B1372 NAPS UPGRADE

SUPPLEMENTAL TECHNICAL REQUIREMENTS

(this PDF is tabbed)

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B1372 Repairs - DDC (DIRECT DIGITAL CONTROLS)

- Refer to drawings provided with the design-build statement of work. Refer also to the original DDC requirements in the design-build statement of work. This document is offered as supplemental information/requirements.
- Refer to revised drawing ATT-2 REV1 issued by amendment.
- Direct Digital Controls (DDC) shall be a first-tier subcontractor to the prime contractor and shall not be affiliated with any other subcontractor.
- DDC first-tier subcontractor shall be Johnson Controls, Inc. (JCI) or a JCI-certified Metasys ABCS (Authorized Building Controls Specialist) company. If an ABCS company is selected, the prime contractor shall submit ABCS certificate to the Government for review.
- All new controls shall be Johnson Controls, Inc. (JCI) Metasys Extended Architecture with Metasys "U/I" ("MUI") graphics. All controllers (primary, secondary, unitary, etc.) shall be of the latest Metasys line, (SNE, CGM, CVM, XPM, etc.). [Note 'SNC' controllers shall NOT be used.]
- Factory controls are prohibited with the exception of chillers, boilers, closed loop cooling towers, chemical treatment systems, and stand-alone DX equipment. Provide BACnet MS/TP integration to DDC.
- All new building control systems shall be tied into the existing Naval Station Newport DDC LAN, currently at Metasys Version 12 with ADX server.
- Control network shall be MS/TP; provide cabling, BACnet communication cards, etc. as required for a fully functioning network. Supervisory controller(s) shall be the only IP addressable item(s).
- Provide lockable enclosures for supervisory DDC controllers to include 120V power supply, 24V transformer and other required appurtenances.
- Provide a full points list as part of the DDC submittal.
- Comply with Naval Station Newport point naming standardization (mimics JCI standard naming convention) as well as Naval Station Newport alarm standardization.
- Coordinate all work, point naming (mimics JCI standard naming convention), alarm structure, uploads/downloads, etc. during construction with the Navy's DDC Expert on site at Naval Station Newport.
- All work shall conform to the existing Naval Station Newport DDC standards as outlined in the NSN DDC Standards document. This includes but is not limited to alarm priorities, alarm message text, Graphics page configuration and naming, UI equipment definition configuration and naming, Complete UI configuration of relationships between equipment and equipment serving spaces and updating overview graphics pages as they relate to this project.
- Unless otherwise specified, provide 2200 series SNEs.
- **COORDINATION MEETINGS**: A series of special coordination meetings are required prior to DDC programming. The purpose of these meetings is to at a minimum (1) ensure the DOR's intent is met, (2) ensure written sequences match the actual programming, (3) provide an opportunity for the DDC subcontractor to make recommendations for minor sequence changes to NAVFAC and the DOR for discussion. The intent is to collaborate as early as possible to avoid problematic mechanical acceptance testing at the end of the project. Specifically, the aim is to refine the language in the sequences of operation to ensure equipment is programmed effectively and efficiently and in keeping with the engineer's intent. <u>Prior to</u> formal submission of the DDC

submittal package, a meeting or meetings will be held to review the DDC design requirements and sequences of operation. Then, after submission of DDC submittal package and prior to any DDC programming, additional meetings shall occur to review the content of the DDC submittal to ensure that all parties agree moving forward. The DDC subcontractor (JCI's system engineer, and others as required) and the Prime contractor shall attend these meeting which will also include the NAVFAC mechanical engineer, the NAVFAC DDC technician, the Designer of Record mechanical engineer. In addition, as required, the Prime contractor shall direct any manufacturer who has third party BACnet controls (e.g. chiller manufacturer, etc.) to attend the appropriate parts of these meetings. Expect minor modifications to be made to the sequence of operation language – this, and the resulting adjustments to how systems will be programmed, will be done at no additional cost to the government. Expect the total hours of these coordination meetings not to exceed 16 hours. (Note: These meetings are solely for discussion of sequences of operation and DDC drawing submittal. DDC attendance at other typical coordination meetings with the Prime contractor, for TAB and Commissioning support, etc., shall also be provided). All programming shall exactly reflect the narrative language in the written sequence of operation in the DDC submittal. After approval of the DDC submittal, any changes to the sequences or programming shall be RFI'd (Request for Information) by the DDC subcontractor to the Government as soon as possible.

