BUILDING 15 - RHODE ISLAND COLLEGE

MOUNT PLEASANT AVENUE · PROVIDENCE · RHODE ISLAND

FIRE ALARM SYSTEM REPLACEMENT

MAY 9, 2018, REVISED OCTOBER 3, 2018

PREPARED FOR

RHODE ISLAND COLLEGE
PHYSICAL PLANT BUILDING
600 MOUNT PLEASANT AVENUE
PROVIDENCE, RI 02908

PREPARED BY

FUSS & O'NEILL
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
401.861.3070
www.fando.com

SHEET INDEX

SHEET No.	SHEET TITLE
GI-001	COVER SHEET
FA-001	GENERAL NOTES, LEGEND, AND DIAGRAMS
FA-101	NEW WORK FIRE ALARM PLAN - BASEMENT
FA-102	NEW WORK FIRE ALARM PLAN - FIRST FLOOR
FA-103	NEW WORK FIRE ALARM PLAN - 2ND AND THIRD FLOOR

LOCATION MAP
SCALE: 1" = 1000'

PROJ. No.: 20160941.A30
DATE: APRIL 2018

GI-001

RE-ISSUED FOR PERMIT 10/03/2018

File Path: J:\DWG\P2016\09411A30\MEP\Electrical\20160941A30_COV01.dwg, Layout: GI-001, Plotted: Tuesday, October 02, 2018, User: cwright Plotter: DWG TO PDF.PC3 CTB File: FO.STB

FIRE ALARM SYSTEM

F	MANUAL PULL STATION MOUNTED LOCAL 48" AFF
F	SPEAKER/STROBE ALARM MOUNTED 80" AFF.
F CLG	SPEAKER/STROBE ALARM CEILING MOUNTED
F	VISUAL ONLY UNIT MOUNTED 80" AFF.
SD	PHOTOELECTRIC SMOKE DETECTOR
SD	WALL MOUNTED PHOTOELECTRIC SMOKE DETECTOR
HD 190°	135° FIXED TEMPERATURE HEAT DETECTOR. "190°" INDICATES 190°F FIXED TEMPERATURE
TS	SPRINKLER TAMPER SWITCH FURNISHED AND INSTALLED BY THE FIRE PROTECTION SUBCONTRACTOR, WIRED BY THE ELECTRICAL SUBCONTRACTOR
FS	FLOW SWITCH
SD	DUCT MOUNTED SMOKE DETECTOR WITH SAMPLING TUBE
RTS	REMOTE TEST STATION FOR DUCT SMOKE DETECTOR WITH NAMEPLATE LABELED ACCORDINGLY
RAI	REMOTE ALARM INDICATOR
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM REMOTE ANNUNCIATOR
CM	ADDRESSABLE CONTROL MODULE
MM	ADDRESSABLE MONITOR MODULE
IM	ZONE ISOLATION MODULE
	EXTERIOR FIRE ALARM BEACON
K	KNOX BOX
BC	BATTERY CABINET
VEP	VOICE EVAC PANEL
DS	SMOKE DAMPER
BD	BEAM SMOKE DETECTOR

LEGEND

- MOUNTING HEIGHTS SHALL BE AS INDICATED UNLESS SHOWN OTHERWISE ON ELECTRICAL DRAWINGS OR ARCHITECTURAL ELEVATIONS.
- ALL SYMBOLS MAY NOT BE SHOWN ON PLANS

RACEWAYS AND WIRING

P4–1,3,5 — SINGLE PHASE HOMERUNS TO PANELBOARD. "P4" DENOTES PANEL, "1,3,5" DENOTES CIRCUIT NUMBERS, [(3) 20A, 1P CIRCUITS] NUMBER OF SLASH MARKS DENOTES NUMBER OF #12AWG CONDUCTORS IN MINIMUM 3/4"C. NO SLASH MARKS INDICATE 2#12 & 1#12G–3/4"C UNLESS INDICATED OTHERWISE.

P4–2, 20/3 — MULTI–POLE HOMERUN TO PANELBOARD. "P4" DENOTES PANEL, "2" DENOTES CIRCUIT NUMBER, 20 AMP 3 POLE C/B. NUMBER OF SLASH MARKS DENOTES NUMBER OF #12AWG CONDUCTORS IN MINIMUM 3/4"C.

