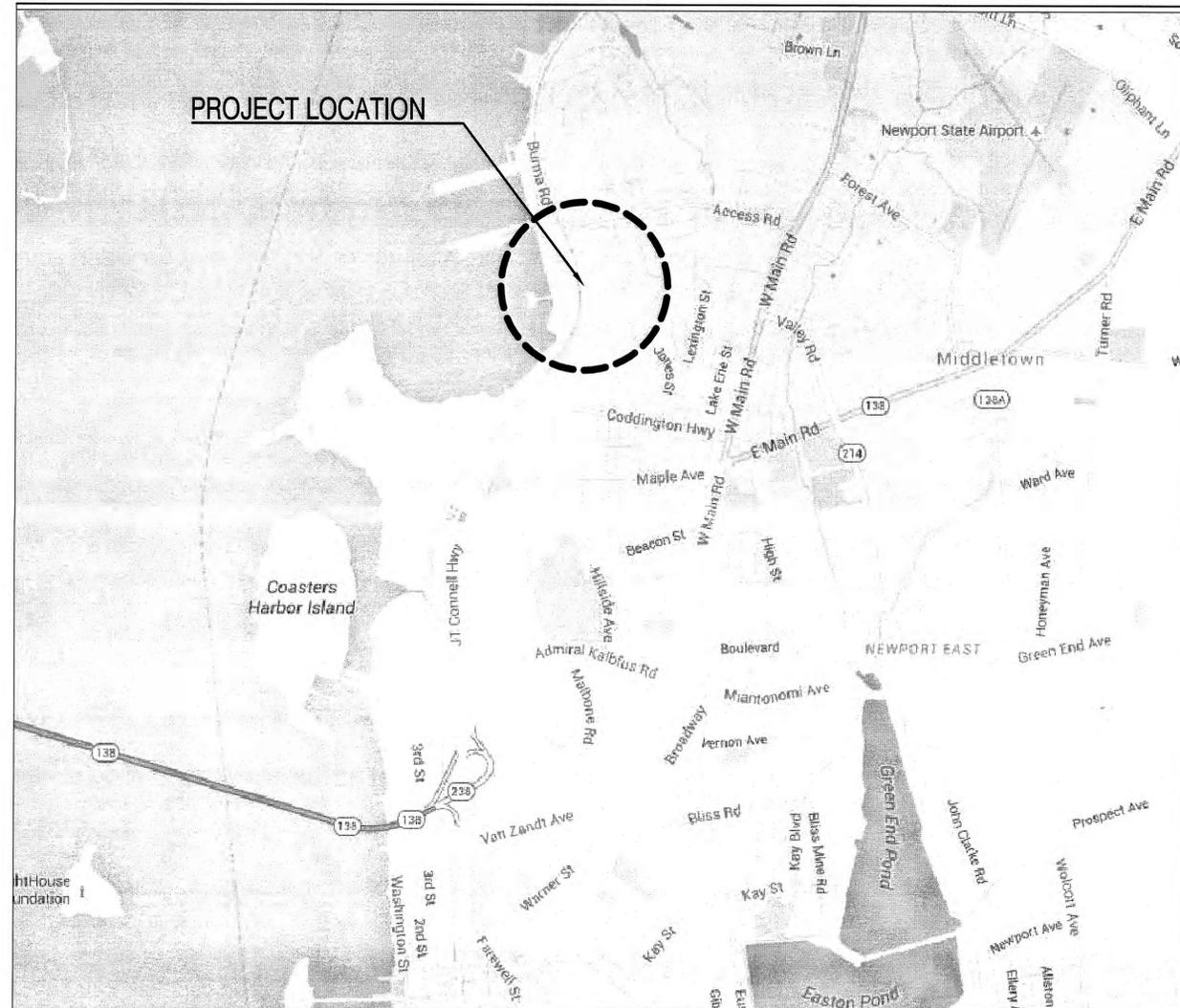


OVERHAUL BOILER NO. 1, BUILDING 7CC NAVAL STATION NEWPORT NEWPORT, RI

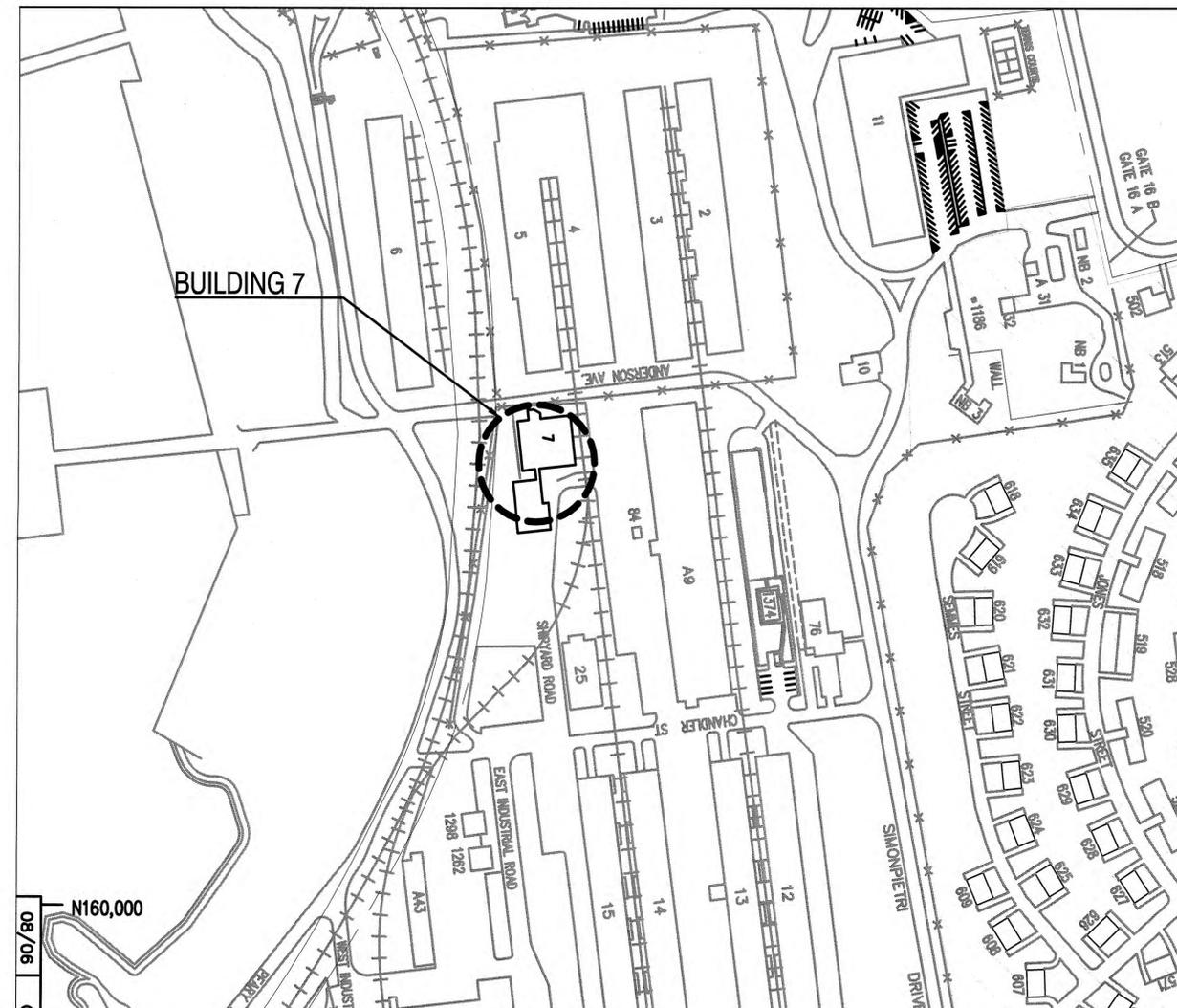
ISSUED FOR CONSTRUCTION
28 OCTOBER 2016



LOCATION MAP



VICINITY MAP



FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport\RI\2016022551_Meppor\RI-Eng\Boiler\Drawings\General\OVERHAUL-BOILER-G-001.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 10:50am USER: Rite

NAVSTA #43455-402

ISSUED FOR CONSTRUCTION	DATE	10/28/16
SYN	DESCRIPTION	
APPROVED	A/E INFO	
FOR COMMANDER NAVFAC	ACTIVITY	
SATISFACTORY TO	DES	DRW
CHIEF ENGINEER/ARCH	CHIEF	CHK
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVFAC NAVAL FACILITIES ENGINEERING MID-ATLANTIC NORTHWEST PT NAVAL STATION NEWPORT OVERHAUL BOILER #1 BUILDING 7CC COVER SHEET		
SCALE	N/A	
EPROJECT NO.	1470866	
CONSTR. CONTR. NO.	N40083-14-D-0016	
NAVFAC DRAWING NO.	12734650	
SHEET	1	OF 25
G-001		

DRAWFORM REVISION: 10 MAY 2014

1

2

3

4

5

INDEX OF DRAWINGS

BUILDING CODE ANALYSIS

SHEET NO	DRAWING NO	NAVFAC NO	SHEET TITLE
GENERAL			
1	G-001	12734650	COVER SHEET
2	G-002	12734651	INDEX OF DRAWINGS & BUILDING CODE ANALYSIS
3	G-003	12734652	SYMBOLS, ABBREVIATIONS AND GENERAL NOTES
4	G-004	12734653	HAZARDOUS MATERIALS PLAN
MECHANICAL			
5	M-001	12734654	MECHANICAL ABBREVIATIONS
6	M-002	12734655	MECHANICAL SYMBOLS
7	M-101	12734656	MECHANICAL FIRST FLOOR PLAN
8	MD102	12734657	MECHANICAL PENTHOUSE PLAN DEMOLITION
9	MD301	12734658	SECTIONAL ELEVATION DEMOLITION
10	MD302	12734659	SECTIONAL ELEVATION DEMOLITION
11	MD303	12734660	MECHANICAL CASING ELEVATIONS DEMOLITION
12	M-102	12734661	MECHANICAL PENTHOUSE PLAN - NEW WORK
13	M-301	12734662	SECTIONAL ELEVATION - NEW WORK
14	M-302	12734663	SECTIONAL ELEVATION - NEW WORK
15	M-303	12734664	MECHANICAL CASING ELEVATIONS
16	M-501	12734665	MECHANICAL DETAILS
17	M-502	12734666	MECHANICAL DETAILS
18	M-503	12734667	MECHANICAL DETAILS
19	M-504	12734668	MECHANICAL DETAILS
20	M-505	12734669	MECHANICAL DETAILS
21	M-506	12734670	MECHANICAL DETAILS
22	M-507	12734671	MECHANICAL DETAILS
ELECTRICAL			
23	E-001	12734672	ELECTRICAL ABBREVIATIONS AND GENERAL NOTES
24	E-002	12734673	ELECTRICAL SYMBOLS
25	E-101	12734674	ELECTRICAL OVERALL FLOOR PLAN

1. APPLICABLE CODES & REGULATIONS:
- INTERNATIONAL BUILDING CODE (IBC) 2015 EDITION
 - ARCHITECTURAL BARRIERS ACT (ABA) STANDARDS (2015).
 - UFC 1-200-01 GENERAL BUILDING REQUIREMENTS, 1 JULY 2013, WITH CHANGE 3, 1 AUGUST 2015
 - FC 1-300-09N NAVY AND MARINE CORPS DESIGN PROCEDURES, 01 MAY 2014, WITH CHANGE 2, 21 AUGUST 2015
 - 29 CFR 1910.120 HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE, 21 DECEMBER 1994
 - UFC 4-010-1 DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS, 9 FEBRUARY 2012, WITH CHANGE 1, 1 OCTOBER 2013
 - UFC 3-600-01, FIRE PROTECTION ENGINEERING FOR FACILITIES, 26 SEPTEMBER 2006, WITH CHANGE 3, 1 MARCH 2013
 - NFPA 101: LIFE SAFETY CODE 2015 EDITION
 - NATIONAL ELECTRICAL CODE (NEC), 2014 EDITION
 - INTERNATIONAL FIRE CODE, 2015 EDITION

APPR	
DATE	10/28/16
ISSUED FOR CONSTRUCTION	
DESCRIPTION	
SYM	



APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO

DES - DRW - CHK -

<<CPM/DM>>

BRANCH MANAGER

CHEF ENG/ARCH

<<--->>

DEPARTMENT OF THE NAVY
NAVFAC
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING MID-ATLANTIC
NEWPORT, RI
NAVAL STATION NEWPORT
OVERHAUL BOILER #1
BUILDING 7CC
INDEX OF DRAWINGS & BUILDING CODE ANALYSIS

SCALE: N/A

PROJECT NO.: 1470886

CONSTR. CONTR. NO.: N40083-14-D-0016

NAVFAC DRAWING NO.: 12734651

SHEET 2 OF 25

NAVSTA #43456-402

G-002

DRAWING REVISION: 10 MAY 2014

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport\RI\202551_Newport\Bldg\Boiler\Drawings\General\OVERHAUL_BOILER-G-002.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 10:59am USER: Itate

SYMBOLS

OVERALL PLAN TITLE: PLAN NORTH, VIEW TITLE, SCALE

PLAN/DETAIL/SECTION/ELEVATION TITLE: VIEW TITLE, SCALE, A-000, A#

DOOR NUMBER: 101

DETAIL BOUNDARY: 0, A-000

SECTION: 0, A-000, DETAIL NO., SHEET ON WHICH DETAIL IS SHOWN

EXTERIOR ELEVATION: 0, A-000

INTERIOR ELEVATION DESIGNATION: A, INTERIOR ELEVATION SYMBOL (N, E, S, W), 0, A-000, DETAIL NO., SHEET ON WHICH INTERIOR ELEVATION IS SHOWN

KEYNOTE (NUMBER DESIGNATION): 0, NEW WORK, DEMO WORK, SPECIALITY WORK

NORTH ARROW: PLAN NORTH, TRUE NORTH INDICATOR

COLUMN LINE GRID DESIGNATION: 1, A

PROPERTY LINES: ---

CENTER LINES: ---

BREAK LINES: ---

OUTLINE OF OBJECT ABOVE: ---

FIRE EXTINGUISHER: HOFE

FIRE EXTINGUISHER CABINET: FEFC

REVISION DESIGNATION: #

PARTITION TYPE SYMBOLS: #

WINDOW SYMBOLS: #

ELEVATION DATUM / BENCH MARK: FLOOR LEVEL, EL. 0'-0"

GRAPHIC SCALE: 8', 4', 0', 8', SCALE: 1/8" = 1'-0"

LEGEND

DEMOLITION: ---

EXISTING TO REMAIN: ---

ABBREVIATIONS

ADJ AFB AFF AP APC APPROX ARCH AT/FP	A ADJACENT AIR FORCE BASE ABOVE FINISHED FLOOR ACCESS PANEL ACOUSTICAL PANEL CEILING APPROXIMATE ARCHITECTURAL ANTITERRORISM FORCE PROTECTION	EL EDP	E ELEVATION ELECTRICAL DISTRIBUTION PANEL ELECTRICAL EMERGENCY EQUIPMENT EXISTING EXP EXP JT EXT EW	JAN JST JT	J JANITOR JOIST JOINT	P/L PERIM PLBG PLYWD PNL PR PRE PREFAB PROP PS PT PTN	P PROPERTY LINE PERIMETER PLUMBING PLYWOOD PANEL PAIR PREFINISHED PREFABRICATED PROPERTY PANEL SWITCH POINT PARTITION	TBD TEMP THK TO. TP.	T TO BE DETERMINED TEMPERATURE THICK TOP OF TYP TYPICAL
BD BLDG BLK BO BOT	B BOARD BUILDING BLOCK BLOCK OPENING BOTTOM	FA FG FOB FOD FT FURN FXT	F FIRE ALARM FINISHED GRADE FACE OF BLOCK FOREIGN OBJECT DEBRIS FEET FURNISH FIXTURE	L LB LEV LIN LP LTG LVR	L LENGTH POUND LEVEL LINEAR (LINEAL) LOW POINT LIGHTING LOUVER	QTY	Q QUANTITY	UNF UON UTIL	U UNFINISHED UNLESS OTHERWISE NOTED UTILITY
CAP CJ CL CLR CONC CONST CONT COR	C CAPACITY CONTROL JOINT CENTER LINE CLEAR CONCRETE CONSTRUCTION CONTINUOUS CONTRACTING OFFICER REPRESENTATIVE CENTER	GA GALV GC GEN GR GWB	G GAUGE GALVANIZE GENERAL CONTRACTOR GENERAL GRADE GYPSUM BOARD	MAS MAX MECH MET MFR MIN MISC MREC	M MASONRY MAXIMUM MECHANICAL METAL MANUFACTURER MINIMUM/MINUTES MISCELLANEOUS MESH REINFORCED ELASTOMERIC COATING METAL DECK	R RAD RD REBAR REF REINF REP REQD REV RM RO	R RISER RADIUS ROOF DRAIN REINFORCING BAR REFERENCE REINFORCE REPRESENTATIVE REQUIRED REVISION (REVISED) ROOM ROUGH OPENING	V VAR VB VERT VIF VTR	V VENT VARIABLE, VARIES VAPOR BARRIER VERTICAL VERIFY IN FIELD VENT TO ROOF
CTR DEMO DIA DIM DIV DN DWG DS	D DEMOLISH, DEMOLITION DIAMETER DIMENSION DIVISION DOWN DRAWING DISTRIBUTION SWITCH	HB HDWD HORZ HP HT HVAC	H HOSE BIB HARDWOOD HORIZONTAL HIGH POINT HEIGHT HEATING/VENTILATING/ AIR CONDITIONING	NAV NIC NOM NTS	N NAVAL FACILITIES ENGINEERING COMMAND NOT IN CONTRACT NOMINAL NOT TO SCALE	SCHED SEC SF or S.F. SHPO	S SCHEDULE SECTION SQUARE FOOT STATE HISTORICAL PRESERVATION OFFICE SIMILAR SPECIFICATIONS SQUARE STAINLESS STEEL STANDARD STEEL STORAGE STRUCTURAL	YD	Y YARD
		IN INSUL INT INV	I INCH(ES) INSULATION INTERIOR INVERT	OC OH OHW OPNG	O ON CENTER OPPOSITE HAND ORIGINAL HISTORICAL WINDOW OPENING	SIM SPEC SQ SS STD STL STOR STRUCT			

GENERAL NOTES

HAZMAT NOTES

- HAZMAT SAMPLING DID NOT FLAG ASBESTOS. HOWEVER, MATERIALS INSIDE BOILER CASING BOUNDARY WERE NOT FULLY TESTED. CONTRACTOR TO BE ADVISED THAT SOME ASBESTOS MAY BE ENCOUNTERED.
- COATINGS ARE LEAD-BASED PAINT UNLESS TESTED AND PROVEN OTHERWISE. REFER TO SPECIFICATION SECTION 02 82 16.00 20 "ENGINEERING CONTROL OF ASBESTOS CONTAINING MATERIALS" AND 02 82 33.13 20 "REMOVAL/CONTROL AND DISPOSAL OF PAINT WITH LEAD" FOR HAZMAT ABATEMENT SCOPE OF WORK AND WORK PRACTICES.
- REFER TO G-004.

DEMOLITION WORK

- DEMOLITION WORK NECESSARY TO PERFORM THE WORK SHALL BE CONSIDERED WITHIN THE SCOPE OF THIS CONTRACT. IN GENERAL, ITEMS TO BE DEMOLISHED OR REMOVED ARE INDICATED ON THE DETAIL BY MEANS OF DASHED LINES (SEE LEGEND).
- REFER TO SPECIFICATION DIVISION 01, 02 AND DRAWINGS FOR SCOPE OF EXISTING/ DEMOLITION WORK.
- PROTECT AND PRESERVE EXISTING ITEMS TO REMAIN, REPAIR AND/OR REPLACE ITEMS DAMAGED DURING THE COURSE OF WORK TO THE SATISFACTION AND APPROVAL OF THE COR WITHOUT ADDITIONAL COST TO THE GOVERNMENT.
- COORDINATE WITH COR ON LAYDOWN AND ACCESS ROUTES.

NEW WORK

- DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY. VERIFY DIMENSIONS PRIOR TO START OF WORK. IN THE EVENT OF DISCREPANCY, NOTIFY THE COR AND GET RESOLUTION BEFORE PROCEEDING.
- NOTIFY THE COR IN WRITING OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THE CONTRACT DOCUMENTS BEFORE PROCEEDING WITH THAT PORTION OF THE WORK. FAILURE TO NOTIFY THE COR WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO PERFORM THE WORK INTENDED BY THE CONTRACT DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR WORK ARISING FROM SUCH FAILURE TO COORDINATE DISCREPANCIES TO THE SATISFACTION OF THE COR.
- AT EXISTING SURFACES OR FINISHES TO REMAIN, WHERE DISTURBED BY THE WORK, PATCH OR RESTORE THE FINISHES TO MINIMIZE THE APPARENT CONTRAST BETWEEN NEW AND EXISTING SURFACES. LEVEL AND/OR PREPARE EXISTING SURFACES FOR APPLICATION OF SCHEDULED NEW FINISHES. AT DISTURBED EXISTING FINISHES TO REMAIN, RESTORE DISTURBED AREAS TO MATCH EXISTING.
- VERIFY EXISTING DIMENSIONS, CONDITIONS, AND CLEARANCES PRIOR TO PROVIDING SUBMITTALS.
- PROVIDE BLOCKING AND ANCHORAGE FOR INSTALLATION OF THE NEW WORK.
- ADDITIONAL PLAN INFORMATION IS SHOWN ON LARGE SCALE PLANS. FOR AREAS INDICATED, LARGE SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.