- **DDC requirements for Performance Verification Testing (PVT)**: In addition to the various requirements in the specifications for PVT (such as 23 09 00, 3.6 PERFORMANCE VERIFICATION TESTING, and other sections), the following is required. In general, the PVT shall be performed in 2 phases: pre-functional (normally not Government-witnessed) and functional (Government-witnessed). The functional PVT shall be a demonstration BY the Contractor TO the Government that all systems are working properly, efficiently, and in accordance with the contract documents, and approved DDC submittal. Functional PVT shall show that all aspects of the controls (graphics, programming, sequences, point-to-point operation, alarms, schedules, trends, BACnet connections, etc.) have been pre-checked, vetted, proven, etc. PRIOR TO the functional PVT demonstration to the Government. The functional PVT shall NOT be a troubleshooting session. If, during functional PVT, it becomes apparent that systems have not been pre-verified, and a significant amount of real-time troubleshooting is required, the Government reserves the unilateral right to terminate the PVT session and the Contractor shall attend to all issues and reschedule functional PVT at no additional cost to the Government.

END

B1372 Fire Protection Scope of Work

Background and Existing System:
The existing Fire Alarm System is Simplex. Fire alarm control panel (FACP) is 4100U located in the south entry stairwell (stair tower #1) on the first floor. FACP battery backup exists in IT/Server Room 1204. A Simplex public address (PA) panel is located in the Quarterdeck area. The fire alarm system communicates back to Bldg.# 1373 (Police-Fire Headquarters) via a hardwired Gamewell Notification Box on the exterior of the building adjacent to the mechanical room exterior door on the south side of the building. Smoke detectors have a sounder base (alarm, but not voice evacuation). The horns and horn-strobes are alarm but not voice evacuation. Fire sprinkler system and all components are existing-to-remain (ETR).

New work:

- Refer to revised bid schedule.
- Refer to additional original requirements in the design-build scope of work.
- For bidding purposes, refer to fire protection as-built drawings for location and number of all fire protection devices. Bids shall account for a deviation of 10% from the number and type shown on the drawings.
- (Base bid): **Relocate** existing Simplex FACP from south stairwell to the Quarterdeck area next to Simplex PA panel. Reconnect to PA Panel.
    - Convert the existing FACP location into a large junction box (JB).
    - Provide new wire and conduit to extend existing fire alarm system circuits from the existing FACP location in Stair #1 to new FACP location in the Quarterdeck. Wire nuts are prohibited. All fire alarm wiring shall be in rigid conduit.
    - Provide all necessary, conduit, wire, devices, panels, programming, etc. for complete and usable system.
    - FACP battery backup in IT/Server shall be reviewed by the designer. If relocation is necessary, the design-build contractor shall relocate and provide all necessary conduit/conductors for a complete and usable system as part of the cost to relocate the FACP.
    - Recommission the Fire Alarm System for full functionality.
- (Base Bid) Replace smoke detectors in berthing spaces (174).
- (Option) Provide a **new** FACP and locate the new panel in the Quarterdeck area, adjacent to the Simplex PA panel on the east end of the Quarterdeck area. Connect the new FACP to the existing Simplex PA panel.
    - Convert the existing FACP location into a large junction box (JB).

  - Provide new wire and conduit to extend existing fire alarm system circuits from the existing FACP location in Stair #1 to new FACP location in the Quarterdeck. Wire nuts are prohibited. All fire alarm wiring shall be in rigid conduit.
  - Provide all necessary, conduit, wire, devices, panels, programming, etc. for complete and usable system.
  - FACP battery backup in IT/Server shall be reviewed by the designer. If relocation is necessary, the design-build contractor shall relocate and provide all necessary conduit/conductors for a complete and usable system as part of the cost to relocate the FACP.
  - Commission the Fire Alarm System for full functionality.
- (Option) It is expected that all existing devices (smoke detectors, pull stations, horn-strobes, annunciators, etc.) will be backwards compatible with the new FACP, however new devices shall be provided if backwards-compatibility is not achievable. Existing wiring may be reused. For smoke detectors, this option includes all remaining smoke detectors outside berthing spaces.
- (Option) If it is determined that the PA panel is not compatible with the new FACP, provide new PA panel and integrate with new FACP for a complete and usable system.
- (Option) Provide new addressable CO detectors in the mechanical room and tie into the nearest fire alarm loop. Provide all conduit, wiring, programming, testing to fully integrate into the system.