NOTES:
1. GREEN GROUND CONDUCTOR NOT INDICATED BUT SHALL BE INCLUDED IN EACH RACEWAY. SIZE SHALL BE #12AWG UNLESS INDICATED OTHERWISE.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
C/B	CIRCUIT BREAKER
CAT	CATALOG
CLG	CEILING MOUNTED
CKT	CIRCUIT
CU	COPPER
DWG	DRAWING
E	WIRED ON EMERGENCY CIRCUIT
EC	ELECTRICAL CONTRACTOR
EM	EMERGENCY
ETD	EXISTING TO BE DEMOLISHED
ETR	EXISTING TO REMAIN
ETRL	EXISTING TO BE RELOCATED
ETRP	EXISTING TO BE REPLACED
G	GROUND
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE
NTS	NOT TO SCALE
ø	PHASE
P	POLE
RL	NEW LOCATION OF RELOCATED DEVICE
SM	SURFACE MOUNT
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VIF	VERIFY IN FIELD
W	WATT

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL AND RHODE ISLAND ELECTRICAL CODES AND OTHER STATE OF RHODE ISLAND REQUIREMENTS AND THE NATIONAL ELECTRICAL SAFETY CODE C2.
2. ADDITIONAL JUNCTION / PULL BOXES SHALL BE FURNISHED AND INSTALLED AS REQUIRED.
3. ALL CONDUITS SHALL CONTAIN A GREEN SAFETY GROUND WIRE. BOND ALL PANELS, CABINETS, ENCLOSURES, CONDUITS, ETC., AS REQUIRED.
4. PROVIDE CONDUIT SLEEVES FILLED WITH AN APPROVED FIRE–RESISTANT MATERIAL WHERE FIRE–RATED WALLS ARE PENETRATED. PROVIDE WATERTIGHT CONDUIT SLEEVES WHERE EXTERIOR WALLS ARE PENETRATED EITHER ENTERING OR LEAVING A BUILDING.
5. ALL CUTTING, PATCHING AND FIRESTOPPING RELATED TO ELECTRICAL WORK SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
6. ALL WIRING EXTENDED FROM SPLICE BOXES TO PANELBOARDS SHALL BE TERMINATED ON TERMINAL STRIPS IN SPLICE BOXES. PROVIDE CIRCUIT BRANCH CIRCUIT IDENTIFICATION WITHIN THE SPLICE BOX.
7. BRANCH CIRCUIT WIRING TO BE MODIFIED OR EXTENDED MAY NOT BE SHOWN BUT SHALL BE PROVIDED AS REQUIRED. MINIMUM WIRING SHALL BE 3/4"C–2#12, 1#12 GROUND. NO MORE THAN THREE PHASES MAY BE COMBINED IN A SINGLE HOMERUN AND EACH PHASE SHALL BE PROVIDED WITH AN INDIVIDUAL NEUTRAL.
8. FIRE ALARM SYSTEM SHALL BE PER RI FIRE SAFETY CODE.
9. REPLACE EXISTING 2'x2' CEILING TILES AFFECT BY DEMOLITION. NEW TILES SHALL BE EXACT MATCH TO EXISTING.
10. WHERE NEW RACEWAYS ARE REQUIRED CONTRACTOR SHALL REVIEW PROPOSED ROUTING WITH OWNER/ENGINEER. CONDUITS SHALL BE RUN IN CONCEALED LOCATIONS TO MAXIMUM EXTENT POSSIBLE.