ISSUED FOR CONSTRUCTION: 10/28/16

DATE

DESCRIPTION

SYMBOL

NAV FAC

ENGINEER: ROBERT H. UNGER

24042

APPROVED: _____

FOR COMMANDER NAVFAC

ACTIVITY: _____

SATISFACTORY TO: _____

DES: --- DRW: --- CHK: ---

<<PM/DM>> ---

BRANCH MANAGER: ---

CHIEF ENG/ARCH: ---

<<-->> ---

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING MID-ATLANTIC
NORTH/EAST IFT
NAVAL STATION NEWPORT
NEWPORT, RI
OVERHAUL BOILER #1
BUILDING 7CC

SYMBOLS, ABBREVIATIONS, & GENERAL NOTES

SCALE: N/A

PROJECT NO.: 1470866

CONSTR. CONTR. NO.: N40083-14-D-0016

NAVFAC DRAWING NO.: 12734652

SHEET 3 OF 25

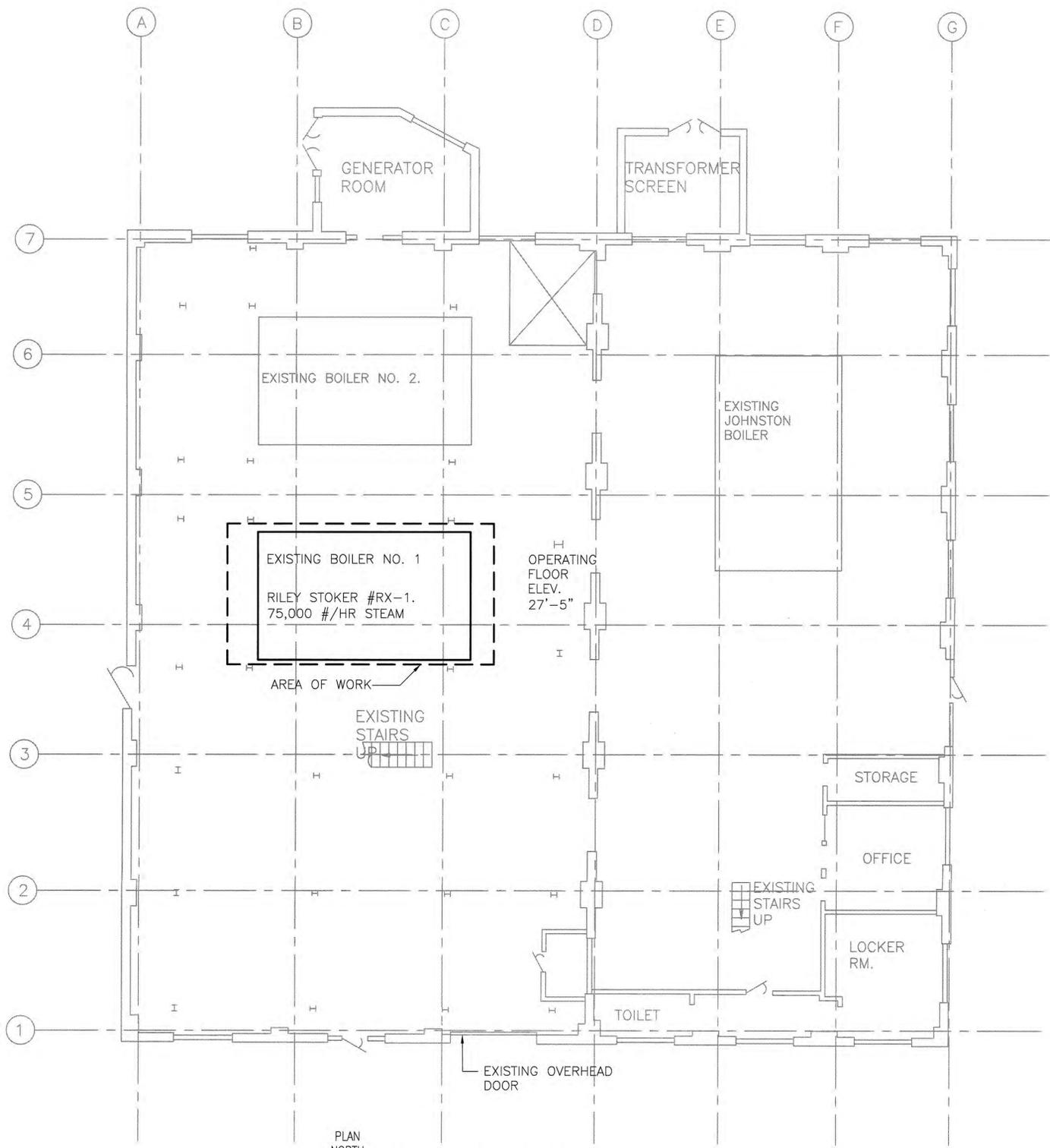
NAVSTA #43457-402

G-003

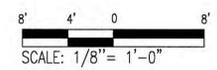
DRAWING REVISION: 10 MAY 2014

FILE NAME: F:\Active Projects\NAVFAC\Wood Station Newport RI\70202551_NewportRI-Boiler\Drawings\General\Overhaul-Boiler-G-003.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 11:00am USER: hobe

1 2 3 4 5



PLAN NORTH
HAZARDOUS MATERIALS PLAN
 SCALE: 1/8" = 1'-0"



GENERAL NOTES

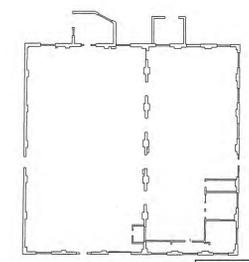
1. GLOBAL CONSULTING, INC. (GLOBAL) PERFORMED THE ENVIRONMENTAL SERVICES AND LIMITED HAZARDOUS MATERIAL SURVEY ASSOCIATED WITH THE PROJECT. THIS DRAWING DOCUMENTS THE FINDINGS OF THE SURVEY OF BOILER #1, AND ITS ASSOCIATED COMPONENTS, FOR ASBESTOS-CONTAINING MATERIAL (ACM) AND LEAD-BASED PAINT (LBP) CONDUCTED ON JUNE 7, 2016.

2. GLOBAL'S EPA-ACCREDITED ASBESTOS INSPECTOR INSPECTED BOILER NO. 1 AND ANCILLARY EQUIPMENT FOR THE PRESENCE OF SUSPECT ASBESTOS-CONTAINING MATERIALS (ACM) ON JUNE 7, 2016. A TOTAL OF 26 SAMPLES OF 12 DIFFERENT HOMOGENOUS MATERIALS WERE SAMPLED AND ANALYZED BY POLARIZED LIGHT MICROSCOPY (PLM) USING EPA METHOD EPA/600/R-93/116. THE SAMPLE RESULTS INDICATE THAT NO DETECTABLE ASBESTOS WAS IDENTIFIED AND THE MATERIALS ARE NOT CONSIDERED TO BE ASBESTOS CONTAINING. DEMOLITION AND RECONSTRUCTION OF THE BOILERS CAN PROCEED USING NORMAL CONSTRUCTION TECHNIQUES, HOWEVER, CONTRACTOR TO FOLLOW PROTOCOLS DETAILED IN SPECIFICATIONS WITH REGARD TO IDENTIFICATION OF POTENTIAL ASBESTOS-CONTAINING MATERIALS.

3. GLOBAL'S INDUSTRIAL HYGIENIST (IH) INSPECTED BOILER NUMBER 1 AND ANCILLARY EQUIPMENT FOR THE PRESENCE OF MATERIALS THAT MAY CONTAIN LEAD-BASED PAINT (LBP) ON JUNE 7, 2016. IN ACCORDANCE WITH THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR RESOURCES AIR POLLUTION CONTROL REGULATION NO. 24 AND THE US ENVIRONMENTAL PROTECTION AGENCY (EPA) LBP IS CONSIDERED ANY PAINT OR OTHER MATERIAL THAT CONTAIN GREATER THAN 0.5% LEAD BY WEIGHT. BULK SAMPLES OF PAINT WERE COLLECTED AND FOR LEAD CONCENTRATION AND THE FOLLOWING COMPONENTS WERE DETERMINED TO CONTAIN LBP*:

1. PAINTED RAILINGS (YELLOW, SILVER, AND ORANGE)
2. STRUCTURAL STEEL ON GROUND FLOOR (SILVER)
3. I-BEAMS ON BASEMENT LEVEL (WHITE)
4. I-BEAMS ON BASEMENT LEVEL (RED)

THE REMAINING LBP MATERIALS APPEARED TO BE IN GOOD CONDITION, AND SHOULD BE MANAGED IN PLACE. THE LEAD BASED PAINT ON SURFACES SCHEDULED TO BE DISTURBED DURING CONSTRUCTION DO NOT NEED TO BE FULLY ABATED; 6-8-INCH SPOT ABATEMENT AT THE POINT OR LINE WHERE THE STEEL WILL BE CUT, TORCHED OR WELDED WILL SUFFICE.



KEY PLAN NAVSTA #43458-402

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport_RI\070202551_NeaportR1-RingBoiler\Drawings\General\G-004.dwg LAYOUT NAME: Layout1 PLOTTED: Thursday, October 27, 2016 - 1:07pm USER: litte

APPR	10/28/16	DATE
ISSUED FOR CONSTRUCTION		
SYN		
APPROVED	A/E INFO	
FOR COMMANDER NAVFAC		
ACTIVITY	-----	
SATISFACTORY TO		
DES	DRW	CHK
<<PM/DM>>	---	---
BRANCH MANAGER	---	
CHEF ENG/ARCH	---	
<<-->>	---	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING MID-ATLANTIC NORTHEAST IPT NAVAL STATION NEWPORT NEWPORT, RI OVERHAUL BOILER #1 BUILDING 7CC HAZARDOUS MATERIALS PLAN		
SCALE:	N/A	
EPROJECT NO.:	1470886	
CONSTR. CONTR. NO.:	N40083-14-D-0016	
NAVFAC DRAWING NO.:	12734653	
SHEET	4 OF 25	
G-004		
DRAWING REVISION: 10 MAY 2014		

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport RI\20150515_NavportRI-RIgysbier-Drawings\Mechanical\M-001.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 10:29am USER: labe

ABBREVIATIONS

A/E ARCHITECT / ENGINEER
AAHX AIR TO AIR HEAT EXCHANGER
AB AIR BLENDER
AAV AUTOMATIC AIR VENT
ACC AIR COOLED CONDENSER
ACCH AIR COOLED CHILLER
ACCU AIR-COOLED CONDENSING UNIT
ACU AIR CONDITIONING UNIT
ACD AUTOMATIC CONTROL DAMPER,MODULATING
ACD-TP AUTOMATIC CONTROL DAMPER,TWO POSITION
AD ACCESS DOOR
AF AFTER FILTER
AFCV AIR FLOW CONTROL VALVE
AFF ABOVE FINISHED FLOOR
AFMD AIR FLOW MEASURING DEVICE
AFW AIR FOIL WHEEL (FAN)
AHU AIR-HANDLING UNIT
ALWCO AUXILIARY LOW WATER CUTOFF
AMP AMPERGE
AP ACCESS PANEL
APD AIR PRESSURE DROP
ARI AIR CONDITIONING AND REFRIGERATION INSTITUTE
AS AIR SEPARATOR
ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AW AIR WASHER
AXF AXIAL FLOW
B BOILER
BAS BUILDING AUTOMATION SYSTEM
BD BUTTERFLY DAMPER
B/D BLOWDOWN
BDD BACKDRAFT DAMPER
BDR BASE BOARD RADIATOR
BFP BACKFLOW PREVENTER
BFT BOILER PLANT FIRE TUBE
BFW BOILER FEED WATER
BG BOTTOM GRILLE
BHP BRAKE HORSEPOWER
BHW HOT WATER HEATING BOILER
BHX BOILER BLOWDOWN HEAT EXCHANGER
BIW BACKWARD INCLINED WHEEL (FAN)
BMT BONE MARROW TRANSPLANT
BR BOTTOM REGISTER
BSC BIOLOGICAL SAFETY CABINETS
BT BLOWOFF TANK
BTC BLOWOFF TANK CONTROL VALVE
BTU BRITISH THERMAL UNIT
BTUH BRITISH THERMAL UNIT PER HOUR
BWT BOILER PLANT WATER TUBE
C CENTIGRADE (CELCIUS)
CC COOLING COIL
CCD COOLING COIL CONDENSATE DRAIN
CD CEILING DIFFUSER
CD-1 CONSTRUCTION DOCUMENTS (SUBMISSION1)
CD-2 CONSTRUCTION DOCUMENTS (SUBMISSION2)
CENT CENTRIFUGAL
CFH CUBIC FEET PER HOUR
CFM CUBIC FEET PER MINUTE
CFT CUBIC FEET
CFP CHEMICAL FEED PUMP
CG CEILING GRILLE
CH CHILLER
CHP CHILLED WATER PUMP
CHW CHILLER WATER
CHR CHILLED WATER RETURN
CHS CHILLED WATER SUPPLY
CI CAST IRON
CM CARBON MONOXIDE
CW CUBIC METER
CM/S CUBIC METER PER SECOND
CO CLEAN OUT
CO2 CARBON DIOXIDE
COMP COMPRESSOR UNIT
COP COEFFICIENT OF PERFORMANCE
CP CONDENSATE PUMP
CR CEILING REGISTER/CONDENSATE RETURN
CS CONDENSATE STORAGE TANK
CSG CLEAN STEAM GENERATOR
CT COOLING TOWER
CU CONDENSING UNIT
CUH CABINET UNIT HEATER
CV CONSTANT VOLUME
CW COLD WATER (POTABLE)
CWCC CHILLED WATER COOLING COIL
CWP CONDENSER WATER PUMP
CWR CONDENSER WATER RETURN (TO COOLING TOWER)
CWS CONDENSER WATER SUPPLY (FROM COOLING TOWER)
D DAMPER - AUTOMATIC
D-1 OUTDOOR AIR DAMPER
D-2 RETURN AIR DAMPER
D-3 RELIEF AIR DAMPER
DB DECIBELS
Db DRY-BULB TEMPERATURE
DD-1 DESIGN DEVELOPMENT (SUBMISSION1)
DD-2 DESIGN DEVELOPMENT (SUBMISSION2)
DDC DIRECT DIGITAL CONTROLS
DEG DEGREE
DF DIFFUSER
DIA DIAMETER
DIW DEIONIZED WATER
DP DEW POINT TEMPERATURE
DP DIFFUSER PLATE
DPA DIFFERENTIAL PRESSURE ASSEMBLY
DPS DIFFERENTIAL PRESSURE SENSOR
DWH DOMESTIC WATER HEATER
DX DIRECT EXPANSION
DXCC DIRECT EXPANSION COOLING COIL

EA EXHAUST AIR
EAT ENTERING AIR TEMPERATURE
EC EVAPORATIVE COOLER
ECC ENGINEERING CONTROL CENTER
ECU EVAPORATIVE CONDENSER UNIT
EDH ELECTRIC DUCT HEATER
EER ENERGY EFFICIENCY RATIO
EF EXHAUST FAN
EG EXHAUST GRILLE
EGS EMERGENCY GAS SHUTOFF
EGT ENTERING GLYCOL TEMPERATURE
EH EXHAUST HOOD
EJ EXPANSION JOINT
EMD END OF MAIN DRIP (STEAM)
ENT ENTERING
ER EXHAUST REGISTER
ERC ELECTRIC REHEAT COIL
ERP ELECTRIC RADIANT PANEL
ESP EXTERNAL STATIC PRESSURE
ET EXPANSION TANK
ETO ETHYLENE OXIDE
EUH ELECTRIC UNIT HEATER
EWC EVAPORATIVE WATER COOLER
EWT ENTERING WATER TEMPERATURE
EX. EXISTING
F FAHRENHEIT
F&T FLOAT AND THERMOSTATIC DAMPER
F/SDPR COMBINATION FIRE SMOKE DAMPER
FA FREE AREA
FC FLEXIBLE CONNECTION
FCU FAN COIL UNIT (4 PIPE)
FCUC FAN COIL UNIT COOLING ONLY
FCUH FAN COIL UNIT HEATING ONLY
FCW FORWARD CURVED WHEEL (FAN)
FD FLOOR DRAIN
FD FIRE DAMPER
FF FINAL FILTER
FHX FLUE GAS/FEEDWATER HEAT EXCHANGER
FM FLOW METER
FOP FUEL OIL PUMP
FOR FUEL OIL RETURN
FOS FUEL OIL SUPPLY
FOT FUEL OIL TANK
FOHX FUEL OIL HEAT EXCHANGER
FPM FEET PER MINUTE
FPS FEET PER SECOND
FPTU FAN POWERED TERMINAL UNIT
FR FLOOR REGISTER
FRP FIBER REINFORCED POLYESTER
FS FLOW SWITCH
FSTAT FREZESTAT
FT FEET
FT-LB FOOT-POUND
FTR FIN TUBE RADIATION
FV FACE VELOCITY
GA GAUGE
GAL GALLONS
GH GRAVITY HOOD
GPD GALLONS PER DAY
GPH GALLONS PER HOUR
GPM GALLONS PER MINUTE
GPR GAS PRESSURE REGULATOR
GS GALVANIZED STEEL
H HUMIDIFIER
H&CW HOT & COLD WATER
HAC HOUSEKEEPING AID CLOSET
HB HOSE BIBB
HC HEATING COIL
HD HEAD
HD HOOD
HDA HAND/OFF/AUTOMATIC
HP HEAT PUMP
HP HORSEPOWER
HPDT HIGH PRESSURE DRIP TRAP
HPR HIGH PRESSURE RETURN (STEAM CONDENSATE)
HPS HIGH PRESSURE SUPPLY (STEAM)
HRC HEAT RECOVERY COIL
HRD HEAT RECOVERY DEVICE
HRP HYDRONIC RADIANT (CEILING) PANEL
HRW HEAT RECOVERY WHEEL
HSTAT HUMIDISTAT
HTM HUMIDIFIER TERMINAL
HUM HUMIDIFIER UNIT MOUNTED
HVU HEATING AND VENTILATING UNIT
HW HOT WATER
HWC HOT WATER COIL
HWHC HOT WATER HEATING COIL
HWP HEATING HOT WATER PUMP
HWR HEATING HOT WATER RETURN
HWS HEATING HOT WATER SUPPLY
HWUH HOT WATER UNIT HEATER
HVD HOISTWAY VENT DAMPER
HX HEAT EXCHANGER
HZ HERTZ

I/O INPUT/OUTPUT
IAQ INDOOR AIR QUALITY
IBT INVERTED BUCKET TRAP
ICF IN-LINE CENTRIFUGAL FAN
ICU INTENSIVE CARE UNIT
ID INSIDE DIAMETER
IFB INTEGRAL FACE AND BYPASS
IN INCHES
IN HG INCHES OF MERCURY
IN WC INCH WATER COLUMN
IN WG INCH WATER GAUGE
IN-LB INCH-POUND
IPLV INTEGRATED PART LOAD VALUE
IRH INTRARED HEATER
IS INSECT SCREEN
IU INDUCTION UNIT
IV INLET VANES

J INTENTIONALLY LEFT BLANK
kg KILOGRAM
kg/HR KILOGRAM PER HOUR
kPa KILOPASCAL
kW KILOWATT
kWh KILOWATT HOUR
L LITER
L/h LITERS PER HOUR (OR LITERS/HOUR)
L/m LITERS PER MINUTE (OR LITERS/MINUTE)
L/s LITERS PER SECOND (OR LITERS/SECOND)
LAT LEAVING AIR TEMPERATURE
LBS/HR POUNDS PER HOUR
LF LINEAR FOOT (FEET)
LGT LEAVING GLYCOL TEMPERATURE
LH LATENT HEAT
LPG LIQUID PROPANE GAS
LPR LOW PRESSURE RETURN (STEAM CONDENSATE)
LPRC LOW PRESSURE STEAM RETURN (CLEAN)
LLHX LIQUID TO LIQUID HEAT EXCHANGER
LPS LOW PRESSURE STEAM
LPSC LOW PRESSURE STEAM (CLEAN)
LSD LINEAR SLOT DIFFUSER
LTCP LOCAL TEMPERATURE CONTROL PANEL
LTV LEAVING
LVR LOUVER
LWT LEAVING WATER TEMPERATURE

M METER, SI UNIT
M/s METERS PER SECOND (OR METERS/SECOND)
MA MIXED AIR
MAT MIXED AIR TEMPERATURE
MAU MAKE-UP AIR UNIT
MAV MANUAL AIR VENT
MAX MAXIMUM
MB MIXING BOX
MBH 1000 BTUH
MCA MINIMUM BRANCH CIRCUIT AMPACITY
MER MECHANICAL EQUIPMENT ROOM
MERV MINIMUM EFFICIENCY REPORTING VALUE
MH MANHOLE
MHP MOTOR HORSEPOWER
MIN MINIMUM
MM MILLIMETER
MOV MOTOR OPERATED VALVE
MPR MEDIUM PRESSURE RETURN (STEAM CONDENSATE)
MPS MEDIUM PRESSURE STEAM
MRI MAGNETIC RESONANCE IMAGING
MTD MEAN TEMPERATURE DIFFERENCE
MVD MANUAL VOLUME DAMPER
MZ MULTI-ZONE
NA NOT APPLICABLE
NC NOISE CRITERIA
NC NORMALLY CLOSED
NG NATURAL GAS
NGFM NATURAL GAS FLOWMETER
NO NORMALLY OPEN
NOAA NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION
NOM NOMINAL
NPLV NON-STANDARD PART LOAD VALUE
NP5H NET POSITIVE SUCTION HEAD
NTS NOT TO SCALE
OA OUTSIDE AIR
OAG OUTSIDE AIR GRILLE
OAI OUTSIDE AIR INTAKE
OD OUTSIDE DIAMETER
OFM OIL FLOWMETER
OR OPERATING ROOM

R/E RETURN OR EXHAUST
RA RETURN AIR
RAD REFRIGERANT AIR DRYER
RAF RADIO FREQUENCY
RAHX ROTARY AIR HEAT EXCHANGER
RAT RETURN AIR TEMPERATURE
RCCH REMOTE CONDENSER CHILLER
RCU RECIPROCATING CHILLER UNIT
RD REFRIGERANT DISCHARGE
RDS ROOM DATA SHEETS
REA RELIEF AIR
RF RETURN FAN
RG RETURN GRILLE
RH RELATIVE HUMIDITY
RHC REHEAT COIL
RHG REFRIGERANT HOT GAS
RL REFRIGERANT LIQUID LINE
RLA RUN LOAD AMPERE
RO REVERSE OSMOSIS
RPM REVOLUTIONS PER MINUTE
RR RETURN REGISTER
RS REFRIGERANT SUCTION
RTU ROOF TOP UNIT
RTV RELIEF VALVE
SA SUPPLY AIR
SAD SOUND ATTENUATING DEVICE
SAT SUPPLY AIR TEMPERATURE
SC SHADING COEFFICIENT
SCFM STANDARD CUBIC FEET PER MINUTE
SCI SPINAL CODE INJURY
SCR SILICON CONTROLLED RECTIFIER
SD SMOKE DETECTOR
SD SUPPLY AIR DIFFUSER
SD-1 SCHEMATIC DESIGN (SUBMISSION1)
SD-2 SCHEMATIC DESIGN (SUBMISSION2)
SDPR SMOKE DAMPER
SDR SMOKE DAMPER (RETURN)
SDS SMOKE DAMPER (SUPPLY)
SEN SENSIBLE HEAT
SF SUPPLY FAN
SG SUPPLY AIR GRILLE
SH STEAM HUMIDIFIER
SHC STEAM HEATING COIL
SI SQUARE INCHES
SL SHIPLAP
SP STATIC PRESSURE
SP GR SPECIFIC GRAVITY
SPD SUPPLY PROCESS AND DISTRIBUTION
SPRV STEAM PRESSURE REDUCING VALVE
SPS STATIC PRESSURE SENSOR
SQ FT SQUARE FOOT (FEET)
SR SUPPLY AIR REGISTER
SS STAINLESS STEEL
SSHX STEAM TO STEAM HEAT EXCHANGER
SSR SOLID SEPARATOR
ST STEAM TRAP
SUH STEAM UNIT HEATER
SV STEAM PRESSURE REDUCING VALVE
SVS STEAM VENT SILENCER
SWHX STEAM TO WATER HEAT EXCHANGER
T & PCV TEMPERATURE AND PRESSURE CONTROL VALVE
TAB TESTING, ADJUSTING, BALANCE
TD TEMPERATURE DIFFERENCE
TDH TOTAL DYNAMIC HEAD
TDS TOTAL DISSOLVED SOLIDS
TG TRANSFER GRILLE
TP TRAP
TR TOP REGISTER
TSP TOTAL STATIC PRESSURE
TSTAT THERMOSTAT
TU TERMINAL UNIT
TWU THRU-WALL UNIT

UC UNDER CUT
UC UNIT COOLER
UH UNIT HEATER
UL UNDERWRITERS LABORATORY
URV UPBLAST UNIT VENTILATOR

V VALVE
VAF VANE-AXIAL FAN
VAV VARIABLE AIR VOLUME
VD VOLUME DAMPER (MANUAL OPPOSED BLADE)
VFD VARIABLE FREQUENCY DRIVE
VHA VETERANS HEALTH ADMINISTRATION
VI VIBRATION ISOLATOR
VIV VARIABLE INLET VANES
VP VACUUM PUMP
VPS VARIABLE PRIMARY SYSTEM
VR VACUUM (STEAM CONDENSATE) RETURN
VSD VARIABLE SPEED DRIVE
VUH VERTICAL UNIT HEATER

W WATTS
WAG WASTE ANESTHESIA GAS
Wb WET-BULB (TEMPERATURE)
WC WATER COOLED
WCCW WATER COOLED CHILLER
WCCU WATER COOLED CONDENSING UNIT
WCHP WATER COOLED HEAT PUMPS
WCPU WATER COOLED PACKAGED UNIT
WEF WALL EXHAUST FAN
WF WATER FILTER
WFCV WATER FLOW CONTROL VALVE
WFM WATER FLOWMETER
WFMFD WATER FLOW MEASURING DEVICE
WG WATER GAGE
WPD WATER SIDE PRESSURE DROP
YR YEAR

Table with columns: DATE, ISSUED FOR CONSTRUCTION, DESCRIPTION, SW, APPR.



APPROVED: A/E INFO

PER COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO

DES - DRW - CHK -

BRANCH MANAGER

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY

NAVFACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING MID-ATLANTIC

NORFOLK IPT

NAVAL STATION NEWPORT

NEWPORT, RI

OVERHAUL BOILER #1

BUILDING 7CC

MECHANICAL ABBREVIATIONS

SCALE: N/A

EPROJCT NO.: 1470866

CONSTR. CONTR. NO. N40083-14-D-0016

NAVFAC DRAWING NO. 12734654

SHEET 5 OF 25

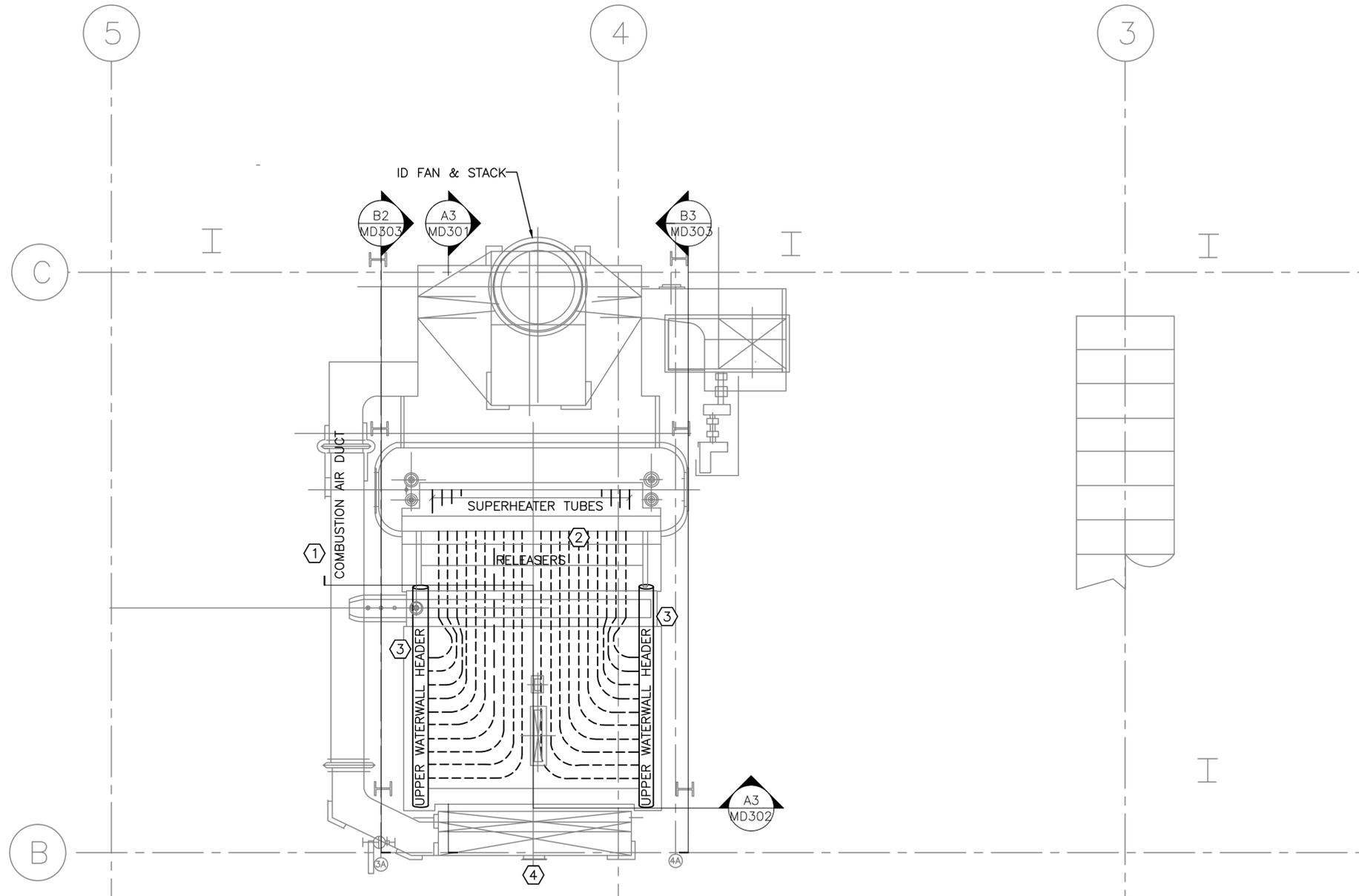
M-001

NAVSTA #43459-402

NOTE: NOT ALL ABBREVIATIONS APPEAR IN SET

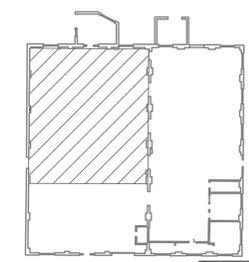
DRAWING REVISION: 10 MAY 2014

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport_RV\DD20251_NeaportR1-fig\fig\Boiler-Drawings\Mechanical\MD102.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 12:45pm USER: litle



PLAN NORTH
MECHANICAL PENTHOUSE PLAN DEMOLITION
 SCALE: 1/4" = 1'-0"

16' 8' 0' 16'
 SCALE: 1/4" = 1'-0"



KEY PLAN NAVSTA #43463-402

SHEET NOTES

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE PROPER FIT OF ALL NEW REPLACEMENT TUBES AND COMPONENTS USING EXISTING FIELD CONDITIONS.
2. WHERE WATER WALL HEADERS ARE RE-USED, CUT TUBES 6" FROM HEADERS AND REMOVE. CAREFULLY REMOVE TUBE STUBS FROM HEADERS AND REFURBISH TUBE SEATS IN HEADER IN PREPARATION FOR ROLLING THE NEW TUBE END INTO THE HEADER.
3. GENERATING BANK TUBES SHALL BE CUT 6" FROM STEAM DRUM AND FROM LOWER DRUM. CAREFULLY REMOVE THE STUBS AND REFURBISH THE TUBE SEATS IN PREPARATION FOR ROLLING THE NEW TUBES INTO THE DRUMS.
4. SUPERHEATER TUBES SHALL BE CUT 6" FROM DRUM AND FROM OUTLET HEADER. CAREFULLY REMOVE TUBE STUBS FROM DRUM AND HEADER, THEN REFURBISH TUBE SEATS IN PREPARATION FOR ROLLING THE NEW TUBE ENDS INTO THE HEADER AND STEAM DRUM.
5. REMAINING DRUMS AND HEADERS SHALL REMAIN IN CORRECT ALIGNMENT AT ALL TIMES.

KEY NOTES

- ① CAREFULLY REMOVE COMBUSTION AIR DUCT AS NECESSARY TO PERMIT REMOVAL OF BOILER CASING AND COMPONENTS FOR RE-TUBE. STORE IN DESIGNATED LOCATION.
- ② DEMOLISH AND REMOVE ALL SUPERHEATER TUBES, RELEASERS AND ROOF TUBES. SEE SPECIFICATIONS FOR MATERIAL, SIZE AND THICKNESS.
- ④ CAREFULLY REMOVE AND STORE EXISTING BURNER AND THROAT TILE FOR RE-INSTALLATION UPON INSTALLATION OF FRONT WALL TUBES AND RECONSTRUCTION OF FRONT WALL, BURNER THROAT, BURNER THROAT TILE, AND BURNER.

BID OPTION KEY NOTES

- ③ DEMOLISH AND REMOVE UPPER AND LOWER WATERWALL HEADERS.

NO.	DESCRIPTION	DATE	APPR.
	ISSUED FOR CONSTRUCTION	10/28/16	

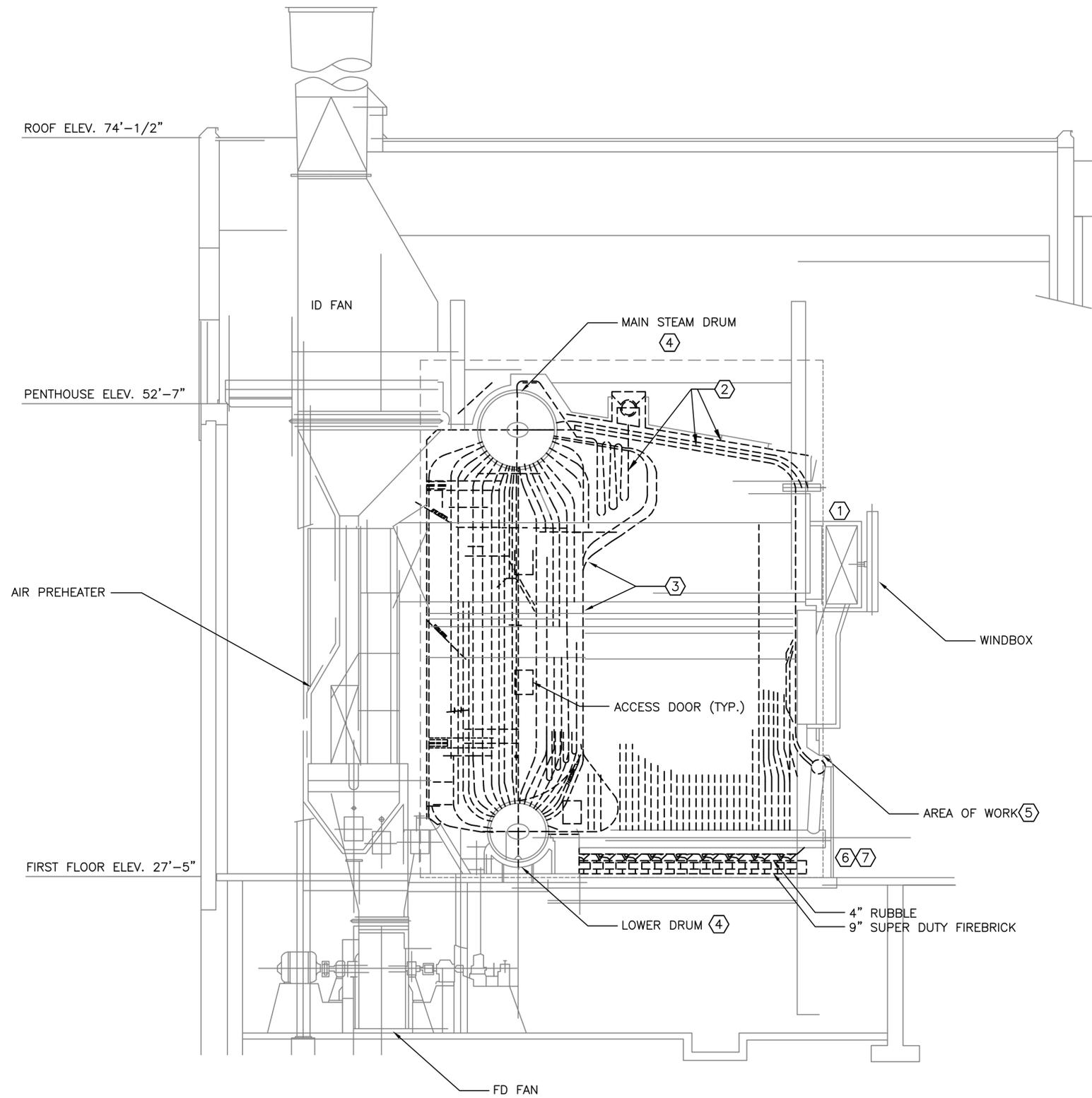


APPROVED	A/E I/PS
FOR COMMANDER NAVFAC	
SATISFACTORY TO	
DES -	DRW -
CHK -	
BRANCH MANAGER	
CHIEF ENG/ARCH	

DEPARTMENT OF THE NAVY
 NAVAL FACILITIES ENGINEERING COMMAND
 NAVAL FACILITIES ENGINEERING MID-ATLANTIC
 NEWPORT, RI
 NAVAL STATION NEWPORT
**OVERHAUL BOILER #1
 BUILDING 7CC**
 MECHANICAL PENTHOUSE PLAN DEMOLITION

SCALE: N/A
 EPROJCT NO.: 1470866
 CONSTR. CONTR. NO.: N40083-14-D-0016
 NAVFAC DRAWING NO.: 12734657
 SHEET 8 OF 25
MD102
 NAVSTA #43463-402
 DRAWFORM REVISION: 10 MAY 2014

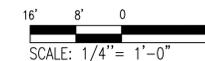
FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport RIV\2015\1_NewportRI-Eligible\Drawings\Mechanical\MD301.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 2:14pm USER: hite



SECTIONAL ELEVATION

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

MD301 **A3**



SHEET NOTES

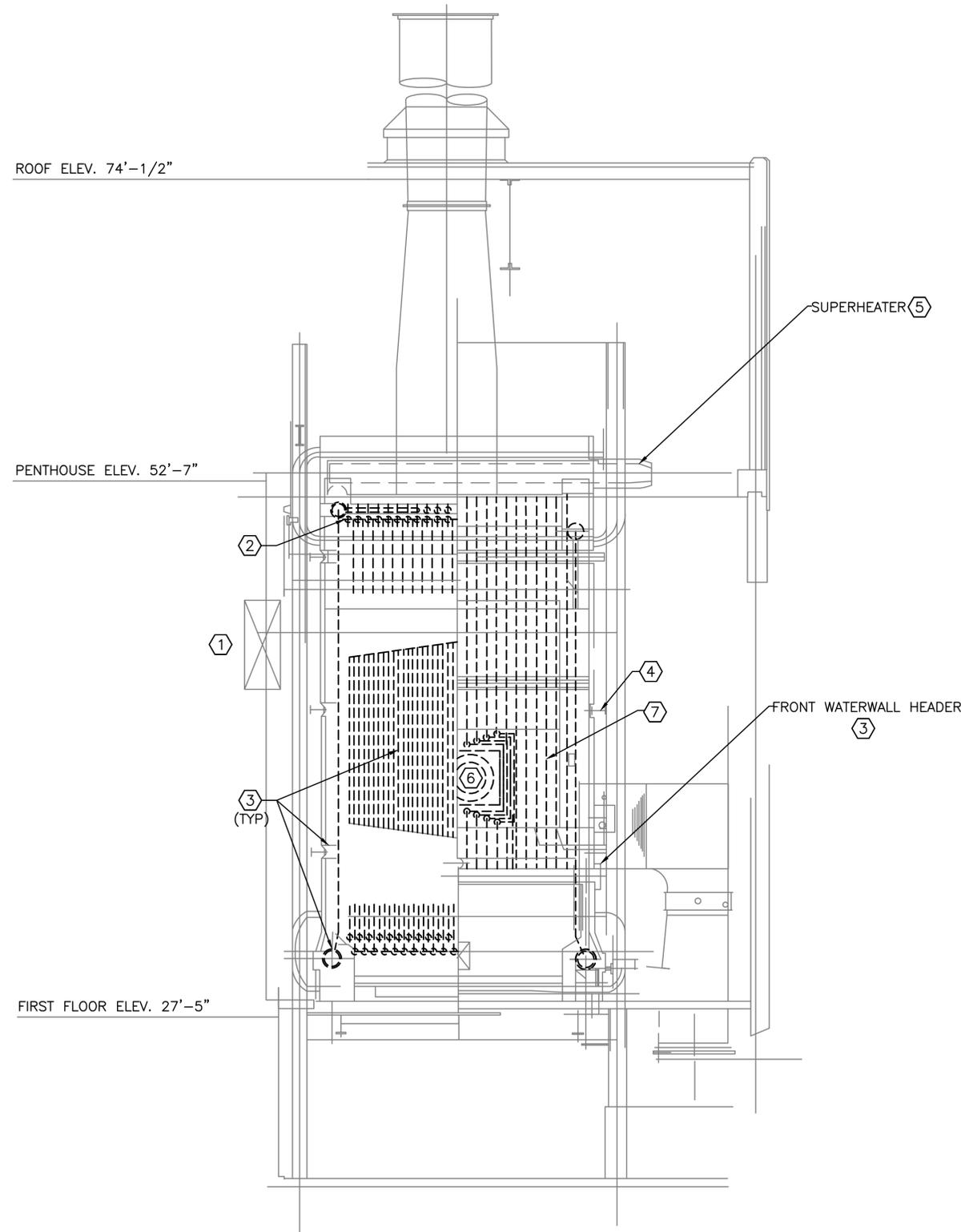
1. IT IS THE INTENT OF THIS PROJECT TO RETAIN AND RE-USE THE EXISTING BURNER. PROTECT THE BURNER THROAT, THROAT TILE AND SETTING AS NECESSARY TO PERMIT PROPER BURNER OPERATION UPON COMPLETION OF WORK.
2. BURNER ASSEMBLY MAY BE REMOVED AND RE-INSTALLED TO AVOID DAMAGE DURING CONSTRUCTION.
3. BURNER THROAT TILE MAY BE REMOVED FOR RE-USE, OR REPLACED IN FULL. CONTRACTOR IS RESPONSIBLE FOR MEASURING AND MATCHING THE EXISTING THROAT DIAMETERS AND TAPER.

KEY NOTES

- ① CAREFULLY REMOVE COMBUSTION AIR DUCT AS NECESSARY TO PERMIT REMOVAL OF BOILER CASING AND COMPONENTS FOR RE-TUBE. STORE IN DESIGNATED LOCATION, AND REINSTALL UPON COMPLETION OF BOILER WORK.
- ② ALL SUPERHEATER TUBES, RELEASERS AND ROOF TUBES SHALL BE REPLACED. SEE SPECIFICATIONS FOR MATERIAL, SIZE AND THICKNESS.
- ③ DEMOLISH AND REMOVE GENERATING AND FURNACE REAR WALL/SCREEN TUBES. EXISTING GENERATING SECTION BAFFLES SHALL BE RE-USED AS NECESSARY; REFURBISHED AND RE-INSTALLED IN ORIGINAL POSITIONS. REFER TO SHEET M-506 FOR BAFFLE LAYOUT AND DETAIL INFORMATION.
- ④ DRUMS SHALL REMAIN. DRUMS SHALL REMAIN LEVEL, PLUMB AND IN CORRECT ALIGNMENT AT ALL TIMES. SUPERHEATER OUTLET HEADER SHALL REMAIN IN PLACE AND REMAIN IN ALIGNMENT WITH STEAM DRUM.
- ⑤ WORK IS LIMITED TO BOILER TUBE, REFRACTORY, INSULATION AND SUPPORT REPLACEMENT, AS WELL AS CASING REPAIRS AS NECESSARY. WORK DOES NOT INCLUDE AIR PREHEATER OR BURNER.
- ⑥ LOWER WATERWALL HEADER KNEE-WALLS AND FRONT WALL BELOW WATERWALL HEADER SHALL BE REMOVED TO STRUCTURAL BASE. RECONSTRUCT PER DETAILS.
- ⑦ REMOVE AND PROPERLY DISPOSE OF EXISTING RUBBLE ON FURNACE FLOOR. 9" SUPER-DUTY FIREBRICK SHALL BE REMOVED AND RE-USED/REPLACED IN-KIND IF DAMAGED. REPLACE MINIMUM 4" LAYER OF RUBBLE WITH MINIMUM 4" LAYER AASHTO#57 STONE.

	DATE 10/26/16 APPR
	ISSUED FOR CONSTRUCTION DESCRIPTION
 	
APPROVED	
PER. COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	
DES - - - - - DRAW - - - - - CHK - - - - -	
BRANCH MANAGER	
CHIEF ENG/ARCH	
N/A	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING MID-ATLANTIC NAVFAC NAVAL STATION NEWPORT NEWPORT, RI	NAVFAC OVERHAUL BOILER #1 BUILDING 7CC SECTIONAL ELEVATION DEMOLITION
SCALE: N/A	
PROJECT NO.: 1470866	
CONSTR. CONTR. NO. N40083-14-D-0016	
NAVFAC DRAWING NO. 12734658	
SHEET 9 OF 25	
NAVSTA #43463-402	
MD301	
DRAWING REVISION: 10 MAY 2014	

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport RIV\2015\51_Neaport\B1-Eligible\Drawings\Mechanical\MD302.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 2:24pm USER: tlore

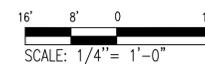


SECTIONAL ELEVATION

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

MD302

A3



SHEET NOTES

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE PROPER FIT OF ALL NEW REPLACEMENT TUBES AND COMPONENTS USING EXISTING FIELD CONDITIONS.
2. WHERE WATER WALL HEADERS ARE RE-USED CAREFULLY CUT WATER WALL TUBES, LEAVING STUBS AT HEADER CONNECTIONS. CONTRACTOR SHALL PROPERLY PREPARE STUBS FOR CONNECTION TO NEW TUBES. ENSURE DRUM AND WATER WALL HEADER ALIGNMENTS ARE MAINTAINED AT ALL TIMES.

KEY NOTES

- ① CAREFULLY REMOVE COMBUSTION AIR DUCT AS NECESSARY TO PERMIT REMOVAL OF BOILER CASING AND COMPONENTS FOR RE-TUBE. STORE IN DESIGNATED LOCATION.
- ② DEMOLISH AND REMOVE ALL SUPERHEATER TUBES, RELEASERS AND ROOF TUBES AS INDICATED.
- ④ EXISTING BUCKSTAYS SHALL REMAIN. CUT 2" X 6" X 12" SHIPLAP TILE AND USE DRY TUBE TIES IN THIS AREA.
- ⑤ REMOVABLE BLANKET COVER IN SUPERHEATER BOX TO FACILITATE HANDHOLE REMOVAL SHALL BE REMOVED AND RETAINED.
- ⑥ BURNER MAY BE REMOVED AND RE-INSTALLED AT CONTRACTOR'S OPTION. BURNER MUST BE PROTECTED FROM DAMAGE DURING PROJECT.
- ⑦ RECOMMEND USING EXISTING FRONT WALL TUBES AS PATTERNS. DIMENSIONAL DOCUMENTATION IS NOT AVAILABLE.

BID OPTION KEY NOTES

- ③ DEMOLISH AND REMOVE UPPER AND LOWER WATERWALL HEADERS AND TUBES AS INDICATED.

SYN	DESCRIPTION	DATE	APPR
	ISSUED FOR CONSTRUCTION	10/28/16	



APPROVED	A/E: WFS	
PER COMMANDER NAVFAC		
ACTIVITY		
SATISFACTORY TO		
DES	DRW	CHK
<<PM/DM>>		
BRANCH MANAGER		
CHIEF ENG/ARCH		
<<-->>		

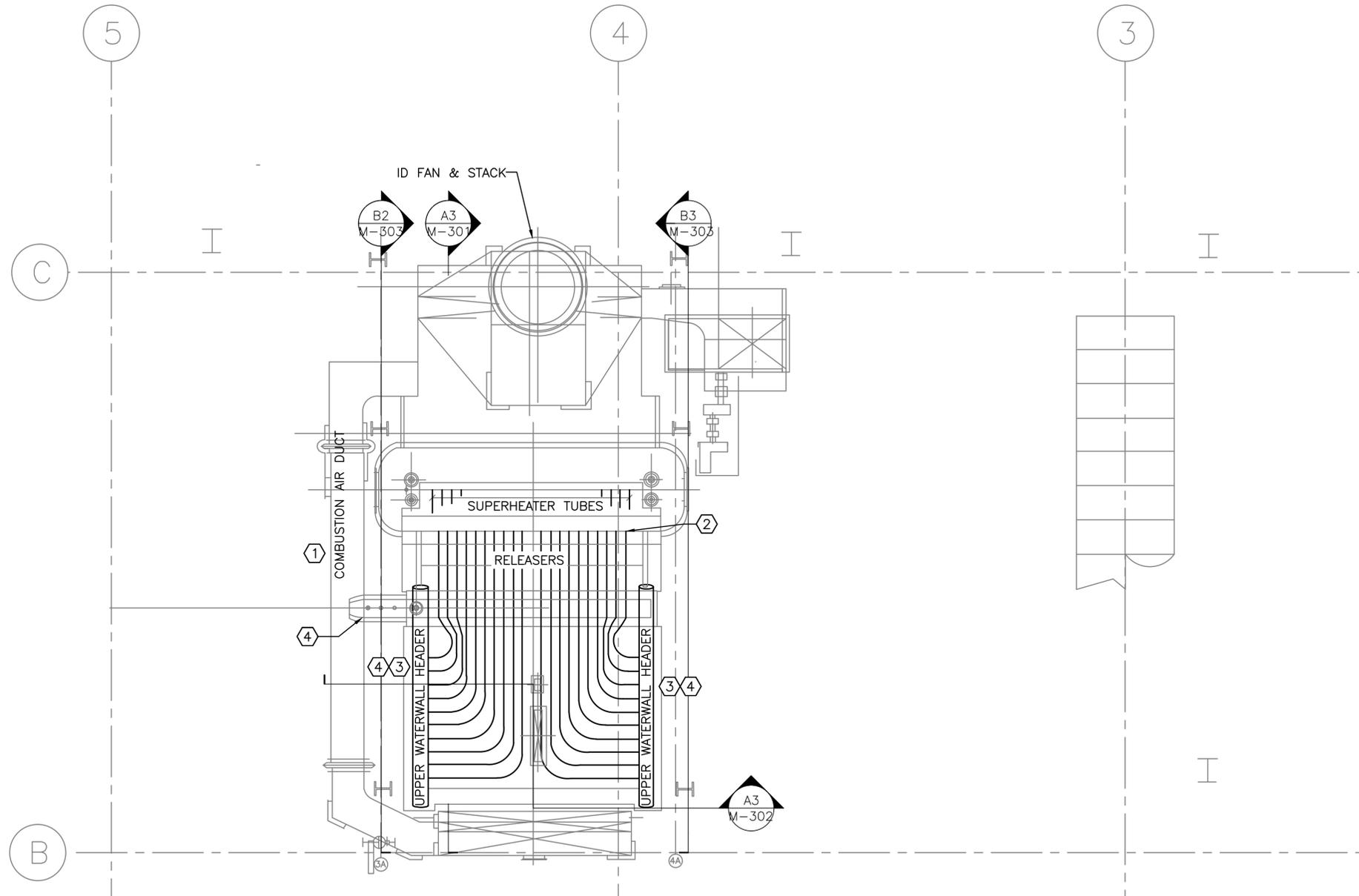
DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND	NEWPORT, RI
NAVAL FACILITIES ENGINEERING MID-ATLANTIC		NEWPORT, RI
NAVAL STATION NEWPORT	OVERHAUL BOILER #1	
	BUILDING 7CC	
	SECTIONAL ELEVATION DEMOLITION	

SCALE:	N/A
PROJECT NO.:	1470866
CONSTR. CONTR. NO.:	N40083-14-D-0016
NAVFAC DRAWING NO.:	12734659
SHEET	10 OF 25
MD302	

NAVSTA #43464-402

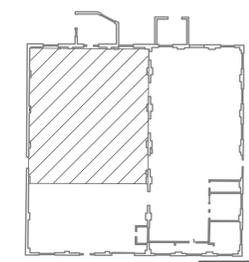
DRAWFORM REVISION: 10 MAY 2014

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport RY\202551_NeaportRi-fig\Bshop Drawings\Mechanical\M-102.dwg LAYOUT NAME: Layout1 PLOTTED: Thursday, October 27, 2016 - 1:24pm USER: labe



PLAN NORTH
MECHANICAL PENTHOUSE PLAN - NEW WORK
 SCALE: 1/4" = 1'-0"

16' 8' 0' 16'
 SCALE: 1/4" = 1'-0"



KEY PLAN NAVSTA #43466-402

SHEET NOTES

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE PROPER FIT OF ALL NEW REPLACEMENT TUBES AND COMPONENTS USING EXISTING FIELD CONDITIONS.
2. CONTRACTOR SHALL ENSURE DRUM AND WATER WALL HEADER ALIGNMENTS ARE MAINTAINED AT ALL TIMES.

KEY NOTES

- ① CAREFULLY REINSTALL COMBUSTION AIR DUCT AS NECESSARY UPON COMPLETION OF BOILER WORK.
- ② INSTALL ALL NEW SUPERHEATER TUBES, RELEASERS AND ROOF TUBES AS INDICATED. SEE SPECIFICATIONS FOR MATERIAL, SIZE AND THICKNESS.
- ④ SUPERHEATER AND ALL WATERWALL HANDHOLES AND PLUGS SHALL BE MACHINED AND TRUED, AND SHALL BE FULLY WATERTIGHT UNDER ALL CONDITIONS.

BID OPTION KEY NOTES

- ③ INSTALL NEW UPPER, LOWER, AND FRONT WATERWALL HEADERS AND TUBES AS INDICATED.

SYMBOL	DESCRIPTION	DATE	APPROVED
	ISSUED FOR CONSTRUCTION	10/28/16	



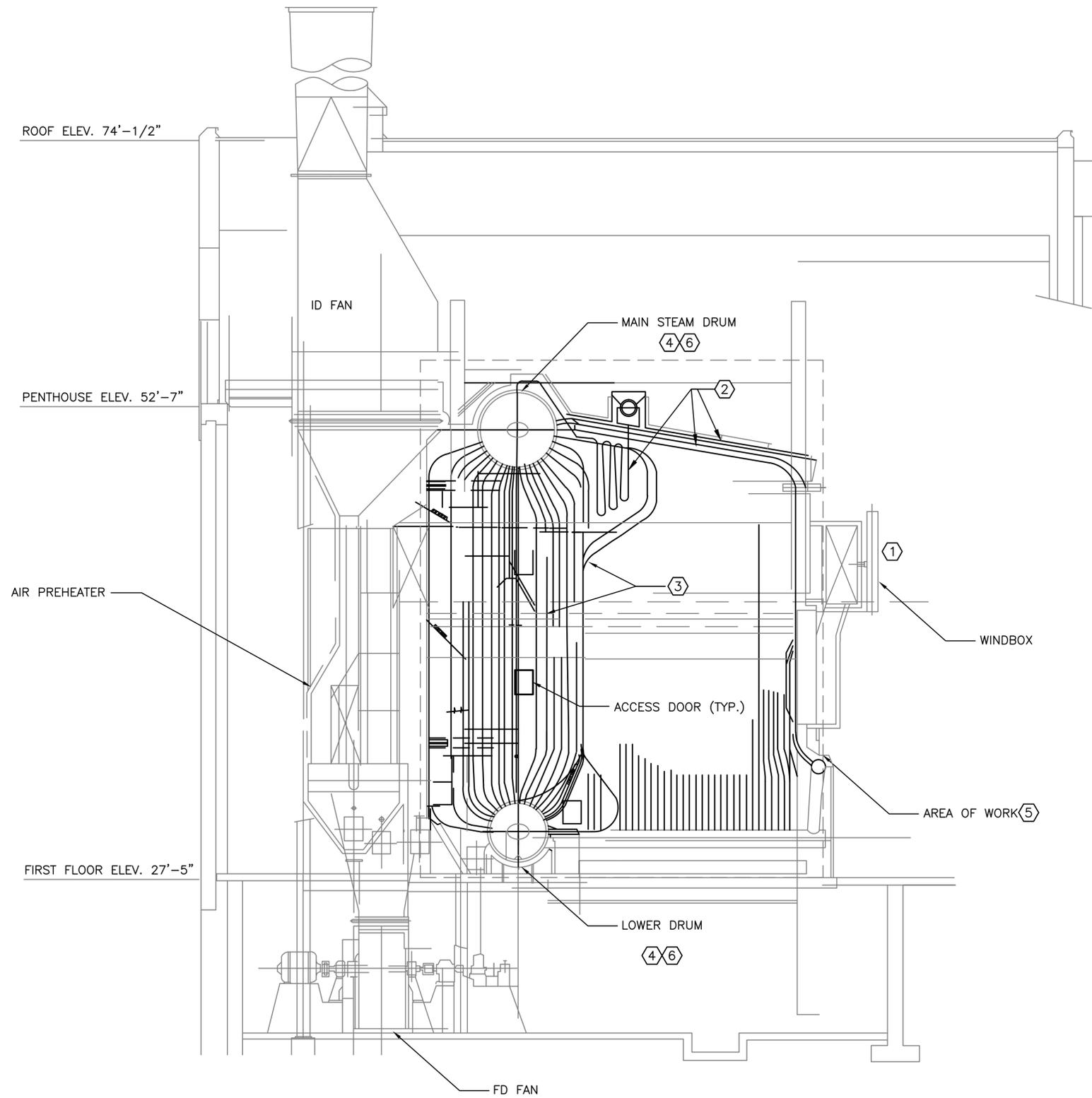
APPROVED	A/E (R/S)
FOR COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	
DES -	DRW -
CHK -	
BRANCH MANAGER	
CHIEF ENG/ARCH	

DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND	NEWPORT, RI
NAVAL FACILITIES ENGINEERING MID-ATLANTIC		NEWPORT, RI
NAVAL STATION NEWPORT	OVERHAUL BOILER #1	
	BUILDING 7CC	
	MECHANICAL PENTHOUSE PLAN - NEW WORK	

SCALE:	N/A
EPROJCT NO.:	1470866
CONSTR. CONTR. NO.:	N40083-14-D-0016
NAVFAC DRAWING NO.:	12734661
SHEET	12 OF 25
M-102	

DRAWING REVISION: 10 MAY 2014

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport RY\202551_NewportRI-FlagBoiler-Drawings\Mechanical\M-301.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 4:34pm USER: lita

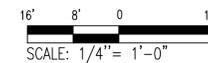


SECTIONAL ELEVATION

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

M-301

A3



SHEET NOTES

1. REFER TO COPES VULCAN DRAWING B-71799 FOR SOOT BLOWERS, BEARING LOCATION AND BEARING NUMBERS.

KEY NOTES

- 1 CAREFULLY REINSTALL COMBUSTION AIR DUCT AS NECESSARY UPON COMPLETION OF BOILER WORK.
- 2 INSTALL NEW SUPERHEATER TUBES, RELEASERS AND ROOF TUBES AS INDICATED. SEE SPECIFICATIONS FOR MATERIAL, SIZE AND THICKNESS.
- 3 INSTALL NEW GENERATING AND FURNACE REAR WALL/SCREEN TUBES AS INDICATED. INCLUDE SOOTBLOWER GUIDES AND BEARINGS.
- 4 EXISTING DRUMS SHALL REMAIN LEVEL, PLUMB AND IN CORRECT ALIGNMENT AT ALL TIMES.
- 5 WORK IS LIMITED TO BOILER TUBE, REFRACTORY, INSULATION AND SUPPORT REPLACEMENT, AS WELL AS CASING REPAIRS AS NECESSARY. REPLACEMENT WORK DOES NOT INCLUDE AIR PREHEATER, BURNER, IF REMOVED.
- 6 MAIN STEAM AND LOWER DRUM MANWAY OPENINGS AND PLATES SHALL BE MACHINED AND TRUED, AND SHALL BE FULLY WATERTIGHT UNDER ALL CONDITIONS.

NO.	DESCRIPTION	DATE	APPR.
1	ISSUED FOR CONSTRUCTION	10/28/16	



APPROVED: _____
PER COMMANDER NAVFAC

ACTIVITY			

SATISFACTORY TO			
DES	DRW	CHK	
<<PM/DM>>			
BRANCH MANAGER			

CHIEF ENG/ARCH			

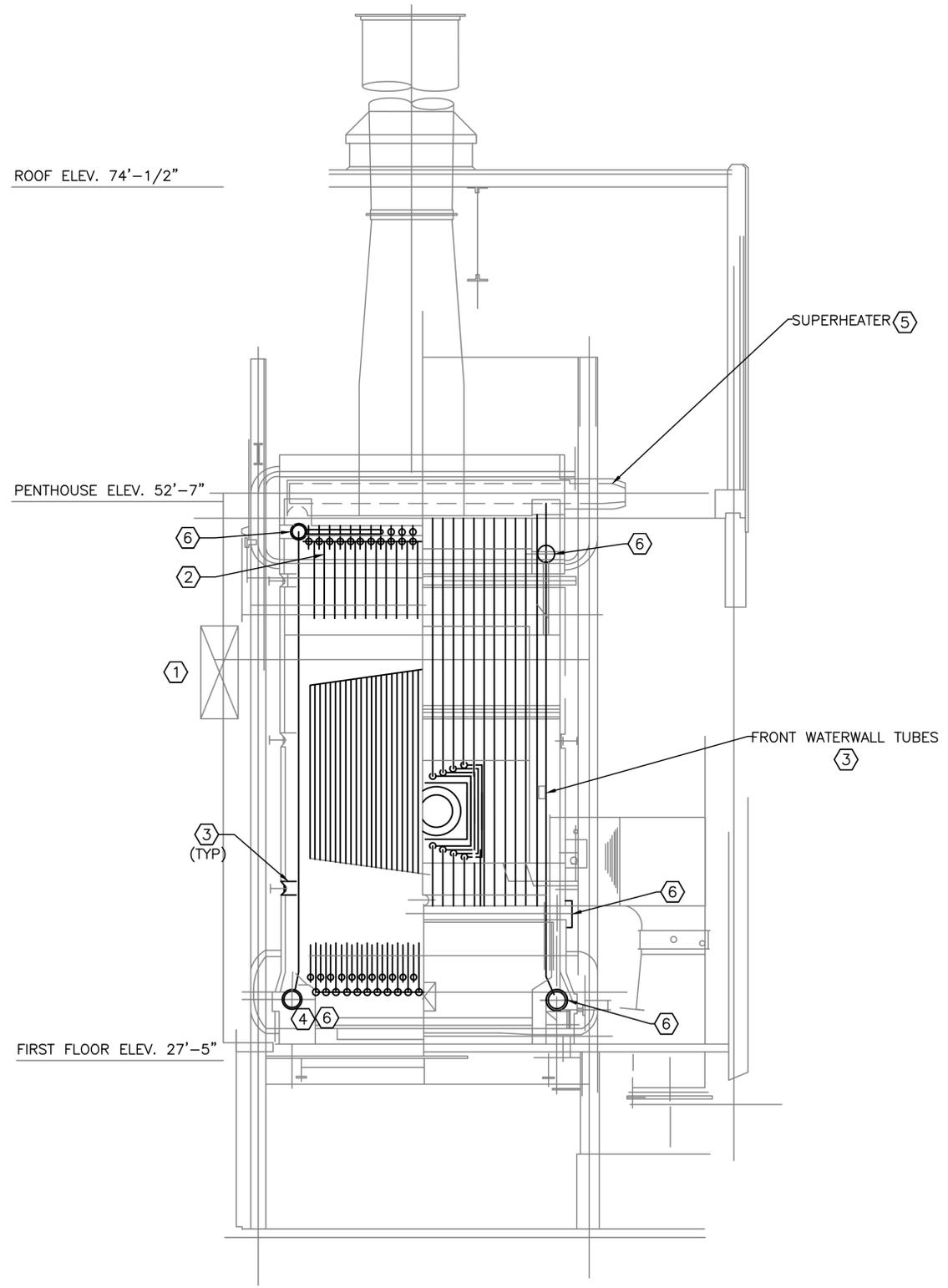
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING MID-ATLANTIC
NEWPORT, RI
NAVAL STATION NEWPORT
**OVERHAUL BOILER #1
BUILDING 7CC**
SECTIONAL ELEVATION - NEW WORK

SCALE:	N/A
EPROJCT NO.:	1470866
CONSTR. CONTR. NO.:	N40083-14-D-0016
NAVFAC DRAWING NO.:	12734658
SHEET	13 OF 25

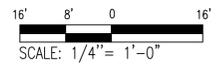
NAVSTA #43467-402

M-301
DRAWFORM REVISION: 10 MAY 2014

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport RVT0202551_NewportRI-EligibleDrawings\Mechanical\M-302.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 3:34pm USER: ltoe



BOILER NO. 1 FRONT SECTION
 SCALE: 1/4" = 1'-0" M-302 A3



SHEET NOTES

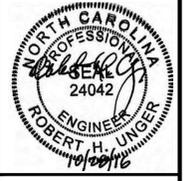
1. PACK EXPANSION JOINTS IN WATER WALLS WITH CERAMIC FIBER ROPE (RATED 1800F OR HIGHER) OR BRAID.

