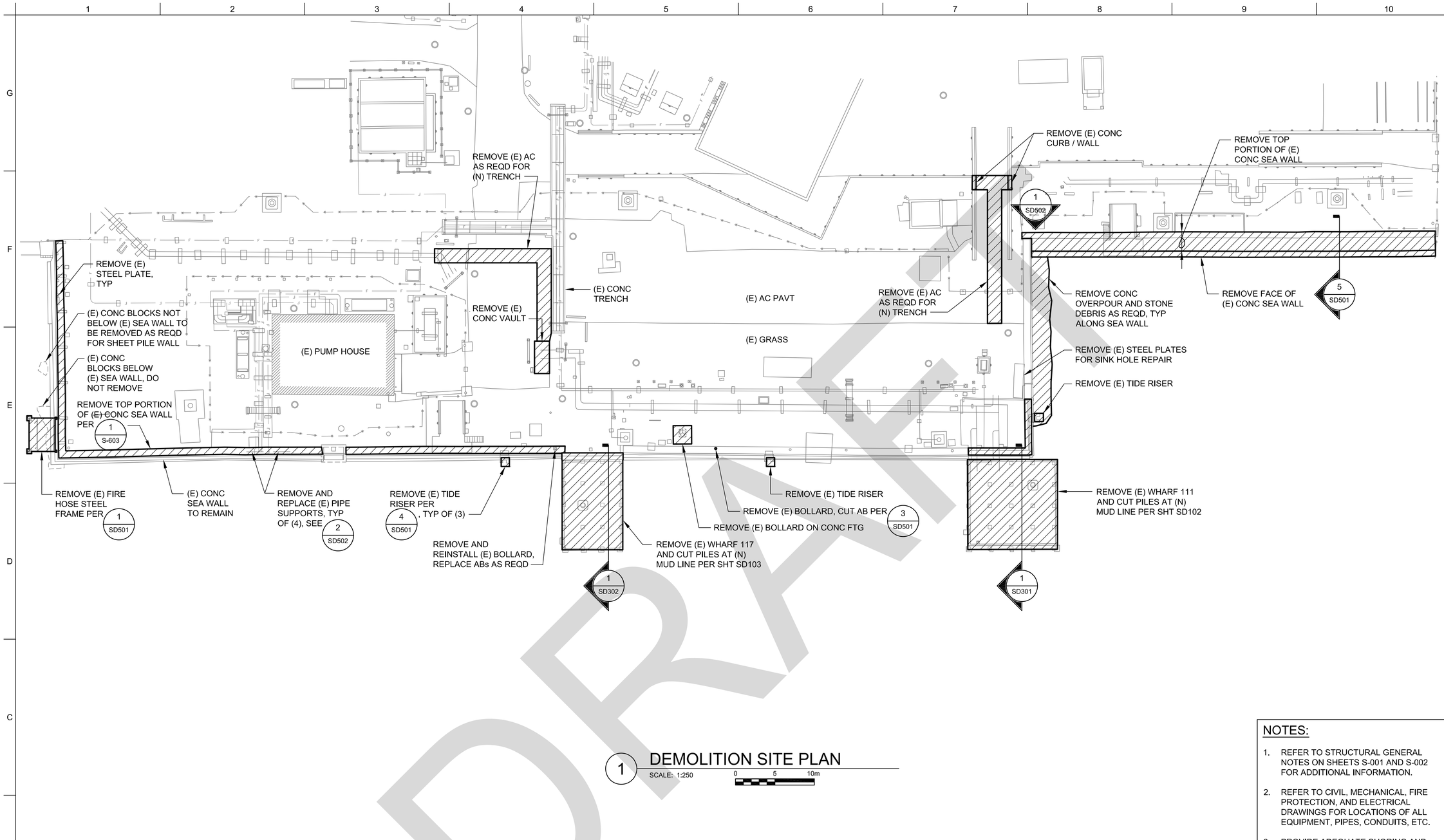
DREDGING SECTIONS 6

SHEET ID

CN306

FILE: DESC1904CN301-306.dwg
DATE: 6/25/2018 5:05 PM
OPER: CDK
SCALE: NTS

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES



1 DEMOLITION SITE PLAN

SCALE: 1:250 0 5 10m

NOTES:

1. REFER TO STRUCTURAL GENERAL NOTES ON SHEETS S-001 AND S-002 FOR ADDITIONAL INFORMATION.
2. REFER TO CIVIL, MECHANICAL, FIRE PROTECTION, AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT, PIPES, CONDUITS, ETC.
3. PROVIDE ADEQUATE SHORING AND BRACING AS NEEDED FOR ALL DEMOLITION WORK.
4. DEMOLITION DRAWINGS ARE BASED ON INFORMATION FROM AVAILABLE AS-BUILT DRAWINGS. FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO STARTING WORK. ANY DISCREPANCIES WITH DRAWINGS MUST BE BROUGHT TO THE CONTRACTING OFFICER'S ATTENTION PRIOR TO STARTING WORK.
5. DO NOT OVERCUT NEW OPENINGS IN EXISTING SLABS AND WALLS.

PLAN NORTH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POHNA-PDD-TCD
APO AP 96343-5310

HDR - WTNA JV
1001 BISHOP STREET
SUITE 2400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE, YSURUMI, YOKOHAMA, JAPAN

DEMOLITION SITE PLAN

SHEET ID

SD101

FILE: DESC1904-SD101.dwg
DATE: 12/8/2020 9:08 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
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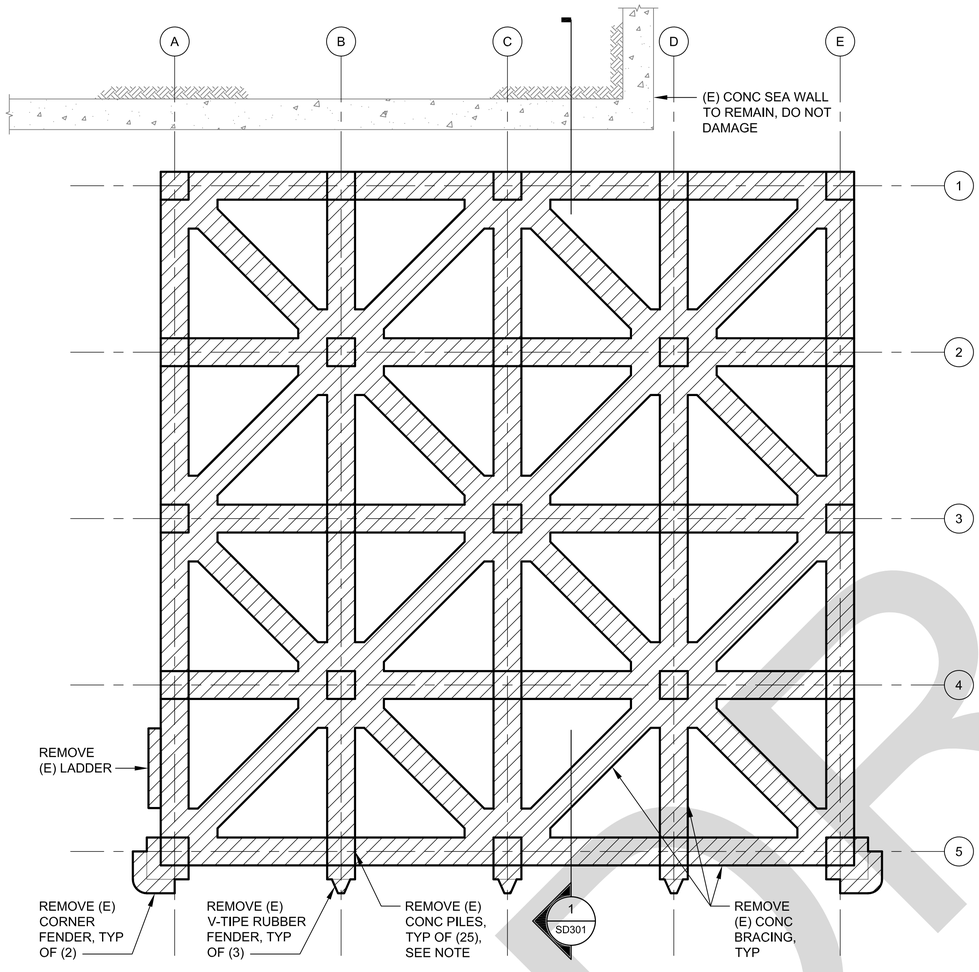
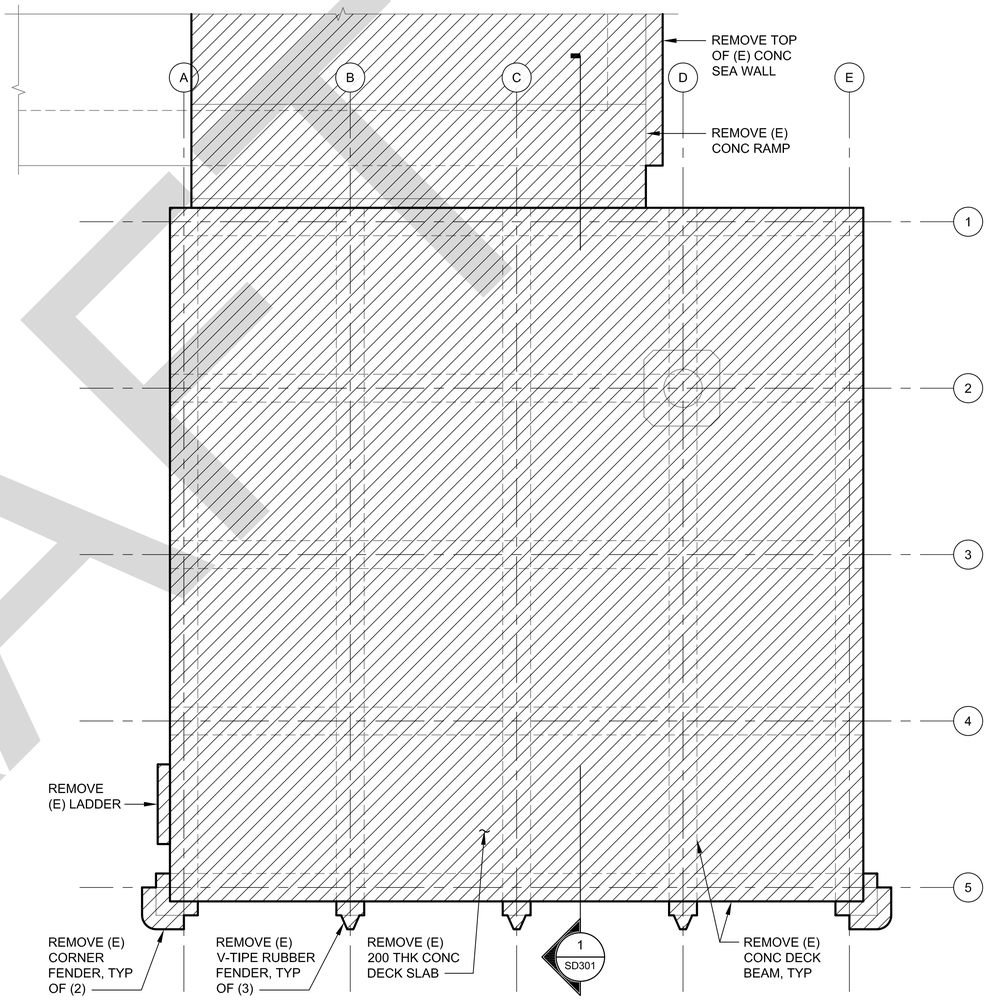
RTA SUBMITTAL



1 WHARF 111 LOWER FRAMING DEMOLITION PLAN

SCALE: 1:50 0 500 1000 2000



2 WHARF 111 DECK DEMOLITION PLAN

SCALE: 1:50 0 500 1000 2000

NOTE:

ALL EXISTING PILES AT WHARF 111 SHALL BE CUT OFF AT EXISTING MUD LINE OR NEW MUD LINE AS REQUIRED BY DREDGING. EXTREME CARE TO BE TAKEN WHEN CUTTING THE PILES ALONG GRID 1 SO AS TO NOT UNDERMINE OR AFFECT THE STABILITY OF THE CONCRETE SEA WALL. THE COORDINATES AND TOP OF PILE ELEVATIONS OF THE CUT OFF PILES SHALL BE DOCUMENTED ON AS-BUILT DRAWINGS.

PLAN NORTH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
SIZE: ISO A1
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 1400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-4 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

DEMOLITION
WHARF 111
PLANS

SHEET ID

SD102

FILE: DESC1904-SD102.dwg
DATE: 12/8/2020 9:08 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
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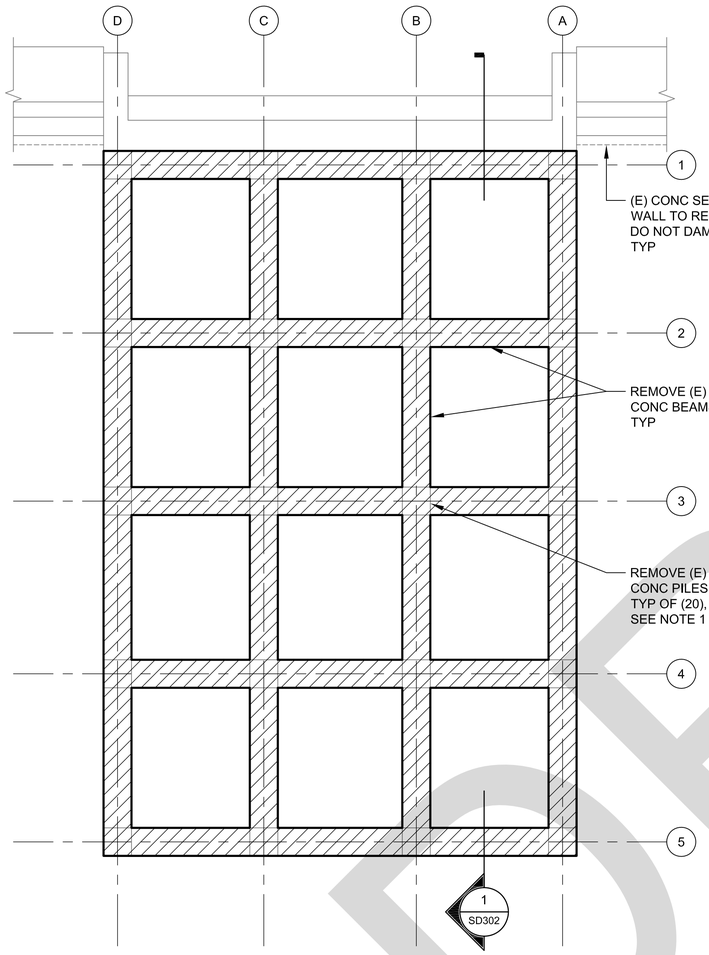
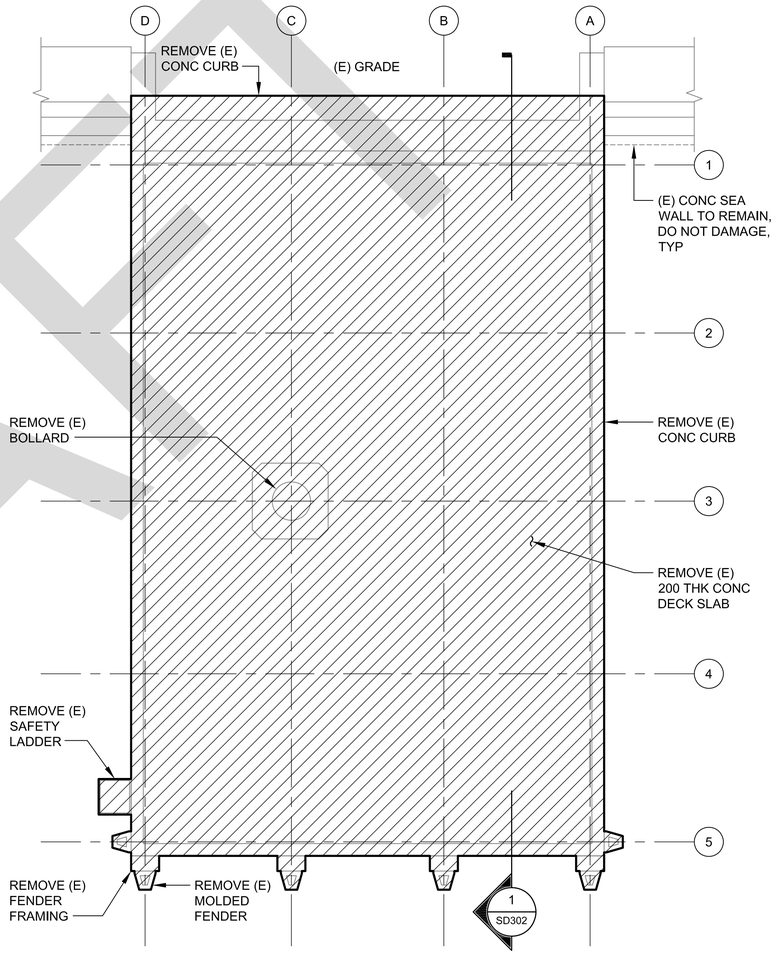


1 WHARF 117 LOWER FRAMING DEMOLITION PLAN

SCALE: 1:50 0 500 1000 2000



2 WHARF 117 DECK DEMOLITION PLAN

SCALE: 1:50 0 500 1000 2000

NOTE:

ALL EXISTING PILES AT WHARF 117 TO BE CUT OFF AT EXISTING MUD LINE OR NEW MUD LINE AS REQUIRED BY DREDGING. EXTREME CARE TO BE TAKEN WHEN CUTTING THE PILES ALONG GRID 1 SO AS TO NOT UNDERMINE OR AFFECT THE STABILITY OF THE CONCRETE SEA WALL. THE COORDINATES AND TOP OF PILE ELEVATIONS OF THE CUT OFF PILES SHALL BE DOCUMENTED ON AS-BUILT DRAWINGS.

PLAN NORTH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L.LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
FILE NAME:
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -

U.S. ARMY CORPS OF ENGINEERS
POHONOLULU DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 4000
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

DEMOLITION
WHARF 117
PLANS

SHEET ID

SD103

FILE: DESC1904-SD103.dwg
DATE: 12/8/2020 9:08 AM
OPER:
SCALE:

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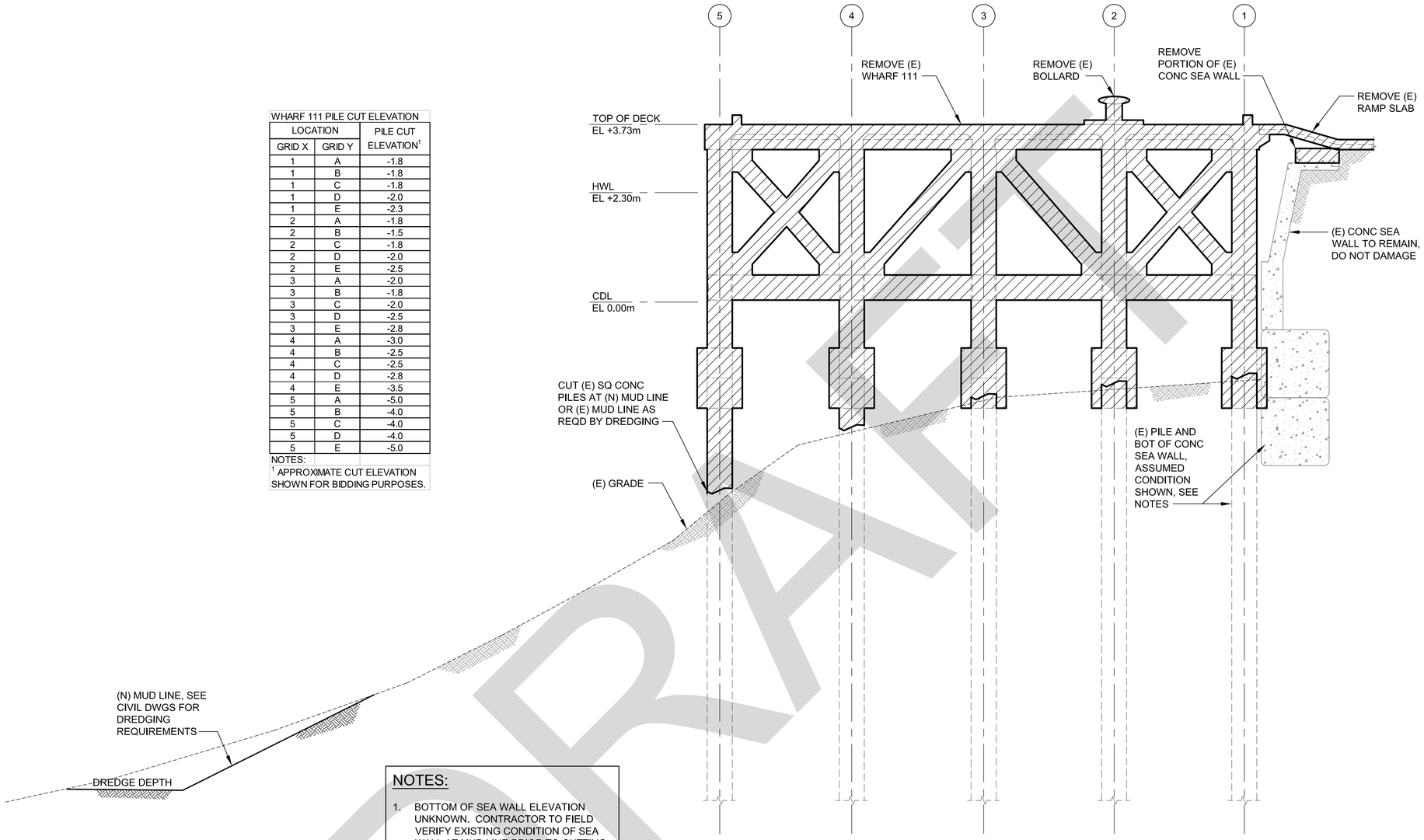
RTA SUBMITTAL

WHARF 111 PILE CUT ELEVATION		
LOCATION		PILE CUT ELEVATION[1]
GRID X	GRID Y	
1	A	-1.8
1	B	-1.8
1	C	-1.8
1	D	-2.0
1	E	-2.3
2	A	-1.8
2	B	-1.5
2	C	-1.8
2	D	-2.0
2	E	-2.5
3	A	-2.0
3	B	-1.8
3	C	-2.0
3	D	-2.5
3	E	-2.8
4	A	-3.0
4	B	-2.5
4	C	-2.5
4	D	-2.8
4	E	-3.5
5	A	-5.0
5	B	-4.0
5	C	-4.0
5	D	-4.0
5	E	-5.0

NOTES:
[1] APPROXIMATE CUT ELEVATION SHOWN FOR BIDDING PURPOSES.



NOTES:

1. BOTTOM OF SEA WALL ELEVATION UNKNOWN. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION OF SEA WALL AT MUD LINE PRIOR TO CUTTING PILES.
2. EXTREME CARE TO BE TAKEN WHEN CUTTING THE EXISTING PILES ALONG GRID 1 SO AS TO NOT UNDERMINE OR AFFECT THE STABILITY OF THE CONCRETE SEA WALL.

1 WHARF 111 DEMOLITION SECTION

SCALE: 1:50 0 500 1000 2000

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MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LOO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POH DISTRICT
APO AP 96343-5310

HDR - WTNA JV
1001 BISHOP STREET
SUITE 2400
HONOLULU, HAWAII 96813

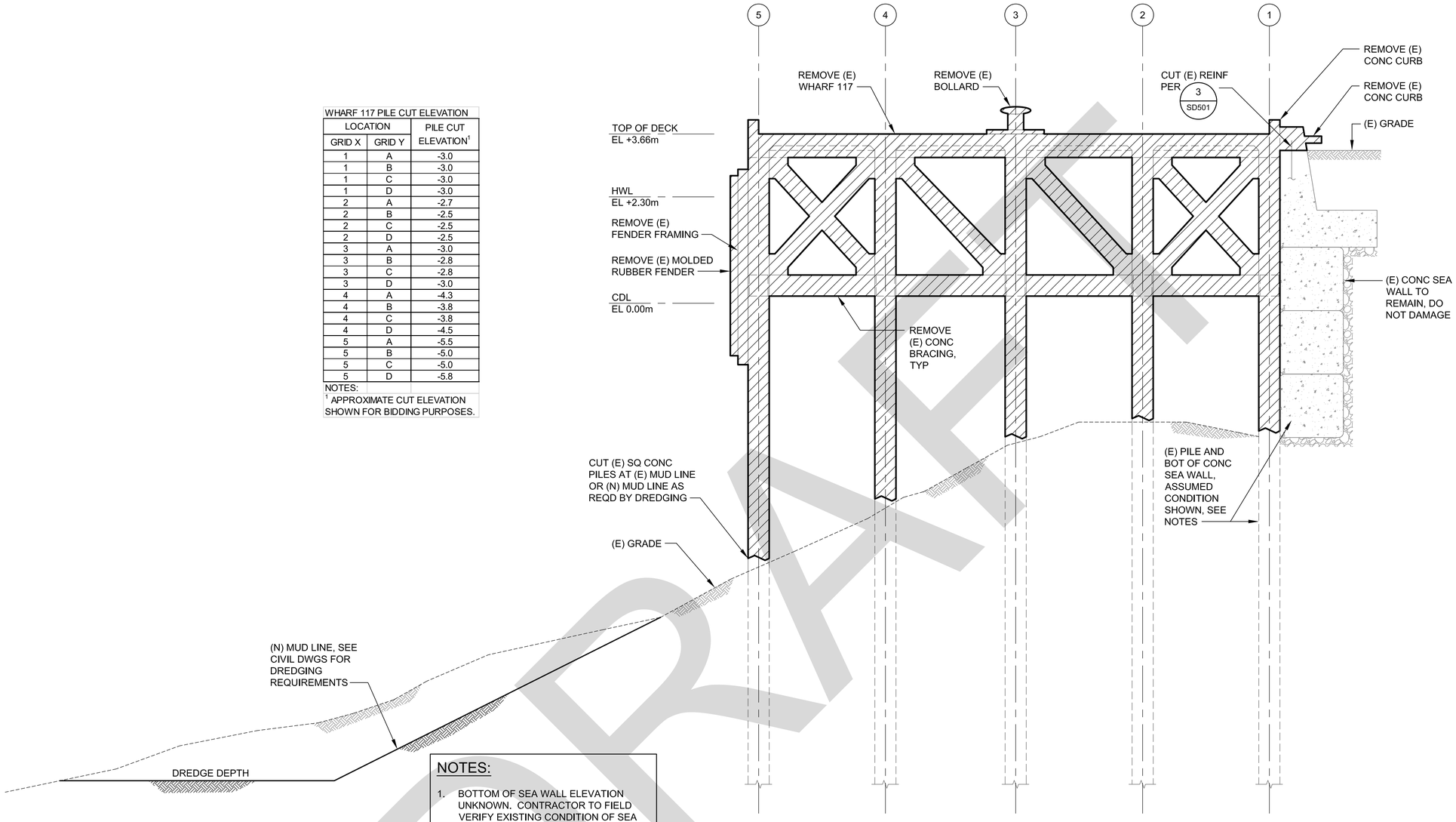
DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE, TSURUMI, YOKOHAMA, JAPAN

DEMOLITION
WHARF 111
SECTION

SHEET ID
SD301

WHARF 117 PILE CUT ELEVATION		
LOCATION		PILE CUT ELEVATION[1]
GRID X	GRID Y	
1	A	-3.0
1	B	-3.0
1	C	-3.0
1	D	-3.0
2	A	-2.7
2	B	-2.5
2	C	-2.5
2	D	-2.5
3	A	-3.0
3	B	-2.8
3	C	-2.8
3	D	-3.0
4	A	-4.3
4	B	-3.8
4	C	-3.8
4	D	-4.5
5	A	-5.5
5	B	-5.0
5	C	-5.0
5	D	-5.8

NOTES:
[1] APPROXIMATE CUT ELEVATION SHOWN FOR BIDDING PURPOSES.



NOTES:

1. BOTTOM OF SEA WALL ELEVATION UNKNOWN. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION OF SEA WALL AT MUD LINE PRIOR TO CUTTING PILES.
2. EXTREME CARE TO BE TAKEN WHEN CUTTING THE EXISTING PILES ALONG GRID 1 SO AS TO NOT UNDERMINE OR AFFECT THE STABILITY OF THE CONCRETE SEA WALL.

1 WHARF 117 DEMOLITION SECTION
SCALE: 1:50 0 500 1000 2000

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DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LOO
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CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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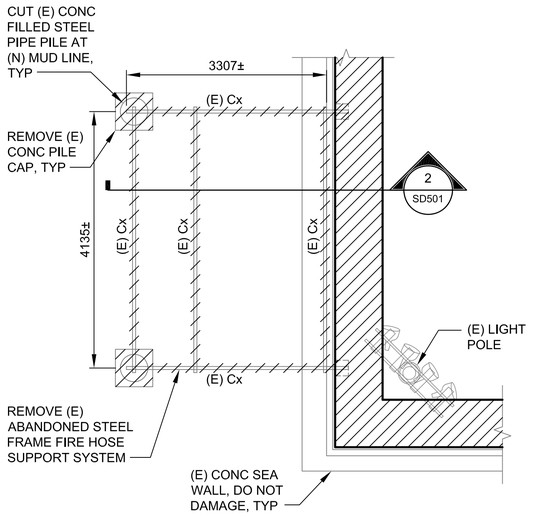
DESC 1904
MODERNIZE FUELING WHARVES TO T-4 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

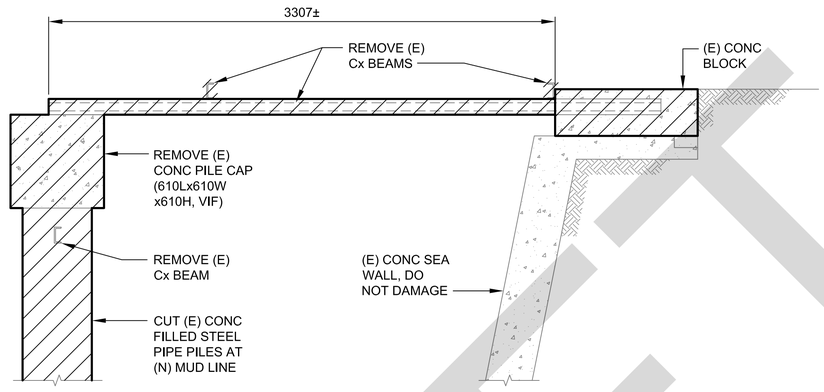
DEMOLITION
WHARF 117
SECTION

SHEET ID
SD302



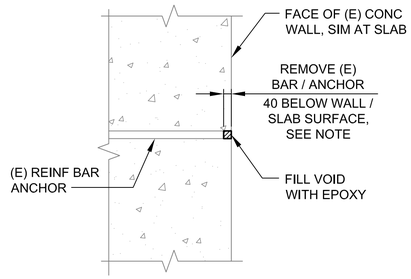
1 FIRE HOSE STEEL FRAME DEMOLITION - PLAN

SCALE: 1:50 0 500 1000 2000



2 FIRE HOSE STEEL FRAME DEMOLITION - SECTION

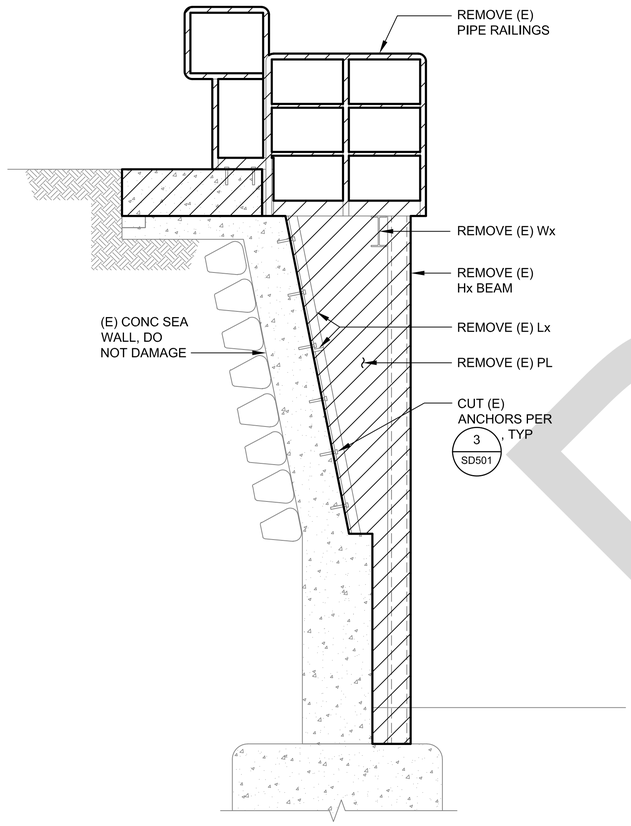
SCALE: 1:20 0 200 400 800



NOTE:
REMOVE 40 MINIMUM WHERE NEW CONCRETE WILL BE POURED AGAINST EXISTING FACE. REMOVE 75 MINIMUM WHERE EXISTING CONCRETE FACE WILL REMAIN EXPOSED.

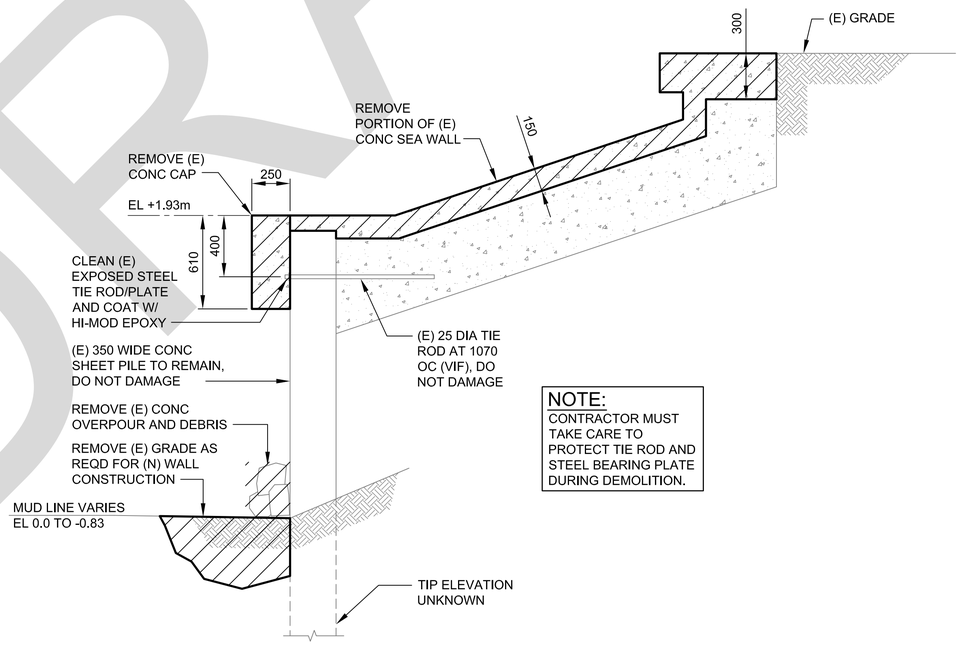
3 DETAIL

NOT TO SCALE



4 TIDE RISER DEMOLITION - SECTION

SCALE: 1:20 0 200 400 800



NOTE:
CONTRACTOR MUST TAKE CARE TO PROTECT TIE ROD AND STEEL BEARING PLATE DURING DEMOLITION.

5 CONCRETE SEALWALL DEMOLITION - SECTION

SCALE: 1:20 0 200 400 800

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
HONOLULU DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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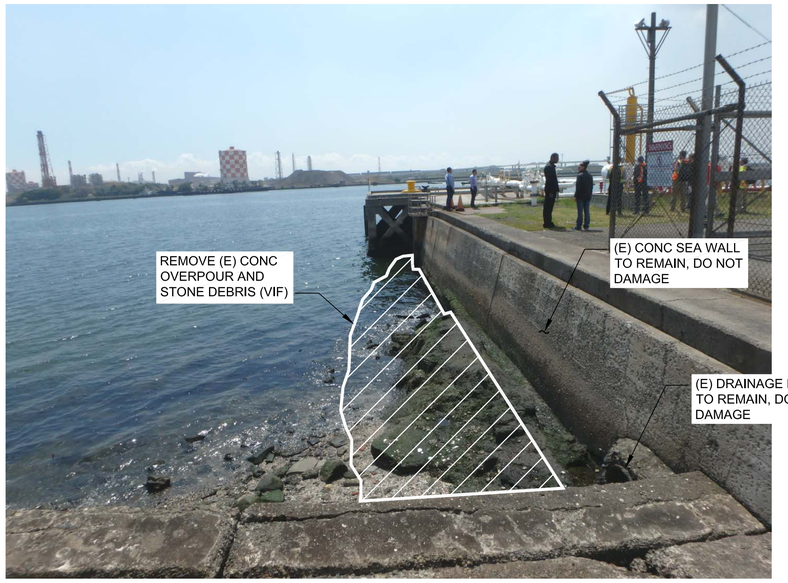
DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE, TSURUMI, YOKOHAMA, JAPAN

DEMOLITION DETAILS

SHEET ID

SD501



1 PHOTO
NOT TO SCALE

2 PHOTO
NOT TO SCALE

US Army Corps of Engineers®

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DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HW-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
PACIFIC OCEAN DIVISION
APO AP 96343-5010

HDR - WTNA JV
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HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

PHOTOS

SHEET ID

SD502

FILE: DESC1904-SD502.dwg
DATE: 12/8/2020 9:08 AM
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GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP MUST CONFORM TO THE DRAWINGS AND SPECIFICATIONS.
2. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES. VERIFY ALL FIELD DIMENSIONS, EXISTING ELEVATIONS AND CONDITIONS AGAINST PROJECT DRAWINGS PRIOR TO STARTING WORK. REPORT ALL DISCREPANCIES TO THE CONTRACTING OFFICER AND RESOLVE BEFORE PROCEEDING WITH THE WORK OR ORDERING MATERIALS.
3. REPORT ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS TO THE CONTRACTING OFFICER BEFORE STARTING ANY WORK.
4. NOTES AND DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
5. DETAILS SHOWN ON THE DRAWINGS ARE TYPICAL FOR ALL SIMILAR CONDITIONS. MODIFY DETAILS FOR SPECIAL CONDITIONS AS DIRECTED BY CONTRACTING OFFICER.

CONSTRUCTION NOTES

1. DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR JOBSITE SAFETY. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND PROVISION OF ALL TEMPORARY BRACING, SHORING, GUYS, ETC. IN ACCORDANCE WITH ALL APPLICABLE SAFETY ORDINANCES.
2. SPREAD OUT CONSTRUCTION MATERIALS IF PLACED ON FRAMED FLOORS. DO NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.
3. PROVIDE ALL NECESSARY MEASURES TO PROTECT THE NEW WORK AND EXISTING SURFACES AND OBJECTS TO REMAIN FROM DAMAGE. ANY ITEM TO REMAIN THAT IS DAMAGED BY THE CONTRACTOR IS TO BE REPLACED OR REPAIRED TO MATCH EXISTING ADJACENT SURFACE AT NO ADDITIONAL COST.
4. NO PENETRATIONS ARE ALLOWED THROUGH ANY STRUCTURAL MEMBER UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE CONTRACTING OFFICER.
6. THE STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR MUST BE RESPONSIBLE FOR AND PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES INCLUDE, BUT NOT BE LIMITED TO BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, WIND AND SEISMIC LOADING. OBSERVATION VISITS TO THE SITE BY THE CONTRACTING OFFICER DO NOT INCLUDE INSPECTION OF THE ABOVE ITEMS NOR RELIEVE THE CONTRACTOR OF HIS/HER OBLIGATIONS, DUTIES AND RESPONSIBILITIES.
7. THIS PROJECT REQUIRES THE IMPLEMENTATION OF A BEST MANAGEMENT PRACTICES (BMP) PLAN DURING ALL DEMOLITION AND CONSTRUCTION WORK TO PREVENT AND/OR MINIMIZE ENVIRONMENTAL IMPACTS DURING THE CONSTRUCTION ACTIVITY. IF FOREIGN OBJECTS AND/OR MATERIALS ACCIDENTALLY FALL INTO THE WATER, THEY MUST BE RETRIEVED AND DISPOSED OF AT NO COST TO THE GOVERNMENT. THE BMP PLAN MUST ADDRESS THE USE OF DUST AND DEBRIS CONTAINMENT AND CATCHMENT DEVICES TO PREVENT ANY FOREIGN MATTER (E.G., CONSTRUCTION MATERIALS, DEBRIS, DUST, ETC.) FROM FALLING INTO THE WATER FROM THE PROJECT SITE AND TO MINIMIZE FUGITIVE DUST. THE CONTRACTOR MUST ABIDE BY APPLICABLE GENERAL CONDITIONS FOR REGION.
8. USE FULL WATER DEPTH SILT CURTAINS TO ENCLOSE THE WORK AREA TO CONTROL TURBIDITY DURING ALL IN-WATER AND OVER-WATER WORK. IF A PLUME IS OBSERVED OUTSIDE OF THE SILT CURTAINS THAT IS CAUSED BY THE CONSTRUCTION ACTIVITY, STOP THE ACTIVITY AND TAKE CORRECTIVE ACTION IMMEDIATELY. RESUME WORK AFTER CORRECTION HAS BEEN MADE. THE DEPTH BELOW CDL VARIES. CONTRACTOR TO VERIFY ACTUAL DEPTHS.
9. NO DEBRIS IS ALLOWED TO ENTER THE WATER. PROVIDE A TEMPORARY PLATFORM OR OTHER SUITABLE POSITIVE MEANS OF CAPTURING DEBRIS FROM CONSTRUCTION AND DEMOLITION OPERATIONS. THESE FACILITIES MUST BE IN PLACE PRIOR TO STARTING DEMOLITION WORK.

DEMOLITION NOTES

1. PROVIDE ADEQUATE SHORING AND BRACING FOR ALL DEMOLITION WORK.
2. DRAWINGS ARE BASED ON INFORMATION FROM AVAILABLE AS-BUILT DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS. VERIFY ALL EXISTING DIMENSIONS IN FIELD PRIOR TO STARTING WORK. REPORT ANY DISCREPANCIES WITH DRAWINGS TO THE CONTRACTING OFFICER PRIOR TO STARTING WORK.
3. DO NOT OVERCUT NEW OPENINGS IN EXISTING SLABS AND WALLS.
4. DO NOT EMBED NEW PIPES AND CONDUITS IN EXISTING CONCRETE WALLS AND SLABS.
5. EXISTING CONCRETE SURFACES THAT INTERFERE WITH NEW CONSTRUCTION ARE TO BE REMOVED OF ALL LOOSE OR UNSOUND MATERIALS AND OTHER CONDITIONS THAT WOULD INHIBIT BOND SUCH AS PLASTER, LAITANCE, DUST, DIRT, OIL, CURING COMPOUND, EXISTING PAINT OR COATINGS, EFFLORESCENCE AND OTHER MATTER THAT COULD INTERFERE WITH THE BOND OF NEW CONSTRUCTION.

FOUNDATION NOTES

1. FOUNDATION DESIGN REQUIREMENTS:

ALLOWABLE BEARING PRESSURE	= 70 kN/m^2
LATERAL BEARING	= 16 kN/m^3
COEFFICIENT OF FRICTION	= 0.25

2. UNLESS OTHERWISE NOTED, CONCRETE SLABS-ON-GRADE, PADS, AND TRENCHES MUST BE SUPPORTED BY A MINIMUM 300mm THICK LAYER OF NON-EXPANSIVE GRANULAR SOILS OR AGGREGATE BASE COMPACTED TO 95 PERCENT RELATIVE COMPACTION.
3. ON-SITE SOILS THAT DO NOT CONTAIN COHESIVE SOILS WITH LIQUID LIMIT MORE THAN 25 AND PLASTICITY INDEX GREATER THAN 6 ARE SUITABLE AS ENGINEERED FILL MATERIAL, PROVIDED THEY ARE CLEANSED OF EXCESSIVE ORGANICS, DEBRIS, AND FRAGMENTS LARGER THAN 76mm IN MAXIMUM DIMENSION.
4. IMPORTED SOILS FOR USE AS NON-EXPANSIVE ENGINEERED FILL OR SELECTED ON-SITE ENGINEERED FILL MUST HAVE A MAXIMUM LIQUID LIMIT OF 25, A MAXIMUM PLASTICITY INDEX OF 6 AND A MAXIMUM 15 PERCENT PASSING NO. 200 SIEVE.
5. ENGINEERED FILL MATERIALS MUST BE PLACED IN LOOSE LIFTS NOT MORE THAN 200mm THICK (150mm IN COMPACTED THICKNESS), MOISTURE CONDITIONED AS NECESSARY, AND COMPACTED TO ACHIEVE AT LEAST 95 PERCENT OF ITS DRY DENSITY AS DETERMINED BY JIS A1210 WITH A DENSE AND UNYIELDING SURFACE. ANY YIELDING SOILS MUST BE EXCAVATED, AIR-DRIED TO NEAR OPTIMUM MOISTURE, AND RECOMPACTED TO BE DENSE AND UNYIELDING.
6. EXCAVATIONS FOR FOOTINGS ARE TO BE APPROVED BY THE CONTRACTING OFFICER PRIOR TO PLACING THE CONCRETE AND REINFORCING. NOTIFY CONTRACTING OFFICER WHEN EXCAVATION IS READY FOR INSPECTIONS.
7. PLACE AND ESTIMATE CONCRETE FOOTINGS ACCORDING TO DEPTHS SHOWN ON DRAWINGS SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY CONTRACTING OFFICER, ALTER FOOTING ELEVATIONS AS REQUIRED BY CONTRACTING OFFICER.
8. PROVIDE DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE.
9. PROVIDE DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING, AND SHORING NECESSARY TO SAFELY RETAIN EXCAVATIONS AND EARTH BANKS.
10. PROPERLY BACKFILL ALL EXCAVATIONS. BRACE OR PROTECT ALL WALLS BELOW GRADE FROM LATERAL LOADS.
11. TRENCH BACKFILL MUST BE PLACED IN MAXIMUM 150mm COMPACTED LIFTS, MOISTURE CONDITIONED TO NEAR THE OPTIMUM MOISTURE CONTENT AND MECHANICALLY COMPACTED TO AT LEAST 90 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY JIS A1210.
12. SEE SHEET S-501 FOR STEEL PIPE PILE INFORMATION.
13. SEE SHEET S-531 FOR STEEL SHEET PILE INFORMATION.

CONCRETE NOTES

1. CONCRETE WORK MUST BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE 301 (ACI 301) AND ACI 318 OR JASS 5, UON.
2. ALL CONCRETE UNLESS OTHERWISE NOTED MUST CONFORM TO THE REQUIREMENTS SPECIFIED FOR NORMAL WEIGHT OF CONCRETE.
3. SCHEDULE OF STRUCTURAL CONCRETE 28-DAY STRENGTH AND TYPES:

LOCATION OF STRUCTURE	STRENGTH	W/C RATIO
ALL CONCRETE	36 MPa	0.4 MAX

W/C = WATER TO CEMENT RATIO.

4. CLEAR COVERAGE OF CONCRETE OVER OUTER REINFORCING BARS MUST BE AS FOLLOWS, UON:

A. CONCRETE POURED DIRECTLY AGAINST EARTH	= 75mm CLEAR
B. CONCRETE PLACED AGAINST FORMS EXPOSED TO EARTH OR WEATHER:	
TRENCH WALLS	= 50mm CLEAR
PILE CAPS, SUSPENDED SLABS	= 75mm CLEAR
C. SLABS:	
NOT EXPOSED TO EARTH OR WEATHER	= 25mm CLEAR AT TOP
EXPOSED TO EARTH OR WEATHER	= 75mm CLEAR AT TOP

5. SECURE ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS IN POSITION PRIOR TO PLACING CONCRETE.
6. PROVIDE SLEEVES FOR MECHANICAL AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING IN CONCRETE IS NOT PERMITTED EXCEPT AS SHOWN. NOTIFY THE CONTRACTING OFFICER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS.
7. PROVIDE 20mm CHAMFER AT ALL EXPOSED CORNERS OF BEAMS, SLABS, CURBS, ETC., UNLESS OTHERWISE NOTED ON DRAWINGS.
8. ALL ROUGHENED SURFACES IN CONCRETE MUST BE MADE WITH A MINIMUM AMPLITUDE OF 6mm. THOROUGHLY CLEAN ROUGHENED SURFACES PRIOR TO PLACING CONCRETE.
9. CONCRETE ADMIXTURES:
   A. PROVIDE CEMENTITIOUS CRYSTALLINE CONCRETE WATERPROOFING ADMIXTURE.
   B. PROVIDE COMPLEX CATALYZED HYDROUS SILICATE, WATER VAPOR REDUCING LIQUID ADMIXTURE.
   C. ADMIXTURES CONTAINING CHLORIDE OR CHLORIDE SALTS ARE NOT PERMITTED.

REINFORCING STEEL

1. REINFORCING STEEL BARS MUST CONFORM TO THE FOLLOWING JIS OR ASTM DESIGNATIONS:

BAR SIZE	JIS	STRENGTH	ASTM
D16 & SMALLER	G3112 SD295A	295 MPa (43 ksi)	A615/A706 GR 60
D19 & LARGER	G3112 SD345	345 MPa (50 ksi)	A615/A706 GR 60
D29 & LARGER	G3112 SD390	390 MPa (56.5 ksi)	A615/A706 GR 60

2. REINFORCEMENT HOOKS AND BENDS ARE STANDARD HOOKS CONFORMING TO THE PROVISIONS OF ACI 318 OR JASS 5, UNLESS OTHERWISE NOTED.
3. SPLICE REINFORCING ONLY AS SHOWN OR NOTED. SEE TYPICAL LAP SPLICE DETAIL. STAGGER SPLICES WHEREVER POSSIBLE.
4. CONTRACTOR OPTION TO PROVIDE WELDED REBAR SPLICE USING GAS PRESSURE WELDING FOR BARS D19 AND LARGER. WELDERS TO BE QUALIFIED IN ACCORDANCE WITH JIS Z3801, JIS Z3841, AND JIS Z3881. GAS PRESSURE WELDING TO BE IN ACCORDANCE WITH JASS 5 AND JRJI. WELDS MUST DEVELOP 125% OF THE MINIMUM YIELD TENSILE STRENGTH OF THE SPLICE BAR. MECHANICAL TESTING OF STEEL TO BE PERFORMED IN ACCORDANCE WITH JIS Z2201 AND JIS Z2241 OR ASTM A370.
5. ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS ARE TO BE SECURELY TIED IN PLACE BEFORE CONCRETE IS POURED.
6. ALL REINFORCING BAR BENDS MUST BE MADE COLD, AND PRIOR TO CONCRETE PLACEMENT.
7. SUBMIT REINFORCING BAR LAYOUTS AND DETAILS FOR CONTRACTING OFFICER'S REVIEW PRIOR TO FABRICATION. FABRICATE FROM REVIEWED DRAWINGS ONLY. PHOTO COPIES AND DUPLICATES OF CONSTRUCTION DOCUMENTS SUBMITTED AS SHOP DRAWINGS WILL BE REJECTED.

STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL MUST BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE "AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" AND JASS 6.
2. STRUCTURAL CARBON STEEL MUST CONFORM TO THE FOLLOWING JIS OR ASTM DESIGNATIONS:

SHAPE	JIS	STRENGTH	ASTM
H SHAPE (WIDE FLANGE)	G3136 SN490B	325 MPa (47 ksi)	A992 GR 50
CHANNELS, ANGLES, PLATES, MISC. STEEL	G3136 SN400B	235 MPa (34 ksi)	A36
TUBES	G3466 STKR400	245 MPa (35.5 ksi)	A500 GR B
PIPES	G3444 STK400	235 MPa (34 ksi)	A53 GR B
HIGH STRENGTH BOLTS	B1186	640 MPa (92.8 ksi)	A325
ANCHOR BOLTS	B1220, G3438 SNR400B	235 MPa (34 ksi)	F1554 GR 36

3. STRUCTURAL STAINLESS STEEL MUST CONFORM TO THE FOLLOWING JIS OR ASTM DESIGNATIONS UNLESS OTHERWISE NOTED:

SHAPE	JIS	ASTM
SS H SHAPE (WIDE FLANGE)	G4317 SUS 316	A276 TYPE 316
SS CHANNELS, ANGLES	G4317 SUS 316	A276 TYPE 316
SS PLATES	G4304 SUS 316	A276 TYPE 316
SS PIPES	G3446 SUS 316	A312 TYPE 316
SS ANCHOR BOLTS	B1220, G4303 SUS 316	F593 TYPE 316

4. THE STRUCTURAL STEEL FABRICATOR MUST FURNISH SHOP DRAWINGS OF ALL STRUCTURAL STEEL FOR CONTRACTING OFFICER'S REVIEW BEFORE FABRICATION.
5. CORROSION COATING:
   A. FOR EXPOSED STRUCTURAL CARBON STEEL AT WHARF AND DOLPHIN: PROVIDE 2 LAYER MARINE SPLASH ZONE COATING AS INDICATED. UNDERCOATING TO BE A ZINC EPOXY OR URETHANE ELASTOMER ANTICORROSIVE COATING. TOPCOAT TO BE A HIGH STRENGTH POLYESTER COATING. COORDINATE COATING WITH STEEL MANUFACTURER. PROTECT COATING FROM DAMAGE DURING CONSTRUCTION. REPAIR COATING AS REQUIRED.
   B. UNLESS NOTED IN NOTE 5A ABOVE, ALL STRUCTURAL CARBON STEEL AND MISCELLANEOUS METAL MUST BE HOT-DIP GALVANIZED AFTER FABRICATION. ALL WELDS AFTER HOT-DIP GALVANIZING MUST BE GROUND SMOOTH AND COATED WITH COLD GALVANIZING. UNLESS OTHERWISE NOTED, ALL EMBEDDED BOLTS, ANCHORS, PLATES, INSERTS, ETC MUST BE HOT-DIP GALVANIZED AFTER FABRICATION.
   C. PRIME AND PAINT ALL STEEL MEMBERS ACCORDING TO SPECIFICATIONS.
6. ALL GROUT (OR DRYPACK) BELOW BASE PLATES, BEAMS BEARING ON CONCRETE WALLS, ETC., MUST BE NON-SHRINK, NON-STAINING, WITH f'c=34 MPa.

WELDING NOTES

1. ALL WELDS MUST BE IN CONFORMITY WITH THE STRUCTURAL WELDING CODE AWS D1.1, D1.6 AND D1.8 OF THE AMERICAN WELDING SOCIETY OR JASS 6. USE ELECTRODES PER JIS Z3211 OR JIS 3221 AS REQUIRED.
2. WELDS MUST BE FULL LENGTH OF JOINT WITH RETURNS UNLESS LENGTH OF WELD IS NOTED ON WELD SYMBOL.
3. ALL WELDING MUST BE PERFORMED BY CERTIFIED WELDERS IN CONFORMANCE WITH JIS Z3801, JIS Z3841, OR JIS 3821 AS REQUIRED BY THE TYPE OF WELDING.

EPOXY MATERIAL

1. REFER TO DRAWINGS FOR STRUCTURES THAT REQUIRE EPOXY EMBEDDED CONNECTIONS.
2. INSTALL EPOXY IN STRICT CONFORMANCE TO MANUFACTURER INSTALLATION INSTRUCTIONS. PROPERLY CLEAN HOLE BY AIR HOSE AND/OR MANUFACTURER AIR NOZZLES.
3. DO NOT OVER DRILL HOLE AND PENETRATE BOTTOM OF SLAB.
4. CONFIRM EPOXY EXPIRATION DATE SHOWN ON PACKAGING.
5. SUBMIT PRODUCT DATA OF PROPOSED PRODUCT INCLUDING INTERNATIONAL CODE COUNCIL EVALUATION REPORTS FOR CONTRACTING OFFICER'S REVIEW PRIOR TO CONSTRUCTION.
6. TO PREVENT DAMAGE, LOCATE EXISTING STEEL REINFORCING BY NON-DESTRUCTIVE METHODS PRIOR TO DRILLING HOLES. CONTRACTOR IS RESPONSIBLE FOR REPAIR OF EXISTING REINFORCING IF DAMAGE IS CAUSED.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: J. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:
SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

STRUCTURAL
GENERAL
NOTES 1

SHEET ID
S-001

DESIGN CRITERIA

1. CODES:

   2018 INTERNATIONAL BUILDING CODE
   ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
   UFC 3-301-01 STRUCTURAL ENGINEERING
   UFC 4-152-01 DESIGN: PIERS AND WHARVES

2. DESIGN LIVE LOADS:

FUELING WHARF	= 14.4 kPa (300 PSF)
FUELING ARM PLATFORM	= 4.8 kPa (100 PSF)
WALKWAY	= 4.8 kPa (100 PSF)

3. WIND DESIGN DATA:

BASIC WIND SPEED	= 259 KM/H (161 MPH)
RISK CATEGORY	= III
WIND EXPOSURE CATEGORY	= D

4. SEISMIC DESIGN DATA:

RISK CATEGORY	= III

   MAPPED SPECTRAL RESPONSE ACCELERATION:
   S_S = 1.96 g
   S_1 = 0.93 g

SITE CLASS	= E

   SPECTRAL RESPONSE COEFFICIENTS:
   S_{DS} = 1.18 g
   S_{D1} = 1.49 g

SEISMIC DESIGN CATEGORY	= E

5. MOORING DESIGN DATA:

MOORING SERVICE TYPE	= I MILD WEATHER MOORING

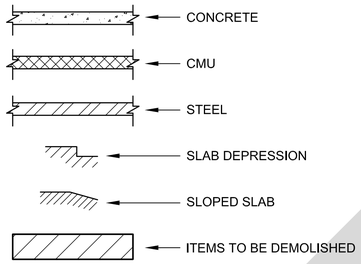
REPAIR NOTES

1. CONTRACTOR MUST USE CONCRETE SPALL AND REPAIR QUANTITIES ON SHEET S-601.
2. SPALLS AND DELAMINATIONS ARE CALLED OUT AS "SPALLS". NO SEPARATE DISTINCTION IS MADE BETWEEN THEM SINCE THE REPAIRS ARE THE SAME.
3. UNLESS OTHERWISE INDICATED ON THE REPAIR DETAILS, CHIP OUT AREAS MUST EXTEND A MINIMUM OF 75mm BEYOND THE SPALL SIZE.
4. CHIPPED OUT AREA WHEN REBARS ARE EXPOSED MUST NOT BE LESS THAN 19mm CLEAR AROUND THE BARS OR 6mm LARGER THAN THE LARGEST AGGREGATE IN THE REPAIR MATERIAL, WHICHEVER IS GREATER.
5. EDGES OF CHIPPED OUT AREAS MUST BE SQUARE CUT BY SAW CUTTING FOR A MINIMUM DEPTH OF 13mm UNLESS OTHERWISE SHOWN ON THE REPAIR DETAILS. ADJUST DEPTH OF SAW CUTTING TO AVOID CUTTING EXISTING REBARS. JACKHAMMER MUST BE LIMITED TO 6.8 KG (15 LBS) OR LESS.
6. SEE REPAIR NOTES AND DETAILS ON OTHER SHEETS. REPLACE EXISTING REBARS AS REQUIRED PER TABLE I ON SHEET S-601. ALL EXPOSED REBARS MUST BE CLEANED OF ALL SCALE, RUST, DIRT, OIL AND OTHER DELETERIOUS MATERIALS. CLEANING OF REBARS MUST BE PERFORMED USING HAND TOOLS (E.G., WIRE BRUSH). BLASTING USING ABRASIVE MEDIA OR WATER IS ACCEPTABLE.
7. DO NOT FEATHER EDGE REPAIRS.
8. TEST ALL REPAIRS AFTER THE REPAIR MATERIAL IS CURED TO VERIFY THE BOND BETWEEN THE REPAIR MATERIAL AND THE EXISTING CONCRETE. A HOLLOW SOUND WHEN TAPPED WITH A HAMMER INDICATES UNSATISFACTORY BOND AND SHALL BE REJECTED. ALL REJECTED REPAIRS SHALL BE REDONE AND RETESTED UNTIL A SATISFACTORY BOND IS ACHIEVED, AT NO ADDITIONAL COST.
9. AFTER REPAIRS ARE COMPLETED AND ACCEPTED BY CONTRACTOR'S QUALITY CONTROL SPECIALIST, COAT REPAIRED AREAS WITH A CONCRETE SEALER. THE COATED AREA SHALL EXTEND 300mm BEYOND THE REPAIRED AREA.

ABBREVIATIONS

AB	ANCHOR BOLT
AC	ASPHALT CONCRETE
ADDL	ADDITIONAL
ALT	ALTERNATE
ALUM	ALUMINUM
(B), BOT	BOTTOM
BLDG	BUILDING
BM	BEAM
BOW	BOTTOM OF WALL
BRG	BEARING
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLR	CLEAR(ANCE)
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
(D)	DEEP
DB	DUMBELL
DEG	DEGREE
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DO	DITTO
DWG(S)	DRAWING(S)
(E), EXST	EXISTING
EA	EACH
EF	EACH FACE
EL, ELEV	ELEVATION
ELEC	ELECTRICAL
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EXP	EXPANSION
EXT	EXTERIOR
FIN	FINISH
FLG	FLANGE
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
(H)	HIGH
HORIZ	HORIZONTAL
HDG	HOT-DIP GALVANIZED
HT	HEIGHT
JT	JOINT
(L)	LONG
MANUF	MANUFACTURER
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
(N)	NEW
NO.	NUMBER
NS	NON-SHRINK
NTS	NOT TO SCALE
OC	ON CENTER
OPNG	OPENING
OPP	OPPOSITE
PAVT	PAVEMENT
PL	PLATE
REINF	REINFORCING
REQD	REQUIRED
SCHED	SCHEDULE
SHT	SHEET
SIM	SIMILAR
SL	SLOPE
SPECS	SPECIFICATIONS
SOG	SLAB-ON-GRADE
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
(T)	TOP
T&B	TOP AND BOTTOM
THK	THICK
THRU	THROUGH
TOF	TOP OF FOOTING
TOW	TOP OF WALL
TS	TUBE STEEL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
(W)	WIDE, WIDTH
W/	WITH
WP	WORKPOINT

LEGEND



US Army Corps of Engineers®

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CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
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U.S. ARMY CORPS OF ENGINEERS
POHONOLULU DISTRICT
APO AP 96858-5010

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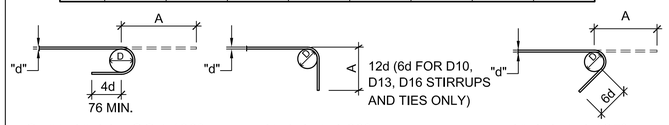
DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

STRUCTURAL
GENERAL
NOTES 2

SHEET ID
S-002

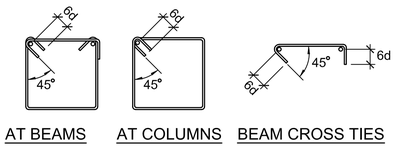
MINIMUM EXTENSION LENGTHS "A"								
BAR SIZE	STANDARD HOOKS				TIES AND STIRRUPS			
	180° HOOKS		90° HOOKS		90° HOOKS		135° HOOKS	
	(MM)	(INCH)	(MM)	(INCH)	(MM)	(INCH)	(MM)	(INCH)
D10	125	5	150	6	105	4	105	4
D13	150	6	200	8	115	5	115	5
D16	175	7	250	10	155	6	150	6
D19	200	8	300	12	305	12	205	8
D22	250	10	375	15	NA	NA	NA	NA
D25	275	11	425	17	NA	NA	NA	NA
D29	375	15	475	19	NA	NA	NA	NA
D32	425	17	550	22	NA	NA	NA	NA



STANDARD HOOK 180° BAR BEND 90° BAR BEND 135°

BAR SIZE	D
D10, D13, D16 D19, D22, D25	6 d
D29, D32, D35	8 d

1 TYPICAL REBAR BENDING
NOT TO SCALE



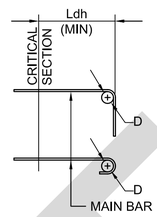
AT BEAMS AT COLUMNS BEAM CROSS TIES

NOTE:

1. THESE DETAILS MUST APPLY TO D10, D13, AND D16 BARS.
2. ALL BARS MUST BE BENT COLD.
3. MINIMUM FINISHED BEND DIAMETER = 4d FOR D10, D13, AND D16 BARS.

2 TYPICAL TIE AND STIRRUP DETAIL
NOT TO SCALE

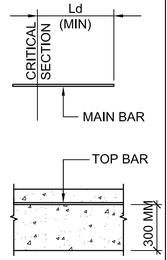
BAR SIZE	Ldh	
JIS	(MM)	(INCH)
D10	190	8
D13	230	9
D16	305	12
D19	360	15
D22	420	17
D25	475	19
D29	535	21
D32	610	24



1. THE BARS ARE UNCOATED AND DEFORMED.
2. ALL DEVELOPMENT LENGTH MUST BE THE MINIMUM AS TABULATED ABOVE UNLESS OTHERWISE NOTED OR SHOWN IN THE DRAWINGS.

3 DEVELOPMENT LENGTH WITH HOOK
NOT TO SCALE

BAR SIZE	Ld			
JIS	TOP BARS		OTHERS	
	(MM)	(INCH)	(MM)	(INCH)
D10	495	20	380	15
D13	595	24	455	18
D16	790	32	610	24
D19	940	37	725	29
D22	1360	54	1045	42
D25	1545	61	1190	47
D29	1730	68	1330	53
D32	1975	78	1520	60



1. THE BARS ARE UNCOATED AND DEFORMED.
2. ALL DEVELOPMENT LENGTH MUST BE THE MINIMUM AS TABULATED ABOVE UNLESS OTHERWISE NOTED OR SHOWN IN THE DRAWINGS.

4 DEVELOPMENT LENGTH WITHOUT HOOK
NOT TO SCALE

BAR SIZE	TOP BARS		OTHERS	
JIS	(MM)	(INCH)	(MM)	(INCH)
D10	645	26	495	20
D13	770	31	595	24
D16	1030	41	790	32
D19	1220	48	940	37
D22	1765	70	1360	54
D25	2005	79	1545	61
D29	2245	89	1730	68
D32	2565	101	1975	78

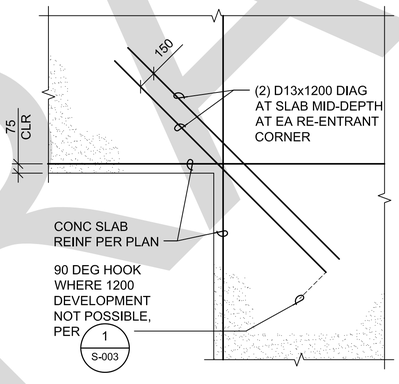
1. LAP SPLICES MUST BE STAGGERED AT LEAST 600MM.
2. ALL LAP SPLICES MUST BE THE MINIMUM AS TABULATED ABOVE UNLESS OTHERWISE NOTED OR SHOWN IN THE DRAWINGS.
3. CONTRACTOR OPTION TO PROVIDE WELDED REBAR SPLICE USING GAS PRESSURE WELDING FOR BARS D19 AND LARGER. WELDERS TO BE QUALIFIED IN ACCORDANCE WITH JIS Z3801, JIS Z3841, AND JIS Z3881. GAS PRESSURE WELDING TO BE IN ACCORDANCE WITH JASS 5 AND JRJI. WELDS MUST DEVELOP 125% OF THE MINIMUM YIELD TENSILE STRENGTH OF THE SPLICE BAR. MECHANICAL TESTING OF STEEL TO BE PERFORMED IN ACCORDANCE WITH JIS Z2201 AND JIS Z2241 OR ASTM A370

LAP SPLICE OF REINFORCEMENTS IN TENSION

5 TYPICAL LAP SPLICE DETAIL
NOT TO SCALE

BAR SIZE	Ldc	
JIS	(MM)	(INCH)
D10	495	20
D13	595	24
D16	790	32
D19	940	37
D22	1360	54
D25	1545	61
D29	1730	68
D32	1975	78

LAP SPLICE OF REINFORCEMENTS IN COMPRESSION



6 CORNER REINFORCEMENT
NOT TO SCALE

US Army Corps of Engineers®

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DRAWN BY: J. LO
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SUBMITTED BY: D. OKAWA
ISSUE DATE: AUGUST 2020
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SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TYPICAL DETAILS - REINFORCING

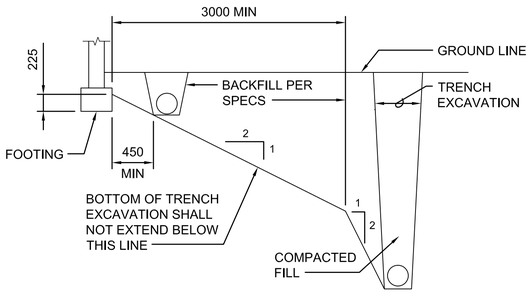
SHEET ID

S-003

FILE: DESC1904-S-003.dwg
DATE: 12/8/2020 9:09 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL

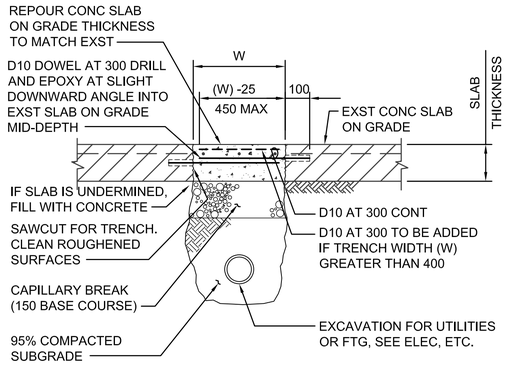


NOTE:

THE CONTRACTOR MUST PROVIDE SHORING, SHEATHING OR OTHERWISE MAINTAINING THE SIDE OF THE EXCAVATION FROM CAVE-INS UNTIL ALL BACKFILL IS COMPLETED PER SPECIFICATIONS.

1 EXCAVATIONS PARALLEL TO FTG

NOT TO SCALE

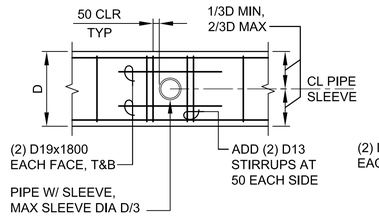


NOTES:

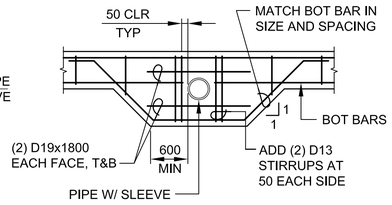
1. IF BOTTOM OF TRENCH IS REQUIRED TO BE DUG LOWER THAN ELEVATION OF BOTTOM OF ADJACENT EXISTING FOOTING, NOTIFY CONTRACTING OFFICER.
2. COAT REINFORCING WITH HI-MOD EPOXY PAINT IF CLEARANCE IS LESS THAN 75.

2 EXTERIOR SLAB ON GRADE REPAIR

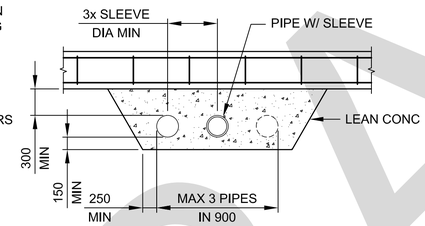
NOT TO SCALE



(E) PIPE THRU FTG CLEAR OF TOP & BOT REBAR



(E) PIPE THRU FTG AT BOT REBAR



(N) OR (E) PIPE BELOW FTG

NOTES:

1. SLEEVE INSIDE DIAMETER 50 LARGER THAN PIPE OUTSIDE DIAMETER.
2. TIE SPACING MUST NOT BE INCREASED FOR PIPE PENETRATION.
3. PENETRATIONS THROUGH FOOTING ARE ONLY PERMITTED WITH REVIEW OF CONTRACTING OFFICER.