DELETE the requirement for replacing the existing GAMEWELL Notification Box with a Radio Transmitter.

END.

B1372 CAC Readers

D503005 SECURITY SYSTEMS

An Electronic Security System (ESS) is the integrated electronic system that encompasses one or more of the following subsystems; access control system (ACS), intrusion detection system (IDS), and closed circuit television (CCTV) systems for assessment of alarm conditions.

Provide the ESS (**CAC – common access card - access for two doors + control panel with battery backup in the Quarterdeck area + associated work to connect to existing basewide LENEL network**) for this project in accordance with the requirements of UFC 4-021-02, *Electronic Security Systems*, Intelligence Community Standard (ICS) Number 705-1, SECNAV M-5510.36 Department of Navy *Information Security Program*, and OPNAV Instruction 5530.13C *Department of the Navy Physical Security Instruction for Conventional Arms, Ammunition, and Explosives* and consist of an ACS, an IDS and a CCTV system.

Provide an electronic security system (ESS) including equipment, programming and supporting infrastructure complete, tested, and operational. ESS must be compatible with the Installation's central monitoring system and must be capable of being monitored within the secure/protected area and at the Installation central monitoring station.

Provide an ACS utilizing credential devices and/or coded devices, to monitor and control personnel movement into the secure area and/or protected area facility. The ACS must log and archive all transactions and alert authorities of unauthorized entry attempts. Locate equipment containing access control software, authorization data, card-encoded data, personnel identification data, or verification data within a secure area.

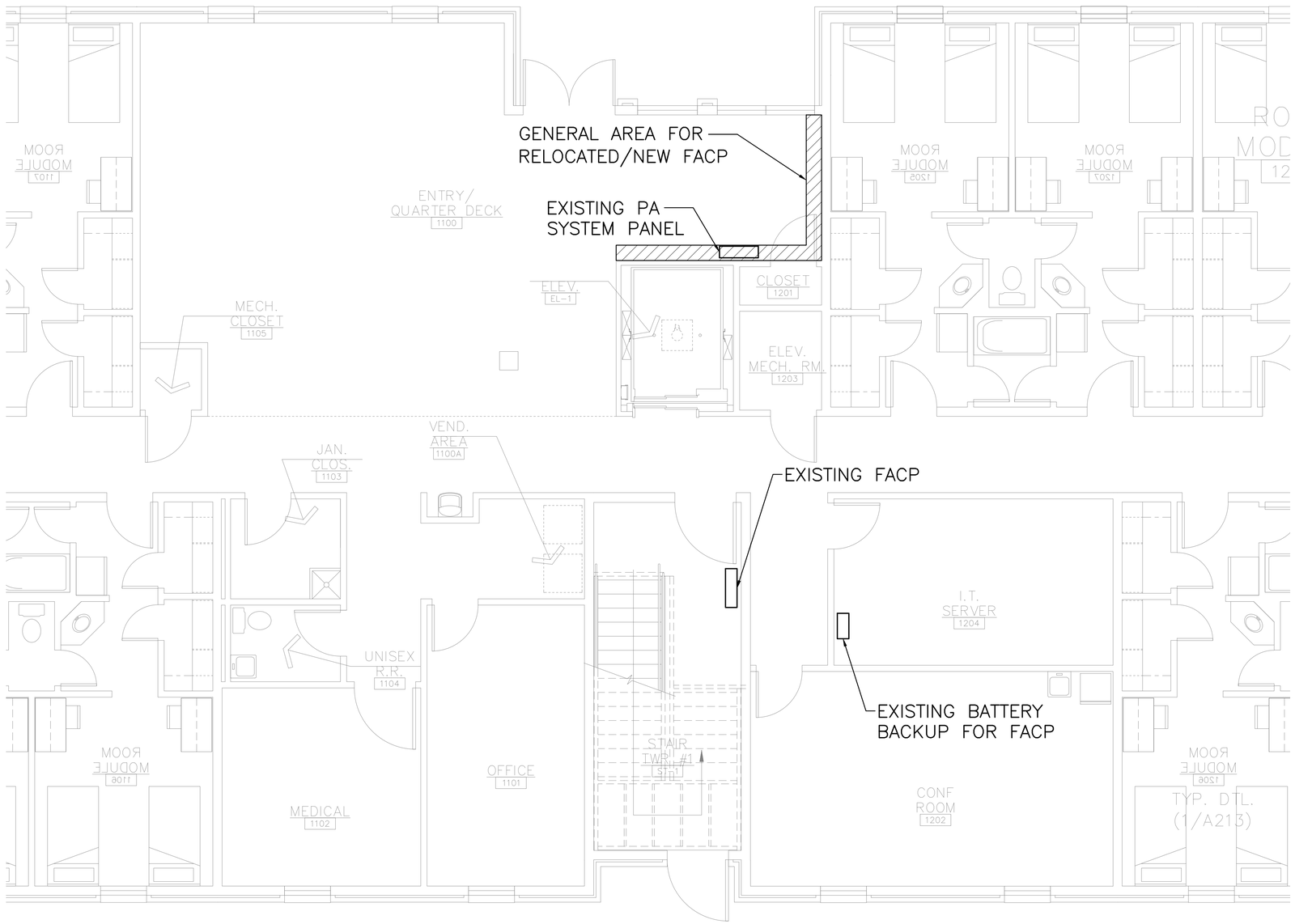
Configure system to only allow cleared personnel located within the secure/protected area to initiate changes in access modes or alarm conditions.