DEMOLITION NOTES

1. EXISTING FIRE ALARM DEVICES INDICATED ON PLANS MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION AS REQUIRED. ANY EQUIPMENT THAT IS NOT IDENTIFIED AND CONFLICTS WITH CONSTRUCTION SHALL NOT BE DISCONNECTED AND SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER/ENGINEER FOR DISPOSITION.
2. WHERE WIRING IS TO BE REMOVED, RELOCATED OR RECONNECTED, THE CONTRACTOR SHALL TAKE PRECAUTIONS AND ASSUME THAT THE CIRCUIT MAY BE ACTIVE. CONTRACTOR SHALL TEST, VERIFY AND SECURE ALL CIRCUITS BEFORE REMOVAL. UNKNOWN WIRING SHALL BE IDENTIFIED. ANY WIRING TO REMAIN SHALL BE VERIFIED BY THE CONTRACTOR, TAGGED AND IDENTIFIED AS REQUIRED.
3. EXISTING FIRE ALARM DEVICES AND WIRING TO REMAIN SHALL BE PROTECTED FROM DAMAGE AS REQUIRED DURING THE CONSTRUCTION PERIOD AND LEFT IN GOOD WORKING ORDER AT COMPLETION. ANY EQUIPMENT DAMAGED SHALL BE REPLACED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
4. OWNER AND CODE REQUIRED SYSTEMS THAT ARE REQUIRED TO REMAIN ACTIVE DURING CONSTRUCTION SHALL BE TEMPORARILY WIRED AS REQUIRED TO REMAIN ACTIVE THROUGHOUT THE CONSTRUCTION PERIOD UNTIL NEW SYSTEMS ARE INSTALLED, TESTED AND ACCEPTED.
5. FIRE ALARM DEVICES ARE IN CONDITIONS WHERE IN THE OPINION OF THE CONTRACTOR IT IS NOT CLEAR WHETHER EXISTING IS TO BE REMOVED OR REMAIN, IT SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR REVIEW AND FINAL DECISION.
6. ANY DISRUPTION OF THE FIRE ALARM SYSTEM NECESSITATED BY THE RENOVATION SHALL BE COORDINATED WITH THE OWNER IN ORDER FOR PROPER NOTICE TO BE GIVEN PRIOR TO THE DISCONNECTION OF ANY SERVICE.
7. EXISTING FIRE ALARM EQUIPMENT REMOVED SHALL BE BROKEN DOWN INTO MANAGEABLE LENGTHS FOR STORAGE, HANDLING AND DISPOSAL.
8. EXISTING FIRE ALARM EQUIPMENT REMOVED SHALL BE PROPERLY DISPOSED OF BY CONTRACTOR NO ITEMS SHALL BE TURNED OVER TO STATE.
9. FIRE ALARM RENOVATION WORK SHALL BE ACCOMPLISHED IN CONFORMANCE WITH THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, NFPA 72 AND NFPA 101, AND PER CITY OF PROVIDENCE FIRE DEPARTMENT.

FIRE ALARM RISER NOTES

1. PROVIDE NEW RETROFIT FCI E3 SERIES CONTROL PANEL WITH EMERGENCY EVACUATION CAPABILITIES. PROVIDE WITH EVENT BY–PASS SWITCHES AT REQUIRED FOR AUDITORIUM DETECTION CONTROLS. COORDINATE NUMBER OF SWITCHES WITH OWNER. CONTROL SCHEME TO BE REVIEWED WITH AUDITORIUM MANAGER.
2. REFER TO FLOOR PLANS FOR EXACT QUANTITIES AND LOCATIONS OF ALL DEVICES.
3. ALL NEW WIRING SHALL BE CLASS "A" AND PER MANUFACTURER'S RECOMMENDATIONS AND SHALL BE CONCEALED WHERE POSSIBLE. SURFACE MOUNTED WIRING SHALL BE INSTALLED IN MINIMUM 3/4" EMT.
4. ALL NEW FIRE ALARM WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF NFPA, STATE, AND LOCAL BUILDING CODES AND THE AMERICANS WITH DISABILITIES ACT (ADA).
5. ALL EXISTINGS DEVICES SHALL BE REMOVED AND REPLACED NEW. DEVICES SHALL BE FCI.
6. PROVIDE SHIELDED WIRING FOR ALL NEW NOTIFICATION APPLIANCE CIRCUITS.
7. THE EXISTING SYSTEM IS TO REMAIN OPERATIONAL THROUGHOUT THE CONSTRUCTION PERIOD UNTIL THE NEW SYSTEM HAS BEEN INSTALLED, TESTED, AND ACCEPTED.
8. PROVIDE (1) ISOLATION MODULE PER EVERY 25 DEVICES, MINIMUM (1) PER FLOOR.
9. CONTRACTOR SHALL DOWNLOAD EXISTING SYSTEM PROGRAM AND MATCH EXISTING INCORPORATING NEW DEVICES.
10. PROVIDE BY PADS SWITCH AT FACP FOR SMOKE DAMPERS.