3 PIPE PERPENDICULAR TO FOOTING

NOT TO SCALE

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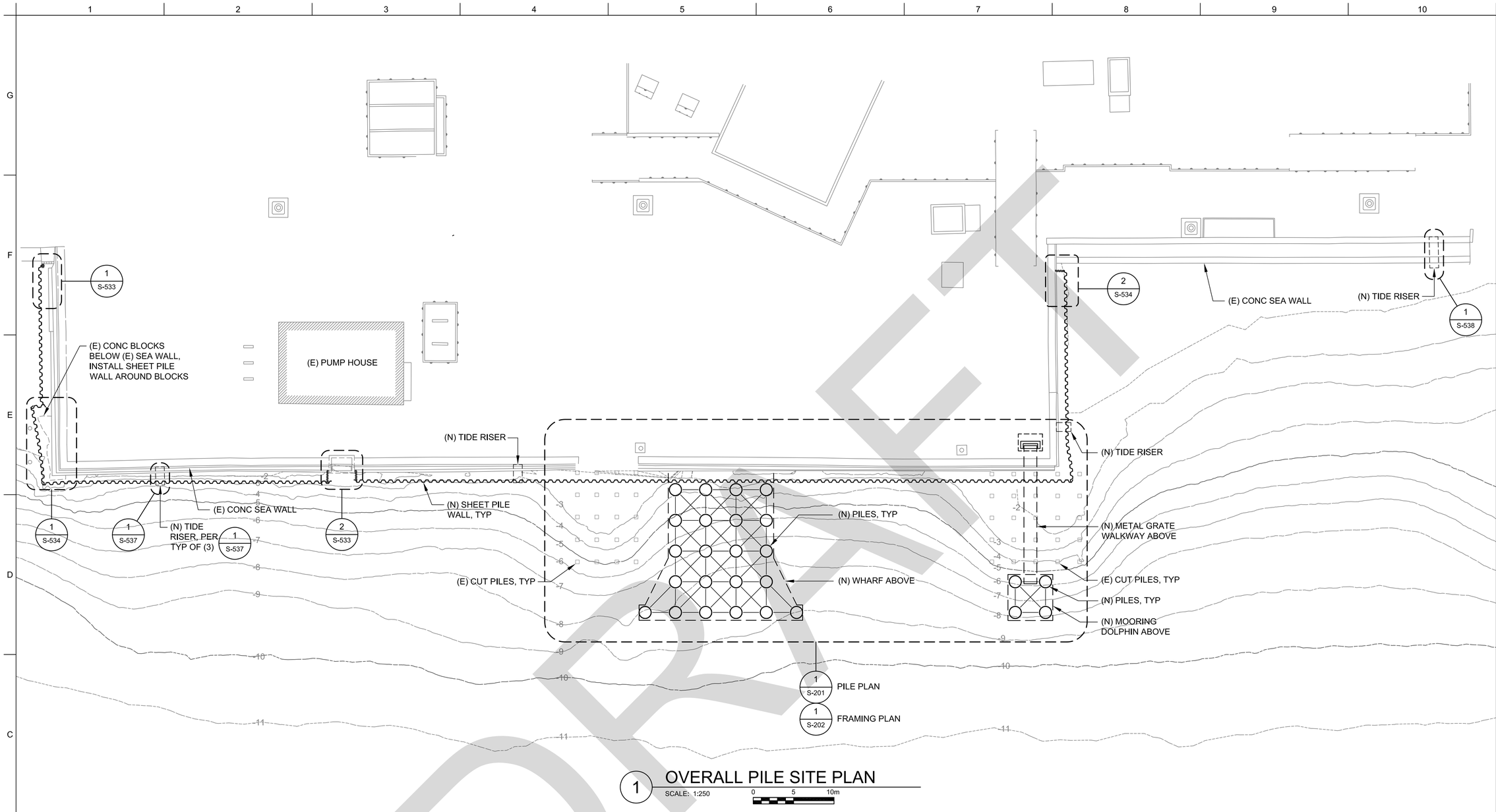
DESC 1904
MODERNIZE FUELING WHARVES NO. 1 & T-4 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TYPICAL DETAILS - CONCRETE

SHEET ID

S-004



1 OVERALL PILE SITE PLAN

SCALE: 1:250 0 5 10m

NOTES:

1. REFER TO STRUCTURAL GENERAL NOTES ON SHEETS S-001 AND S-002 FOR ADDITIONAL INFORMATION.
2. REFER TO CIVIL, MECHANICAL, FIRE PROTECTION, AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT, PIPES, CONDUITS, ETC.
3. DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURE MEMBERS FROM EXISTING DRAWINGS. FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION.
4. REFER TO CIVIL DRAWINGS FOR DREDGING REQUIREMENTS.

PLAN NORTH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
FILE NAME:
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -

U.S. ARMY CORPS OF ENGINEERS
AK AREA DISTRICT
APO AP 96343-5010

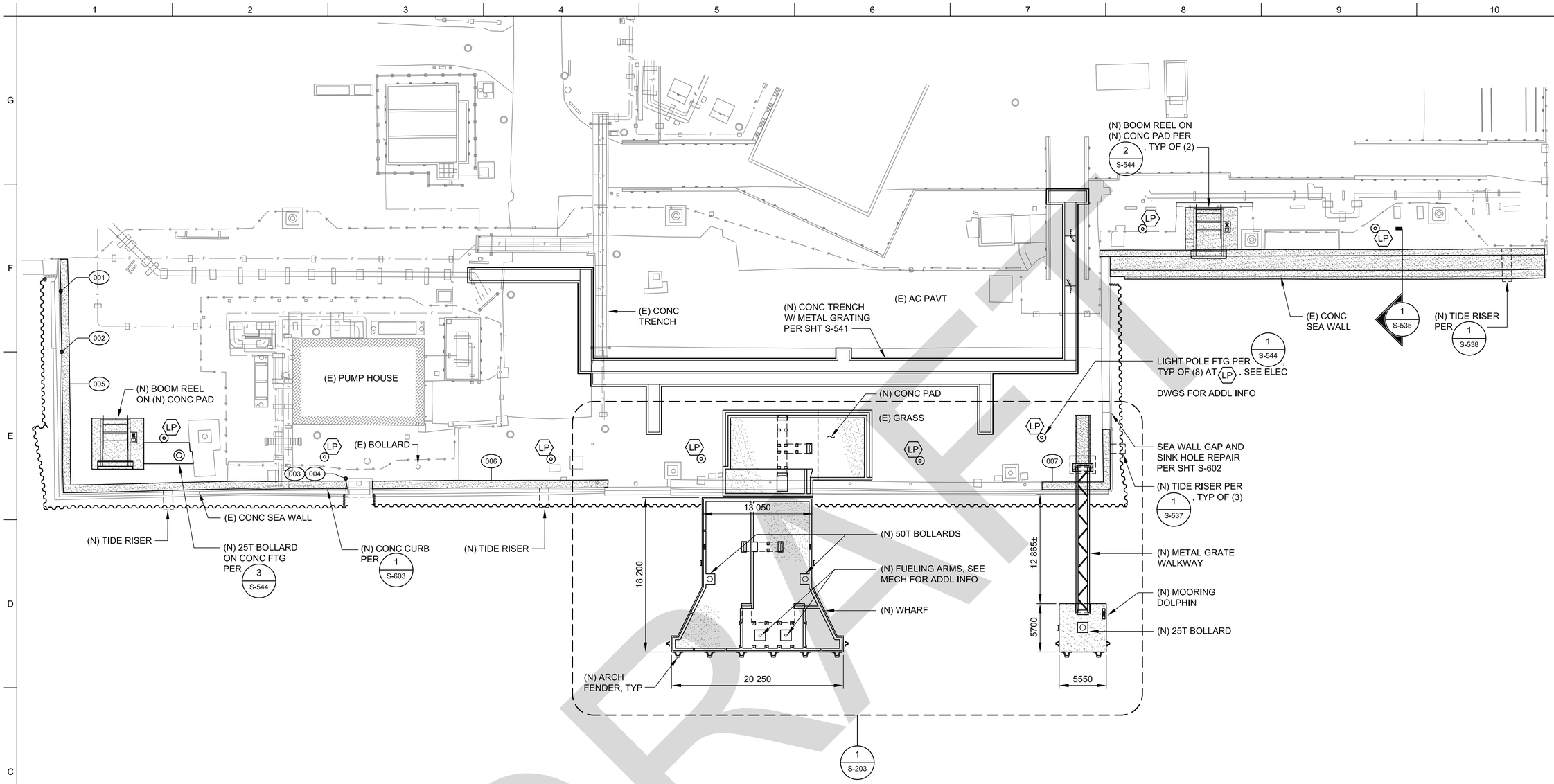
HDR - WTNA JV
1001 BISHOP STREET
SUITE 2400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE.
TSURUMI, YOKOHAMA, JAPAN

OVERALL PILE SITE PLAN

SHEET ID

S-101



1 OVERALL GROUND SITE PLAN

SCALE: 1:250 0 5 10m

DRAFT

LEGEND:

(###) CONCRETE REPAIR NO. CORRESPONDING TO SCHEDULE ON SHEET S-603

NOTES:

1. REFER TO STRUCTURAL GENERAL NOTES ON SHEETS S-001 AND S-002 FOR ADDITIONAL INFORMATION.
2. REFER TO CIVIL, MECHANICAL, FIRE PROTECTION, AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT, PIPES, CONDUITS, ETC.
3. DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURE MEMBERS FROM EXISTING DRAWINGS. FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION.

PLAN NORTH

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MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
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SUBMITTED BY: D. OKAWA
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
SIZE: ISO A1
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

OVERALL GROUND SITE PLAN

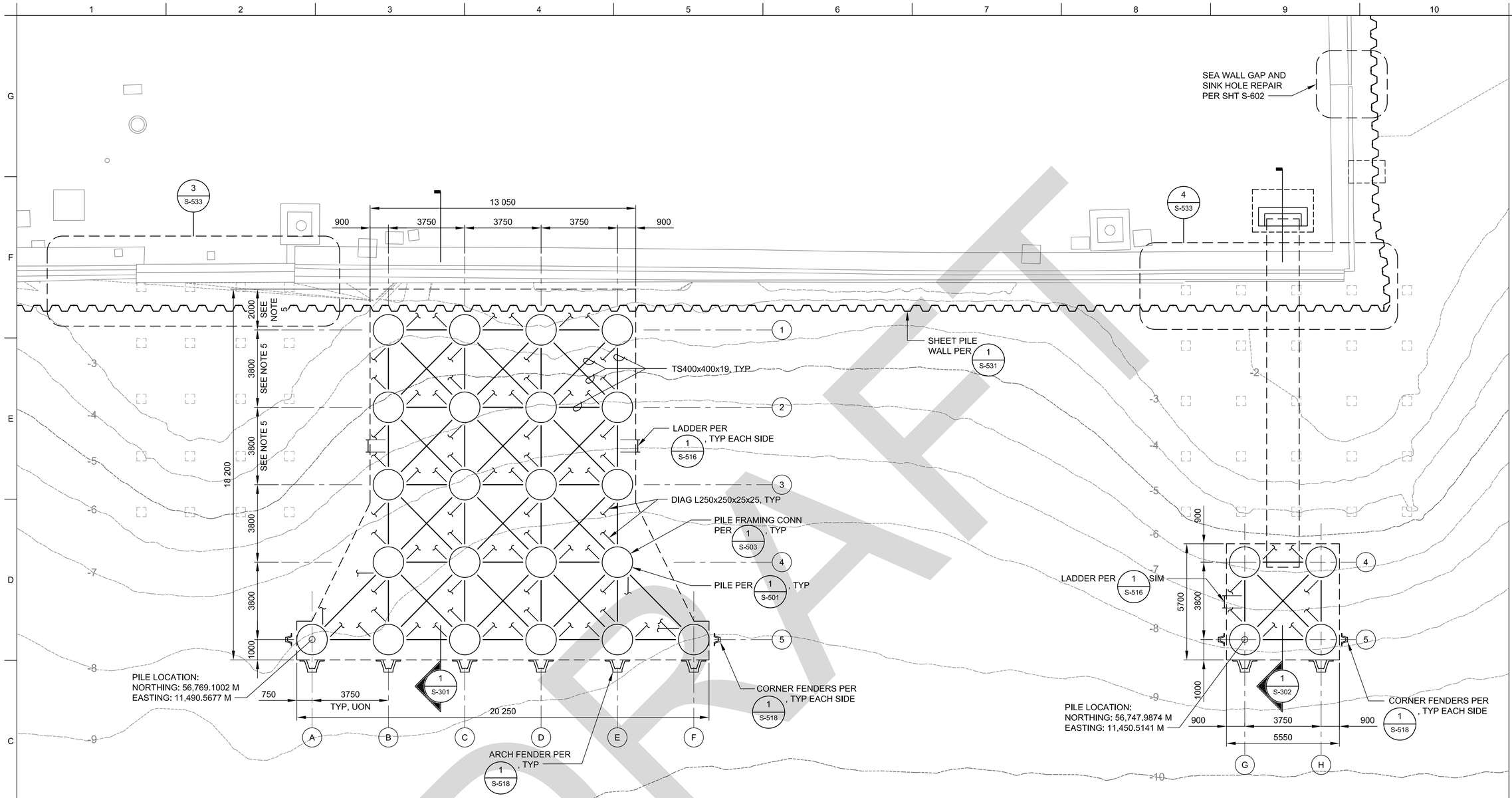
SHEET ID

S-102

FILE: DESC1904-S-102.dwg
DATE: 12/8/2020 9:09 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL



1 ENLARGED WHARF PILE/LOWER FRAMING PLAN

SCALE: 1:100 0 1000 2000 4000

NOTES:

1. REFER TO STRUCTURAL GENERAL NOTES ON SHEETS S-001 AND S-002 FOR ADDITIONAL INFORMATION.
2. REFER TO CIVIL, MECHANICAL, FIRE PROTECTION, AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT, PIPES, CONDUITS, ETC.
3. DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURE MEMBERS FROM EXISTING DRAWINGS. FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION.
4. PROVIDE TESTING FOR PILES LOCATED AT (1) - (E), (5) - (F), AND (4) - (H). SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. LOCATION OF EXISTING SEAWALL CONCRETE FOUNDATION BLOCKS ARE UNKNOWN. FIELD VERIFY EXISTING CONDITIONS. THE INBOARD CANTILEVER DISTANCE FROM GRID 1 MAY BE INCREASED FROM 2000 TO A MAXIMUM OF 2750 AS REQUIRED TO ALLOW FOR PILE INSTALLATION ADJACENT TO SHEET PILE WALL. DISTRIBUTE OFFSET DISTANCE EQUALLY BETWEEN GRIDS 1 TO 3. APPROVAL AND DETERMINATION WILL BE MADE BY CONTRACTING OFFICER.
6. PROVIDE ANTICORROSION COATING ON STRUCTURAL STEEL SURFACES. SEE STEEL NOTES ON S-001 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

PLAN NORTH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
SIZE: ISO A1
FILE NAME:

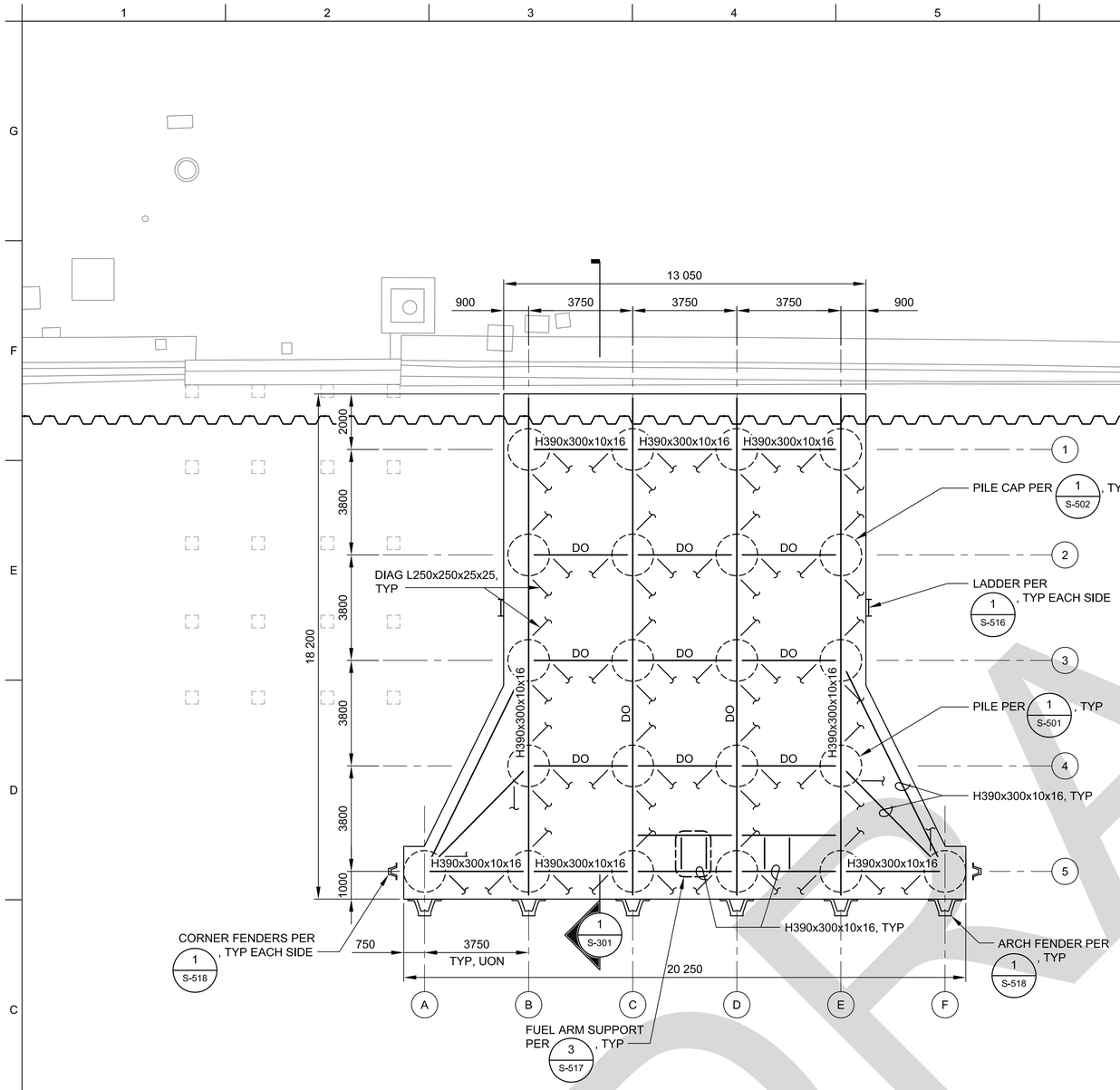
U.S. ARMY CORPS OF ENGINEERS
POHNPEI DISTRICT
APO AP 96943-0010

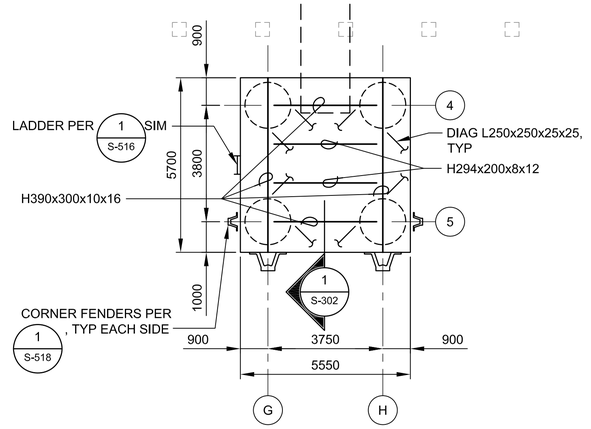
HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

ENLARGED WHARF PILE/LOWER FRAMING PLAN

SHEET ID
S-201





1 ENLARGED DECK FRAMING PLAN

SCALE: 1:100 0 1000 2000 4000

NOTES:

1. REFER TO STRUCTURAL GENERAL NOTES ON SHEETS S-001 AND S-002 FOR ADDITIONAL INFORMATION.
2. REFER TO CIVIL, MECHANICAL, FIRE PROTECTION, AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT, PIPES, CONDUITS, ETC.
3. DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURE MEMBERS FROM EXISTING DRAWINGS. FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION.
4. PROVIDE ANTICORROSION COATING ON STRUCTURAL STEEL SURFACES. SEE STEEL NOTES ON S-001 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

PLAN NORTH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
SIZE: ISO A1
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

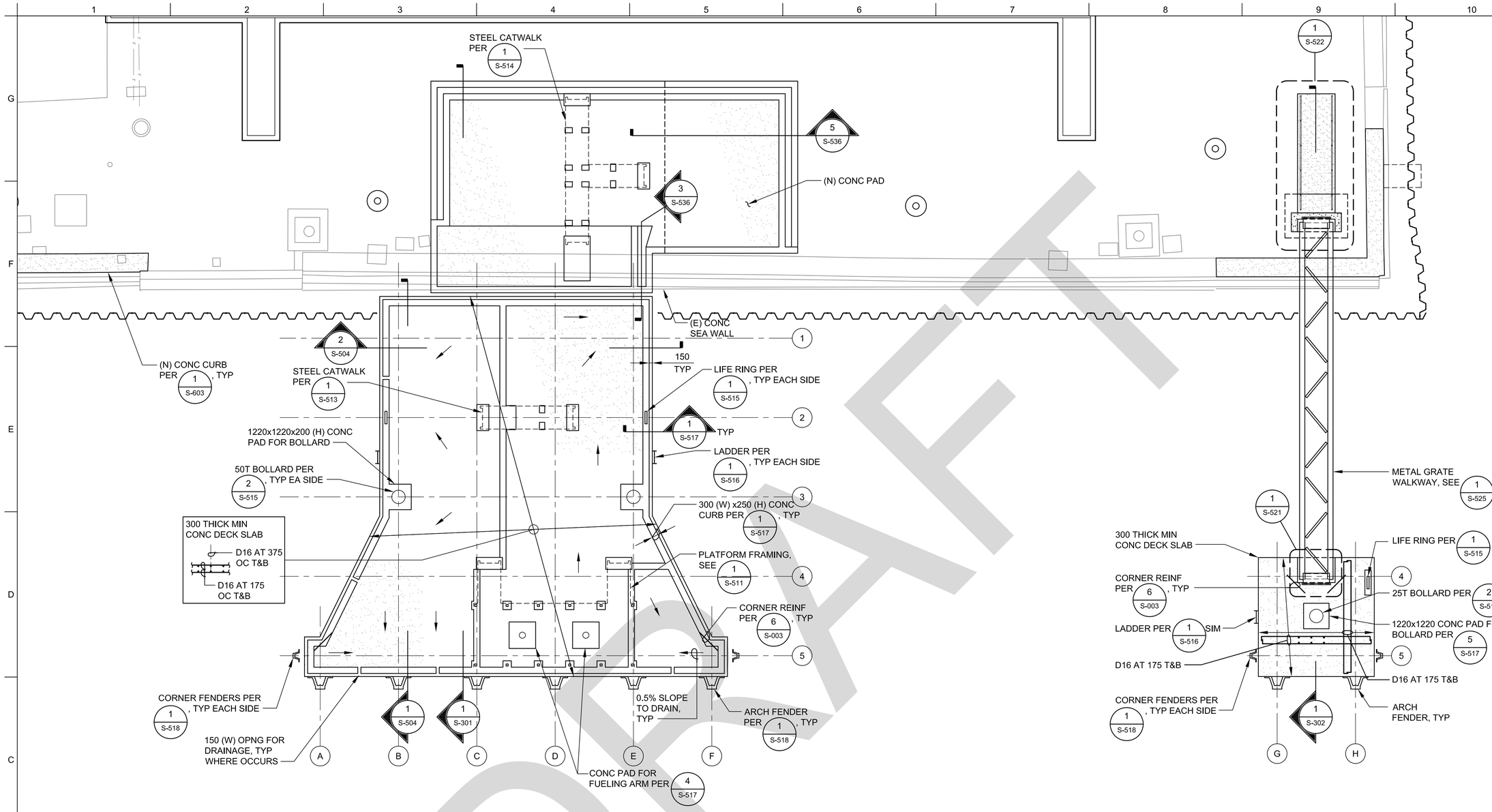
HDR - WTNA JV
1001 BISHOP STREET
SUITE 2400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES NO. T-4 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

ENLARGED DECK FRAMING PLAN

SHEET ID

S-202



1 ENLARGED GROUND/TOP DECK PLAN

SCALE: 1:100 0 1000 2000 4000

NOTES:

1. REFER TO STRUCTURAL GENERAL NOTES ON SHEETS S-001 AND S-002 FOR ADDITIONAL INFORMATION.
2. REFER TO CIVIL, MECHANICAL, FIRE PROTECTION, AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT, PIPES, CONDUITS, ETC.
3. DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURE MEMBERS FROM EXISTING DRAWINGS. FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION.

PLAN NORTH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: J. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POH DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
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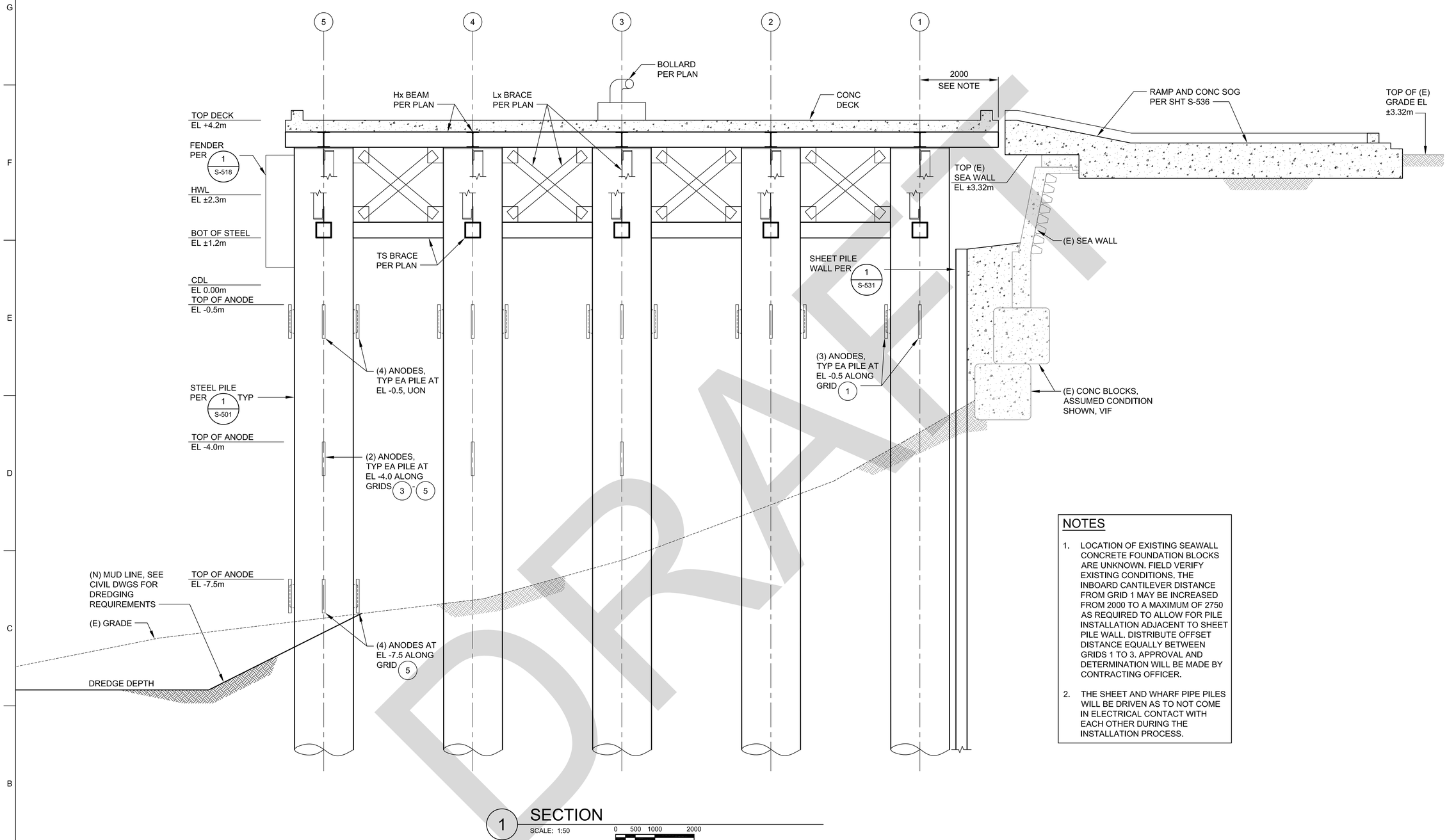
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

ENLARGED GROUND/TOP DECK PLAN

SHEET ID

S-203



1 SECTION

SCALE: 1:50 0 500 1000 2000

NOTES

1. LOCATION OF EXISTING SEAWALL CONCRETE FOUNDATION BLOCKS ARE UNKNOWN. FIELD VERIFY EXISTING CONDITIONS. THE INBOARD CANTILEVER DISTANCE FROM GRID 1 MAY BE INCREASED FROM 2000 TO A MAXIMUM OF 2750 AS REQUIRED TO ALLOW FOR PILE INSTALLATION ADJACENT TO SHEET PILE WALL. DISTRIBUTE OFFSET DISTANCE EQUALLY BETWEEN GRIDS 1 TO 3. APPROVAL AND DETERMINATION WILL BE MADE BY CONTRACTING OFFICER.
2. THE SHEET AND WHARF PIPE PILES WILL BE DRIVEN AS TO NOT COME IN ELECTRICAL CONTACT WITH EACH OTHER DURING THE INSTALLATION PROCESS.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
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FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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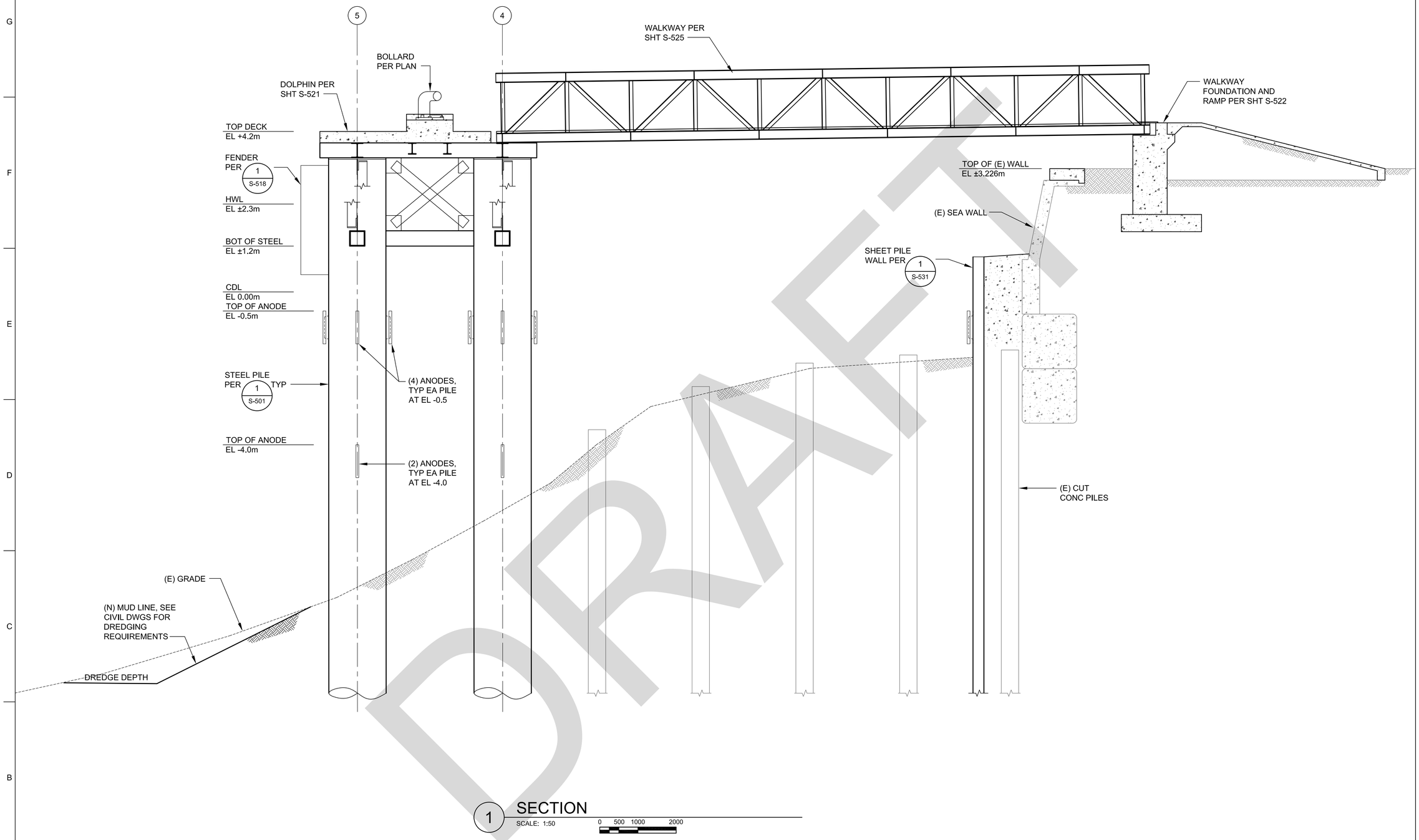
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-4 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

SECTION

SHEET ID

S-301



1 SECTION

SCALE: 1:50 0 500 1000 2000

DRAFT

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DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
FILE NAME:

ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 4000
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

SECTION

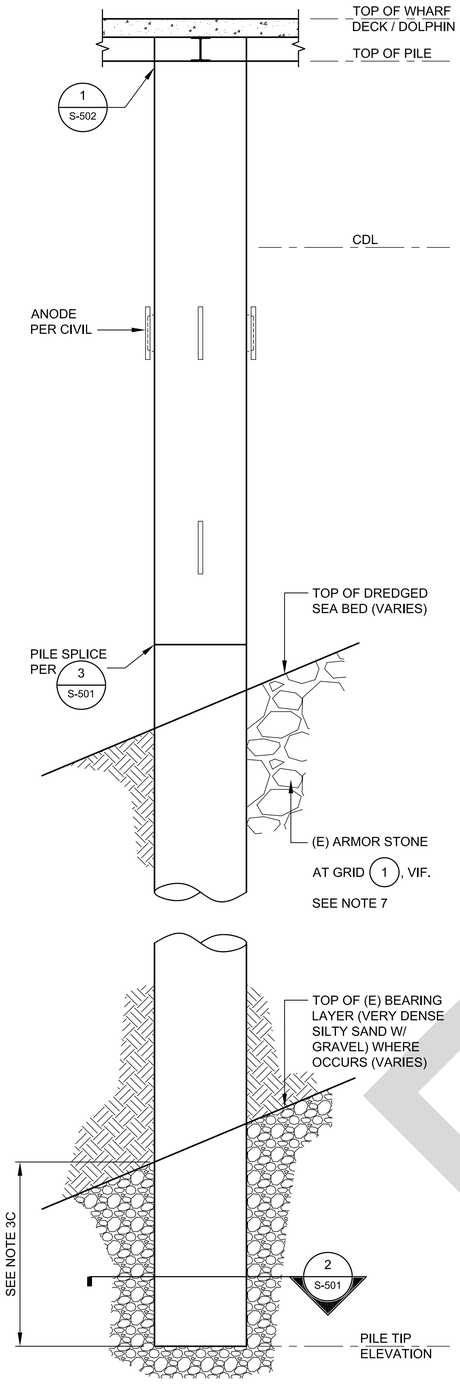
SHEET ID

S-302

FILE: DESC1904-S-302.dwg
DATE: 12/8/2020 9:09 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

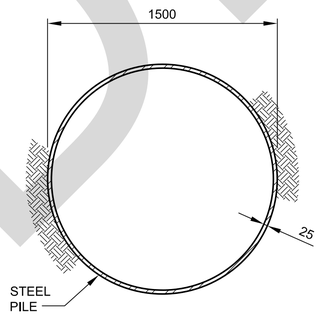
RTA SUBMITTAL



1 TYPICAL PILE ELEVATION
SCALE: 1:50 0 500 1000 2000

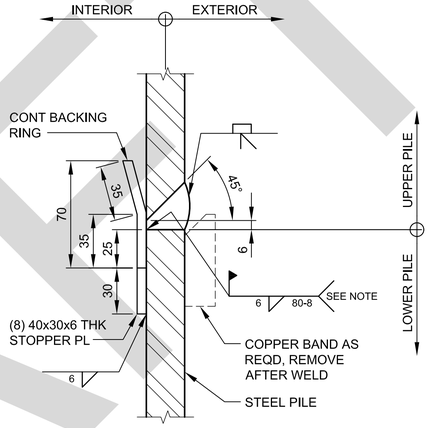
STEEL PILE NOTES

1. PROVIDE STEEL PIPE PILES CONFORMING TO JIS A 5525 GRADE SKK490 (ASTM A252 GRADE 3).
2. PLATES WELDED WITH PIPE PILES MUST CONFORM TO JIS G 3106 GRADE SM 490YB.
3. PIPE PILE INSTALLATION:
   A. INSTALL PIPE PILE IN ACCORDANCE WITH CONTRACT DOCUMENTS.
   B. INSTALLATION LENGTH IS DEPENDENT UPON SUBSURFACE CONDITIONS. PILE LENGTHS WILL NEED TO BE ADJUSTED BASED ON CONDITIONS SUCH AS CHARACTERISTICS OF SOIL DENSITY AS WELL AS PILE DRIVING CRITERIA SUCH AS PILE SET, HAMMER STROKE AND RAM WEIGHT.
   C. PILES MUST BE DRIVEN AT LEAST TWICE THE PILE DIAMETER INTO THE STABLE BEARING LAYER OR TO HARD ROCK REFUSAL OF 50 BLOWS PER cm, WHICHEVER IS SHALLOWER.
   D. INSTALL PIPE PILES AFTER STEEL SHEET PILE WALL INSTALLATION.
   E. INSTALL PILES BY HAMMERING METHOD (DAGEKI KOUHOU). PILE DRIVING MUST BE WITH A PILE HAMMER, EQUIPMENT AND DRIVING ENERGY OF HAMMERS MUST BE AS DETERMINED BY PILING WEIGHTS AND SUBSURFACE MATERIALS ENCOUNTERED AND VERIFIED BY WAVE EQUATION ANALYSIS PROGRAM.
   F. PILES DRIVEN BELOW THE REQUIRED TOP ELEVATION OR DAMAGED BY DRIVING AND CUT OFF TO PERMIT FURTHER DRIVING MUST BE EXTENDED AS REQUIRED TO REACH TOP OF ELEVATION BY SPLICING.
4. SEE SHEETS G-007 AND G-008 FOR BORING LOGS.
5. CORROSION PROTECTION:
   A. PROVIDE 2 LAYER MARINE SPLASH ZONE COATING AS INDICATED. UNDERCOATING TO BE A ZINC EPOXY OR URETHANE ELASTOMER ANTICORROSIVE COATING. TOPCOAT TO BE A HIGH STRENGTH POLYESTER COATING. COORDINATE COATING WITH PIPE PILE MANUFACTURER. PROTECT COATING FROM DAMAGE DURING CONSTRUCTION. REPAIR COATING AS REQUIRED.
   B. PROVIDE ELECTROLYTIC PROTECTION SUCH AS CATHODIC PROTECTION AS INDICATED. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
6. FOR BIDDING PURPOSES, ASSUME EACH PILE TO BE 50 M DEEP.
7. RUBBLE STONE IN FRONT OF EXISTING SEAWALL MUST BE REMOVED PRIOR TO SHEET PILE DRIVING. TEMPORARY INSTALLATION OF STEEL CASINGS MINIMUM 1500mm DIAMETER MUST BE USED TO EXTRACT RUBBLE STONES. VOIDS MUST BE FILLED WITH JIS A5001 CRUSHED STONE OR SUITABLE WELL-GRADED AGGREGATE TO ENSURE STABILITY OF THE FOUNDATION UPON REMOVAL OF THE CASING.



PLAN

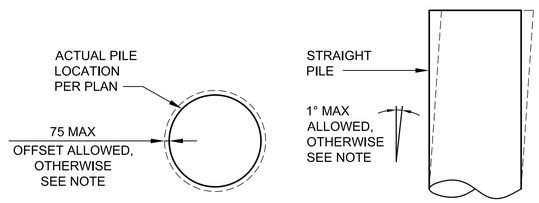
2 SECTION
SCALE: 1:20 0 200 400 800



NOTES
1. PROVIDE WELD TO MAINTAIN ROUT DISTANCE.
2. COAT PILE AS REQUIRED PER SPECIFICATIONS AFTER WELD CONSTRUCTION.

3 PILE SPLICE
SCALE: 1:2 0 20 40 80

NOTE:
PILES INSTALLED THAT EXCEED MAXIMUM OFFSETS SHOWN MUST EITHER BE REMOVED AND REINSTALLED OR SUPPLEMENTED WITH ADDITIONAL PILE(S) AT NO ADDITIONAL COST TO THE GOVERNMENT. DETERMINATION WILL BE MADE BY CONTRACTING OFFICER.



PLAN (AT TOP OF PILE) ELEVATION

4 PILE LOCATION TOLERANCES
SCALE: 1:50 0 500 1000 2000

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

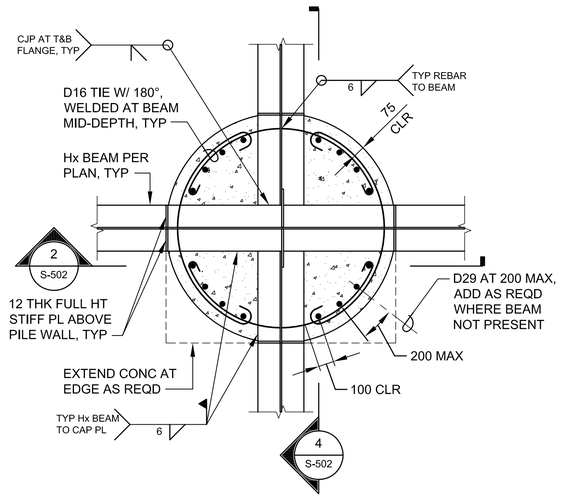
U.S. ARMY CORPS OF ENGINEERS
POHNPEI DISTRICT
APO AP 96940-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 2400
HONOLULU, HAWAII 96813

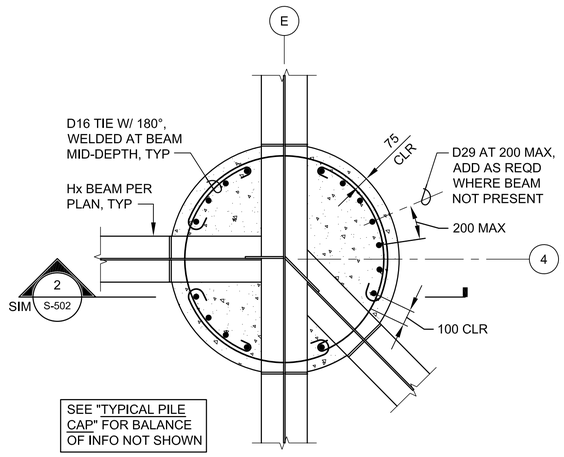
DESC 1904
MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

WHARF DETAILS
- PILES

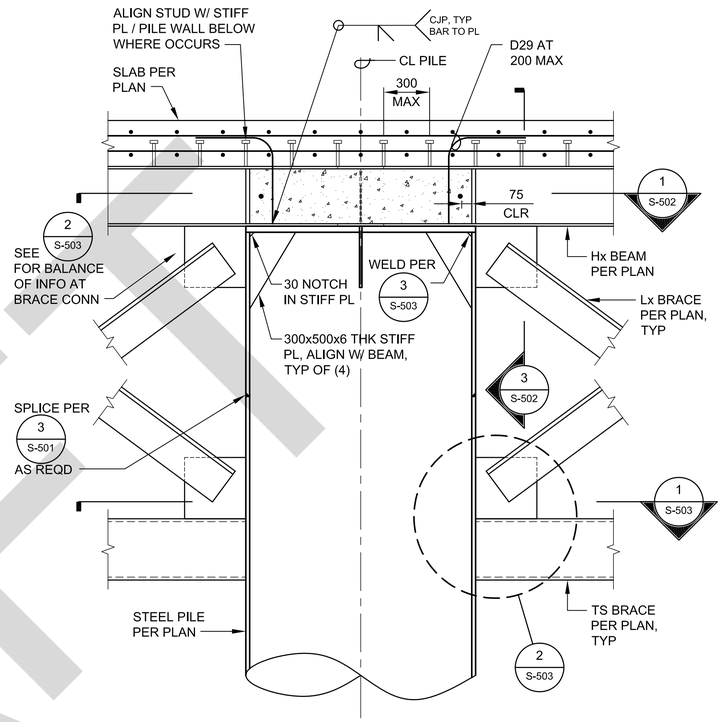
SHEET ID
S-501



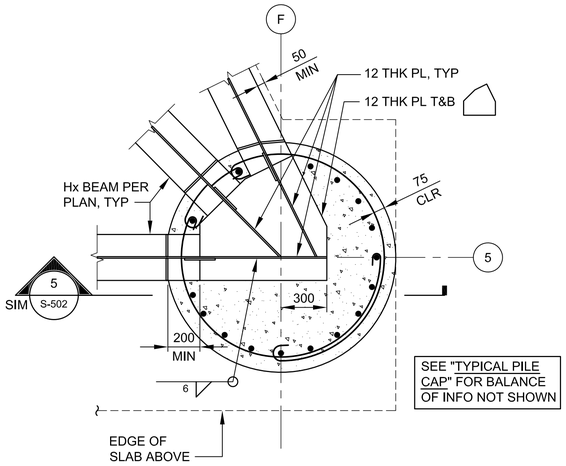
PLAN - TYPICAL PILE CAP



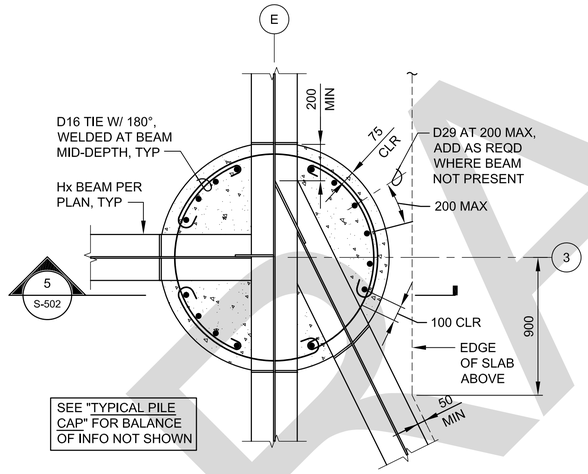
PLAN - PILE CAP AT GRID LINES 4/E AND 4/B (OPP)



2 SECTION
SCALE: 1:20 0 200 400 800

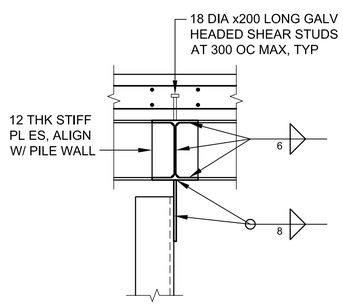


PLAN - PILE CAP AT GRID LINES 5/F AND 5/A (OPP)

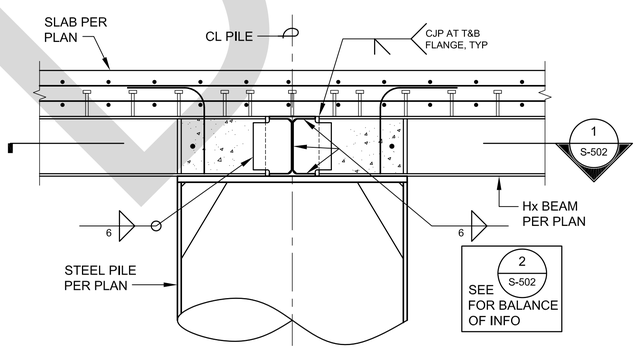


PLAN - PILE CAP AT GRID LINES 3/E AND 3/B (OPP)

1 PILE CAP DETAILS
SCALE: 1:20 0 200 400 800



3 SECTION
SCALE: 1:20 0 200 400 800



4 SECTION
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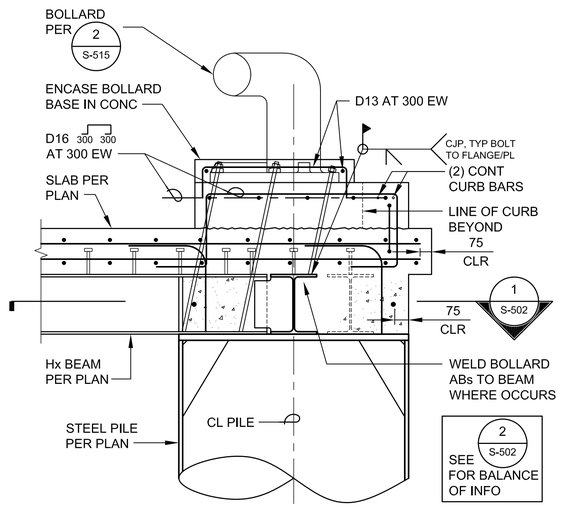

5 SECTION
SCALE: 1:20 0 200 400 800

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MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
SIZE: ISO A1
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POHNC-CONSTRUCTION
APO AP 96334-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 4000
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES NO. 1-1 TANKER CAPABLE, TSURUMI, YOKOHAMA, JAPAN

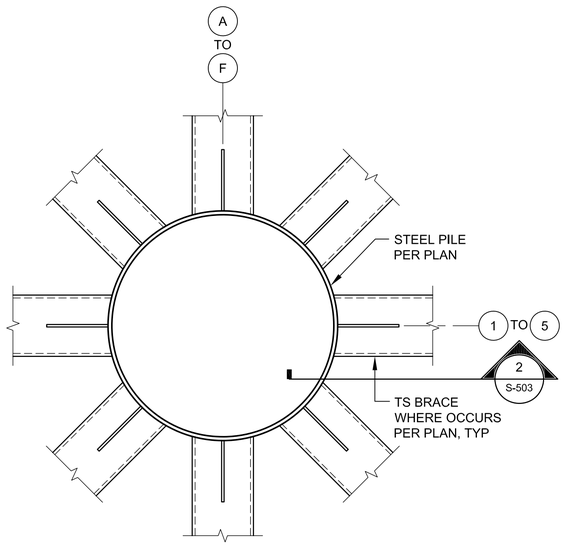
WHARF DETAILS - PILES

SHEET ID
S-502

FILE: DESC1904-S-502.dwg
DATE: 12/8/2020 9:09 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

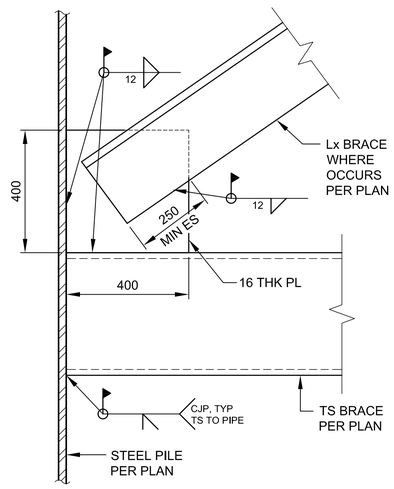
RTA SUBMITTAL



PLAN

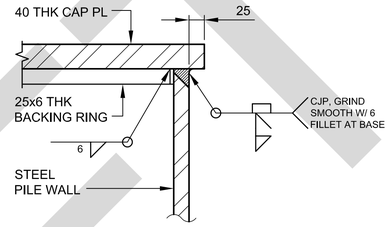
1 SECTION

SCALE: 1:20 0 200 400 800



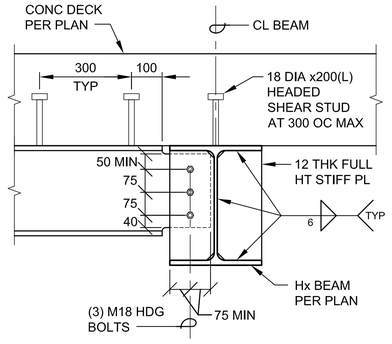
2 DETAIL

SCALE: 1:10 0 100 200 400



3 WELD DETAIL

SCALE: 1:5 0 50 100 200



4 DETAIL

SCALE: 1:10 0 100 200 400

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
PACIFIC OCEAN DIVISION
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 600
HONOLULU, HAWAII 96813

MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
DESC 1904
TSURUMI, YOKOHAMA, JAPAN

WHARF DETAILS
- PILES

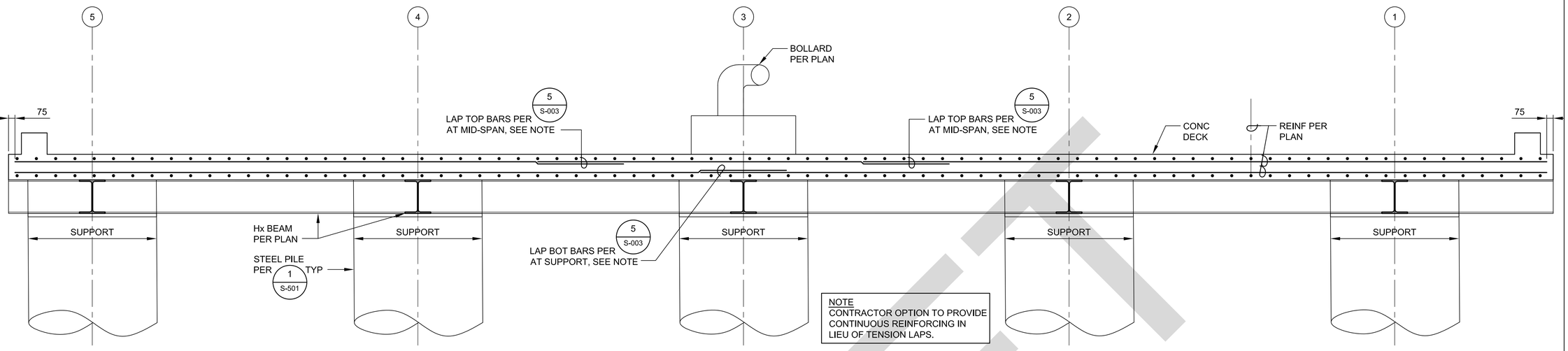
SHEET ID

S-503

FILE: DESC1904-S-503.dwg
DATE: 12/8/2020 9:09 AM
OPER:
SCALE:

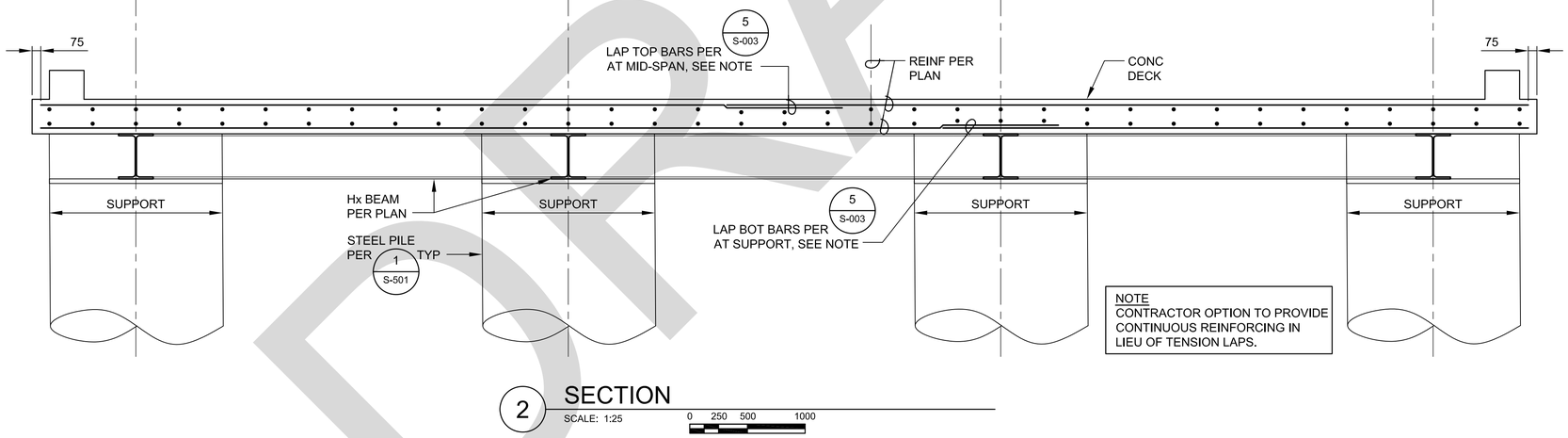
IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL



1 SECTION

SCALE: 1:25 0 250 500 1000



2 SECTION

SCALE: 1:25 0 250 500 1000

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
FILE NAME:

ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -

U.S. ARMY CORPS OF ENGINEERS
POH DISTRICT
APO AP 96343-5010

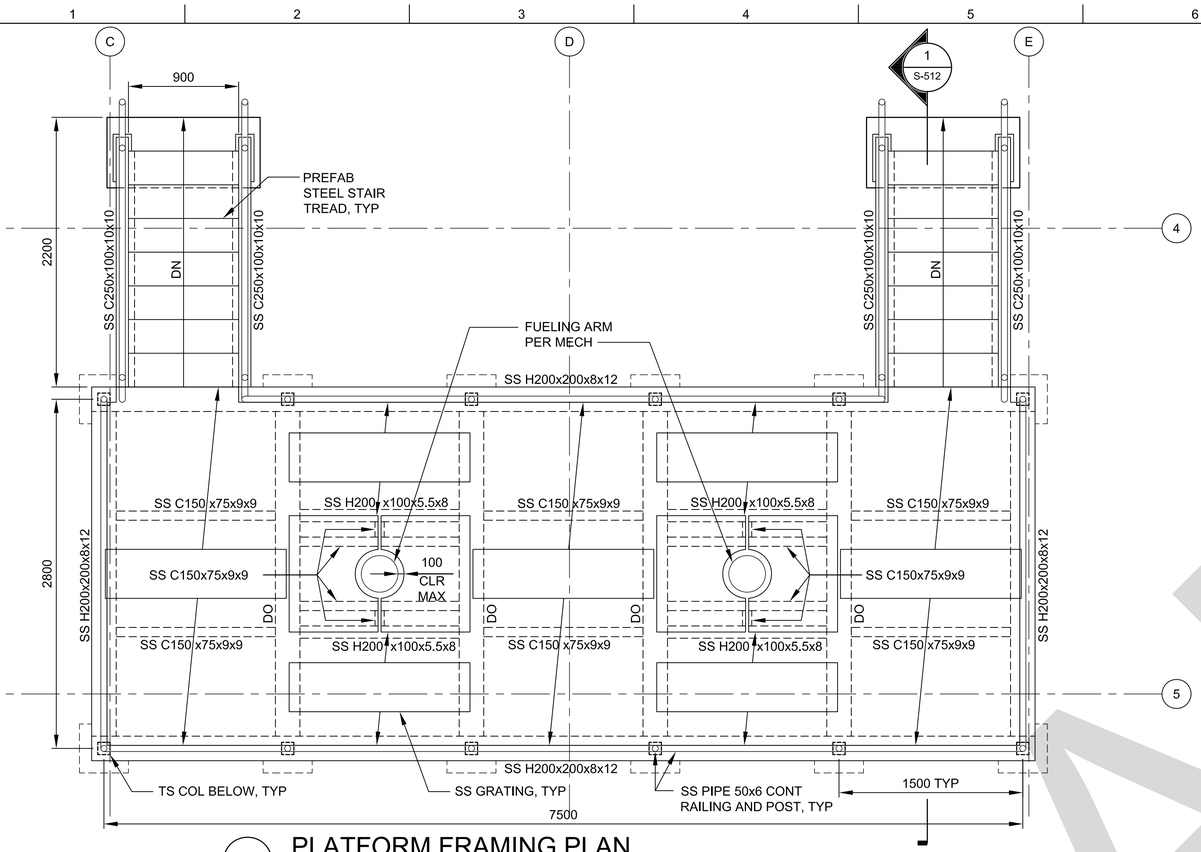
HDR - WTNA JV
1001 BISHOP STREET
SUITE 600
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

WHARF DETAILS
- SLAB

SHEET ID

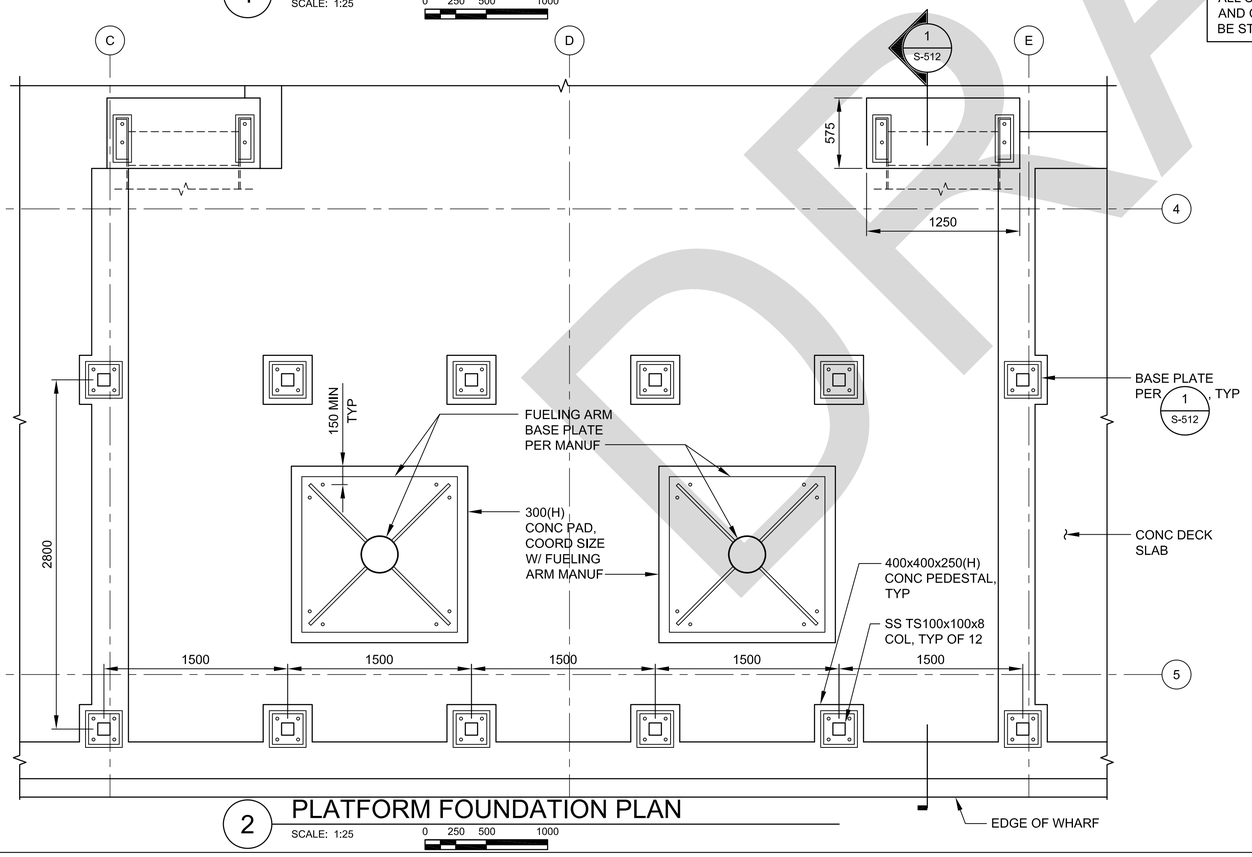
S-504



1 PLATFORM FRAMING PLAN

SCALE: 1:25 0 250 500 1000

NOTE:
ALL STEEL MEMBERS AND CONNECTIONS TO BE STAINLESS STEEL.



2 PLATFORM FOUNDATION PLAN

SCALE: 1:25 0 250 500 1000

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
FILE NAME:

ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -

U.S. ARMY CORPS OF ENGINEERS
POH-PM-MS (STRUCT)
APO AP 96343-5310

HDR - WTNA JV
1001 BISHOP STREET
SUITE 2400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE,
YSURUMI, YOKOHAMA, JAPAN

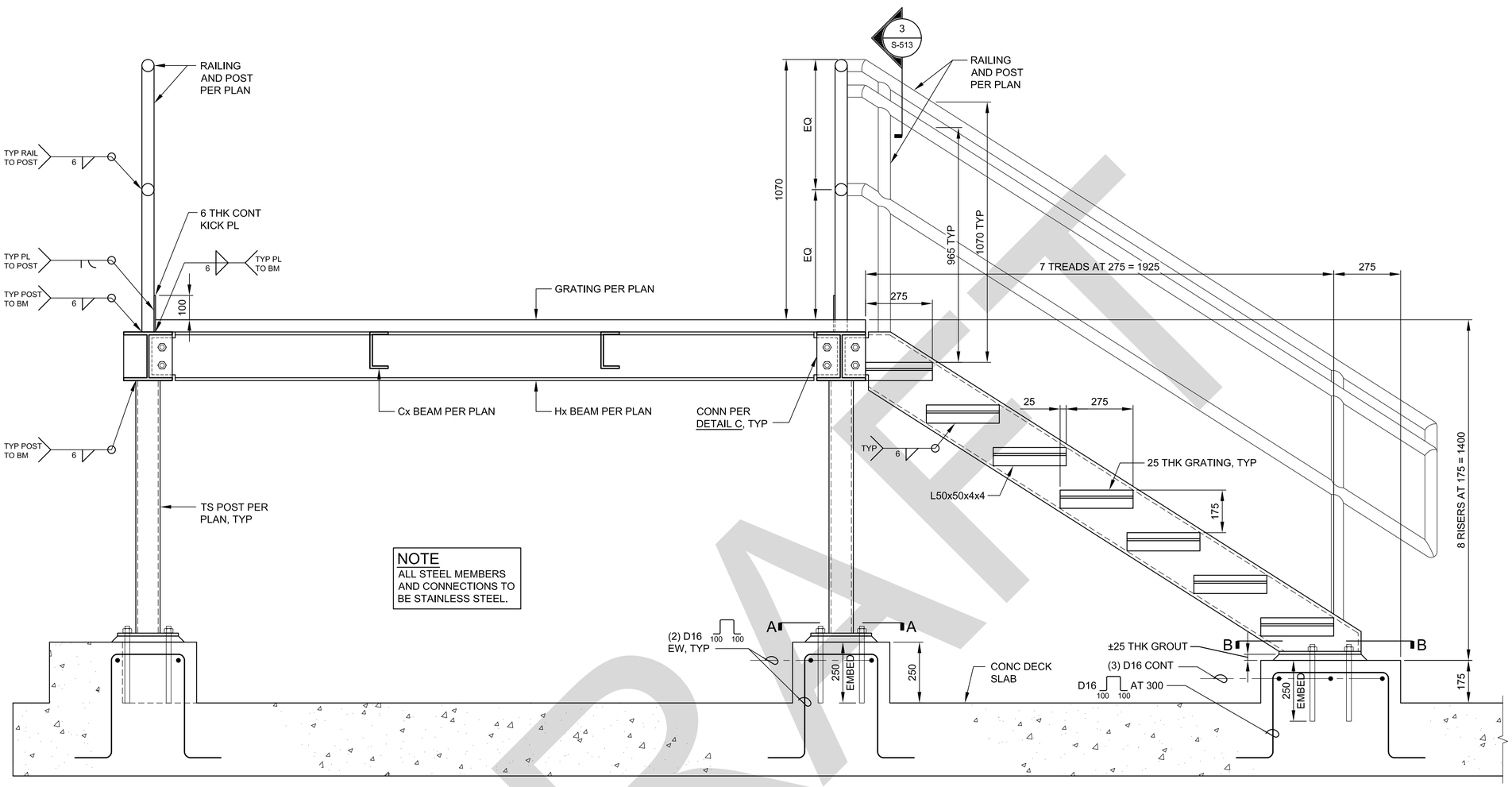
STEEL PLATFORM DETAILS

SHEET ID
S-511

FILE: DESC1904-S-511.dwg
DATE: 12/8/2020 9:10 AM
OPER:
SCALE:

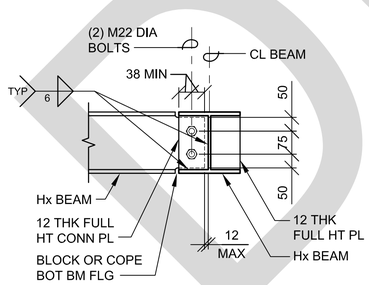
IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL

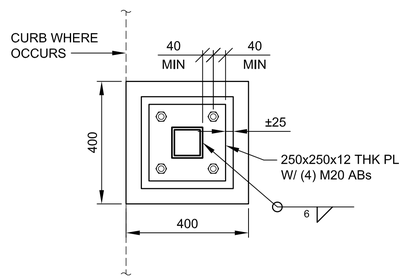


NOTE
ALL STEEL MEMBERS AND CONNECTIONS TO BE STAINLESS STEEL.

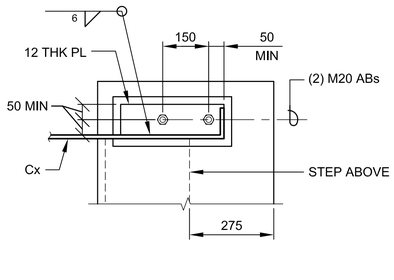
SECTION



DETAIL C



SECTION A-A



SECTION B-B

1 STEEL PLATFORM SECTION

SCALE: 1:10 0 100 200 400

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. ITO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

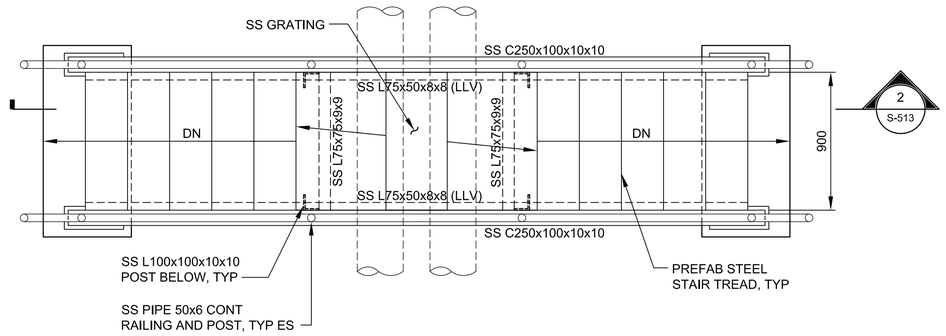
U.S. ARMY CORPS OF ENGINEERS
POHTA AA, POHTCH
APO AP 96858-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 2400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE, YSURUMI, YOKOHAMA, JAPAN

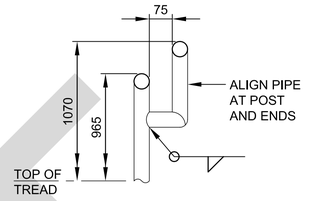
STEEL PLATFORM DETAILS

SHEET ID
S-512



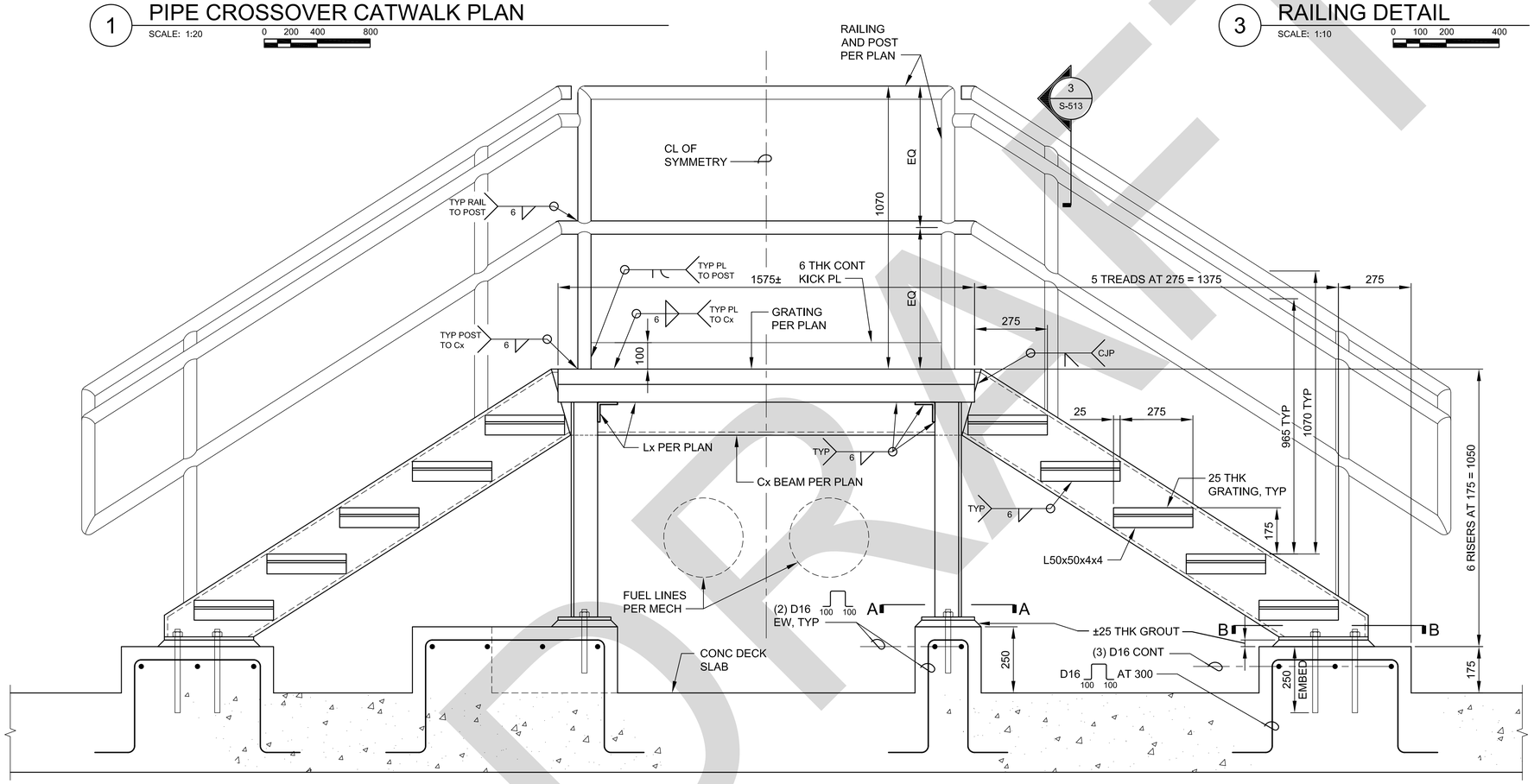
1 PIPE CROSSOVER CATWALK PLAN

SCALE: 1:20 0 200 400 800



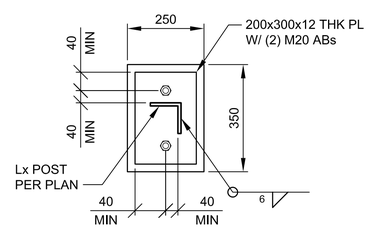
3 RAILING DETAIL

SCALE: 1:10 0 100 200 400

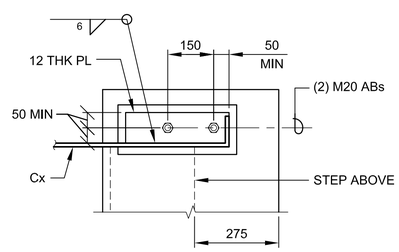


SECTION

NOTE
ALL STEEL MEMBERS AND CONNECTIONS TO BE STAINLESS STEEL.



SECTION A-A



SECTION B-B

2 PIPE CROSSOVER CATWALK SECTION

SCALE: 1:10 0 100 200 400

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LOO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

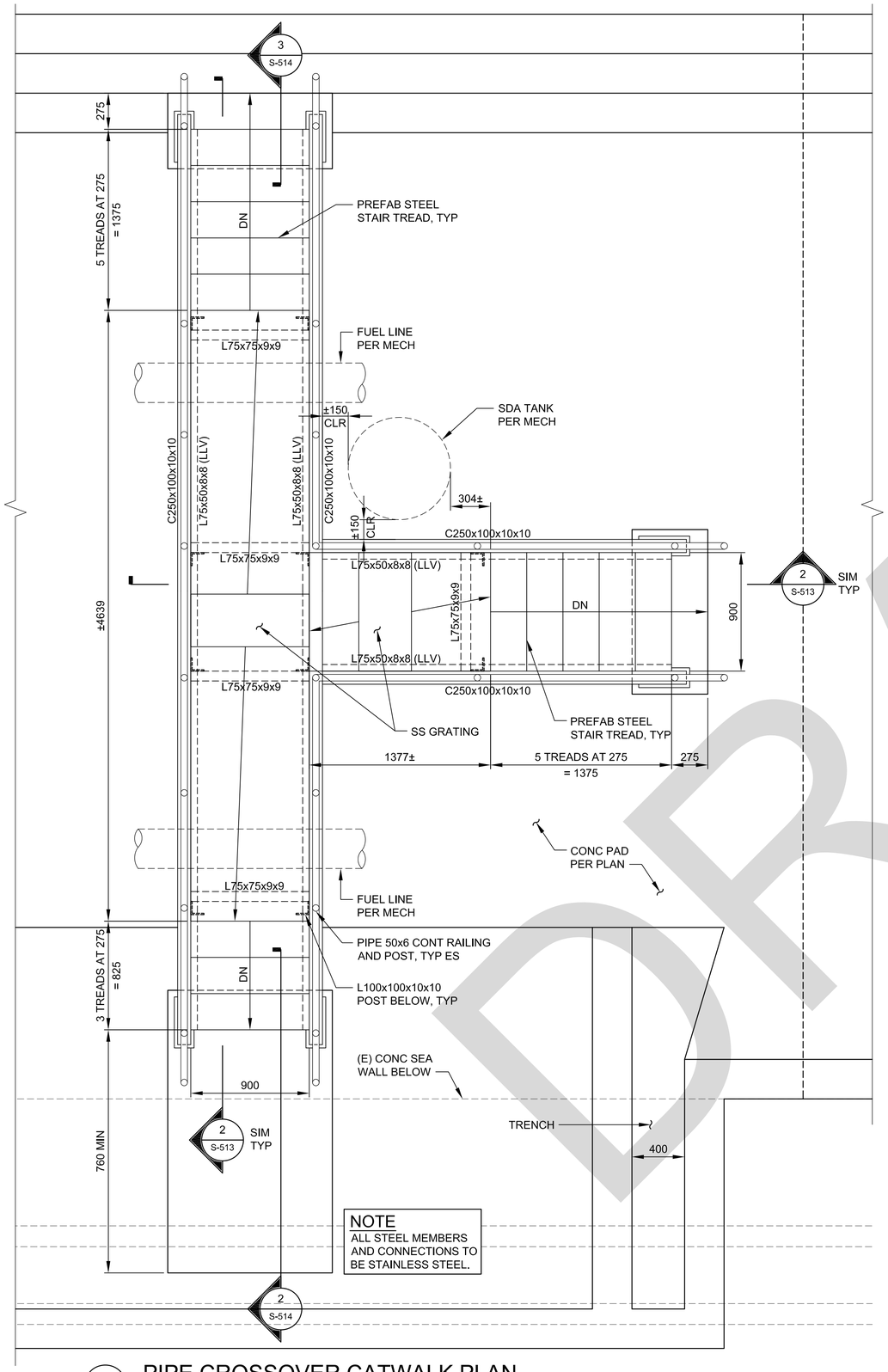
U.S. ARMY CORPS OF ENGINEERS
HONOLULU DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 1600
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

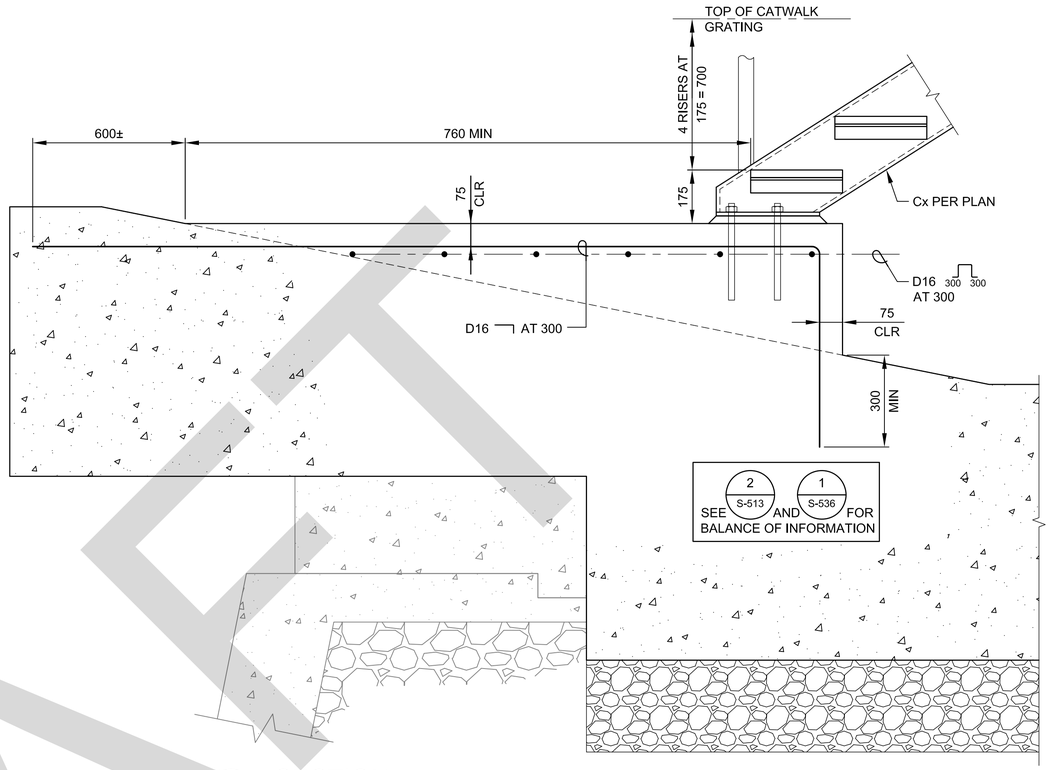
CROSSOVER
CATWALK
DETAILS

SHEET ID
S-513



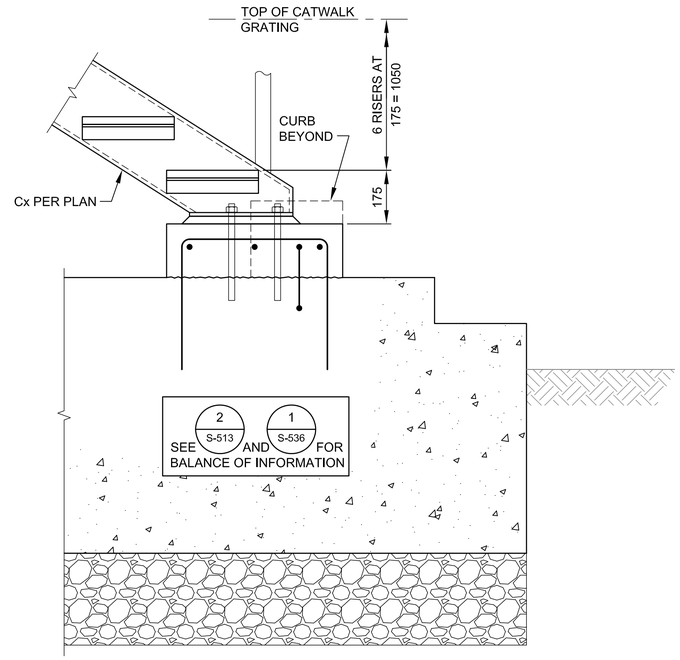
1 PIPE CROSSOVER CATWALK PLAN

SCALE: 1:20 0 200 400 800



2 SECTION

SCALE: 1:10 0 100 200 400



3 SECTION

SCALE: 1:10 0 100 200 400

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LOO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
FILE NAME:
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HW-17-D007
DRAWING CODE: -

U.S. ARMY CORPS OF ENGINEERS
HONOLULU DISTRICT
APO AP 96858-5810

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE,
DESC 1904
TSURUMI, YOKOHAMA, JAPAN

CROSSOVER
CATWALK
DETAILS

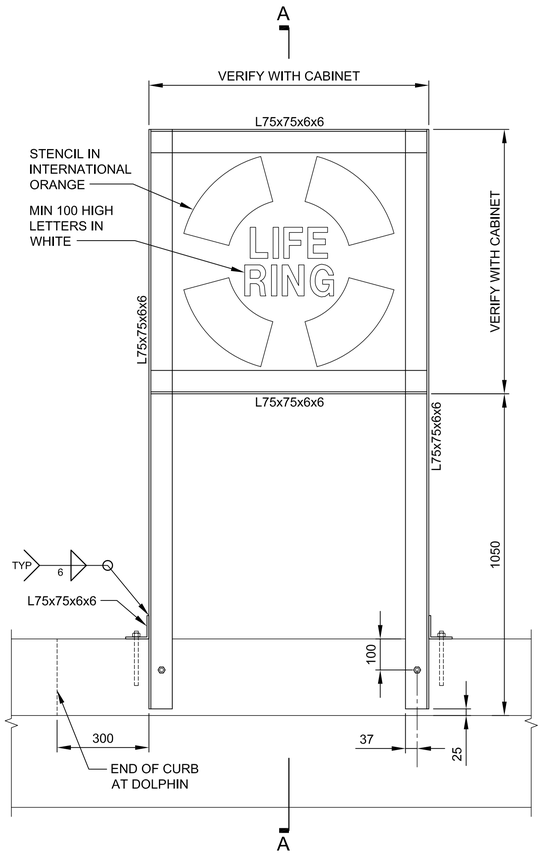
SHEET ID

S-514

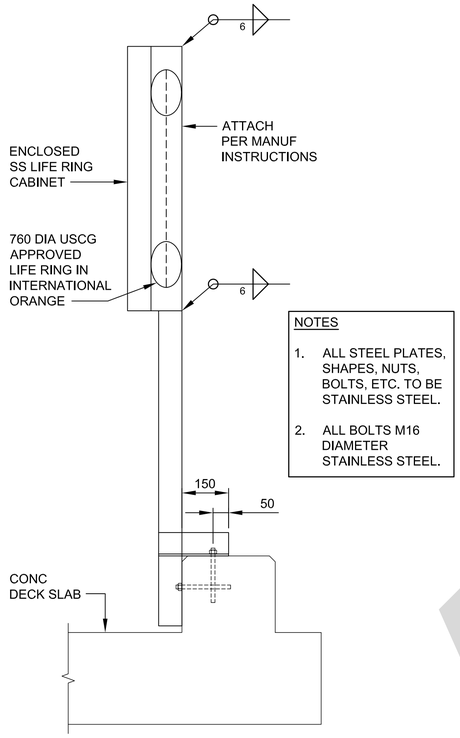
FILE: DESC1904-S-514.dwg
DATE: 12/8/2020 9:10 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL



ELEVATION



SECTION A-A

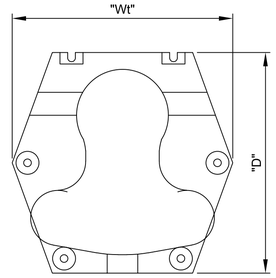
NOTES

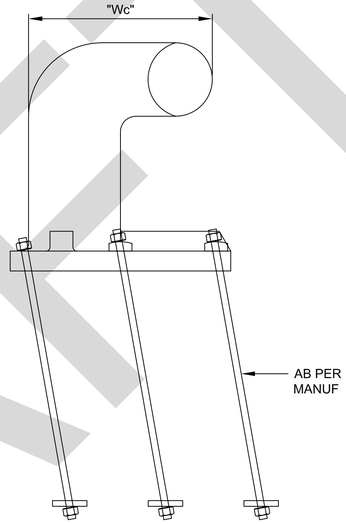
1. ALL STEEL PLATES, SHAPES, NUTS, BOLTS, ETC. TO BE STAINLESS STEEL.
2. ALL BOLTS M16 DIAMETER STAINLESS STEEL.

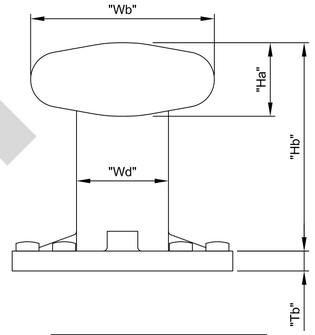
1 LIFE RING SUPPORT DETAILS

SCALE: 1:10 0 100 200 400

BOLLARD		
	25 TON	50 TON
Wt	720	945
D	720	840
Wb	600	700
Wd	300	350
Tb	65	70
Ha	240	280
Hb	680	780
Wc	600	700
BOLT LENGTH	850	1000
BOLTS	M42	M48
BOLT QTY	4	6
RECESS	160	170







NOTES

1. PROVIDE CAPACITY MARKING ON BOLLARD.
2. COVER BOLLARD BASE WITH CONCRETE.
3. PROVIDE ANTICORROSION COATING PER SPECIFICATIONS.

2 DETAIL - BOLLARD

SCALE: 1:10 0 100 200 400

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POHNA-PDS-TSTD
APO AP 96343-5310

HDR - WTNA JV
1001 BISHOP STREET
SUITE 2400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE, YSURUMI, YOKOHAMA, JAPAN

MISCELLANEOUS DETAILS

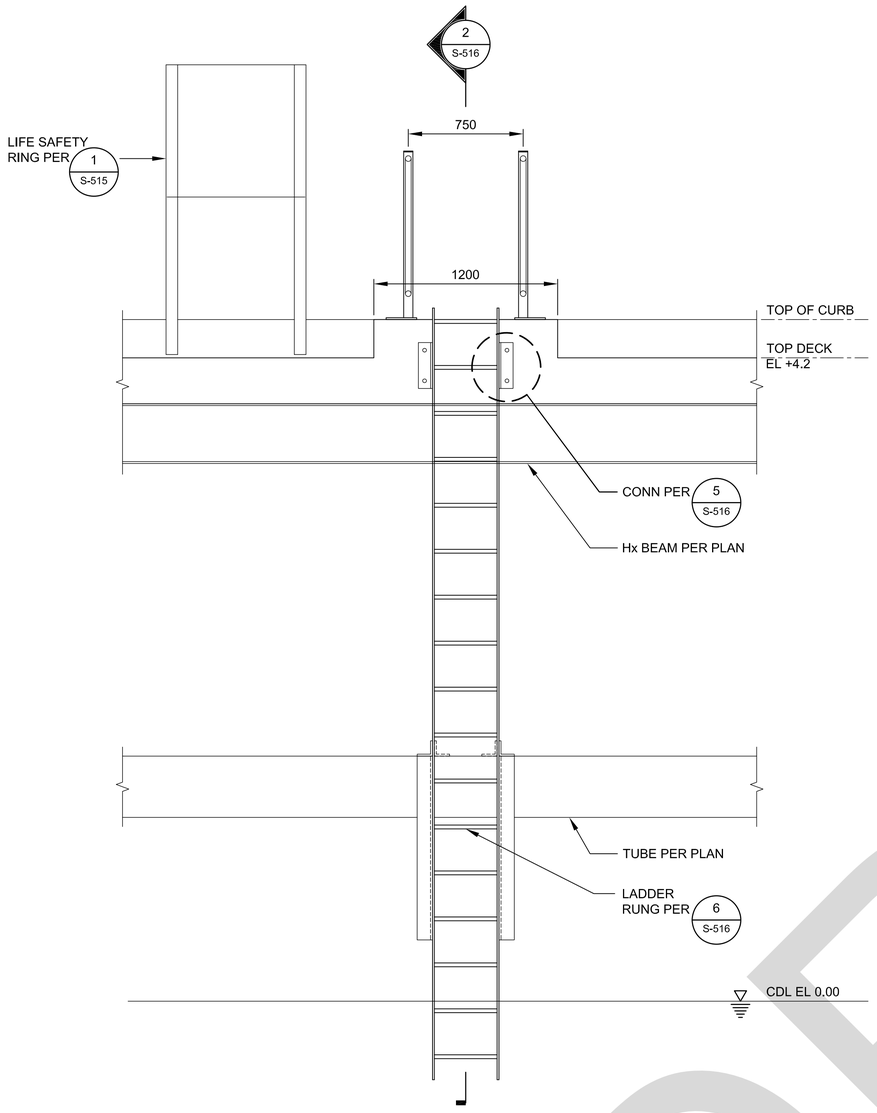
SHEET ID

S-515

FILE: DESC1904-S-515.dwg
DATE: 12/8/2020 9:10 AM
OPER:
SCALE:

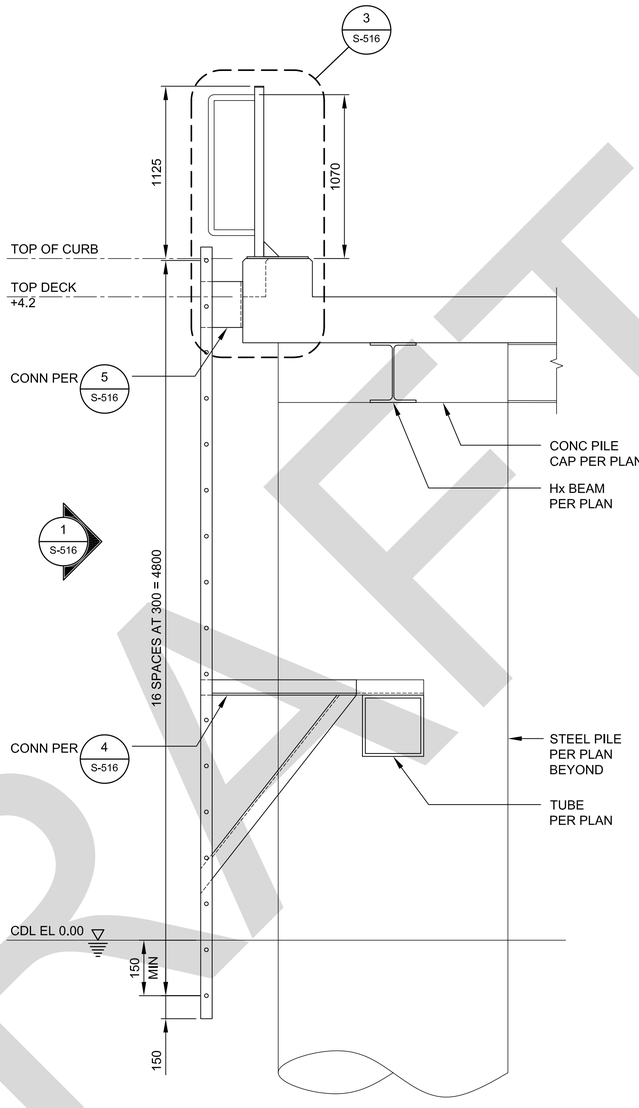
IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL



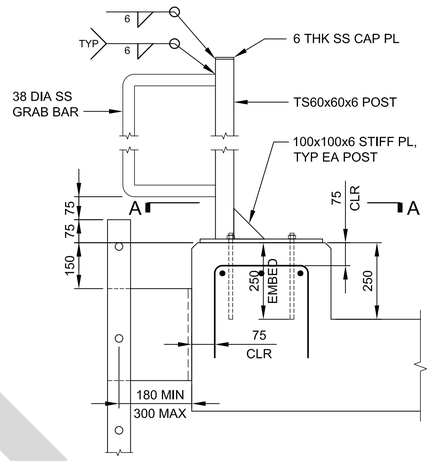
1 LADDER ELEVATION

SCALE: 1:20 0 200 400 800

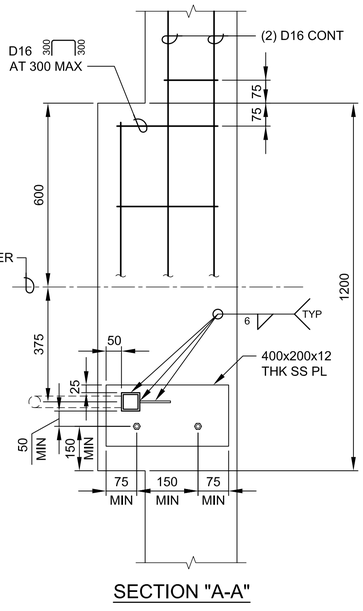


2 LADDER SECTION

SCALE: 1:20 0 200 400 800



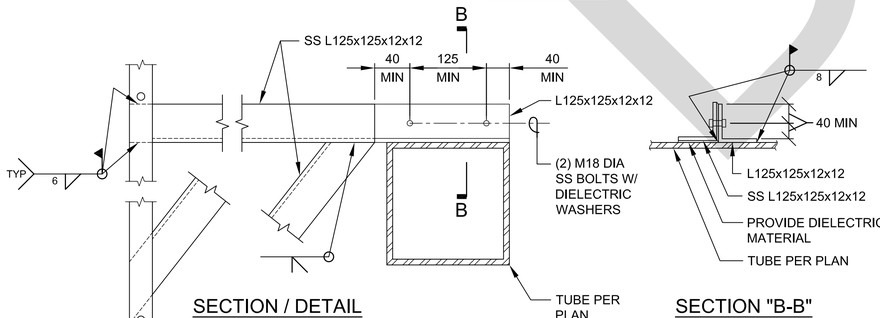
SECTION / DETAIL



SECTION "A-A"

3 POST / CURB DETAIL

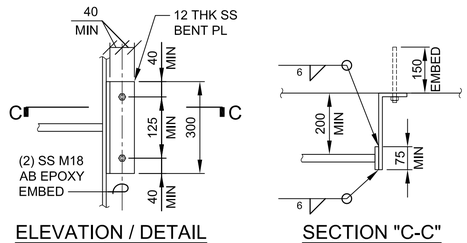
SCALE: 1:10 0 100 200 400



SECTION / DETAIL SECTION "B-B"

4 DETAIL

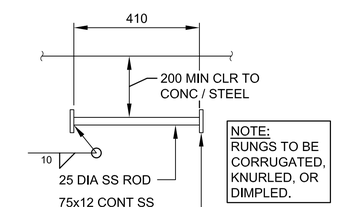
SCALE: 1:10 0 100 200 400



ELEVATION / DETAIL SECTION "C-C"

5 DETAIL

SCALE: 1:10 0 100 200 400



6 DETAIL

SCALE: 1:10 0 100 200 400

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: LJO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
JOINT BASE DISTRICT
APO AP 96543-5010

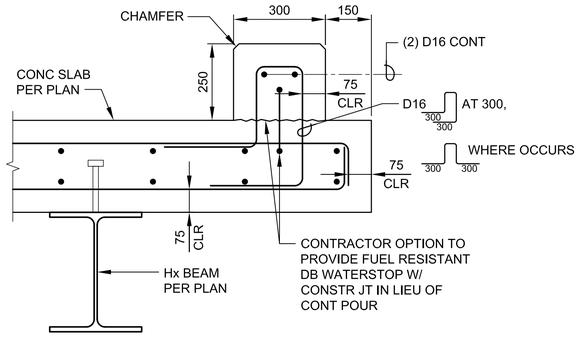
HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES NO. 1 & T-4 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

LADDER DETAILS

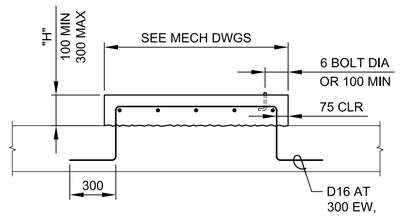
SHEET ID

S-516



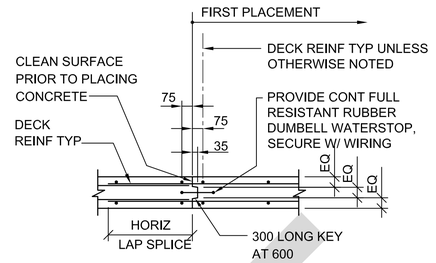
1 SECTION AT CURB

SCALE: 1:10 0 100 200 400



2 EQUIP PAD ON WHARF

SCALE: 1:20 0 200 400 800

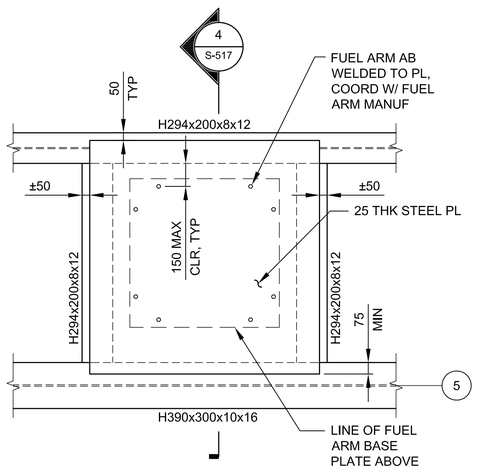


SECTION

NOTES:
1. PROVIDE CONSTRUCTION JOINT AT MIDDLE 1/3 OF SLAB SPAN.
2. LOCATION AND DETAIL OF JOINT MUST BE REVIEWED BY CONTRACTING OFFICER PRIOR TO CONSTRUCTING FORMS OR PLACING CONCRETE.

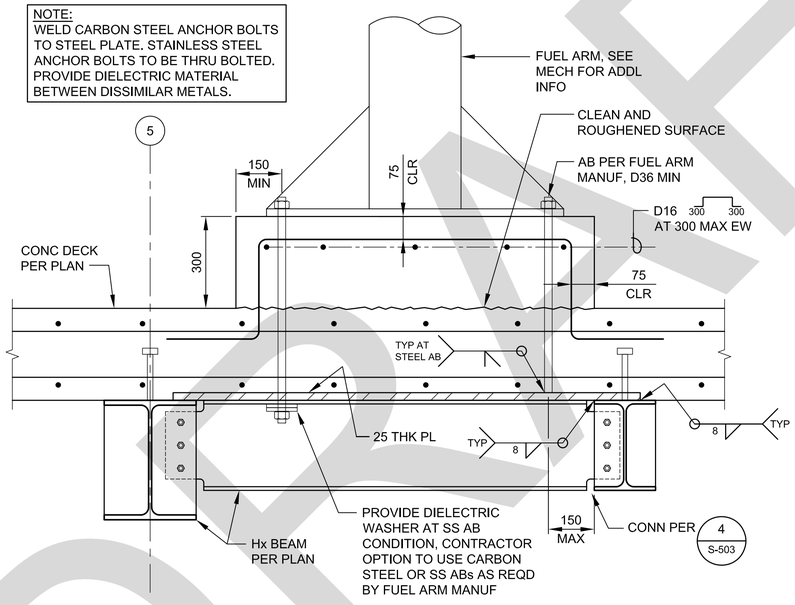
6 DECK SLAB CONSTRUCTION JOINT

NOT TO SCALE



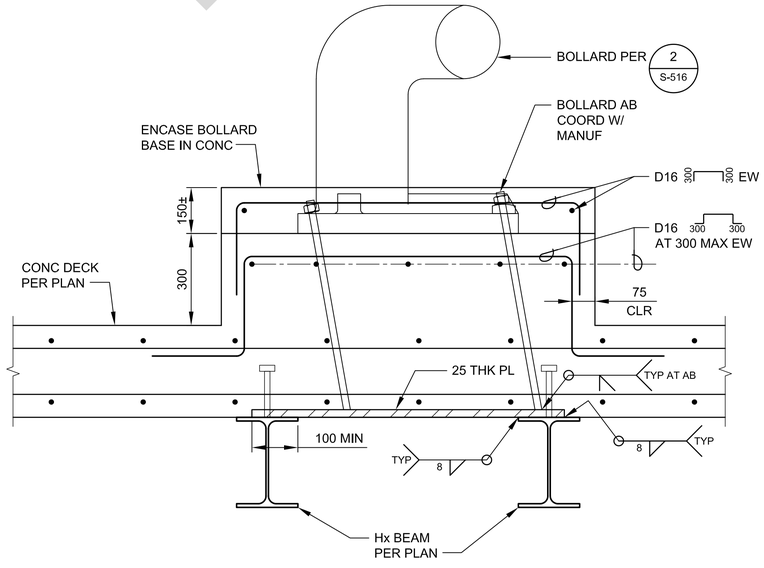
3 FUEL ARM SUPPORT - PLAN

SCALE: 1:20 0 200 400 800



4 FUEL ARM SUPPORT - SECTION

SCALE: 1:10 0 100 200 400



5 BOLLARD ON DOLPHIN

SCALE: 1:10 0 100 200 400

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: J. OKUNAGA
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:
SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

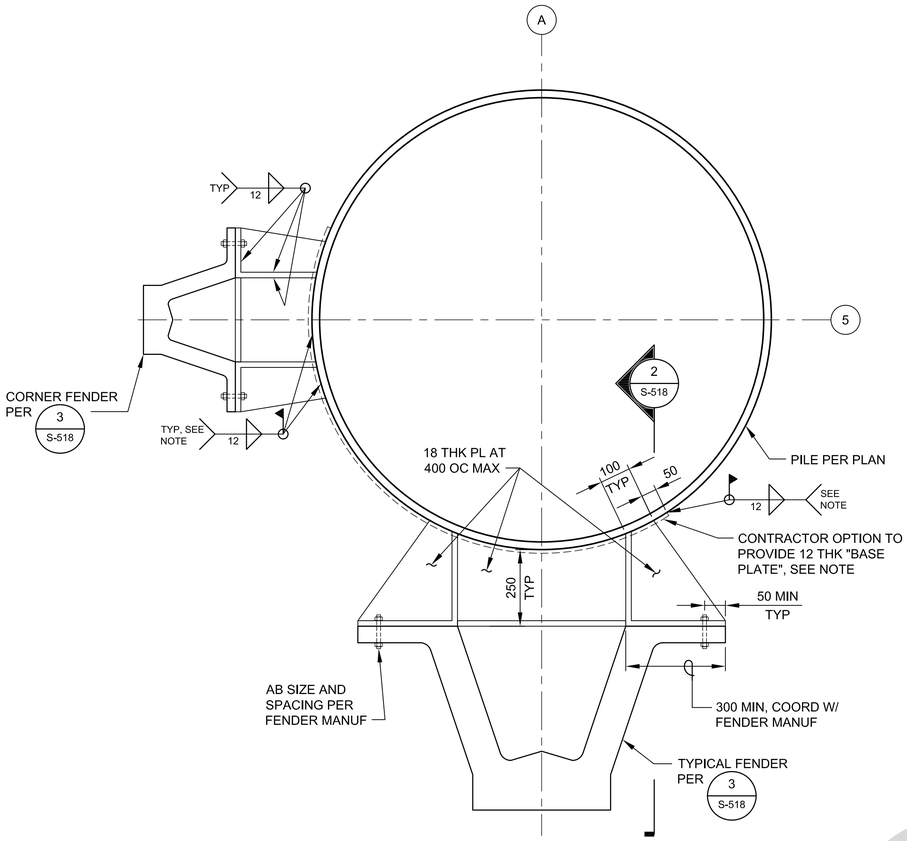
HDR - WTNA JV
1001 BISHOP STREET
SUITE 1400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

MISCELLANEOUS DETAILS

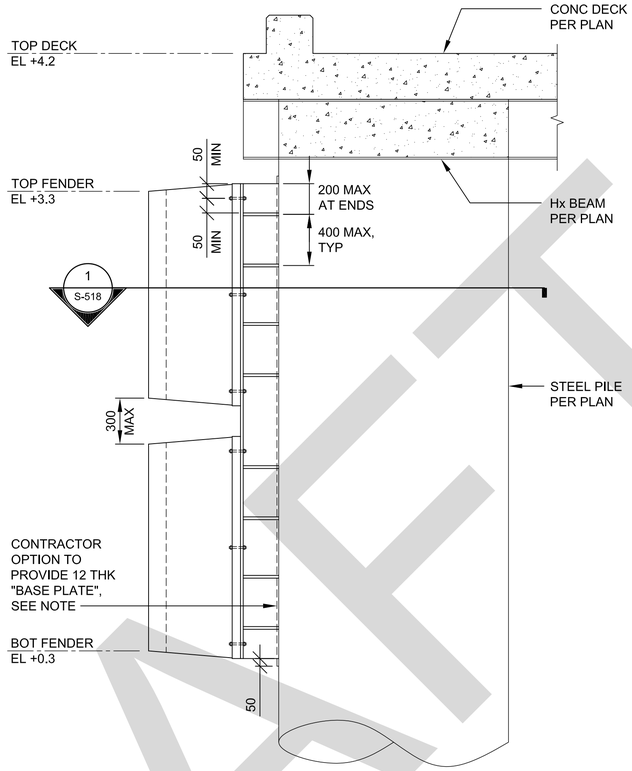
SHEET ID

S-517



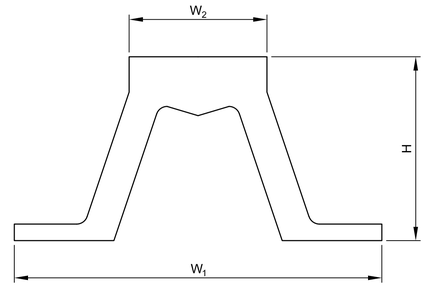
1 FENDER DETAIL - PLAN

SCALE: 1:10 0 100 200 400



2 FENDER DETAIL - SECTION

SCALE: 1:20 0 200 400 800



FENDER PROPERTIES				
TYPE	H (mm)	W_1 (mm)	W_2 (mm)	ENERGY ABSORPTION AT 40% COMPRESSION
TYPICAL	500 - 600	1000 - 1200	400 - 480	100 kNm (74 kft)
CORNER	200 - 300	400 - 600	150 - 250	5 kNm (3.7 kft)

MAX ALLOWABLE REACTION FORCE: 2000 kPa (290 PSI)

3 FENDER PROPERTIES

SCALE: 1:10 0 100 200 400

NOTE:

CONTRACTOR TO TAKE MEASURES TO LIMIT FIELD WELDING TO STEEL PILE TO LIMIT FIELD APPLICATION OF PROTECTIVE COATINGS. MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO, STEEL FENDER SUPPORTS WELDED TO PILE PRIOR TO FIELD INSTALLATION, OR STEEL FENDER SUPPORTS WELDED TO CURVED BASE PLATE.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LOO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POD AP 96843-5010
APO AP 96334-5010

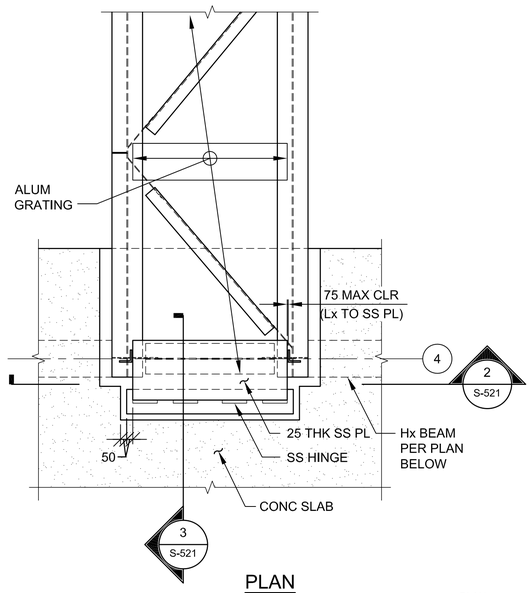
HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

FENDER DETAILS

SHEET ID

S-518

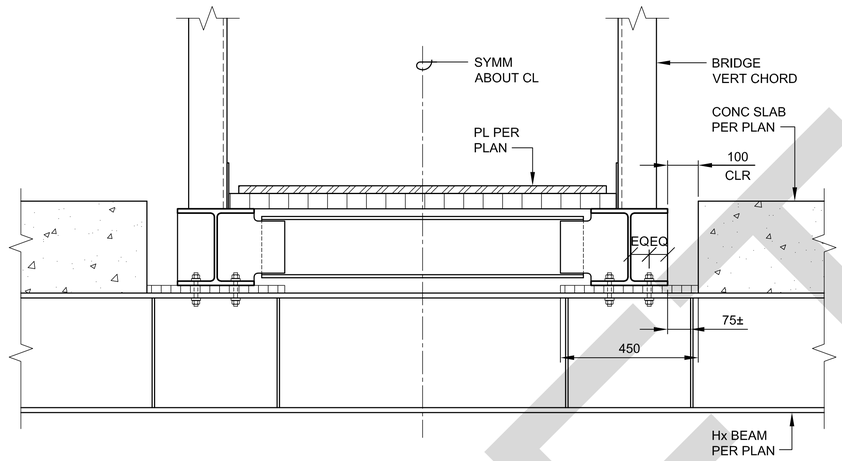


PLAN

1 BRIDGE CONN AT DOLPHIN

SCALE: 1:25 0 250 500 1000

PLAN NORTH



2 SECTION

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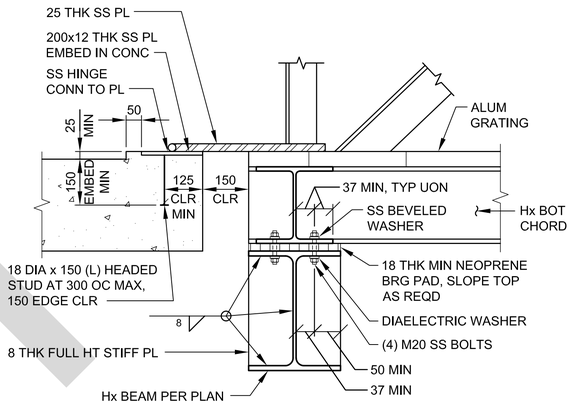

3 SECTION

SCALE: 1:10 0 100 200 400

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DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
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ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POH-PPD-MC
FOR AP DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 600
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

WHARF DETAILS - MOORING DOLPHIN

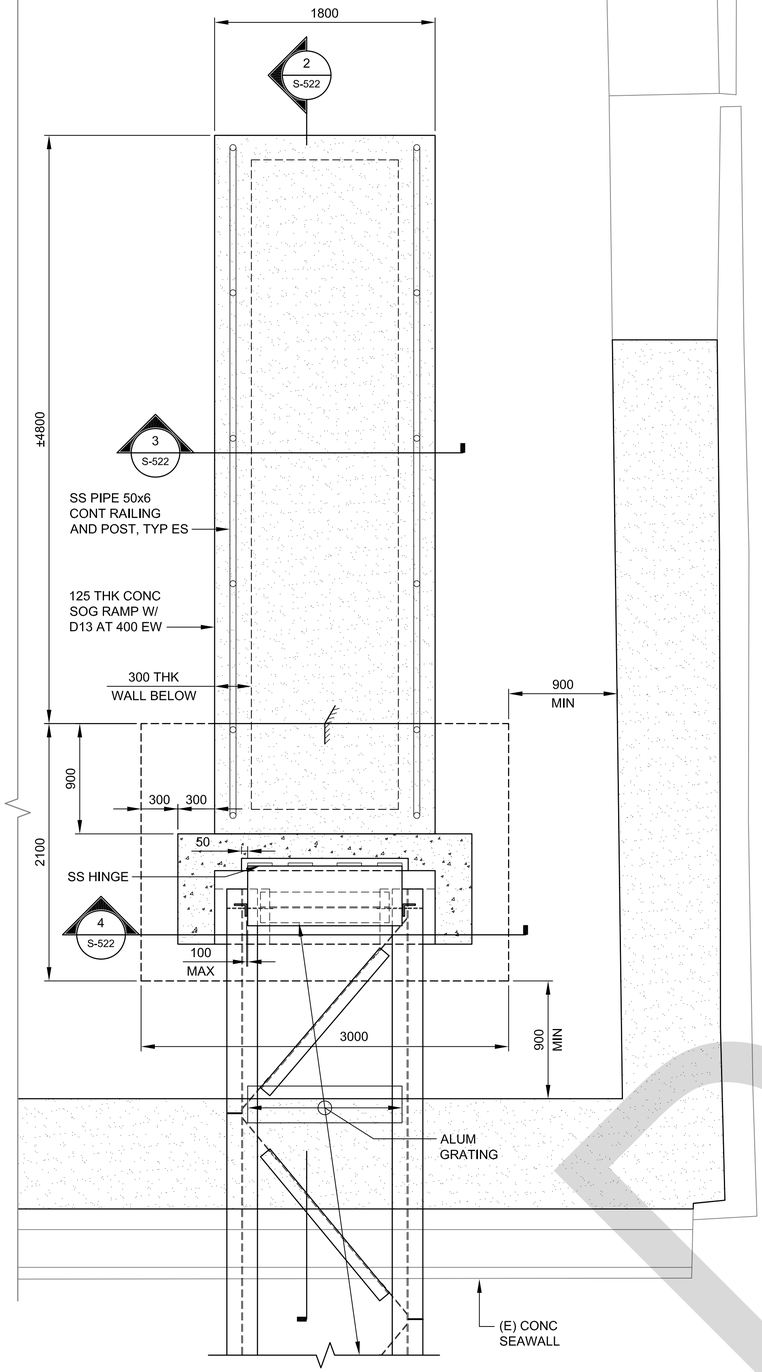
SHEET ID

S-521

FILE: DESC1904-S-521.dwg
DATE: 12/8/2020 9:10 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL



1 FOUNDATION PLAN
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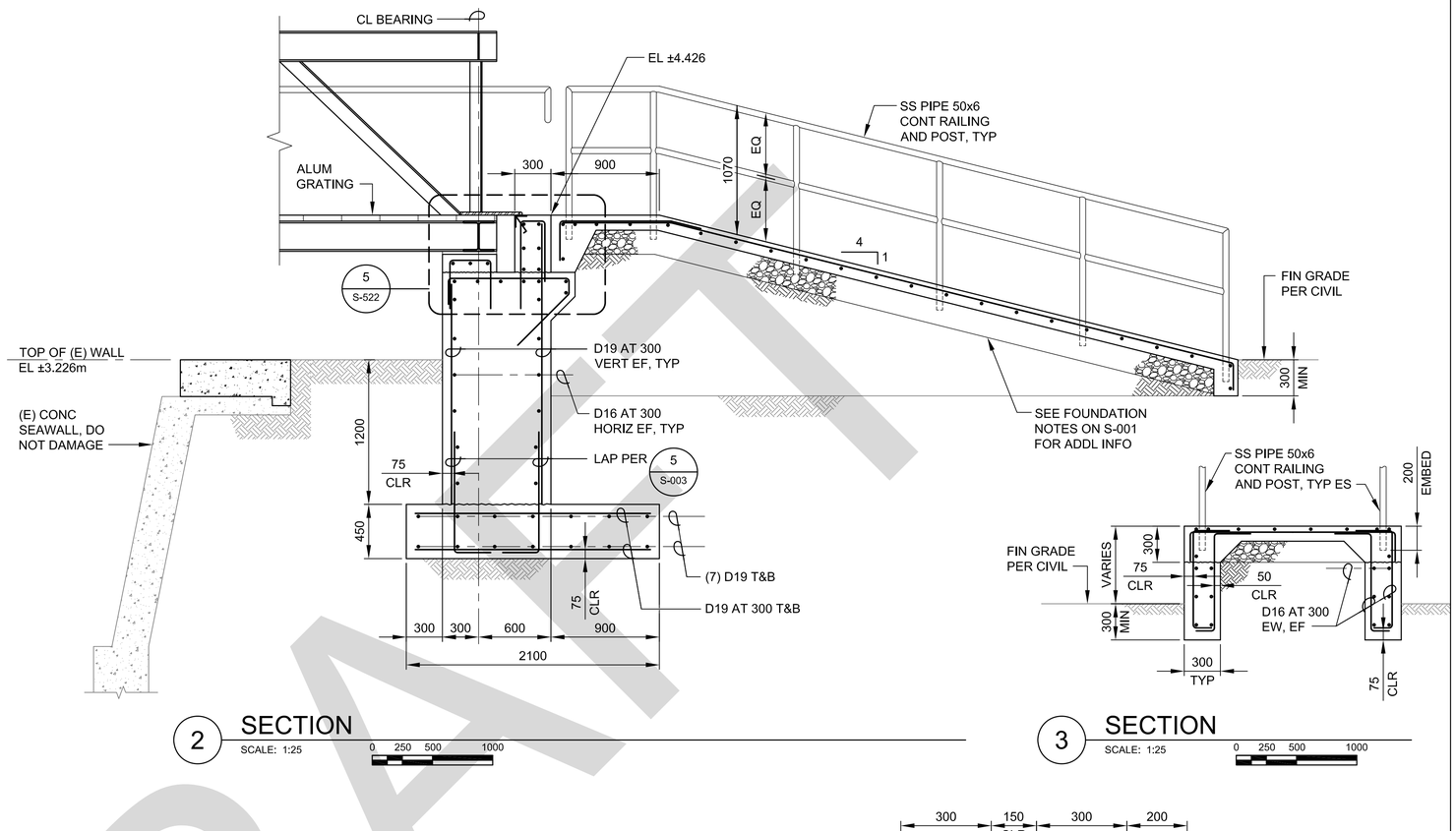
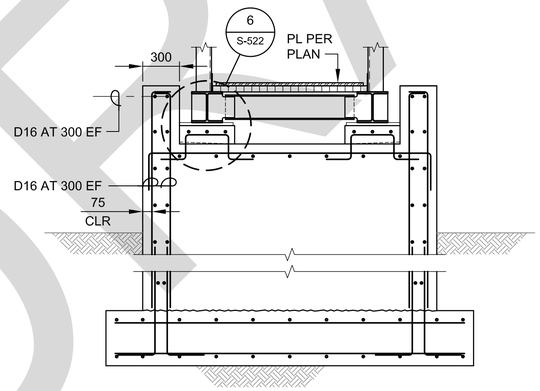
PLAN NORTH



2 SECTION
SCALE: 1:25 0 250 500 1000

3 SECTION
SCALE: 1:25 0 250 500 1000



4 SECTION
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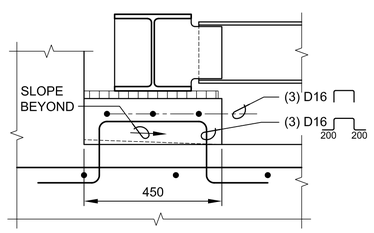
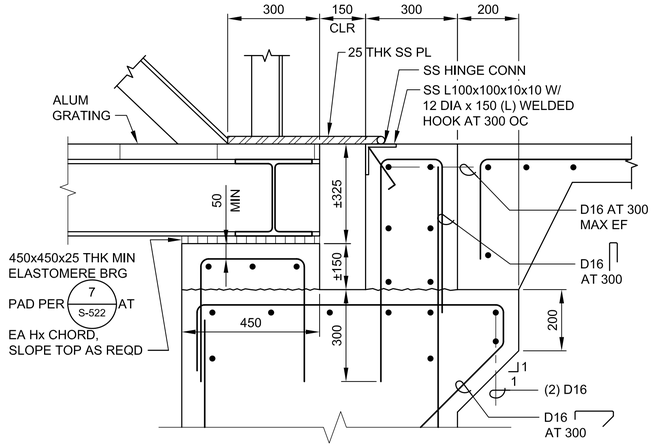
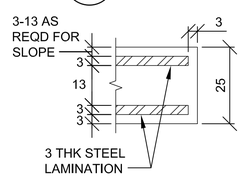


6 DETAIL
SCALE: 1:10 0 100 200 400



5 DETAIL
SCALE: 1:10 0 100 200 400



NOTE
IF OTHER LAMINATIONS ARE USED IN LIEU OF STEEL,
ADJUST BEARING SEAT HEIGHT AS REQUIRED.

7 ELASTOMERIC BEARING PAD
SCALE: 1:1 0 10 20 40

DRAFT

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

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DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HW-17-D007
DRAWING CODE: -
SIZE: ISO A1
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POHNA DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES NO. 1 & 4 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

WHARF DETAILS - WALKWAY FOUNDATION

SHEET ID
S-522

FILE: DESC1904-S-522.dwg
DATE: 12/8/2020 9:10 AM
OPER:
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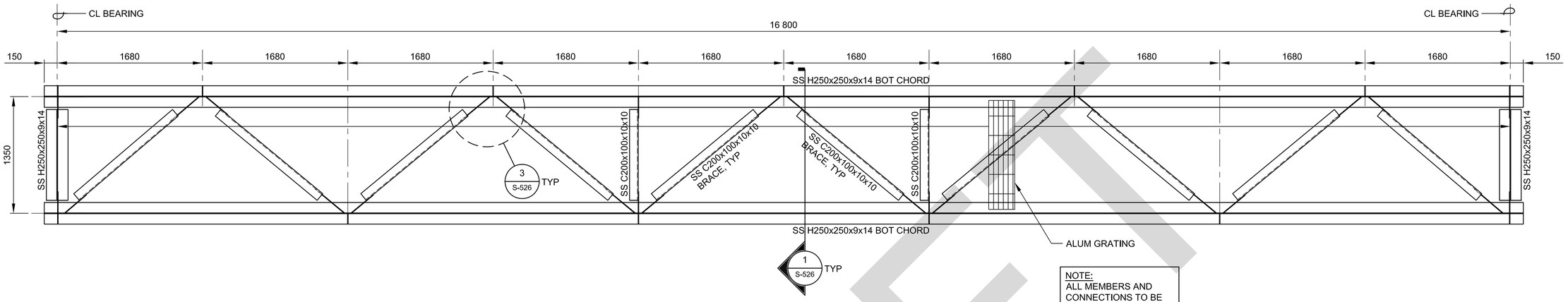

1 WALKWAY FRAMING PLAN

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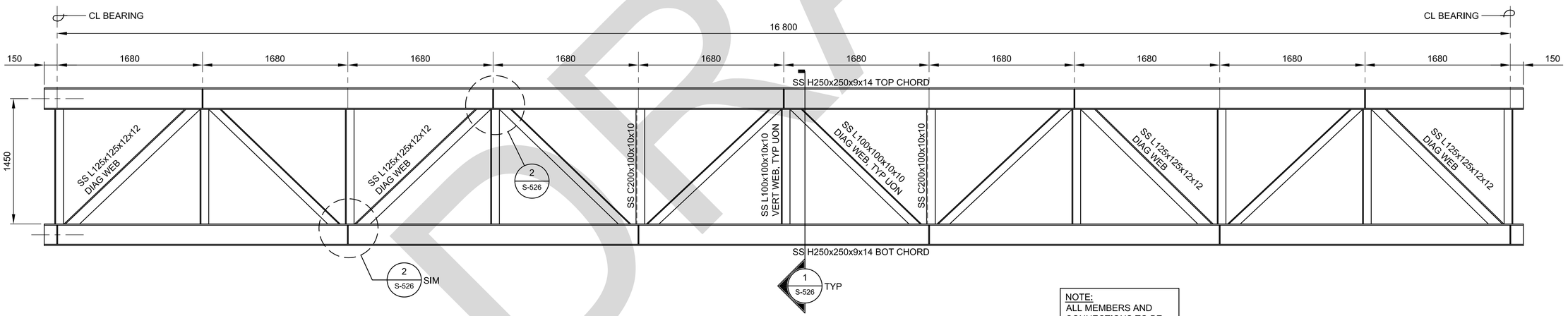

2 WALKWAY FRAMING ELEVATION

SCALE: 1:25 0 250 500 1000

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CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POHNPEI DISTRICT
APO AP 96944-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 1000
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

WALKWAY DETAILS

SHEET ID

S-525

FILE: DESC1904-S-525.dwg
DATE: 12/8/2020 9:10 AM
OPER:
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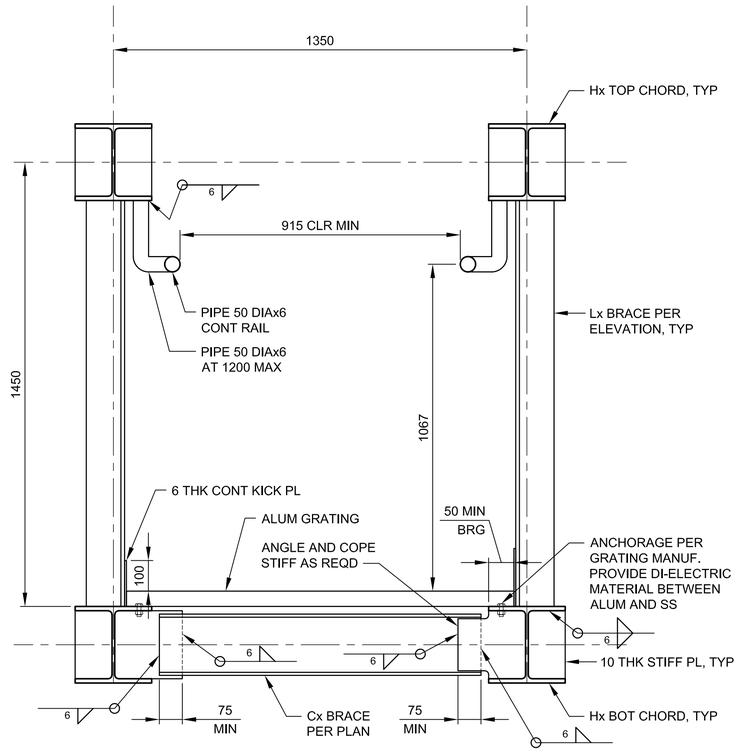
IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL



1 WALKWAY FRAMING SECTION

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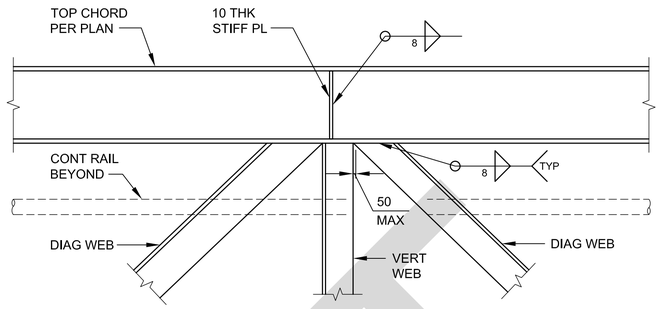

ELEVATION

2 CONNECTION DETAIL

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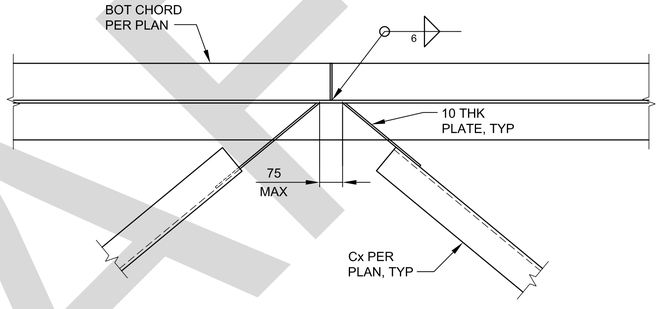

PLAN

3 CONNECTION DETAIL

SCALE: 1:10 0 100 200 400

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SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POH-PPD-MC
FORT SHAFTER
APO AP 96858-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 1600
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

WALKWAY
DETAILS

SHEET ID

S-526

FILE: DESC1904-S-526.dwg
DATE: 12/8/2020 9:10 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

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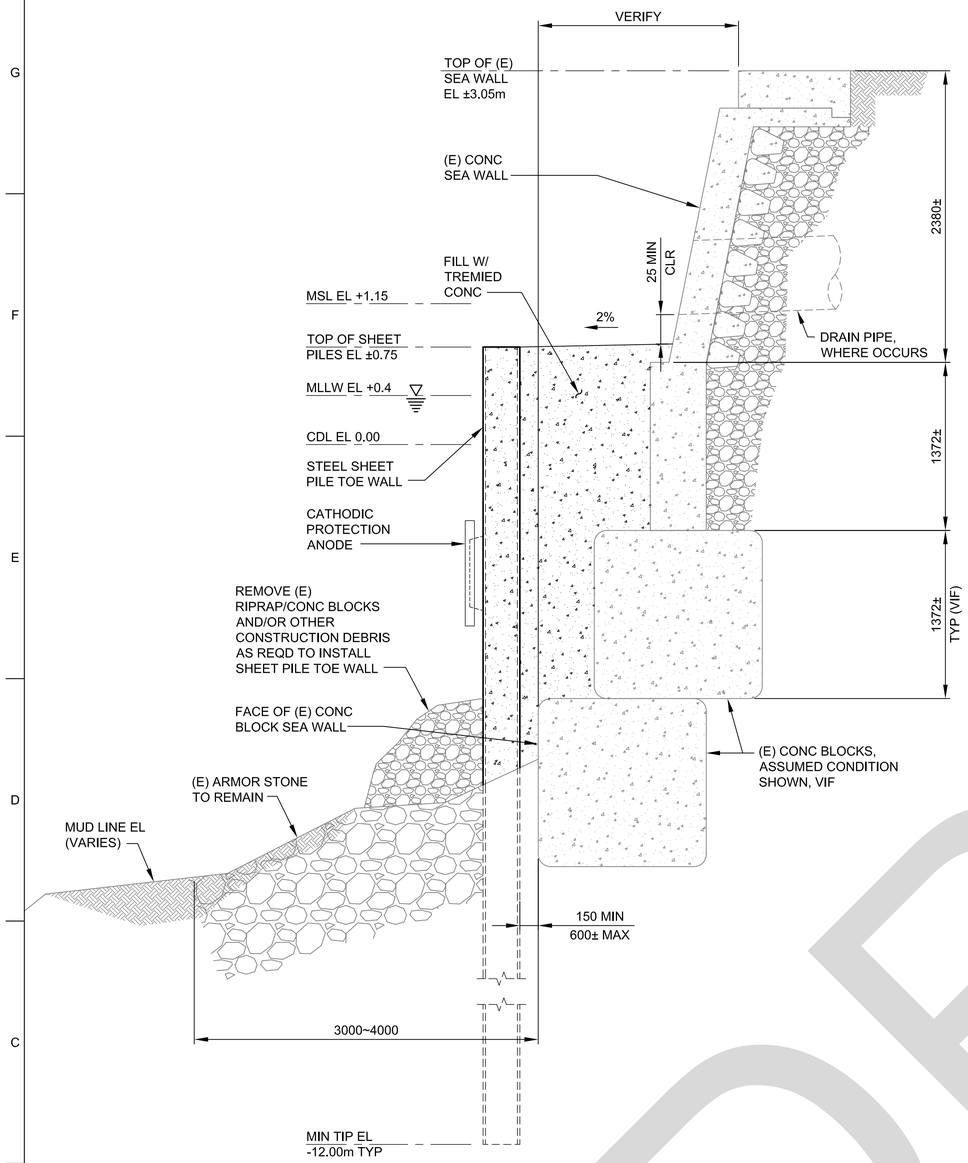


1 TYPICAL SHEET PILE WALL SECTION

SCALE: 1:25 0 250 500 1000

STEEL SHEET PILE WALL NOTES

1. THE SHEET PILE WALL SYSTEM CONSISTS OF TOE PROTECTION FOR EXISTING CONCRETE SEAWALL.
2. THE EXISTING SEAWALL DIMENSIONS ARE BASED ON AS-BUILT DRAWINGS. FIELD VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS PRIOR TO FINALIZING SHEET PILE WALL LAYOUT AND FABRICATION.
3. PROVIDE HOT-ROLLED U-TYPE SHEET PILE SECTIONS CONFORMING TO JIS A 5523 GRADE SYW390, JIS A 5528 GRADE SY390 OR ASTM A572 GRADE 50.
4. SHEET PILE INSTALLATION:
   - A. INSTALL SHEET PILE WALL IN ACCORDANCE WITH CONTRACT DOCUMENTS.
   - B. ALIGNMENT OF SHEET PILE WALL TO BE MAINTAINED AT MINIMUM 150 mm CLEARANCE BETWEEN THE EXISTING CONCRETE SEAWALL AND THE INNER FLANGE OF THE STEEL SHEET PILE WALL UNLESS OTHERWISE NOTED. SEE DEVIATION ANGLE AND CORNER CONDITION FOR ADDITIONAL INFORMATION.
   - C. SHEET PILES MUST BE DRIVEN INTO THE GROUND WITH LOW VIBRATION METHODS SUCH AS VARIABLE HIGH FREQUENCY VIBRO HAMMER OR HYDRAULIC TYPE.
   - D. RUBBLE STONE IN FRONT OF EXISTING SEAWALL MUST BE REMOVED PRIOR TO SHEET PILE DRIVING. TEMPORARY INSTALLATION OF STEEL CASINGS MINIMUM 1500mm DIAMETER MUST BE USED TO EXTRACT RUBBLE STONES. VOIDS MUST BE FILLED WITH JIS A5001 CRUSHED STONE OR SUITABLE WELL-GRADED AGGREGATE TO ENSURE STABILITY OF THE FOUNDATION UPON REMOVAL OF THE CASING.
   - E. INSTALL SHEET PILE WALL BEFORE PIPE PILE INSTALLATION.
5. CORROSION PROTECTION:
   - A. PROVIDE MARINE SPLASH ZONE COATING AS INDICATED. COATING TO BE A URETHANE ELASTOMER ANTICORROSIVE COATING. COORDINATE COATING WITH SHEET PILE WALL MANUFACTURER. PROTECT COATING FROM DAMAGE DURING CONSTRUCTION.
   - B. PROVIDE ELECTROLYTIC PROTECTION SUCH AS CATHODIC PROTECTION AS INDICATED. SEE SHEET C-509 FOR ADDITIONAL INFO.
6. ALL SURFACES THAT WILL BE CONTACT WITH NEW CONCRETE FILL MUST BE CLEANED FREE OF MARINE GROWTH AN ALL OTHER DELETERIOUS MATERIALS.
7. PROVIDE BRACING AS REQUIRED TO PREVENT SHEET PILE WALL FROM DEFLECTING DURING CONCRETE TREMIE PLACEMENT.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HW-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
HONOLULU DISTRICT
APO AP 96858-5810

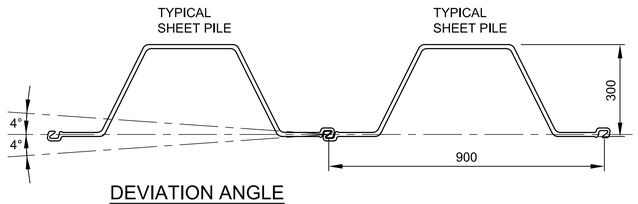
HDR - WTNA JV
1001 BISHOP STREET
SUITE 1400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

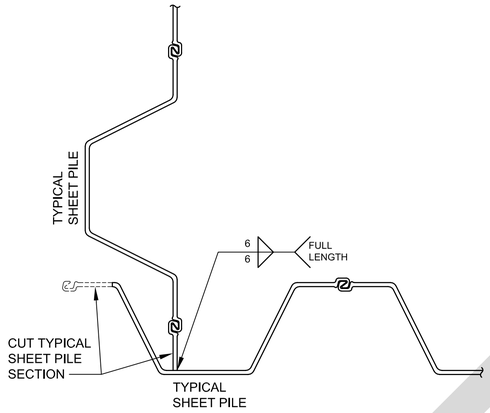
SHEET PILE
WALL DETAILS

SHEET ID

S-531



DEVIATION ANGLE



CORNER CONDITION

STEEL SHEET PILE SECTION PROPERTIES

TYPE	DIMENSIONS			PROPERTIES PER PILE				PROPERTIES PER 1 M OF PILE WALL WIDTH			
	EFFECTIVE WIDTH, W (mm)	EFFECTIVE HEIGHT, H (mm)	THICKNESS, T (mm)	SECTION AREA, cm^2	MOMENT OF INERTIA, cm^4	SECTION MODULUS, cm^3	UNIT MASS, kg/M	SECTION AREA, cm^2	MOMENT OF INERTIA, cm^4	SECTION MODULUS, cm^3	UNIT MASS, kg/M
TYPICAL	900	300	13.2	144.4	22,000	1,450	113	160.4	24,400	1,610	126

1 STEEL SHEET PILE SECTION PROPERTIES

SCALE: 1:10 0 100 200 400

US Army Corps of Engineers®

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DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
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SUBMITTED BY: D. OKAWA
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:
SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
POH-PPD-DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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SUITE 600
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

SHEET PILE
WALL DETAILS

SHEET ID

S-532

FILE: DESC1904-S-532.dwg
DATE: 12/8/2020 9:10 AM
OPER:
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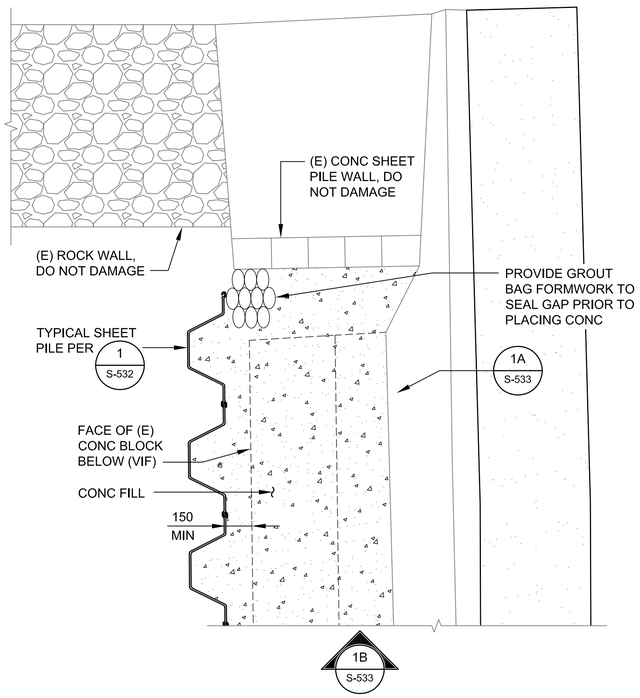
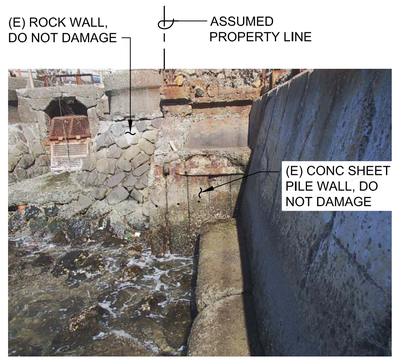