KEY NOTES

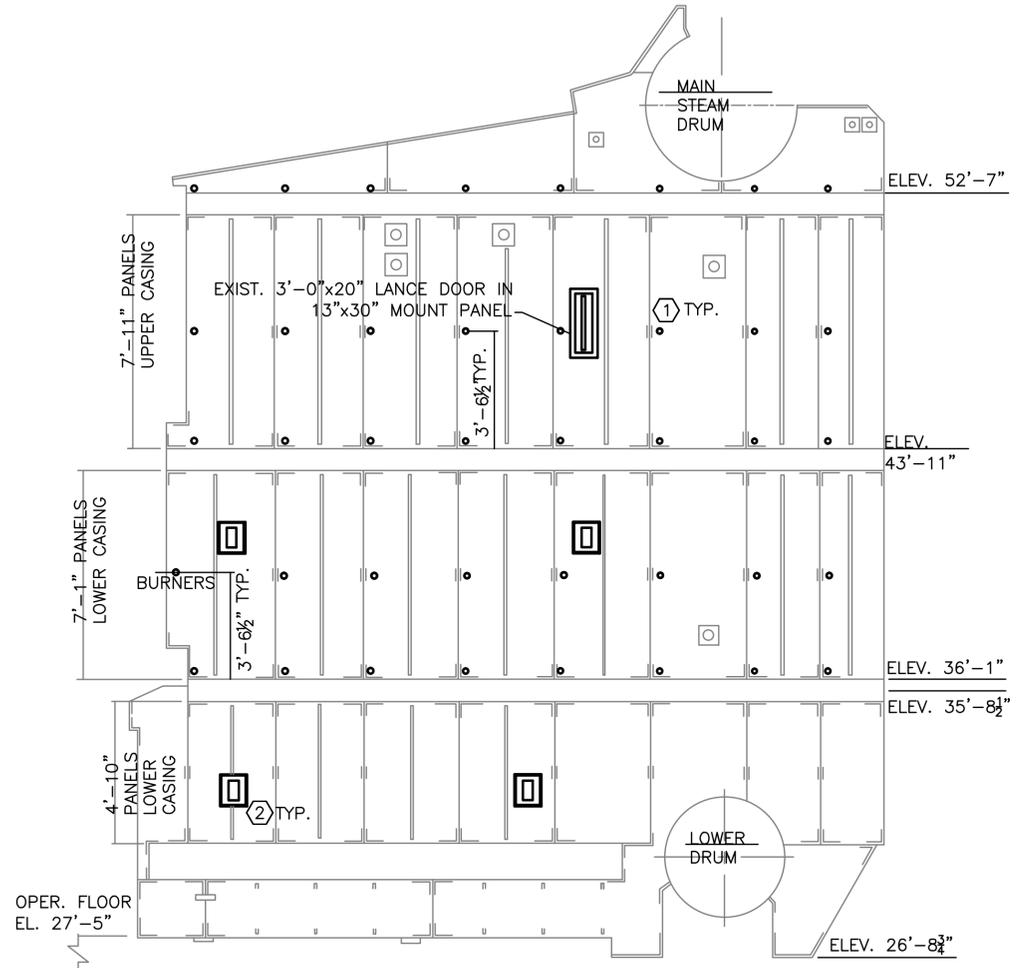
- ① CAREFULLY REINSTALL COMBUSTION AIR DUCT AS NECESSARY UPON COMPLETION OF BOILER RE-TUBING.
- ② INSTALL ALL NEW SUPERHEATER TUBES, RELEASERS AND ROOF TUBES AS INDICATED. SEE SPECIFICATIONS FOR MATERIAL, SIZE AND THICKNESS.
- ③ INSTALL NEW TUBES IN UPPER AND LOWER WATERWALL HEADERS AS INDICATED. SEE ALSO SHEET M-507.
- ④ COVER LOWER WATERWALL HEADER WITH CERAMIC FIBER FELT BEFORE CASTABLE IS APPLIED.
- ⑤ INSTALL NEW REMOVABLE BLANKET COVER IN SUPERHEATER BOX TO FACILITATE HANDHOLE REMOVAL.

BID OPTION KEY NOTES

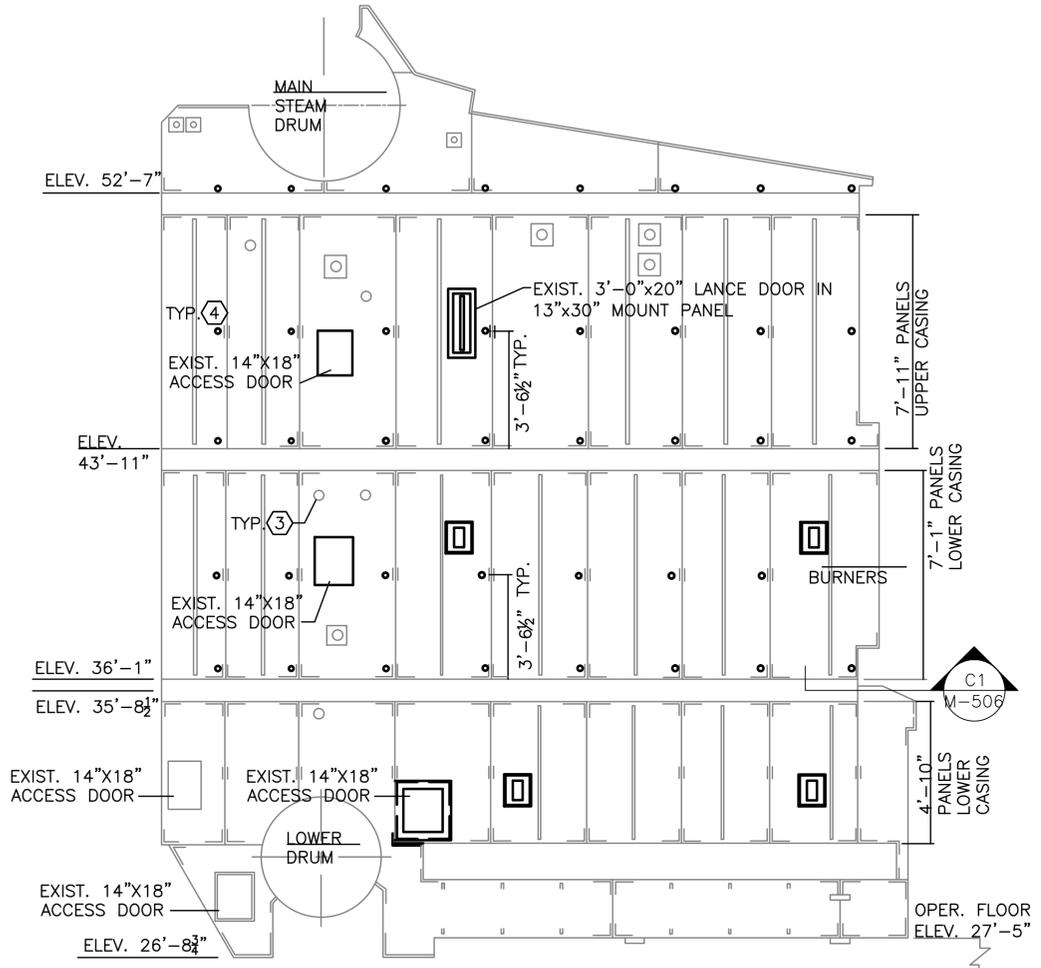
- ⑥ INSTALL NEW UPPER AND LOWER WATERWALL HEADERS

APPROVED	DATE	APP'R
	10/28/16	
ISSUED FOR CONSTRUCTION	DESCRIPTION	SYN
		
		
APPROVED PER COMMANDER NAVFAC ACTIVITY SATISFACTORY TO DES - - - - - <<PM/CM>> BRANCH MANAGER CHIEF ENG/ARCH <<->>		
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING MID-ATLANTIC NEWPORT, RI NAVAL STATION NEWPORT OVERHAUL BOILER #1 BUILDING 7CC BOILER NO. 1 FRONT SECTION		
SCALE:	N/A	
PROJECT NO.:	1470866	
CONSTR. CONTR. NO.:	N40083-14-D-0016	
NAVFAC DRAWING NO.:	12734663	
SHEET	14	OF 25
M-302		
NAVSTA #43468-402		
DRAWING REVISION: 10 MAY 2014		

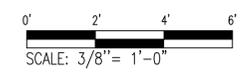
FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport RIV\202551_NewportRI-#RigBoiler-Drawings\Mechanical\M-303.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 3:39pm USER: litae



SOUTH SIDE CASING ELEVATION
SCALE: 3/8" = 1'-0" M-303 (B2)



NORTH SIDE CASING ELEVATION
SCALE: 3/8" = 1'-0" M-303 (B3)



SHEET NOTES

1. REPLACE REFRACTORY WALLS WITH NEW TILES
2. INSTALL CERAMIC FIBER INSULATION ON FURNACE WALLS.
3. INSTALL CASING, ATTACHMENTS AND ACCESS DOORS.
4. PAINT EXTERIOR FINAL COLOR, SELECTION BY GOVERNMENT.
5. REINSTALL INSTRUMENTS AND OTHER ACCESSORIES THAT WERE REMOVED DURING DEMOLITION AND PROVE PRE-CONSTRUCTION OPERATING CONDITION.

KEY NOTES

- ① FIELD LOCATE AND INSTALL NEW WATERWALL TUBE ANCHOR SUPPORT LUG IN APPROXIMATE LOCATION SHOWN. SEE DETAIL C4/M-501. REPAIR HOLES FROM EXISTING LUG REMOVAL.
- ② PROVIDE NEW FRAME IN RECONSTRUCTED SIDEWALL. REINSTALL 4"x8" OBSERVATION DOOR IN REPAIRED CASING. PROVIDE REFRACTORY INSERT FOR OPENING.
- ③ CONTRACTOR SHALL REINSTALL ANY SOOT BLOWERS REMOVED DURING DEMOLITION AS NECESSARY, REINSTALL TO PROVIDE PRE-CONSTRUCTION PERFORMANCE TO SATISFACTION OF GOVERNMENT. UPON COMPLETION, SOOT BLOWERS SHALL BE FREE TO ROTATE THROUGHOUT NORMAL RANGE OF MOTION. REFER TO COPES VULCAN DRAWING IN APPENDIX.
- ④ FIELD LOCATE NEW STAY-BOLT ANCHOR LOCATION TO NOT CONTACT WATERWALL TUBES. SEE DETAIL

NO.	DESCRIPTION	DATE	APP'R
1	ISSUED FOR CONSTRUCTION	10/28/16	



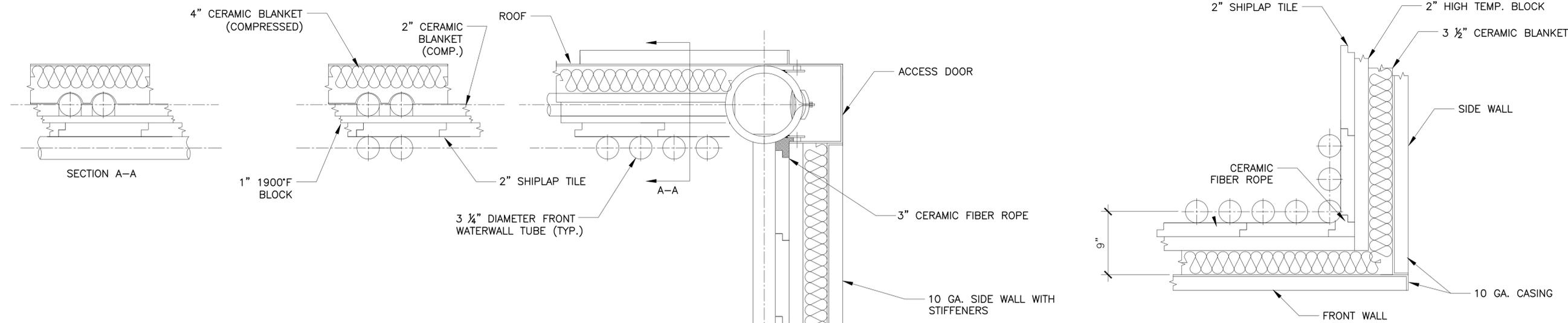
APPROVED	A/E: WFS	
FOR COMMANDER NAVFAC		
ACTIVITY		
SATISFACTORY TO		
DES -	DRW -	CHK -
<<PM/CM>>		
BRANCH MANAGER		
CHIEF ENG/ARCH		
<<->>		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING MID-ATLANTIC
NAVAL STATION NEWPORT
NEWPORT, RI
**OVERHAUL BOILER #1
BUILDING 7CC**
MECHANICAL CASING ELEVATIONS - NEW WORK

SCALE:	N/A
PROJECT NO.:	1470866
CONSTR. CONTR. NO.:	N40083-14-D-0016
NAVFAC DRAWING NO.:	12734664
SHEET	15 OF 25
M-303	

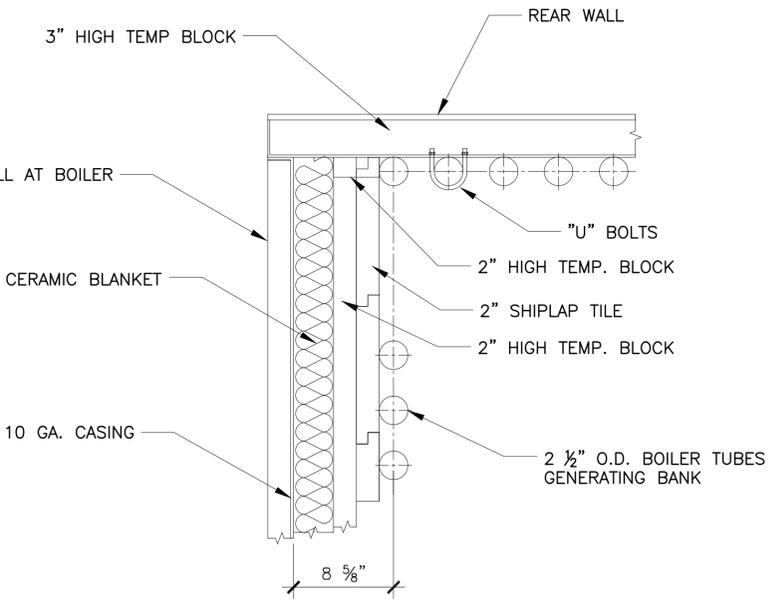
NAVSTA #43469-402

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport\RI\DD20251_NewportRI-RI\Bldg\Drawings\Mechanical\M-502.dwg LAYOUT NAME: DETAILS 2 PLOTTED: Wednesday, October 26, 2016 - 4:02pm USER: lobe

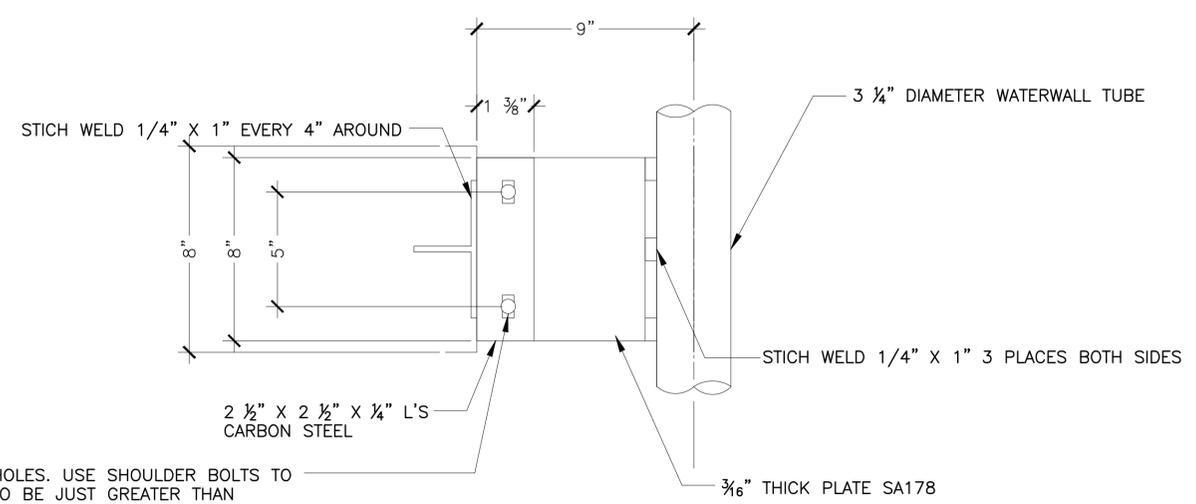


BOILER JUNCTION OF ROOF AND SIDE WALL (B2)
SCALE: 1-1/2" = 1'-0" M-502

BOILER JUNCTION OF FRONT AND SIDE WALL (C4)
SCALE: 1 1/2" = 1'-0" M-502



BOILER JUNCTION OF REAR AND SIDE WALLS (B4)
SCALE: 1 1/2" = 1'-0" M-502



BUCKSTAY CONNECTION DETAIL (A2)
SCALE: NONE M-502

ROOF AT PENTHOUSE (A4)
SCALE: 1 1/2" = 1'-0" M-502

5/8" HOLES. ELONGATE BOLT HOLES. USE SHOULDER BOLTS TO FASTEN. SHOULDER LENGTH TO BE JUST GREATER THAN THICKNESS OF TUBE TIE PLATE AND 1/4" ANGLE SECTION WHEN JOINED TO PREVENT BINDING. WRAP TIE ASSEMBLY IN HIGH TEMPERATURE BLANKET MATERIAL TO PREVENT CASTABLE FILL FROM BINDING AS WELL.

DATE	10/26/16
APP'R	
DESCRIPTION	ISSUED FOR CONSTRUCTION
SYN	




APPROVED: _____
PER COMMANDER NAVFAC

SATISFACTORY TO: _____

DES - _____
CHK - _____

BRANCH MANAGER: _____

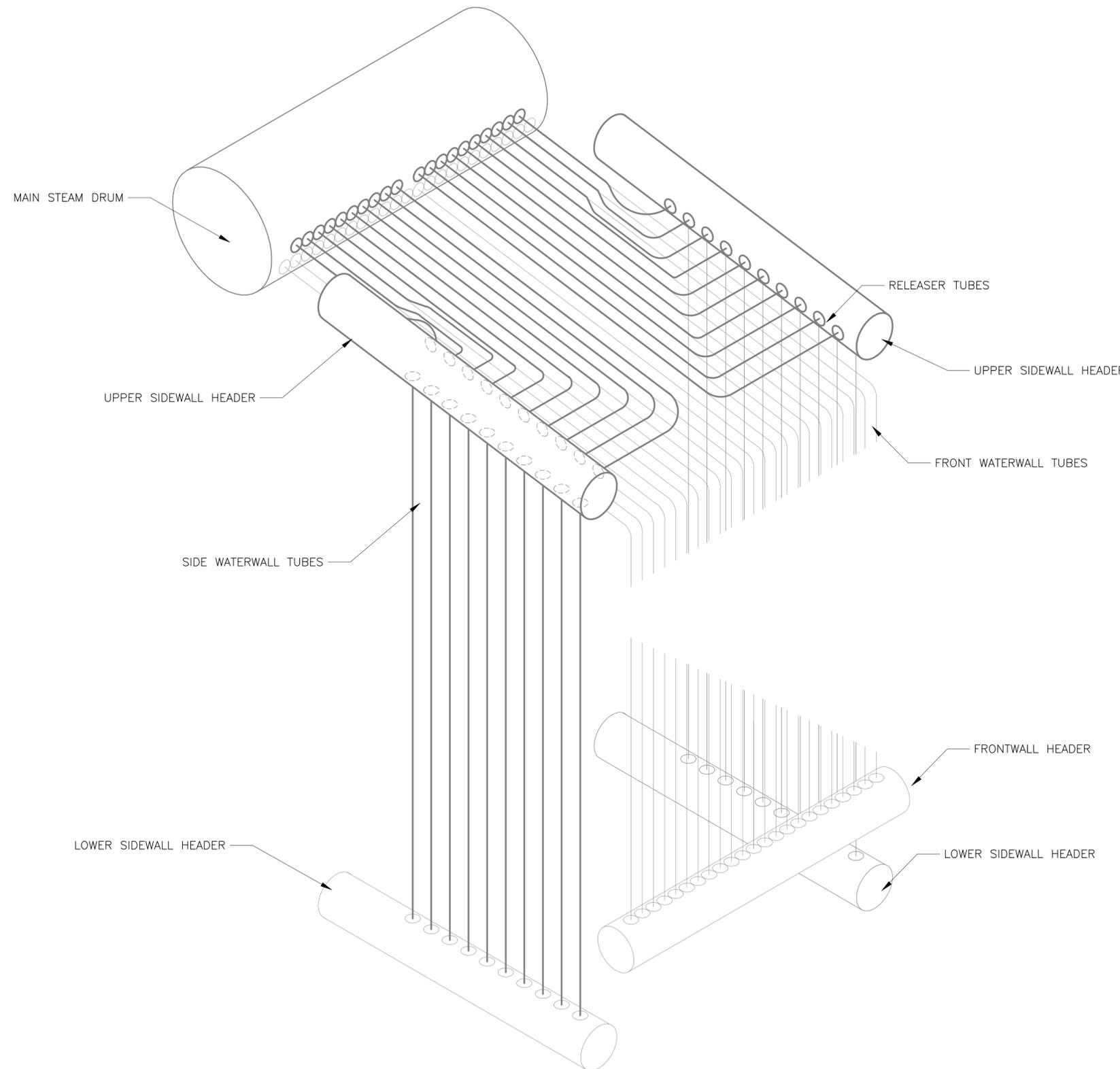
CHIEF ENG/ARCH: _____

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING MID-ATLANTIC
NEWPORT, RI
NAVAL STATION NEWPORT
**OVERHAUL BOILER #1
BUILDING 7CC**
MECHANICAL DETAILS

SCALE: N/A
PROJECT NO.: 1470866
CONSTR. CONTR. NO.: N40083-14-D-0016
NAVFAC DRAWING NO.: 12734666
SHEET 17 OF 25

NAVSTA #43471-402
M-502
DRAWING REVISION: 10 MAY 2014

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport RIV\2015\1_Navport\RI-Playbook-Drawings\Mechanical\M-503.dwg LAYOUT NAME: Layout1 PLOTTED: Thursday, October 27, 2016 - 1:25pm USER: hiale



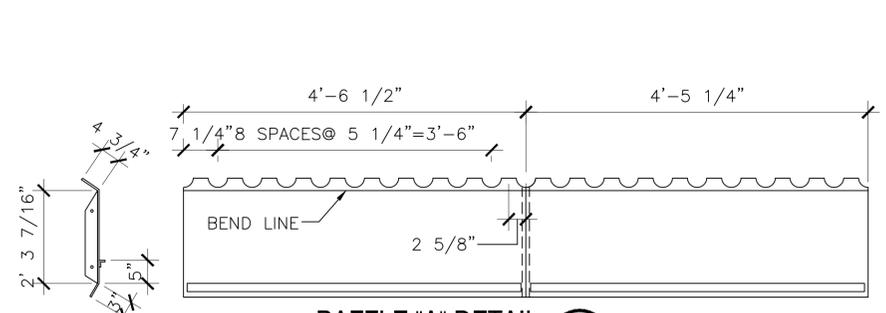
NOTE: ALL BOILER TUBES SHALL BE REPLACED. VARIED LINE WEIGHTS PROVIDED TO INDICATE DEPTH OF FIELD ONLY.

ISOMETRIC LAYOUT OF FRONT AND SIDE WATERWALL TUBES (B1)
 NTS M-503

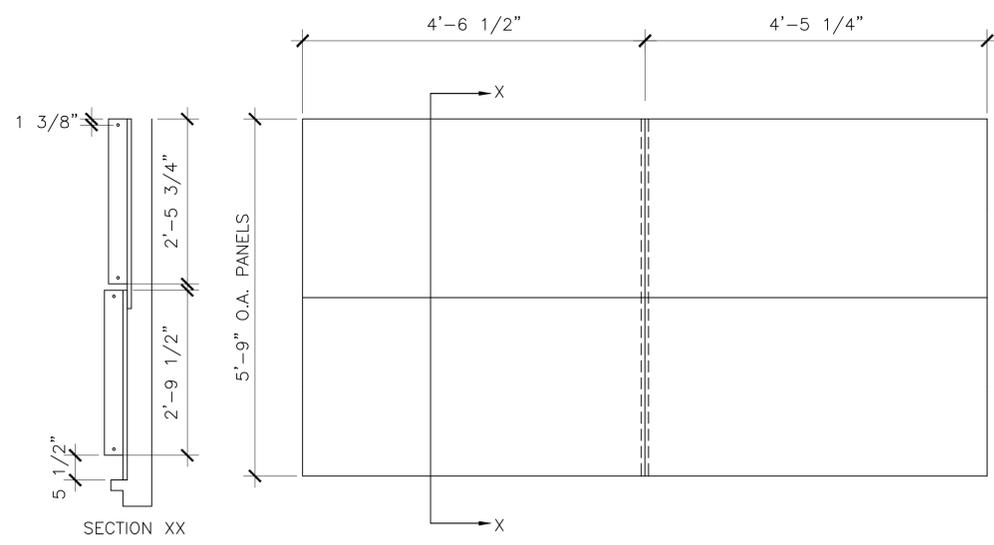
NAVSTA #43472-402

DATE	10/28/16	APPR
DESCRIPTION	ISSUED FOR CONSTRUCTION	
		
		
A/E INFO		
APPROVED		
FOR COMMANDER NAVFAC		
ACTIVITY		
SATISFACTORY TO		
DES	DRW	CHK
<<PM/DM>>		
BRANCH MANAGER		
CHIEF ENG/ARCH		
<<-->>		
DEPARTMENT OF THE NAVY		
NAVAL FACILITIES ENGINEERING COMMAND		
NAVAL FACILITIES ENGINEERING MID-ATLANTIC		
NEWPORT, RI		
NAVAL STATION NEWPORT		
OVERHAUL BOILER #1		
BUILDING 7CC		
MECHANICAL DETAILS		
SCALE: N/A		
PROJECT NO.: 1470866		
CONSTR. CONTR. NO. N40083-14-D-0016		
NAVFAC DRAWING NO. 12734667		
SHEET	18	OF 25
M-503		
DRAWING REVISION: 10 MAY 2014		

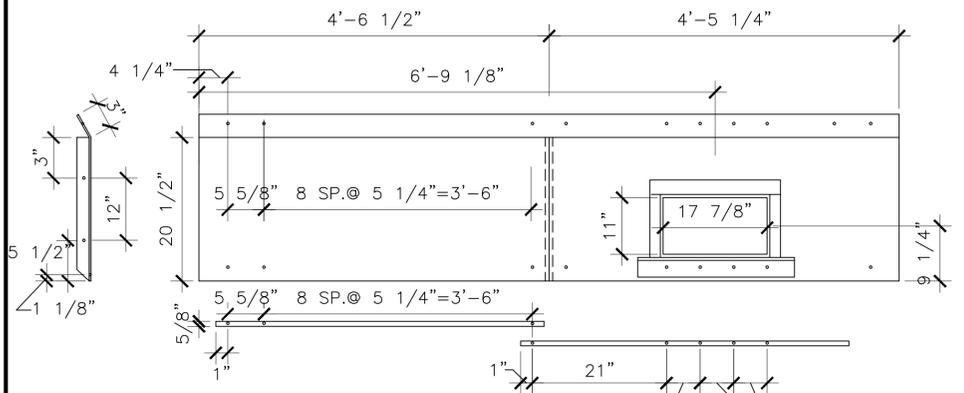
FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport_RV\DD202551_NewportRI-Eligible\Drawings\Mechanical\M-505.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 4:31pm USER: litae



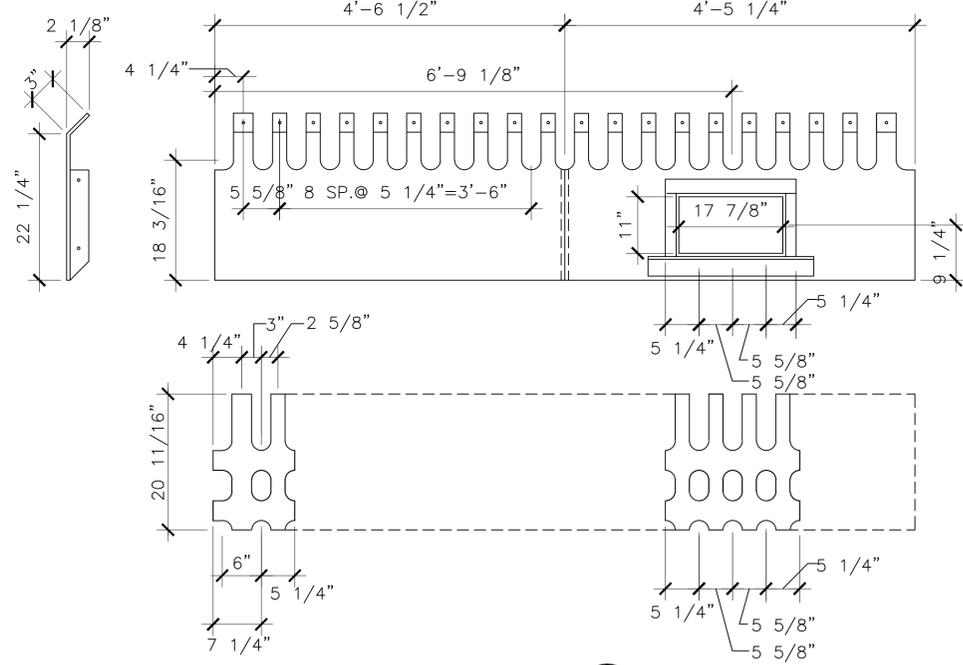
BAFFLE "A" DETAIL (D1)
SCALE: NONE M-505



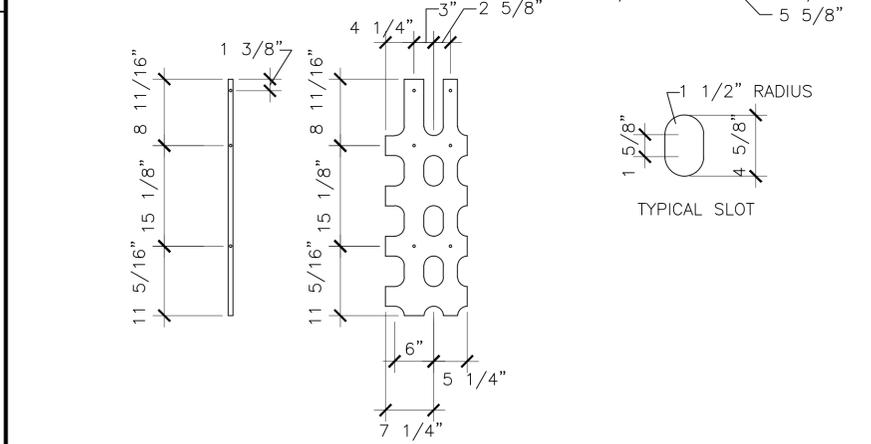
BAFFLE "B" DETAIL (C4)
SCALE: NONE M-505



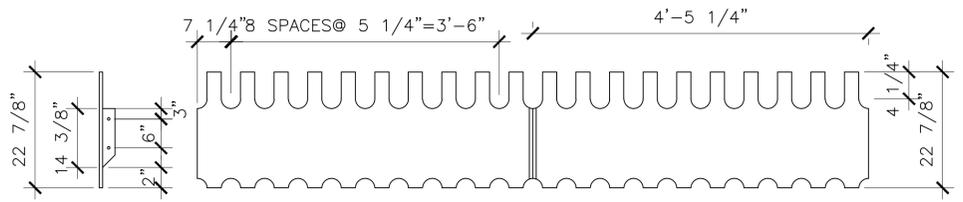
BAFFLE "C" DETAIL (B1)
SCALE: NONE M-505



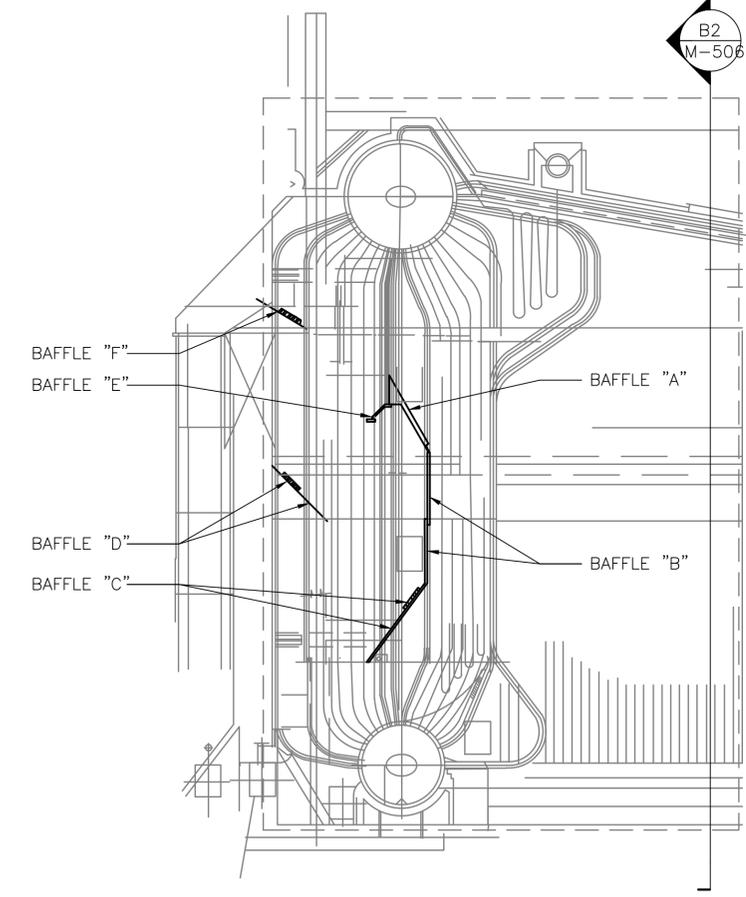
BAFFLE "D" DETAIL (B4)
SCALE: NONE M-505



BAFFLE "E" DETAIL (A2)
SCALE: NONE M-505



BAFFLE "F" DETAIL (A3)
SCALE: NONE M-505

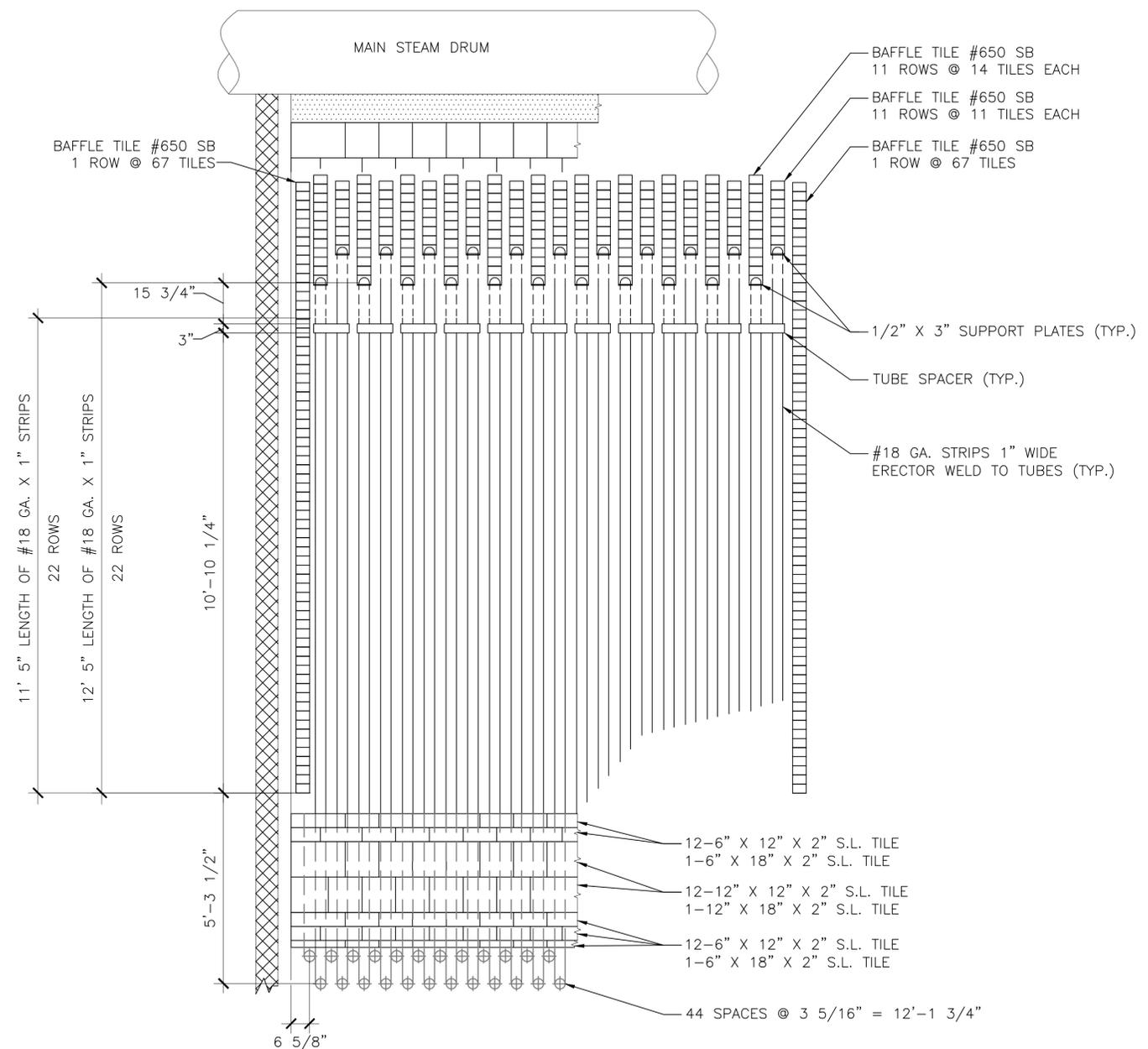


OVERALL BAFFLE ARRANGEMENT (B5)
SCALE: NONE M-505

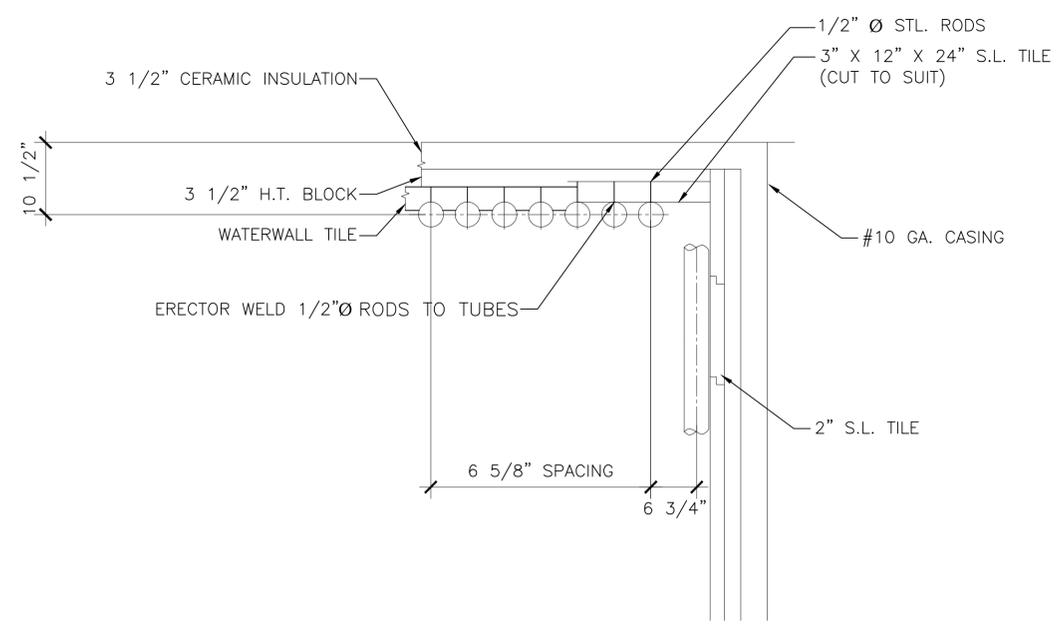
ISSUED FOR CONSTRUCTION	DATE	10/28/16
SYN	DESCRIPTION	
 		
APPROVED	A/E INFO	
PER COMMANDER NAVFAC		
ACTIVITY	-----	
SATISFACTORY TO	-----	
DES -	DRW -	CHK -
<<P/M>>		
BRANCH MANAGER	-----	
CHIEF ENG/ARCH	-----	
<<-->>		
DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND	NEWPORT, RI
NORFLEET IPT	NAVAL FACILITIES ENGINEERING MID-ATLANTIC	NEWPORT, RI
NAVAL STATION NEWPORT	OVERHAUL BOILER #1	MECHANICAL DETAILS
	BUILDING 7CC	
SCALE:	N/A	
EPROJCT NO.:	1470866	
CONSTR. CONTR. NO.	N40083-14-D-0016	
NAVFAC DRAWING NO.	12734669	
SHEET	20	OF 25
M-505		
DRAWING REVISION: 10 MAY 2014		

NAVSTA #43474-402

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport\RV\DDZ0251_Neaport\B1-#RigBoiler-Drawings\Mechanical\M-506.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 4:11pm USER: lita



BAFFLE TILE SECTIONAL DETAIL (B2)
SCALE: NONE M-506



STEEL ROD SUPPORT DETAIL (C4)
SCALE: NONE M-506

APPROVED	ISSUED FOR CONSTRUCTION	DATE	APPR
PER COMMANDER NAVFAC	DESCRIPTION	10/28/16	
			
			
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING MID-ATLANTIC NAVAL STATION NEWPORT OVERHAUL BOILER #1 BUILDING 7CC MECHANICAL DETAILS NEWPORT, RI			
SCALE: N/A EPROJECT NO.: 1470866 CONSTR. CONTR. NO.: N40083-14-D-0016 NAVFAC DRAWING NO.: 12734670 SHEET 21 OF 25			
NAVSTA #43475-402 M-506 <small>DRAWING REVISION: 10 MAY 2014</small>			

1

2

3

4

5

D

C

B

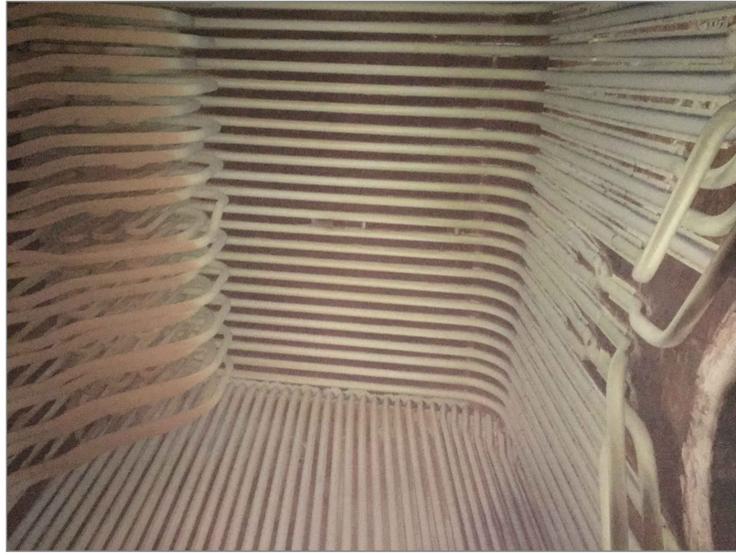
A



FRONT WALL BELOW BURNER TO WATERWALL HEADER (C2) M-507



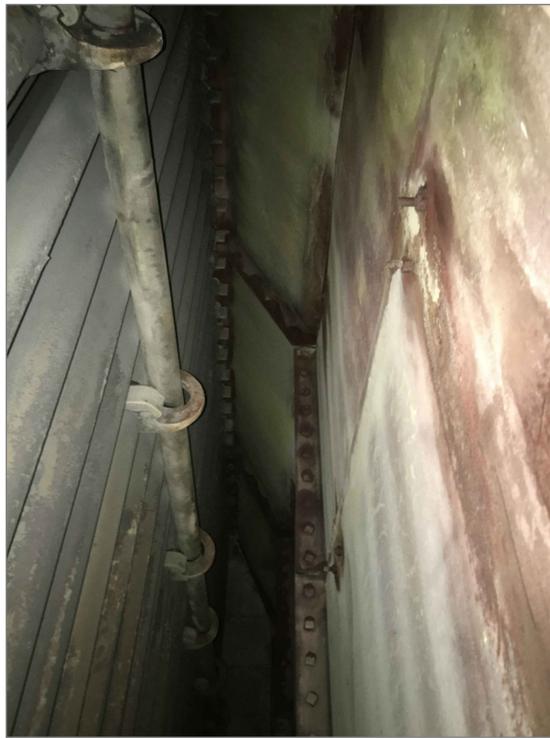
FRONT WALL ABOVE BURNER (C3) M-507



UPPER FURNACE, BURNER TO RIGHT (C4) M-507



REAR WALL, UPPER FURNACE (A3) M-507

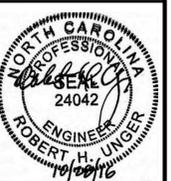


SOOT BLOWER ELEMENT #4 (A3) M-507



AREA BELOW REAR GENERATING BANK (A4) M-507

SYN	DESCRIPTION	DATE	APPR
	ISSUED FOR CONSTRUCTION	10/28/16	



DATE INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO

DES - DRAW - CHK -

BRANCH MANAGER

CHEF ENG/ARCH

DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING MID-ATLANTIC

NEWPORT, RI

NAVAL STATION NEWPORT

OVERHAUL BOILER #1

BUILDING 7CC

MECHANICAL DETAILS

SCALE: N/A

PROJECT NO.: 1470866

CONSTR. CONTR. NO. N40083-14-D-0016

NAVFAC DRAWING NO. 12734671

SHEET 22 OF 25

M-507

NAVSTA #43476-402

DRAWING REVISION: 10 MAY 2014

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport_RI\FDZD551_NewportRI-FileyBoiler-Drawings\Mechanical\M-507.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, October 26, 2016 - 4:14pm USER: lita

ELECTRICAL ABBREVIATIONS

A AMP AMPERE AC ALTERNATING CURRENT ACC ACCESS CONTROL AF AMPERE FRAME, AMPERE FUSE AFC ABOVE FINISHED COUNTER AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE AIC AMPERE INTERRUPTING CAPACITY AHU AIR HANDLING UNIT ANN ANNUNCIATOR AO ANALOG OUTPUT AP ANNUNCIATOR POINT AT AMPERE TRIP AV AUDIO/VISUAL AWG AMERICAN WIRE GAUGE	B BB BACKBONE BC BARE COPPER BKR BREAKER BMS BALANCED MAGNETIC SWITCH	C C CONDUIT CHH COMMUNICATIONS HAND HOLE COND CONDUCTOR CONN CONNECTION CONT CONTINUOUS COR CONTRACTING OFFICER'S REPRESENTATIVE CB CIRCUIT BREAKER CCTV CLOSED CIRCUIT TELEVISION CKT CIRCUIT CLR CONTROL RELAY CO CONDUIT ONLY CONV CONVENIENCE COMB COMBINATION COMM COMMUNICATION COMP COMPRESSOR CPU CENTRAL PROCESSING UNIT CR CARD READER CS CONTROL SWITCH CT CURRENT TRANSFORMER CU COPPER	D DC DIRECT CURRENT DDCP DIRECT DIGITAL CONTROL PANEL DEM DEMAND DGP DATA GATHERING PANEL DI DIGITAL INPUT DIA DIAMETER DISC DISCONNECT DM DEMAND METER DO DIGITAL OUTPUT DP DATA PANEL DPDT DOUBLE POLE DOUBLE THROW DPNL DISTRIBUTION PANEL DP DISTRIBUTION PANEL DPST DOUBLE POLE SINGLE THROW DRY DRYER DT DRYER TYPE	E <E> EXISTING TO REMAIN E.C. EMPTY CONDUIT EHC ELECTRIC HEATING COIL EL ELECTRIC, ELECTRICAL ELEV ELEVATOR EMH ELECTRICAL MANHOLE EMT ELECTRICAL METALLIC TUBING ENCL ENCLOSURE EHT ELECTRIC HEAT TRACE EQ, EQUIP EQUIPMENT ER EQUIPMENT ROOM ES ELECTRIC STRIKE EWC ELECTRIC WATER COOLER	F FAAP FIRE ALARM ANNUNCIATOR PANEL FACP FIRE ALARM CONTROL PANEL FC FOOTCANDLE FDR FEEDER FLA FULL LOAD AMPERES FLND NON-DIMMED FLUORESCENT FL FLUORESCENT FO FIBER OPTIC FPP FIBER PATCH PANEL FUT FUTURE FV FULL VOLTAGE FVNR FULL VOLTAGE, NON-REVERSING	G GA GAUGE GEC GROUNDING ELECTRODE CONDUCTOR G.F.E. GOVERNMENT FURNISHED EQUIPMENT GFI GROUND FAULT INTERRUPTER GFCI GROUND FAULT CIRCUIT INTERRUPTER GFP GROUND FAULT PROTECTION G.GRD. GROUND GND	H HAZ HAZARDOUS HID HIGH INTENSITY DISCHARGE HH HANDHOLE HOA HAND-OFF-AUTOMATIC HP HORSEPOWER HPF HIGH POWER FACTOR HPP HORIZONTAL PATCH PANEL HPS HIGH PRESSURE SODIUM HSS HOUSE SIDE SHIELD HT HEIGHT HV HIGH VOLTAGE HVAC HEATING, VENTILATING AND AIR CONDITIONING HZ HERTZ	I IC INTERMEDIATE CROSS CONNECT IDF INTERMEDIATE DISTRIBUTION FRAME IES ILLUMINATING ENGINEERING SOCIETY IG ISOLATED GROUND INCAND INCANDESCENT INTR INTRUSION DETECTION	J J,JB JUNCTION BOX	K KA KILOAMPERES KCMIL THOUSAND CIRCULAR MILLS KEQ KITCHEN EQUIPMENT KP KEYPAD KV KILOVOLT KVA KILOVOLT AMPERES KVAR KILOVOLT AMPERES-REACTIVE KW KILOWATT KWH KILOWATT HOUR	L L&A LIGHTING AND APPLIANCE LRA LOCKED ROTOR AMPERE LTG LIGHTING LV LOW VOLTAGE	M MAX MAXIMUM MC MAIN CROSS CONNECT MCC MOTOR CONTROL CENTER MCP MOTOR CIRCUIT PROTECTOR MDF MAIN DISTRIBUTION FRAME MDT MAIN DISTRIBUTION TERMINAL MEQ MECHANICAL EQUIPMENT MFR MANUFACTURER MIN MINIMUM MLO MAIN LUGS ONLY mm MILLIMETER MM MULTIMODE MTG MOUNTING	N N, NEUT NEUTRAL N/C NORMALLY CLOSED NEC NATIONAL ELECTRICAL CODE NIC NOT IN CONTRACT NO NUMBER N/O NORMALLY OPEN NR NON-REVERSING	O OC ON CENTER, OVERCURRENT OSP OUTSIDE PLANT OVHD OVERHEAD	P P POLE PABX PRIVATE AUTOMATIC BRANCH EXCHANGE PBX PRIVATE BRANCH EXCHANGE PCMS POWER CONTROL MONITORING SYSTEM PF POWER FACTOR PH PHASE PIR PASSIVE INFRARED PKG PACKAGED POS POSITIVE PTZ PAN-TILT-ZOOM PVC POLYVINYL CHLORIDE	Q QY, QTY QUANTITY	R REC RECEPTACLE RECT RECTIFIER RFI RADIO FREQUENCY INTERFERENCE RFE RANGE RGS RIGID GALVANIZED STEEL RMS ROOT MEAN SQUARE	S SCP SYSTEM CONTROL PANEL SM SINGLE MODE SP SINGLE POLE SSRV SOLID STATE REDUCED VOLTAGE S/S START-STOP ST SET S-T SHUNT-TRIP STBY STANDBY STD STANDARD STP SHIELDED TWISTED PAIR SUB SUB PANEL SVS SEISMIC VAULT SENSOR SW SWITCH SWBD SWITCHBOARD	T TB TERMINAL BOX OR TERMINAL BOARD TD TIME DELAY TE TELECOMMUNICATIONS ENCLOSURE TELE TELEPHONE TERM TERMINAL TP TERMINATION PANEL TR TELECOMMUNICATIONS ROOM TT TELEPHONE TERMINAL TV TELEVISION TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR TYP TYPICAL	U UNIV UNIVERSAL	V V VOLT, VOLTAGE VA VOLT AMPERE VM VOLTMETER VP VOICE PANEL VFD VARIABLE FREQUENCY DRIVE	W W WATT WM WATTMETER WP WEATHERPROOF	X X,XP EXPLOSION PROOF XFMR TRANSFORMER	Y Y-D WYE-DELTA Y WYE	Z Z IMPEDANCE
--	--	--	--	---	---	--	---	---	-------------------------------	--	---	--	---	---	---	------------------------------	---	---	--	----------------------------	---	---	--	------------------------------------	-------------------------

WIRING SYMBOLS

—————	CONDUIT OR CABLE CONCEALED IN WALLS OR ABOVE CEILINGS
- - - - -	CONDUIT OR CABLE EXPOSED
-----	CONDUIT OR CABLE IN SLAB OR BELOW GRADE
---E---	UNDERGROUND PRIMARY ELECTRIC CONDUIT OR CABLE
---E---	UNDERGROUND SECONDARY ELECTRIC CONDUIT OR CABLE
---E _s ---	EXISTING UNDERGROUND ELECTRIC CONDUIT OR CABLE
—E—	AERIAL ELECTRIC CABLE
	CONCRETE ENCASED DUCT BANK
-----	LOW VOLTAGE CABLE
—○—	CONDUIT OR CABLE TURNING UP
—●—	CONDUIT OR CABLE TURNING DOWN
—>—	CONDUIT OR CABLE CHANGE IN ELEVATION
— —	CONDUIT CAPPED
—CATV—	CABLE TV
—FO—	FIBER OPTIC CABLE
---c---	UNDERGROUND COMMUNICATION CONDUIT OR CABLE
---c _s ---	EXISTING UNDERGROUND COMMUNICATION CONDUIT OR CABLE
—c—	AERIAL COMMUNICATION CABLE
→ EL-2,4,6	ARROW HEADS DENOTE A HOMERUN TO PANELBOARD. INDICATES ORIGINATING PANEL AND CIRCUIT NUMBERS.
	SWITCH LEG CONNECTED TO SWITCH "a".
	SWITCH LEG CONNECTED TO RELAY #1 IN LIGHTING CONTROL PANEL INDICATED.

SINGLE LINE DIAGRAM SYMBOLS

	TRANSFER SWITCH
	MOLDED CASE CIRCUIT BREAKER
	DRAW OUT CIRCUIT BREAKER
	FUSED DISCONNECT SWITCH
	NON-FUSED DISCONNECT SWITCH
	LUG CONNECTION
	TRANSFORMER (T112 = 112.5kVA, ETC.)
	SURGE PROTECTIVE DEVICE
	DIGITAL MULTI-FUNCTION METER
	LIGHTNING ARRESTOR
	GROUND FAULT PROTECTION
	CURRENT TRANSFORMER
	DRAW-OUT POTENTIAL TRANSFORMER WITH PRIMARY FUSE
	MAIN CIRCUIT BREAKER PANELBOARD
	MAIN LUG ONLY PANELBOARD
	UTILITY METER

GENERAL ELECTRICAL NOTES

1. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATICAL IN NATURE AND INDICATE THE GENERAL LOCATION OF OUTLETS, EQUIPMENT, AND THE CIRCUIT ARRANGEMENT OF THE REQUIRED WIRING. ALTHOUGH THE DRAWINGS DO NOT NECESSARILY INDICATE THE ACTUAL ROUTES OF SURFACE MOUNTED CONDUITS, WHERE INDICATED, THEY SHALL BE FOLLOWED AS CLOSELY AS PROPER COORDINATION WITH THE WORK OF OTHER TRADES AND SPACE WILL PERMIT. WHERE CONDUIT RUNS ARE NOT SHOWN ON THE DRAWINGS, SUCH AS FOR MECHANICAL EQUIPMENT, COORDINATE CONDUIT RUNS WITH THE WORK OF OTHER TRADES AND STRUCTURE. SIMPLIFY INSTALLATION WHEREVER POSSIBLE, BUT SUBJECT TO APPROVAL BY THE COR FOR VISUAL AND STRUCTURAL REASONS. IT IS NOT WITHIN THE SCOPE OF THE DRAWINGS TO SHOW ALL NECESSARY OFFSETS, BENDS, PULL BOXES, AND OBSTRUCTIONS. THE DRAWINGS ARE NOT INTENDED TO BE SCALED, REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
2. SOME LEGEND SYMBOLS MIGHT NOT BE USED - SEE DRAWINGS FOR APPLICABLE DEVICES.

GENERAL ELECTRICAL DEMOLITION NOTES

1. EXISTING INFORMATION IS INTENDED TO ASSIST IN IDENTIFYING THE EXISTING CONDITIONS BASED UPON THE INFORMATION GATHERED FROM RECORD DRAWINGS AND THROUGH NON-INVASIVE FIELD INVESTIGATION. PERFORM DEMOLITION WITH THE INTENT OF COMPLETELY REMOVING EQUIPMENT, DEVICES, AND ASSOCIATED WIRING AND CONDUIT WITHIN THE PROJECT AREA, UNLESS NOTED OTHERWISE. VERIFY ROUTING AND CIRCUIT ARRANGEMENT SHOWN ON THE DRAWINGS PRIOR TO COMMENCING WORK.
2. WHERE EXISTING CIRCUITS FEEDING DEVICES THAT ARE TO BE DEMOLISHED OR RELOCATED, MAINTAIN CIRCUIT CONTINUITY TO THE PORTION OF THE CIRCUIT REQUIRED TO REMAIN IN SERVICE.
3. PATCH, REPAIR, AND PAINT HOLES AND DAMAGE CAUSED BY THE ELECTRICAL MODIFICATIONS TO MATCH ADJACENT AREA AND EXISTING CONDITIONS.
5. SAFEGUARD EXISTING TO REMAIN EQUIPMENT, DEVICES, WIRING, CONDUIT, AND RELATED ITEMS FROM DAMAGE OR SERVICE INTERRUPTION. IF DEEMED NECESSARY TO RELOCATE COMPONENTS, TEMPORARILY OR OTHERWISE, ACQUIRE APPROVAL FROM THE COR PRIOR TO SUCH ACTION.
7. WHEN RELOCATING DEVICES AND EQUIPMENT, RELOCATE ASSOCIATED WIRING, CONDUIT, BOXES, HANGERS, AND APPURTENANCES BACK TO THE SOURCE, UNLESS OTHERWISE NOTED. MAINTAIN SERVICE AND CIRCUIT CONTINUITY TO REMAINING DEVICES AND EQUIPMENT WITHIN AND OUTSIDE THE AREA OF WORK THROUGHOUT THE DURATION OF WORK. PROVIDE TEMPORARY POWER TO SUPPORT EXISTING TO REMAIN CIRCUITS, AS REQUIRED TO MINIMIZE OUTAGES. INSTALL TEMPORARY SOURCES PRIOR TO DE-ENERGIZATION OF EQUIPMENT OR DEVICES SCHEDULED FOR RELOCATION. COORDINATE WITH COR.
8. VERIFY CIRCUITS SERVING EQUIPMENT TO BE RELOCATED PRIOR TO BEGINNING WORK.

GENERAL ELECTRICAL NEW WORK NOTES

1. EXTENSION OF EXISTING CONDUIT THAT REMAINS SHALL MATCH THAT CONDUIT IN BOTH TYPE AND SIZE.
2. NEW WIRE REQUIRED TO BE INSTALLED SHALL BE THHN-THWN INSULATED, 600 VOLT, COPPER, 75 DEGREE C RATED, AND SHALL MATCH THE NUMBER AND SIZE OF THE EXISTING WIRING TO WHICH IT IS CONNECTED.

MISCELLANEOUS SYMBOLS

	EQUIPMENT IDENTIFICATION TAG.
-----	HEAVY DASHED LINE ON DEMOLITION PLANS DENOTES ITEM TO BE DEMOLISHED
—————	LIGHT LINE DENOTES ITEM TO REMAIN
—————	HEAVY LINE DENOTES WORK TO BE PERFORMED
	CONNECTION TO EXISTING
	EXTENT OF DEMOLITION

DATE	10/28/16
ISSUED FOR CONSTRUCTION	
DESCRIPTION	
SW	
APPROVED	
FER COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	
DES	DP
DRW	DP
CHK	BM
BRANCH MANAGER	
CHIEF ENGR/ARCH	
DEPARTMENT OF THE NAVY	
NAVAL FACILITIES ENGINEERING COMMAND	
NAVAL FACILITIES ENGINEERING MID-ATLANTIC	
NEWPORT, RI	
NAVAL STATION NEWPORT	
OVERHAUL BOILER #1	
BUILDING 7CC	
ELECTRICAL ABBREVIATIONS AND GENERAL NOTES	
SCALE:	NONE
EPROJECT NO.:	1470866
CONSTR. CONTR. NO.	N40083-14-D-0016
NAVFAC DRAWING NO.	12734672
SHEET	23 OF 25
NAVSTA #43477-402	E-001
DRAWING REVISION: 10 MAY 2014	

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport_RI\12734672_1_Neporftbl-eflybshar\Drawings\Electrical\E-001.dwg LAYOUT NAME: E-001 PLOTTED: Thursday, October 27, 2016 12:52pm USER: hite

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport RVT\2015\Newport\Drawings\Electrical\E-002.dwg PLOTTED: Wednesday, October 26, 2016 - 2:58pm USER: lrt

SWITCH AND CONTROL SYMBOLS

- COMBINATION MOTOR STARTER/FUSED DISCONNECT SWITCH: 600V, 3-POLE, 30A SWITCH, 30A FUSES, SIZE 1 STARTER, IN NEMA 1 ENCLOSURE, MOUNTED 1524mm AFF UNLESS OTHERWISE NOTED.
- FUSIBLE DISCONNECT SWITCH: 600V, 3-POLE, 30A SWITCH, 30A FUSES, IN NEMA 1 ENCLOSURE, MOUNTED 1524mm AFF UNLESS OTHERWISE NOTED.
- NON-FUSIBLE DISCONNECT SWITCH: 600V, 30A, 3-POLE, IN NEMA 1 ENCLOSURE, MOUNTED 1524mm AFF UNLESS NOTED OTHERWISE.
- ENCLOSED CIRCUIT BREAKER: 600V, 100AF/100AT, 3-POLE IN NEMA 1 ENCLOSURE, MOUNTED 1524mm AFF UNLESS NOTED OTHERWISE.
- ENCLOSED MOTOR STARTER. SIZE 1 STARTER IN NEMA 1 ENCLOSURE UNLESS NOTED OTHERWISE.
- VARIABLE FREQUENCY DRIVE
- MANUAL MOTOR STARTER AND DISCONNECT SWITCH
- MOTOR CONNECTION
- PACKAGED EQUIPMENT CONNECTION POINT
- THREE-BUTTON CONTROL STATION
- SINGLE-BUTTON CONTROL STATION

DISTRIBUTION EQUIPMENT SYMBOLS

- SURFACE MOUNTED 480 VOLT RATED DISTRIBUTION PANEL
- SURFACE MOUNTED 208 VOLT RATED DISTRIBUTION PANEL
- SURFACE MOUNTED 480 VOLT RATED PANEL
- SURFACE MOUNTED 208 VOLT RATED PANEL
- FLUSH MOUNTED 480 VOLT RATED PANEL
- FLUSH MOUNTED 208 VOLT RATED PANEL
- TRANSFORMER (T30kVA, NO LETTER: GENERAL DUTY, K: K-RATED, H: HARMONIC CANCELLING)

LIGHTNING PROTECTION AND GROUNDING

- GROUNDING CONDUCTOR
- LIGHTNING PROTECTION CONDUCTOR
- LIGHTNING PROTECTION AIR TERMINAL
- LIGHTNING PROTECTION DOWNLEAD CONDUCTOR CONCEALED WITHIN BUILDING STRUCTURE
- LIGHTNING PROTECTION CONDUCTOR ROOF PENETRATION TO LOWER ROOF
- GROUND ROD
- GROUND TEST WELL
- POWER DISTRIBUTION SYSTEM MAIN GROUND BAR
- POWER DISTRIBUTION SYSTEM SECONDARY GROUND BAR
- TELECOMMUNICATIONS SYSTEM MAIN GROUND BAR
- TELECOMMUNICATIONS SYSTEM SECONDARY GROUND BAR

SITE ELECTRICAL EQUIPMENT SYMBOLS

- SITE HAND HOLE.
- EXISTING SITE HAND HOLE.
- SITE ELECTRICAL MANHOLE.
- EXISTING SITE ELECTRICAL MANHOLE.
- SITE COMMUNICATIONS MANHOLE.
- EXISTING SITE COMMUNICATIONS MANHOLE.
- UTILITY POLE
- PAD MOUNTED TRANSFORMER
- PAD MOUNTED SWITCH

LIGHTING SYMBOLS

- DOWNLIGHT FIXTURE. SUBSCRIPT "D1" DENOTES FIXTURE TYPE D1, SUBSCRIPT "b" DENOTES CONTROLLED BY SWITCH b (TYP. FOR ALL LIGHTING FIXTURES).
- DOWNLIGHT FIXTURE WITH INTEGRAL BATTERY PACK AND CHARGER.
- ROUND WALL WASHER. CHEVRON POINTS TO WASHED WALL.
- ROUND CORNER WALL WASHER. CHEVRON POINTS TO WASHED WALL.
- RECTANGULAR WALL WASHER. CHEVRON POINTS TO WASHED WALL.
- WALL MOUNTED FIXTURE.
- WALL MOUNTED FIXTURE WITH INTEGRAL BATTERY PACK AND CHARGER.
- 2' x 4' FIXTURE (DRAWN TO SCALE).
- 2' x 4' FIXTURE WITH INTEGRAL BATTERY PACK AND CHARGER.
- 2' x 2' FIXTURE (DRAWN TO SCALE).
- 2' x 2' FIXTURE WITH INTEGRAL BATTERY PACK AND CHARGER.
- 1' x 4' FIXTURE (DRAWN TO SCALE).
- 1' x 4' FIXTURE WITH INTEGRAL BATTERY PACK AND CHARGER.
- ROUND PENDANT LIGHT FIXTURE
- ROUND PENDANT LIGHT FIXTURE WITH INTEGRAL BATTERY PACK AND CHARGER.
- STRIP FIXTURE.
- STRIP FIXTURE WITH INTEGRAL BATTERY PACK AND CHARGER.
- WALL MOUNTED FIXTURE
- WALL MOUNTED FIXTURE WITH INTEGRAL BATTERY PACK AND CHARGER.
- WALL MOUNTED BATTERY PACK WITH HEADS.
- WALL MOUNTED EXIT SIGN WITH ARROWS AS INDICATED (SHADING INDICATES ILLUMINATED FACE(S) OF SIGN).
- CEILING OR PENDANT MOUNTED EXIT SIGN WITH ARROWS AS INDICATED (SHADING INDICATES ILLUMINATED FACE(S) OF SIGN).
- GRADE-MOUNTED SITE FLOOD LIGHT.
- SITE LIGHTING BOLLARD.
- SINGLE SITE LIGHTING FIXTURE. ARROW INDICATES ORIENTATION OF OPTICS.
- TWIN-MOUNT SITE LIGHTING FIXTURE. ARROW INDICATES ORIENTATION OF OPTICS.
- TRIPLE-MOUNT SITE LIGHTING FIXTURE. ARROW INDICATES ORIENTATION OF OPTICS.
- QUAD-MOUNT SITE LIGHTING FIXTURE. ARROW INDICATES ORIENTATION OF OPTICS.
- ROUND POST-TOP SITE LIGHTING FIXTURE. ARROW INDICATES ORIENTATION OF OPTICS (WHERE APPLICABLE).
- LIGHTING CONTROL PANEL
- LIGHTING CONTROL RELAY PANEL

COMMUNICATIONS SYSTEMS SYMBOLS

- COMBINATION VOICE/DATA OUTLET - FACE PLATE WITH FOUR RJ-45 CAT6 JACKS MOUNTED 18" AFF TO CENTER OF BOX UNLESS OTHERWISE NOTED. PROVIDE (2) 1" CONDUIT FROM BOX TO COMMUNICATIONS CABINET.
- DATA OUTLET - FACE PLATE WITH FOUR RJ-45 CAT6 JACKS MOUNTED 18" AFF TO CENTER OF BOX UNLESS OTHERWISE NOTED. PROVIDE (2) 1" CONDUIT FROM BOX TO COMMUNICATIONS CABINET. SUBSCRIPT "W" DENOTES OUTLET FOR WALL MOUNTED TELEPHONE WITH ONE RJ-45 CAT6 JACK INSTALLED AT 48" AFF AND (1) 1" CONDUIT FROM BOX TO COMMUNICATIONS CABINET.
- VOICE ONLY OUTLET - FACE PLATE WITH ONE RJ-45 CAT6 JACK MOUNTED 18" AFF TO CENTER OF BOX UNLESS OTHERWISE NOTED. PROVIDE (1) 1" CONDUIT FROM BOX TO COMMUNICATIONS CABINET. SUBSCRIPT "W" DENOTES OUTLET FOR WALL MOUNTED TELEPHONE INSTALLED AT 48" AFF, SUBSCRIPT "F" DENOTES DEDICATED LINE FOR FIRE ALARM AUTO-DIALER, SUBSCRIPT "WP" DENOTES WEATHERPROOF OUTLET.
- ROUGH-IN FOR TELEVISION OUTLET - PROVIDE EMPTY OUTLET BOX WITH (1) 1" CONDUIT FROM BOX TO PLYWOOD BACKBOARD IN COMMUNICATIONS ROOM.
- WALL MOUNTED PUNCH-DOWN BLOCK
- STANDARD FLOOR MOUNTED OPEN EQUIPMENT RACK WITH CABLE MANAGEMENT ACCESSORY
- STANDARD FLOOR MOUNTED ENCLOSED EQUIPMENT CABINET

WIRING DEVICE SYMBOLS

- TOGGLE SWITCH - LOWER CASE SUBSCRIPT "c" DENOTES SWITCH DESIGNATION "c". OTHER SUBSCRIPT DENOTES:
 - K = KEYED SWITCH
 - 3 = THREE WAY
 - 4 = FOUR WAY
 - 3K = THREE WAY KEYED SWITCH
 - 4K = FOUR WAY KEYED SWITCH
 - D = DIMMER (NO SUBSCRIPT- 1200W, SUBSCRIPT 1 - 600W)
 - M = MOTOR RATED SWITCH
 - OS = OCCUPANCY SENSOR/WALL SWITCH
 - PL = ILLUMINATED SWITCH (WHEN OFF)
 - T = ADJUSTABLE TIMER SWITCH
 - L1 = LOW VOLTAGE CONTROL STATION, NUMERAL DENOTES CONTROL STATION NUMBER
 - F = CEILING FAN SPEED CONTROL
 - WP = WEATHER PROOF
 - X = EXPLOSION PROOF
- EXTERIOR PASSIVE INFRARED MOTION SENSOR
- PHOTOCCELL SENSOR
- CEILING MOUNTED OCCUPANCY SENSOR AND POWER PACK(S). SUBSCRIPTS DENOTE:
 - DT = DUAL TECHNOLOGY INFRARED/ULTRASONIC
 - IR = INFRARED
 - US = ULTRASONIC
 - NUMERAL DENOTES COVERAGE AREA:
 - NO NUMERAL = 500sf
 - 1 = 1000sf
 - 2 = 2000sf
- WALL MOUNTED DUAL TECHNOLOGY PASSIVE INFRARED/ULTRASONIC OCCUPANCY SENSOR AND POWER PACK(S), SUBSCRIPTS AS NOTED ABOVE
- JUNCTION BOX CONCEALED ABOVE FINISHED CEILING
- JUNCTION BOX IN WALL WITH BLANK COVERPLATE. MOUNT 18" AFF TO CENTER OF BOX UNLESS OTHERWISE NOTED. SUBSCRIPT "D" DENOTES FOR DOOR SECURITY POWER SUPPLY MOUNTED ABOVE FINISHED ACCESSIBLE CEILING.
- WALL MOUNTED DUPLEX RECEPTACLE - 125V, 20A, 2-POLE, 3-WIRE GROUNDING NEMA 5-20R MOUNTED 18" AFF TO CENTER OF RECEPTACLE UNLESS OTHERWISE NOTED. THE FOLLOWING SUBSCRIPTS APPLY TO ALL RECEPTACLE DEVICES:
 - GFI = GROUND FAULT INTERRUPTER
 - WP = WEATHERPROOF ENCLOSURE
 - S = SWITCHED OUTLET - TOP OUTLET TO BE SWITCHED, BOTTOM OUTLET UNSWITCHED
 - SM = SURFACE MOUNTED OUTLET
 - C = COMPUTER RECEPTACLE - GRAY BODY
 - X = EXPLOSION PROOF OUTLET
 - FC = FLUSH CEILING MOUNTED RECEPTACLE
 - EWC = ELECTRIC WATER COOLER
 - IG = ISOLATED GROUND RECEPTACLE
- WALL MOUNTED DUPLEX RECEPTACLE - 125V, 20A, 2-POLE, 3-WIRE GROUNDING NEMA 5-20R MOUNTED 152mm ABOVE COUNTERTOP OR BACKSPASH TO CENTER OF RECEPTACLE UNLESS OTHERWISE NOTED. SUBSCRIPTS AS DEFINED ABOVE.
- WALL MOUNTED SIMPLEX RECEPTACLE - 125V, 20A, 2-POLE, 3-WIRE GROUNDING NEMA 5-20R MOUNTED 18" AFF TO CENTER OF RECEPTACLE UNLESS NOTED OTHERWISE. SUBSCRIPTS AS DEFINED ABOVE.
- WALL MOUNTED DOUBLE DUPLEX RECEPTACLE - TWO 125V, 20A, 2-POLE, 3-WIRE GROUNDING NEMA 5-20R UNDER COMMON COVER PLATE MOUNTED 18" AFF TO CENTER OF RECEPTACLE UNLESS OTHERWISE NOTED. SUBSCRIPTS AS DEFINED ABOVE.
- WALL MOUNTED SPECIAL RECEPTACLE 18" AFF TO CENTER OF RECEPTACLE UNLESS NOTED OTHERWISE. NUMERAL DENOTES NEMA CONFIGURATION:
 - 1 = 125/250V, 30A, 3-POLE, 4-WIRE GROUNDING; NEMA 14-30R
 - 2 = 250V, 30A, 2-POLE, 3-WIRE GROUNDING TWIST LOCK; NEMA L6-30R
 - 3 = 250V, 20A, 2-POLE, 3-WIRE GROUNDING; NEMA 6-20R
- WALL MOUNTED SPECIAL RECEPTACLE 48" AFF TO CENTER OF RECEPTACLE UNLESS OTHERWISE NOTED.
- 6" x 6" x 4" JUNCTION BOX IN WALL WITH BLANK COVERPLATE FOR SECURITY WIRING.

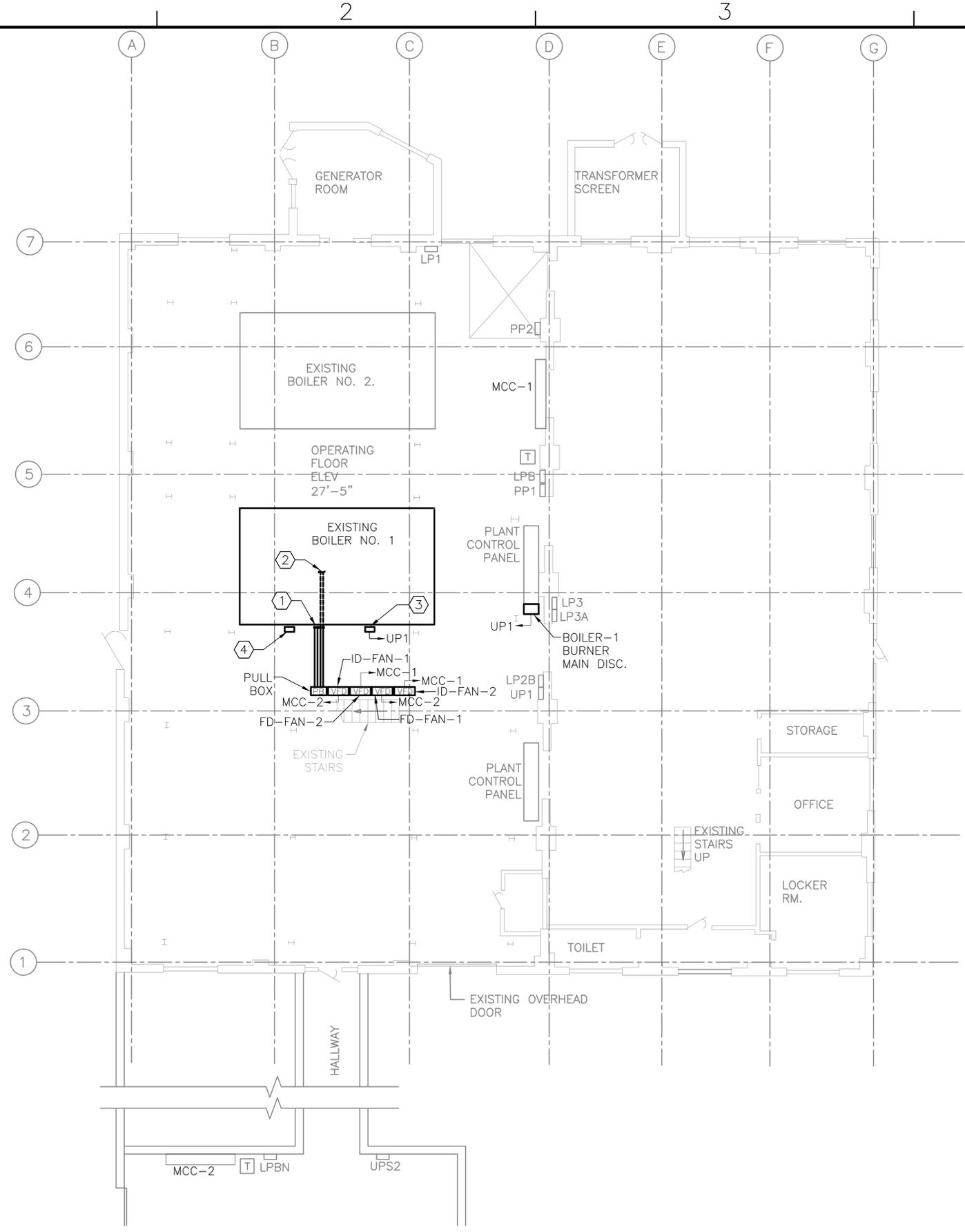
ACCESS CONTROL EQUIPMENT SYMBOLS

- VIDEO INTERCOM MASTER STATION
- VIDEO INTERCOM STATION
- CARD READER
- KEYPAD
- BUTTON

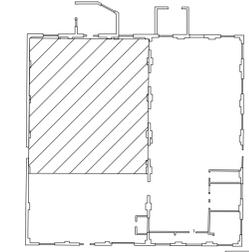
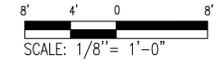
ISSUED FOR CONSTRUCTION	DATE
10/28/16	
DESCRIPTION	
SW	
JOHN A. O'NEILL NAVAL FACILITIES ENGINEERING MID-ATLANTIC	
APPROVED	
FOR COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	
DES	CHK
<<P/DM>>	
BRANCH MANAGER	
CHIEF ENGR/ARCH	
<<-->>	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVFACILITIES ENGINEERING MID-ATLANTIC NEWPORT, RI NAVAL STATION NEWPORT OVERHAUL BOILER #1 BUILDING 7CC ELECTRICAL SYMBOLS	
SCALE: NONE EPROJECT NO.: 1470866 CONSTR. CONTR. NO. N40083-14-D-0016 NAVFAC DRAWING NO. 12734673 SHEET 24 OF 25 E-002 DRAWING REVISION: 10 MAY 2014	

NAVSTA #43478-402

FILE NAME: F:\Active Projects\NAVFAC\Naval Station Newport\RV\202551_Newport\B1-Elgib\B1-Elgib\B1-Elgib\B1-Elgib.dwg LAYOUT NAME: E101A FLOTED: Thursday, October 27, 2016 - 1:47pm USER: itate



PLAN NORTH
ELECTRICAL FIRST FLOOR PLAN
 SCALE: 1/8" = 1'-0"



NAVSTA #43479-402

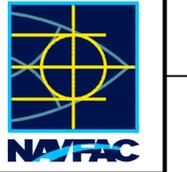
GENERAL NOTES

1. ALL ELECTRICAL CIRCUITS, CONDUIT, CABLING AND CONTROL EQUIPMENT LOCATED AT OR ADJACENT TO THE LEFT(SOUTH) SIDE OF BOILER-1 SHALL BE TEMPORARILY RELOCATED PRIOR TO THE REPLACEMENT OF EXISTING CASING, REFRACTORY WALLS AND TUBES ONLY AS REQUIRED. ALL RELOCATED CIRCUITS SHALL BE REINSTALLED IN THEIR ORIGINAL LOCATION AFTER BOILER CASING IS REINSTALLED. DOCUMENT AND INVENTORY.
2. CAREFULLY REMOVE AND STORE INSTRUMENTS AND OTHER ACCESSORIES AS REQUIRED. REINSTALL UPON COMPLETION OF MECHANICAL WORK, AND ENSURE PRE-CONSTRUCTION OPERATING CONDITION.
3. ELECTRICAL CONTRACTOR SHALL REPORT ANY REQUIRED MECHANICAL EQUIPMENT OUTAGES TO PLANT MANAGER PRIOR TO RELOCATION OF ANY CIRCUITS.

KEY NOTES

- 1 EXISTING CONDUIT/WIRE ROUTED UP TO BOILER-1 FANS SHALL BE TEMPORARILY REWORKED, AS REQUIRED, TO ALLOW THE BOILER CASING AND TUBES TO BE REPLACED. CONDUCTORS SHALL BE REMOVED AND CONDUIT DISASSEMBLED. AFTER THE BOILER WORK IS COMPLETED, THE CONDUIT SHALL BE EXTENDED BACK TO THE FAN AND NEW WIRES INSTALLED AND TERMINATED. BOILER -2 SHALL REMAIN FULLY OPERATIONAL THROUGHOUT THE BOILER-1 WORK.
- 2 EXISTING BOILER-1 ID FAN FEEDER WIRE AND CONDUIT RUNNING UNDERNEATH BOILER.
- 3 EXISTING FLOW METER AND ASSOCIATED CONTROL CONDUIT/WIRE AT BOILER-1 SHALL BE REWORKED, AS REQUIRED, TO ALLOW THE BOILER-1 CASING AND TUBES TO BE REPLACED. CONDUCTORS SHALL BE REMOVED BACK TO THE NEAREST ACCESSIBLE JUNCTION BOX AND CONDUIT DISASSEMBLED, AS REQUIRED. AFTER THE BOILER WORK IS COMPLETED, THE FLOW METER SHALL BE REINSTALLED; CONDUIT SHALL BE EXTENDED; AND NEW WIRES INSTALLED AND TERMINATED. COORDINATE THIS WORK WITH BOILER PLANT MANAGER.
- 4 EXISTING CONTROL DEVICE AT THE 2ND LEVEL AND ASSOCIATED CONTROL CONDUIT/WIRE AT BOILER-1 SHALL BE REWORKED, AS REQUIRED, TO ALLOW THE BOILER-1 CASING AND TUBES TO BE REPLACED. CONDUCTORS SHALL BE REMOVED BACK TO THE NEAREST ACCESSIBLE JUNCTION BOX AND CONDUIT DISASSEMBLED, AS REQUIRED. AFTER THE BOILER WORK IS COMPLETED, THE CONTROL DEVICE SHALL BE REINSTALLED; CONDUIT SHALL BE EXTENDED; AND NEW WIRES INSTALLED AND TERMINATED. COORDINATE THIS WORK WITH BOILER PLANT MANAGER.

NO.	DESCRIPTION	DATE	APPR.
1	ISSUED FOR CONSTRUCTION	10/28/16	



APPROVED	A/E: WFS
FOR COMMANDER NAVFAC	ACTIVITY
SATISFACTORY TO	
DES. D.P.	DRW. D.P.
CHK. B.M.	
BRANCH MANAGER	
CHEF ENG/ARCH	

DEPARTMENT OF THE NAVY
 NAVAL FACILITIES ENGINEERING COMMAND
 NAVAL FACILITIES ENGINEERING MID-ATLANTIC
 NEWPORT, RI
 NAVAL STATION NEWPORT
**OVERHAUL BOILER #1
 BUILDING 7CC**
 ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"
 PROJECT NO.: 1470866
 CONSTR. CONTR. NO. N40083-14-D-0016
 NAVFAC DRAWING NO. 12734674
 SHEET 25 OF 25
E-101