1 FIRE ALARM SYSTEM SINGLE–LINE DIAGRAM
NO SCALE

NOTES:
1. INSTALL DEVICES ON ONE COMMON VERTICAL CENTERLINE WHENEVER APPLICABLE.
2. INSTALL DEVICES AT THIS HEIGHT WHEREVER APPLICABLE.

DETAIL OF TYPICAL DEVICE MOUNTING HEIGHTS | NTS

RE-ISSUED FOR PERMIT 10/03/2018

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
2.	7/3/2018	RE–ISSUED FOR PERMIT	CW	KS
1.	5/9/2018	ISSUED FOR PERMIT	RB	KS

SEAL

SEAL

SCALE: HORZ.: NOT TO SCALE; VERT.:
DATUM: HORZ.: VERT.:
1 0 1
GRAPHIC SCALE

FUSS & O'NEILL
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
401.861.3070
www.fando.com

RHODE ISLAND COLLEGE
GENERAL NOTES, LEGEND, AND DIAGRAMS
FIRE ALARM
BUILDING 15
MOUNT PLEASANT — PROVIDENCE, RHODE ISLAND

PROJ. No.: 20160941.A30
DATE: APRIL 2018

FA-001

File Path: J:\DWG\P2016\0941\A30\MEP\Electrical\20160941A30_ELE01_3.dwg Layout: FA-001 Plotted: Tue, October 02, 2018 - 10:26 PM User: cwright
Plotter: DWG TO PDF.PC3 CTB File: FO.STB
LAYER STATE:
MS VIEW:

1 NEW WORK PLAN – BASEMENT
3/32" = 1'-0"

KEYED NOTES:

1. DISCONNECT AND REMOVE EXISTING SPEAKER/STROBE – PROVIDE BOX EXTENDER FOR CONNECTION OF NEW NOTIFICATION APPLIANCES IN EXISTING WIRING LOOP AS REQUIRED.
2. PROVIDE NEW SURFACE MOUNTED NOTIFICATION APPLIANCE INDICATED. CONNECT TO NOTIFICATION SYSTEM LOOP WITH WIRING TO MATCH EXISTING FIRE ALARM WIRING, INSTALLED IN SURFACE MOUNTED 3/4" EMT IN FINISHED AREAS WIREMOLD SHALL BE USED.
3. PROVIDE NEW SURFACE MOUNTED INITIATION DEVICE INDICATED. CONNECT TO INITIATION SYSTEM LOOP WITH WIRING TO MATCH EXISTING FIRE ALARM WIRING, INSTALLED IN SURFACE MOUNTED 3/4" EMT IN FINISHED AREAS WIREMOLD RACEWAY SHALL BE USED.

RE-ISSUED FOR PERMIT 10/03/2018

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
2.	7/3/2018	RE-ISSUED FOR PERMIT	CW	KS
1.	5/9/2018	ISSUED FOR PERMIT	RB	KS

SEAL

SEAL

SCALE:
HORZ.: 3/32" = 1'-0"
VERT.:
DATUM:
HORZ.:
VERT.:
3/32 0 3.32
GRAPHIC SCALE

FUSS & O'NEILL
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
401.861.3070
www.fando.com

RHODE ISLAND COLLEGE

NEW WORK FIRE ALARM PLAN - BASEMENT

BUILDING 15

MOUNT PLEASANT PROVIDENCE, RHODE ISLAND

PROJ. No.: 20160941.A30
DATE: APRIL 2018

FA-101

File Path: J:\DWG\P20160941\A30\MEP\Electrical\20160941A30_ELE01_3.dwg Layout: FA-101 Plotted: Tue, October 02, 2018 - 10:26 PM User: cwright
Plotter: DWG TO PDF.PC3 CTB File: FO.STB
LAYER STATE:
MS VIEW:

1 NEW WORK PLAN – FIRST FLOOR

3/32" = 1'-0"

KEYED NOTES:

1. DISCONNECT AND REMOVE EXISTING FIRE ALARM CONTROL PANEL REFER TO SINGLE-LINE DIAGRAM ON DWG. FA-001 FOR ADDITIONAL REQUIREMENTS.
2. EXISTING FIRE ALARM MASTER BOX #4752 TO REMAIN.
3. PROVIDE NEW SURFACE MOUNTED INITIATING DEVICE INDICATED. CONNECT TO INITIATION SYSTEM LOOP WITH WIRING TO MATCH EXISTING FIRE ALARM WIRING, INSTALLED IN 3/4" EMT IN FINISHED AREAS WIREMOLD SHALL BE USED.
4. PROVIDE3 NEW SURFACE MOUNTED NOTIFICATION DEVICE INDICATED. CONNECT TO EXISTING NOTIFICATION LOOP WITH WIRING TO MATCH EXISTING FIRE ALARM WIRING, INSTALLED IN 3/4" EMT IN FINISHED AREAS WIREMOLD SHALL BE USED.

2 WALL ELEVATION – FACP

NOT TO SCALE

MATCH LINE 'A'

RE-ISSUED FOR PERMIT 10/03/2018

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
2.	7/3/2018	RE-ISSUED FOR PERMIT	CW	KS
1.	5/9/2018	ISSUED FOR PERMIT	RB	KS

SEAL

SEAL

SCALE:
HORZ.: 3/32" = 1'-0"
VERT.:
DATUM:
HORZ.:
VERT.:
3/32 0 3.32
GRAPHIC SCALE

FUSS & O'NEILL
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
401.861.3070
www.fando.com

RHODE ISLAND COLLEGE

NEW WORK FIRE ALARM PLAN - FIRST FLOOR

BUILDING 15

MOUNT PLEASANT PROVIDENCE, RHODE ISLAND

PROJ. No.: 20160941.A30
DATE: APRIL 2018

FA-102

File Path: J:\DWG\P20160941\A30\MEP\Electrical\20160941A30_ELE01_3.dwg Layout: FA-102 Plotted: Tue, October 02, 2018 - 10:26 PM User: cwright
Plotter: DWG TO PDF.PC3 CTB File: FO.STB
LAYER STATE:
MS VIEW:

1 NEW WORK PLAN – SECOND FLOOR

3/32" = 1'-0"

KEYED NOTES:

1. PROVIDE NEW SURFACE MOUNTED NOTIFICATION APPLIANCE INDICATED. CONNECT TO NOTIFICATION SYSTEM LOOP WITH WIRING TO MATCH EXISTING FIRE ALARM WIRING, INSTALLED IN SURFACE MOUNTED 3/4" EMT IN FINISHED AREAS WIREMOLD SHALL BE USED.
2. PROVIDE NEW SURFACE MOUNTED INITIATION DEVICE INDICATED. CONNECT TO INITIATION SYSTEM LOOP WITH WIRING TO MATCH EXISTING FIRE ALARM WIRING, INSTALLED IN SURFACE MOUNTED 3/4" EMT IN FINISHED AREAS WIREMOLD SHALL BE USED.
3. PROVIDE CONTROL MODULE FOR SOUND AND DIMMING CABINET FOR SHUTDOWN AND CONNECT TO EXISTING LOOP.
4.

2 NEW WORK PLAN – THIRD FLOOR

1/4" = 1'-0"

MATCH LINE 'A'

RE-ISSUED FOR PERMIT 10/03/2018

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
2.	7/3/2018	RE-ISSUED FOR PERMIT	CW	KS
1.	5/9/2018	ISSUED FOR PERMIT	RB	KS

SEAL

SEAL

SCALE:
HORZ.: 3/32" = 1'-0"
VERT.:
DATUM:
HORZ.:
VERT.:
3/32 0 3.32
GRAPHIC SCALE

FUSS & O'NEILL
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
401.861.3070
www.fando.com

RHODE ISLAND COLLEGE

NEW WORK FIRE ALARM PLAN - SECOND AND THIRD FLOOR

BUILDING 15

MOUNT PLEASANT PROVIDENCE, RHODE ISLAND

PROJ. No.: 20160941.A30
DATE: APRIL 2018

FA-103

File Path: J:\DWG\P2016\0941\A30\MEP\Electrical\20160941A30_ELE01_3.dwg Layout: FA-103 Plotted: Tue, October 02, 2018 - 10:26 PM User: cwright
Plotter: DWG TO PDF.PC3 CTB File: FO.STB
LAYER STATE:
MS VIEW: