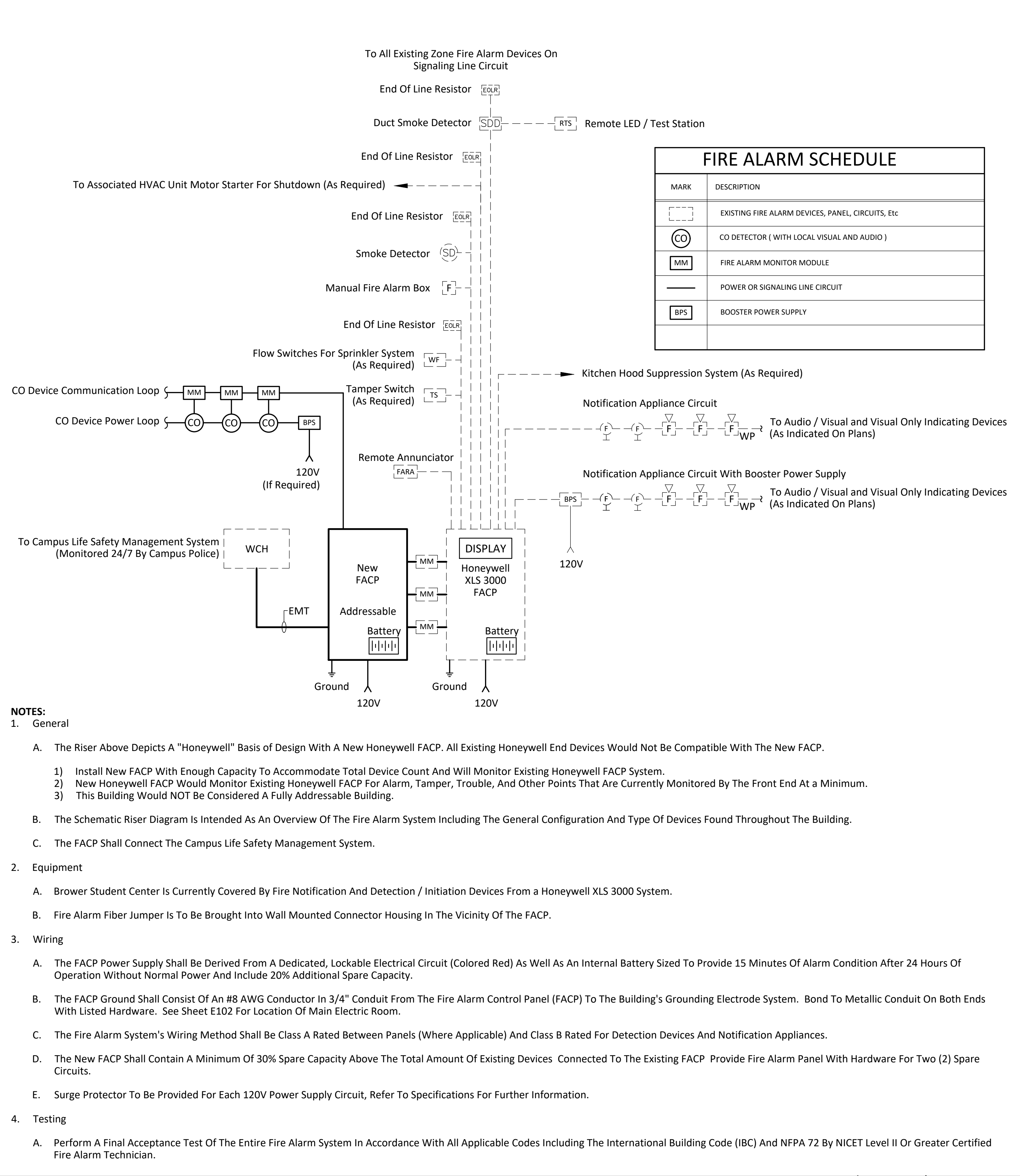


- KEY NOTES (SYMBOLS ①, ②, ETC.)**
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
 - Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
 - Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
 - Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.
 - Provide New CO Devices Connected To New Panel. See Sheet E102 For Approximate Location.

NOTES:

- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNJ/IT
- Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
- Install Fiber Jumpers Between WCH And FACP.



FIRE ALARM SCHEDULE

MARK	DESCRIPTION
[Symbol]	EXISTING FIRE ALARM DEVICES, PANEL, CIRCUITS, ETC.
[Symbol]	CO DETECTOR (WITH LOCAL VISUAL AND AUDIO)
[Symbol]	FIRE ALARM MONITOR MODULE
[Symbol]	POWER OR SIGNALING LINE CIRCUIT
[Symbol]	BOOSTER POWER SUPPLY

- NOTES:**
- General
 - The Riser Above Depicts A "Honeywell" Basis Of Design With A New Honeywell FACP. All Existing Honeywell End Devices Would Not Be Compatible With The New FACP.
 - Install New FACP With Enough Capacity To Accommodate Total Device Count And Will Monitor Existing Honeywell FACP System.
 - New Honeywell FACP Would Monitor Existing Honeywell FACP For Alarm, Tamper, Trouble, And Other Points That Are Currently Monitored By The Front End At A Minimum.
 - This Building Would NOT Be Considered A Fully Addressable Building.
 - The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - The FACP Shall Connect The Campus Life Safety Management System.
 - Equipment
 - Brower Student Center Is Currently Covered By Fire Notification And Detection / Initiation Devices From A Honeywell XLS 3000 System.
 - Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring
 - The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing
 - Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.



- GENERAL NOTES**
- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
 - The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments. Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
 - Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
 - Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
 - When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently Reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.
 - CO Detectors To Provide Local Audio Visual And Supervisory At FACP And LSMS Control Station.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
[Symbol]	Fire Alarm Control Panel	[Symbol]	New Equipment
[Symbol]	Existing Wall-Mounted Connector Housing	[Symbol]	Existing Equipment
[Symbol]	Existing Fire Alarm Control Panel	[Symbol]	Photo Tag
[Symbol]		[Symbol]	Connect To Existing

FIRE ALARM RISER (ZONE) Scale: NTS Drawing: E101 Detail: 01

PARTIAL FLOOR PLANS Scale: 1/8"=1'-0" Drawing: E101 Detail: 03

title FIRE ALARM PANEL REPLACEMENT BROWER STUDENT CENTER dwg. no. E101-BSC

ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

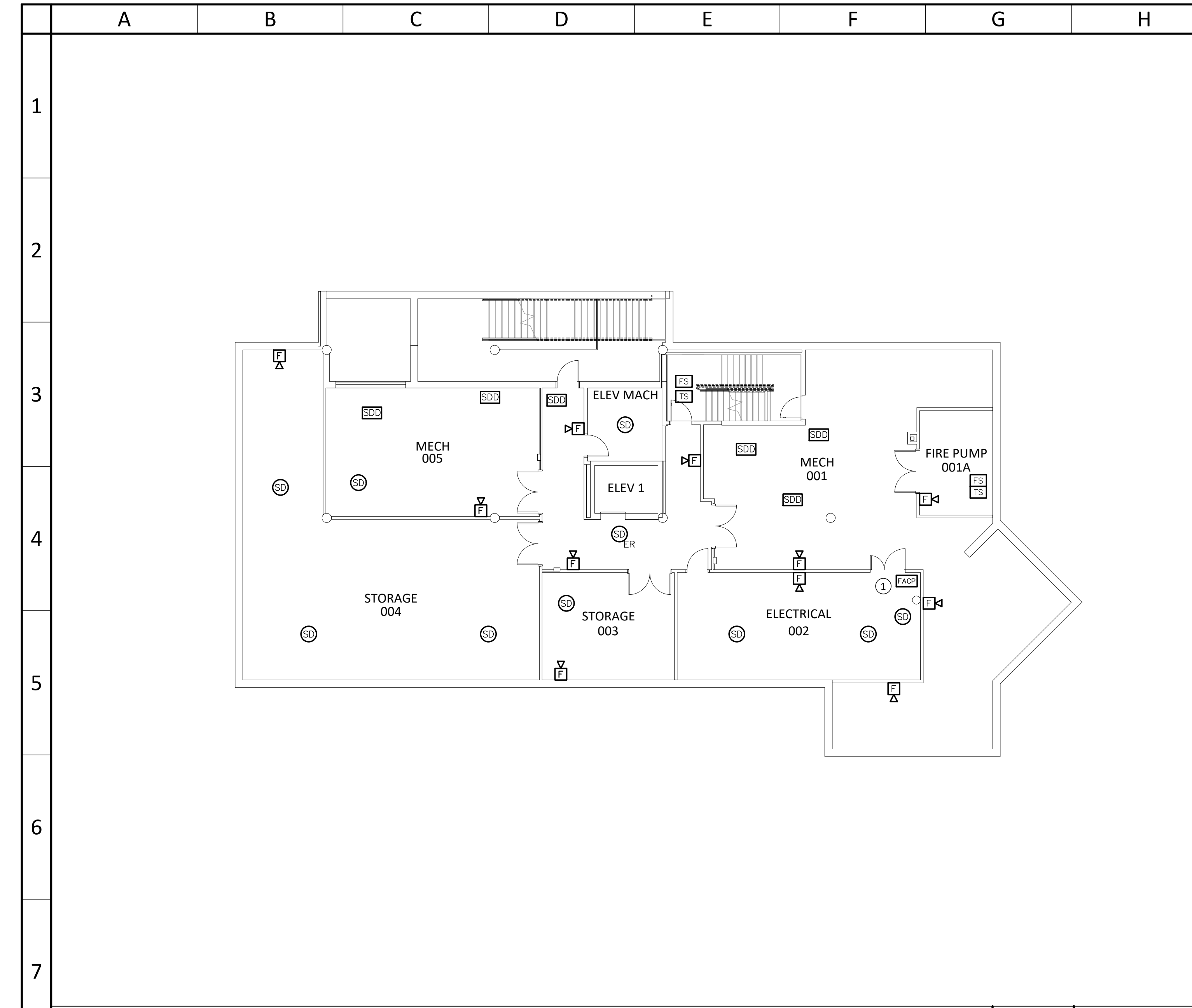
Questions For DLB Call: Anthony Laskosky Phone: 732-927-5038