PLAN

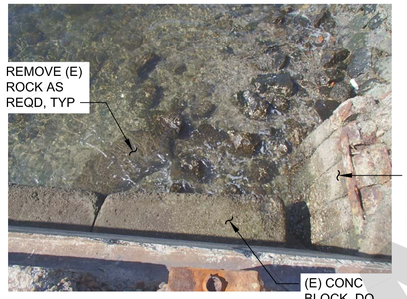
1 TOE WALL - WEST END

SCALE: 1:25 0 250 500 1000



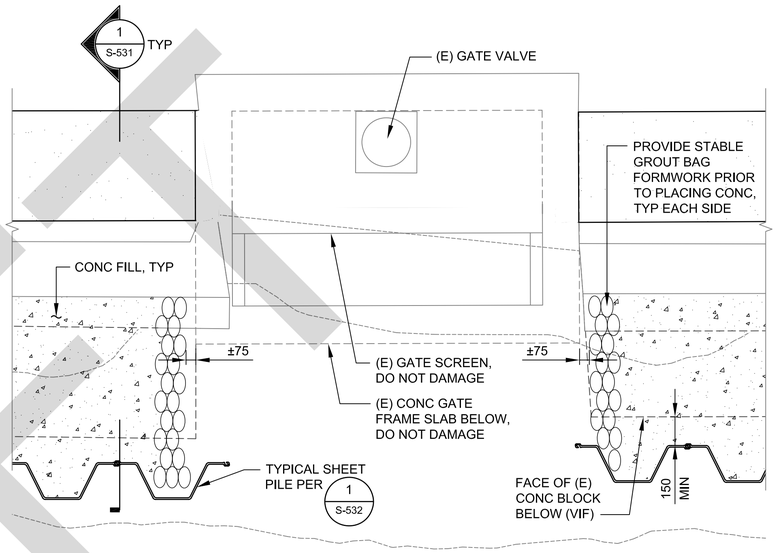
1A PHOTO

NOT TO SCALE



1B PHOTO

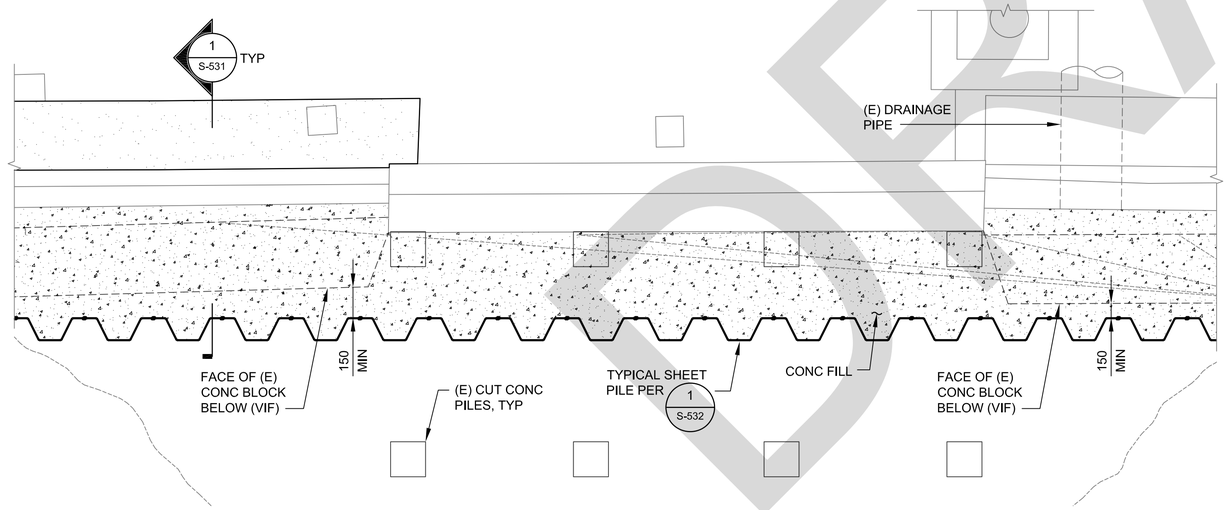
NOT TO SCALE



PLAN

2 TOE WALL - AT GATE VALVE

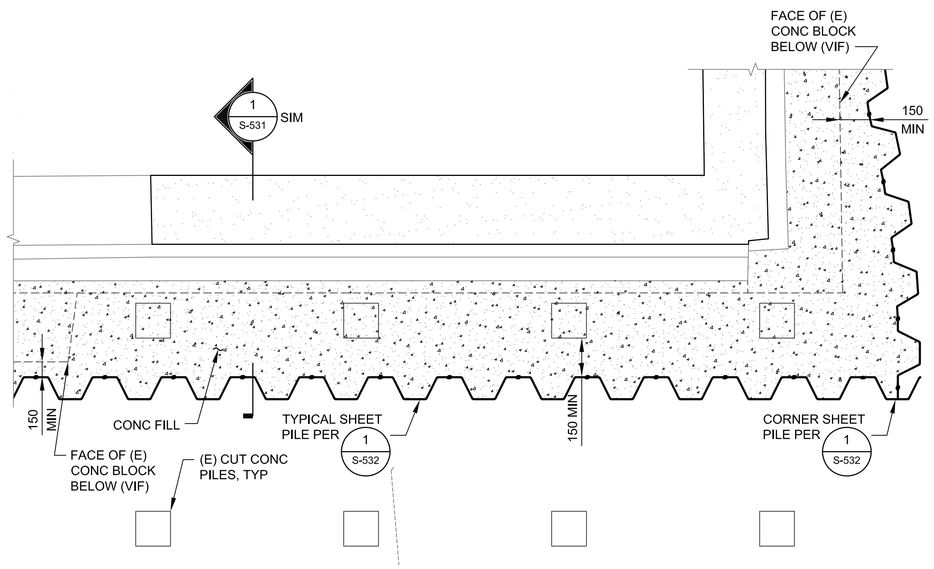
SCALE: 1:25 0 250 500 1000



PLAN

3 TOE WALL - WHARF 117

SCALE: 1:40 0 400 800 1600



PLAN

4 TOE WALL - WHARF 111

SCALE: 1:40 0 400 800 1600

PLAN NORTH

US Army Corps of Engineers®

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DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
HONOLULU DISTRICT
APO AP 96540-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 1400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE, TSURUMI, YOKOHAMA, JAPAN

SHEET PILE WALL DETAILS

SHEET ID

S-533

FILE: DESC1904-S-533.dwg
DATE: 12/8/2020 9:11 AM
OPER:
SCALE:

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REDUCED PRINT = USE GRAPHIC SCALES

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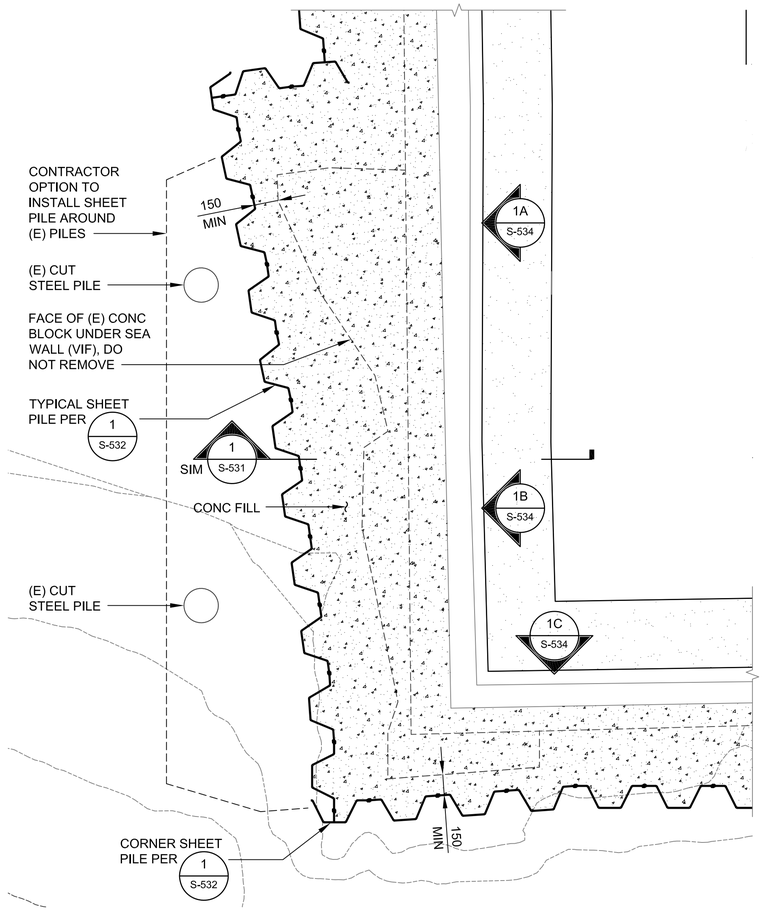
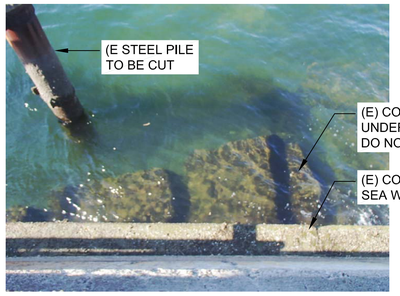


PLAN

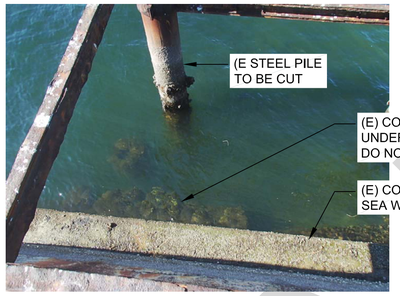
1 TOE WALL - WEST CORNER

SCALE: 1:40 0 400 800 1600



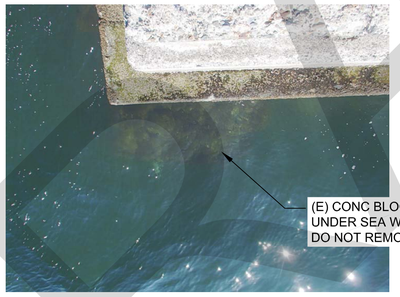
1A PHOTO

NOT TO SCALE



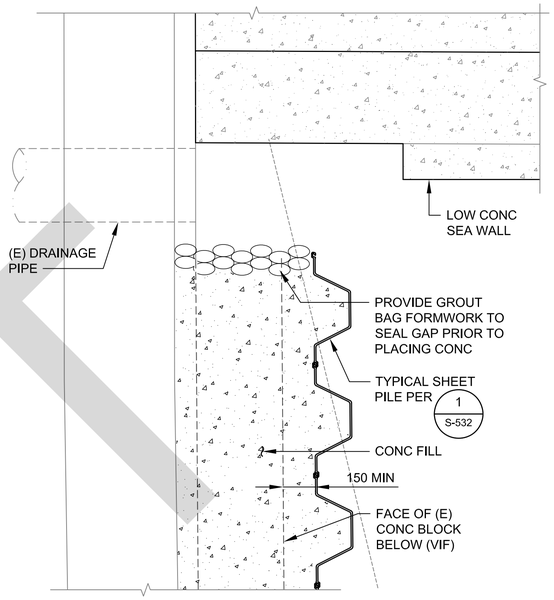
1B PHOTO

NOT TO SCALE



1C PHOTO

NOT TO SCALE



PLAN

2 TOE WALL - EAST END

SCALE: 1:25 0 250 500 1000

PLAN NORTH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

DESIGNED BY: J. OKUNAGA
DRAWN BY: JO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 4000
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES NO. 1 TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

SHEET PILE WALL DETAILS

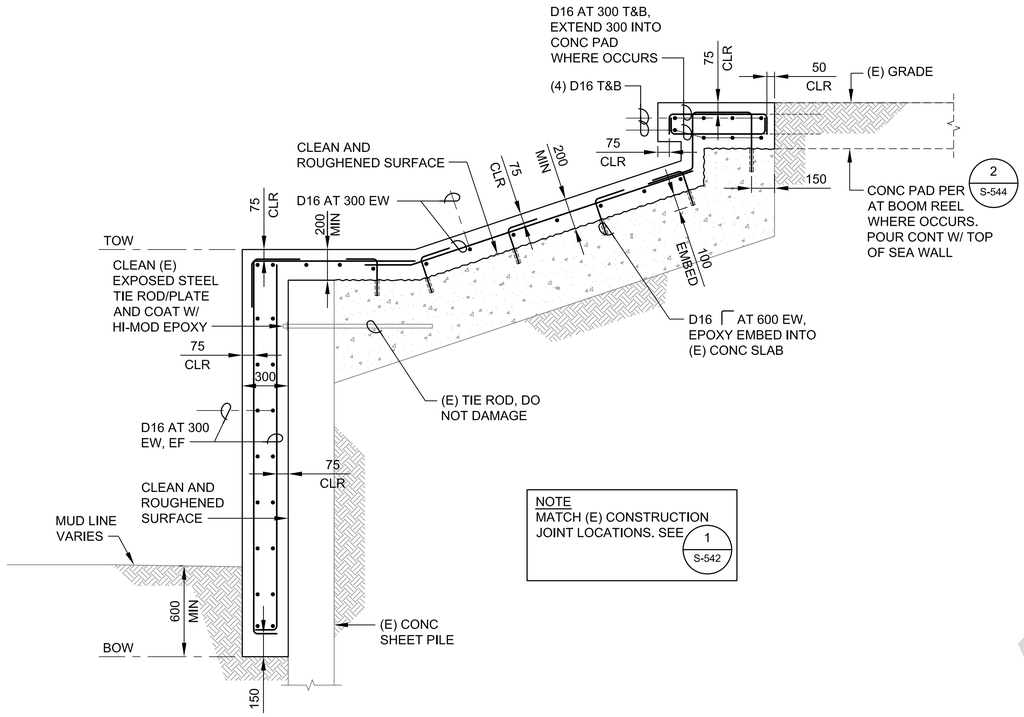
SHEET ID

S-534

FILE: DESC1904-S-534.dwg
DATE: 12/8/2020 9:11 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL



1 LOW SEAWALL SECTION

SCALE: 1:20 0 200 400 800

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
PACIFIC OCEAN DIVISION
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 600
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

LOW SEAWALL DETAILS

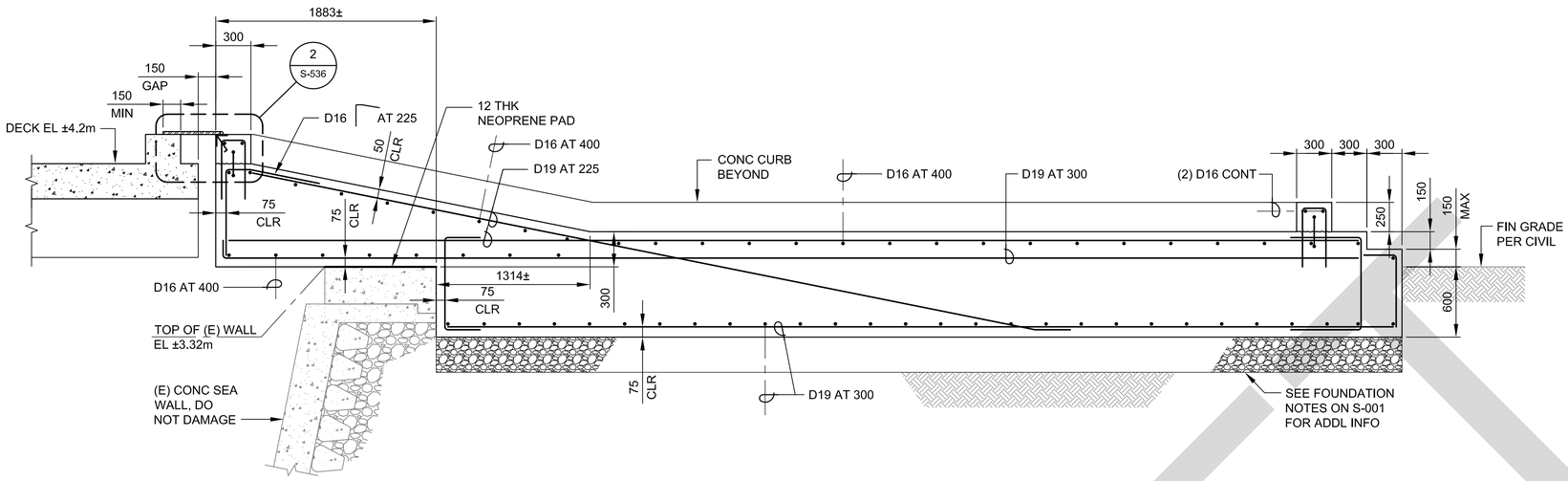
SHEET ID

S-535

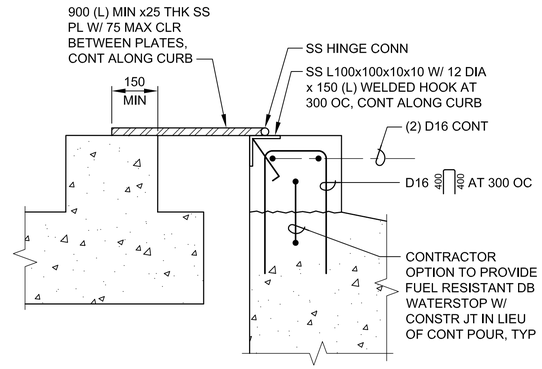
FILE: DESC1904-S-535.dwg
DATE: 12/8/2020 9:11 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL



1 SECTION
SCALE: 1:25 0 250 500 1000



2 DETAIL
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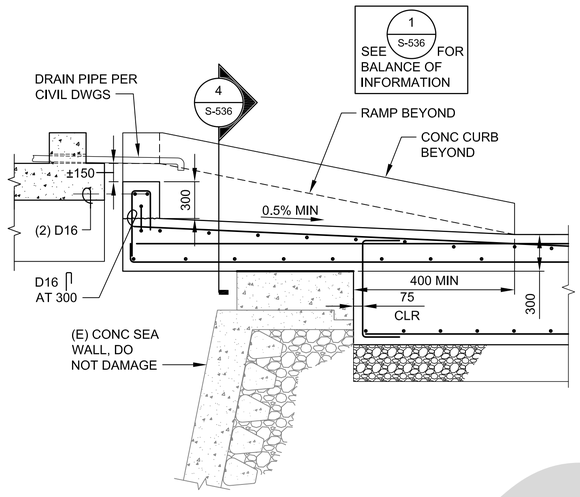

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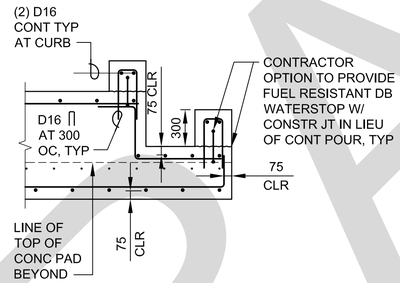

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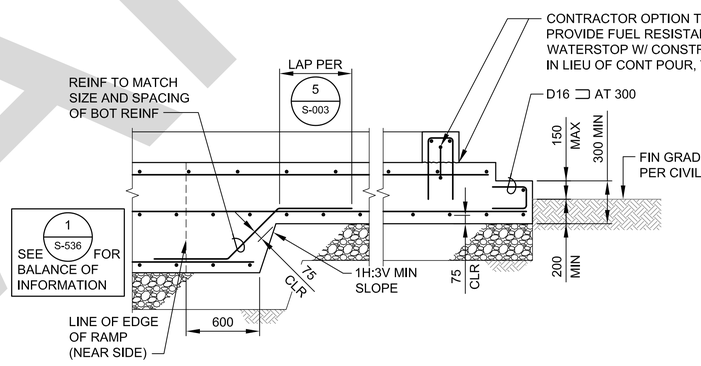

5 SECTION
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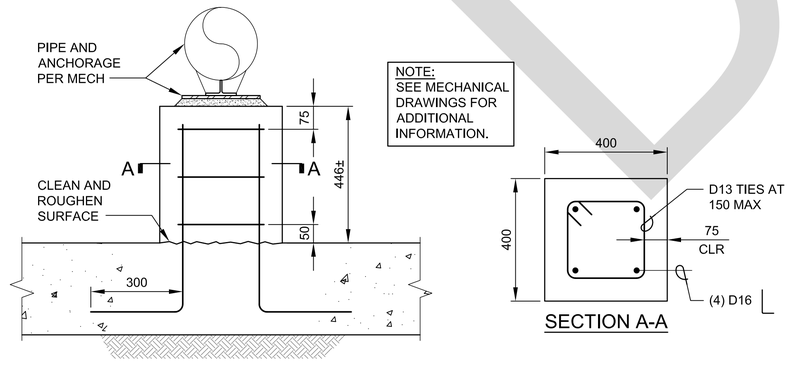


6 ANCHOR SUPPORT DETAIL
SCALE: 1:10 0 100 200 400

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:
SIZE: ISO A1

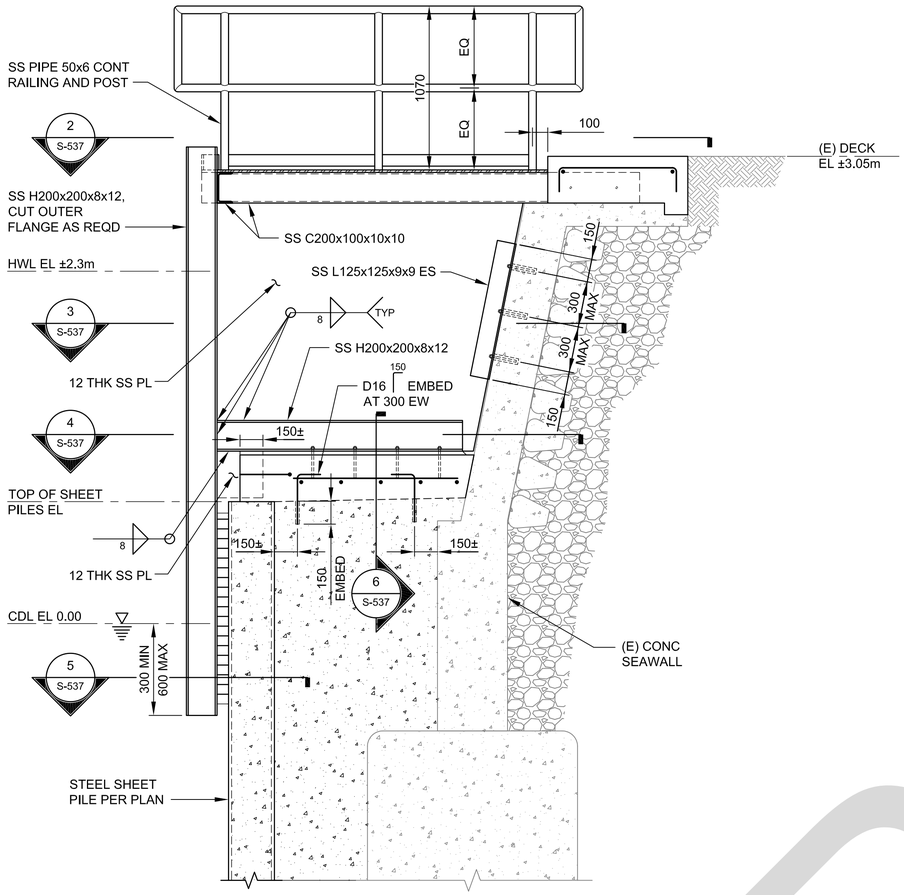
U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING FACILITIES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

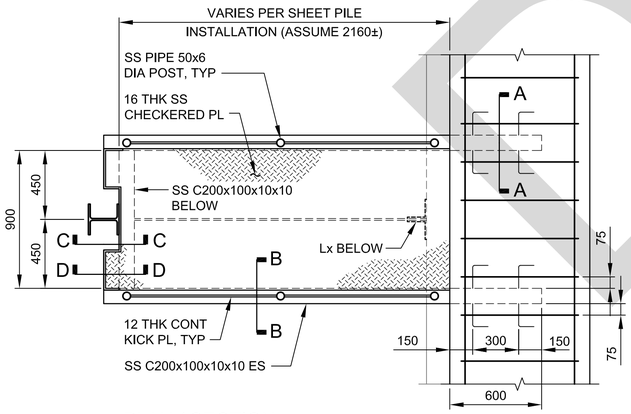
WHARF RAMP
AND SLAB

SHEET ID
S-536



1 TIDE RISER - SECTION

SCALE: 1:20 0 200 400 800

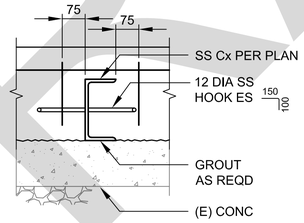


PLAN / SECTION

SCALE: 1:20 0 200 400 800

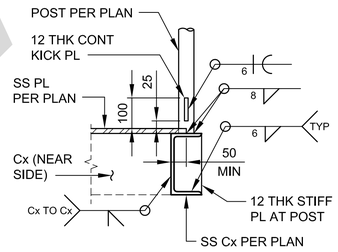
2 TIDE RISER - PLAN / SECTION AT TOP

SCALE: AS SHOWN



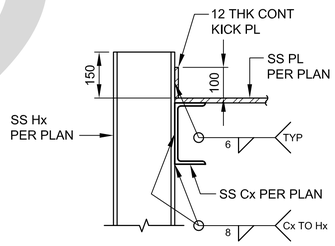
SECTION "A-A"

SCALE: 1:10 0 100 200 400



SECTION "B-B"

SCALE: 1:10 0 100 200 400



SECTION "C-C"

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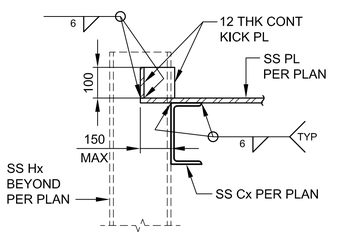

SECTION "D-D"

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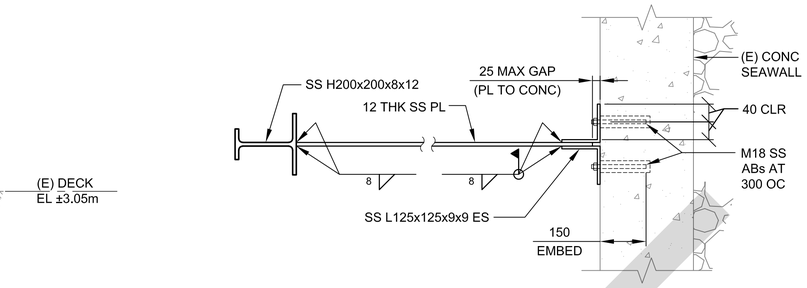

3 TIDE RISER - PLAN / SECTION

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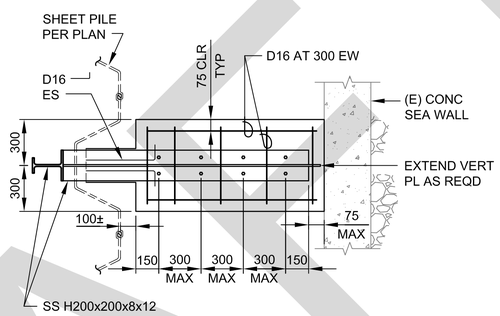
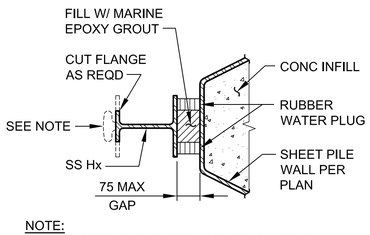


4 TIDE RISER - PLAN / SECTION

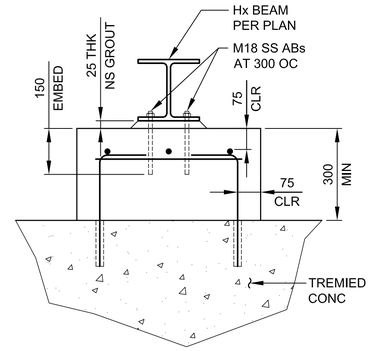
SCALE: 1:20 0 200 400 800



NOTE:
CONTRACTOR OPTION TO PROVIDE OIL BOOM RAIL IN LIEU OF CUTTING Hx FLANGE. COORDINATE WITH OIL BOOM MANUFACTURER.

5 DETAIL AT SHEET PILE

SCALE: 1:10 0 100 200 400



6 SECTION

SCALE: 1:10 0 100 200 400

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LOO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
SIZE: ISO A1
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
JOINT BASE DISTRICT
APO AP 96543-5010

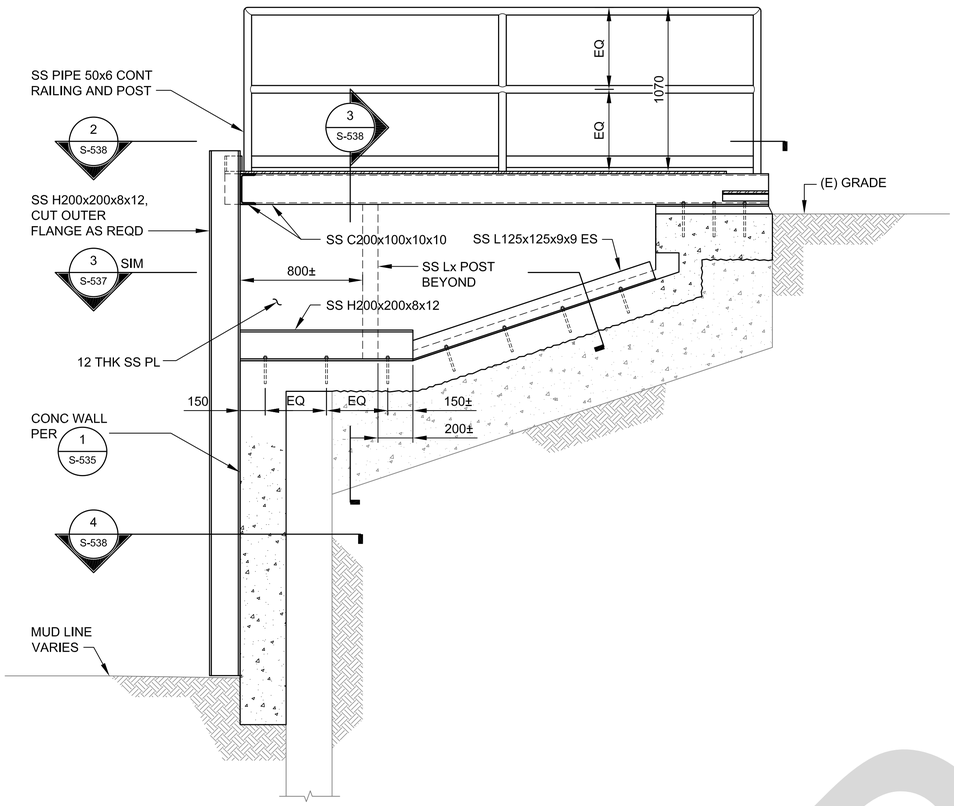
HDR - WTNA JV
1001 BISHOP STREET
SUITE 1400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-4 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TIDE RISER DETAILS

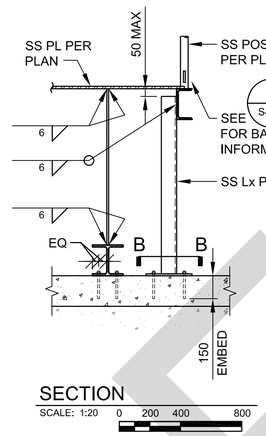
SHEET ID

S-537



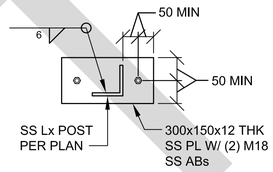
1 TIDE RISER - SECTION

SCALE: 1:20 0 200 400 800



SECTION

SCALE: 1:20 0 200 400 800

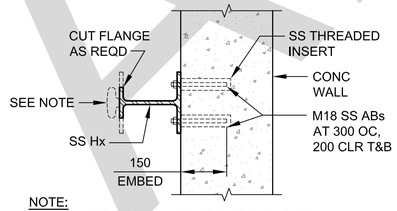


SECTION "B-B"

SCALE: 1:10 0 100 200 400

3 TIDE RISER - SECTION

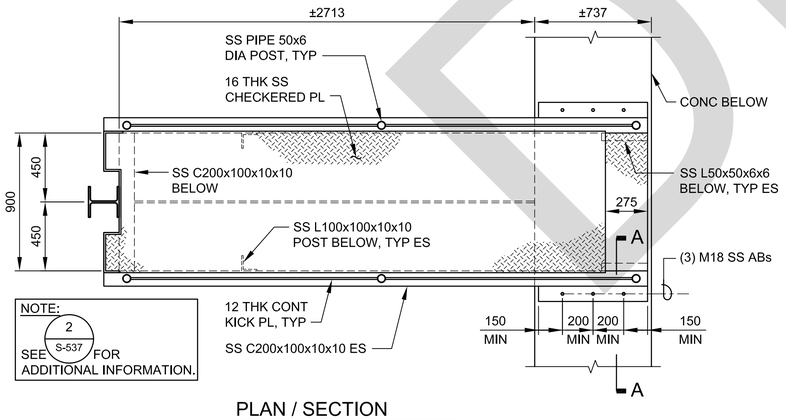
SCALE: AS SHOWN



NOTE:
CONTRACTOR OPTION TO PROVIDE OIL BOOM RAIL IN LIEU OF CUTTING Hx FLANGE. COORDINATE WITH OIL BOOM MANUFACTURER.

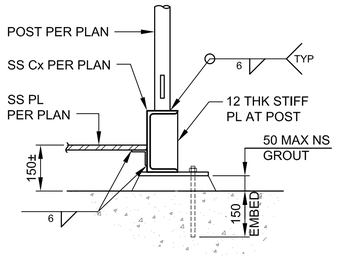
4 DETAIL AT CONC WALL

SCALE: 1:10 0 100 200 400



PLAN / SECTION

SCALE: 1:20 0 200 400 800



SECTION "A-A"

SCALE: 1:10 0 100 200 400

2 TIDE RISER - PLAN / SECTION AT TOP

SCALE: AS SHOWN

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POHONOLULU DISTRICT
APO AP 96858-5310

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TIDE RISER
DETAILS

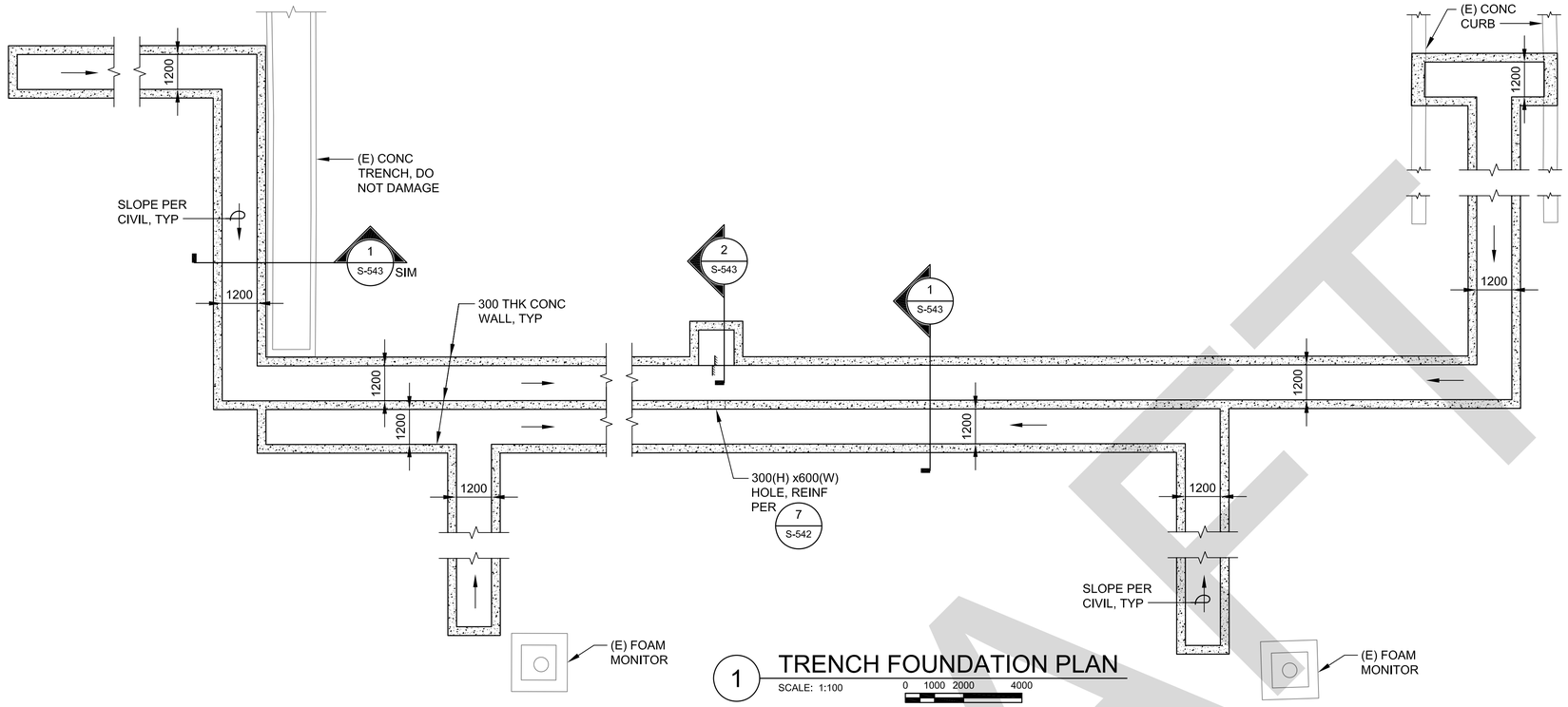
SHEET ID

S-538

FILE: DESC1904-S-538.dwg
DATE: 12/8/2020 9:11 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

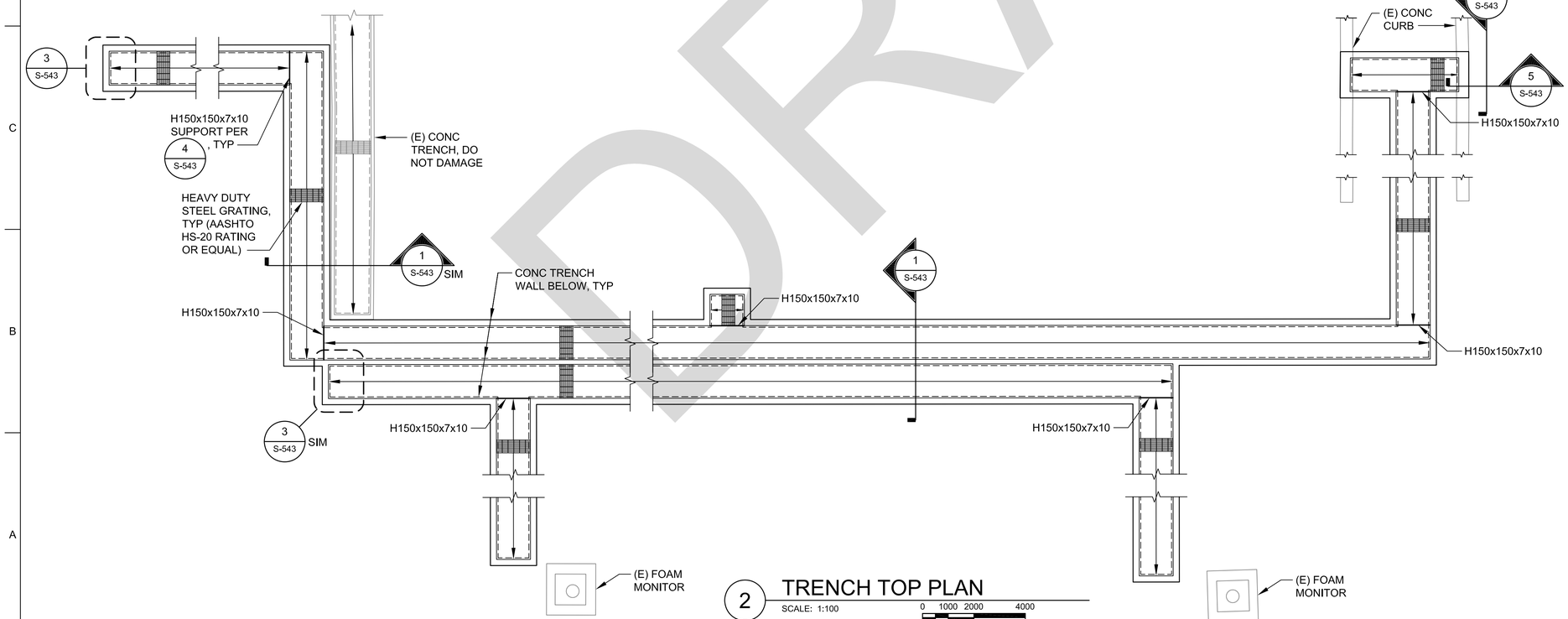
RTA SUBMITTAL



1 TRENCH FOUNDATION PLAN

SCALE: 1:100 0 1000 2000 4000

NOTE:
REFER TO CIVIL, MECHANICAL, FIRE PROTECTION, AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT, PIPES, CONDUITS, ETC.



2 TRENCH TOP PLAN

SCALE: 1:100 0 1000 2000 4000

PLAN NORTH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LOO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
HONOLULU DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 1600
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TRENCH PLANS

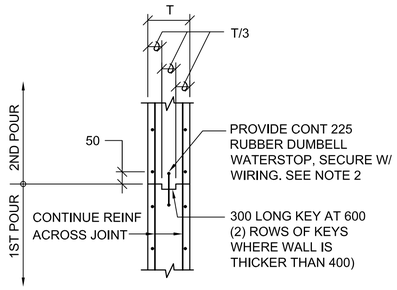
SHEET ID

S-541

FILE: DESC1904-S-541.dwg
DATE: 12/8/2020 9:11 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL

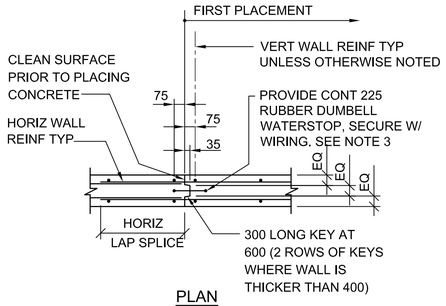


SECTION

NOTES:
1. JOINT LOCATION SHALL BE SUBMITTED TO CONTRACTING OFFICER'S REVIEW.
2. DUMBELL WATERSTOPS REQUIRED AT ALL CONSTRUCTION JOINTS IN ALL BELOW-GRADE WALLS.

1 HORIZ WALL CONSTRUCTION JOINT

NOT TO SCALE



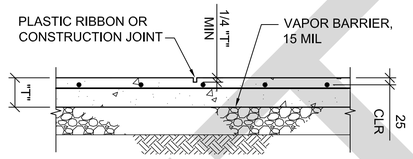
PLAN

NOTES:
1. PROVIDE CONSTRUCTION JOINT AT 9000 OC MAX.
2. LOCATION AND DETAIL OF JOINT SHALL BE REVIEWED BY CONTRACTING OFFICER PRIOR TO CONSTRUCTING FORMS OR PLACING CONCRETE.
3. DUMBELL WATERSTOPS REQUIRED AT ALL CONSTRUCTION JOINTS IN ALL BELOW-GRADE WALLS.

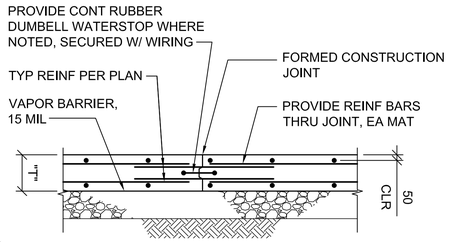
2 VERT WALL CONSTRUCTION JOINT

NOT TO SCALE

NOTE:
1. DUMBELL WATERSTOPS REQUIRED AT ALL CONSTRUCTION JOINTS OF BELOW-GRADE SLABS.



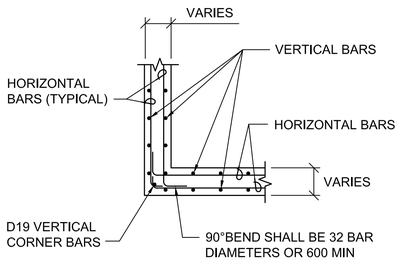
CONTROL JOINT



CONSTRUCTION JOINT (TRENCH)

3 TYPICAL SLAB ON GRADE JOINTS

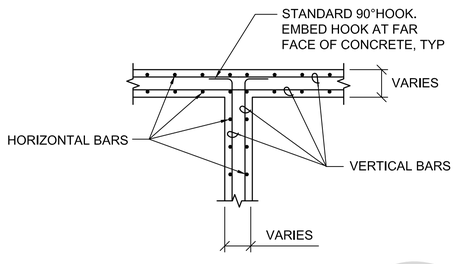
NOT TO SCALE



PLAN

4 TYP WALL CORNER DETAIL

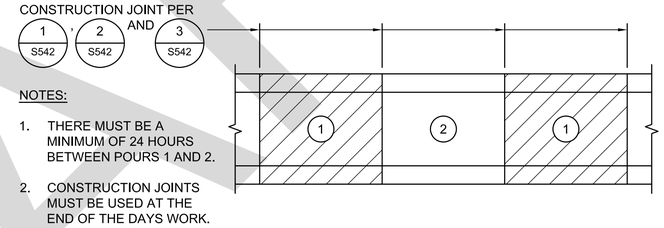
NOT TO SCALE



PLAN

5 TYP WALL INTERSECTION DETAIL

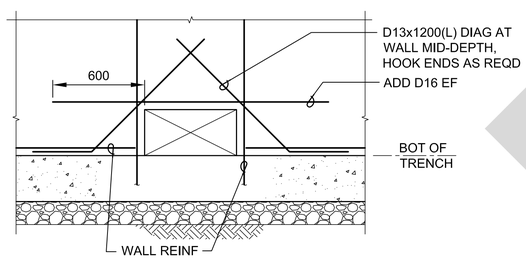
NOT TO SCALE



NOTES:
1. THERE MUST BE A MINIMUM OF 24 HOURS BETWEEN POURS 1 AND 2.
2. CONSTRUCTION JOINTS MUST BE USED AT THE END OF THE DAYS WORK.

6 TRENCH CONC POUR PATTERN

NOT TO SCALE



7 REINF AT OPENING

NOT TO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

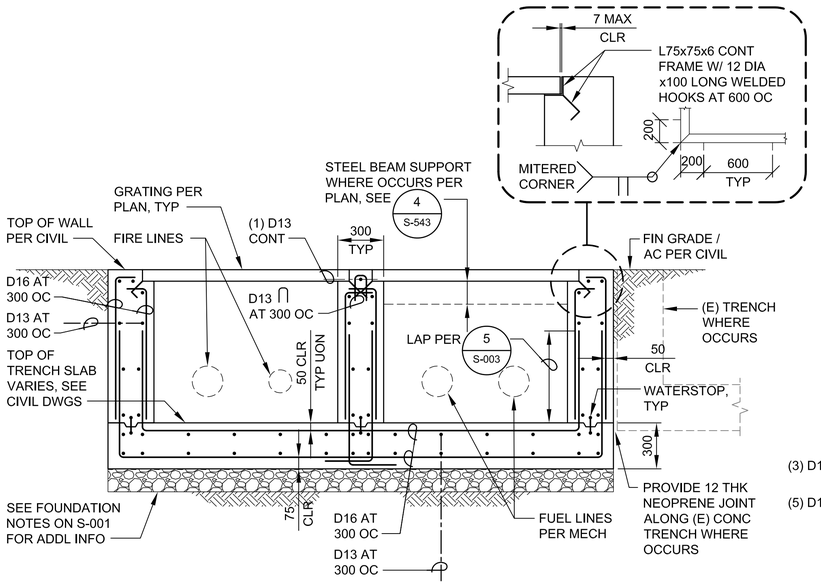
HDR - WTNA JV
1001 BISHOP STREET
SUITE 1400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-4 TANKER CAPABLE, TSURUMI, YOKOHAMA, JAPAN

TRENCH DETAILS

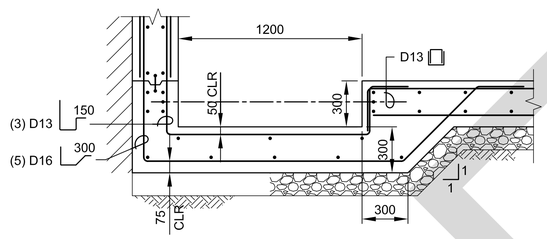
SHEET ID

S-542



1 TYPICAL TRENCH SECTION

SCALE: 1:20 0 200 400 800



2 SUMP PIT DETAIL

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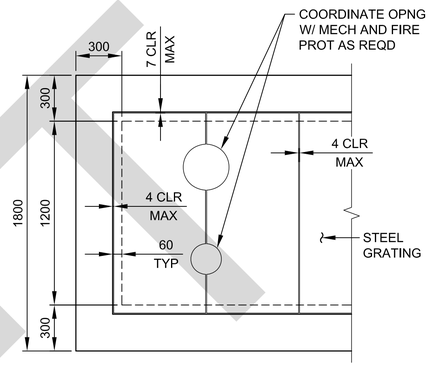

3 END DETAIL - TOP PLAN

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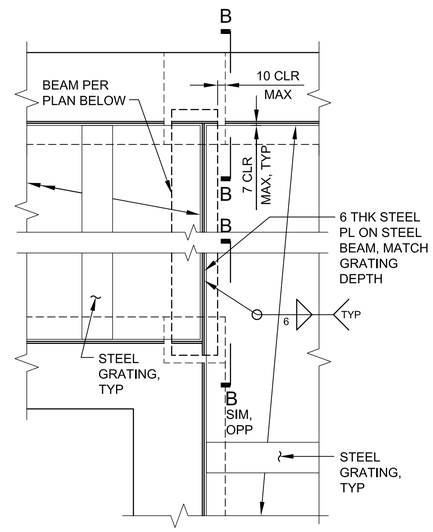
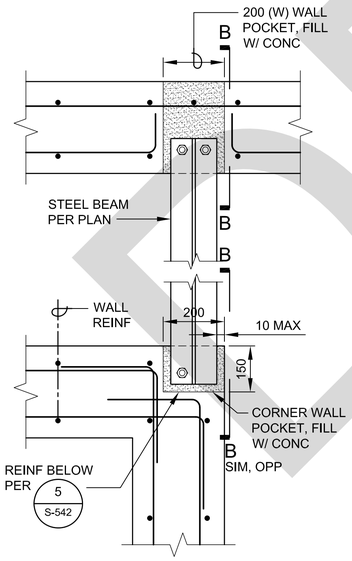
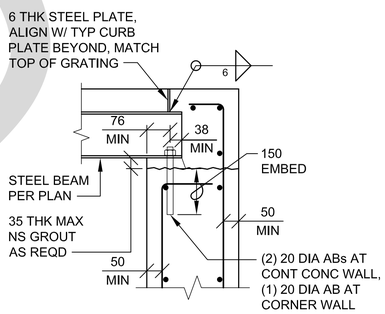


TOP PLAN



FOUNDATION PLAN



SECTION B-B

4 BEAM SUPPORT DETAILS

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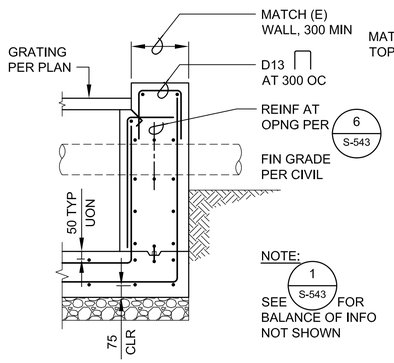

5 SECTION

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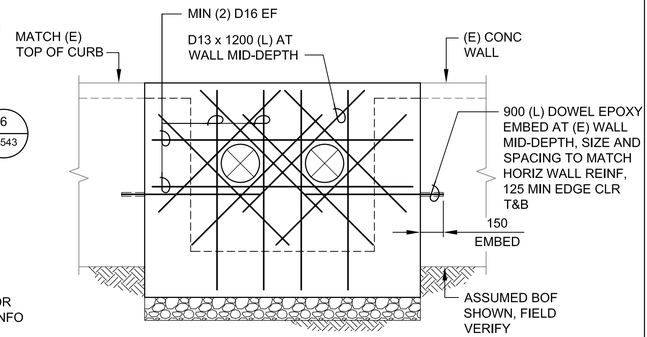

6 SECTION

SCALE: 1:20 0 200 400 800

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MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LOO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.:
CONTRACT NO.: W912HW-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POHNPEI DISTRICT
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DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TRENCH DETAILS

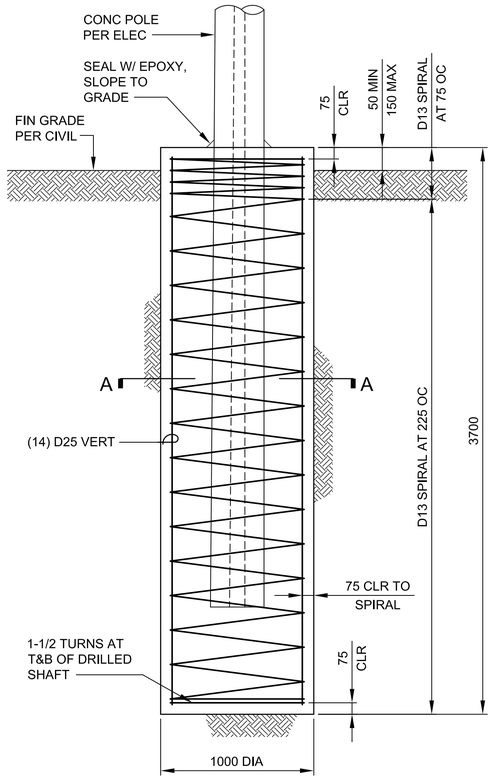
SHEET ID

S-543

FILE: DESC1904-S-543.dwg
DATE: 12/8/2020 9:11 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL



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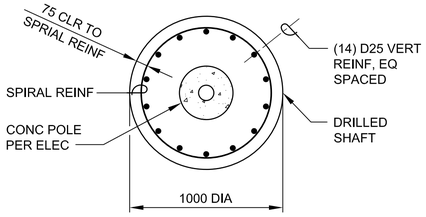

SECTION A-A

LIGHT POLE NOTES:

1. LIGHT POLE DESIGN WILL BE PROVIDED BY THE CONTRACTOR. SUBMIT DRAWINGS AND CALCULATIONS BY A STRUCTURAL ENGINEER. REFER TO DESIGN CRITERIA IN GENERAL NOTES ON SHEET S-002, ELECTRICAL DRAWINGS AND PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. SUBMIT LIGHT POLE SHOP DRAWINGS AND CALCULATIONS TO CONTRACTING OFFICER FOR REVIEW PRIOR TO FABRICATION AND CONSTRUCTION OF FOOTINGS.

DRILLED SHAFT NOTES:

1. PROVIDE DRILLING AND EXCAVATION AS REQUIRED TO EXCAVATE A HOLE OF DIAMETER AND DEPTH INDICATED. PROTECT EXCAVATED WALLS WITH TEMPORARY WATERTIGHT STEEL CASINGS OF SUFFICIENT SIZE TO PREVENT WATER INTRUSION, CAVE-INS, DISPLACEMENT OF SURROUNDING EARTH, AND INJURY TO PERSONNEL AND DAMAGE TO CONSTRUCTION OPERATIONS.
2. PROTECT EXISTING STRUCTURES, UTILITIES, AND OTHER FACILITIES FROM DAMAGE.
3. REMOVE LOOSE DEBRIS, MATERIALS AND/OR MUCK TO MAKE BOTTOM OF SURFACES LEVEL. REMOVE WATER FROM EXCAVATED SHAFT PRIOR TO CONCRETE PLACEMENT. PLACE CONCRETE IN A CONTINUOUS OPERATION WITHOUT SEGREGATION.

1 DETAL - DRILLED SHAFT FOUNDATION

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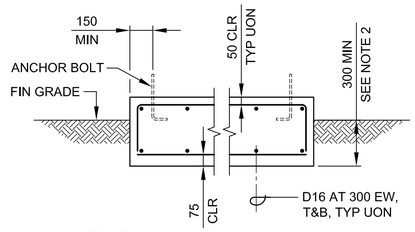

NOTES

1. CONTRACTOR TO COORDINATE SIZE OF CONCRETE BASE AND EQUIPMENT ANCHORAGE REQUIREMENTS WITH EQUIPMENT.
2. SEE CIVIL, MECHANICAL, FIRE PROTECTION, AND ELECTRICAL DRAWINGS FOR EQUIPMENT PAD LOCATION AND DIMENSIONS.

2 CONC BASE AND SLAB FOR EQUIP

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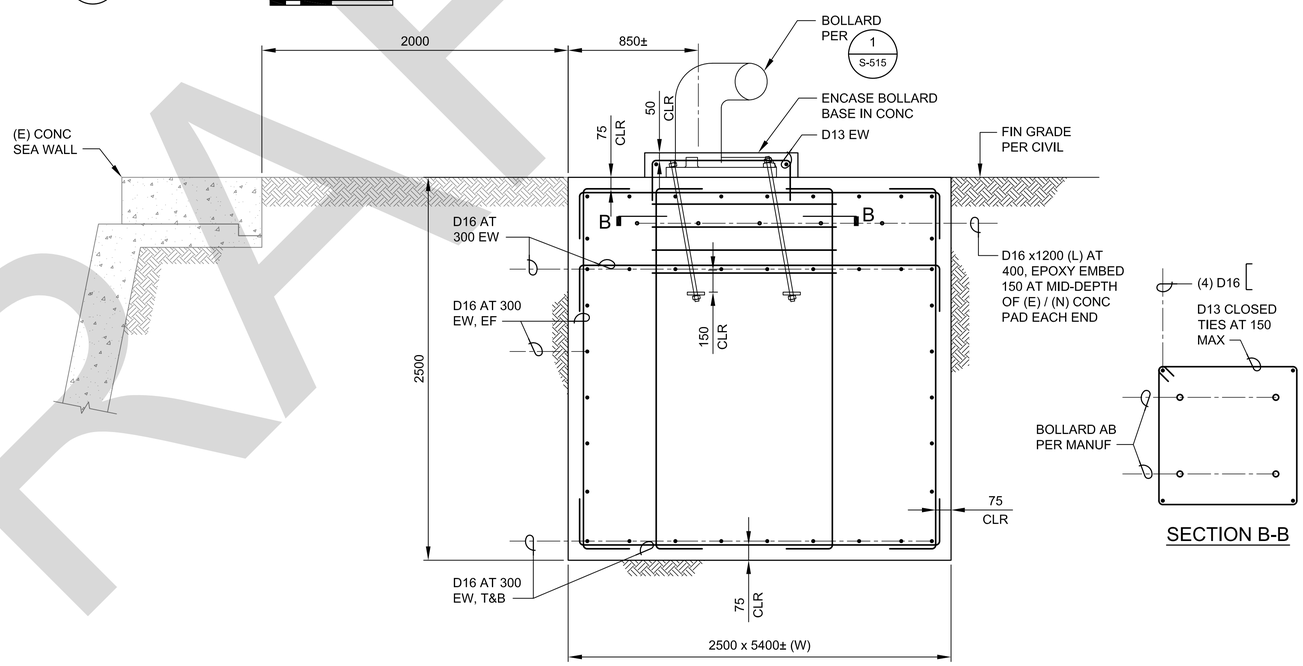

SECTION B-B

3 SECTION - BOLLARD FOUNDATION

SECTION

SCALE: 1:20 0 200 400 800

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MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
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CONTRACT NO.: W912HV-17-D007
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FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
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DESC 1904
MODERNIZE FUELING WHARVES NO. 1 T-4 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

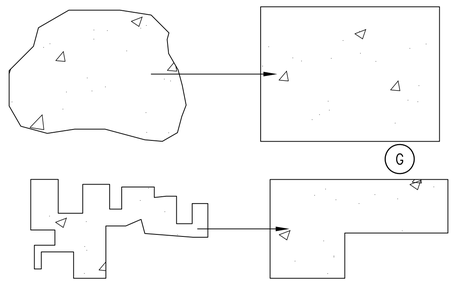
MISCELLANEOUS DETAILS

SHEET ID

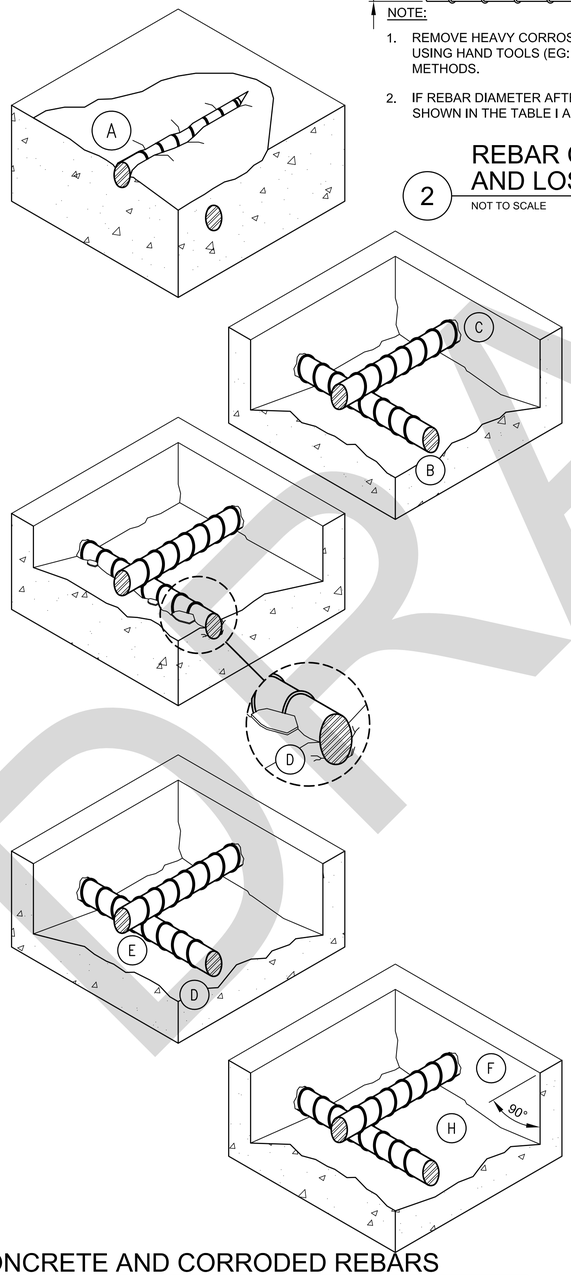
S-544

CONCRETE REPAIR NOTES

1. FIELD LOCATE CONCRETE SPALLS AND REPAIR.
2. SPALLS, DELAMINATIONS AND HONEYCOMB SURFACES ARE INDICATED AS "SPALLS" SINCE THE REPAIRS ARE SIMILAR.
3. CONCRETE REPAIR MUST BE IN CONFORMANCE WITH THE "CONCRETE REPAIR MANUAL", 2ND EDITION, INTERNATIONAL CONCRETE REPAIR INSTITUTE UNLESS OTHERWISE INDICATED.
4. CLEANING AND REPAIR OF REINFORCING STEEL SEE 2/S-601 AND 3/S-601.
5. EXPOSING AND UNDER CUTTING OF REINFORCING STEEL:
   - (A) HAMMER SOUNDING TO LOCATE EXTENT OF DELAMINATED AREAS. IF CONCRETE SOUNDS "HOLLOW" OR IS CRACKED, REMOVE DETERIORATED CONCRETE. USE CHIPPING HAMMER LESS THAN 6.8 kg (15#) OR OTHER GOVERNMENT APPROVED METHODS TO REMOVE LOOSE OF DELAMINATED CONCRETE ABOVE CORRODED REINFORCING STEEL. DO NOT DAMAGE SOUND CONCRETE.
   - (B) ONCE INITIAL REMOVALS ARE MADE, PROCEED WITH THE UNDERCUTTING OF ALL EXPOSED CORRODED BARS. UNDERCUTTING MUST PROVIDE CLEARANCE FOR UNDER BAR CLEANING AND FULL BAR CIRCUMFERENCE BONDING TO SURROUNDING CONCRETE, AND TO SECURE THE REPAIR STRUCTURALLY. PROVIDE MINIMUM 19mm CLEARANCE BETWEEN EXPOSED REBARS AND SURROUNDING CONCRETE OR 6mm LARGER THAN THE LARGEST AGGREGATE IN REPAIR MATERIAL, WHICHEVER IS GREATER.
   - (C) CONCRETE REMOVALS MUST EXTEND ALONG THE BARS TO LOCATIONS ALONG THE BAR FREE OF BOND INHIBITING CORROSION, AND WHERE THE BAR IS WELL BONDED TO SURROUNDING CONCRETE.
   - (D) IF NON-CORRODED REINFORCING STEEL IS EXPOSED DURING THE UNDERCUTTING PROCESS, CARE MUST BE TAKEN NOT TO DAMAGE THE BAR'S BOND TO SURROUNDING CONCRETE. IF BOND BETWEEN BAR AND CONCRETE IS BROKEN, UNDERCUTTING OF THE BAR MUST BE REQUIRED.
   - (E) ANY REINFORCEMENT WHICH IS LOOSE MUST BE SECURED IN PLACE BY TYING TO OTHER SECURED BARS OR BY OTHER GOVERNMENT APPROVED METHODS.
6. EDGE AND SURFACE CONDITIONING OF CONCRETE:
   - (F) AT EDGE LOCATIONS, PROVIDE RIGHT ANGLE CUTS TO THE CONCRETE SURFACE WITH A SAWCUT 13mm OR LESS AS REQUIRED TO AVOID CUTTING REINFORCING STEEL. DO NOT FEATHER EDGE.
   - (G) REPAIR CONFIGURATIONS SHOULD BE KEPT AS SIMPLE AS POSSIBLE, PREFERABLY WITH SQUARED CORNERS.
   - (H) AFTER REMOVALS AND EDGE CONDITIONING ARE COMPLETE, EXISTING CONCRETE SURFACE MUST BE CLEAN, ROUGHEN AND SURFACE SATURATED DRY PRIOR TO RECEIVING PATCH MATERIAL. REMOVE BOND INHIBITING MATERIALS (DIRT, CONCRETE SLURRY, LOOSELY BONDED AGGREGATES) USING HAND TOOLS (EG: WIRE BRUSH) OR OTHER GOVERNMENT APPROVED METHODS. BLASTING USING ABRASIVE MEDIA OR WATER IS NOT ALLOWED.
   - (I) COAT ALL REINFORCING REINFORCING STEEL WITH AN EPOXY BONDING AGENT.
   - (J) COAT ALL CONCRETE SURFACES TO RECEIVE REPAIR MORTAR/CONCRETE WITH EPOXY BONDING AGENT. APPLY REPAIR MORTAR/CONCRETE PER MANUFACTURER'S INSTRUCTION.
7. SEE NOTES ON SHEETS S-001 AND S-002 FOR ADDITIONAL INFORMATION:
8. DO NOT FEATHER EDGE REPAIRS:
9. TEST ALL REPAIRS AFTER THE REPAIR MATERIAL HAS CURED TO VERIFY THE BOND BETWEEN THE REPAIR MATERIAL AND THE EXISTING CONCRETE. A HOLLOW SOUND WHEN TAPPED WITH A HAMMER INDICATES UNSATISFACTORY BOND AND MUST BE REJECTED. ALL REJECTED REPAIRS MUST BE REDONE AND RETESTED UNTIL A SATISFACTORY BOND IS ACHIEVED, AT NO ADDITIONAL COST.
10. AFTER REPAIRS ARE COMPLETED AND ACCEPTED BY CONTRACTOR'S QUALITY CONTROL SPECIALIST, COAT REPAIRED AREAS WITH A CONCRETE SEALER. THE COATED AREA MUST EXTEND 300mm BEYOND THE REPAIRED AREA.

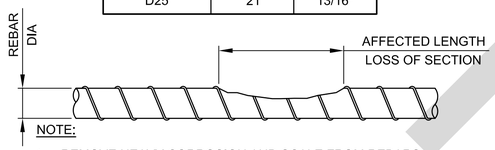


BOUNDARY OF SPALL OR DELAMINATED CONCRETE — RECOMMENDED LAYOUT



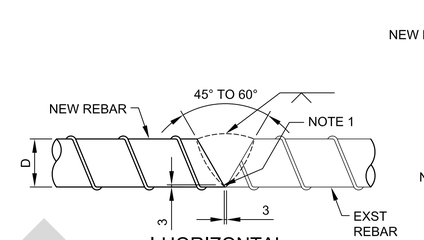
1 SURFACE PREPARATION OF SPALLED CONCRETE AND CORRODED REBARS
NOT TO SCALE

TABLE 1: MINIMUM REBAR DIAMETER AT SECTION LOSS		
REBAR SIZE	MIN ACCEPTABLE DIA AT SECTION LOSS	
	mm	INCHES
D10	8	5/16"
D13	11	7/16"
D16	13	1/2"
D19	16	5/8"
D22	19	3/4"
D25	21	13/16"

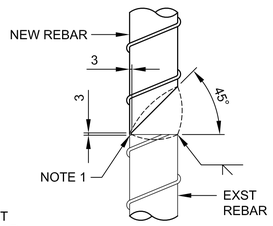


NOTE:
1. REMOVE HEAVY CORROSION AND SCALE FROM REBARS USING HAND TOOLS (EG: WIRE BRUSH) OR OTHER APPROVED METHODS.
2. IF REBAR DIAMETER AFTER CLEANING IS LESS THAN THAT SHOWN IN THE TABLE I ABOVE, REPAIR REBAR PER 3/S-601.

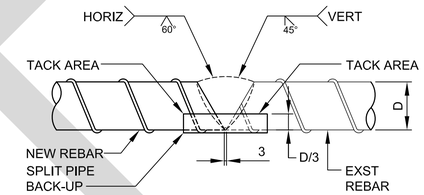
2 REBAR CLEANING AND LOSS OF SECTION
NOT TO SCALE



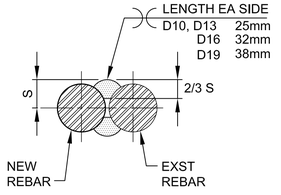
I-HORIZONTAL



III-VERTICAL



II-HORIZONTAL AND VERTICAL



IV-LAP SPLICE

NOTE:
1. CHIP, GRIND OR GOUGE TO SOUND METAL BEFORE WELDING OTHER SIDE.
2. DETAIL I AND III FOR D29 LARGER. DETAIL II FOR D25 AND SMALLER. DETAIL IV FOR D19 AND SMALLER.
3. ELECTRODES PER JIS Z3211 E49 400 MPa.
4. SEE AWS D1.4 FOR WELDING PROCESS AND OTHER DETAILS.
5. FOR TYPE IV REPAIRS WHERE WELDS ARE NOT ACCESSIBLE ON EACH SIDE OF BARS. WELDS MUST BE 2.5x LENGTH ON ONE SIDE.
6. CONTRACTOR OPTION TO PROVIDE GAS PRESSURE WELDING. SEE REINFORCING NOTES ON S-001 FOR ADDITIONAL INFORMATION.

3 REBAR WELD SPLICE DETAIL
NOT TO SCALE

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DESIGNED BY: J. OKUNAGA
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CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
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U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

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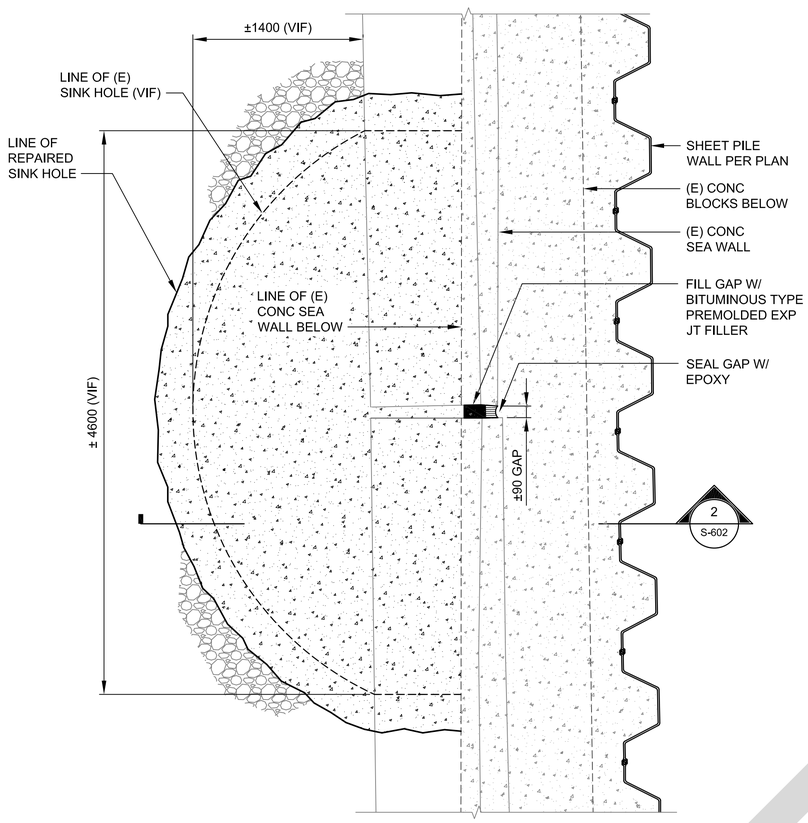
DESC 1904
MODERNIZE FUELING WHARVES TO T-4 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TYPICAL CONCRETE REPAIR DETAILS

SHEET ID
S-601

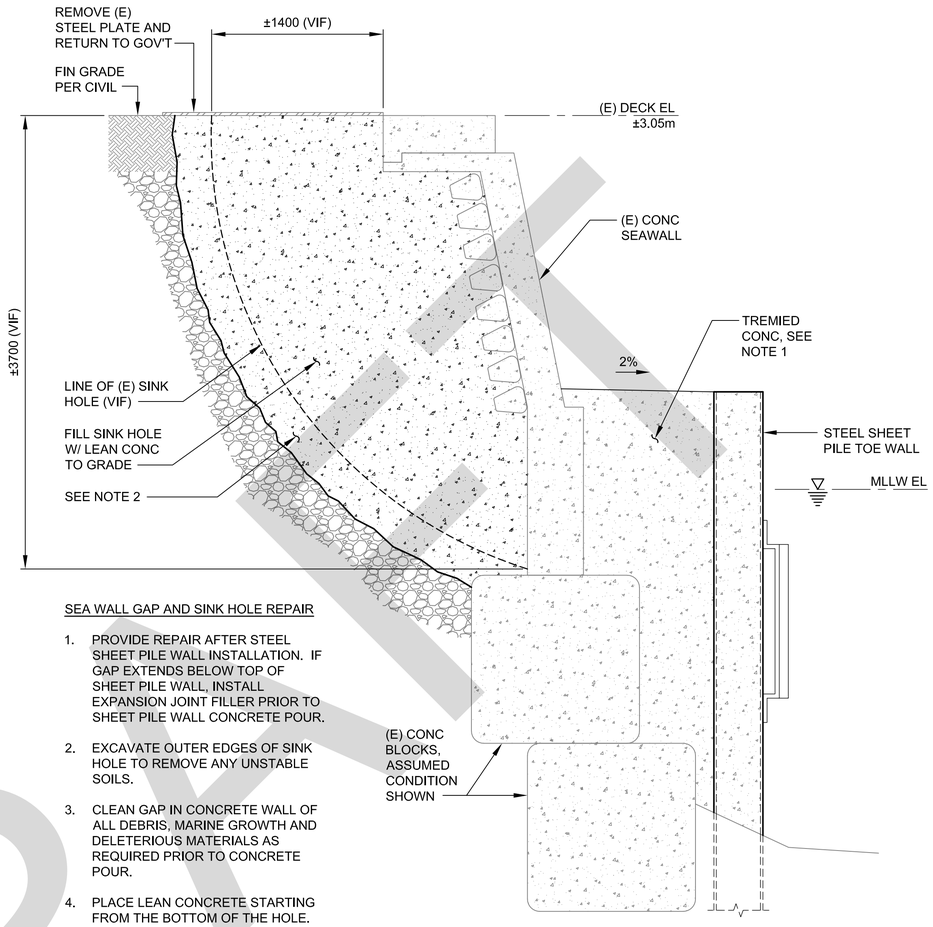


PLAN

1 SEA WALL GAP AND SINK HOLE REPAIR

SCALE: 1:25 0 250 500 1000

PLAN NORTH



SEA WALL GAP AND SINK HOLE REPAIR

1. PROVIDE REPAIR AFTER STEEL SHEET PILE WALL INSTALLATION. IF GAP EXTENDS BELOW TOP OF SHEET PILE WALL, INSTALL EXPANSION JOINT FILLER PRIOR TO SHEET PILE WALL CONCRETE POUR.
2. EXCAVATE OUTER EDGES OF SINK HOLE TO REMOVE ANY UNSTABLE SOILS.
3. CLEAN GAP IN CONCRETE WALL OF ALL DEBRIS, MARINE GROWTH AND DELETERIOUS MATERIALS AS REQUIRED PRIOR TO CONCRETE POUR.
4. PLACE LEAN CONCRETE STARTING FROM THE BOTTOM OF THE HOLE.

2 SECTION

SCALE: 1:25 0 250 500 1000

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SUBMITTED BY: D. OKAWA
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U.S. ARMY CORPS OF ENGINEERS
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APO AP 96343-5010

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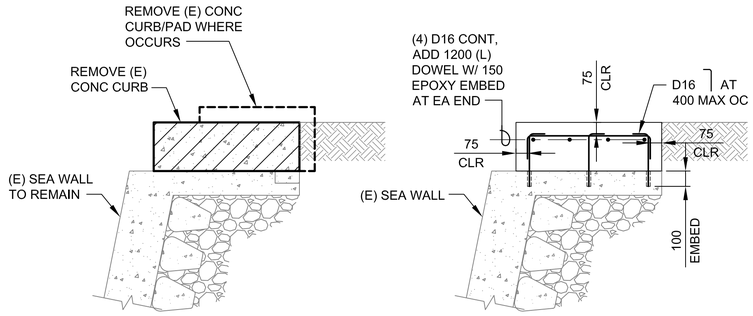
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
DESC 1904
TSURUMI, YOKOHAMA, JAPAN

SEA WALL GAP
AND SINK HOLE
REPAIR

SHEET ID

S-602



1 SEA WALL CURB REPAIR

SCALE: 1:20 0 200 400 800

SEA WALL REPAIR SCHEDULE			
MARK	SIZE (LxW)	REPAIR DET	COMMENT
001	300x300	1/S-604	SPALL AT TOP OF SEA WALL, SEE 4/S-603 SIM
002A	600x300	1/S-604	SPALL AT TOP OF SEA WALL, SEE 4/S-603
002B	1200 (L)	2/S-603	EXP JT AT TOP OF SEA WALL, SEE 4/S-603
003	300x600	1/S-604	SPALL AT TOP OF SEA WALL, SEE 5/S-603
004	1200x600	3/S-604	SPALL AT GATE SLAB, SEE 5/S-603
005	60 900 (L)	1/S-603	SEA WALL CURB REPAIR, SEE NOTE 4
006	27 800 (L)	1/S-603	SEA WALL CURB REPAIR, SEE NOTE 4
007	15 100 (L)	1/S-603	SEA WALL CURB REPAIR, SEE NOTE 4

CONCRETE REPAIR QUANTITIES FOR BIDDING PURPOSES	
REPAIR TYPE	REPAIR QUANTITY
SPALL	15 SQ METERS
REBAR	75 KILOGRAMS
CRACK	300 METERS

NOTES

1. REPAIR DRAWINGS AND SCHEDULE ARE SHOWN TO PROVIDE AN ESTIMATE OF THE TYPE AND EXTENT OF REPAIRS THAT EXIST.
2. REPAIR INFORMATION SHOWN WAS BASED ON FIELD OBSERVATIONS.
3. CONTRACTOR TO FIELD LOCATE CONCRETE SPALLS AND CRACKS ALONG THE VERTICAL FACE OF THE EXISTING CONCRETE SEA WALL. PROVIDE REPAIRS FOR DEFECTS FOUND BETWEEN THE TOP OF NEW CONCRETE INFILL AT NEW SHEET PILE WALL AND TOP OF SEA WALL.
4. SEA WALL CURB REPAIR MATERIAL NOT INCLUDED IN REPAIR TOTALS.

REFERENCE DRAWINGS

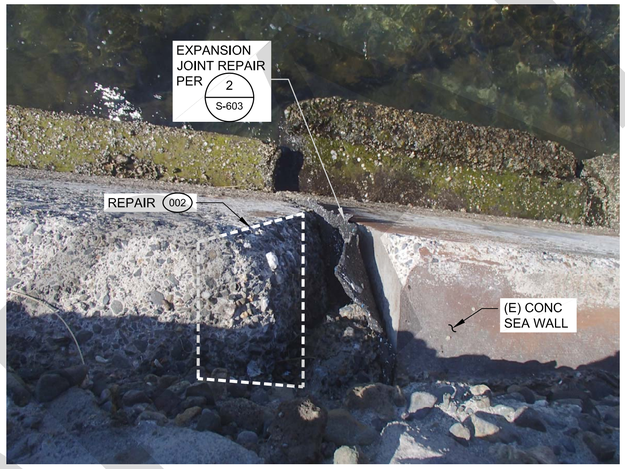
REPAIR NOTES . . . . . S-001 THRU S-002

PLAN S-102

CONCRETE REPAIR DETAILS . . . . . S-601 THRU S-604

3 REPAIR SCHEDULES

NOT TO SCALE



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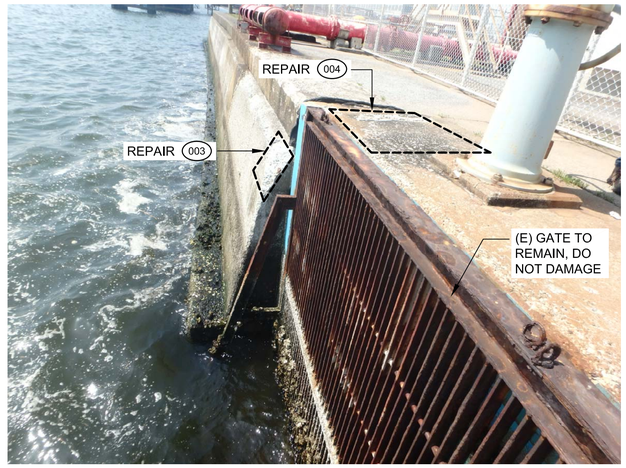
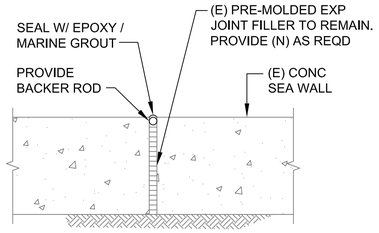
NOT TO SCALE



5 PHOTO

NOT TO SCALE



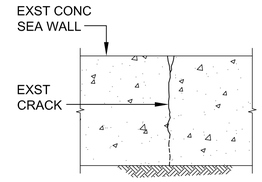
NOTE
PROVIDE REPAIR AFTER SHEET PILE WALL IS COMPLETE.

2 EXPANSION JOINT REPAIR

NOT TO SCALE

CONCRETE CRACK REPAIR NOTES:

1. FIELD LOCATE CRACKS AND REPAIR ALL CRACKS WIDER THAN 1mm ON EXISTING CONCRETE.
2. LIGHTLY TAP THE EXISTING CONCRETE ADJACENT TO THE CRACK. IF THE CONCRETE SOUNDS "HOLLOW", CHIP OFF THE SURFACE AND ANY DELAMINATED CONCRETE AND REPAIR AS A SPALL PER A1/S-601.
3. PREPARE EXISTING CRACK BY NEAT ROUTING OUT CRACK ALONG SURFACE OF CONCRETE 6mm WIDE AND 6mm DEEP.
4. SEAL PREPARED CRACK WITH EPOXY PATCHING MATERIAL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
5. FINISH PREPARED ROUTED AND SEALED CRACK FLUSH WITH EXISTING CONCRETE SURFACE. GRIND SMOOTH AS REQUIRED TO OBTAIN SMOOTH FLUSH FINISH. APPLY CONCRETE SEALER.
6. PROVIDE REPAIRS AFTER SHEET PILE WALL IS COMPLETE.



6 TYPICAL CONCRETE CRACK REPAIR DETAIL

NOT TO SCALE

US Army Corps of Engineers®

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DESIGNED BY: J. OKUNAGA
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SUBMITTED BY: D. OKAWA
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SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
PACIFIC OCEAN DIVISION
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 1400
HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

SEA WALL REPAIR

SHEET ID
S-603

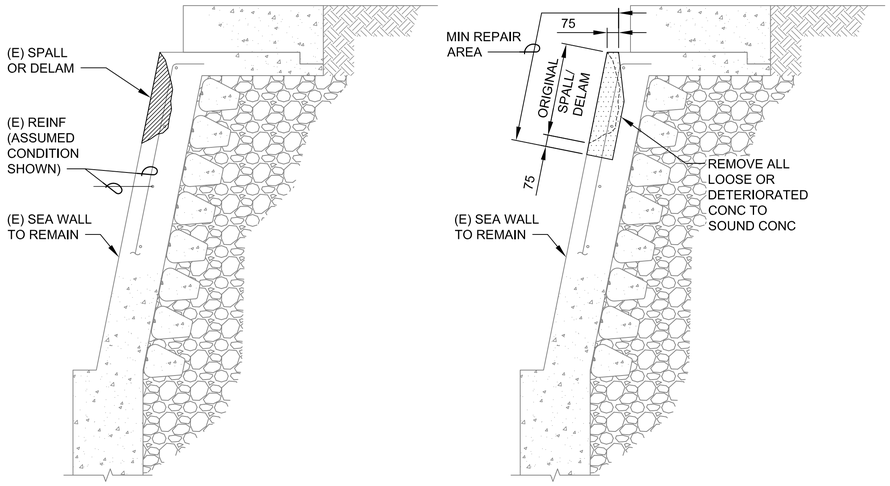
FILE: DESC1904-S-603.dwg
DATE: 12/8/2020 9:12 AM
OPER:
SCALE:

IF SHEET IS LESS THAN 594 X 841 MM
REDUCED PRINT = USE GRAPHIC SCALES

RTA SUBMITTAL

NOTES

1. REPLACE CORRODED REINFORCING BAR PER TABLE I ON (2 / S-601).
2. PROVIDE REINFORCING TO MATCH SIZE AND SPACING OF EXISTING REINFORCING BARS.
3. SEE CONCRETE REPAIR NOTES AND DETAILS ON SHEETS S-002 AND S-601.

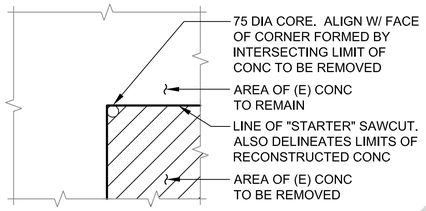


EXISTING CONDITION

REPAIR CONDITION

1 SEA WALL SPALL/DELAM REPAIR

SCALE: 1:20 0 200 400 800

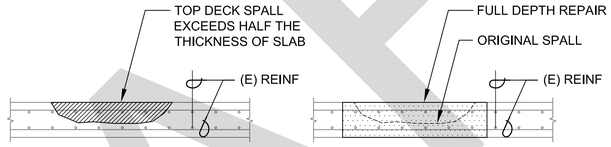


2 OVER-CUT PREVENTION AT REPAIR

NOT TO SCALE

NOTES

1. FULL DEPTH SLAB REPLACEMENT SHALL BE DONE AT LOCATIONS WHERE TOP DECK REPAIR EXCEEDS HALF THE THICKNESS OF THE SLAB.
2. SEE CONCRETE REPAIR NOTES AND DETAILS ON SHEETS S-002 AND S-501.



EXISTING SPALL/DELAM

REPAIR CONDITION

3 DECK SPALL REPAIR / DECK SLAB REPLACEMENT

NOT TO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. OKUNAGA
DRAWN BY: L. LO
CHECKED BY: D. OKAWA
SUBMITTED BY: D. OKAWA
SIZE: ISO A1
ISSUE DATE: AUGUST 2020
SOLICITATION NO.: -
CONTRACT NO.: W912HV-17-D007
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
POHA DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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HONOLULU, HAWAII 96813

DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE, TSURUMI, YOKOHAMA, JAPAN

CONCRETE REPAIRS

SHEET ID

S-604

FILE: DESC1904-S-604.dwg
DATE: 12/8/2020 9:12 AM
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FIRE SUPPRESSION NOTES:

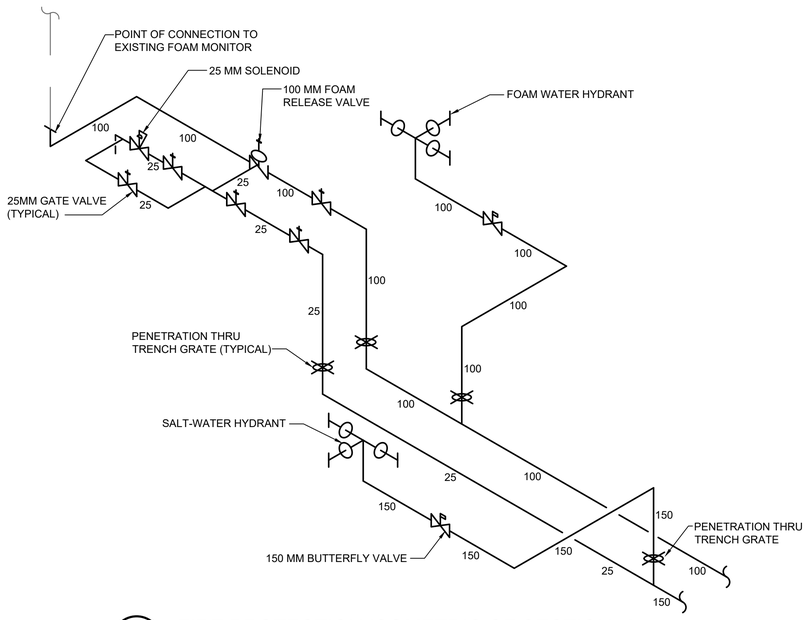
1. THE FIRE SUPPRESSION DESIGN AND PROVISION MUST BE IN ACCORDANCE WITH NFPA 13-2016 AND SPECIFICATION SECTION 21 13 13.00 10.
2. DEVICES AND EQUIPMENT MUST BE UL LISTED OR FM APPROVED.
3. EXISTING WATER SUPPLY SERVING THE WHARF IS AS FOLLOWS:

   LOCATION: OS-1 TSURUMI, JAPAN
   STATIC PRESSURE; 1165 kPA
   RESIDUAL PRESSURE: 135 kPA
   FLOW AT RESIDUAL: 18,124 lpm

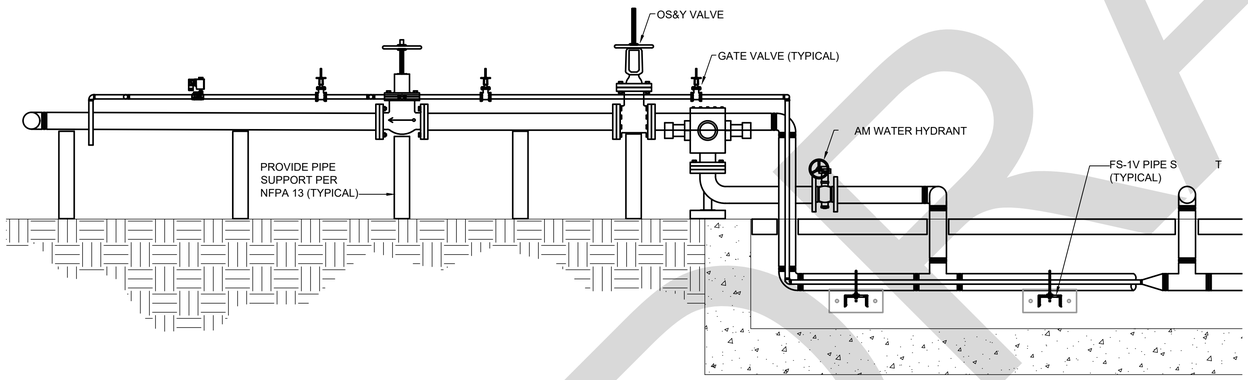
4. FIRE PROTECTION WATER SUPPLY PIPING MUST COMPLY WITH NFPA 13, EXCEPT THAT COPPER AND PLASTIC PIPE MUST NOT BE PERMITTED.
5. ALL PIPING AND FITTINGS ON THE WHARF SHALL BE SCHEDULE 40 SAE 316L STAINLESS STEEL.
6. THE PIPE ROUTING IS CONCEPTUAL. INSTALL THE SYSTEM IN ACCORDANCE WIT THE APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS AND EQUIP LISTINGS.
7. PROVIDE A NOMINAL CLEARANCE OF 50 MM AROUND PIPES 90 MM AND SMALLER, AND PROVIDE A NOMINAL CLEARANCE OF 100 MM AROUND PIPES MM AND LARGER PASSING THROUGH METAL GRATING.
8. PROVIDE INSPECTION AND HYDROSTATIC TESTS IN ACCORD WITH NFPA 13 AND SPECIFICATION 21 13 13.00 10.
9. FOAM MONITORS SHALL BE PROTECTED IN PLACE DU CONSTRUCTION.
10. EXISTING FIRE SUPPRESSION PIPING IS EMPTY D NOT CONTAIN EXISTIN SOLUTION.
11. PIPE SUPPORTS SHALL NOT TO EXCEED 4572 MM SPA TERVAL ACCORDANCE WITH NFPA 13.

FIRE PROTECTION SYMBOLS & ABBREVIATIONS

EXISTING	NEW	DESCRIPTION
— F —	— F —	FIRE SUPPRESSION PIPING
		PIPE POINT OF CONNECTION TO EXISTING
		PIPE CAP
		PIPE DOWN
		BUTTERFLY VALVE
		BALL VALVE
		FIRE HYDRANT
		FIBERGLASS FIRE HOSE CABINET
		CONCRETE PIPE SUPPORT
		DELUGE VALVE
		FIRE PUMP START STATION
(SV)	(S)	SOLENOID VALVE
		HIGH HAZARD DRY CHEMICAL FIRE EXTINGUISHER



4 FIRE PROTECTION ISOMETRIC OF SECTION -3
SCALE: NOT TO SCALE



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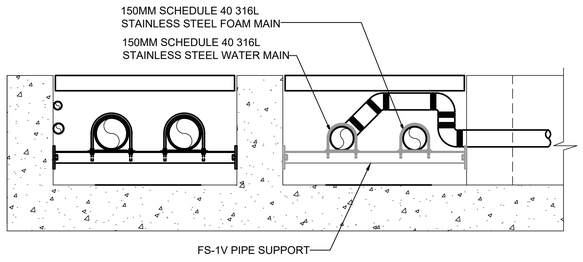
SCALE: 1:20 0 800mm



2 FIRE PROTECTION SECTION -2
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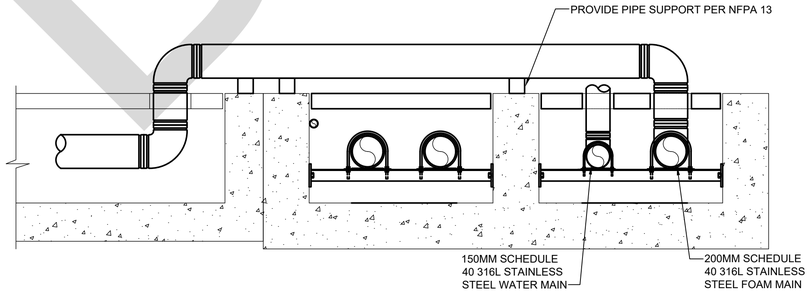

1 FIRE PROTECTION SECTION -1
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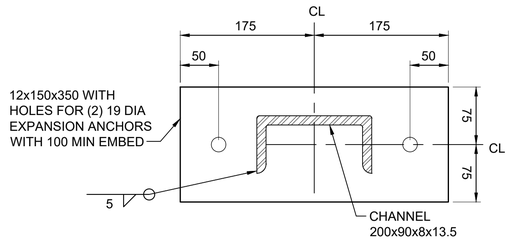
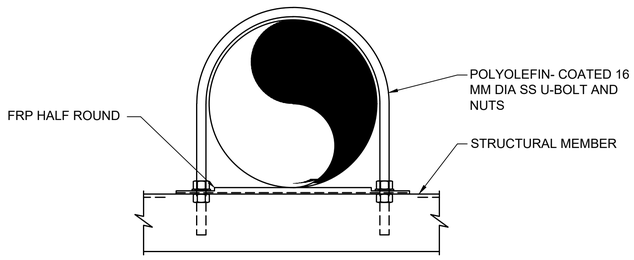
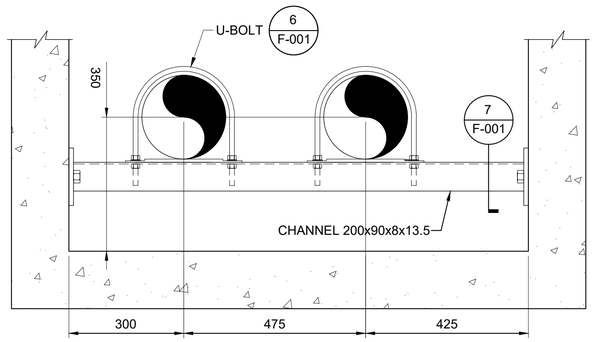


7 FS-1V CONNECTION DETAIL
SCALE: 1:4 0 100 200mm



6 PIPE SUPPORT DETAILS
SCALE: 1:4 0 100 200mm



5 FS-1V PIPE SUPPORT
SCALE: 1:8 0 200 400mm

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: -
SOLICITATION NO.:
CONTRACT NO.:
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DESIGNED BY: R. BIGTAS
DRAWN BY: K. OKAMOTO
CHECKED BY: J. HIGASHI
SUBMITTED BY: R. BIGTAS
FILE NAME:
SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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SUITE 1400
HONOLULU, HAWAII 96813

DESC 19004
MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

FIRE PROTECTION NOTES, ABBREVIATIONS, AND LEGEND

SHEET ID
F-001

FILE: F-001.dwg
DATE: 6/25/2018 5:05 PM
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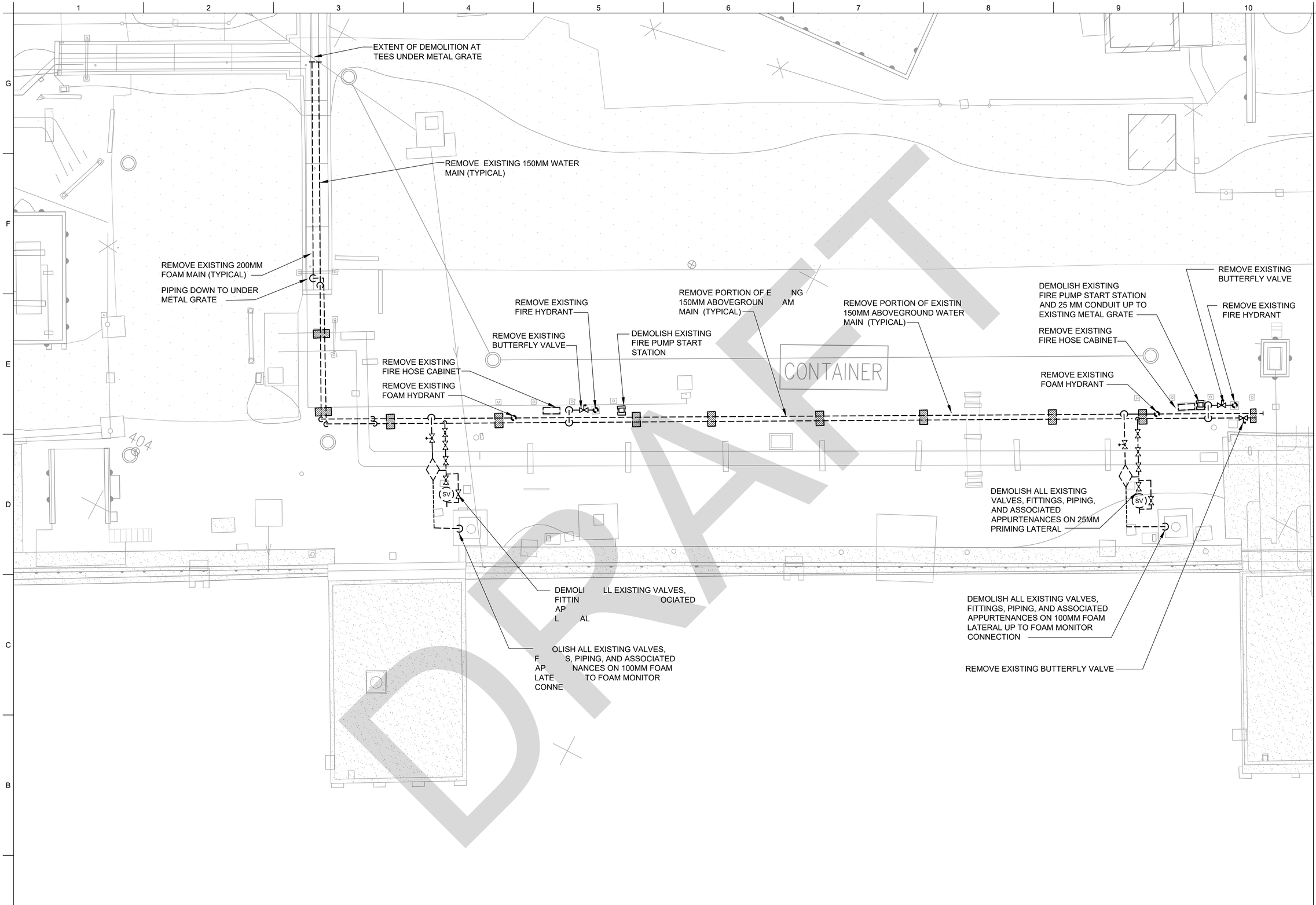

1 FIRE PROTECTION PIPING DEMOLITION PLAN
SCALE: 1:100

NORTH

0 2000 4000mm

US Army Corps of Engineers®

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ISSUE DATE: -
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DRAWN BY: K. OKAMOTO
CHECKED BY: J. HIGASH
SUBMITTED BY: R. BIGTAS
SIZE: ISO A1

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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SUITE 1400
HONOLULU, HAWAII 96813

DESC 19104
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

FIRE PROTECTION PIPING DEMOLITION

SHEET ID

FD101

FILE: FD101.dwg
DATE: 6/25/2018 5:05 PM
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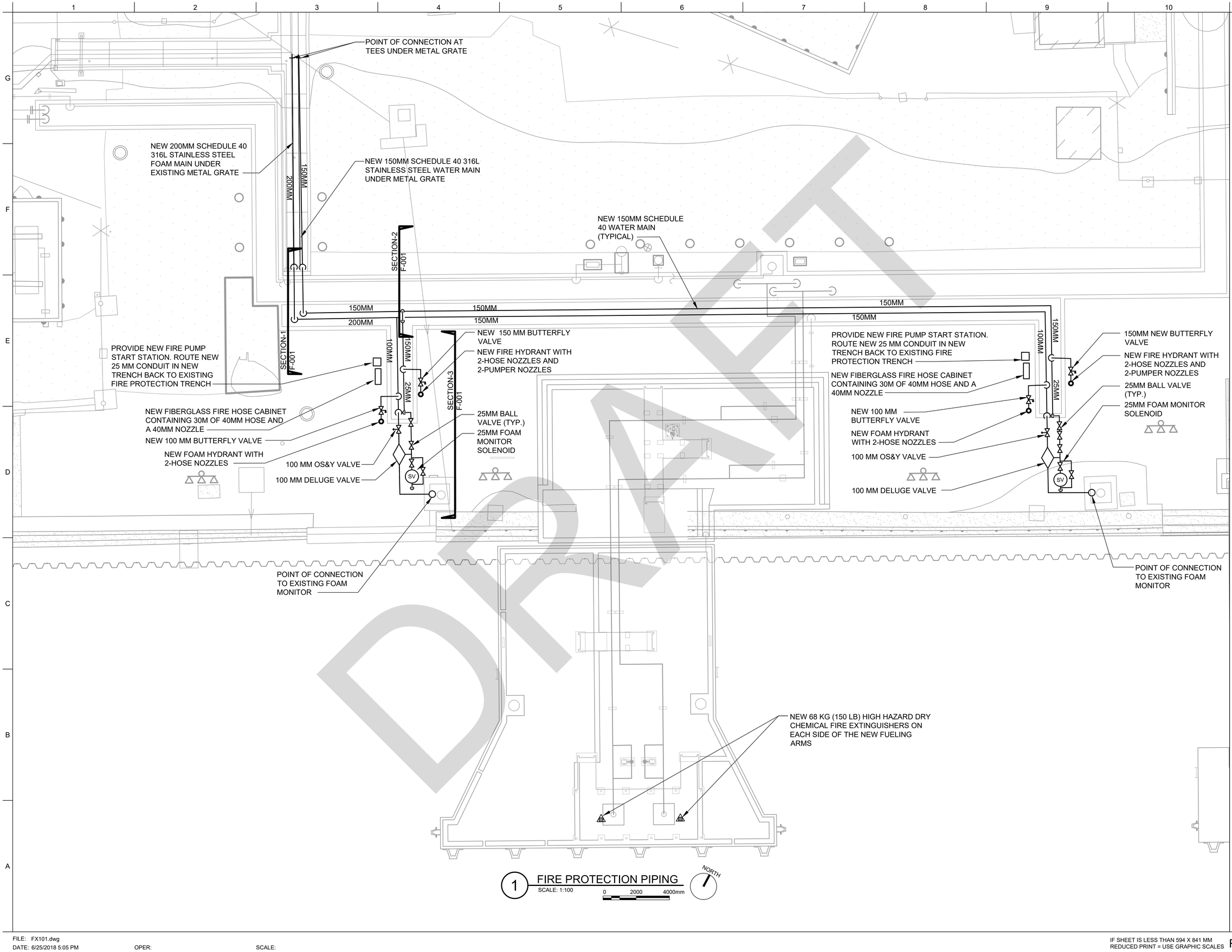

1 FIRE PROTECTION PIPING
SCALE: 1:100
0 2000 4000mm

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: R. BIGTAS	ISSUE DATE: -		
DRAWN BY: K. OKAMOTO	SOLICITATION NO.: -		
CHECKED BY: J. HIGASH	CONTRACT NO.: -		
SUBMITTED BY: R. BIGTAS	DRAWING CODE: -		
SIZE: ISO A1	FILE NAME:		

U.S. ARMY CORPS OF ENGINEERS
HONOLULU DISTRICT
APO AP 96858-5010

HDR - WTNA JV
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DESC 1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

FIRE PROTECTION PIPING

SHEET ID

FX101

FILE: FX101.dwg
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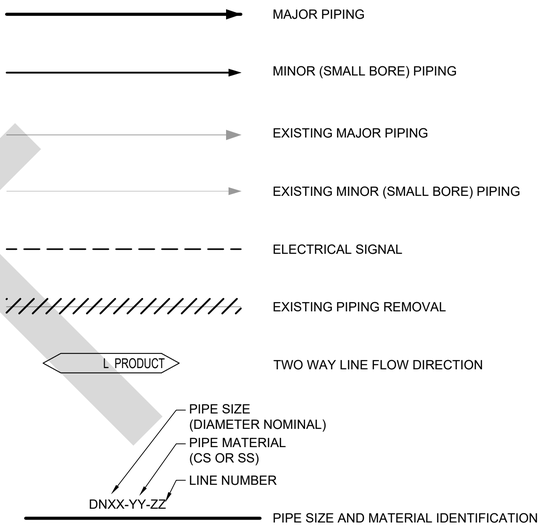
ABBREVIATIONS

AG	ABOVE GRADE
AI	ADDITIVE INJECTION
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
CS	CARBON STEEL
DN	DIAMETER NOMINAL (MM)
DB&B	DOUBLE BLOCK AND BLEED
ECC	ECCENTRIC
FOB	FLAT ON BOTTOM
FS	FLOW SWITCH
FT	FEET
GAL	GALLON
GPM	GALLONS PER MINUTE
HOA	HAND-OFF-AUTO
HPV	HIGH POINT VENT
HS	HAND SWITCH
HZ	HERTZ
IF	ISOLATION FLANGE
JP	JET PROPULSION
KPA	KILOPASCAL
KW	KILOWATT
L	LITER
LG	LEVEL GAUGE
LPD	LOW POINT DRAIN
LPM	LITERS PER MINUTE
M	MOTOR
MIN	MINUTE
MLA	MARINE LOADING ARM
MT	MIX TANK
MM	MILLIMETERS
MX	MIXER
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
PRV	PRESSURE RELIEF VALVE
PS-X	PIPE SUPPORT NUMBER "X"
PSI	POUNDS PER SQUARE INCH
RED	REDUCER
SC	SAMPLE CONNECTION
SDA	STATIC DISSIPATER ADDITIVE
SR	SHORT RADIUS
SS	STAINLESS STEEL
SW	SOCKET WELD
TYP	TYPICAL
V	VOLT
W/	WITH
WNF	WELD NECK FLANGE
#	NUMBER OR POUND

FLOW DIAGRAM SYMBOLS

SYMBOL	NAME
	ADDITIVE INJECTOR (POSITIVE DISPLACEMENT TYPE)
	ARROW FLOW DIRECTION
	BALL VALVE
	BRAIDED PUMP CONNECTOR
S	BASKET STRAINER
	CAM AND GROOVE TYPE COUPLING
	CHECK VALVE - WAFER OR DUAL PLATE TYPE
	CONNECT TO EXISTING
	DOUBLE BLOCK AND BLEED (PLUG) VALVE
	FLANGE CONNECTION
FR	FLOW RELAY
	FREE VENT WITH WEATHER HOOD
	LIMITS OF REMOVAL (SOLID FILL SIDE)
	MARINE LOADING ARM
M	MIXER
	PIPE CAP R SOCKET WELDED)
PI	PRESSURE I ATOR
	PRESSURE REL ALVE
	REDUCER (ECCE FLAT ON B M)
	REDUCER - CONCE C
M	NG-VANE POSITIVE LACEMENT PUMP (SIDE INLET, SIDE HARGE)
	CTION (QUICK ISCONNECT-TYPE_
	TANK HATCH
	WYE STRAINER

FLOW DIAGRAM LINE DESIGNATIONS



INSTRUMENT IDENTIFICATION LEGEND

XXX / -	LOCAL, FIELD MOUNTED INSTRUMENT
I	CONTROL INTERLOCK SCHEME

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: B. RICHARDSON
DRAWN BY: J. FU
CHECKED BY: J. FREDERICK
SUBMITTED BY: B. RICHARDSON
SIZE: ISO A1
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 4000
HONOLULU, HAWAII 96813

DESC1804
MODERNIZE FUELING WHARF NO.T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

ABBREVIATIONS, LEGENDS, SYMBOLS

SHEET ID

M-001

FILE: M001.dwg
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MECHANICAL NOTES

1. ALL INDICATED SIZES AND DIMENSIONS ARE IN METRIC UNITS UNLESS NOTED OTHERWISE.
2. ALL MECHANICAL PIPING WORK IS TO BE IN ACCORDANCE WITH ASME B31.3 UNLESS OTHERWISE NOTED.
3. PROVIDED MATERIALS TO BE INSTALLED MUST BE ASBESTOS AND LEAD FREE.
4. THE CONTRACTOR IS RESPONSIBLE FOR DEFUELING OF EXISTING PIPING SYSTEMS AS REQUIRED TO PERFORM THE WORK REQUIRED BY THIS PROJECT.
5. THE GOVERNMENT WILL ACCEPT CLEAN FUEL THE CONTRACTOR REMOVES FROM EXISTING PIPING.
6. HOT-WORK, PIPE END PREPARATION, AND WELDING MUST BE ACCOMPLISHED BY:
   A. COMPLETE DEFUELING AND INERTING BETWEEN ISOLATION POINTS, OR
   B. USING GAS BARRIER PLUGS AND INERTING IN ACCORDANCE WITH API BULLETIN 2209.
7. COLD CUTTING OF EXISTING PIPE, AFTER DEFUELIING, IS REQUIRED. PERFORM INITIAL CUTTING OF EXISTING PIPING WITH A MULTI-WHEEL PIPE CUTTER USING NON-FLAMMABLE LUBRICANT OR OTHER APPROVED COLD CUTTING METHOD. COLD CUT PIPE IN LOCATIONS INDICATED BY LIMITS OF REMOVAL. CONTRACTOR MUST DETERMINE EXACT LOCATION OF CUTS AND CORRESPONDING TIE-IN WELDS.
8. PROVIDE BLOCKING WHEN REMOVING COMPONENTS TO MAINTAIN PIPE AND FLANGE BOLT ALIGNMENT.
9. CONTRACTOR MUST NOT DAMAGE EXISTING PIPE TO REMAIN DURING PIPING REMOVAL AND MUST REPAIR ANY DAMAGE AT NO ADDITIONAL COST TO THE GOVERNMENT.
10. PROVIDE MATING FLANGES AND GASKETS TO MATCH EXISTING WHERE REQUIRED.
11. ALL TIE-IN FLANGED SPOOLS AND WELDED PIPE PUPS NOT TO BE TESTED AS PART OF THE ENTIRE SYSTEM MUST BE PREFABRICATED AND PRE-TESTED PRIOR TO MAKING CONNECTION.
12. THE FOLLOWING WELD CLEARANCES MUST BE MAINTAINED DURING PIPING CONSTRUCTION:
   A. PROVIDE A MINIMUM OF 75 MM BETWEEN ADJACENT PIPE GIRTH WELDS
   B. PROVIDE A MINIMUM OF 50 MM BETWEEN A PIPE GIRTH WELD AND ADJACENT WELD FOR BRANCH FITTINGS
   C. PROVIDE A MINIMUM OF 25 MM BETWEEN A PIPE GIRTH WELD AND ADJACENT PIPE SUPPORT ATTACHMENT WELD.

MECHANICAL PHASING

1. THE CONTRACTOR MUST SUBMIT A COMPREHENSIVE CONSTRUCTION PHASING WORK PLAN TO BE APPROVED BY THE CONTRACTING OFFICER PRIOR TO START OF WORK.
2. LIMITATIONS OF SERVICE OUTAGES AND OTHER PHASING REQUIREMENTS MUST BE IN ACCORDANCE WITH THE GENERAL PROJECT PHASING NOTES.
3. THIS PROJECT WILL REQUIRE THE REMOVAL OF RECEIPT CAPABILITY AT OU-1 FOR AN EXTENDED PERIOD OF TIME. TRANSFER CAPABILITY BETWEEN OU-1 AND OU-2 THROUGH THE INTER-TERMINAL PIPELINES MUST BE MAINTAINED AT ALL TIMES DURING WORK WITH THE EXCEPTION OF DURING PLANNED SERVICE OUTAGES.
4. TO MAINTAIN TRANSFER CAPABILITY, A TEMPORARY TRANSFER LINE WILL BE INSTALLED PRIOR TO TAKING THE INTER-TERMINAL PIPELINES OUT OF SERVICE. TEMPORARY MECHANICAL PROVISIONS WILL REMAIN IN PLACE UNTIL OPERATIONAL CAPABILITY OF THE INTER-TERMINAL PIPELINES IS READY TO BE RESTORED. REFER TO MECHANICAL SHEET MD103 FOR TEMPORARY MECHANICAL PROVISIONS

ASBESTOS CONTAINING MATERIALS

1. CONTRACTOR MUST ASSUME ASBESTOS IS PRESENT IN EXISTING PIPING GASKETS. CONTRACTOR MUST TAKE APPROPRIATE PRECAUTIONS, USE REQUIRED CONTROLS DISPOSE OF HAZARDOUS WASTE IN ACCORDANCE WITH INSTALLATION, LOCAL ESE ENVIRONMENTAL GOVERNING STANDARDS, AND FEDERAL REGULATIONS.

LEAD CONTAINING PAINT

1. CONTRACTOR MUST ASSUME LEAD BASED PAINT IS PRESENT IN EXISTING COATI CONTRACTOR MUST TAKE APPROPRIATE PRECAUTIONS AND USE REQUIRED CONTR BASED ON RESULTS OF TESTING. DISPOSE OF HAZARDOUS WASTE IN ACCORDANCE WI INSTALLATION, LOCAL, JAPANESE ENVIRONMENTAL GOVERNING STANDARDS, AND FEDERA REGULATIONS.

FLANGE PROTECTOR BANDS

1. PROVIDE FLANGE PROTECTOR BANDS ON ALL CARBON STEEL TO STAINLESS STEEL FLANGES AND FLANGED CONNECTIONS PROVIDED, ALTERED, OR REASSEMBLED BY THIS PROJECT (INCLUDING FLANGES ON VALVES AND EQUIPMENT), WITH THE EXCEPTION OF FLANGES ON ABANDONED-IN-PLACE PIPING.
2. FLANGE PROTECTOR BANDS MUST BE DESIGNED TO SEAL AND PROTECT FLANGE FACES FROM ATMOSPHERIC CORROSION AND MUST ALLOW FULL VISUAL INSPECTION OF THE FLANGE GASKET WITHOUT REMOVING THE BAND. EACH BAND MUST BE FITTED WITH A GREASE INJECTION FITTING.
3. BANDS PROVIDED ON ISOLATION FLANGES MUST BE FILLED WITH CORROSION INHIBITOR GREASE.

TESTING AND COMMISSIONING REQUIREMENTS

1. HYDROSTATICALLY TEST ALL PROVIDED OR MODIFIED PIPING AS INDICATED. TESTING MUST ONLY BE CONDUCTED AFTER ALL NDE IS COMPLETED AND PRIOR TO FLUSHING AND COMMISSIONING.
2. ALL PNEUMATIC AND HYDROSTATIC TESTING MUST BE PERFORMED PRIOR TO BOLT-UP EXISTING PIPING TO AVOID HYDROSTATIC TESTING WITH FUEL NEAR WATER. PNE MATIC AND HYDROSTATIC TESTING CAN BE SHOP TESTED OR PERFORMED AT A LOC AWAY FROM WATER.
3. TO FACILITATE FLUSHING OF THE PIER PIPING AND INTER-TERMINAL PI S, THE FOLLOWING FLUSHING PLAN IS RECOMMENDED:
   a. DESIGNATE ONE ISSUE TANK AT OU-1, ONE ISSUE TANK AT O ND ONE RECEIPT TANK AT OU-1 FOR ALL FLUSHING ACTIVITIES.
   b. FOR FLUSHING PIPELINES DN200-SS-01 AND DN200-SS-02, REM E FLANGED P BETWEEN THE MARINE LOADING ARM ISOLATION VALVES AND THE E LO S ARMS. PROVIDE A TEMPORARY CROSS-CONNECT WITH FLANGED PIPI TING DN200-SS-01 AND DN200-SS-02 (SEE SHEET M-011 AND DETAIL 4/M-401 FOR TION). TRANSFER FUEL FROM THE OU-1 ISSU TANK TO THE OU-1 RECEIPT TANK US OU-1 PUMP, CIRCULATING THROUGH TH CROSS-CONNECT.
   c. FOR FLUSHING DN200-SS-03, TRANS FUEL F U 2 ISSUE TANK TO THE O RECEIPT TANK USING AN OU-2 PUMP.
   d. FOR FLUSHING DN200-SS-04, TRANSFER FROM THE OU-2 O THE OU-1 RECEIPT TANK USING AN OU-2 PUMP.
   e. FOR FLUSHING TEMPORARY INTER-TERMIN PELINE SFER FUEL FROM T E OU-2 ISSUE TANK T OU-1 RECEIPT TANK USI N O UMP.
   f. FLUSHIN DING ARMS WILL BE RMED DURING PERFORMANCE TES

PIPE E ABANDONME EQUIREMENTS

HE LIMITS OF PIPELINE A ONMENT ARE IDENTIFIED HE DEMOLITION PLAN RAWINGS, SEE SHEET 10 D 102

2 D PIPING MU T A M M EXISTING FIELD WELDS.

3. PIP BE A ONED MUST BE DRAINED, CLEANED BY PIGGING, FILLED WITH FLOWABLE CONC T SLURRY, AND CAPPED. BURIED PIPING MUST BE CAPPED WITH A FULLY SEAL-WEL ATE OR PIPE CAP. ABOVEGROUND ABANDONED PIPING WITH FLANGED ENDS CAN BE CLOS H BLIND FLANGES.

GING MUST C OF A MINIMUM OF THREE FOAM PIG RUNS PER PIPELINE TO REMOVE CH RESIDUAL F POSSIBLE. IT IS EXPECTED CLEANING CAN BE ACCOMPLISHED W T THE INSTALLA OF CONVENTIONAL PIG LAUNCHER AND RECEIVER BARRELS AS THE MUST BE PROPELLED BY COMPRESSED AIR AND/OR VACUUM PROVIDED BY A VACU RUCK. TEMPORARY FLANGES MUST BE INSTALLED AS REQUIRED TO FACILITATE PIGGIN TIVITIES.

SEQUENCE OF OPERATIONS

THE OPERATION PROCEDURES DESCRIBED HEREIN ARE INTENDED AS AN OVERVIEW OF SYSTEM OPERATION FOR THE OPERATOR AND ARE NOT INTENDED FOR CONTROL SYSTEM PROGRAMMING.

SEQUENCE OF OPERATIONS: STRIPPING SYSTEM

THE STRIPPING SYSTEM IS INTENDED TO BE USED FOLLOWING COMPLETION OF FUEL LOADING/OFF-LOADING TO REMOVE RESIDUAL FUEL FROM THE LOADING ARM.

1 MANUALLY CLOSE THE DN200 ISOLATION VALVE DOWNSTREAM OF THE MARINE LOADING RM.
2. MANUALLY OPEN THE BALL VALVES UPSTREAM AND DOWNSTREAM OF THE STRIPPING PUMP.
3. START THE STRIPPING PUMP BY SETTING THE HAND SWITH TO “ON”. “ON” INDICATOR LIGHT WILL ILLUMINATE.
4. THE FLOW RELAY WILL AUTOMATICALLY SHUT OFF THE STRIPPING PUMP ON LOSS OF FLOW (INDICATING LOADING ARM HAS BEEN DRAINED). “OFF/NO FUEL” INDICATOR LIGHT WILL UMINATE. THE STRIPPING PUMP WILL RUN FOR APPROXIMATELY 5 MINUTES BEFORE THE WILL BE DRAINED. DRAINING OF THE MARINE LOADING ARM PIPING CAN BE MONITORED WI FLOW RELAY SIGHT GLASS.
5. RESID EL UPSTREAM OF THE STRIPPING PUMP CAN BE REMOVED USING THE UPSTREAM POINT DRAIN.
6. MANUALLY CL HE BALL VALVES UPSTREAM AND DOWNSTREAM OF THE STRIPPING PUMPS ONCE STRIPPING IS COMPLETE.

SEQUENCE OF OPERATIONS: ADDITIVE INJECTION

THE ADDITIVE INJECTION SYSTEM IS INTENDED TO BE USED FOR ADDING SDA TO JP-8 FUEL DURING MARINE OFF-LOADING.

FOR MARINE OFF-LOADING OPERATION:

1. ENSURE SDA MIX TANK HAS SUFFICIENT VOLUME FOR FUEL OFF-LOAD OPERATION. A 25 MBBL OFF-LOAD REQUIRES APPROXIMATELY 119 LITERS (31.5 GALLONS) OF DILUTED SDA. MIX TANK IS MANUALLY FILLED VIA DN100 FILL HATCH ON TOP OF TANK.
2. MANUALLY OPEN BALL VALVES FROM SDA MIX TANK TO ADDITIVE INJECTOR TO BE USED FOR OFF-LOAD.
3. MANUALLY OPEN BALL VALVES UPSTREAM AND DOWNSTREAM OF ADDITIVE INJECTOR.
4. MANUALLY CLOSE BALL VALVE FOR ADDITIVE INJECTOR BYPASS LINE.
5. MANUALLY OPEN THE VALVE DOWNSTREAM OF THE MARINE LOADING ARM.
6. MANUALLY ALIGN VALVES ON THE INTER-TERMINAL PIPELINE TO OFF-LOAD FUEL TO EITHER OU-1 OR OU-2.
7. DURING FUEL OFF-LOAD, ADDITIVE INJECTOR WILL INJECT SDA BASED ON FLOW RATE TO MAINTAIN THE REQUIRED 1.5 PPM OF SDA.
8. MARINE OFF-LOAD CAN BE PERFORMED WITHOUT ADDITIVE BY CLOSING THE VALVES FROM THE SDA MIX TANK TO THE ADDITIVE INJECTOR. MARINE OFF-LOAD MUST NOT BE PERFORMED USING THE ADDITIVE INJECTOR BYPASS.

FOR MARINE LOADING OPERATION:

1. MANUALLY CLOSE THE BALL VALVES UPSTREAM AND DOWNSTREAM OF THE ADDITIVE INJECTOR.
2. MANUALLY OPEN THE BALL VALVE ON THE ADDITIVE INJECTOR BYPASS LINE.
3. MANUALLY OPEN THE VALVE UPSTREAM OF THE MARINE LOADING ARM.
4. MANUALLY ALIGN VALVES ON THE INTER-TERMINAL PIPELINE TO LOAD FUEL FROM EITHER OU-1 OR OU-2.

EMERGENCY STOP AND RESET

1. DEPRESSING THE EMERGENCY STOP (EFSO) PUSHBUTTON AT THE OU-1 FUELING WHARF WILL STOP THE STRIPPING PUMPS AT THE FUELING WHARF AND THE PUMPS AT THE OU-1 PUMPHOUSE. THIS ACTION IS EXECUTED WITHOUT REGARD FOR WHETHER PUMPS ARE RUNNING IN AUTOMATIC OR MANUAL MODES. THE EMERGENCY STOP SYSTEM WILL ACTIVATE AN EXTERIOR STROBE AND AUDIBLE ALARM. ALL AUDIBLE AND VISUAL ALARMS WILL CONTINUE UNTIL THE ALARM IS RESET.
2. IN ORDER TO RESET THE SYSTEM AFTER AN ALARM, DEPRESS THE "RESET" PUSHBUTTTON LOCATED AT THE ALARM PANEL AFTER RESETTING THE INITIAL ACTIVE EMERGENCY STOP PUSHBUTTON STATION.

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U.S. ARMY CORPS OF ENGINEERS
POHONO, POD
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 1000
HONOLULU, HAWAII 96813

DESC:1504
MODERNIZE FUELING WHARVES NO.1 & 1-4 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

GENERAL MECHANICAL NOTES

SHEET ID
M-002

FILE: M002.dwg
DATE: 6/25/2018 5:05 PM
OPER:
SCALE:

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PIER 111 DEMOLITION PHASING

1. TO MAINTAIN FUEL RECEIPT CAPABILITY AT THE FACILITY, EXISTING EQUIPMENT AT PIER 111 WILL BE REMOVED IN PHASES. ONE ADDITIVE INJECTOR WILL BE REMOVED AND RELOCATED TO OU-2 PRIOR TO DEMOLISHING THE EXISTING INTER-TERMINAL PIPELINE. SEE MD-102 FOR LIMITS OF PARTIAL REMOVAL.
2. NOTIFY THE GOVERNMENT 7 DAYS IN ADVANCE PRIOR TO REMOVING THE ADDITIVE INJECTOR FROM PIER 111. REMOVAL OF ONE ADDITIVE INJECTOR WILL NOT IMPACT RECEIPT CAPABILITY AT OU-1.
3. ISOLATE THE INTER-TERMINAL PIPELINE AND THE SDA TUBING FROM THE ADDITIVE INJECTOR AS SHOWN ON MD-102 AND PROVIDE DN200 BLIND FLANGES AFTER REMOVAL OF PIPING.
4. RELOCATE ADDITIVE INJECTOR PIPING TO OU-2 AS SHOWN ON M-121.
5. EXISTING SDA TANK WILL REMAIN AT PIER 111 UNTIL TEMPORARY INTER-TERMINAL PIPELINE IS INSTALLED.

OU-2 TEMPORARY ADDITIVE INJECTION

1. PRIOR TO DEMOLISHING FUEL RECEIPT CAPABILITY AT PIER 111, THE ADDITIVE INJECTOR PIPING MUST BE INSTALLED AT OU-2. OU-2 DOES NOT CURRENTLY HAVE SDA INJECTION CAPABILITY. INSTALLATION OF TEMPORARY ADDITIVE INJECTION AT OU-2 WILL ALLOW SDA TO BE ADDED TO ALL FUEL RECEIPT AT PIER 328 AND 329 DURING CONSTRUCTION OF NEW FUELING WHARF AT OU-1.
2. NOTIFY THE GOVERNMENT 7 DAYS IN ADVANCE PRIOR TO INSTALLING THE TEMPORARY ADDITIVE INJECTION PIPING AT OU-2.
3. INSTALL THE ADDITIVE INJECTION PIPING REMOVED FROM PIER 111 INSIDE THE BERM FOR TANK 307 AT OU-2 (SEE M-121). CONNECTION OF THE ADDITIVE INJECTION PIPING WILL BE MADE AT EXISTING FLANGES AT OU-2 WITH ADDITIONAL TEMPORARY PIPING PROVIDED FOR FIT-UP. NO COLD CUTTING OR WELDING WILL BE PERFORMED ON EXISTING OU-2 PIPING.
4. PERFORM PNEUMATIC AND HYDROSTATIC TESTING AND COMMISSIONING (START-UP) FOR TEMPORARY ADDITIVE INJECTION EQUIPMENT AND PIPING AS SPECIFIED FOR PERMANENTLY-PROVIDED PIPING AND SYSTEMS.
5. RELOCATE EXISTING SDA TANK AT PIER 111 TO OU-2 DURING DOWNTIME OF INTER-TERMINAL PIPELINE. PROVIDE FIELD ROUTED TUBING FROM SDA TANK TO ADDITIVE INJECTOR.

TEMPORARY INTER-TERMINAL PIPELINE PHASING

1. NOTIFY THE GOVERNMENT 14 DAYS IN ADVANCE TO SCHEDULE SYSTEM DOWNTIME TO CONNECT THE TEMPORARY INTER-TERMINAL PIPELINE TO THE EXISTING INTER-TERMINAL PIPELINE. SYSTEM DOWNTIME MUST NOT EXCEED 7 DAYS WITHOUT WRITTEN AUTHORIZATION.
2. PARTIAL UTILIDORS A AND B MUST BE INSTALLED PRIOR TO REMOVAL OF EXISTING INTER-TERMINAL PIPING. SEE M-111 FOR PARTIAL UTILIDOR A AND B LAYOUT COMPARED TO FINAL UTILIDOR.
3. PHASE INSTALLATION OF PARTIAL UTILIDORS A AND B TO ALLOW ACCESS TO EXISTING INTER-TERMINAL PIPING AND PIER 111 AT ALL TIMES.
4. ONLY ONE DN200 TEMPORARY INTER-TERMINAL PIPELINE IS NECESSARY. TEMPORARY INTER-TERMINAL PIPELINE WILL ALLOW FUEL TRANSFERS BETWEEN OU-1 AND OU-2 DURING CONSTRUCTION ACTIVITIES FOR NEW FUELING WHARF. ONCE PIER 111 IS DEMOLISHED, ALL FUEL WILL BE RECEIVED AT OU-2 (WITH TEMPORARY ADDITIVE INJECTION INSTALLED) AND TRANSFERRED VIA THE TEMPORARY INTER-TERMINAL PIPELINE, AS NEEDED.
5. TEMPORARY INTER-TERMINAL PIPELINE MUST BE ROUTED AROUND THE CONSTRUCTION ZONE TO MINIMIZE SITE IMPACT AND ALLOW ACCESS TO EXISTING INTER-TERMINAL PIPELINE AND FUEL RECEIPT AT PIER 111 UNTIL TIE-IN IS PERFORMED.
6. TEMPORARY PIPELINE MUST BE CONNECTED TO EXISTING INTER-TERMINAL PIPELINE WITH DN200 WELD NECK FLANGES ON EACH END.
7. PERFORM PNEUMATIC AND HYDROSTATIC TESTING AND COMMISSIONING (START-UP) FOR TEMPORARY INTER-TERMINAL PIPING AS SPECIFIED FOR PERMANENTLY-PROVIDED PIPING AND SYSTEMS. SEE TESTING AND COMMISSIONING REQUIREMENTS ON SHEET M-002 FOR ADDITIONAL DETAILS.
8. DURING INSTALLATION OF TEMPORARY INTER-TERMINAL PIPELINE, RELOCATE EXISTING SDA TANK TO OU-2 TEMPORARY ADDITIVE INJECTOR LOCATION.

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U.S. ARMY CORPS OF ENGINEERS
POHONOLULU DISTRICT
APO AP 96343-5010

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1001 BISHOP STREET
SUITE 600
HONOLULU, HAWAII 96813

DESC:1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

PHASING NOTES

SHEET ID

M-003

FILE: M003.dwg
DATE: 6/25/2018 5:05 PM
OPER:
SCALE:

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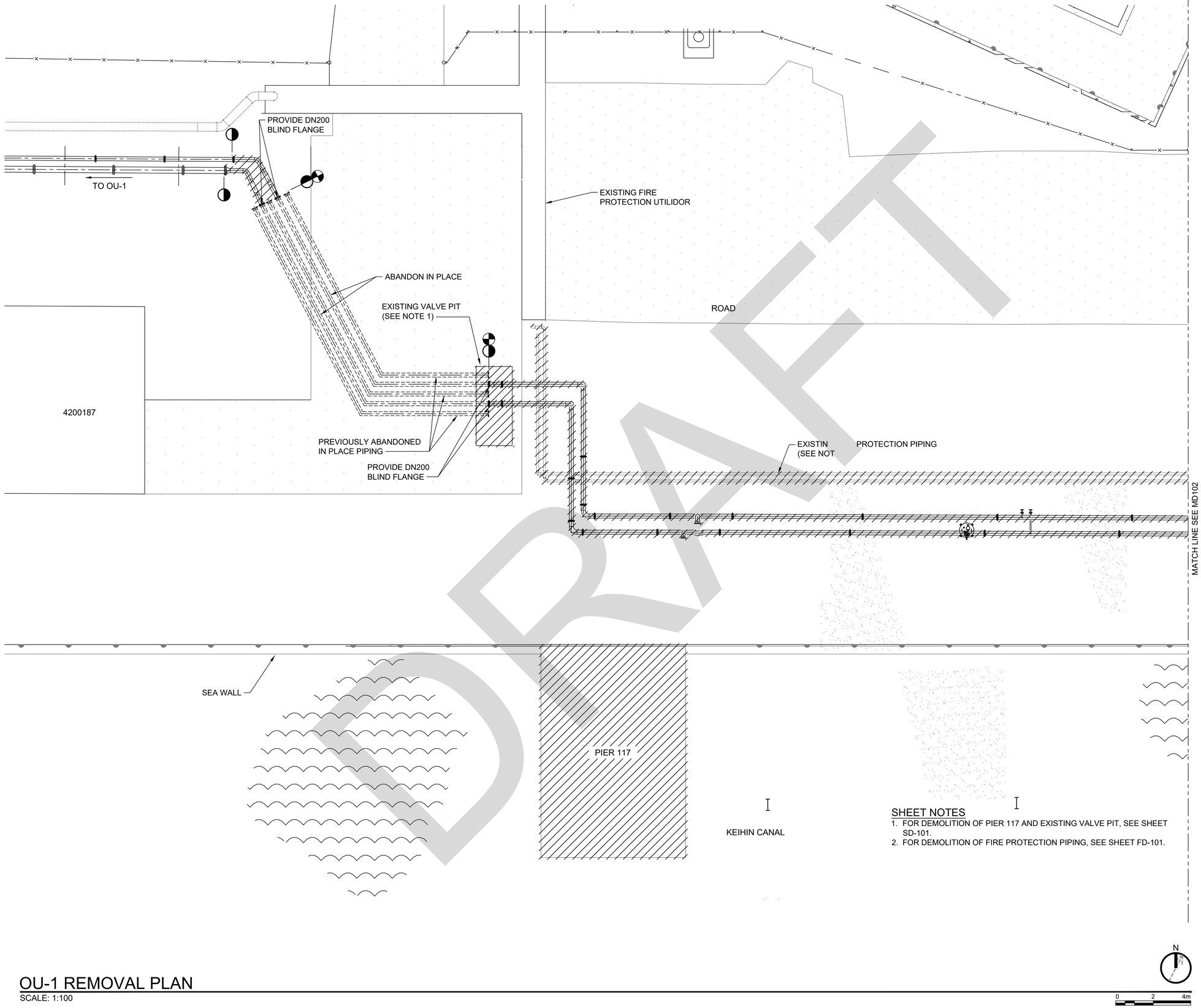

SHEET NOTES

1. FOR DEMOLITION OF PIER 117 AND EXISTING VALVE PIT, SEE SHEET SD-101.
2. FOR DEMOLITION OF FIRE PROTECTION PIPING, SEE SHEET FD-101.

OU-1 REMOVAL PLAN

SCALE: 1:100

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HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
TSURUMI, YOKOHAMA, JAPAN

MECHANICAL INTER-TERMINAL DEMOLITON PLAN 1

SHEET ID

MD-101

FILE: MD101.dwg
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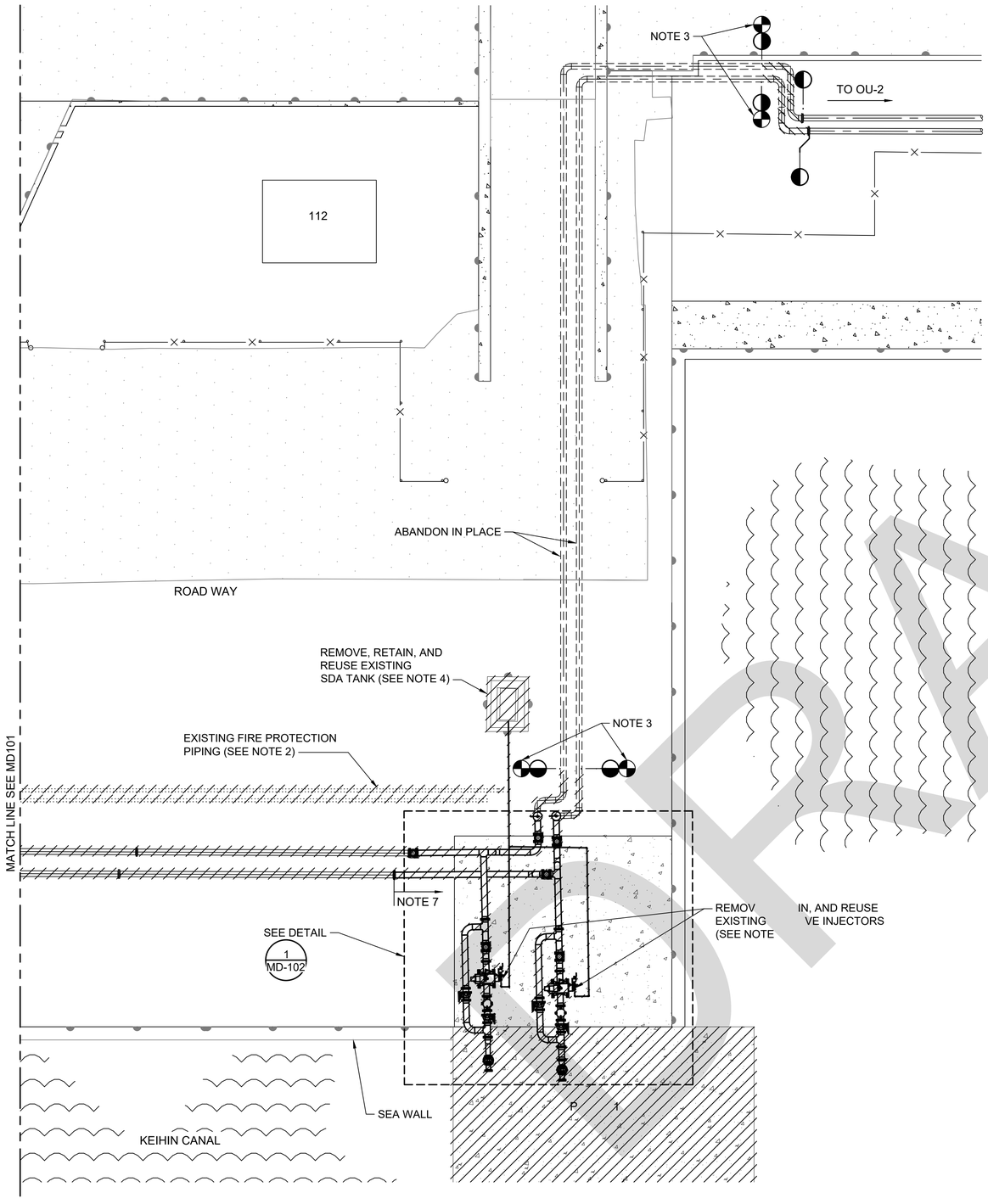
SHEET NOTES

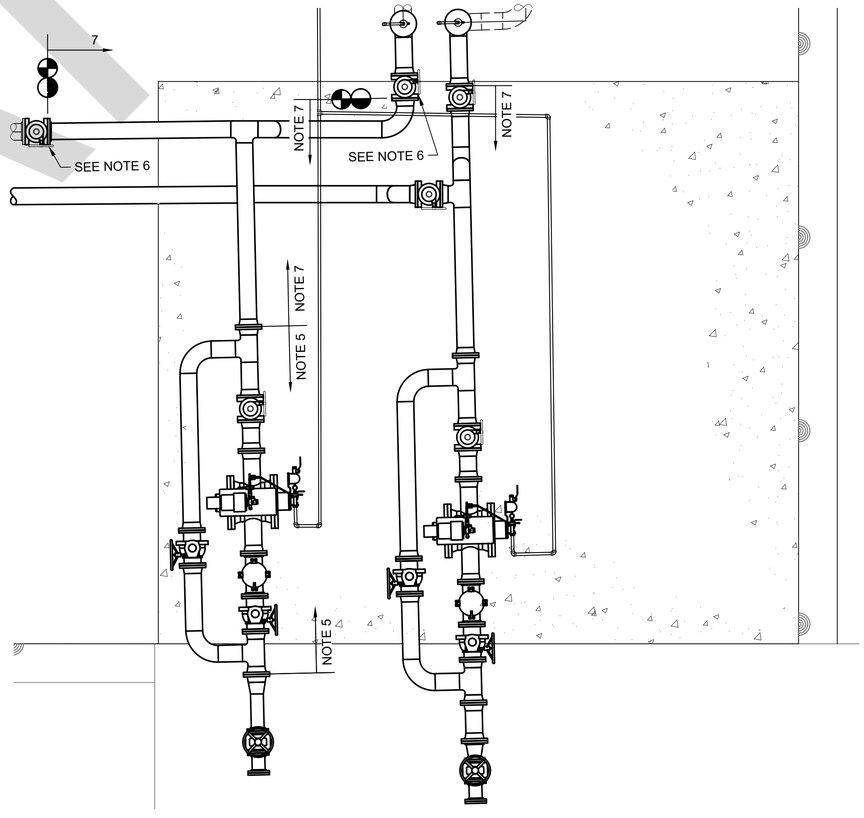
1. FOR DEMOLITION OF PIER 111, SEE SHEET SD-101.
2. FOR DEMOLITION OF FIRE PROTECTION PIPING, SEE SHEET FD-101.
3. CUT EXISTING PIPING A MINIMUM OF 300mm FROM EXISTING BURIED ELBOWS.
4. SEE PHASING NOTES ON SHEET M-003 FOR PHASED REMOVAL OF ADDITIVE INJECTORS AND SDA TANK.
5. RETAIN VALVES, STRAINER, INJECTOR, AND PIPING BETWEEN LIMITS INDICATED AND RELOCATE TO OU-2. SEE SHEET M-121 FOR LOCATION OF TEMPORARY ADDITIVE INJECTION.
6. AFTER REMOVAL OF PIPING PROVIDE DN200 BLIND FLANGE ON EXISTING VALVES.
7. REMOVE AND RETAIN PIPING AND COMPONENTS BETWEEN LIMITS INDICATED AND STORE ON-SITE FOR DURATION OF CONSTRUCTION. LOCATION OF STORAGE TO BE COORDINATED WITH CONTRACTING OFFICER. EXCEPT FOR ADDITIVE INJECTORS, DISPOSE OF PIPING AND COMPONENTS ONCE CONSTRUCTION IS COMPLETE.



OU-1 REMOVAL PLAN

SCALE: 1:100

0 2 4m



1 PIER 111 REMOVAL PLAN DETAIL

SCALE: 1:40

0 1 2m

N

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JOINT BASE PEARL HARBOR-HICKAM
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HDR - WTNA JV
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SUITE 1600
HONOLULU, HAWAII 96813

DESC:1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

MECHANIAL INTER-TERMINAL DEMOLITION PLAN 2

SHEET ID

MD-102

FILE: MD102.dwg
DATE: 6/25/2018 5:05 PM
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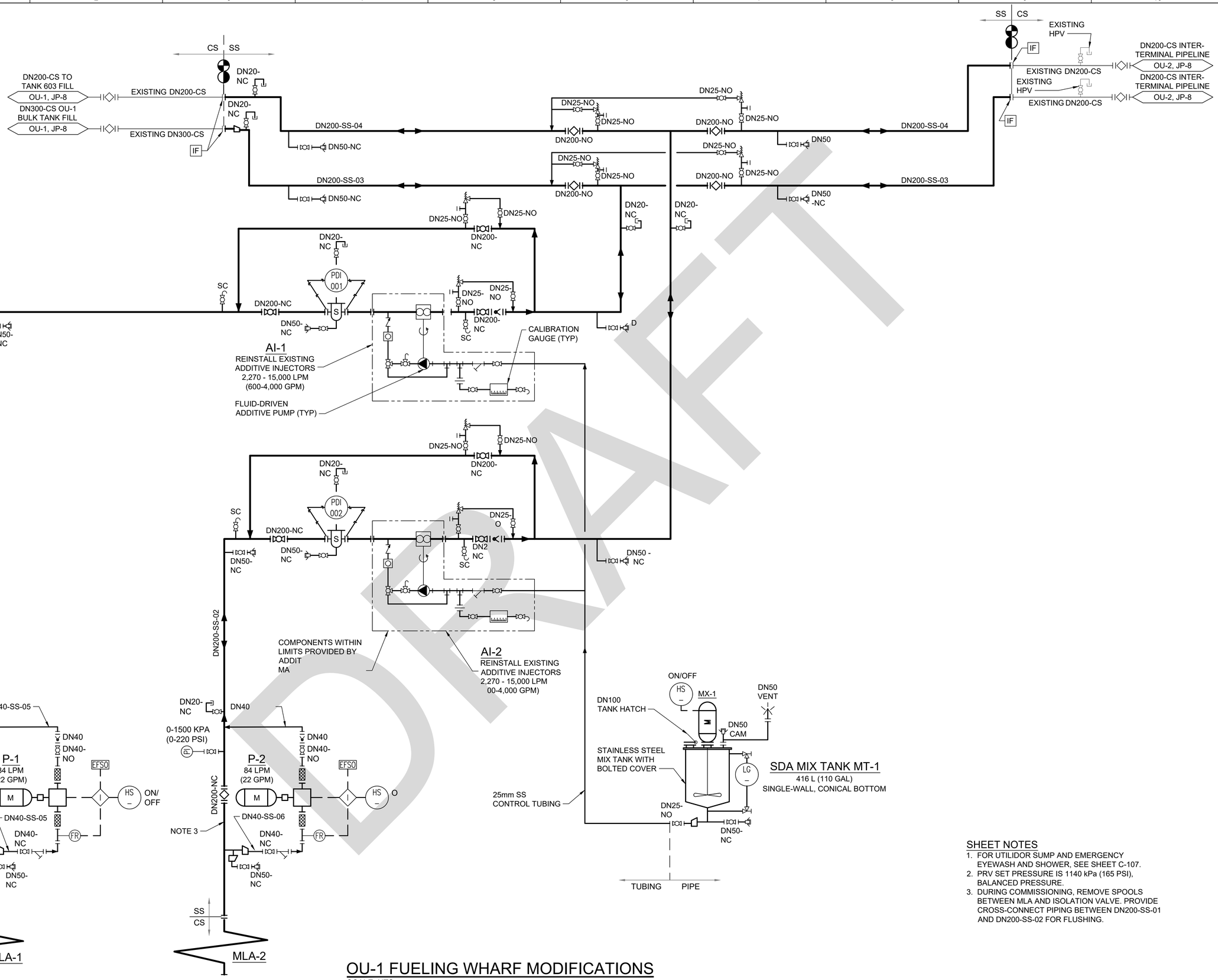

DRAFT

OU-1 FUELING WHARF MODIFICATIONS

SCALE: NTS

SHEET NOTES

1. FOR UTILIDOR SUMP AND EMERGENCY EYEWASH AND SHOWER, SEE SHEET C-107.
2. PRV SET PRESSURE IS 1140 kPa (165 PSI), BALANCED PRESSURE.
3. DURING COMMISSIONING, REMOVE SPOOLS BETWEEN MLA AND ISOLATION VALVE. PROVIDE CROSS-CONNECT PIPING BETWEEN DN200-SS-01 AND DN200-SS-02 FOR FLUSHING.

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APO AP 96343-5010

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HONOLULU, HAWAII 96813

DESC:1904
MODERNIZE FUELING WHARF NO.1 TO T-1 TANKER CAPABLE, TSURUMI, YOKOHAMA, JAPAN

OU-1 FUELING WHARF MODIFICATIONS FLOW DIAGRAM

SHEET ID

M-011

FILE: M011.dwg
DATE: 6/25/2018 5:05 PM
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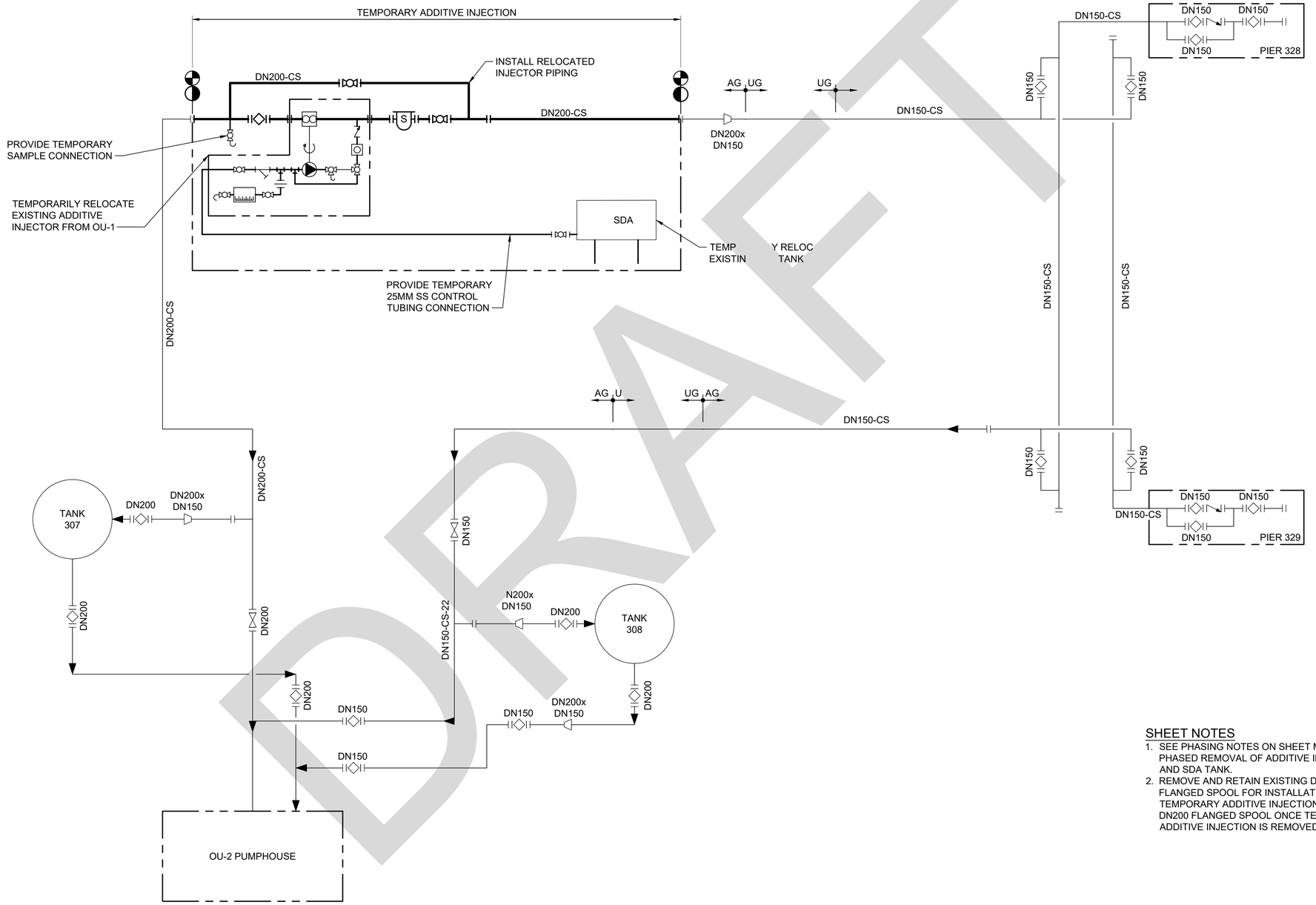

SHEET NOTES

1. SEE PHASING NOTES ON SHEET M-003 FOR PHASED REMOVAL OF ADDITIVE INJECTORS AND SDA TANK.
2. REMOVE AND RETAIN EXISTING DN200-CS FLANGED SPOOL FOR INSTALLATION OF TEMPORARY ADDITIVE INJECTION. REINSTALL DN200 FLANGED SPOOL ONCE TEMPORARY ADDITIVE INJECTION IS REMOVED.

OU-2 FUELING WHARF TEMPORARY MODIFICATIONS

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HONOLULU, HAWAII 96813

DESC:1904
MODERNIZE FUELING WHARVES T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

OU-2 FUELING WHARF TEMPORARY MODIFICATIONS FLOW DIAGRAM

SHEET ID

M-021

FILE: M021.dwg
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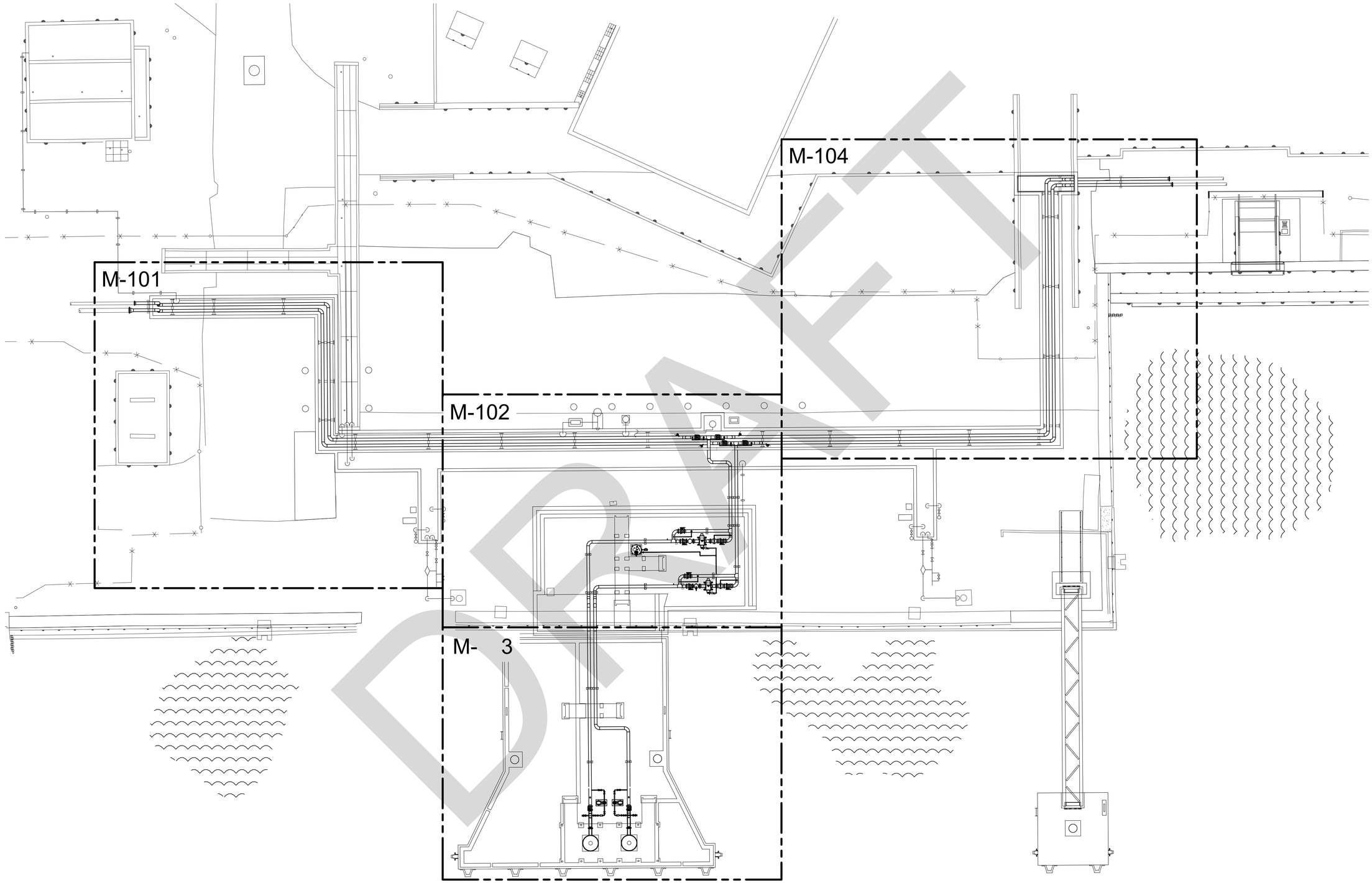

OVERALL MECHANICAL SITE PLAN

SCALE: NTS

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JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 2400
HONOLULU, HAWAII 96813

DESC1804
MODERNIZE FUELING WHARF STO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TSURUMI FUELING WHARF
KEY MAP

SHEET ID

MS-101

FILE: MS101.dwg
DATE: 6/25/2018 5:05 PM
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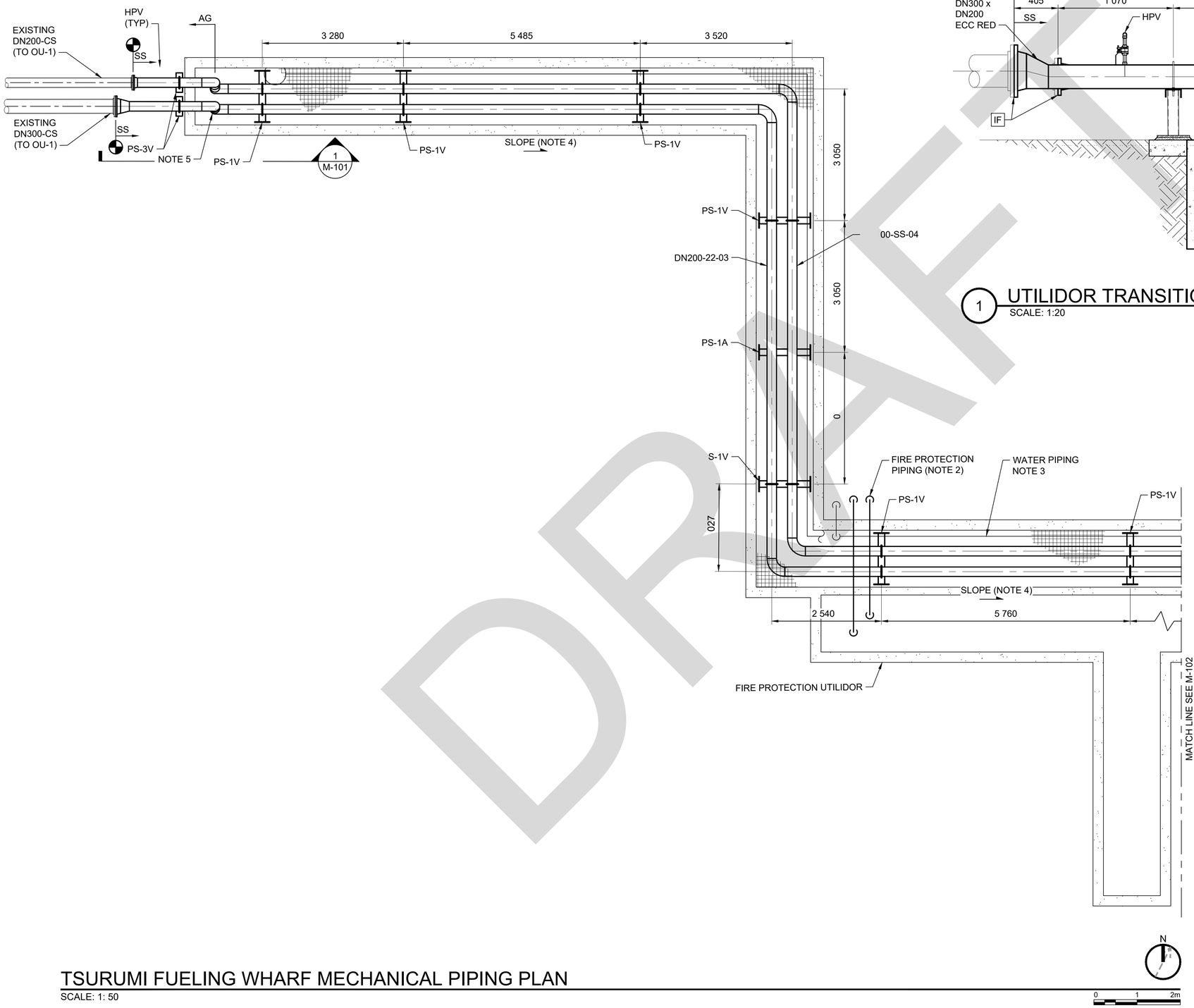
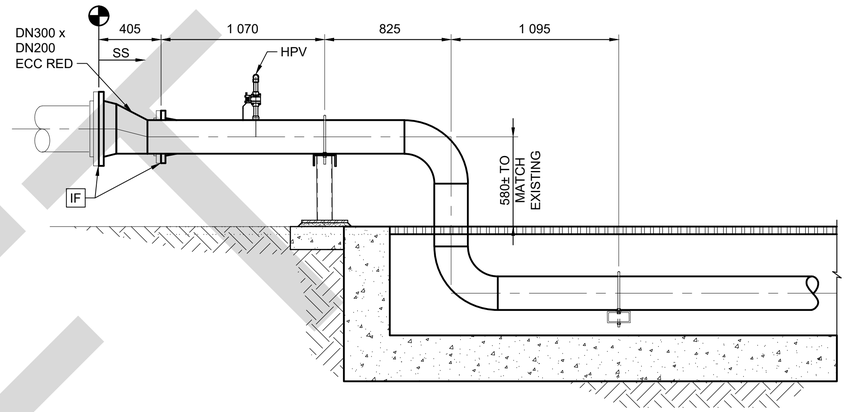
SHEET NOTES

1. FOR UTILIDOR FOUNDATION PLAN SEE SHEET S-541.
2. FOR FIRE PROTECTION PIPING PLAN SEE SHEET FX101.
3. FOR WATER PIPING DETAILS, SEE SHEET C-106.
4. PIPING TO MATCH SLOPE OF UTILIDOR.
5. OFFSET ELBOWS, AS NEEDED, TO MATCH EXISTING PIPING.
6. FOR HPV DETAILS, SEE DETAIL 1/M-501.
7. FOR PS-1V DETAILS, SEE DETAIL 1/M-503.
8. FOR PS-3V DETAILS, SEE DETAIL 3/M-503.
9. FOR PS-1A DETAILS, SEE DETAIL 4/M-503.



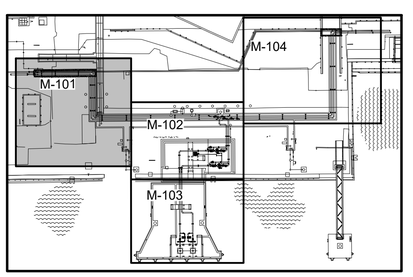
TSURUMI FUELING WHARF MECHANICAL PIPING PLAN

SCALE: 1: 50



1 UTILIDOR TRANSITION SECTION

SCALE: 1:20



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U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 600
HONOLULU, HAWAII 96813

DESC-1904
MODERNIZE FUELING WHARF TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TSURUMI FUELING WHARF
MECHANICAL PIPING PLAN 1

SHEET ID

M-101

FILE: M101.dwg
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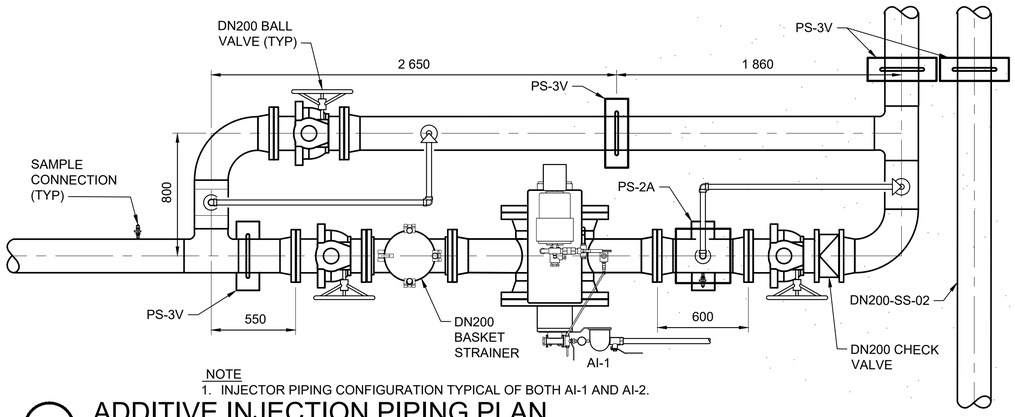


NOTE
1. INJECTOR PIPING CONFIGURATION TYPICAL OF BOTH AI-1 AND AI-2.

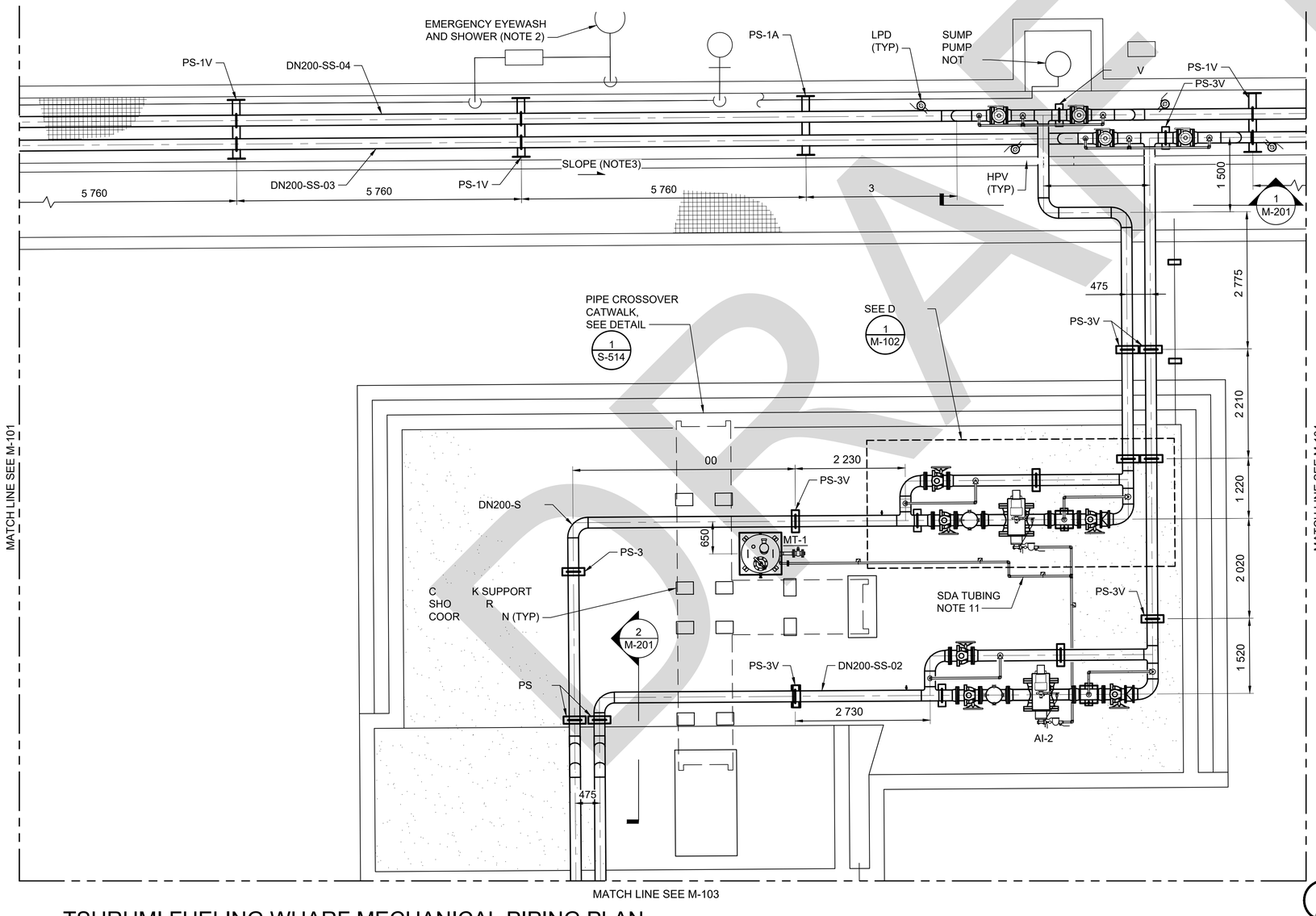
1 ADDITIVE INJECTION PIPING PLAN

SCALE: 1:20

0 500 1000mm

SHEET NOTES

1. FOR UTILIDOR FOUNDATION PLAN SEE SHEET S-541
2. FOR UTILIDOR SUMP, EMERGENCY EYEWASH AND SHOWER, AND PIPING, SEE SHEET C-401.
3. PIPING TO MATCH SLOPE OF UTILIDOR.
4. FOR HPV DETAILS, SEE DETAIL 1/M-501.
5. FOR LPD DETAILS, SEE DETAIL 2/M-501.
6. FOR PRV DETAILS, SEE DETAIL 5/M-501.
7. FOR PS-1V DETAILS, SEE DETAIL 1/M-503.
8. FOR PS-3V DETAILS, SEE DETAIL 3/M-503.
9. FOR PS-1A DETAILS, SEE DETAIL 4/M-503.
10. FOR PS-2A DETAILS, SEE DETAIL 5/M-503.
11. FIELD ROUTE DN25 SDA PIPING TO ADDITIVE INJECTORS. PROVIDE SUPPORTS EVERY 2M (MAX). FOR SDA PIPING SUPPORT, SEE DETAIL 11/M-503.
12. FOR SAMPLE CONNECTION, SEE DETAIL 9 /M-501.



TSURUMI FUELING WHARF MECHANICAL PIPING PLAN

SCALE: 1: 50

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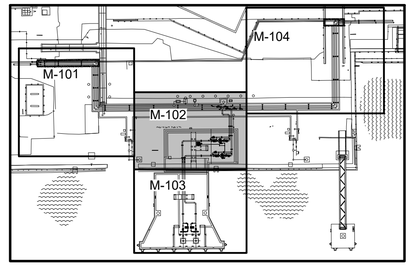

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JAPAN DISTRICT
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DESC1904
MODERNIZE FUELING WHARF TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TSURUMI FUELING WHARF
MECHANICAL PIPING PLAN 2

SHEET ID

M-102

FILE: M102.dwg
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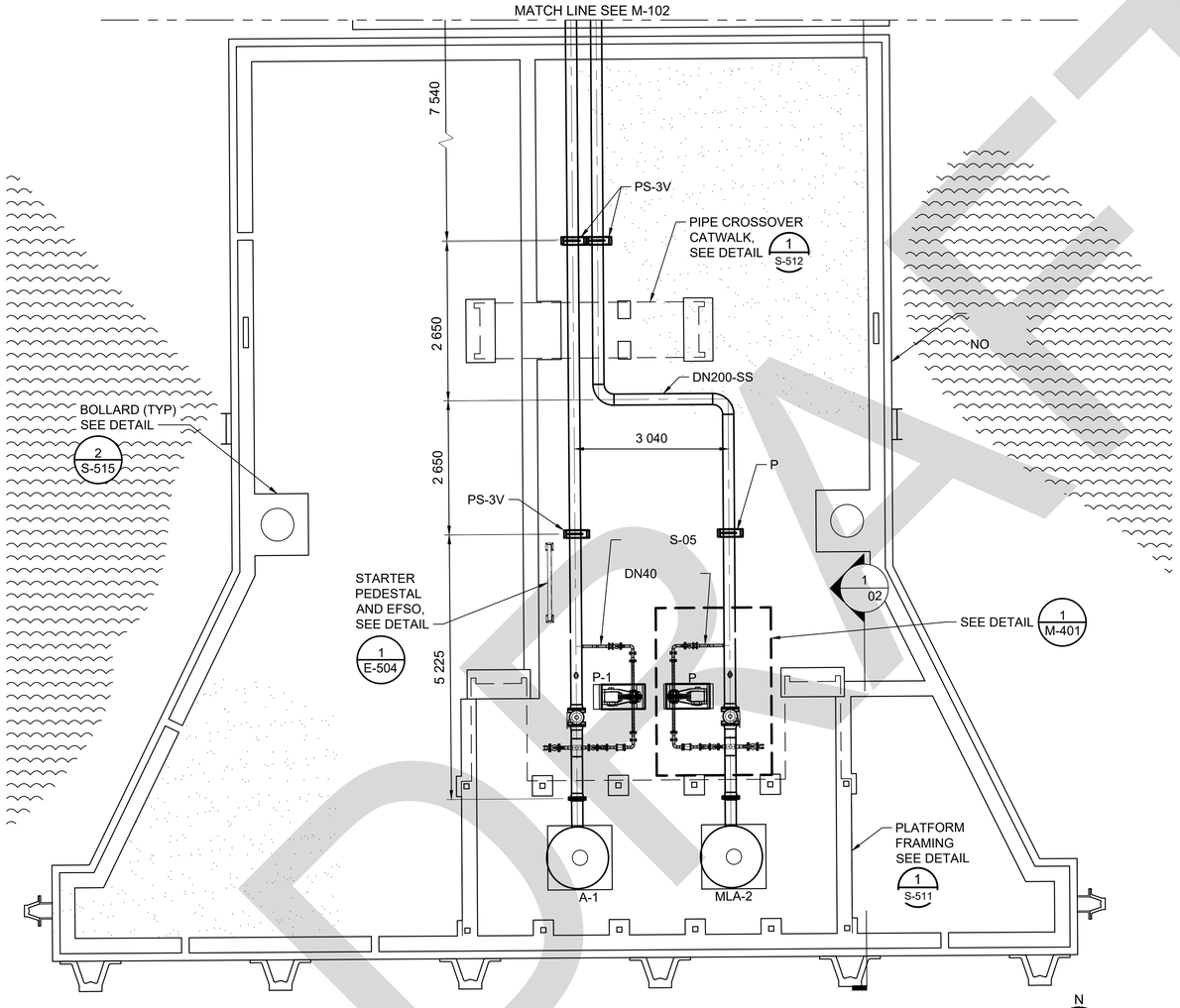
SHEET NOTES

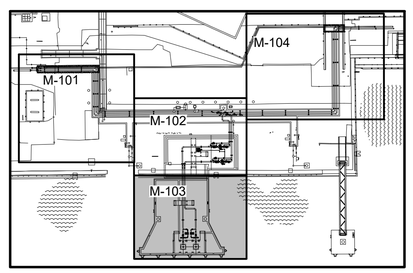
1. FOR FUELING WHARF TOP DECK PLAN SEE SHEET S-203.
2. FOR HPV DETAILS, SEE DETAIL 1/M-501.
3. FOR LPD DETAILS, SEE DETAIL 2/M-501.
4. FOR PS-3V DETAILS, SEE DETAIL 3/M-503.
5. FOR PS-4V DETAILS, SEE DETAIL 10/M-503.
6. FOR PRESSURE INDICATION, SEE DETAIL 4/M-501.



TSURUMI FUELING WHARF ME A CAL PIPING PLAN

SCALE: 1: 50

0 1 2m



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DESIGNED BY: B. RICHARDSON
DRAWN BY: J. LU
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SIZE: ISO A1
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SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 1000
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARF FOR T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TSURUMI FUELING WHARF
MECHANICAL PIPING PLAN 3

SHEET ID

M-103

FILE: M103.dwg
DATE: 6/25/2018 5:05 PM
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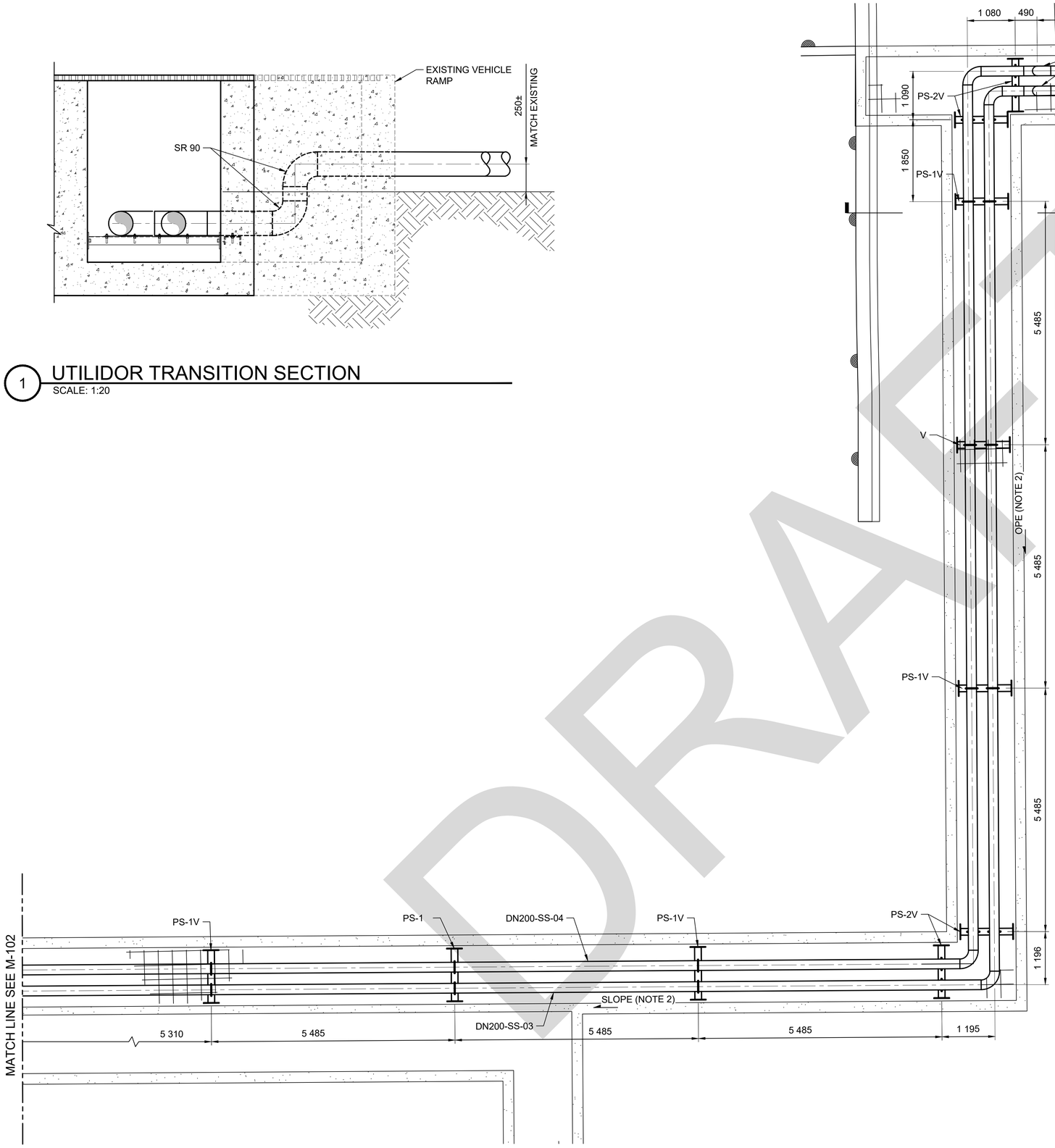
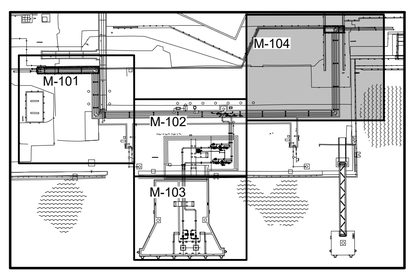
1 UTILIDOR TRANSITION SECTION
SCALE: 1:20



TSURUMI FUELING WHARF MECHANICAL PIPING PLAN
SCALE: 1: 50

0 1 2m

SHEET NOTES
1. FOR UTILIDOR FOUNDATION PLAN SEE SHEET S-541.
2. PIPING TO MATCH SLOPE OF UTILIDOR.
3. OFFSET ELBOWS, AS NEEDED, TO MATCH EXISTING PIPING.
4. FOR HPV DETAILS, SEE DETAIL 1/M-501.
5. FOR PS-1V DETAILS, SEE DETAIL 1/M-503.
6. FOR PS-2V DETAILS, SEE DETAIL 2/M-503.
7. FOR PS-3V DETAILS, SEE DETAIL 3/M-503.
8. FOR PS-1A DETAILS, SEE DETAIL 4/M-503.



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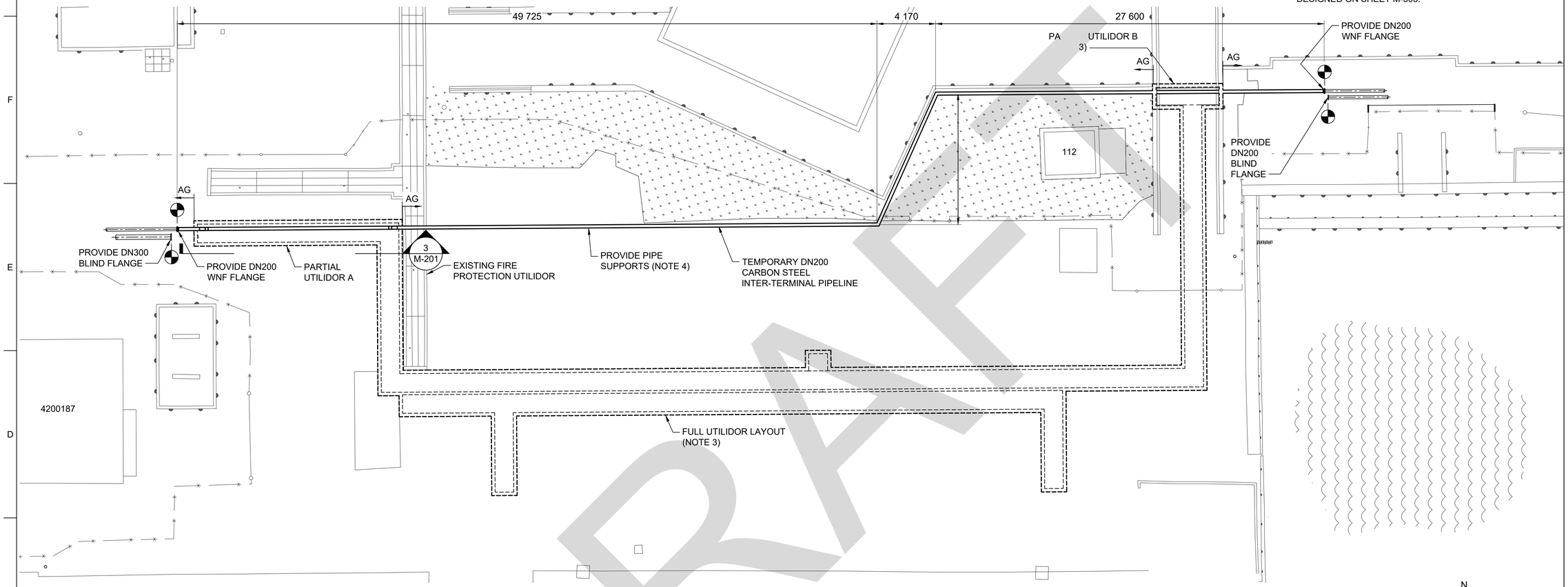
DESC1904
MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TSURUMI FUELING WHARF
MECHANICAL PIPING PLAN 4

SHEET ID
M-104

SHEET NOTES

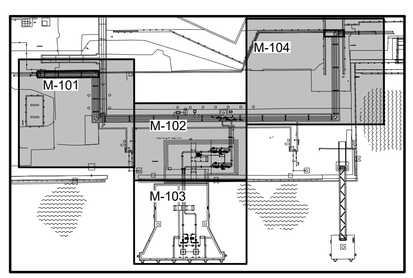
1. SEE PHASING NOTES ON M-003 FOR PHASED REMOVAL OF EXISTING PIPING AND INSTALLATION OF PARTIAL UTILIDORS AND INTER-TERMINAL PIPELINE.
2. DIMENSIONS ARE APPROXIMATE FOR FIELD ROUTING OF TEMPORARY INTER-TERMINAL PIPELINE. CONTRACTOR MUST DETERMINE FINAL ROUTING AND DIMENSIONS.
3. FOR FULL UTILIDOR LAYOUT SEE SHEET S-541.
4. PROVIDE TEMPORARY SUPPORTS EVERY 4.5M (MAX). CONTRACTOR TO PROVIDE TEMPORARY V-HEAD STYLE PIPE STAND SUPPORT OR PIPE SUPPORTS AS DESIGNED ON SHEET M-503.



TEMPORARY INTER-TERMINAL PIPELINE

SCALE: 1: 150

0 5 10m



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HONOLULU, HAWAII 96813

DESC1804
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE, YSURUMI, YOKOHAMA, JAPAN

TEMPORARY INTER-TERMINAL PIPELINE

SHEET ID

M-111

FILE: M111.dwg
DATE: 6/25/2018 5:05 PM
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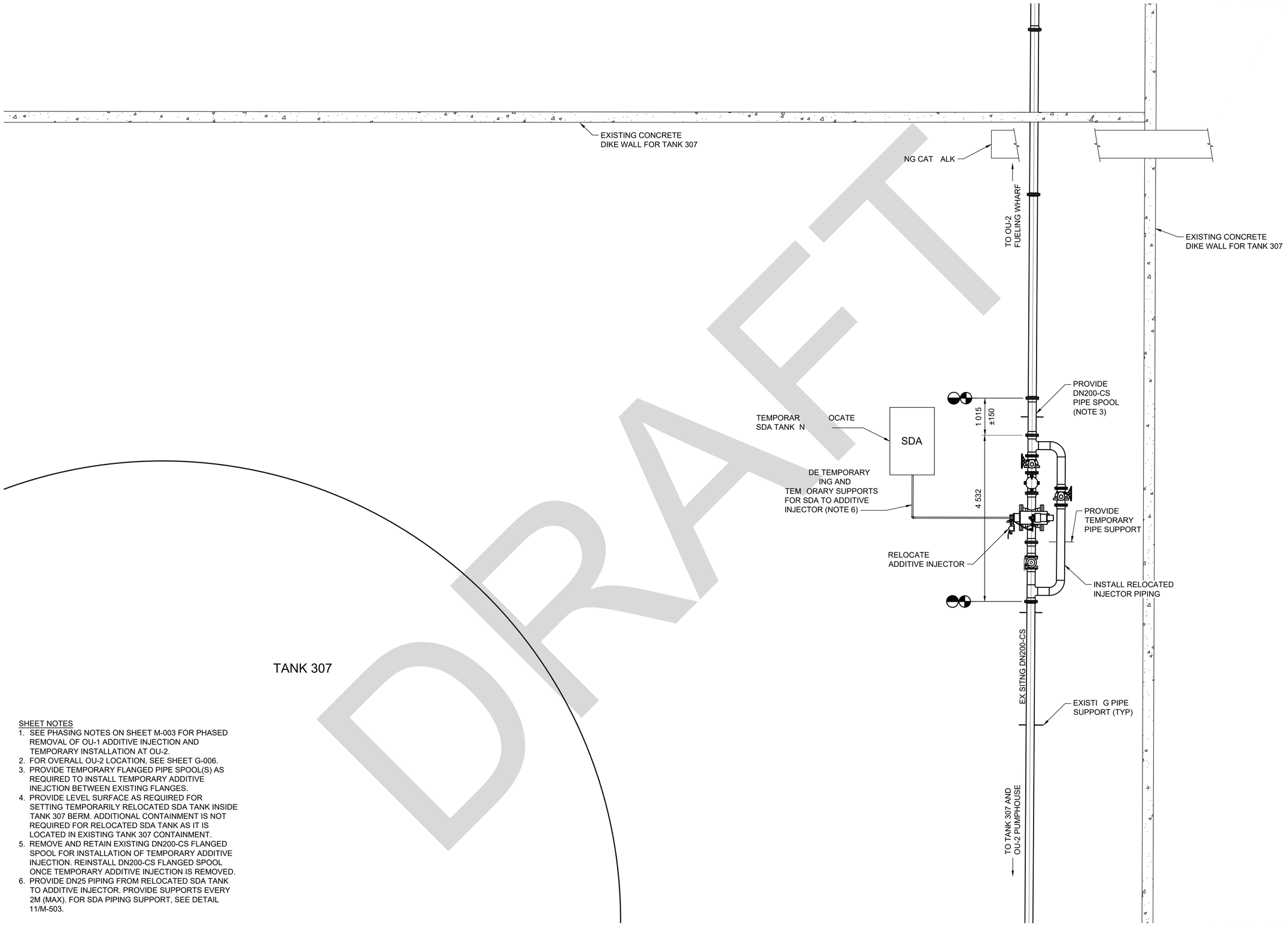

SHEET NOTES

1. SEE PHASING NOTES ON SHEET M-003 FOR PHASED REMOVAL OF OU-1 ADDITIVE INJECTION AND TEMPORARY INSTALLATION AT OU-2.
2. FOR OVERALL OU-2 LOCATION, SEE SHEET G-006.
3. PROVIDE TEMPORARY FLANGED PIPE SPOOL(S) AS REQUIRED TO INSTALL TEMPORARY ADDITIVE INEJCTION BETWEEN EXISTING FLANGES.
4. PROVIDE LEVEL SURFACE AS REQUIRED FOR SETTING TEMPORARILY RELOCATED SDA TANK INSIDE TANK 307 BERM. ADDITIONAL CONTAINMENT IS NOT REQUIRED FOR RELOCATED SDA TANK AS IT IS LOCATED IN EXISTING TANK 307 CONTAINMENT.
5. REMOVE AND RETAIN EXISTING DN200-CS FLANGED SPOOL FOR INSTALLATION OF TEMPORARY ADDITIVE INJECTION. REINSTALL DN200-CS FLANGED SPOOL ONCE TEMPORARY ADDITIVE INJECTION IS REMOVED.
6. PROVIDE DN25 PIPING FROM RELOCATED SDA TANK TO ADDITIVE INJECTOR. PROVIDE SUPPORTS EVERY 2M (MAX). FOR SDA PIPING SUPPORT, SEE DETAIL 11/M-503.

OU-2 TEMPORARY ADDITIVE INJECTION PIPING PLAN

SCALE: 1: 50

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U.S. ARMY CORPS OF ENGINEERS
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APO AP 96343-5010

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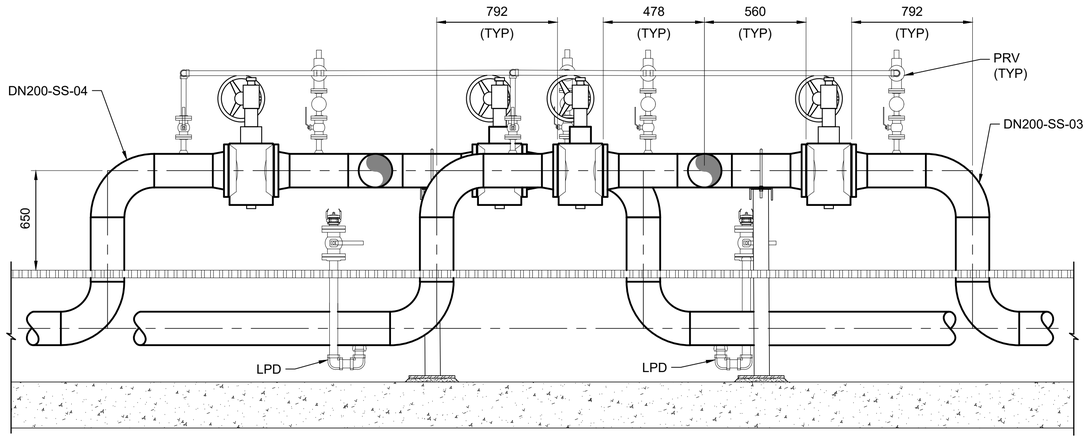
DESC:1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

OU-2 TEMPORARY ADDITIVE INJECTION PIPING PLAN

SHEET ID

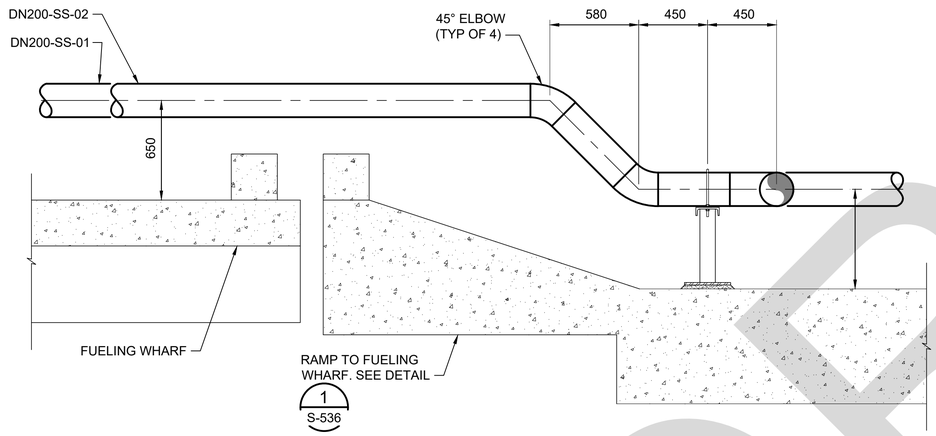
M-121



1 UTILIDOR TRANSITION SECTION

SCALE: 1:20

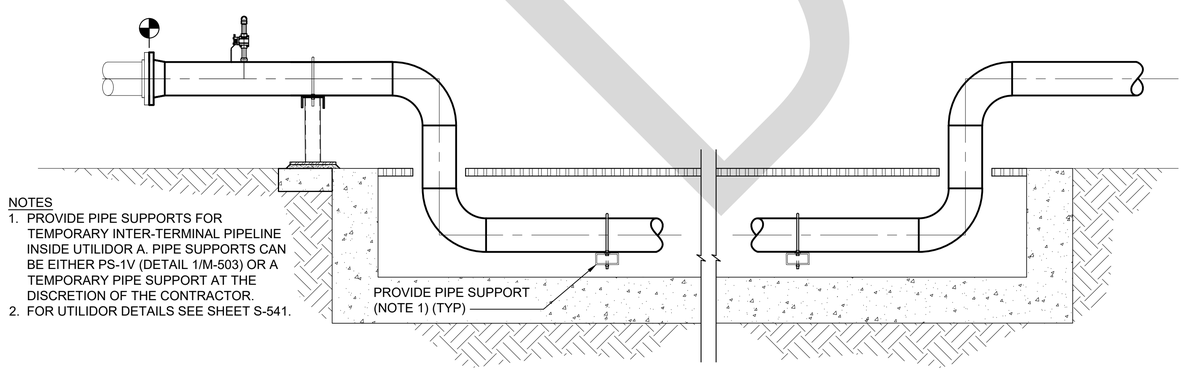
0 500 1000mm



2 RAMP TO FUELING WHARF SECTION

SCALE: 1:20

500 1000m



NOTES
1. PROVIDE PIPE SUPPORTS FOR TEMPORARY INTER-TERMINAL PIPELINE INSIDE UTILIDOR A. PIPE SUPPORTS CAN BE EITHER PS-1V (DETAIL 1/M-503) OR A TEMPORARY PIPE SUPPORT AT THE DISCRETION OF THE CONTRACTOR.
2. FOR UTILIDOR DETAILS SEE SHEET S-541.

3 PARTIAL UTILIDOR A TEMPORARY INTER-TERMINAL PIPELINE SECTION

SCALE: 1:20

0 500 1000mm

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FILE NAME:

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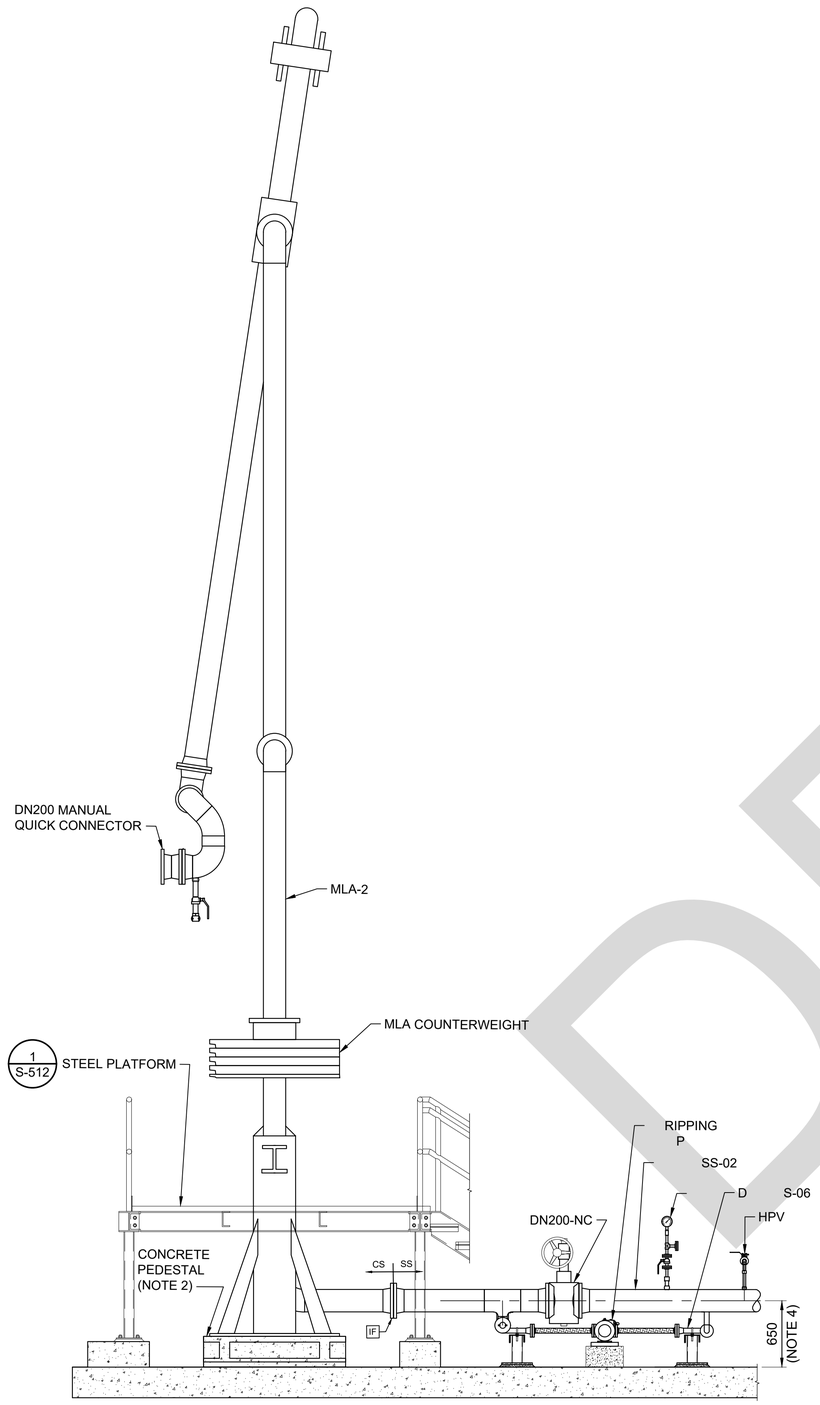
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TSURUMI FUELING WHARF
MECHANICAL PIPING ELEVATIONS

SHEET ID
M-201

NOTES
1. FOR MARINE LOADING ARM OPERATING ENVELOPE, SEE SHEET M-504.
2. FINAL CONFIGURATION OF MARINE LOADING ARM CONNECTION TO FUELING WHARF TO BE PROVIDED BY MANUFACTURER.
3. FINAL GROUNDING DETAIL FOR MARINE LOADING ARM TO BE PROVIDED BY MANUFACTURER.
4. HEIGHT OF THE INLET FLANGE OF THE MARINE LOADING ARM MUST BE COORDINATED WITH THE FUEL PIPING.
5. CONFIGURATION IS TYPICAL FOR MLA-1.



1 LOADING ARM ELEVATION

SCALE: 1:30

0 500 1000mm

US Army Corps of Engineers®

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U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
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HONOLULU, HAWAII 96813

DESC:1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

TSURUMI FUELING WHARF
MECHANICAL PIPING ELEVATIONS 2

SHEET ID

M-202

FILE: M202.dwg
DATE: 6/25/2018 5:05 PM
OPER:
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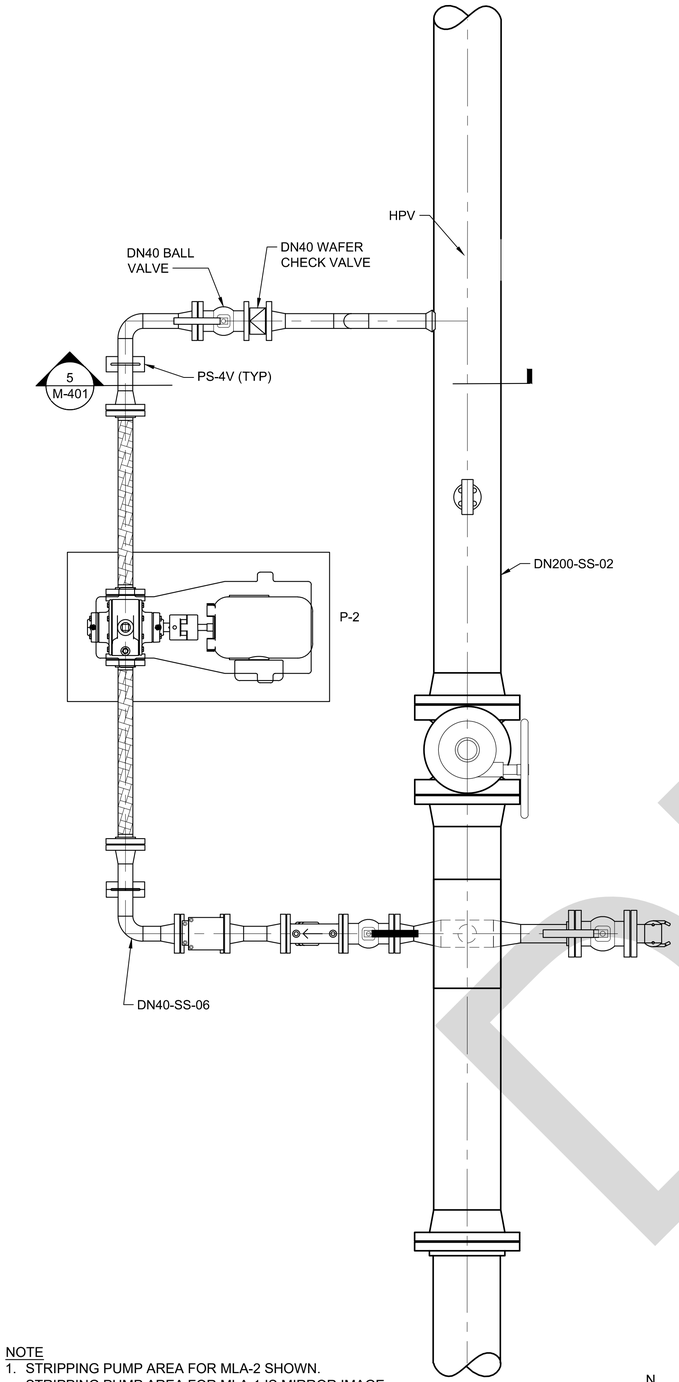
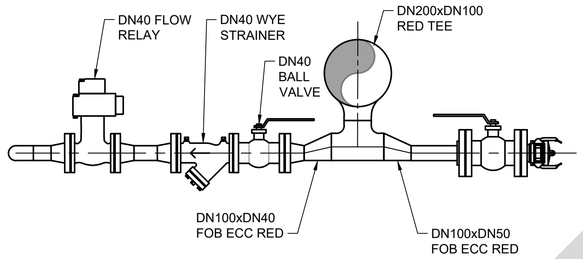


NOTE
1. STRIPPING PUMP AREA FOR MLA-2 SHOWN.
   STRIPPING PUMP AREA FOR MLA-1 IS MIRROR IMAGE.

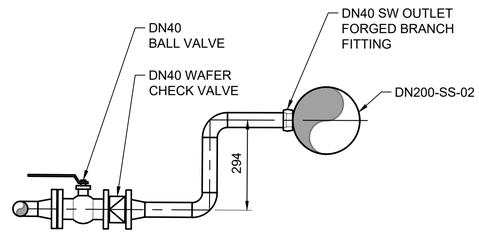
1 TYPICAL STRIPPING PUMP PIPING PLAN

SCALE: 1:20 — 0 500 1000mm



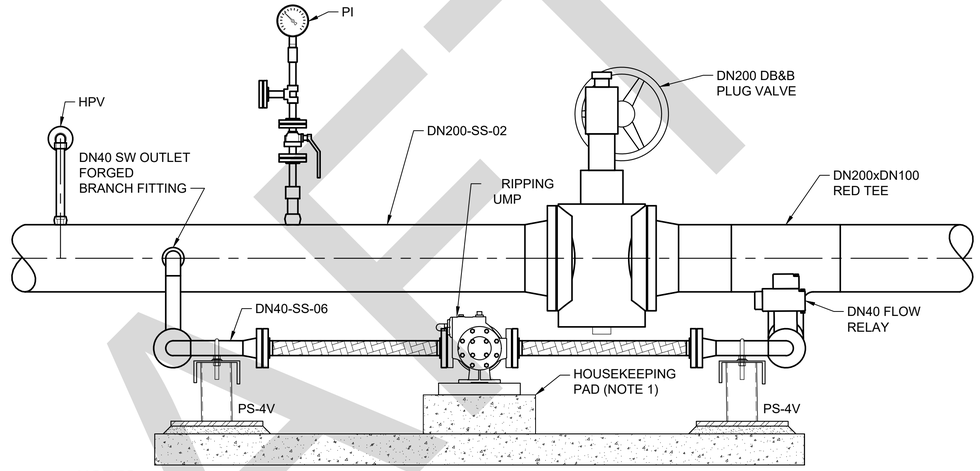
2 STRIPPING PUMP AND DRAIN CONNEC ON

SCALE: 1:10 — 0 0 400mm



5 STRIPPING PUMP OUTLET CONNECTION

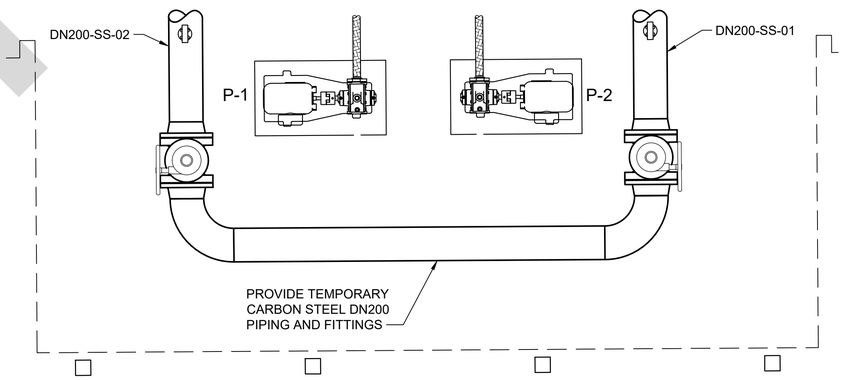
SCALE: 1:10 — 0 200 400mm



NOTES
1. COORDINAT SE HEIGHT W/ PUMP TO MEET CENTERLINE OF PIPING.

3 TRIPPING UMP AND DRAIN CONNECTION

1:10 — 0 200 400mm



NOTES
1. PROVIDE TEMPORARY CROSS CONNECT FOR FLUSHING OF PIER PIPING (DN200-SS-01 AND DN200-SS-02). SEE SHEET M-002 FOR TESTING AND COMMISSIONING NOTES.

4 TEMPORARY CROSS CONNECT FOR FLUSHING

SCALE: 1:20 — 0 500 1000mm

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JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
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HONOLULU, HAWAII 96813

DESC:1504
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOSHAMA, JAPAN

TSURUMI FUELING WHARF
STIPPING PUMPS PIPING PLAN

SHEET ID
M-401

FILE: M401.dwg
DATE: 6/25/2018 5:05 PM
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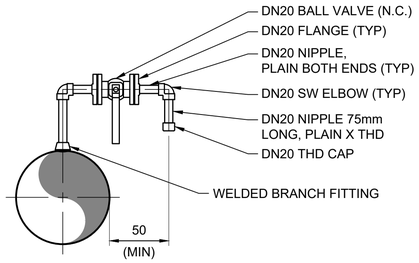
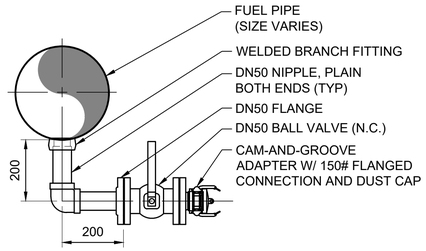


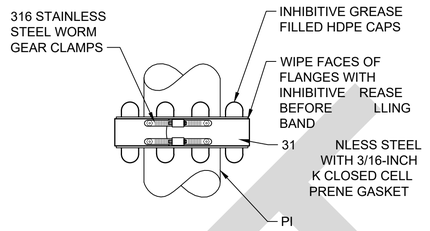
NOTE
1. AT CONTRACTOR'S OPTION, BALL VALVE MAY BE LOCATED VERTICAL..

1 HIGH POINT VENT (HPV)
SCALE: 1:10

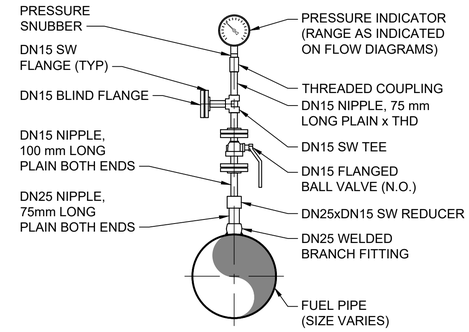


NOTE
1. PROVIDE ADDITIONAL ELBOW AND PIPE WHERE INDICATED TO EXTEND DRAIN CONNECTION AND VALVE ABOVE UTILIDOR GRATING.

2 LOW POINT DRAIN (LPD)
SCALE: 1:10

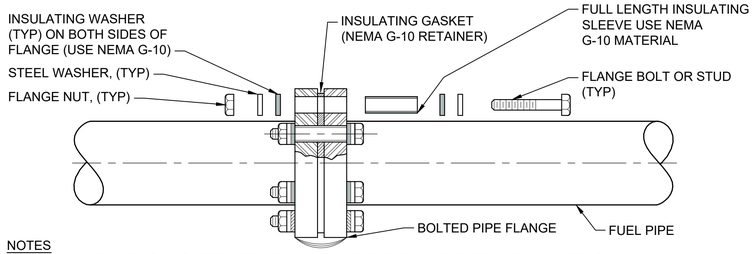


3 PROTECTIVE FLANGE BA
SCALE: 1:10



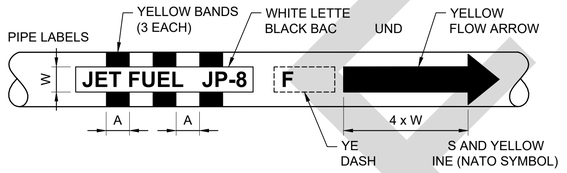
NOTE
1. INDICATOR MUST DISPLAY PRESSURE IN POUNDS PER SQUARE INCH (PSI) AND KILOPASCALS (kPa).

4 PRESSURE INDICATOR
SCALE: 1:10



NOTES
1. DOUBLE INSULATING WASHERS ARE REQUIRED (ONE FOR EACH SIDE OF EACH FLANGE BOLT).
2. FULL FACE GASKETS REQUIRED. GASKET RETAINER MUST BE HIGH COMPRESSIVE STRENGTH NEMA G-10 MATERIAL.
3. BOLT AND NUTS SHALL BE AS SPECIFIED IN UFGS 33 652 40.
4. HARDWARE QUANTITIES IN INSULATING FLANGE KIT WILL VARY BASED ON GASKET PATTERN AND PIPE SIZE.
5. DO NOT COAT OR SPRAY INSULATING COMPONENTS WITH GREASE.
6. PROVIDE FLANGE PROTECTOR BANDS AND BOLT CAPS AFTER INSULATING FLANGE KIT IS COMPLETELY INSTALLED SEE C3/M-501.

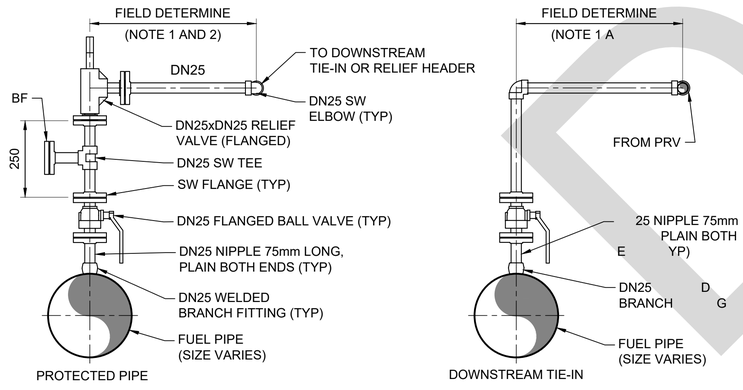
5 ISOLATION FLANGE
SCALE: 1:10



PIPE DIAMETER	B S IDTH AND NG "A"	LENGTH OF BANDS	LETTER SIZE	BACKGROUND AND ARROW WIDTH "W"
UNDER DN80	75 mm	ENCIRCLE	13 mm	25 mm
DN80 TO DN150	75 mm	ENCIRCLE	25 mm	50 mm
DN150 TO DN200	75 mm	ENCIRCLE	50 mm	75 mm
OVER DN200	100 mm	ENCIRCLE	75 mm	115 mm

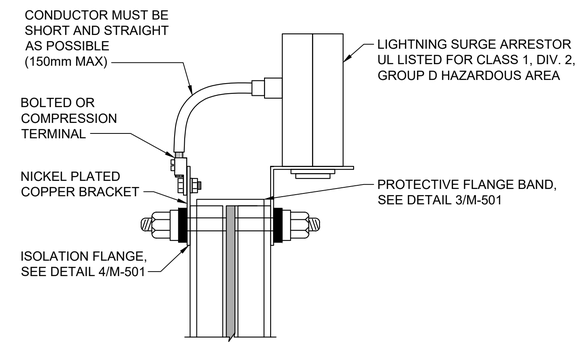
NOTES
1. LABELS AND MARKIN ACCORDANCE WITH MIL-STD-16 ED 04 SEPTEMBER 2015.
2. MARKINGS (TITLES, BA AND MUST BE APPLIED BY PAINT D STENCILING OR, ELASTOMERIC FILM OR REFLECTORIZED SHEETING DECALS. IF DECALS, FILM OR SHEETING ARE D, MATE CONFORM TO SPECIFICA IL-DTL-43719 OR ASTM D4956 AS APPLICABLE.
3. PROVIDE MARKINGS AT TIONS WHER INE ENTERS/ EXITS ROUND, IN VALVE PITS, AT INTERSECTIONS OF ABOVEGROUND PIPING, ON ABOVEGROUND PIPING A ROXIMATELY 60 RVALS, AT ALL RECEIVING CONNECTIONS, WHERE LINE CONNECTIONS ARE MADE AT MANIFOLDS, AND AT ANY OTHER LOCATION NE ARY TO ASSURE ATION OF THE PRODUCT IN THE SYSTEM.
4. IN CONCRETE PITS AND SIM CONDITIONS W E SPA PERMIT BANDING AND STENCILING OF THE PIPE, THE VERTICAL BAND(S) MUST BE PAINTED ON THE WALL ADJACENT TO THE E THE TITL ST BE STENCIL RIZONTALLY IN WHITE ACROSS THE BANDS. WHERE PIT COVERS ARE INSTALLED, MARKINGS MAY BE APPLIED TO THE TOP HE COV
5. PROVIDE FLOW ARROWS AS S N T CATED DIRECTION OF FLOW.

6 RODUCT F OW SYMBOL
E: NTS

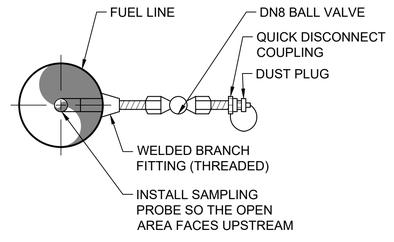


NOTES
1. ADJUST DIMENSION AS REQUIRED TO CLEAR DOWNSTREAM CONFLICTS.
2. ROUTE BYPASS PIPING TO CLEAR CONFLICTS, AND TO LOCATIONS AS INDICATED.
3. CONNECTIONS FLANGED (ASME 150) OR SOCKET WELDED AS INDICATED.
4. RELIEF VALVE SETTINGS AS INDICATED ON SHEET M-001.
5. LOCK BALL VALVES OPEN USING PLASTIC STRAPS (CAR SEALS).
6. INSTALL RELIEF VALVE WITH INLET IN THE VERTICAL DOWN ORIENTATION.

7 PRESSURE RELIEF VALVE (PRV) LOOP
SCALE: 1:10



8 LIGHTNING ARRESTOR
SCALE: 1:10



9 SAMPLE CONNECTION (SC)
SCALE: 1:10

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DRAWING CODE: -
FILE NAME:
SIZE: ISO A1

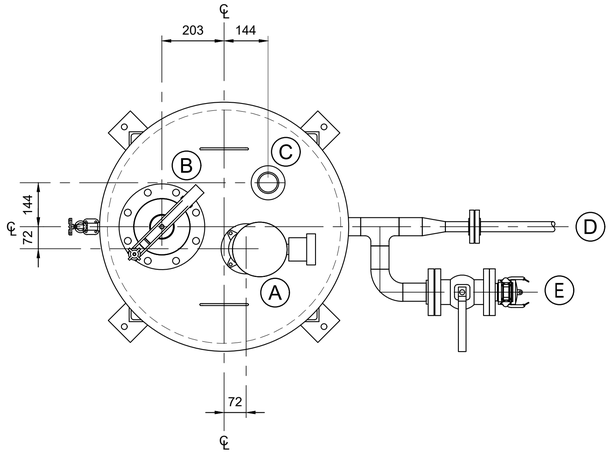
U.S. ARMY CORPS OF ENGINEERS
AMMUNITION DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 600
HONOLULU, HAWAII 96813

DESC:1904
MODERNIZE FUELING HANGERS 1 TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

MECHANICAL DETAILS

SHEET ID
M-501

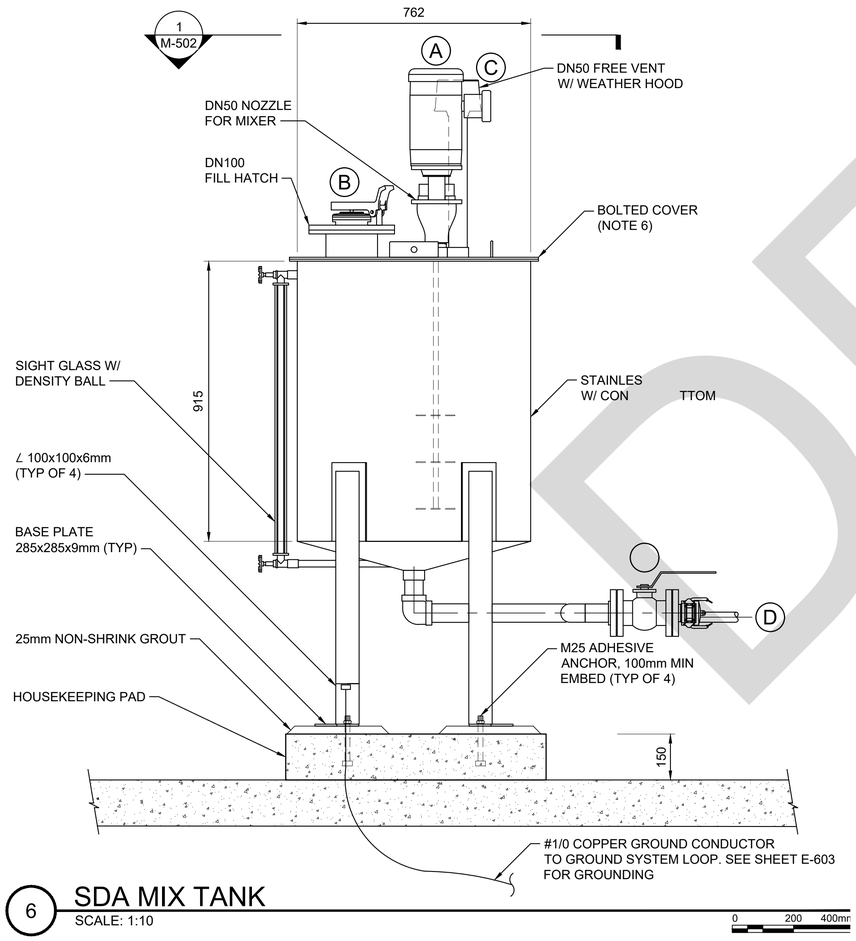


N

0 200 400mm

1 SDA MIX TANK PLAN VIEW

SCALE: 1:10



6 SDA MIX TANK

SCALE: 1:10

0 200 400mm

TANK NOZZLE SCHEDULE				
	QTY	SIZE	TYPE	REMARKS
A	1	DN50	FNPT	MIXER
B	1	DN100	RFSO	FILL HATCH
C	1	DN50	FNPT	NORMAL VENT
D	1	DN25	RFSW	ADDITIVE INJECTOR SUPPLY
E	1	DN50	RFSW	DRAIN

SHEET NOTES

1. COORDINATE TANK ANCHOR SIZE AND LOCATIONS WITH TANK MANUFACTURER WHEN ANCHORING TO CONCRETE SLAB. SEE CIVIL DRAWINGS FOR HOUSEKEEPING PAD AND CONTAINMENT SLAB DETAILS.
2. TANKS AND TANK SUPPORTS MUST BE CONSTRUCTED OF 304L STAINLESS STEEL.
3. TANK LID AND APPURTENANCES MUST BE VAPOR TIGHT UP TO A MAXIMUM PRESSURE OF 13.8 kPa (2 PSI).
4. REFER TO EQUIPMENT SCHEDULES ON SHEET M-601 FOR ADDITIONAL TANK AND MIXER INFORMATION.
5. HEIGHT OF TANK TO BE COORDINATED WITH CATWALK TO ALLOW FILLING OF MIX TANK. ADJUST TANK LEG HEIGHT AS NEEDED.
6. BOLTED COVER THICKNESS TO BE SELECTED BY TANK MANUFACTURER TO ADEQUATELY SUPPORT WEIGHT OF MIXER AND OTHER APPURTENANCES.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: B. RICHARDSON
DRAWN BY: J. LU
CHECKED BY: J. FREDERICK
SUBMITTED BY: B. RICHARDSON
SIZE: ISO A1
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
HONOLULU DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
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HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING HYDRANT SYSTEM AT T-1 TANKER CAPABLE, TSURUMI, YOKOHAMA, JAPAN

SDA MIX TANK DETAILS

SHEET ID

M-502

FILE: M502.dwg
DATE: 6/25/2018 5:05 PM
OPER:
SCALE:

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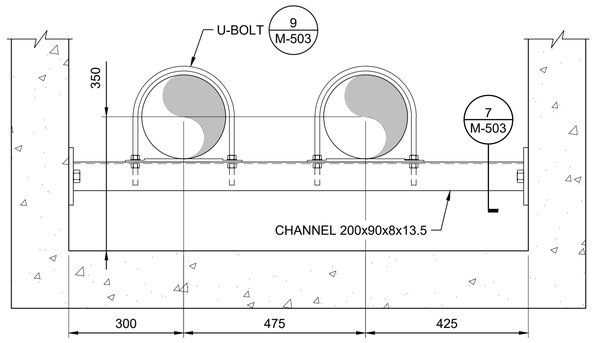
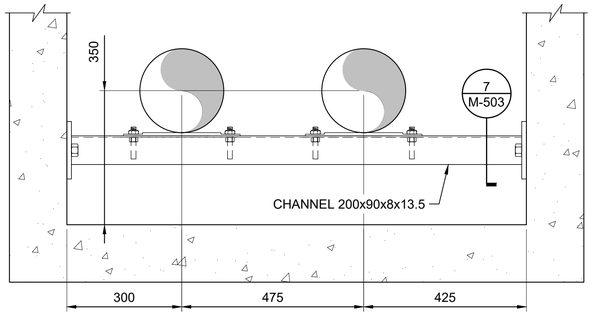
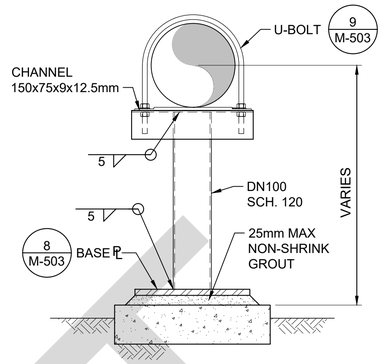


1 PS-1V PIPE SUPPORT
SCALE: 1:8

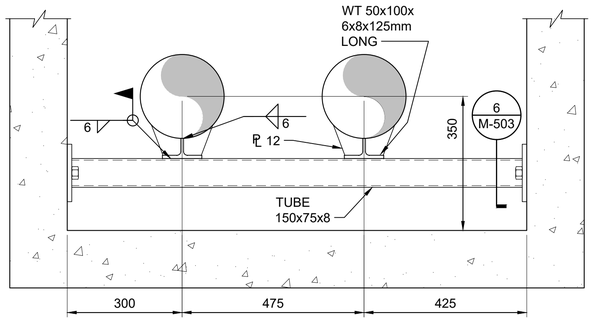


2 PS-2V PIPE SUPPORT
SCALE: 1:8

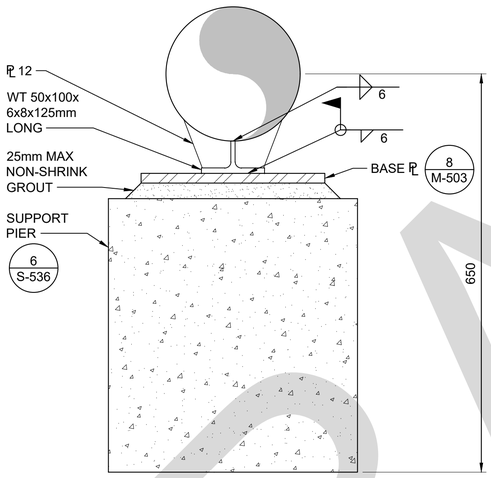


3 PS-3V PIP SUPPORT
SCALE: 1:5

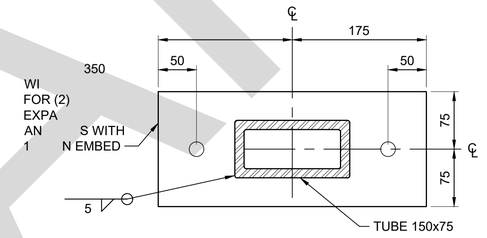
NOTES
1. SUPPORT FINISH MUST BE HOT-DIP GALVANIZED FOR ALL SUPPORT STEEL, UNLESS NOTED OTHERWISE.



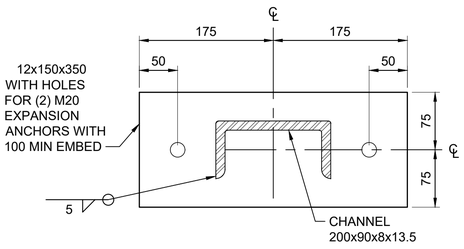
4 PS-1A ANCHOR SUPPORT
SCALE: 1:8



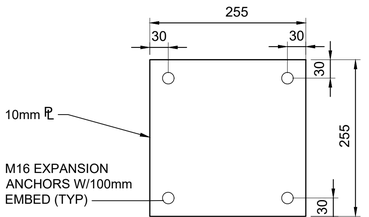
5 PS-2 ANCHOR SU PORT
SCALE: 1:



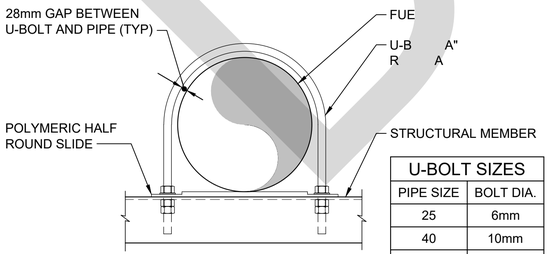
6 PS-1A CONNECTION DETAIL
SCALE: 1:4



7 PS-1V AND PS-2V CONNECTION DETAIL
SCALE: 1:4



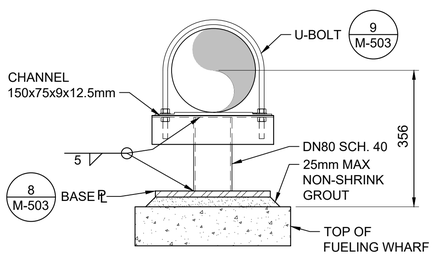
8 BASE PLATE A DETAIL
SCALE: 1:5



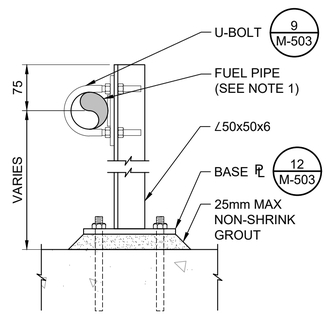
U-BOLT SIZES	
PIPE SIZE	BOLT DIA.
25	6mm
40	10mm
200	18mm

NOTES
1. PROVIDE U-BOLT WITH SEAMLESS NON-METALLIC LOW FRICTION COATING.
2. PROVIDE DOUBLE NUT ON BOTTOM OF U-BOLT

9 PIPE SUPPORT DETAILS
SCALE: 1:5

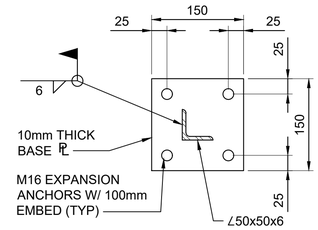


10 PS-4V PIPE SUPPORT
SCALE: 1:5



NOTES
1. PIPE SUPPORT SUITABLE FOR SMALL BORE PIPE SIZES UP TO DN80.
2. SEE PIPE SECTIONS AND ELEVATIONS FOR REQUIRED SUPPORT HEIGHTS.
3. PROVIDE Ø10 HOT-DIP GALVANIZED U-BOLTS.
4. FOR PIPE SUPPORTS REQUIRING A CONCRETE PIER, REFER TO CONCRETE PIER FOR MINOR PIPING DETAIL 12/SP505.

11 SDA PIPING SUPPORT DETAIL
SCALE: 1:5



12 SDA PIPING SUPPORT BASEPLATE DETAIL
SCALE: 1:5

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CHECKED BY: J. FREDERICK
SUBMITTED BY: B. RICHARDSON
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
SIZE: ISO A1
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
FORT SHAFTER
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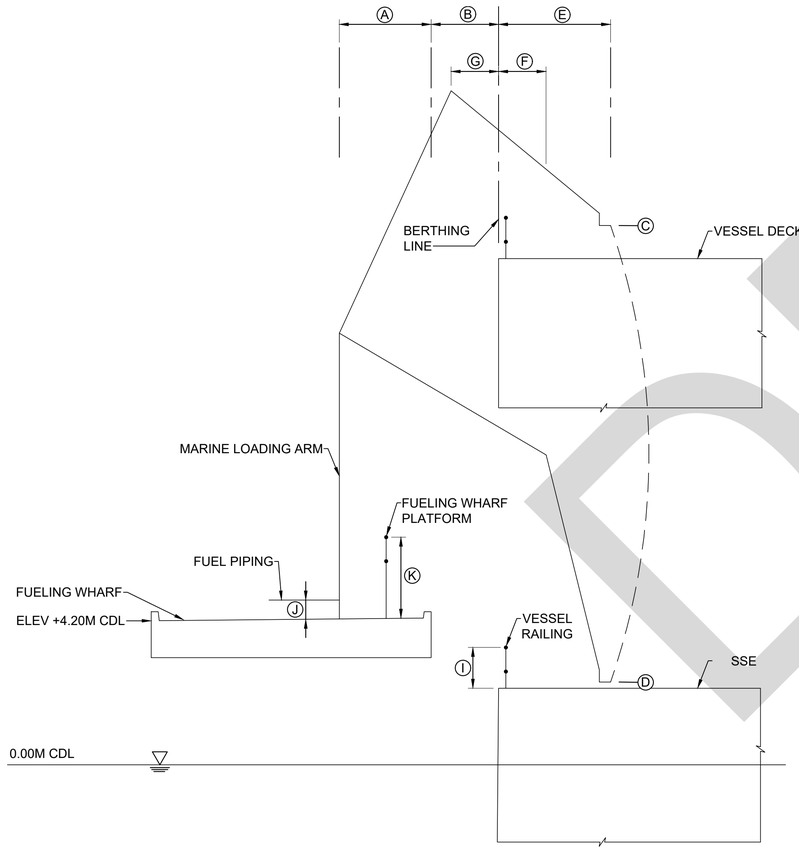
DESC:1604
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE, TSURUMI, YOKOHAMA, JAPAN

PIPE SUPPORT DETAILS 1

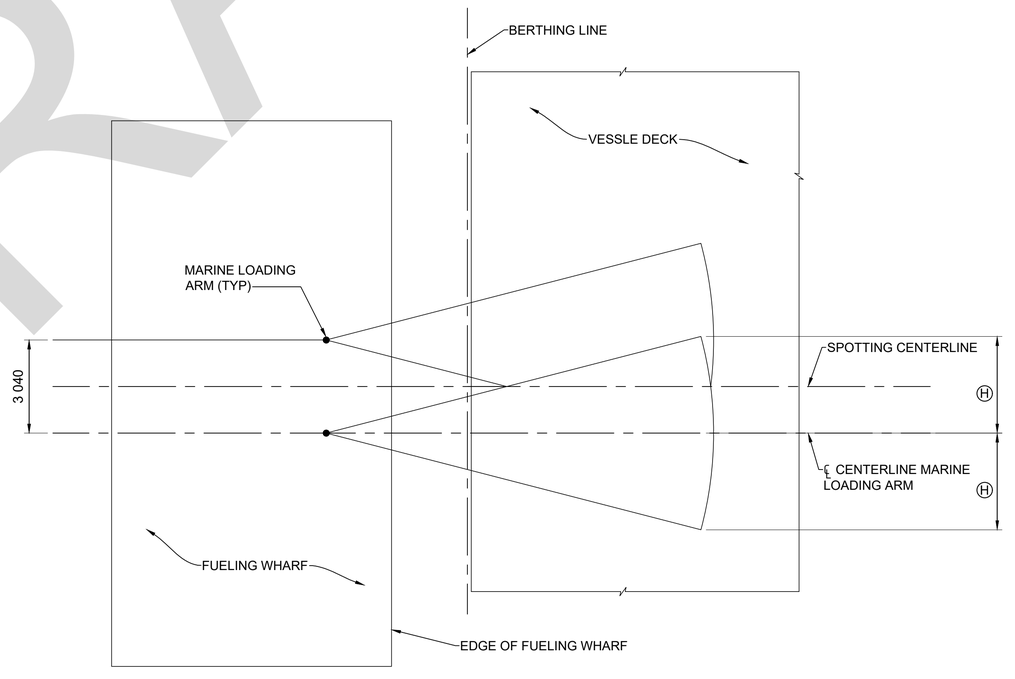
SHEET ID
M-503

	MIN	MAX	NOTES
Ⓐ	1985	1985	MARINE LOADING ARM TO EDGE WHARF
Ⓑ	500	600	FENDER WIDTH (EDGE OF WHARF TO BERTH LINE)
Ⓒ	NA	+10500 DL	MAX MANIFOLD ELEVATION (I.E. BALLAST VESSEL AT HIGH TIDE)
Ⓓ	+1320 CDL		MIN MANIFOLD ELEVATION (I.E. LADEN VESSEL AT LOW TIDE)
Ⓔ	2170	000	MANIFOLD DISTANCE TO SIDE OF VESSEL
Ⓕ	N/A	3000	VESSEL SWAY (OUTWARD)
Ⓖ	100	N/A	VESSEL SWAY (INWARD)
Ⓗ		600	VESSEL SURGE
Ⓘ	0		RAILING HEIGHT
Ⓙ	650	6	FUEL PIPING CENTERLINE
Ⓚ	2645	2645	UELING WHARF PLATFORM HEIGHT

NOTES
1. ELEVATIONS RELATIVE TO LOWEST LO ER LEVEL (LLWL) = CONSTRUCTION DATUM LINE (C.D.L.) = 0.00M C.D.L.
2. FOR TIDAL ELEVATIONS SEE G-007
3. ALL UNITS IN MILLIMETERS.



1 SECTION VIEW OF MLA OPERATING ENVELOPE
SCALE: 1:100
0 2 4m



2 PLAN VIEW OF MLA OPERATING ENVELOPE
SCALE: 1:100
0 2 4m

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DESIGNED BY: B. RICHARDSON
DRAWN BY: J. KUU
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SUBMITTED BY: B. RICHARDSON
SIZE: ISO A1
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

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DESC1904
MODERNIZE FUELING WHARVES 1-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

MARINE LOADING ARM OPERATING ENVELOPE

SHEET ID
M-504

FILE: M504.dwg
DATE: 6/25/2018 5:05 PM
OPER:
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PUMP SCHEDULE

PUMP TAG	DESCRIPTION	PUMP PERFORMANCE						CONNECTION SIZES		ELECTRICAL				REMARKS
		TYPE	FLUID TYPE	SG	FLOW RATE	HEAD	NPSHa	INLET	OUTLET	MOTOR	VOLTAGE	PHASE	Hz	
P-1	STRIPPING PUMP	SLIDING-VANE POSITIVE DISPLACEMENT	JP-8	0.814	84 LPM (22 GPM)	0.7 MPa (102 PSI)	AMPLE	DN40 ASME 150#	DN40 ASME 150#	3.7 kW (5 HP)	415 VAC	3	50	CLASS 1 DIV. 1 GROUP D. 175 kPA (25 PSI) INTERNAL RELIEF VALVE SET PRESSURE. 316 STAINLESS STEEL CONSTRUCTION.
P-2	STRIPPING PUMP	SLIDING-VANE POSITIVE DISPLACEMENT	JP-8	0.814	84 LPM (22 GPM)	0.7 MPa (102 PSI)	AMPLE	DN40 ASME 150#	DN40 ASME 150#	3.7 kW (5 HP)	415 VAC	3	50	CLASS 1 DIV. 1 GROUP D. 175 kPA (25 PSI) INTERNAL RELIEF VALVE SET PRESSURE. 316 STAINLESS STEEL CONSTRUCTION.

MIXER SCHEDULE

MIXER TAG	DESCRIPTION	MIXER PERFORMANCE						MIX TANK CONNECTION	ELECTRICAL				REMARKS
		TYPE	VISCOSITY	SG	NO. OF IMPELLERS	IMPELLER DIA.	SHAFT SPEED		MOTOR	VOLTAGE	PHASE	Hz	
MX-1	SDA MIXER	GEAR DRIVE, SQUARE PITCH PROPELLER	65cP	0.9	3 (2 PADDLES EACH)	120mm (4 IN)	350 RPM	DN50 MNPT	0.37 kW (0.5 HP)	415 VAC	3	50	SEALED MIXER WITH 5:1 GEARBOX. CLASS 1 DIV. 1 GROUP D MOTOR.

ADDITIVE INJECTOR SCHEDULE

EQUIPMENT TAG	DESCRIPTION	CONNECTION SIZE	MIN FLOW RATE	MAX FLOW RATE	DESIGN PRESSURE	FUEL TYPE	SDA INJECTION RATIO	REMARKS
AI-1 (EXISTING)	POSITIVE DISPLACEMENT TYPE ADDITIVE INJECTOR	DN200 ASME 150#	2,270 LPM (600 GPM)	15,000 LPM (4,000 GPM)	1.9 MPa (275 PSI)	JP-8	1.5 PPM (DILUTED 1:19)	THE SDA TARGET IS 1.5 PPM AND MUST BE 1:19 WITH JET FUEL PRIOR TO INJECTI ED USE EXISTING INJECTOR
AI-2 (EXISTING)	POSITIVE DISPLACEMENT TYPE ADDITIVE INJECTOR	DN200 ASME 150#	2,270 LPM (600 GPM)	15,000 LPM (4,000 GPM)	1.9 MPa (275 PSI)	JP-8	1.5 PPM (DILUTED 1:19)	THE SDA TARGET IS 1.5 PPM AND MUST BE D 1:19 WITH JET FUEL PRIOR TO INJECTION. R EXISTING INJECTOR.

MIX TANK SCHEDULE

TANK TAG	DESCRIPTION	CAPACITY	SIDE HEIGHT	INSIDE DIAMETER	REMARKS
MT-1	SDA MIX TANK	416 L (110 GAL)	915mm (36 IN)	772mm (30 IN)	304L STAINLESS STEEL CONSTRUCTION, 15 DEGREE CON TTOM, OR TANK DETAILS.

MARINE LOADING ARM SCHEDULE

EQUIPMENT TAG	DESCRIPTION	CONNECTION SIZES		REMARK
		SHIP SIDE	PIPING SIZE	
MLA-1	FULLY BALANCED MANUALLY OPERATED	DN200 ASME 150# W/ QUICK COUPLING DEVICE	DN200 ASME 150	ARBON ONSTRUCTION, TR SWIVEL W/ SEALED BEARINGS. SEE M FOR RANGE OF MO DETAILS.
MLA-2	FULLY BALANCED MANUALLY OPERATED	DN200 ASME 150# W/ QUICK COUPLING DEVICE	DN200 AS 0#	CARBON STE NSTRUCTION, TRIPL VEL W/ SEALED BEARINGS. SEE 4 FOR RANGE OF MOTIO AILS.

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DRAWING CODE: -
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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SUITE 600
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE, TSURUMI, YOKOHAMA, JAPAN

EQUIPMENT SCHEDULE

SHEET ID

M-601

FILE: M601.dwg
DATE: 6/25/2018 5:05 PM
OPER:
SCALE:

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SITE ELECTRICAL SYMBOLS

	PANELBOARD, 1980 TO TOP
H	DUPLEX RECEPTACLE WITH GFCI PROTECTION, +460 AFF UON
J	LARGE JUNCTION BOX, SIZE AS INDICATED
HJ	LARGE JUNCTION BOX, WALL MOUNTED, SIZE AS INDICATED
	DISCONNECT SWITCH, HEAVY DUTY, HP-RATED, SIZE AS 3P30A MINIMUM UON, +1670 TO TOP UON
	COMBINATION MOTOR STARTER/DISCONNECT, WP/EX SIZE AS 3P30A, MINIMUM UON.
HT	DRY-TYPE TRANSFORMER
HPB	PUSH BUTTON, +1200AFF UON
HT	TIME SWITCH
E	EQUIPMENT CONNECTION
M	MOTOR CONNECTION
$	SINGLE POLE SWITCH, 20A, 120/277V, - 3=3 WAY, 4=4 WAY, M=MANUAL MOTOR SWITCH, TS=TIME SWITCH, +1220 AFF
	MANHOLE
HH	HANDHOLE OR PULLBOX
	TRANSFORMER & CONCRETE PAD
	CONCRETE FLOODLIGHT POLE WITH LED FLOODLIGHTS, SEE 3/E-505 FOR QUANTITY OF FLOOD LIGHTS ON EACH POLE.
	UTILITY POLE
AFF	ABOVE FINISHED FLOOR
CO	CONDUIT ONLY
EX	EXPLOSION-PROOF
UON	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
———	CONDUIT & WIRING CONCEALED WITHIN CONCRETE STRUCTURE
– – – –	CONDUIT & WIRING EXPOSED
~~	FLEXIBLE CONDUIT OR LIQUID TIGHT FLEX (EXPLOSION PROOF AS INDICATED)
— - —	UNDERGROUND DUCTLINE

DUCT DESIGNATION

2 S 100 A

- A — DUCT SECTION "A" SEE DUCT SECTION DETAILS
- 100 — CONDUIT SIZE (IN MILLIMETERS)
- S — SYSTEM "C" CONTROLS
  - "P" PRIMARY ELECTRIC
  - "S" SECONDARY ELECTRIC
  - "SP" SPARE
- 2 — NUMBER OF DUCTS

PULLBOX, HANDHOLE, MANHOLE SCHEDULE

(23) 1000 x 2000 ELECTRIC MANHOLE

GENERAL CONSTRUCTION NOTES:

1. ASSUME ALL EXISTING DUCTLINES ARE CONCRETE ENCASED. NO ASSURANCE CAN BE PROVIDED THAT THE ACUTAL LOCATIONS WILL BE PRECISELY AS SHOWN ON THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF THE UTILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA.
2. ANY DAMAGE INFLICTED ON EXISTING UTILITY LINES RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE IMMEDIATELY REPAIRED TO RESTORED AS DIRECTED BY THE CONTRACTING OFFICER AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL MAINTAIN ESS TO ALL EXISTING PIPE HYDRANTS AND WATER METERS.
4. THE CONTRACTOR, AT HIS EXPE HALL RESTORE TO THE ORIGINAL CONDITION OR BETTER ALL EXISTING FACILITIES TO REMAIN THAT ARE DAMAGED AS A RE F THE CONSTRUCTION.
5. ALL EXPOSED CONDUITS EPT STAINLESS STEEL) SHALL BE PAINTED WITH TWO COATS OF TWO-PART EPOXY BASED PRIMER AND TWO COATS OF U ENAMEL FINISH, COLOR TO MATCH ADJACENT SURFACES.
6. ALL UNDERGROU NDUI BE TYPE HIVE FOR CONDUITS 82 AND LESS AND ECVP FOR CONDUITS LARGER THAN 82. ALL OUTDOOR EXP CONDUIT S E STAINLESS STEEL.
7. ALL MOUNTIN HARDWARE INCLUDIN NOT LIMITED TO) NUTS, BOLTS, WASHERS, ANCHORS, U-CHANNELS, ETC SHALL BE 316L STAINLESS STEEL.
8. TH TRACTOR SHALL BE REQUIRED TO E ADEQUATE, NON-SKID BRIDGING MATERIAL OVER TRENCHES, INCLUDING NG WHEN TRENCHING IN PAVEMENT AR HANDLE ALL TYPES OF VEHICULAR AND PEDESTRIAN TRAFFIC. NO TRENCH LL BE LEFT OPEN DURING NON-WORKING HO JOB SHUTDOWN.

ELECTRICA GENERAL NOTES:

COORDI OWER OUTAGES WITH THE CONTRACTING OFFICER. SUBMIT A PROPOSED SCHEDULE OF WORK IN WRITING TO THE ONT NG OFFICER FOR APPROVAL.

2. V CABLES SHALL BE CV OR CVT. ALL CABLES ABOVE 600V AND BELOW 7.2kV SHALL BE EM-CET. ALL LOW VOLTAGE C CABLES SHALL BE EM-CEE. ALL FIRE PROTECTION CABLES SHALL BE TYPE HP OR FP AS INDICATED.
3. SEE SH C-504 AND M-601 FOR EQUIPMENT SCHEDULE AND EQUIPMENT RATINGS.

18008

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: M. TAIRA
DRAWN BY: D. MATO
CHECKED BY: P. UYEDA
SUBMITTED BY: P. UYEDA
SIZE: ISO A1
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
DRAWING CODE: -
FILE NAME: DESC1904E001.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

ELECTRICAL SYMBOLS, NOTES

SHEET ID

E-001

FILE: DESC1904E001.dwg
DATE: 9/19/2018 1:55 PM
OPER:
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ABBREVIATIONS

&	AND
@	AT
#	NUMBER
+	PLUS
A,AMPS	AMPERES
ABV	ABOVE
AC	ALTERNATING CURRENT
A.C.	ASPHALT CONCRETE
ACU	AIR CONDITIONING UNIT
A/C	AIR CONDITIONER
ADJ	ADJACENT
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERES INTERRUPTING CAPACITY
ALUM	ALUMINUM
AM	AMMETER
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
BATT	BATTERY
BC	BARE COPPER
BD	BOARD
BKBD	BACKBOARD
BKR	BREAKER
BLDG	BUILDING
BMS	BALANCED MAGNETIC SWITCH
BRKT	BRACKET
C	CONDUIT
CAB	CABINET
CAT	CATEGORY
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CC	CENTER TO CENTER
CCTV	CLOSED CIRCUIT TELEVISION
CHH	COMMUNICATION HANDHOLE
CKT	CIRCUIT
CKTS	CIRCUITS
CL	CLEARANCE
CLF	CURRENT LIMITING FUSE
CLG	CEILING
CM	CENTIMETER
CMP	COMMUNICATION PLENUM
CMU	CONCRETE MASONRY UNIT
CO	CONDUIT ONLY
COL	COLUMN
COMM	COMMUNICATION
COMP	COMPUTER
CONC	CONCRETE
CONN	CONNECT, CONNECTION
CONT	CONTINUOUS
CP	CATHODIC PROTECTION
CRI	COLOR RENDERING INDEX
CT	CURRENT TRANSFORMER
CTS	CURRENT TRANSFORMERS
CU	COPPER
DBL	DOUBLE
DC	DIRECT CURRENT
D,DIA	DIAMETER
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DF	DEMAND FACTOR
DIA	DIAMETER
DIAG	DIAGONAL
DI/DO	DIGITAL INPUT/DIGITAL OUTPUT
DISA	DEFENSE INFORMATION SYSTEMS AGENCY
DISC	DISCONNECT
DIST	DISTRIBUTION
DIV	DIVISION
DN	DOWN
DOT	DEPARTMENT OF TRANSPORTATION
DP	DIFFERENTIAL PRESSURE, DEEP
DT	DRY-TYPE
DWG	DRAWING
DWGS	DRAWINGS
EA	EACH
EF	EXHAUST FAN
EFSO	EMERGENCY FUEL SHUT-OFF
EHH	ELECTRIC HANDHOLE
ELEC	ELECTRICAL
ELEV	ELEVATION
EMH	ELECTRICAL MANHOLE
EMERG	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EP	EXPLOSION-PROOF
EPR	ETHYLENE PROPYLENE RUBBER
EQPT	EQUIPMENT
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EX	EXPLOSION PROOF
EXH	EXHAUST
EXST	EXISTING
EXIST	EXISTING
EXT	EXTERIOR
FA	FIRE ALARM
FCBN	FULL CAPACITY BELOW NORMAL
FCO	FUSED CUT OUT
FCU	FAN COIL UNIT
FDN	FOUNDATION
FDP	FIBER DISTRIBUTION PANEL
FDR	FEEDER
FG	FINISHED GRADE
FIG	FIGURE
FIN	FINISH
FIXT	FIXTURE
FLEX	FLEXIBLE
FLR	FLOOR
FLUOR	FLUORESCENT
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FOOT/FEET
FU	FUSE
FVNR	FULL VOLTAGE NON-REVERSING
G,GND	GROUND
GA	GAUGE
GAL	GALLONS
GALV	GALVANIZED
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPT
GFCI	GOVERNMENT FURNISHED CONTRACTOR INSTALLED
GFGI	GOVERNMENT FURNISHED GOVERNMENT INSTALLED
GOVT	GOVERNMENT
GRC	GALVANIZED RIGID CONDUIT
GRS	GALVANIZED RIGID STEEL CONDUIT
GSA	GENERAL SERVICES ADMINISTRATION
GYP	GYPSUM
H	HEIGHT
HEX	HEXAGON
HH	HANDHOLE
HHCS	HEX HEAD CAP SCREW
HMCP	HEATING MOTOR CONTROL PROTECTION
HO	HIGH OUTPUT
H-O-A	HAND-OFF-AUTO
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HR	HOUR
HSG	HOUSING
HT	HEIGHT
HTR	HEATER
HV	HIGH VOLTAGE
HZ	HERTZ
IC	INTERRUPTING CAPACITY
ID	IDENTIFICATION
IDF	INTEMEDIATE DISTRIBUTION FRAME
I.E.	THAT IS
IEC	INTERNATIONAL ELECTROTECHNICAL
IES	ILLUMINATING ENGINEERING SOCIETY
IMC	INTERMEDIATE METALLIC CO
IN	INCH
INSUL	INSULATION
IRRIG	IRRIGATION
IT	INFORMATION TE LOGY
JB	JUNCTION BOX
JP	JOINT POLE
K	KELVIN
KA	KILO-AMPS
KCM	KILO CIRCULAR
KCMIL	KILO CIRCULAR M
KG	KILOGRAM
KIUC	KAUAI ISLAND UTILITY ERATIVE
KMPH	KILOMETERS PER HOUR
KN	KILO NEWTON
KPa	KILO PASCALS
KV	KILO-VOLTS
KVA	KILO-VOLT-AMPERE
KVAR	KILO-VOLT-AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR
KWHR	KILOWATT HOUR
L	LENGTH
LAB	LABORATORY
LBS	POUNDS
LC	LEAD COVERED CABLE
LDS	LOAD DISCONNECT SWITCH
L-L	LINE TO LINE
LG	LONG
LPS	LIGHTNING PROTECTION SYSTEM
LT	LIGHT
LTG	LIGHTING
M	METER
MACH	MACHINE
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MDF	MAIN DISTRIBUTION FRAME
MECH	MECHANICAL
MFG	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
ma	MILLIAMPERE
mm	MILLIMETER
MISC	MISCELLANEOUS
MPH	MILES PER HOUR
MT	MOUNT
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MULTI	MULTIPLE
MVA	MEGA-VOLT-AMPERE
NC	NOISE CRITERION
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NON-FUSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NFSW	NON-FUSED SWITCH
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NUMBER
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
N1	NEMA TYPE 1 ENCLOSURE
N3R	NEMA TYPE 3R ENCLOSURE
N4X	NEMA TYPE 4X ENCLOSURE
N12	NEMA TYPE 12 ENCLOSURE
O.C.	ON CENTER
OCR	OVERCURRENT RELA
O.D.	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CO CTOR INSTALLED
OFOI	OWNER FURNISHED OWN INSTALLED
O/H	OVERHEAD
O.L.	OVERLOAD
P	
PA	RESS
PA	AVEME
P	PULLBOX
	PROTECTE TRIBUTED SYSTEM
	POWER FAC
PFB	PROVISION FUTURE CIRCUIT BREAKER
PH	PHASE
PLC	PROGR B C CONTROLLER
PLYBD	PLYB
PLYWD	PL D
MP	P
	EL
	RESSURE
PS	POUNDS PER SQUARE INCH
PT	TENTIAL TRANSFORMER
PTS	ENTIAL TRANSFORMERS
PVC	NYL CHLORIDE
PVMT	PA NT
PWR	POW
TY	QUANTIT
D	QUADRUPLE
T	RECEPTACLE
F	REINFORCED
	RADIO FREQUENCY INTERFERENCE
	RIGID GALVANIZED CONDUIT
	ROOM
M	REVOLUTIONS PER MINUTE
Q'D	REQUIRED
RQMT	REQUIREMENT
RVNR	REDUCED VOLTAGE NON-REVERSING
SCADA	SUPERVISORY CONTROL AND DATA AQUISITION
SCHD	SCHEDULE
SCHED	SCHEDULE
SDBC	SOFT DRAWN BARE COPPER
SEC	SECONDARY
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SLH	STREET LIGHT HANDHOLE
SN	SOLID NEUTRAL
SPEC	SPECIFICATION
SPKR	SPEAKER
SPST	SINGLE POLE SINGLE THROW
SQ	SQUARE
SS	STAINLESS STEEL
SSRV	SOLID STATE REDUCED VOLTAGE STARTER
STA	STATION
STD	STANDARD
SVC	SERVICE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
SYS	SYSTEM
TC	TELEPHONE CABINE
TCLP	TOXIC CHARACTE LEACHING PROCEDURE
TEL	TELEPHONE
TEMP	TEMPORARY
TGB	TELECOM G ND
THD	TOTAL H NIC DI ON
THK	THICK
TMGB	TELE MASTER GROU
TMH	TELEC MMUNICATIONS MA
TSP	TWISTED SHIELDED PAIR
TYP	PICAL
U	UNIT
	UNIFORM BUILDING CODE
	UNDERGROUND
L	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERR TABLE POWER SYSTEM
UTP	UNSHIE TWISTED PAIR
UV	ULTR ET
V	V
	-AMPERE
S	LT-AMPERES REACTIVE
	VACUUM CIRCUIT BREAKER
VD	VOLTS DIRECT CURRENT
VER	RTICAL
VFD	ABLE FREQUENCY DRIVE
VM	ETER
W	WAT
W	WIDTH
W	WIRE
	WITH
	ATTHOUR METER
WH	EHOUSE
WP	ATHER-PROOF
XFMR	TRANSFORMER
XLP	CROSS-LINKED POLYETHYLENE INSULATION

18008

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CHECKED BY: P. UYEDA
SUBMITTED BY: P. UYEDA
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U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

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DESC1904
MODERNIZE FUELING WHARVES NO. 1 AND T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

ELECTRICAL SYMBOLS, NOTES

SHEET ID

E-002

FILE: DESC1904E002.dwg
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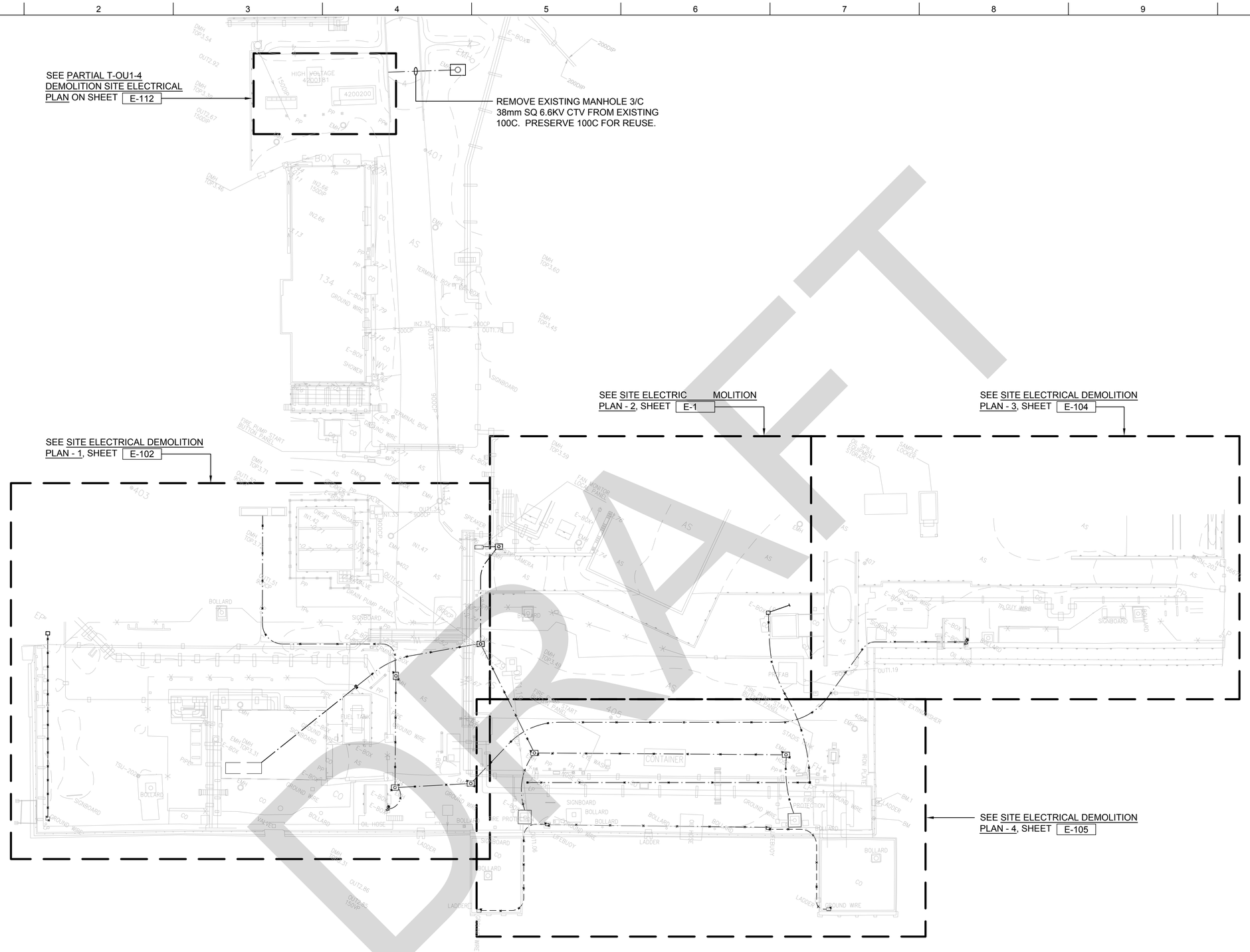

OVERALL WATERFRONT SITE ELECTRICAL DEMOLITION PLAN

SCALE: 1:300

0 5 10m

NOTES:

1. ——— LIGHT LINES DENOTE EXISTING CONDITION
   —×—×— "X" DENOTES REMOVAL WORK

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DESC1904
MODERNIZE FUELING WHARVES T-1, T-1 TANKER CAPABLE,
ITSURUMI, YOKOHAMA, JAPAN

OVERALL WATERFRONT SITE ELECTRICAL DEMOLITION PLAN

SHEET ID

E-101

NOTES:

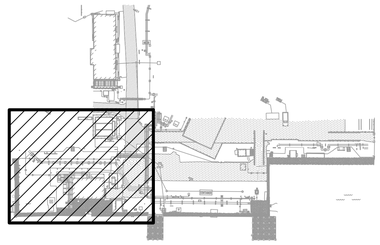
1. ——— LIGHT LINES DENOTE EXISTING CONDITION
   —×—×— "X" DENOTES REMOVAL WORK
2. DEMOLISH ALL CABLE FROM LOAD BACK TO EXISTING PANELBOARD OR FIRE FOAM MONITOR CONTROL STATION AS INDICATED. DEMOLISH ALL CONDUIT IN CONFLICT WITH NEW PIPE TRENCH AND ABANDON ALL OTHER UNDERGROUND CONDUIT.

◇3 REMOVE OIL BOOM REEL ELECTRICAL CONNECTION, CONTROLLER/DISCONNECT AND ASSOCIATED WIRING.

◇4 REMOVE FIRE FOAM MONITOR CABLE (4/C 1.6mm HP) FROM FIRE FOAM MONITOR CONTROL STATION TO MCC IN FIRE PUMP BUILDING (BUILDING 4200187). REMOVE PORTION OF EXISTING 50C UNDERGROUND DUCTLINE TO FACILITATE CONSTRUCTION OF NEW PIPING TRENCH. DEMOLISH ALL EXISTING MANHOLES IN CONFLICT WITH NEW WORK. ABANDON IN PLACE ALL OTHER EXISTING MANHOLES.

◇5 REMOVE ALL CABLES FOR BOOM REELS BACK TO EXISTING PANELBOARD AND LABEL BREAKERS AS SPARE. REMOVE PORTION OF UNDERGROUND DUCTLINE TO FACILITATE CONSTRUCTION OF NEW PIPING TRENCH. DEMOLISH ALL EXISTING MANHOLES IN CONFLICT WITH NEW WORK. ABANDON IN PLACE ALL OTHER EXISTING MANHOLES.

◇6 DEMOLISH FIRE FOAM MONITOR CABLE (4/C) 1.6mm HP FROM HANDHOLE TO FIRE FOAM MONITOR CONTROL STATION. PULL EXISTING 14mm SQ 2/C FP IN SAME 50 CONDUIT FROM FIRE FOAM MONITOR CONTROL STATION. COIL SLACK IN HANDHOLE AND PRESERVE FOR REINSTALLATION.



KEY PLAN
NOT TO SCALE

NORTH

EXISTING PANELBOARD

EXISTING FIRE FOAM MONITOR CONTROL STATION TO REMAIN

◇6 2 C 50

◇5 2 S 50

◇4 1 C 50

MATCHLINE, SEE SHEET E-103

EXISTING POLE TO REMAIN

OH

DEMOLISH EXISTING CONCRETE POLE, BRACKE AND OVERHEAD ABANDONED/DE-ENERGIZE TRICAL LINES

FIRE PUMP BUILDING (BUILDING 4200187)

EXISTING PUMP MCC IN FIRE PUMP BUILDING

◇5 2 S 50

◇3

MATCHLINE, SEE SHEET E-105

1 S 50

SITE ELECTRICAL DEMOLITION PLAN - 1
SCALE: 1:100

0 2 4m

NORTH

DRAFT

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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

SITE ELECTRICAL DEMOLITION PLAN - 1

SHEET ID
E-102

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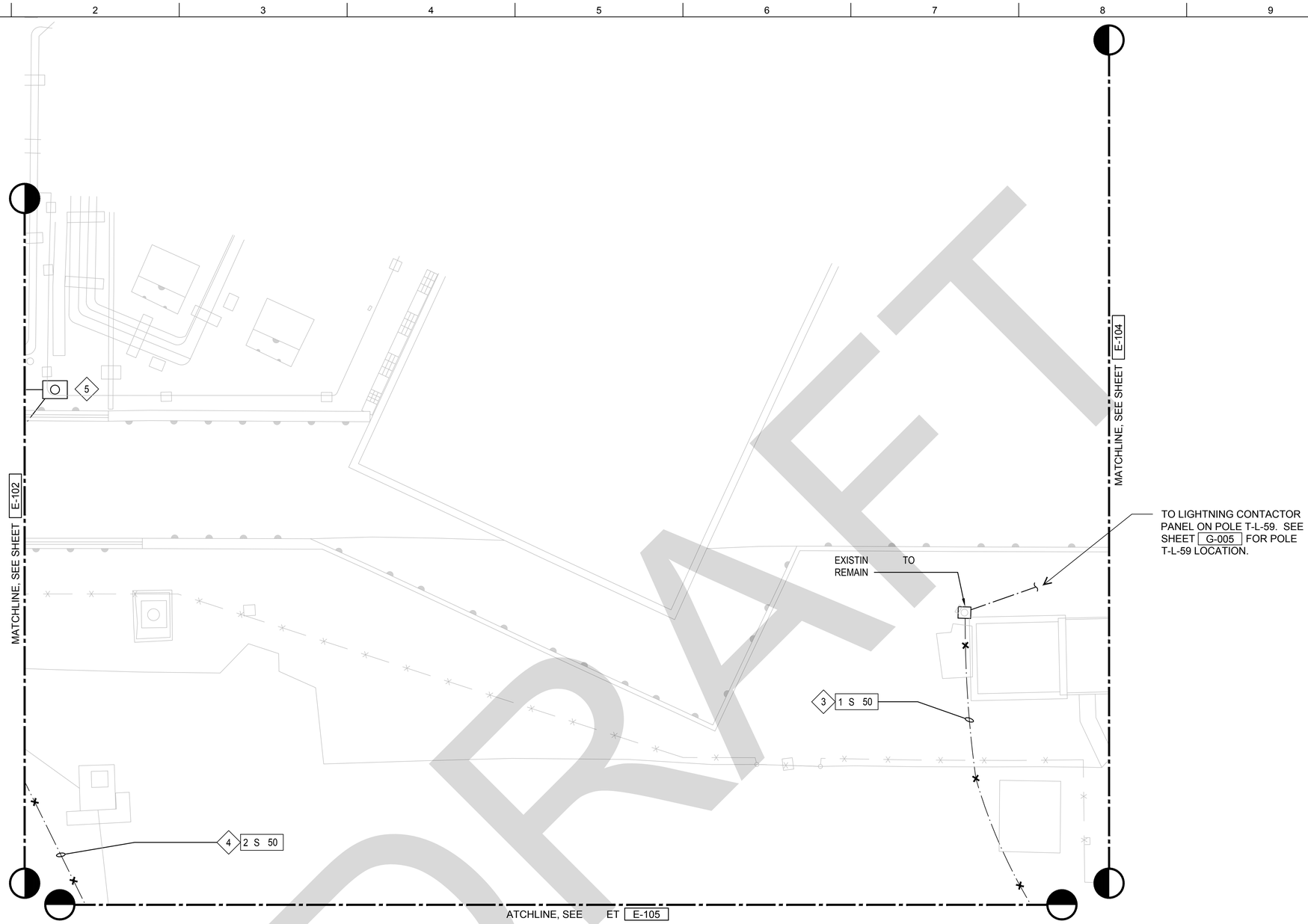


SITE ELECTRICA DEMOLITION PLAN - 2

ALE: 1:100

0 2 4m

NORTH

NO

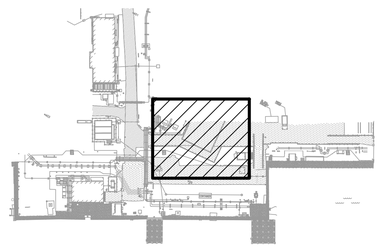
1. ——— LIGHT DENOTE EXISTING CONDITION
   —×—×— "X" TES REMOVAL WORK

2. DEMOLISH BLE FROM LOAD BACK TO PANELBOARD OR FIRE FOAM MONITOR C ROL STATION AS INDICATED. SEE SHEET E-102 FOR PANELBOARD AND FIRE FOAM MONITOR CONTROL STATION. DEMOLISH ALL CONDUIT IN CONFLICT WITH NEW PIPE TRENCH AND ABANDON ALL OTHER UNDERGROUND CONDUIT.

3 REMOVE FLOODLIGHT UNDERGROUND DUCTLINE AND WIRING.

4 REMOVE FIRE FOAM MONITOR CABLES: 2 x (2/C 14mmsq FP, 5-PAIR 1.6mm HP AND 3/C 2mm SQ FP) AND ASSOCIATED DUCTLINES TO FIRE FOAM MONITOR CONTROL STATION.

5 DEMOLISH EXISTING 1.6mm HP CABLE AND PULL EXISITNG 14mm SQ 2/C FP CABLE BACK FROM FIRE FOAM MONITOR CONTROL STATION TO EXISTING HANDHOLE. SEE SHEET E-102 FOR FIRE FOAM MONITOR CONTROL STATION AND HANDHOLE LOCATION.



KEY PLAN
NOT TO SCALE

NORTH

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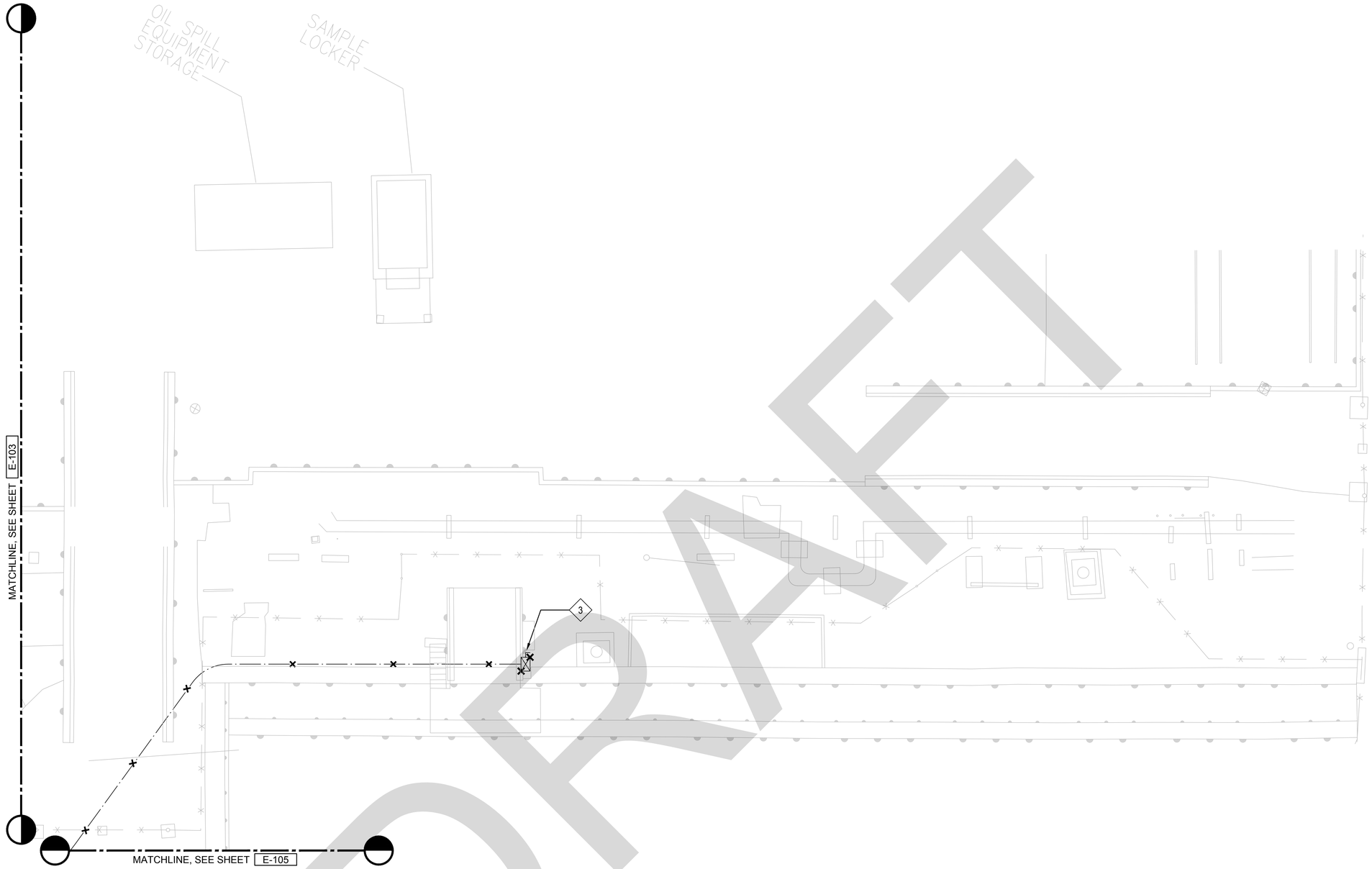
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

SITE ELECTRICAL DEMOLITION PLAN - 2

SHEET ID

E-103



SITE EL CTRICAL DEMOLITION PLAN - 3

SCALE: 1:100

0 2 4m

NORTH

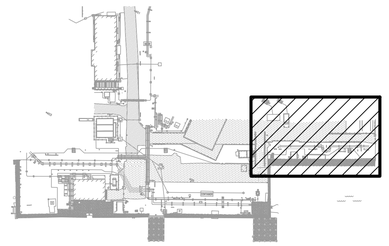
NOTES:

1. ——— LIGHT LINES DENOTE EXISTING CONDITION

—×—×— "X" DENOTES REMOVAL WORK

DEMOLISH ALL CABLE FROM LOAD BACK TO PANELBOARD OR FIRE FOAM MONITOR CONTROL STATION AS INDICATED. SEE SHEET E-102 FOR PANELBOARD AND FIRE FOAM MONITOR CONTROL STATION. DEMOLISH ALL CONDUIT IN CONFLICT WITH NEW PIPE TRENCH AND ABANDON ALL OTHER UNDERGROUND CONDUIT.

◇3 REMOVE OIL BOOM REEL ELECTRICAL CONNECTION, CONTROLLER/DISCONNECT AND ASSOCIATED WIRING/UNDERGROUND CONDUIT.



KEY PLAN

NOT TO SCALE

NORTH

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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
TSURUMI, YOKOHAMA, JAPAN

SITE ELECTRICAL DEMOLITION PLAN - 3

SHEET ID

E-104

MATCHLINE, SEE SHEET E-103

MATCHLINE, SEE SHEET E-104

MATCHLINE, SEE SHEET E-102

CONTAINER

4 1 S 50

5 2 S 50

6

3

6 1 S 50

5 1 S 50

3

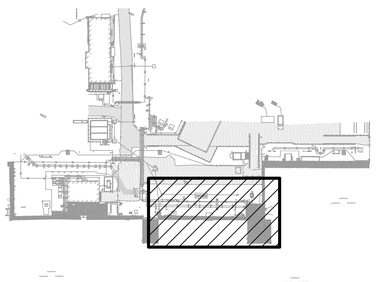
5 1 S 50

EXISTING FIRE FOAM MONITOR 2 TO REMAIN

EXISTING FIRE FOAM MONITOR 1 TO REMAIN

1 S 30

4



KEY PLAN
NOT TO SCALE

NORTH

SITE ELECTRICAL DEMOLITION PLAN - 4

SCALE: 1:100

0 2 4m

NORTH

NOTES:

1. ——— LIGHT LINES DENOTE EXISTING CONDITION
   —x—x— "X" DENOTES REMOVAL WORK
2. DEMOLISH ALL CABLE FROM LOAD BACK TO PANELBOARD OR FIRE FOAM MONITOR CONTROL STATION AS INDICATED. SEE SHEET E-102 FOR PANELBOARD AND FIRE FOAM MONITOR CONTROL STATION. DEMOLISH ALL CONDUIT IN CONFLICT WITH NEW PIPE TRENCH AND ABANDON ALL OTHER UNDERGROUND CONDUIT.

3 REMOVE CONCRETE FLOODLIGHT POLE.

4 REMOVE GROUND CABLE REEL, UNDERGROUND AND EXPOSED CONDUIT, WIRING AND DISCONNECT SWITCHES. DEMOLISH ALL EXISTING MANHOLES IN CONFLICT WITH NEW WORK. ABANDON IN PLACE ALL OTHER EXISTING MANHOLES.

5 REMOVE FIRE FOAM MONITOR CABLES (2/C 14mm SQ FP, 5-PAIR 1.6mm HP AND 3/C 2mm SQ FP) FROM EACH FIRE FOAM MONITOR BACK TO FIRE FOAM MONITOR CONTROL STATION, REMOVE ASSOCIATED UNDERGROUND DUCTLINES.

6 REMOVE FLOODLIGHT UNDERGROUND CONDUIT AND WIRING.

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DESC1904
MODERNIZE FUELING WHARVES T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

SITE ELECTRICAL DEMOLITION PLAN - 4

SHEET ID
E-105

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REMOVE 3/C 38mm SQ, 6.6KV CVT FROM EXISTING 100C TO BE REUSED, PROVIDE 3/C 38mm SQ, 6.6KV EM CVT IN EXISTING 100C

PROVIDE NEW WATER-PROOF SLPICES IN EXISTING MANHOLE, NOTE: MANHOLE SYSTEM IS FILLED WITH WATER

SEE PARTIAL T-OU1-4 SITE ELECTRICAL PLAN ON SHEET E-112

1 S 100 B 2
1 SP 100

23

1 C 54 A

EXISTING EFSO RELAY PANEL

1 S 100 C 2
1 C 54
1 SP 100

SEE PARTIAL SITE ELECTRICAL PLAN - 2 ON SHEET E-108

SEE PARTIAL SITE ELECTRICAL PLAN - 3 ON SHEET E-109

SEE PARTIAL SITE ELECTRICAL PLAN - 1 ON SHEET E-107

FLOODLIGHT POLE 2

FLOODLIGHT POLE 1

S HBOARD

OIL-BOOM REEL 1

WP

WP

OIL-BOOM REEL 3

WP

WP

SEE PARTIAL SITE ELECTRICAL PLAN - 4 ON SHEET E-110

FLOODLIGHT POLE 8

FLOODLIGHT POLE 7

FLOODLIGHT POLE 6

FLOODLIGHT POLE 5

FLOODLIGHT POLE 4

FLOODLIGHT POLE 3

SITE ELECTRICAL PLAN

SCALE: 1:300

0 5 10m

NORTH

NOTES:

1. ——— LIGHT LINES DENOTE EXISTING CONDITION
   ——— BOLD LINES DENOTE NEW WORK

2 FURNISH AND INSTALL 60mm SQ BARE COPPER GROUND.

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DESC1904
MODERNIZE FUELING WHARVES T-1, T-4 TANKER CAPABLE,
ITSURUMI, YOKOHAMA, JAPAN

SITE ELECTRICAL PLAN

SHEET ID

E-106

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NOTES:

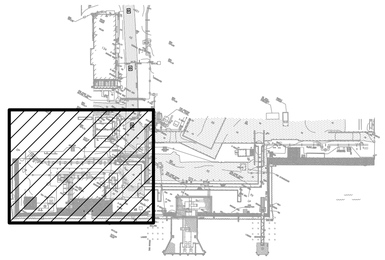
1. ——— LIGHT LINES DENOTE EXISTING CONDITION
   ——— BOLD LINES DENOTE NEW WORK

◇2 INTERCEPT EXISTING CONDUIT STUB AND EXTEND TO EXISTING MANHOLE WITH NEW CONDUIT. PROVIDE 4/C 1.6mm HP FROM FIRE FOAM CONTROLLER TO FIRE PUMP MCC AND RECONNECT.

◇3 PROVIDE 2 x (2/C 14mm SQ FP, 5-PAIR 1.6mm HP AND 3/C 2mm SQ FP) FROM FIRE FOAM MONITOR CONTROL STATION TO FIRE FOAM PUMPS.

◇4 PROVIDE 60mm SQ BARE COPPER GROUND.

◇5 PULL NEW 4/C 1.6mm HP CABLE AND EXISTING 14mm SQ 2/C CABLE THROUGH EXISTING 50C CONDUIT TO FIRE FOAM MONITOR CONTROL STATION.



KEY PLAN
NOT TO SCALE

EXISTING PANELBOARD

SEE SITE ELECTRICAL PLAN, SHEET E-106

EXISTING FIRE FOAM MONITOR CONTROL STATION TO REMAIN

5 2 C 54

100 C ◇4
1
1 SP

MATCHLINE, SEE SHEET E-108

EXTEND 60mm SQ BARE COPPER GROUND FROM DUCTLINE AND BOND TO LIGHTING ARRESTORS FOR ISOLATION FLANGES

2

1 C 54 A

3 2 S 54 B

MATCHLINE, SEE SHEET E-110

EXISTING PUMP MCC
FIRE PUMP BUILDING

1 S 54 A

FLOODLIGHT POLE 8
WF-25,27

WP

WP

OIL-BOOM REEL 2
4.4KW/415V/3PH
WF-29, 31, 33

2 S 54 B

FLOODLIGHT POLE 7
WF-20,22

1 S 54 A

3 S 54 C

1 S 54 A

FLOODLIGHT
POLE 6
WF-21,23

SITE ELECTRICAL PLAN - 1
SCALE: 1:100
0 2 4m

NORTH

DRAFT

18008

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DESIGNED BY: M. TAIRA
DRAWN BY: D. MATSUO
CHECKED BY: P. UYEDA
SUBMITTED BY: P. UYEDA
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SOLICITATION NO.: -
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DRAWING CODE: -
FILE NAME: DESC1904E107.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
TSURUMI, YOKOHAMA, JAPAN

SITE ELECTRICAL PLAN - 1

SHEET ID
E-107

FILE: DESC1904E107.dwg
DATE: 9/19/2018 1:55 PM
OPER:
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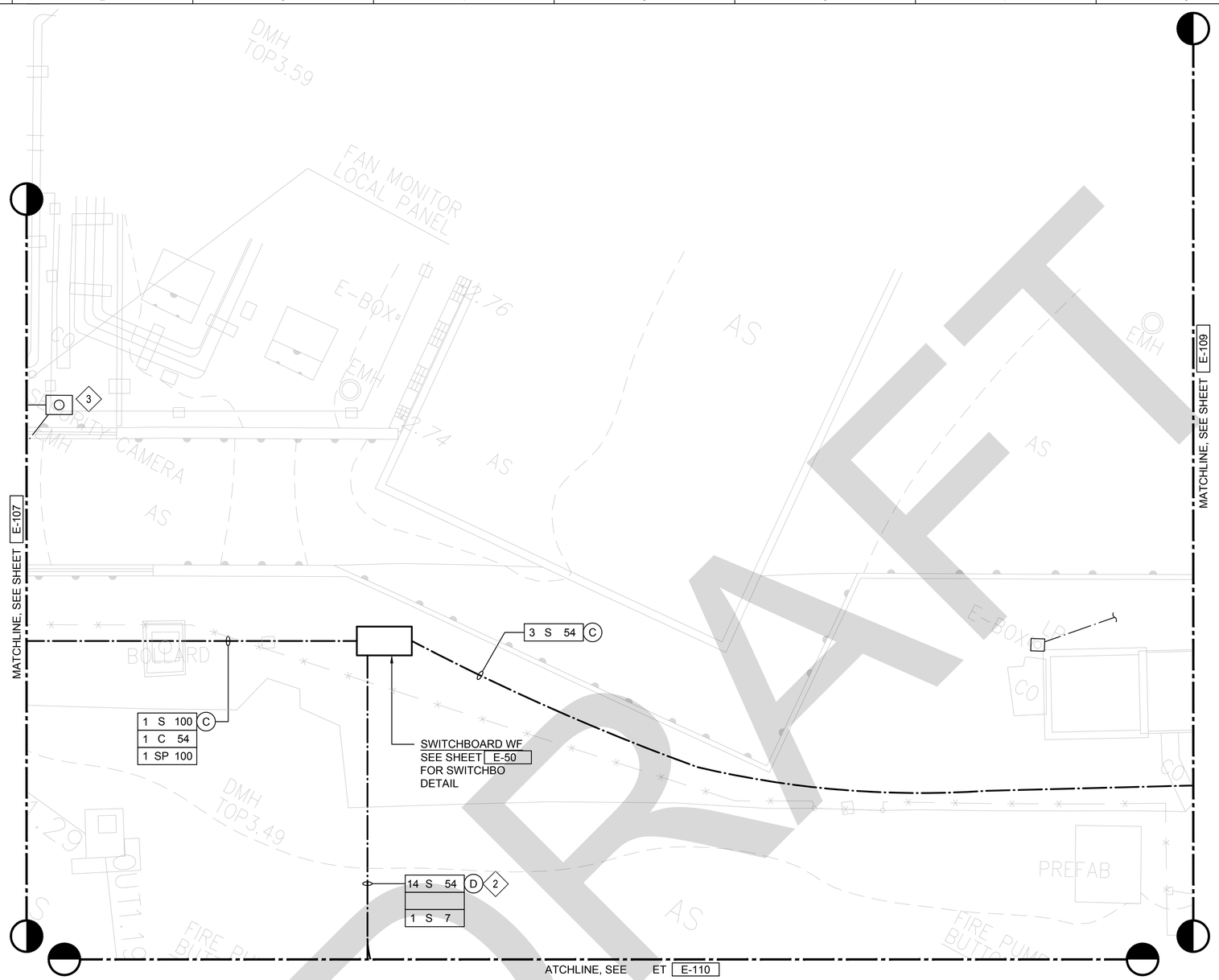


SITE ELEC RICAL PLAN - 2

SCALE: 1:100

0 2 4m

NORTH

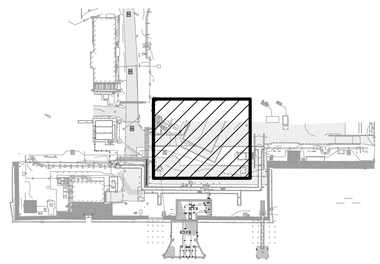
NOTES:

LIGHT LINES DENOTE EXISTING CONDITION

BOLD LINES DENOTE NEW WORK

2 DE 60mm SQ BARE COPPER GROUND.

3 PULL NEW 4/C 1.6mm HP CABLE AND EXISTING 14mmsq 2/C CABLE THROUGH EXISTING 50C CONDUIT TO FIRE FOAM MONITOR CONTROL STATION. SEE SHEET E-108 FOR FIRE FOAM MONITOR LOCATION.



KEY PLAN

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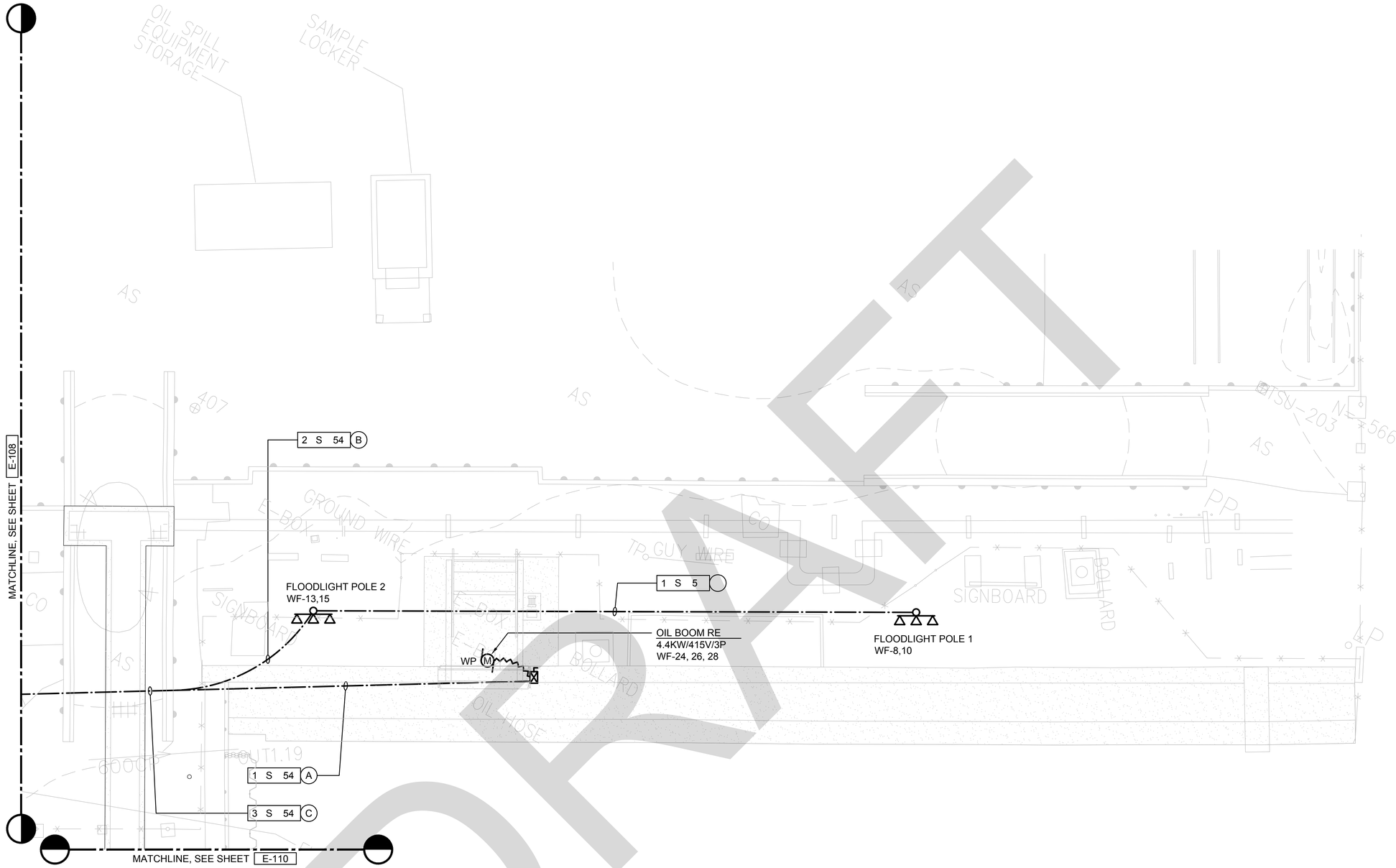
DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

SITE ELECTRICAL PLAN - 2

SHEET ID

E-108



SITE ELECTRICAL PLAN - 3

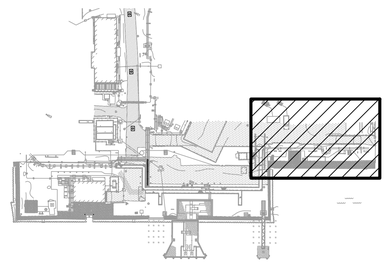
SCALE: 1:100

0 2 4m

NORTH

NOTES:

1. ——— LIGHT LINES DENOTE EXISTING CONDITION
   ——— BOLD LINES DENOTE NEW WORK



KEY PLAN
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NORTH

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1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

SITE ELECTRICAL PLAN - 3

SHEET ID

E-109

FILE: DESC1904E109.dwg
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MATCHLINE, SEE SHEET E-108

MATCHLINE, SEE SHEET E-109

MATCHLINE, SEE SHEET E-107

200A IP67 SS

2 S 54 B

SUMP PUMP
1KW/415/3PH
WF-35,37,39

SUMP PUMP
CONTROL PANEL AND
DISCONNECT SWITCH.

1 S 70 A

WP

WP

EX/WP

EX/WP

EX FLEX

EMERGENCY EYE WASH/SHOWER 2WF-1,3,5
36KW/210V/3PH

3 S 54 C

2 S 54 B 3

MOUNTED TO
ADDITIVE
MIXER FRAME

ADDITIVE MIXER
0.37KW/415V/3PH
WF-7,9,11

EX/WP

EX/WP

FLOODLIGHT
POLE 5
WF-16,18

1 S 54 A

2

3 S 54 C

FLOODLIGHT POLE 4
WF-17,19

S 54 A

FLOODLIGHT
POLE 3
WF-12,14

2

1 S 54 A

2 - 53C FOR STRIPPER PUMPS, AND 1 - 53C
AUDIBLE VISUAL ALARM EMERGENCY PU
SHUTDOWN MOUNTED TO FUEL PIPE
SUPPORTS ABOVE WHARF DECK. EXTEND
60mm SQ BARE COPPER GROUND TO LOADI
ARMS.

STARTERS MOUNTED TO PEDESTAL,
SEE DETAIL 1 / E-504

EMERGENCY PUMP SHUTDOWN
PUSHBUTTON MOUNTED TO
PEDESTAL, SEE DETAIL 1 / E-504

EX/WP

EX/WP

EX/WP

STRIPPING PU
3.7KW/415V
WF-1,3 5

53C EX

PING PUMP 2
3 15V/3PH
WF

53C EX FLEX

EX/WP

EX/WP

EX/WP

EX/WP

F E ROVIDED AND
INS BY MECHANICAL
CONTR R TYPICAL OF 2

27C EX FLEX FOR FLOW
RELAY CONTROL

SITE ELECTRICAL PLAN - 4

SCALE: 1:100

0 2 4m

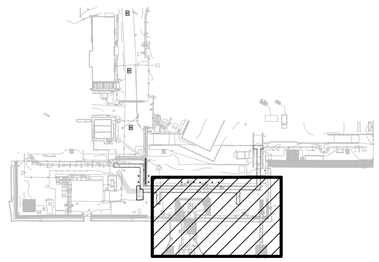
NORTH

NOTES:

1. ——— LIGHT LINES DENOTE EXISTING CONDITION
   ——— BOLD LINES DENOTE NEW WORK

2 PROVIDE AND RECONNECT 2/C 14mmsq FP, 5-PAIR 1.6mm HP AND 3/C 2mmsq FP TO EACH FIRE FOAM PUMP.

3 PROVIDE 60mmsq BARE COPPER GROUND. BOND GROUND TO SDA MIXER TANK AND STAIRS.



KEY PLAN
NOT TO SCALE

NORTH

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U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES T-1, T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

SITE ELECTRICAL PLAN - 4

SHEET ID

E-110

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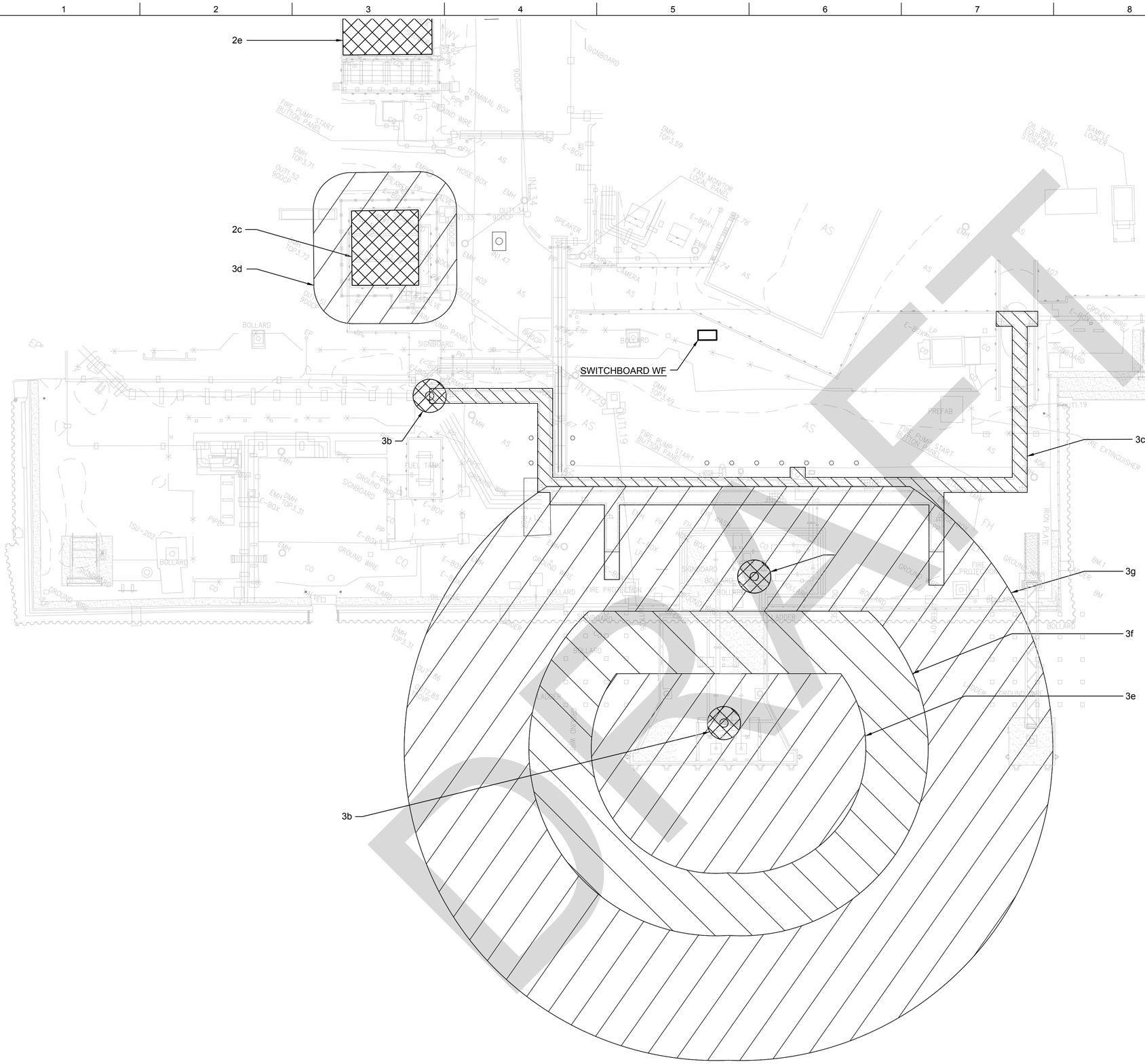

HAZARDOUS LOCATION PLAN

SCALE: 1:250

0 5 10m

NORTH

NOTES:

1. HAZARDOUS LOCATIONS SHALL BE DEFINED IN ACCORDANCE WITH UFC 3-460-01 AND API 500 (LATEST EDITIONS). JP-8 AND OTHER COMBUSTIBLE LIQUIDS UNDER PRESSURE SHALL BE CONSIDERED FLAMMABLE LIQUIDS.
2. CLASS 1/DIVISION 1 LOCATIONS INCLUDE (BUT ARE NOT LIMITED TO):
   a. 0.9 METER/3-FEET IN ALL DIRECTIONS OF FILL OPENINGS OR VENTS TO WHICH FLAMMABLE LIQUIDS (SDA) ARE BEING TRANSFERRED.
   b. 1.5 METER/5-FEET IN ALL DIRECTIONS FROM VENTS AND OPENINGS OF SDA STORAGE TANKS.
   c. WITHIN OIL/WATER SEPARATORS AND INTERIOR OF PUMP BUILDINGS.
3. CLASS 1/DIVISION 2 LOCATIONS INCLUDE (BUT ARE NOT LIMITED TO):
   a. OUTDOOR LOCATIONS BETWEEN 1.5 METERS/5-FEET AND 3-METERS/10-FEET OF VENT AND OPENINGS OF SDA STORAGE TANKS.
   b. OUTDOOR LOCATIONS WITHIN 0.9 METERS/3-FEET IN ALL DIRECTIONS AND 450mm/18-INCHES ABOVE GRADE AND 3 METERS/10-FEET HORIZONTALLY FROM PUMPS, AIR-RELIEF VALVES, WITHDRAWAL FITTINGS, FLANGED/BOLTED FITTINGS, METERS AND SIMILAR DEVICES.
   c. WITHIN FUEL PIPING/FIRE PROTECTION PIPING TRENCHES.
   d. LOCATIONS EXTENDING 450mm/18-INCHES ABOVE GRADE AND WITHIN 4.6 METERS/15-FEET HORIZONTALLY FROM ANY SURFACE OF OPEN TOP SPILL CONTAINMENT STRUCTURES INCLUDING OIL/WATER SEPARATORS AND SPILL CONTAINMENT BOXES.
   e. 7.5 METERS/25-FEET IN ALL DIRECTIONS FROM ARTICULATING LOADING ARMS.
   f. LOCATIONS EXTENDING 7.5 METERS/25-FEET ABOVE WHARF DECK/ABOVE WATER AND WITHIN 15 METERS/50-FEET FROM ARTICULATING LOADING ARMS.
   g. LOCATIONS EXTENDING 0.6 METER/2-FEET ABOVE WHARF DECK AND WITHIN 15 METERS/50-FEET LATERALLY FROM ITEM 3e (ABOVE).
4. SEAL ALL CONDUITS FEEDING ELECTRICAL EQUIPMENT WITHIN THE HAZARDOUS LOCATION AT SWITCHBOARD WF AND 300MM PRIOR TO ENTERING ANY EXPLOSION PROOF DISCONNECT SWITCH, EXPLOSION PROOF JUNCTION BOX, OR EXPLOSION PROOF CONTROL PANELS. CONDUITS THAT PASS THROUGH THE HAZARDOUS LOCATION BUT THAT DO NOT FEED EQUIPMENT WITHIN THE HAZARDOUS LOCATION DO NOT NEED TO BE SEALED.

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1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

HAZARDOUS LOCATION PLAN

SHEET ID

E-111

FILE: DESC1904E111.dwg
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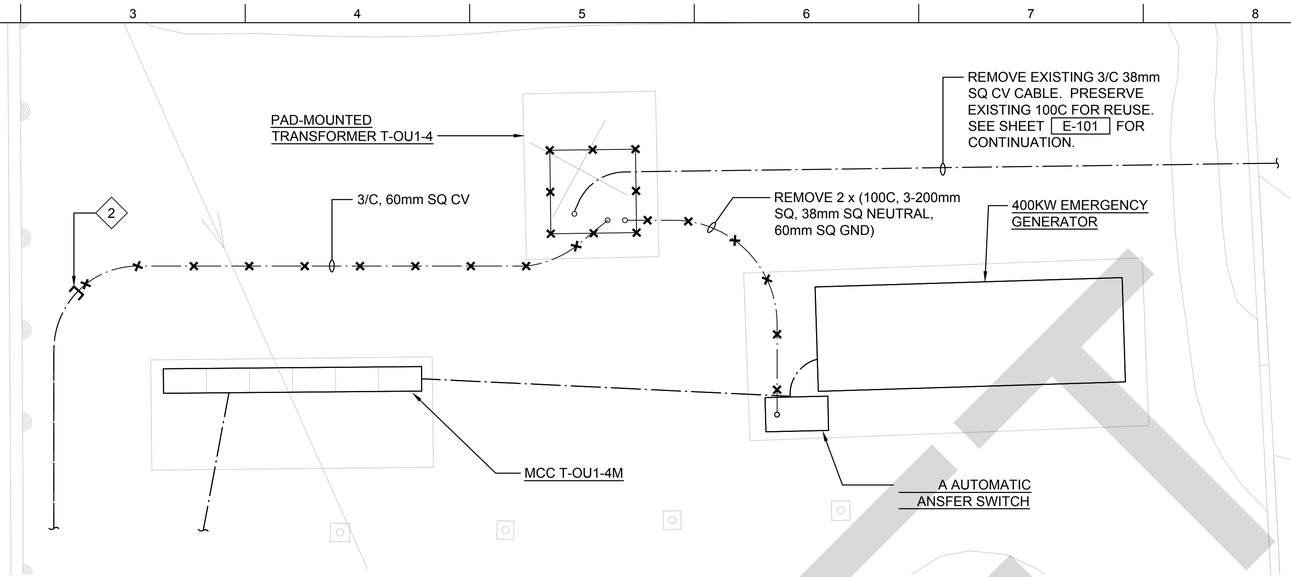


1 PARTIAL T-OU1-4 SITE ELECTRICAL PLAN - D MOLIT ON WORK

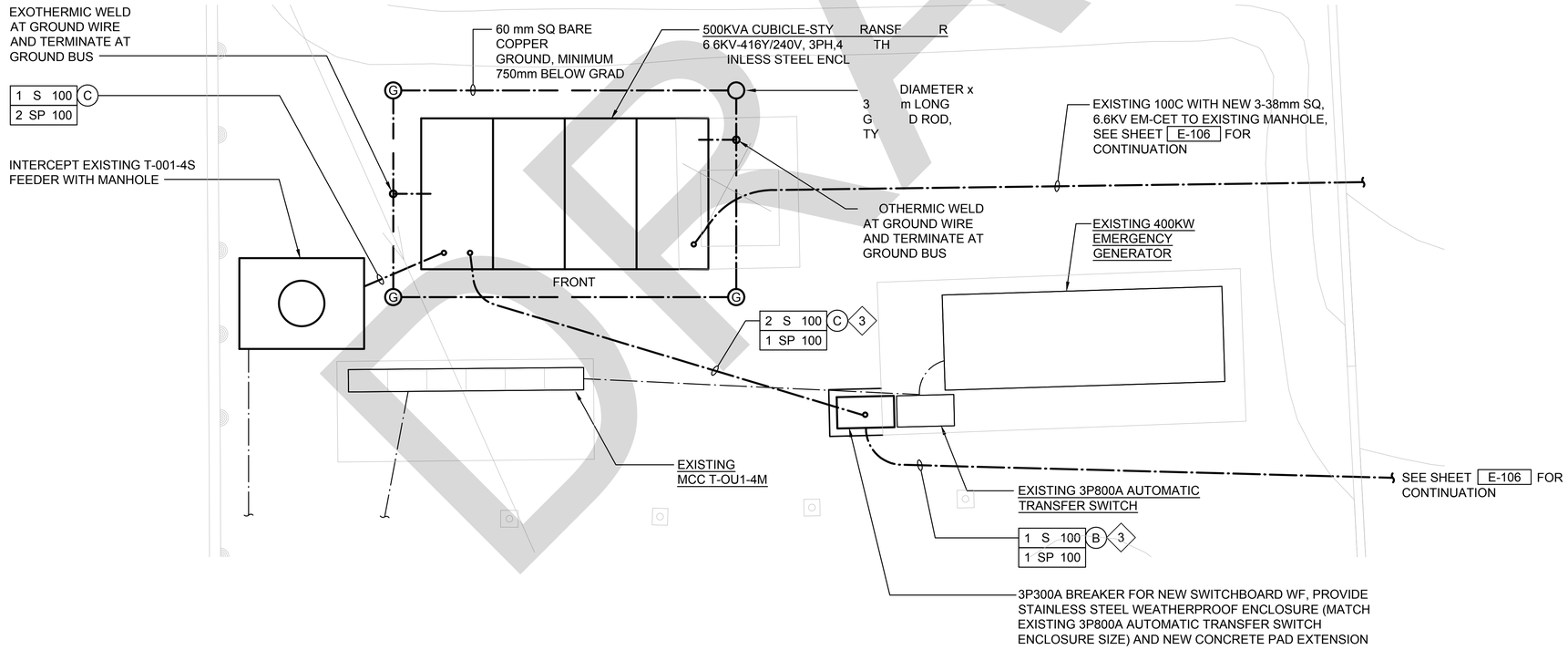
SCALE = 1:50

NORTH

0 1 2m

NOTES:

1. LIGHT LINES DENOTE EXISTING CONDITION
   "X" DENOTES REMOVAL WORK
2. DEMOLISH PORTION OF UNDERGROUND DUCTLINE. PR VE EXIS UIT AND WIRE FOR CON ON VIA NEW MANHOLE.



2 PARTIAL T-OU1-4 SITE ELECTRICAL PLAN - NEW WORK

SCALE: 1:50

NORTH

0 1 2m

NOTES:

1. LIGHT LINES DENOTE EXISTING CONDITION
   BOLD LINES DENOTE NEW WORK
2. DEMOLISH PORTION OF UNDERGROUND DUCTLINE. PRESERVE EXISTING CONDUIT AND WIRE FOR CONNECTION VIA NEW MANHOLE.
3. PROVIDE 60mm SQ BARE COPPER GROUND.

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JAPAN DISTRICT
APO AP 96343-5010

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1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE.
TSURUMI, YOKOHAMA, JAPAN

PARTIAL T-OU1-4 SITE ELECTRICAL PLAN

SHEET ID

E-112

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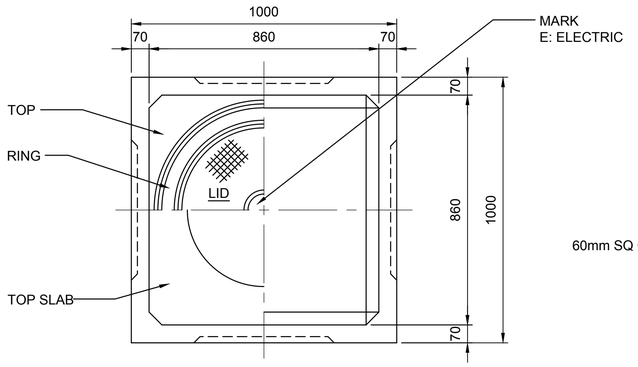
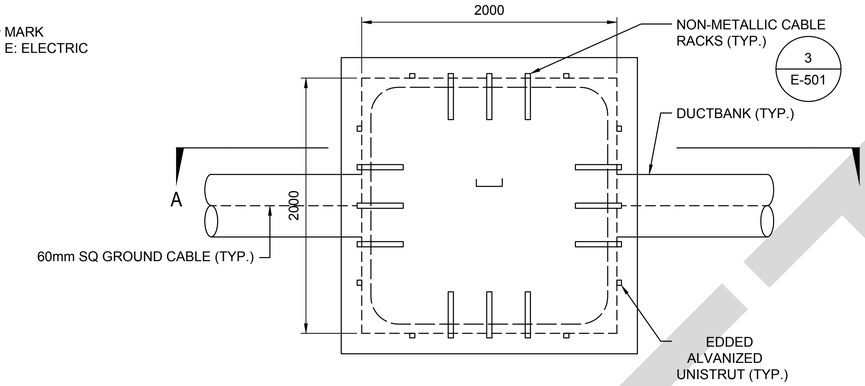
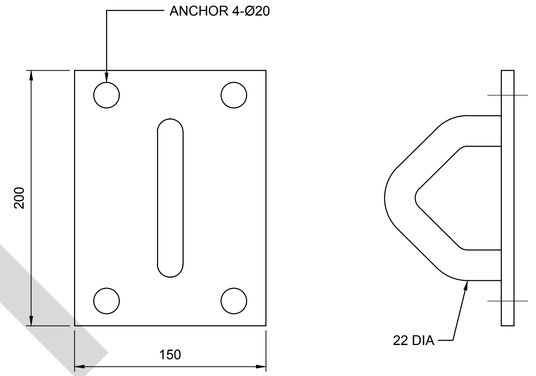


MANHOLE SECTION



PLAN



2 PULLING IRON DETAIL
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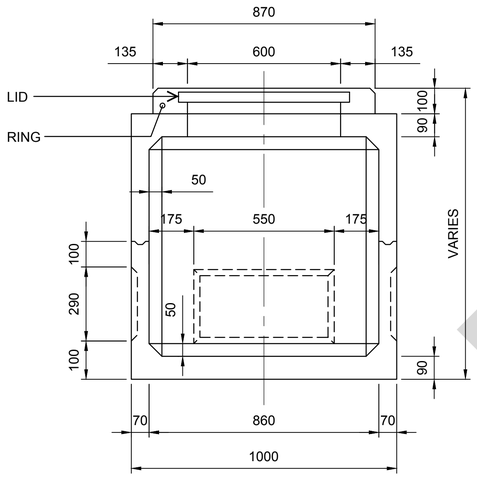

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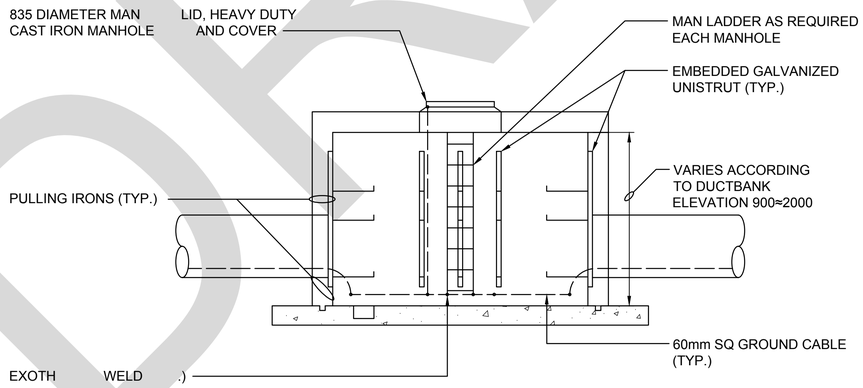
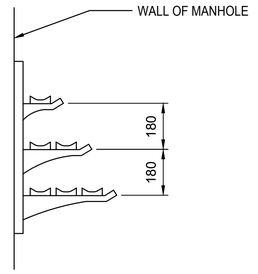


SECTION "A-A"

1 MANHOLE DETAILS
NOT TO SCALE



3 TYPICAL CABLE RACK DETAIL
NOT TO SCALE

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HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

MANHOLE DETAILS

SHEET ID

E-501

FILE: DESC1904E501.dwg
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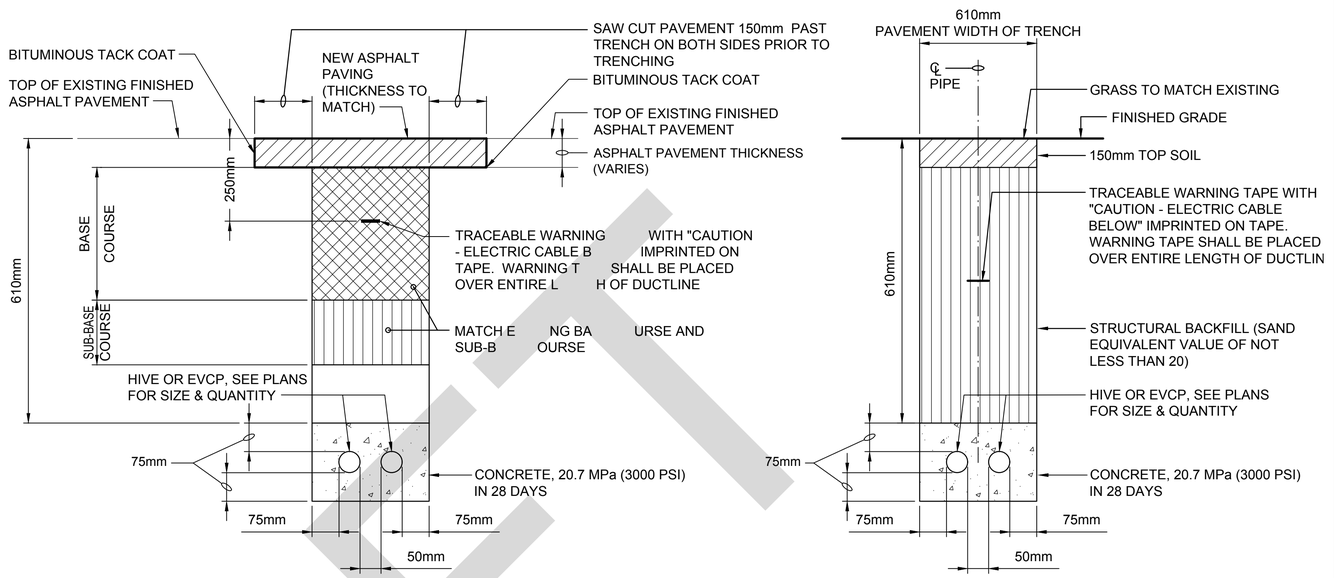
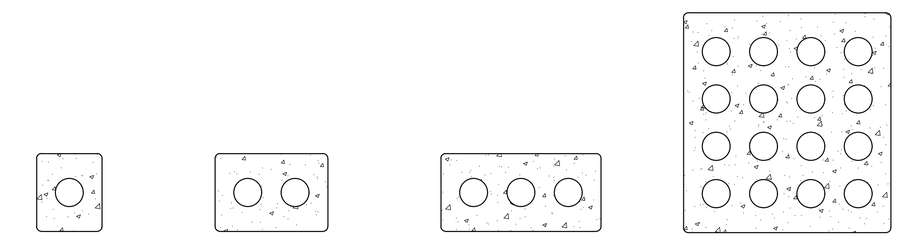


1 TYPICAL DUCTLINE SECTION
T TO SCALE



2 TYPICAL DUCTLINE SECTION
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DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

DUCT SECTION DETAILS

SHEET ID

E-502

FILE: DESC1904E502.dwg
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SCALE:

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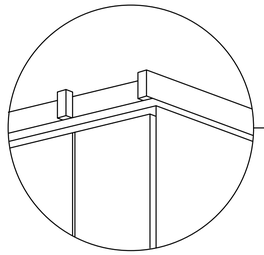
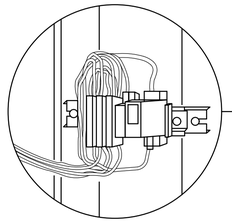
CUBICAL TOP EAVES SHALL:

HAVE NO GAPS BETWEEN TOP COVER (ROOF) AND SIDE OF CUBICLE TO PREVENT INTRUSION AND NESTING OF LIVING CREATURES AND TO PREVENT RAIN WATER AND DUST TO SEEP IN & CAUSE CORROSION.



CUBICAL STRIP HEATER:

PROVIDE STRIP HEATER TO PREVENT CONDENSATION AND MOISTURE.



CUBICAL CABLE TERMINAL DOOR:

PROVIDE SMOOTHLY OPERATING DOOR, EASY TO OPEN TYPE WITHOUT REMOVAL, TO ALLOW SAFE OPERATION AND TO PREVENT ACCIDENTAL ENTRY OF FOREIGN OBJECTS. USE CONSTRUCTION METHOD THAT DOES NOT REQUIRE SCREWS.

CHANNEL BASE SHALL BE:

STAINLESS STEEL AND PAINTED (BLUE JIS 2.5PB 5/8, WEATHER ROOF TYPE). VENTILATION MESH COVER AND SCREW AND BASE CHANNEL BOLT (M-16 SIZE) SHALL BE STAINLESS STEEL TYPE. BASE CHANNEL HEIGHT SHALL BE 100MM AND THICKNESS SHALL BE A MINIMUM OF 4MM

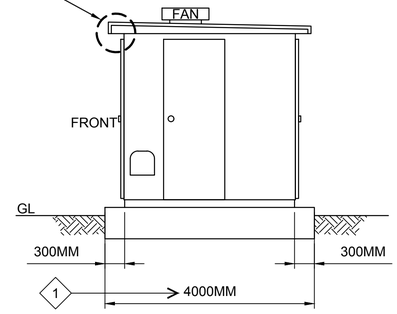
DOOR HINGE:

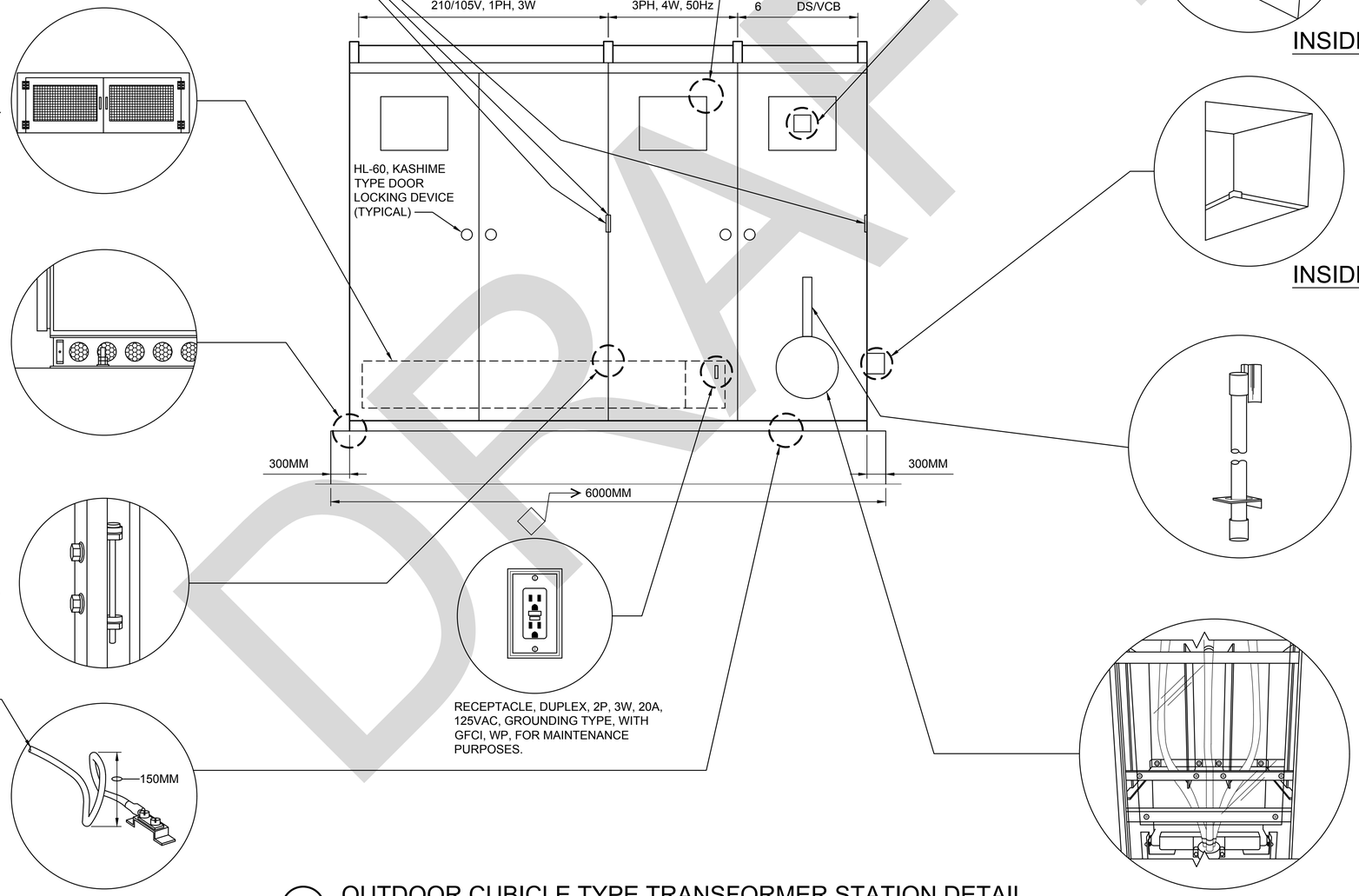
PROVIDE DOOR HINGED WITH STAINLESS STEEL BOLT AND NUT FOR QUICK REPLACEMENT, AND EASY ACCESS FOR PMI WORK AND REPLACEMENT OF DOORS WITHOUT DAMAGING THE CUBICLE.

EXTEND TO PIER GROUND SYSTEM

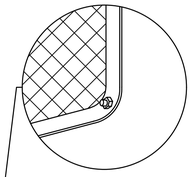
CUBICLE GROUNDING INSTALLATION:

PROVIDE EXTRA LOOP OF INSULATED CONDUCTOR, TO CREATE SPACE WHEN TAKING GROUND MEASUREMENT.



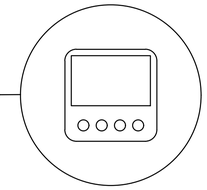


RECEPTACLE, DUPLEX, 2P, 3W, 20A, 125VAC, GROUNDING TYPE, WITH GFCI, WP, FOR MAINTENANCE PURPOSES.

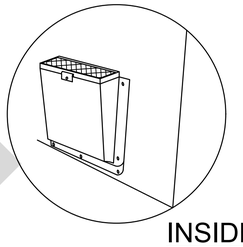


CUBICAL GLASS WINDOW TYPE SHALL BE:

WITH ALUMINUM ORT FRAME AND P TIVE MATERIAL S FILLER. PROVIDE BOLT/NUT FOR QUICK EMENT, DUR Y ASY M NANCE



DIGITAL POWER METER WITH ELECTRONIC DISPLAY & USER INTERFACE



AIR INLET SHALL BE PROVIDED WITH:

AIR FILTER TO PREVENT DUST AND OTHER FOREIGN RUBBISH MATERIALS FROM SEEPING IN AND TO PREVENT MOISTURE THAT WILL CAUSE DAMAGE FROM SALT, LEAKS AND CONDENSATION.

INSIDE

OPENING FOR TEMPORARY PULL OUT CABLE:

PROVIDE COVER ON PULL OUT PORTION TO PREVENT ENTRY OF DUST AND LIVING CREATURES. OPENING SHALL BE EXOTHERMICALLY WELDED ON THE LOW VOLTAGE SIDE PANEL TO AVOID CORROSION AND REDUCE ELECTRICAL HAZARDS.

INSIDE

DISCONNECTING SWITCH ROD:

DISCONNECTING SWITCH ROD HOLDER SHALL BE WELDED TO PREVENT DAMAGE AND TO MAINTAIN INSULATION AND RESISTANCE VALUE OF THE ROD. DISCONNECTING ROD SHALL BE DESIGNED FOR USE IN MARINE ENVIRONMENTS AND SHALL BE RESISTANT TO CORROSION IN SALT LADEN AIR.

CLEAR ACRYLIC TERMINAL COVER:

TERMINAL CABLE SHALL BE PROTECTED WITH COLORLESS ACRYLIC COVER TO PREVENT ACCIDENTAL CONTACT AND FOR QUICK VISUAL INSPECTION OF LOOSE BOLTS, LEAK AND CORROSION. PROVIDE HAND TIGHT STAINLESS STEEL SCREWS FOR EAST ACCESS AND INSTALLATION.

1 OUTDOOR CUBICLE TYPE TRANSFORMER STATION DETAIL

NOT TO SCALE

NOTES:

1. ADJUST SIZE OF PAD TO MATCH SIZE OF APPARATUS BEING FURNISHED AND INSTALLED.

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DRAWN BY: D. MATO
CHECKED BY: P. UYEDA
SUBMITTED BY: P. UYEDA
SIZE: ISO A1
ISSUE DATE: -
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CONTRACT NO.:
DRAWING CODE: -
FILE NAME: DESC1904E503.dwg

U.S. ARMY CORPS OF ENGINEERS
JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE,
ITSURUMI, YOKOHAMA, JAPAN

OUTDOOR CUBICLE TYPE TRANSFORMER STATION DETAIL

SHEET ID

E-503

FILE: DESC1904E503.dwg
DATE: 9/19/2018 1:55 PM OPER: SCALE:

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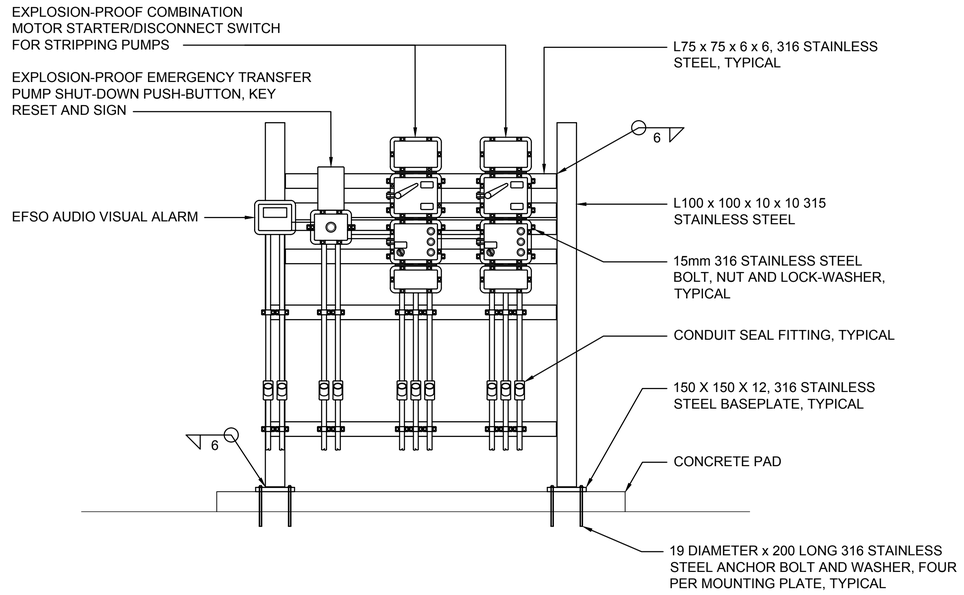
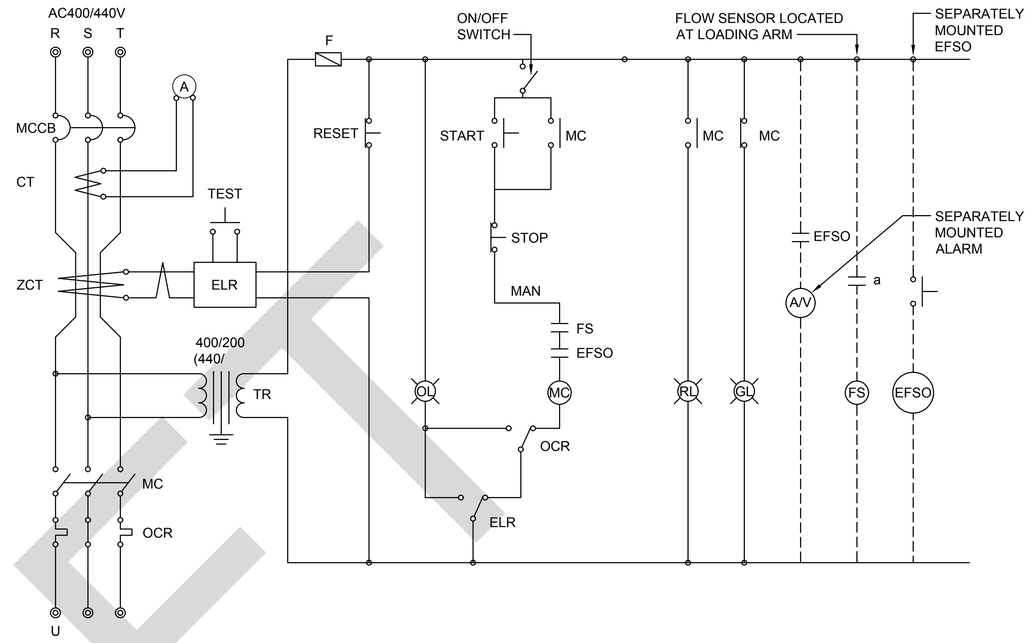
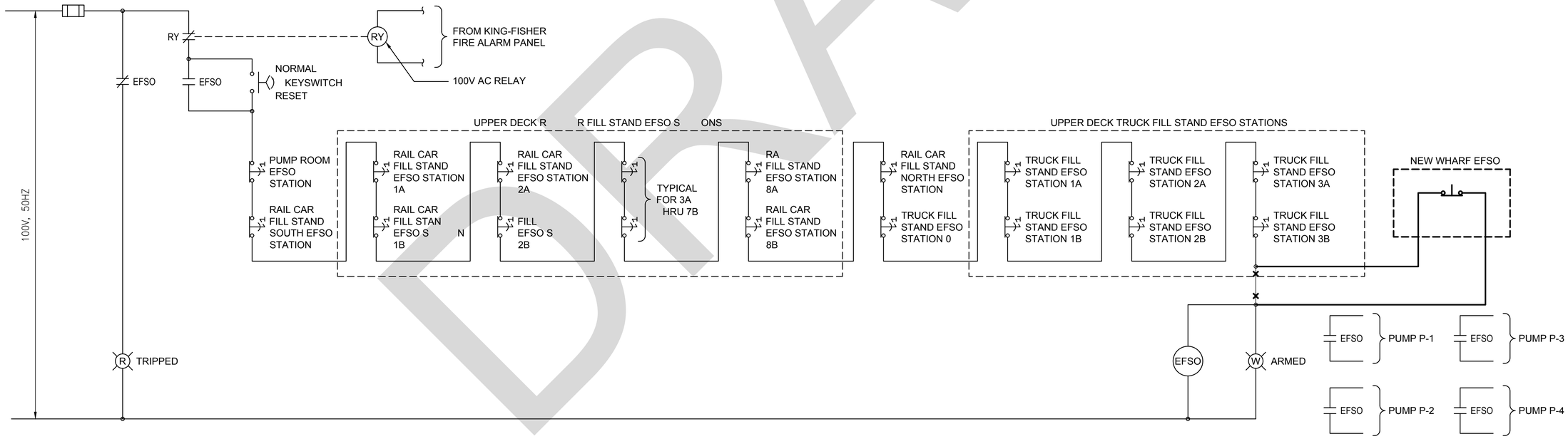


1 PEDESTAL DETAIL
NOT TO SCALE



STRIPPING PUMP MOTOR STARTER CONTROL DIAGRAM
NO SCALE



3 OU-1 EMERGENCY FUEL SHUTOFF RELAY CONTROL DIAGRAM
NO SCALE

NOTES:

1. LIGHT LINES DENOTE EXISTING CONDITION
   BOLD LINES DENOTE NEW WORK
   "X" DENOTES REMOVAL WORK

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DRAWING CODE: -
FILE NAME: DESC1904E504.dwg

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APO AP 96343-5010

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SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

STARTER PEDESTAL DETAIL

SHEET ID

E-504

FILE: DESC1904E504.dwg
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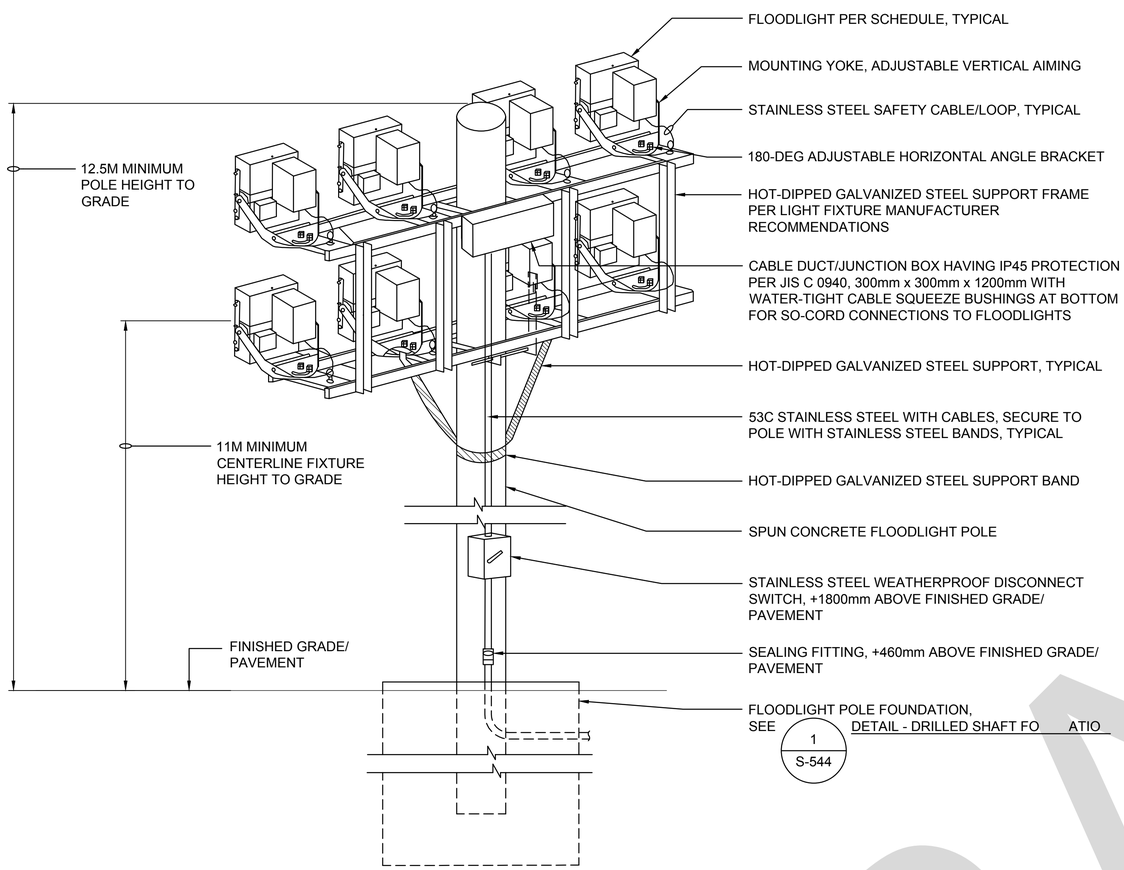
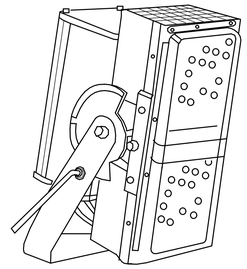


1 FLOODLIGHT POLE DETAIL
NOT TO SCALE

NOTES:

1. THE DRAWING IS INTENDED TO CONVEY QUALITY, PERFORMANCE, SALIENT FEATURES AND DESIGN INTENT.
2. PROVIDE STRUCTURAL DESIGN AND CALCULATIONS BY A LICENSED STRUCTURAL ENGINEER TO SHOW THE ENT POLE ASSEMBLY (INCLUDING, BUT NOT LIMITE OD BRACKETS, SUPPORTS, SPUN CONCR OLE AND CONCR FOOTING) WILL MEET ALL STRUCTU SEISMIC, WIND-LOADIN OTHER REQUIREMENTS AS PART HE SHOP DRAWING SUBMI
   a. DESIGN/CALCULATIONS SH SE THE ACTUAL FLOODLIGHTS BRACKETS, POLES, EQU NT, PARTS AND MATERIALS TO BE USED.
   b. PROVIDE EFFECTIVE PROJE REA (EPA) AND WEIGHTS OF THE ACTUAL FLOODLIGHTS, BR TS, POLES, EQUIPMENT AND PARTS.
   c. PROVIDE FLOODLIGHT SUPPORT STR E MATERIAL DETAIL DIMENSIONS, HARDWARE AND ASSEMBL UIREMENTS.
   d. STEEL SUPPORT MEMBERS AND HARDWARE BE HOT-DIPPED GALVANIZED OR STAINLESS STEE T ND SALT-AIR ENVIRONMENTS.
   e. HOT-DIPPED GALVANIZED STEEL COMPONENTS SHALL BE PAINTED WITH TWO-COATS OF TWO-PART MARINE-GRADE PRIMER AND TWO-COATS OF URETHANE ENAMEL FINISH. STAINLESS STEEL COMPONENTS NEED NOT BE PAINTED.



TYPE	A1	A2	A3	A4
MOUNT	FLOOD LIGHT POLE DETAIL FOR FIXTURE MOUNTING			
HOUSING	MARINE G ADE EXTRUDED ALUMINUM FRONT HOUSING WITH DIE-CAST ALUMINUM END CAPS.			
LIGHT SOURCE	SOLID STATE LEDS, 3000K			
LUMEN OUTPUT	18400 LM	19600 LM	26500 LM	26200 LM
DRIVER	100-242V, 188W			
LISTINGS	OUTDOOR, WET RATED			
CONNECTION	WATER-TIGHT SO-CORD CONNECTOR			

2 LED FLOOD LIGHT DETAIL AND FIXTURE SCHEDULE
NOT TO SCALE

	FIXTURE TYPE AND QUANTITY			
NAME	A1	A2	A3	A4
FLOOD LIGHT POLE 1	1		1	
FLOOD LIGHT POLE 2	1	2		
FLOOD LIGHT POLE 3	1	3		
FLOOD LIGHT POLE 4	1	1		2
FLOOD LIGHT POLE 5	4	4		
FLOOD LIGHT POLE 6	1	2		2
FLOOD LIGHT POLE 7		2		
FLOOD LIGHT POLE 8		2	1	1

3 POLE AND FIXTURE SCHEDULE
NOT TO SCALE

NOTES:

1. THE CONTRACTOR SHALL SUBMIT COMPUTER GENERATED LIGHTING CALCULATIONS THAT CONFIRMS LIGHT ASSEMBLIES BEING PROVIDED WILL MEET ALL LIGHTING REQUIREMENTS.
2. THE CONTRACTOR SHALL PROVIDE LIGHTS AND MOUNTING FRAME, AND AIM LIGHTS AS REQUIRED TO MATCH THE LIGHTING CALCULATION.

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SIZE: ISO A1
ISSUE DATE: -
SOLICITATION NO.: -
CONTRACT NO.: -
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FILE NAME: DESC1904E505.dwg

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JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
1001 BISHOP STREET
SUITE 1400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE,
YSURUMI, YOKOHAMA, JAPAN

LIGHT FIXTURE DETAILS

SHEET ID

E-505

FILE: DESC1904E505.dwg
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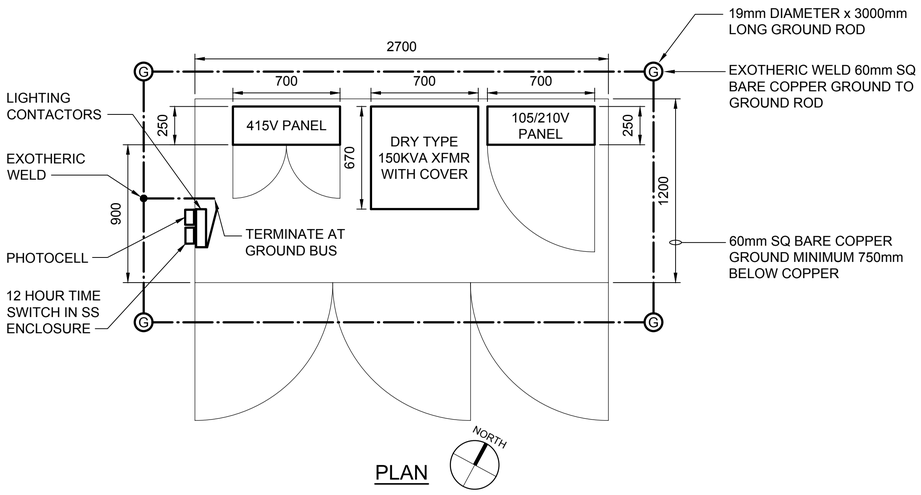
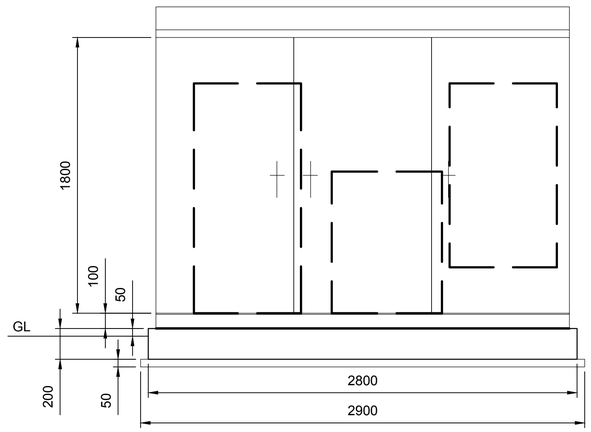
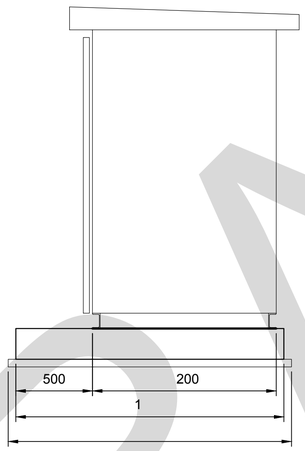


PLAN



FRONT ELEVATION



NT E

1 ELECTRICAL EQUIPMENT DETAIL

SCALE: 1:20

1000mm

NOTES:

1. ———— LIGH ES DENOTE EXISTING CONDIT
   ———— LINES DENOTE NEW WORK

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FILE NAME: DESC1904E506.dwg

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JAPAN DISTRICT
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HDR - WTNA JV
1001 BISHOP STREET
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HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

ELECTRICAL EQUIPMENT DETAIL

SHEET ID

E-506

EMERGENCY
GENERATOR
400KW, 416Y/240V, 3PH,
4W, 50Hz, 0.8 P.F.

3P800

2 x (3/C 200mm SQ CVT)

0A
A C
TRA R
SWIT

2 x (3-200mm SQ,
38mm SQ NEUTRAL,
60mm SQ GND)

2 x (3-200mm SQ,
38mm SQ NEUTRAL,
60mm SQ GND)

FEEDER #2, 6.6KV, 3-38mm SQ CV
TO SS-OU1 (4200180)

TRANSFORMER
T-OU1-3
20KVA, 6.6KV TO
210/105V, 1PH, 3W

20A
FUSES

LA

75A
FUSES

TRANSFORMER STATION T-OU1-3 (4200199)

SEE SHEET G-003 FOR
BUILDING LOCATION

CUT EXISTING 6.6kV mm SQ
CVT IN MANHOL
CABLE FROM OLE T
TRANSFOR STATION
T-OU1-4

100C, 3/C-38mm SQ CVT

MANHOLE

MANHOLE

100C, 3/C-38mm SQ CV

REMOVE 6.6KV, 3/C-38mm SQ CVT
IN EXISTING 100C DUCTLINE (TO
REMAIN/TO BE REUSED)

TRANSFORMER
T-OU1-4
500KVA, 6.6KV DELTA
TO 415/240V, 3PH, 4W

3P800A

20A
FUSES

LA

3P125A

T-OU1-4 (4200181)

3/C 60mm SQ CV
TO T-OU1-4S

DEMOLITION ONE-LINE DIAGRAM

NO SCALE

NOTES:

1. ——— LIGHT LINES DENOTE EXISTING CONDITION
   —×—×— "X" DENOTES REMOVAL WORK

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SIZE: ISO A1
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FILE NAME: DESC1904E601.dwg

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SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

DEMOLITION ONE-LINE DIAGRAM

SHEET ID

E-601

FILE: DESC1904E601.dwg
DATE: 9/19/2018 1:55 PM
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EMERGENCY GENERATOR
400KW, 360KW,
416Y/240V, 3PH, 4W,
50Hz, 0.8 P.F.

3P800A

2 x (3/C 200mm SQ CVT)

3P800A AUTOMATIC TRANSFER SWITCH

2 x (3-200mm SQ, 38mm SQ NEUTRAL, 60mm SQ GND Q MCC T-OU1-4M

100 6 0mm SQ CVT, 22mm SQ GND, Q SUPPLEMENTAL GROUND

SEE ONE-LINE DIAGRAM - NEW WORK (PART B), SHEET E-603 CONTINUATION

3P300A
14KAIC

100C, 4-150mm SQ CVT
60mm SQ GND

2 x (100C, m SQ, 60mm SQ GND) PLUS
60mm SQ SU ENTAL GROUND

FEEDER #2, 6.6KV, 3-38mm SQ CV
TO SS-OU1 (4200180)

TRANSFORMER T-OU1-3
20KVA, 6.6KV TO
210/105V, 1PH, 3W

20A FUSES

LA

75A FUSES

TRANSFORMER STATION T-OU1-3 (4200199)

SEE SHEET G-005 FOR BUILDING LOCATION

100C, 6.6KV, 3/C-38mm SQ CVT

NEW WATER-TIGHT SPLICES

MANHOLE

6.6KV, 3-38mm SQ EM-CET IN EXISTING 100C DUCTLINE

TRANSFORMER T-OU1-4
500 KVA, 6.6KV DELTA
TO 416Y/240V, 3PH, 4W
MIN %Z = 5%

OLE LBS, 7.2KV, 200A,
5A FUSES (3 EA),
12.5KAIC

800/5

3

3P800A
22KAIC

3P225A 22KAIC
(SPARE)

416-210/105V
5KVA

2P15A
22KAIC

2P20A

1P20A 10KAIC SPACE HEATER

1P20A 10KAIC LIGHTS

1P20A 10KAIC RECEPTACLE

8mm SQ GND

3P125A
22KAIC

1P20A 10KAIC

DPM

KWHM

3-POLE LDS,
7.2KV, 400A

3-POLE DS,
7.2KV, 200A

LA (3 EA)
8.4KV

T-OU1-4
CUBICLE STYLE TRANSFORMER,
STAINLESS STEEL/WEATHER PROOF
ENCLOSURE

60mm SQ GND TO GROUND RING

60mm SQ GND,
SEE NOTE 2

SCHNEIDER ION 8650A IN
ACCORDANCE WITH YOKOSUKA
AMI METERING STANDARDS

FLUSH MOUNT DIGITAL
POWER METER WITH
DISPLAY

100C, 3-60mm SQ CVT

NEW WATER-TIGHT SPLICES

MANHOLE

3/C 60mm SQ CVT
T-OU1-4S

ONE-LINE DIAGRAM - NEW WORK (PART A)

NO SCALE

NOTES:

1. ——— LIGHT LINES DENOTE EXISTING CONDITION
   ——— BOLD LINES DENOTE NEW WORK
2. SERVICE/SEPARATELY DERIVED SYSTEM GROUND:
   BOND TO BUILDING REINFORCING STEEL, METALLIC COLD WATER PIPE, GROUND ROD(S) AND GROUND RING PER NEC ARTICLE 250.26.

18008

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FILE NAME: DESC1904E602.dwg

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JAPAN DISTRICT
APO AP 96343-5010

HDR - WTNA JV
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SUITE 400
HONOLULU, HAWAII 96813

MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
DESC1904
TSURUMI, YOKOHAMA, JAPAN

ONE-LINE DIAGRAM - NEW WORK (PART A)

SHEET ID

E-602

FILE: DESC1904E602.dwg
DATE: 9/19/2018 1:55 PM
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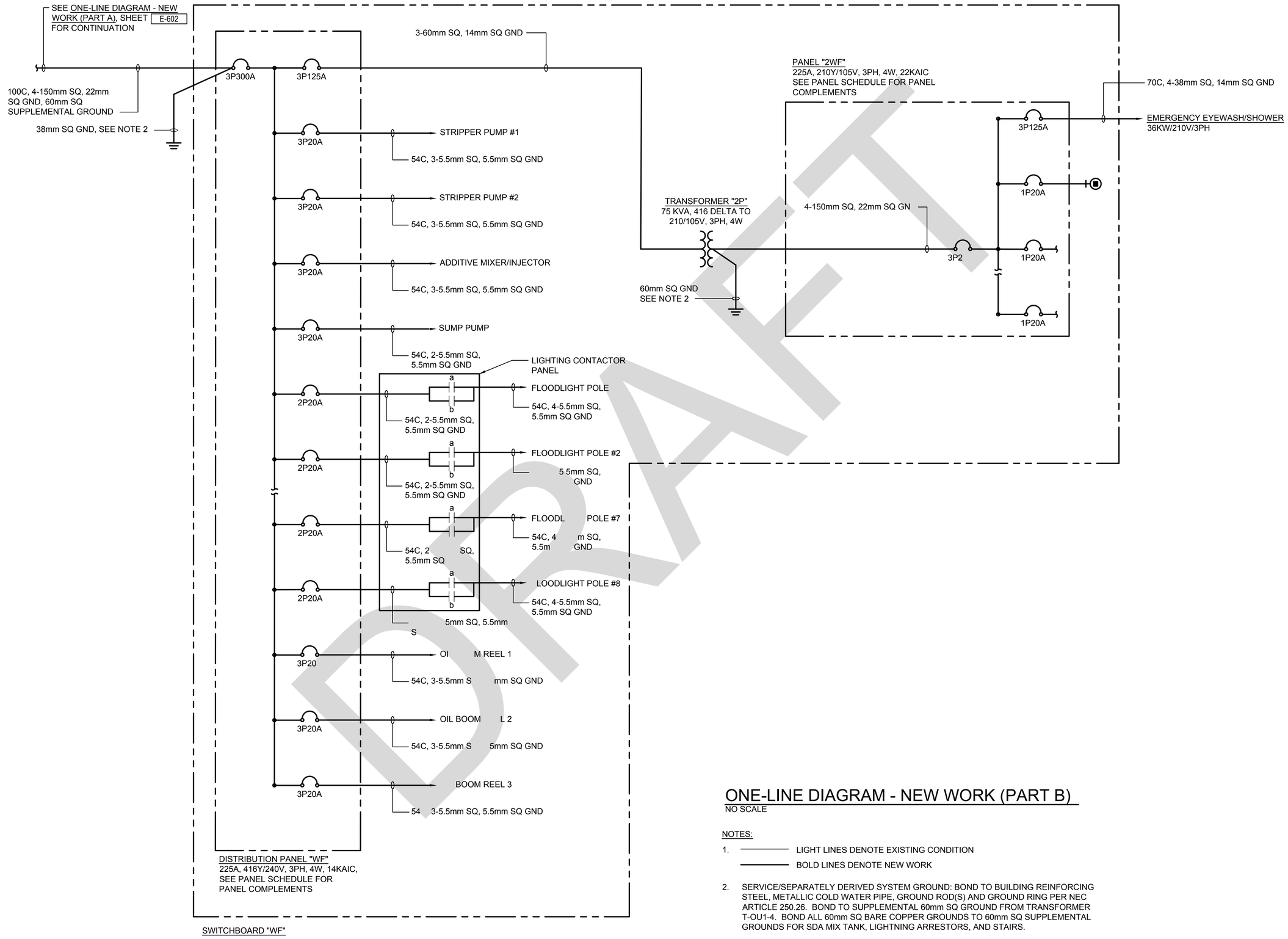

ONE-LINE DIAGRAM - NEW WORK (PART B)

NO SCALE

NOTES:

1. ——— LIGHT LINES DENOTE EXISTING CONDITION
   ——— BOLD LINES DENOTE NEW WORK
2. SERVICE/SEPARATELY DERIVED SYSTEM GROUND: BOND TO BUILDING REINFORCING STEEL, METALLIC COLD WATER PIPE, GROUND ROD(S) AND GROUND RING PER NEC ARTICLE 250.26. BOND TO SUPPLEMENTAL 60mm SQ GROUND FROM TRANSFORMER T-OU1-4. BOND ALL 60mm SQ BARE COPPER GROUNDS TO 60mm SQ SUPPLEMENTAL GROUNDS FOR SDA MIX TANK, LIGHTNING ARRESTORS, AND STAIRS.
3. SUBSCRIPT A CONTACTOR MUST TURN ON SECURITY LIGHTING VIA PHOTOCELL. SUBSCRIPT B SHALL TURN ON ALL OTHER LIGHTS VIA A 12 HOUR TIME SWITCH.

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SUBMITTED BY: P. UYEDA
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CONTRACT NO.: -
DRAWING CODE: -
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FILE NAME: DESC1904E603.dwg

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JAPAN DISTRICT
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HDR - WTNA JV
1001 BISHOP STREET
SUITE 400
HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES NO. T-1 TANKER CAPABLE,
YSURUMI, YOKOHAMA, JAPAN

ONE-LINE DIAGRAM - NEW WORK (PART B)

SHEET ID

E-603

FILE: DESC1904E603.dwg
DATE: 9/19/2018 1:55 PM
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NEW CUBICLE DISTRIBUTION PANEL WF

VOLTAGE:	416Y/240V, 3 PH, 4W	MAIN BKR:	3P300A	INTEGRAL SURGE PROECTION DEVICE	YES
BUS:	COPPER	TYPE:	BOLT ON	EQUIPMENT GROUND BUS:	YES
BUS RATING:	300A	MOUNT:	SURFACE	ISOLATED GROUND BUS:	NO
AIC:	14,000	ENCLOSURE:	MARINE GRADE ALUMINUM	FEED THRU LUGS:	NO
				U.L. LISTED AS SERVICE ENTRANCE EQUIPMENT:	NO

KVA A	KVA B	KVA C	DESCRIPTION: L-LIGHTS R-RECEPTACLE, S-SPARE PFB-PROV FOR FUTURE CB	CKT BKR	CKT NO	CKT NO	CKT BKR	DESCRIPTION: L-LIGHTS R-RECEPTACLE, S-SPARE PFB-PROV FOR FUTURE CB	KVA A	KVA B	KVA C
1.23			STRIPPING PUMP P-1	3P20A	1	2	3P20A	STRIPPING PUMP P-2	1.23		
	1.23		PART OF 1	--	3	4	--	PART OF 2		1.23	
		1.23	PART OF 1	--	5	6	--	PART OF 2			1.23
0.5			ADDITIVE MIXER/INJECTOR	3P20A	7	8	2P20A	FLOOD LIGHT POLE #1		0.5	
	0.5		PART OF 7	--	9	10	--	PART OF 12	0.5		
		0.5	PART OF 7	--	11	12	2P20A	FLOOD LIGHT POLE #3		0.5	
0.5			FLOOD LIGHT POLE #2	2P20A	13	14	--	PART OF 16			0.5
	0.5		PART OF 13	--	15	16	2P20A	FLOOD LIGHT POLE #5	0.5		
		0.5	FLOOD LIGHT POLE #4	2P20A	17	18	--	PART OF 20		0.5	
0.5			PART OF 17	--	19	20	2P20A	FLOOD LIGHT POLE #7			0.5
	0.5		FLOOD LIGHT POLE #6	2P20A	21	22	--	PART OF 24	0.5		
		0.5	PART OF 21	--	23	24	3P20A	OIL BOOM RELL 1		1.5	
0.5			FLOOD LIGHT POLE #8	2P20A	25	26	--	PART OF 28			1.5
	0.5		PART OF 25	--	27	28	--	PART OF 28	1.5		
		1.5	OIL BOOM REEL 2	3P20A	29	30	1P20A	S			
1.5			PART OF 29	--	31	32	1P20A	S			
	1.5		PART OF 29	--	33	34	1P20A	S			
		0.3	SUMP PUMP	3P20A	35	36	1P20A	S			1.5
0.3			PART OF 35	--	37	38	3P125A	XFMR 2P	25.0		
	0.3		PART OF 35	--	39	40	--	PART OF 38		25.0	
			S	1P20A	41	42	--	PART OF 38			25.0
5.0	5.0	4.5	SUBTOTALS						29.2	29.2	30.2

NOTES:

103.0 TOTAL KVA
0.8 DEMAND FACTOR
82.4 DEMAND KVA
114 DEMAND AMPS 416 volts

NEW CUBICLE DISTRIBUTION PANEL 2WF

VOLTAGE:	210Y/105V, 3 PH, 4W	MAIN BKR:	3P225A	INTEGRAL SURGE PROECTION DEVICE	YES
BUS:	COPPER	TYPE:	BOLT ON	EQUIPMENT GROUND BUS:	YES
BUS RATING:	225A	MOUNT:	SURFACE	ISOLATED GROUND BUS:	NO
AIC:	22,000	ENCLOSURE:	MARINE GRADE ALUMINUM	FEED THRU LUGS:	NO
				U.L. LISTED AS SERVICE ENTRANCE EQUIPMENT:	NO

KVA A	KVA B	KVA C	DESCRIPTION: L-LIGHTS R-RECEPTACLE, S-SPARE PFB-PROV FOR FUTURE CB	CKT BKR	CKT NO	CKT NO	CKT BKR	DESCRIPTION: L-LIGHTS R-RECEPTACLE, S-SPARE PFB-PROV FOR FUTURE CB	KVA A	KVA B	KVA C
12.0			EMERGENCY EYE WASH	3P200A	1	2	1P20A	R - ENCLOSURE	0.5		
	12.0		PART OF 1	--	3	4	1P20A	AUDIO VISUAL ALARM		0.2	
		12.0	PART OF 1	--	5	6	1P20A	S			
			S	1P20A	7	8	1P20A	S			
			S	1P20A	9	10	1P20A	S			
			S	1P20A	11	12	1P20A	S			
			S	1P20A	13	14	1P20A	S			
			S	1P20A	15	16	1P20A	S			
			S	1P20A	17	18	1P20A	S			
			S	1P20A	19	20	1P20A	S			
			S	1P20A	21	22	1P20A	S			
			S	1P20A	23	24	1P20A	S			
			S	1P20A	25	26	1P20A	S			
			S	1P20A	27	28	1P20A	S			
			S	1P20A	29	30	1P20A	S			
			S	1P20A	31	32	1P20A	S			
			S	1P20A	33	34	1P20A	S			
			R - ENCLOSURE	1P20A	35	36	1P20A	S			
			PFB		37	38		PRB			
			PFB		39	40		PRB			
			PFB		41	42		PRB			
12.0	12.0	12.0	SUBTOTALS						0.5	0.2	0.0

NOTES:

36.7 TOTAL KVA
0.8 DEMAND FACTOR
29.4 DEMAND KVA
81 DEMAND AMPS 210 volts

18008

US Army Corps of Engineers®

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DESIGNED BY:	ISSUE DATE:
M. TAIRA	-
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D. MATO	-
CHECKED BY:	CONTRACT NO.:
P. UYEDA	-
SUBMITTED BY:	DRAWING CODE:
P. UYEDA	-
SIZE: ISO A1	FILE NAME:

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HONOLULU, HAWAII 96813

DESC1904
MODERNIZE FUELING WHARVES TO T-1 TANKER CAPABLE,
TSURUMI, YOKOHAMA, JAPAN

PANEL SCHEDULES

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