Provide 8 hours of emergency uninterruptable battery backup power.

This design-build contract shall provide all necessary design and construction for a complete and usable CAC card access system at the two indicated doors. Provide a secure central control panel in the Quarterdeck and connect to the fiber optic panel in the main electric room (basement level, southwest corner of the building.). Provide connection of ESS equipment to the Installation's central monitoring station via existing single mode fiber. Provide readers, conduit, wiring, control panels, programming, server work, etc. necessary for a complete and usable system.

Existing system information: The installation's central monitoring system is **LENEL.** The central monitoring station is located in Bldg 1373 (Fire-Police Headquarters) and the server is located in a separate central building. The design-build contractor shall subcontract with a Lenel-certified company to perform the programming, server work, etc. One Lenel-certified company is Galaxy Integrated Technologies, Inc. (https://www.galaxyintegrated.com/) but they are not the only one.

END.



FIRST FLOOR PLAN FIRE PROTECTION
Scale: 1/4"=1'

0 2' 4' 8'
SCALE:1/4"=1'

N

FIRE ALARM CONTROL PANEL
AND PA SYSTEM PANEL
SKETCH 01 OF 01

Supervisory Controller (Tele/Com room 1115)

West Path	T-Stat count	East Path	T-Stat count
Conf 1121	1	Conf 1113	1
Conf 1123	1	Laun 1111	1
room 1125	1	room 1109	1
room 1127	1	room 1107	1
room 1129	1	room 1205	1
room 1131	1	room 1207	1
room 1133	1	room 1209	1
room 1135	1	room 1211	1
room 1137	1	Laun 1213	1
room 1136	1	Conf 1215	1
room 1134	1	Conf 1221	1
room 1132	1	Conf 1223	1
room 1130	1	room 1225	1
CO-12	1	room 1227	1
room 1128	1	room 1229	1
room 1126	1	room 1231	1
room 1124	1	room 1233	1
room 1122	1	room 1235	1
room 1120	1	room 1237	1
room 1119	1	room 1236	1
room 1118	1	room 1234	1
room 1116	1	room 1232	1
room 1114	1	room 1230	1
CO-11 W	1	CO-13	1
room 1112	1	room 1228	1
room 1110	1	room 1226	1
room 1108	1	room 1224	1
room 1106	1	room 1222	1
Med 1102	1	room 1220	1
Conf 1202	1	room 1219	1
room 1206	1	room 1218	1
room 1208	1	room 1216	1
room 1210	1	room 1214	1
room 1212	1	CO-11 E	1
	34		34

Supervisory Controller (Tele/Com room 2113)

West path	T-Stat count	East Path	T-Stat count
room 2119	1	room 2111	1
room 2121	1	room 2109	1
room 2123	1	room 2107	1
room 2125	1	room 2105	1
room 2127	1	room 2103	1
room 2129	1	room 2101	1
room 2131	1	Lounge 2100	1
room 2133	1	room 2203	1
room 2135	1	room 2205	1
room 2134	1	room 2207	1
room 2132	1	room 2209	1
room 2130	1	room 2211	1
room 2128	1	room 2213	1
CO-22	1	room 2219	1
room 2126	1	room 2221	1
room 2124	1	room 2223	1
room 2122	1	room 2225	1
room 2120	1	room 2227	1
room 2118	1	room 2229	1
room 2117	1	room 2231	1
room 2116	1	room 2233	1
room 2115	1	room 2236	1
room 2114	1	room 2235	1
CO-21 W	1	room 2234	1
room 2112	1	room 2232	1
room 2110	1	room 2230	1
room 2108	1	CO-23	1
room 2106	1	room 2228	1
room 2104	1	room 2226	1
room 2102	1	room 2224	1
room 2202	1	room 2222	1
room 2204	1	room 2220	1
room 2206	1	room 2218	1
room 2208	1	room 2217	1
room 2210	1	room 2216	1
room 2212	1	room 2214	1
	36	CO-21 E	1
			37

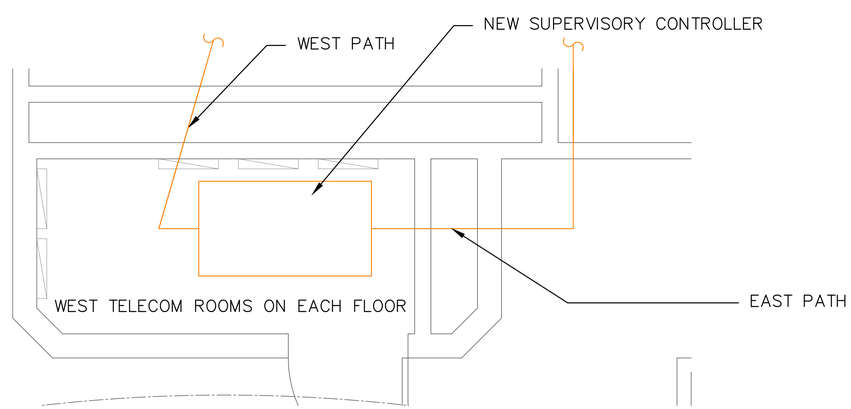
Supervisory Controller (Tele/Com room 3113)

West path	T-Stat count	East Path	T-Stat count
room 3119	1	room 3111	1
room 3121	1	room 3109	1
room 3123	1	room 3107	1
room 3125	1	room 3105	1
room 3127	1	room 3103	1
room 3129	1	room 3101	1
room 3131	1	room 3000	1
room 3133	1	room 3203	1
room 3135	1	room 3205	1
room 3134	1	room 3207	1
room 3132	1	room 3209	1
room 3130	1	room 3211	1
room 3128	1	room 3213	1
CO-32	1	room 3219	1
room 3126	1	room 3221	1
room 3124	1	room 3223	1
room 3122	1	room 3225	1
room 3120	1	room 3227	1
room 3118	1	room 3229	1
room 3117	1	room 3231	1
room 3116	1	room 3233	1
room 3115	1	room 3236	1
room 3114	1	room 3235	1
CO-31 W	1	room 3234	1
room 3112	1	room 3232	1
room 3110	1	room 3230	1
room 3108	1	CO-33	1
room 3106	1	room 3228	1
room 3104	1	room 3226	1
room 3102	1	room 3224	1
room 3202	1	room 3222	1
room 3204	1	room 3220	1
room 3206	1	room 3218	1
room 3208	1	room 3217	1
room 3210	1	room 3216	1
room 3212	1	room 3214	1
	36	CO-31 E	1
			37

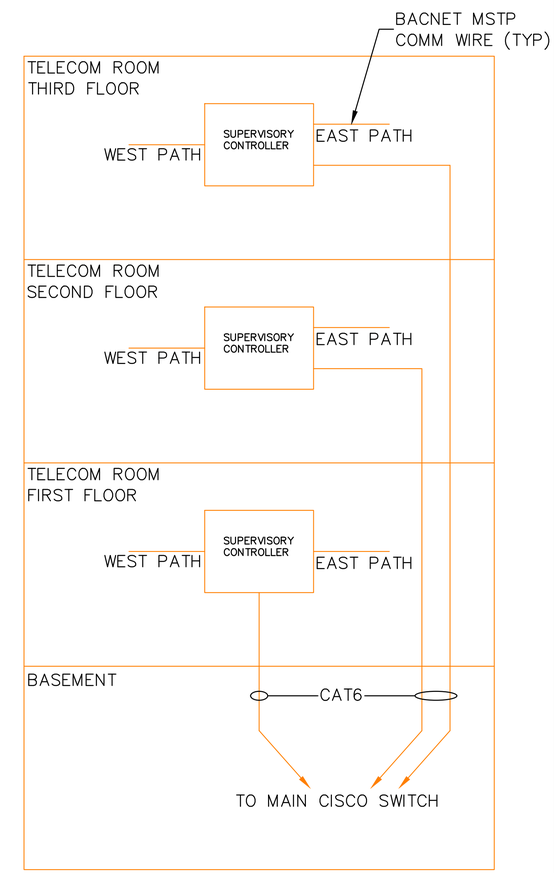
NOTES:

1. MOUNT NEW SUPERVISORY CONTROLLERS IN TELECOM ROOMS.
2. DETAIL SHOWN BELOW IS TYPICAL FOR ALL 3 FLOORS REPRESENTING SUGGESTED NEW CABLE PATHWAYS TO NEW THERMOSTATS.
3. DIFFERENCE IN NUMBER OF THERMOSTATS PER PATHWAY (EAST AND WEST) NOT TO EXCEED 5.
4. SEE ATTACHMENT 1A, 1B, 1C FOR NEW CABLE PATHWAYS THROUGHOUT EACH FLOOR.
5. PROVIDE 3 NEW JCI SNE 220 SUPERVISORY CONTROLLERS IN LOCKABLE CABINETS (ONE PER FLOOR) WITH 120V POWER AND 24V TRANSFORMER.

B1 SUGGESTED CABLE PATHWAYS
Scale: N.T.S.



A2 TYPICAL TELECOM ROOM
Scale: N.T.S.



A5 SUPERVISORY CONTROLLER CONNECTION PATH REV1
Scale: N.T.S.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

PRELIMINARY NOT FOR CONSTRUCTION

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY
NAVAL STATION NEWPORT

SATISFACTORY TO DATE MM/DD/YY
DES -- DRW -- CHK --
PM/DM --
BRANCH MANAGER --
CHIEF ENG/ARCH --
FIRE PROTECTION --

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
PUBLIC WORKS DEPARTMENT – NEWPORT
NAVAL FACILITIES ENGINEERING COMMAND - MID ATLANTIC
NAVAL STATION – NEWPORT, RI
NAVAL STATION NEWPORT, RI
NEWPORT, RI
1372 HVAC, FP, ARCH REPAIRS
SUGGESTED THERMOSTAT CABLE PATHS REV1

SCALE: AS–SHOWN
EPROJECT NO.: #######
CONSTR. CONTR. NO. ######-##-#-####
NAVFAC DRAWING NO. ##
SHEET 04 OF #

ATT-2 REV1

DRAWFORM REVISION: 07 AUG 2018

EXISTING FIRE ALARM CONTRL PANEL (FACP) PHOTOS:

CITY BYPASS
SIGNAL BYPASS
ELEV BYPASS
FAN BYPASS
ALARMS
Fire Alarm
Priority 2 Alarm
SYSTEM WARNINGS
Supervisory
Trouble
Alarm Silenced
AC Power
Fire Alarm Ack
Priority 2 Ack
Supr Ack
Trouble Ack
Alarm Silence
System Reset
Event Time
More Info
Enable
On Aux
Disable
Off Delay
Auto
Lamp Test
Menu
Previous
Next
Enter
C/Exit
Emergency Operating Instructions
Alarm or Warning Condition
System indicator flashing. Tone On.
How to Acknowledge / View Events
Press Ack located under flashing indicator.
Repeat operation until events are acknowledged.
Local tone will silence.
How to Silence Building
Press Alarm Silence.
How to Reset System
Press System Reset.
Press Ack to silence tone
MAPNET
PATENT #4796025
TRUEALARM™
PATENT # 5155468
ALL CIRCUITS ARE POWER – LIMITED EXCEPT FOR AC POWER, BATTERY, AND CITY CIRCUIT

Emergency Operating Instructions
ATTENTION
Procedures for fire panel trouble alarm.
Students
Contact CDO at 401-441-0752
CDOs
Contact fire regional trouble dispatch at 401-841-2225, option 1. Relay that the alarm panel is sounding, and relay what trouble code is displayed. Send an email containing time of call and the trouble code to 1st LT personnel so that we can write the service request.

ZONE JUNCTION BOXES ABOVE FACP:

EXISTING GAMEWELL NOTIFICATION BOX:

EXT. #6

TYPICAL HORN STROBE:

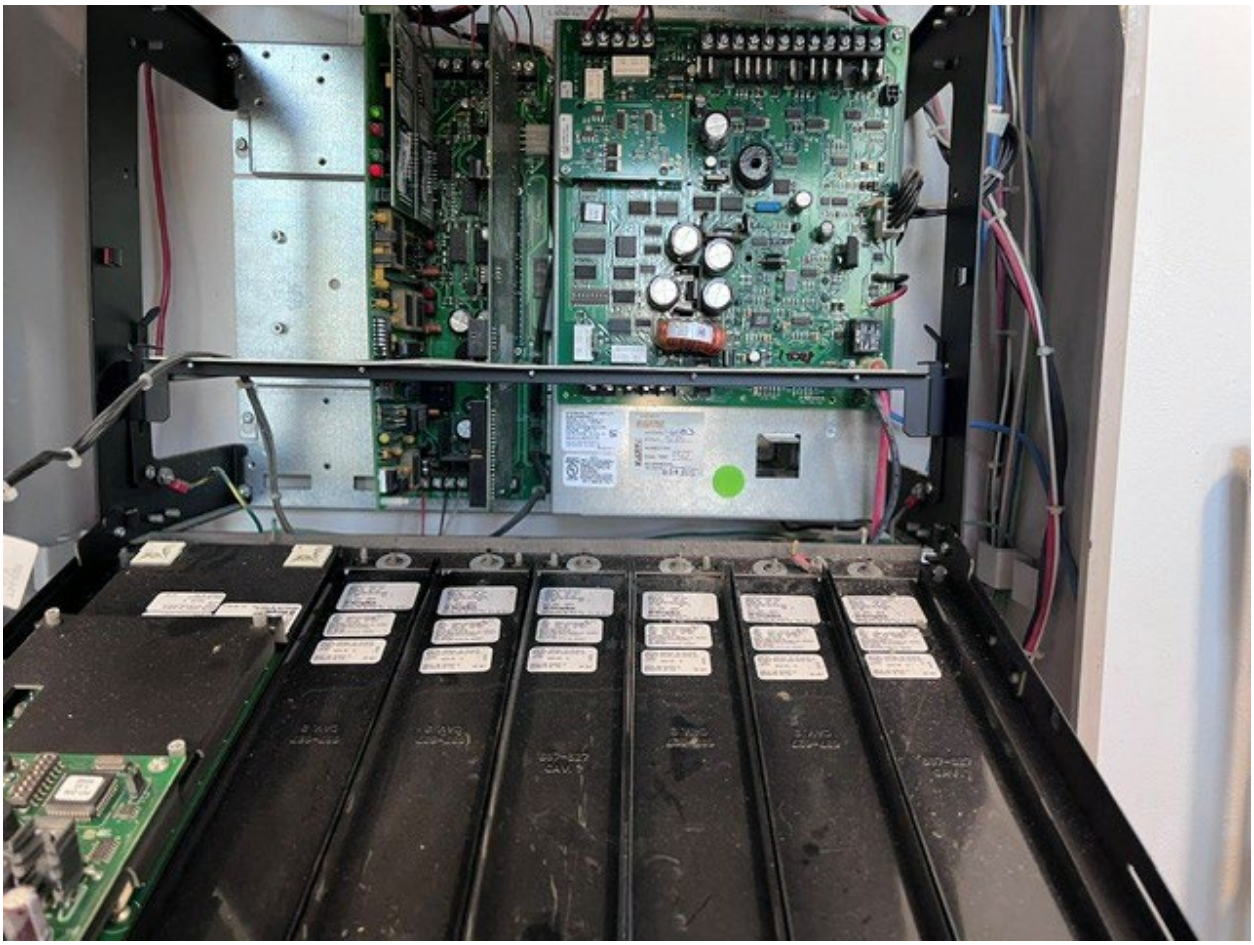
TYPICAL STUDENT/RESIDENT ROOM SMOKE DETECTOR:

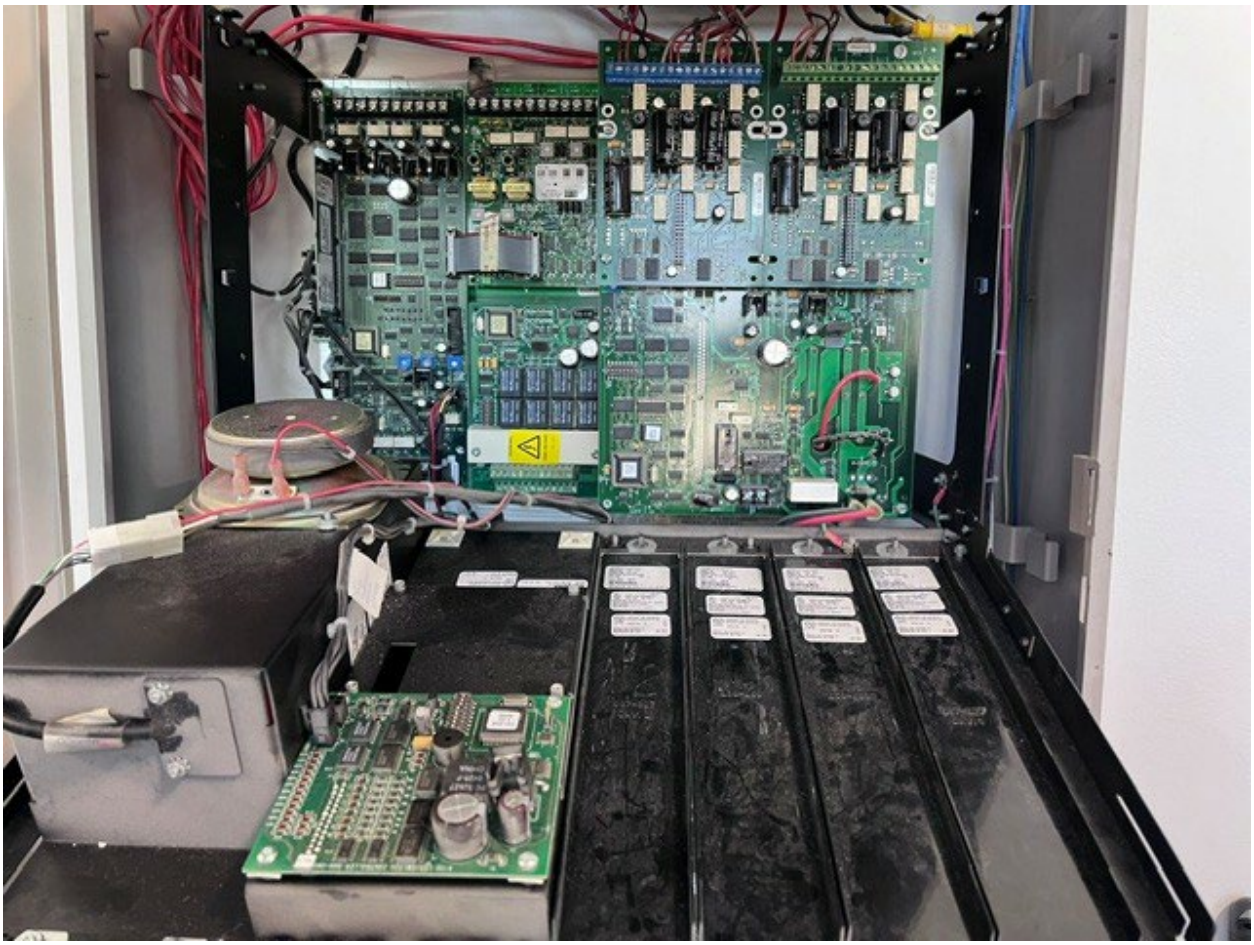
BATTERY BACKUP FOR FACP (IT/SERVER ROOM 1204):

EXISTING PUBLIC ADDRESS (PA) SYSTEM PANEL IN QUARTERDECK:

universal battery
UB12350
universal battery
UB12350

AUDIO CONTROL
BASEMENT
1ST.FLR.ROOMS
1ST.FLR.HALLS
2ND.FLR.ROOMS
2ND.FLR.HALLS
3RD.FLR.ROOMS
3RD.FLR.HALLS
ALL TALK SPEAKERS
READY TO TALK





12V 33AH
universal battery
AGM TYPE
12350
12V
35Ah
UB12350
UPG
universal battery
AGM TYPE
12350
12V
35Ah
UB12350
UPG