project TCNJ - CAMPUS FIRE ALARM PROJECT PART B - HARDWARE & SOFTWARE UPGRADES 2000 PENNINGTON ROAD, EWING NJ, 08618

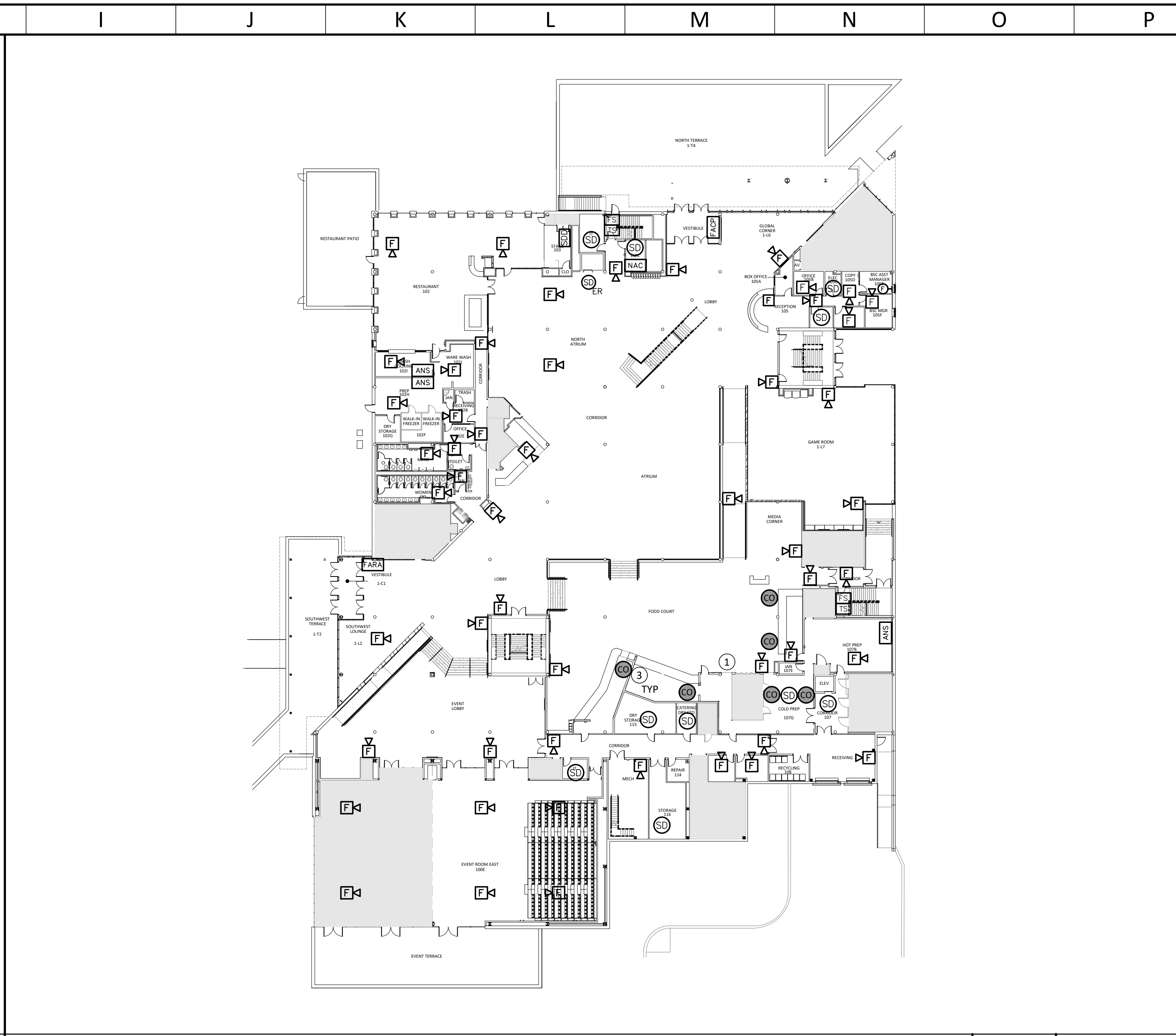
scale	drawn by	checked by	date
AS SHOWN	SC	SF	5/03/2020

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

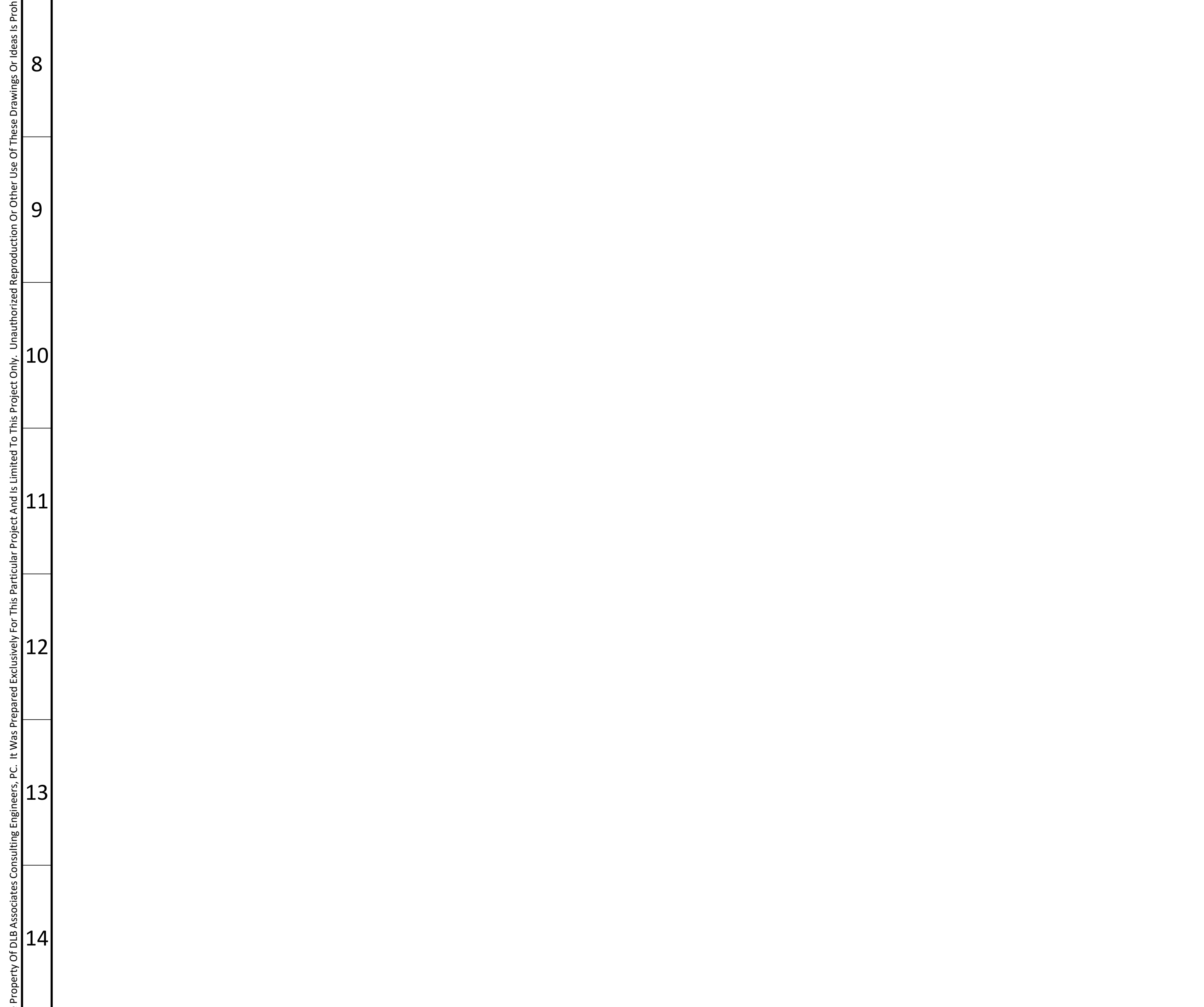
30x42



BASEMENT LAYOUT Scale: 3/32"=1'-0" Drawing: **E102**
Detail: **01**



FIRST FLOOR LAYOUT Scale: 1/32"=1'-0" Drawing: **E102**
Detail: **02**



SECOND FLOOR LAYOUT Scale: 1/32"=1'-0" Drawing: **E102**
Detail: **03**

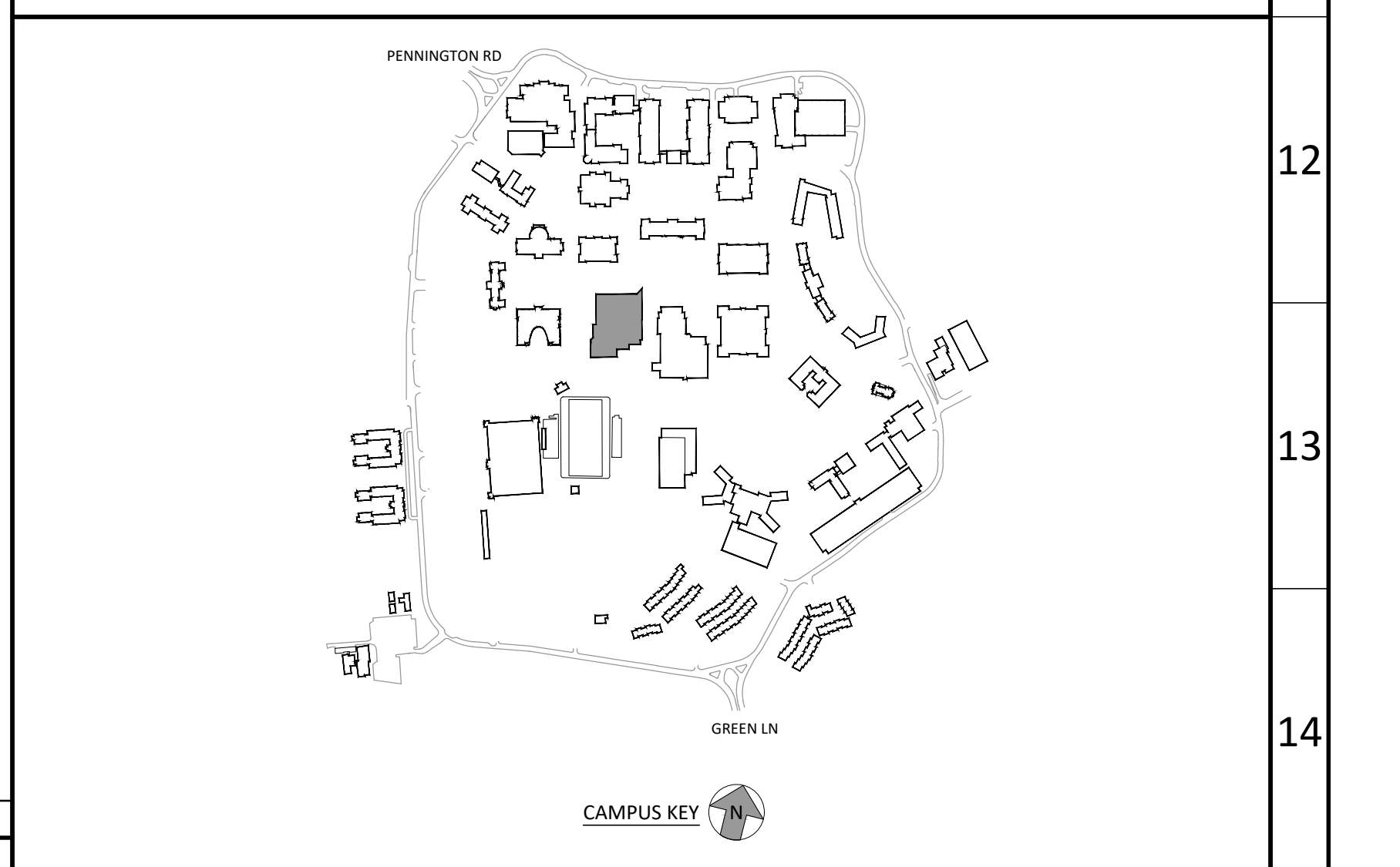
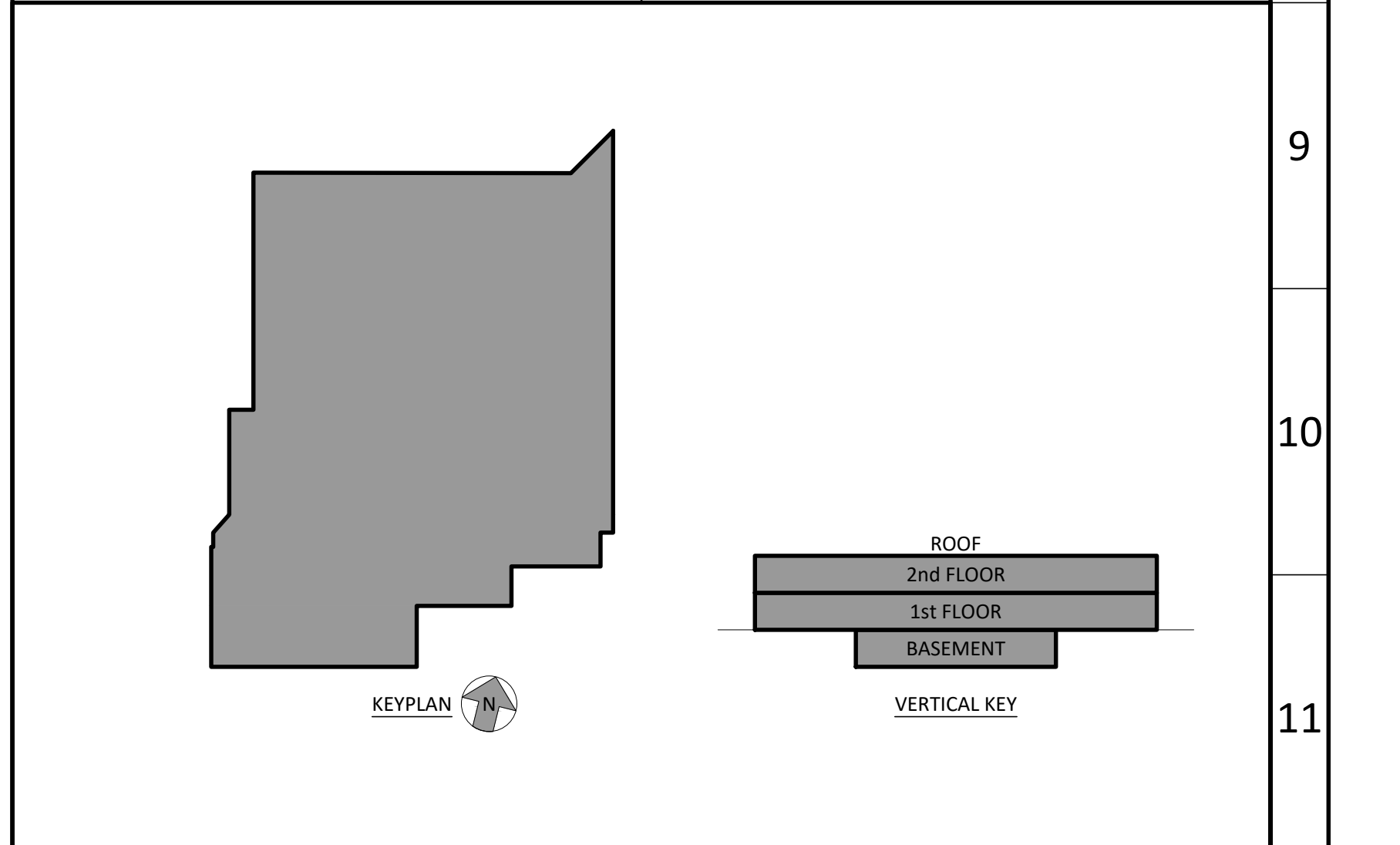
- KEY NOTES (SYMBOLS ①, ②, ETC.)**
- Existing Fire Alarm Control Panel.
 - Existing Gas Kitchen Equipment.
 - New CO Detector.

GENERAL NOTES

- This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
F	Manual Pull Station	□	No Access
⊕	Strobe Only	⊙	New Smoke Detector
⊕	Horn/Strobe	⊕	New Manual Pull Station
⊙	Smoke Detector	⊕	New Strobe
⊙ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	⊕	New Horn / Strobe
⊙ _{SB}	Smoke Detector With Sounder Base	⊕	New Carbon Monoxide Detector With Local Audio And Visual Notification.
⊙	Heat Detector, Combination Fixed Temperature And Rate Of Rise	⊕	Photo Location Indicator
⊙	CO Detector	FACP	Fire Alarm Control Panel
⊕	Duct Mounted Smoke Detector	CO	Carbon Monoxide
FACP	Fire Alarm Control Panel	POE	Point Of Entry
PARA	Fire Alarm Remote Annunciator Panel		
MAC	Fire Alarm Booster Panel		
TS	Fire Sprinkler Tamper Switch		
FS	Fire Sprinkler Flow Switch		
ANS	Fire Alarm Ansil System		



ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

Questions For DLB Call:
DLB Project ID: 47211

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Anthony Laskosky
Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM - EXISTING LAYOUT
BROWER STUDENT CENTER

scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020

dwg. no.
E102-BSC

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30x42

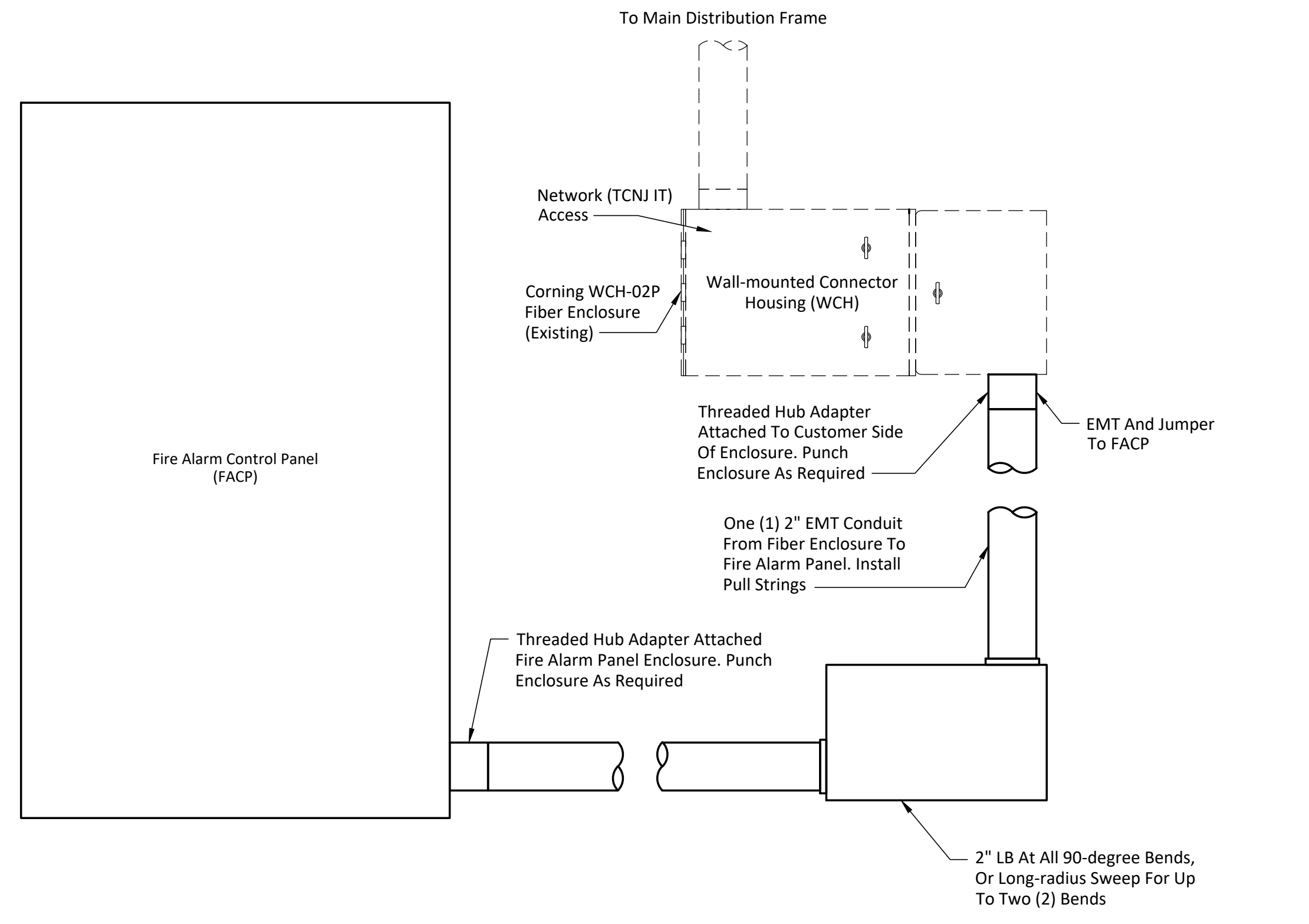
FIRE ALARM PHOTOS



PHOTO A - SIMPLEX FIRE ALARM CONTROL PANEL
Simplex 4010 Addressable Fire Alarm Control Panel With Exposed Conduit Located Within Lower Level Electrical Room



PHOTO B - HONEYWELL FIRE ALARM CONTROL PANEL
Existing Honeywell Intermediary Fire Alarm Control Panel With Exposed Conduit Located In The Lower Level Telecom Room



- NOTES:**
- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNJ/IT
 - Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
 - Install Fiber Jumpers Between WCH And FACP.

KEY NOTES (SYMBOLS ①, ②, ETC.)

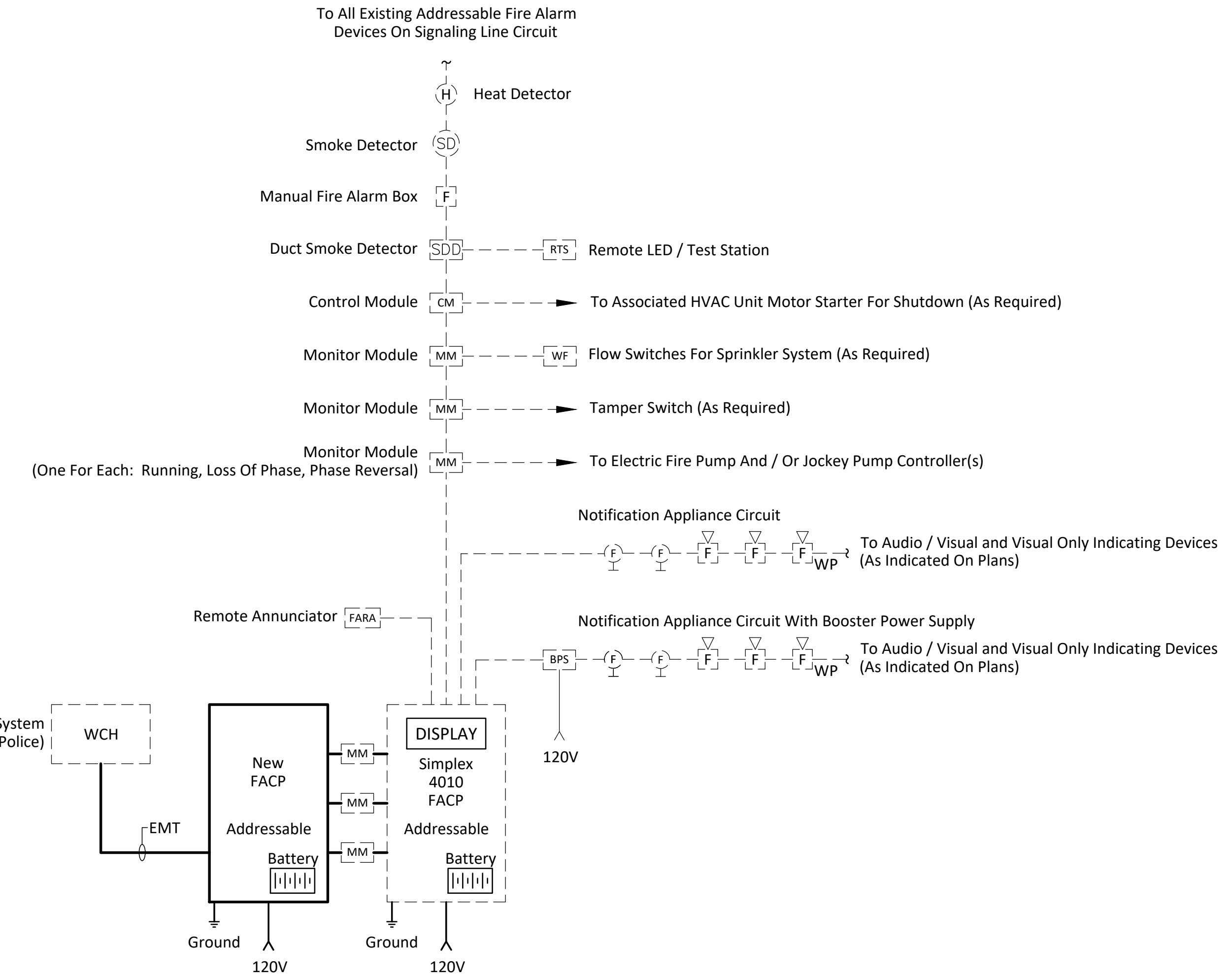
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
- Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
- Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
- Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.

GENERAL NOTES

- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
- The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments.
- Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
- Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
- Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
- When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently Reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.

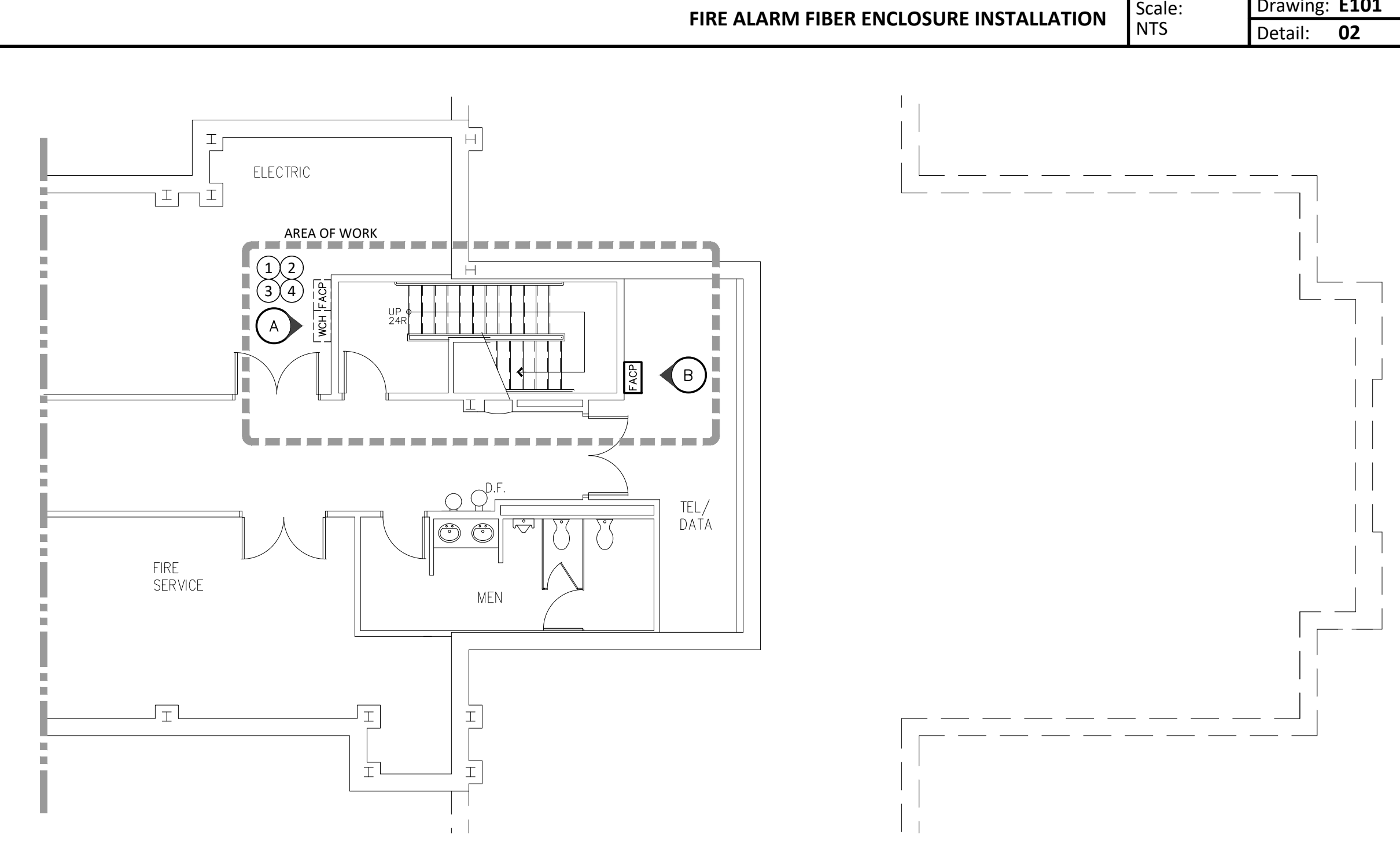
PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
FACP	Fire Alarm Control Panel	FACP	Fire Alarm Control Panel
WCH	Existing Wall-Mounted Connector Housing	EMT	Electrical Metallic Tubing
FACP	Existing Fire Alarm Control Panel	CM	Control Module
[Symbol]	New Equipment	MM	Monitor Module
[Symbol]	Existing Equipment	WCH	Wall-Mounted Connector Housing
[Symbol]	Photo Tag		
[Symbol]	Connect To Existing		

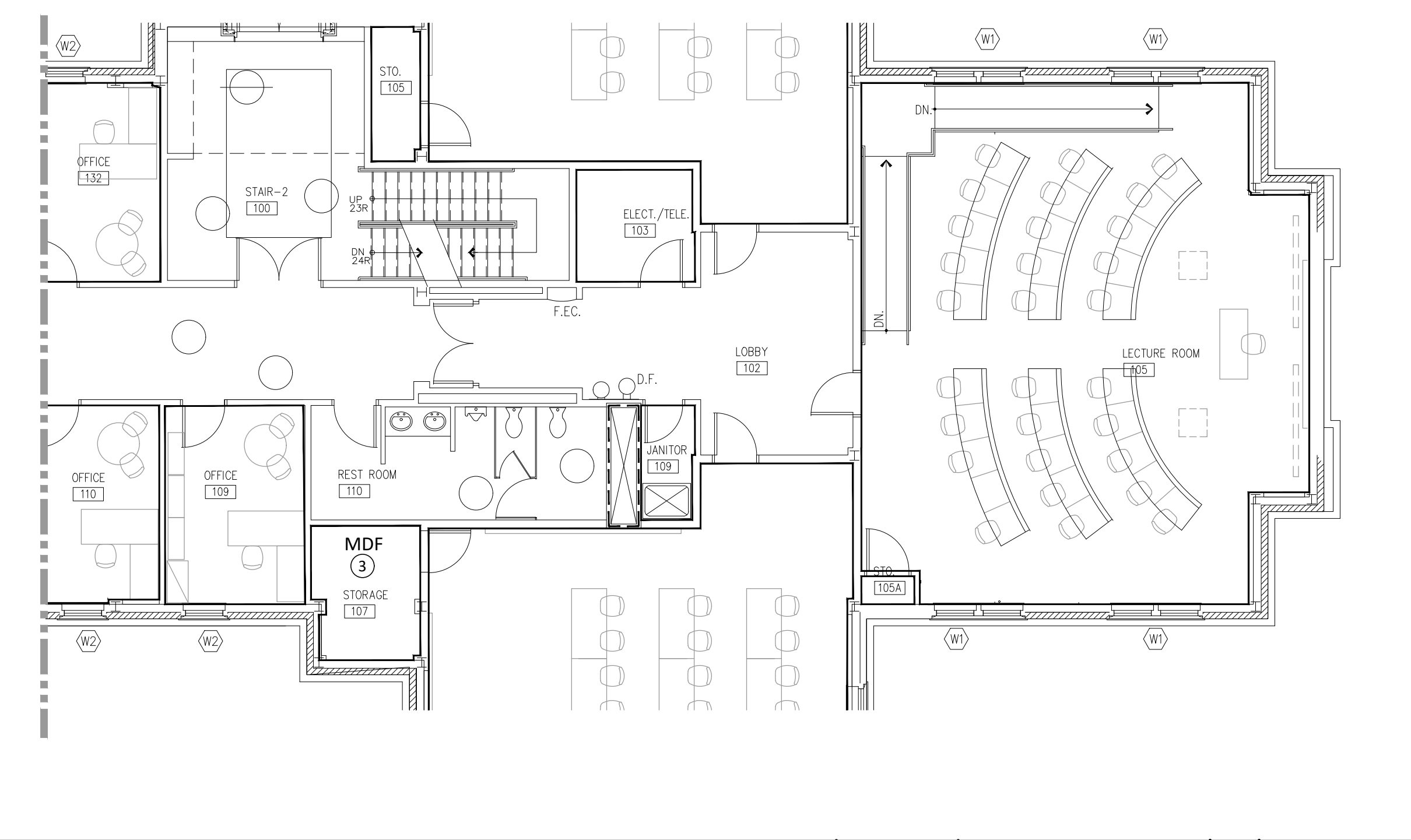


- NOTES:**
- General**
 - The Riser Above Depicts A "Honeywell" Basis Of Design With A New Honeywell FACP. All Existing Simplex End Devices Would Not Be Compatible With The New FACP.
 - Install New FACP With Capacity Noted Below.
 - New Honeywell FACP Would Monitor Existing Simplex FACP For Alarm, Tamper, Trouble, And Other Points That Are Currently Monitored By The Front End At A Minimum.
 - This Building Would NOT Be Considered A Fully Addressable Building.
 - The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - The FACP Shall Connect The Campus Life Safety Management System.
 - Equipment**
 - The Business Building Is Currently Covered By Fire Notification And Detection / Initiation Devices From An Addressable Simplex 4010 System.
 - Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring**
 - The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing**
 - Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.

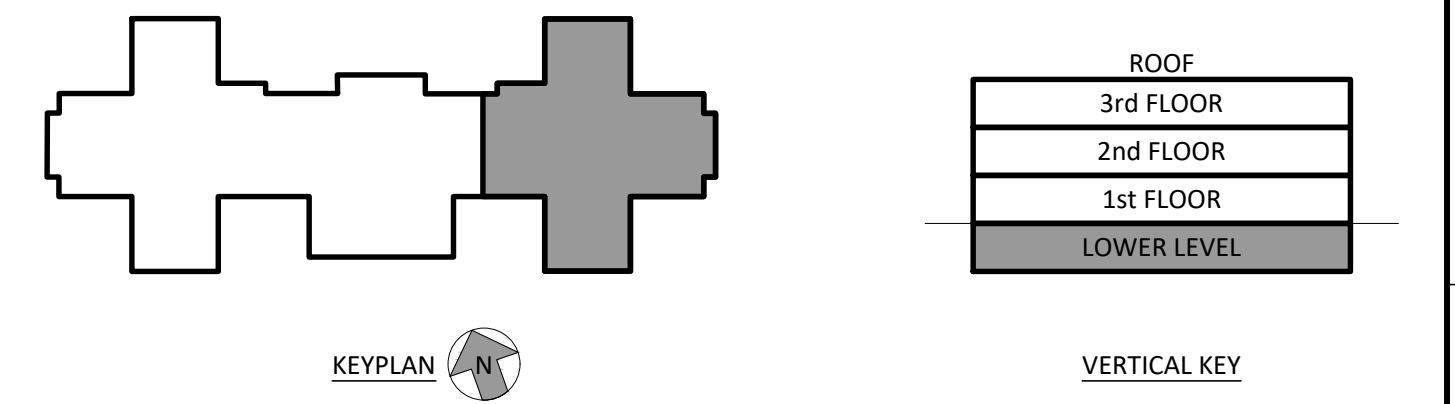
FIRE ALARM RISER Scale: NTS Drawing: **E101** Detail: **01**



PARTIAL FLOOR PLAN - LOWER LEVEL Scale: 1/8"=1'-0" Drawing: **E101** Detail: **03**



PARTIAL FLOOR PLAN - FIRST FLOOR Scale: 1/8"=1'-0" Drawing: **E101** Detail: **04**



project: **TCNJ - CAMPUS FIRE ALARM PROJECT PART B - HARDWARE & SOFTWARE UPGRADES 2000 PENNINGTON ROAD, EWING NJ, 08618**

title: **FIRE ALARM PANEL REPLACEMENT BUSINESS BUILDING**

dwg. no.: **E101-BUS**

scale: AS SHOWN drawn by: SC checked by: SF date: 5/03/2020

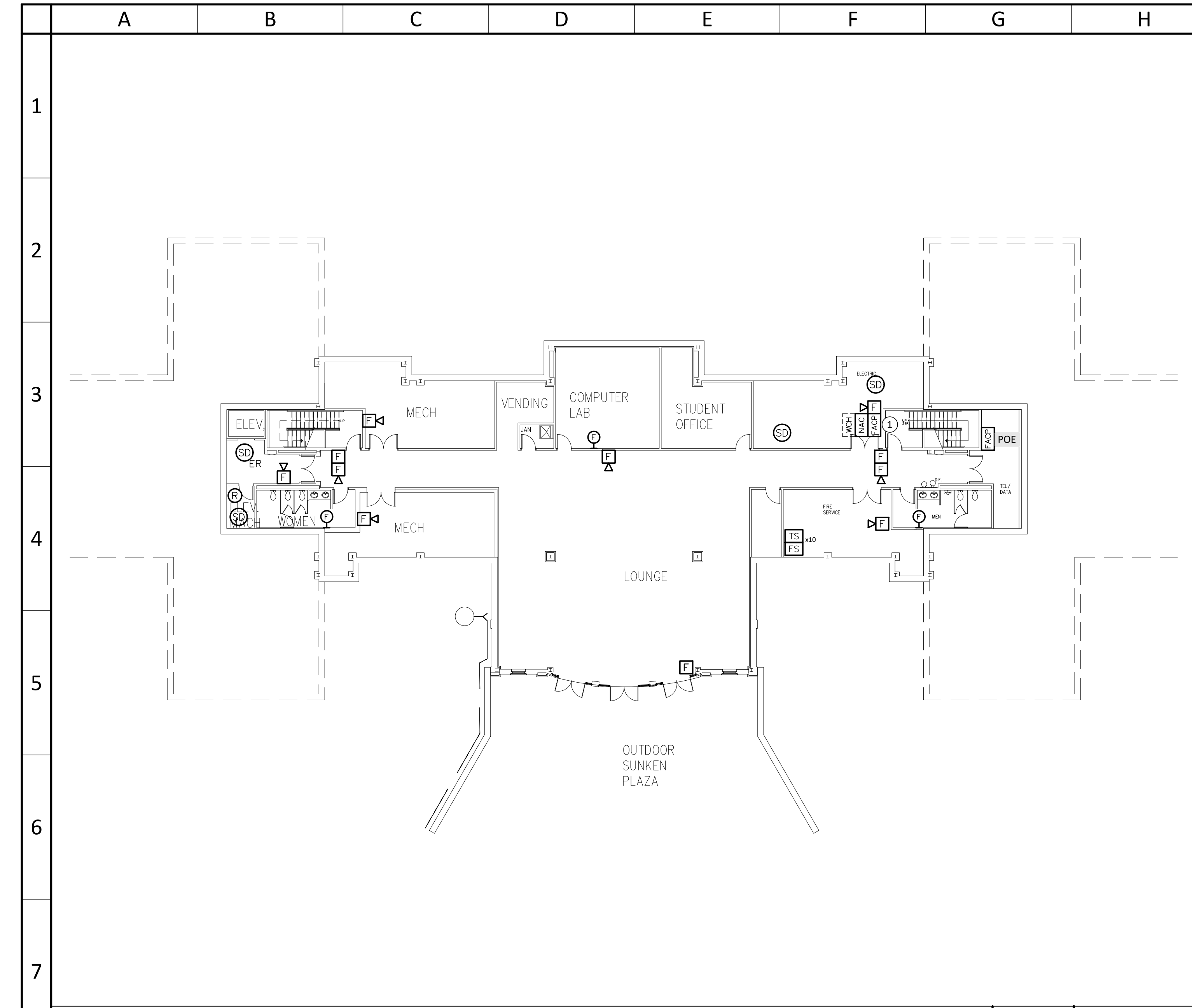
This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30x42

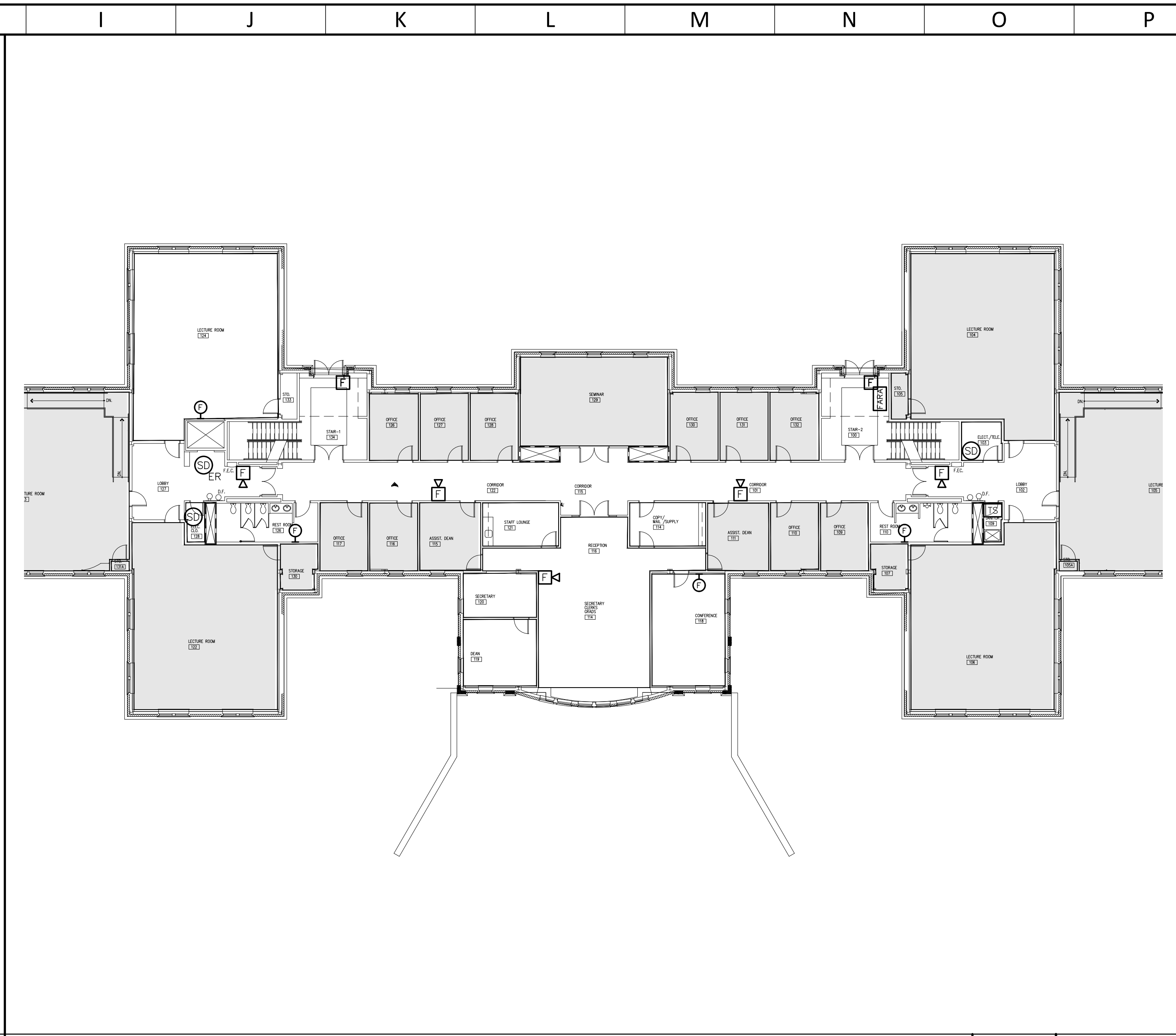
ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

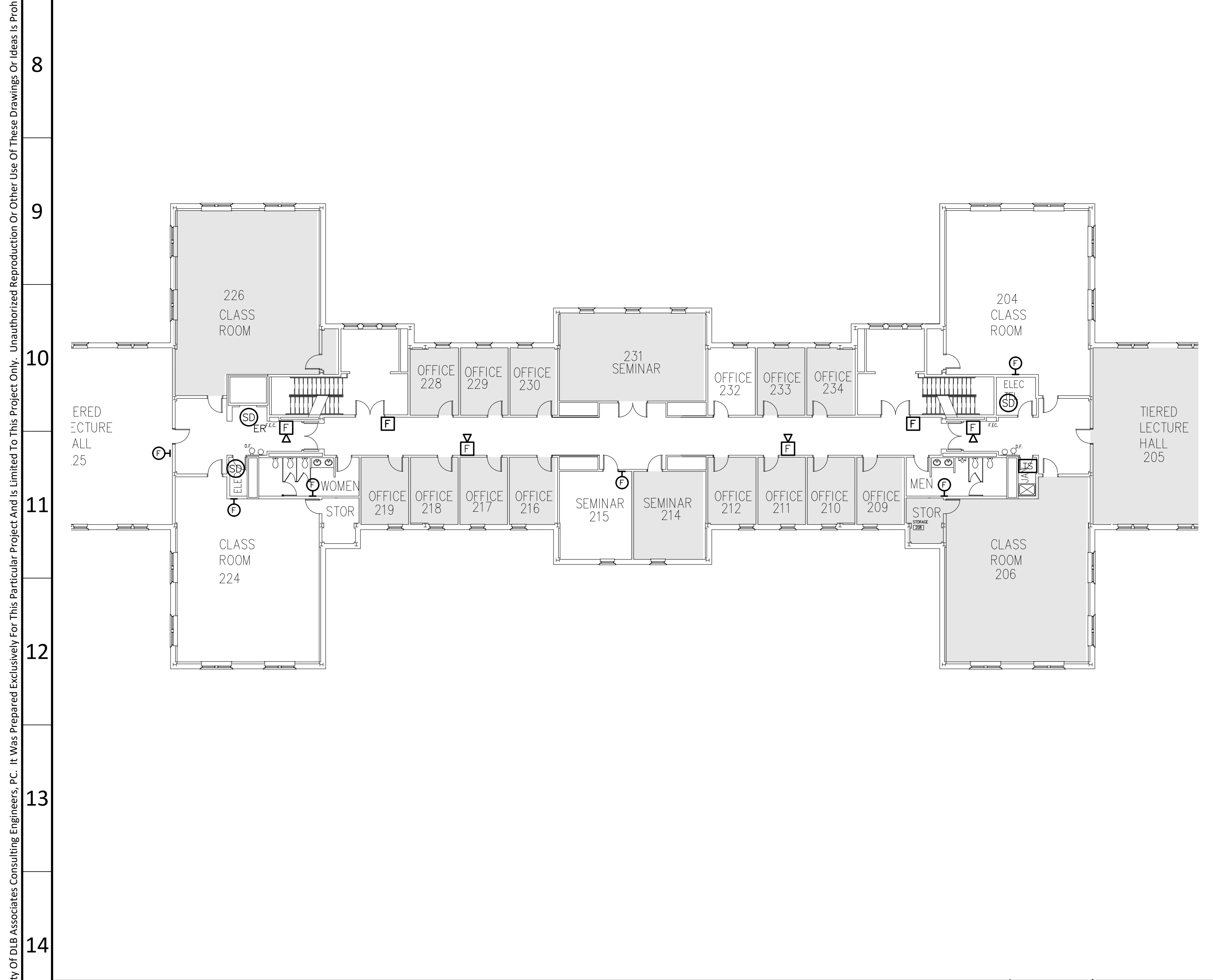
Questions For DLB Call: **Anthony Laskosky**
DLB Project ID: 47211 Phone: 732-927-5038



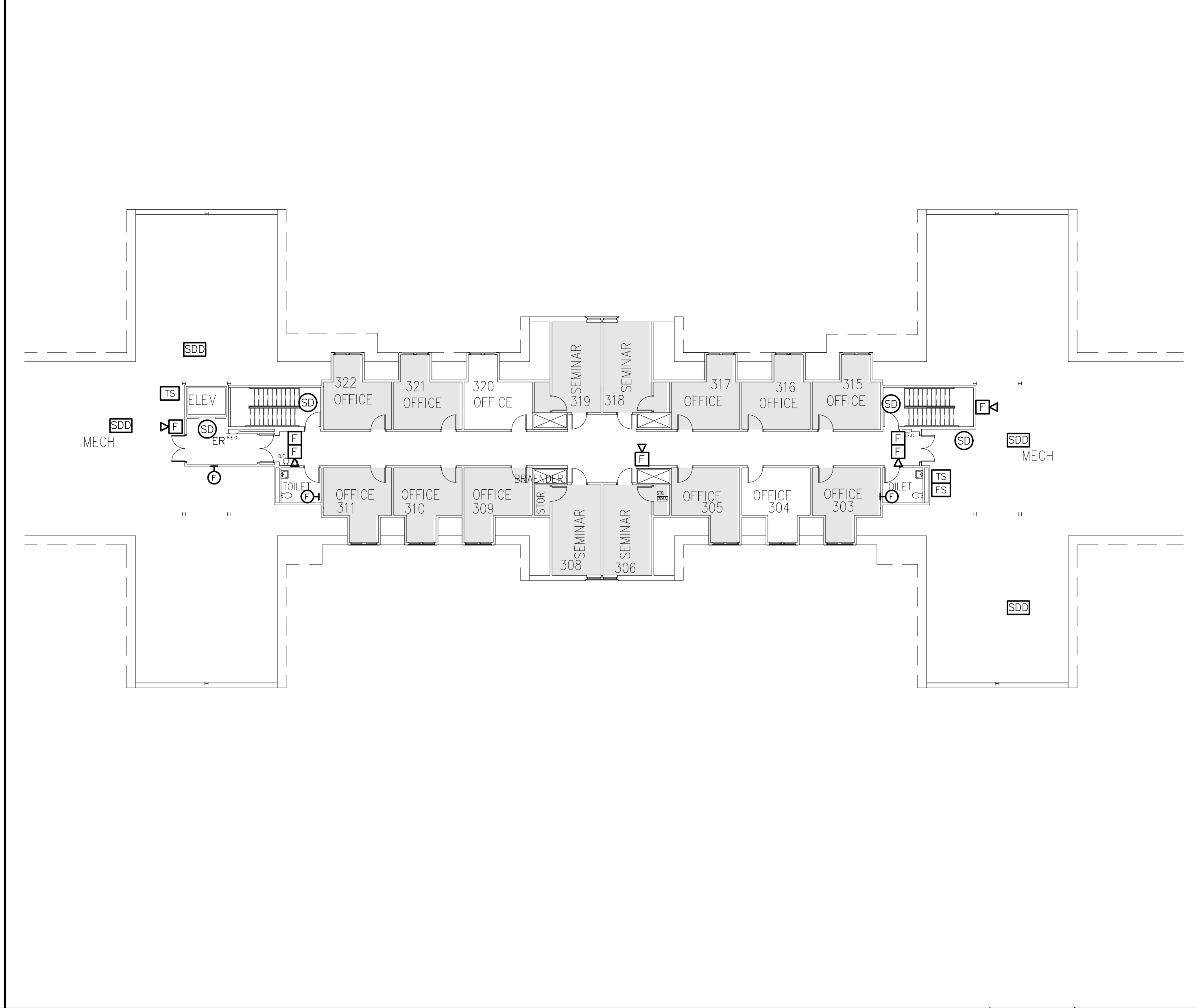
LOWER LEVEL LAYOUT Scale: 1/16"=1'-0" Drawing: **E102** Detail: **01**



FIRST FLOOR LAYOUT Scale: 1/16"=1'-0" Drawing: **E102** Detail: **02**



SECOND FLOOR LAYOUT Scale: 1/16"=1'-0" Drawing: **E102** Detail: **03**



THIRD FLOOR LAYOUT Scale: 1/16"=1'-0" Drawing: **E102** Detail: **04**

KEY NOTES (SYMBOLS ①, ②, ETC.)

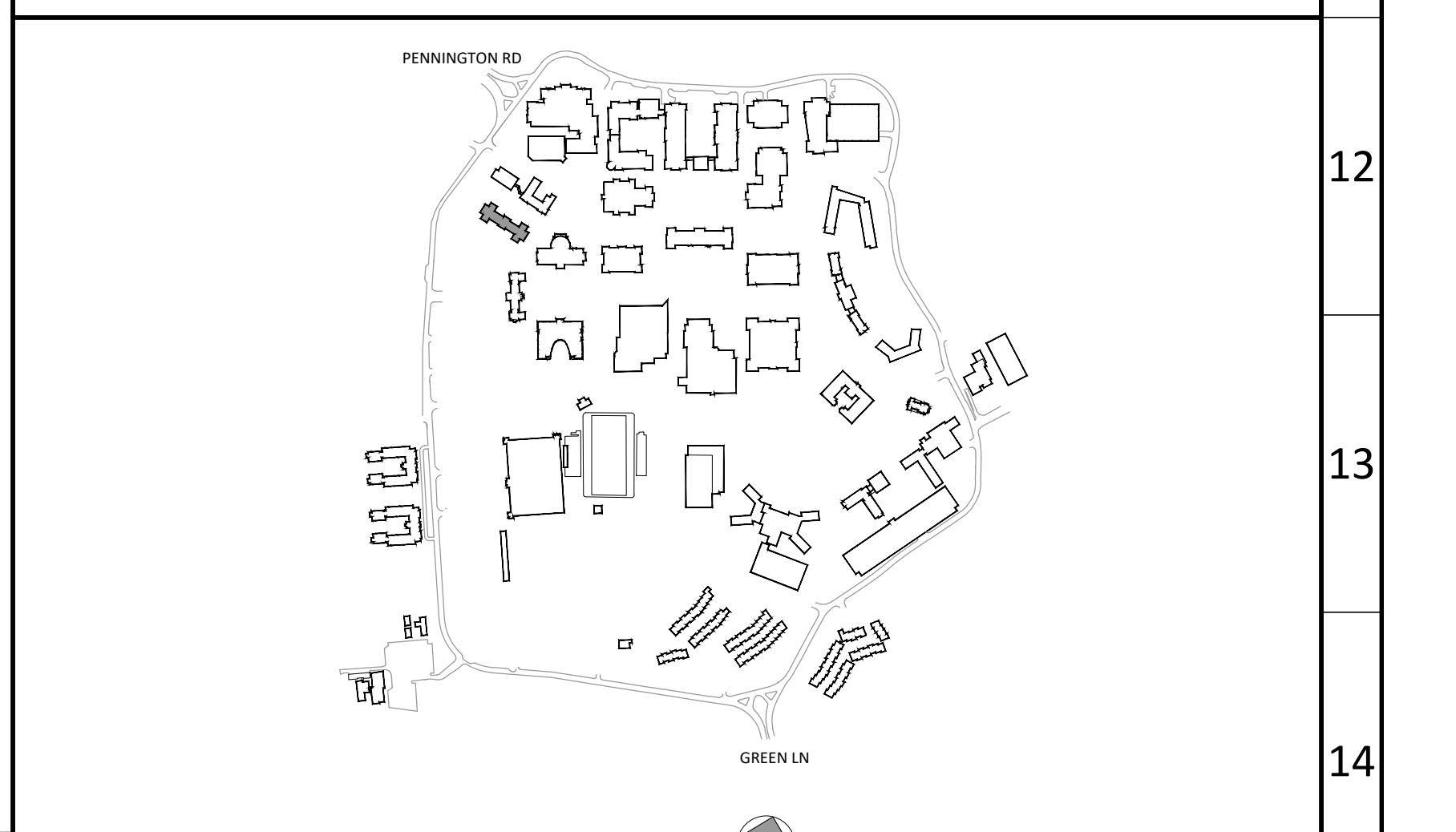
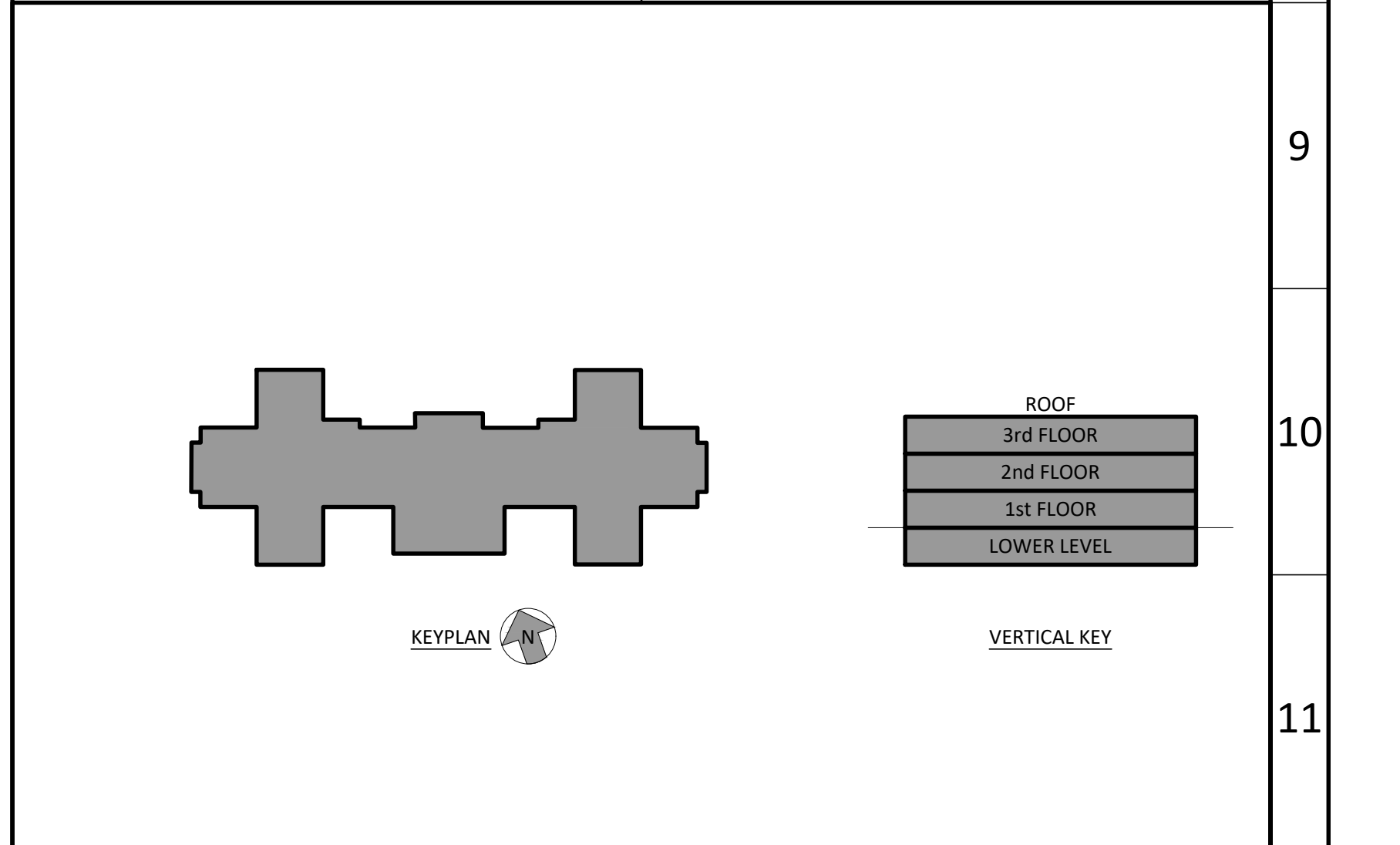
1. Existing Fire Alarm Control Panel.

GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
Ⓛ	Manual Pull Station	□	No Access
Ⓛ	Strobe Only	Ⓛ	New Smoke Detector
Ⓛ	Horn/Strobe	Ⓛ	New Manual Pull Station
Ⓛ	Smoke Detector	Ⓛ	New Strobe
Ⓛ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	Ⓛ	New Horn / Strobe
Ⓛ _{SB}	Smoke Detector With Sounder Base	Ⓛ	Photo ID Tag
Ⓛ	Heat Detector, Combination Fixed Temperature And Rate Of Rise	FACP	Fire Alarm Control Panel
Ⓛ	CO Detector	CO	Carbon Monoxide
Ⓛ _{SDC}	Duct Mounted Smoke Detector	POE	Point Of Entry
Ⓛ _{FACP}	Fire Alarm Control Panel		
Ⓛ _{ARA}	Fire Alarm Remote Annunciator Panel		
Ⓛ _{BA}	Fire Alarm Booster Panel		
Ⓛ _{TS}	Fire Sprinkler Tamper Switch		
Ⓛ _{FS}	Fire Sprinkler Flow Switch		
Ⓛ _{WCH}	Existing Wall Mounted Connector Housing		



30x42

ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

Anthony Laskosky
732-927-5038

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

Questions For DLB Call: 47211
DLB Project ID: 47211

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM - EXISTING LAYOUT
BUSINESS BUILDING

scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020

dwg. no.
E102-BUS

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

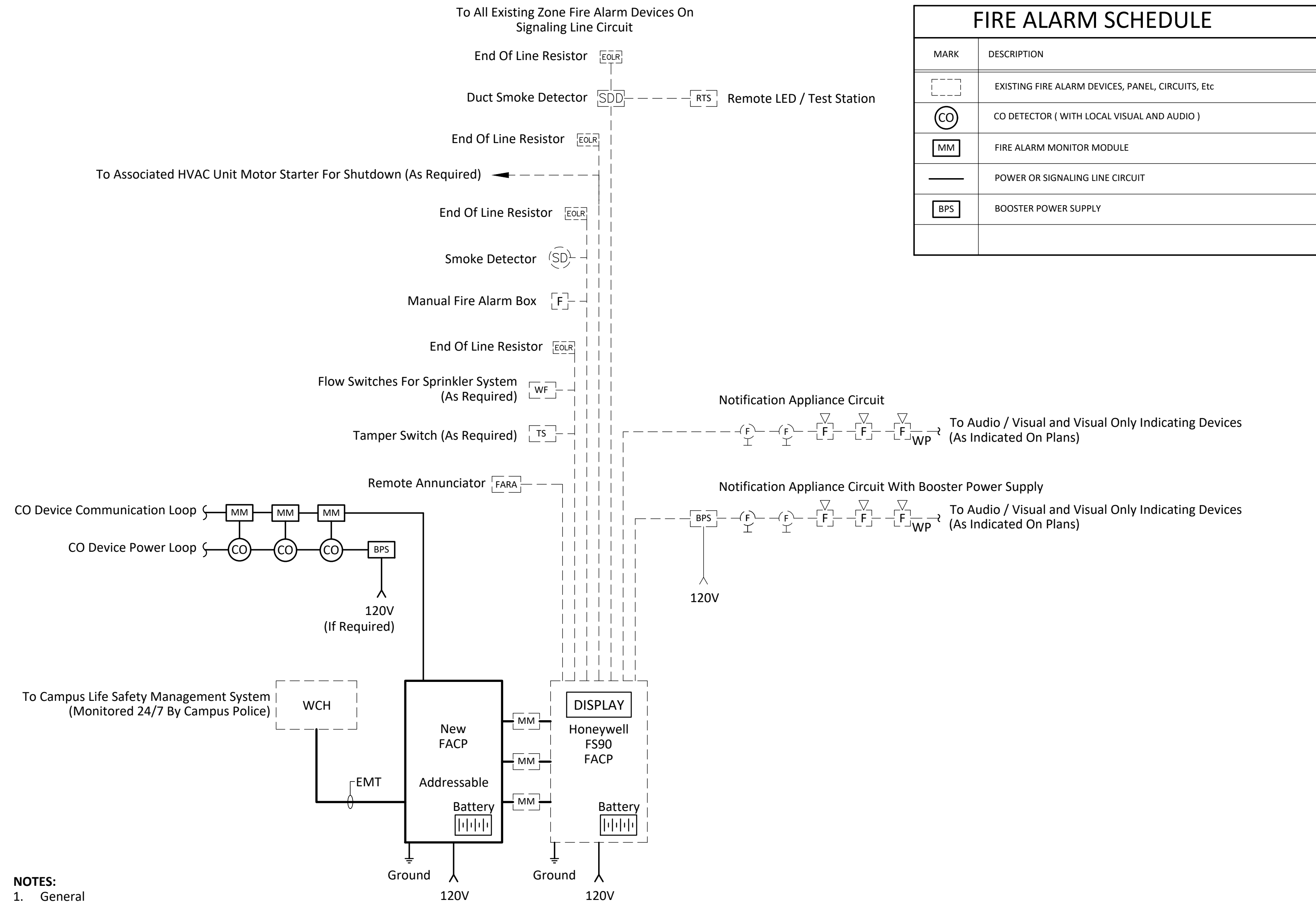
FIRE ALARM PHOTOS



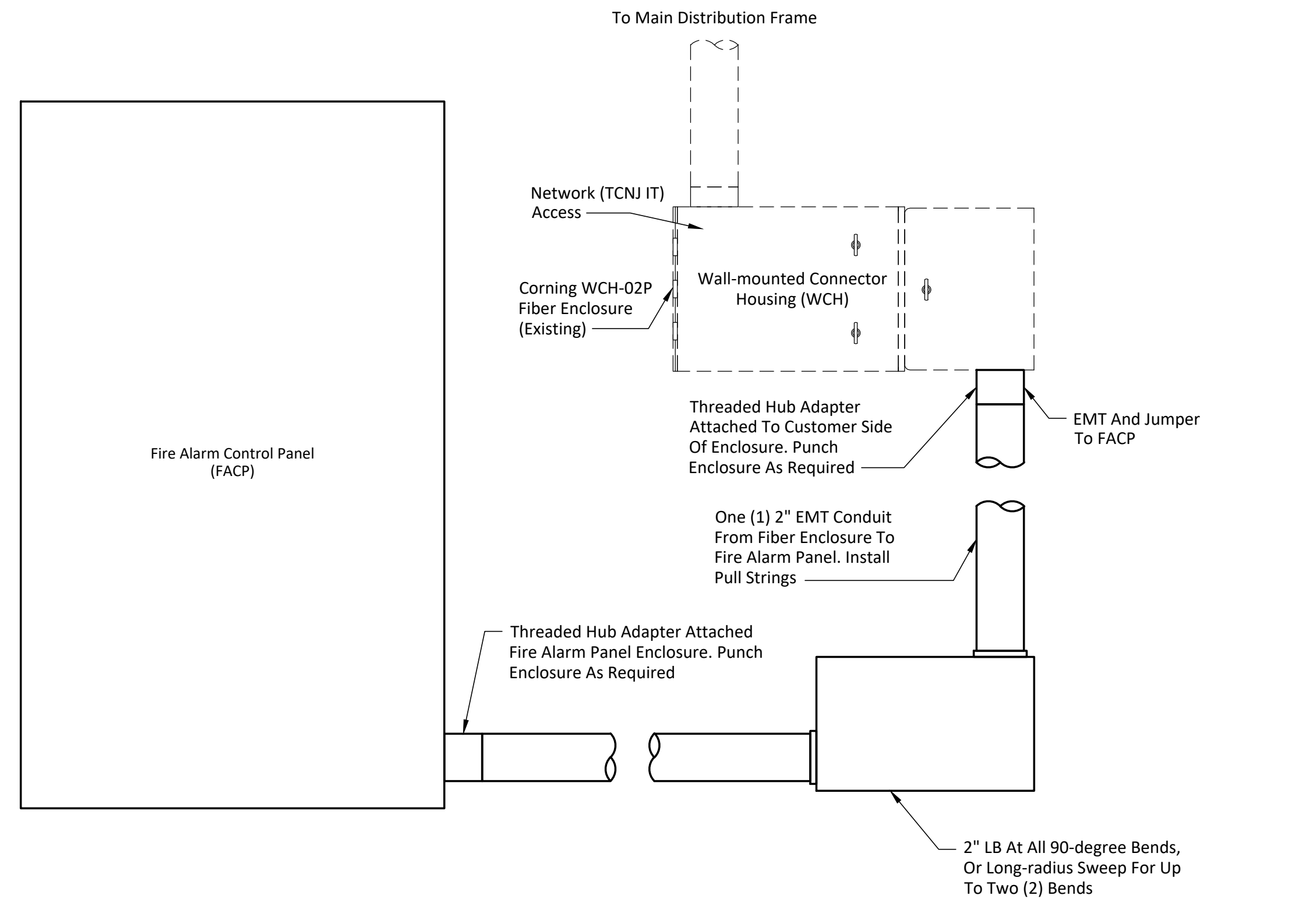
PHOTO A - HONEYWELL FIRE ALARM CONTROL PANEL
Honeywell FS90 Addressable Fire Alarm Control Panel With Exposed Conduit Located Within Lower Level Electrical Room



HONEYWELL FIRE ALARM DEVICES
Existing Honeywell Addressable Fire Alarm Devices Located Throughout The Building

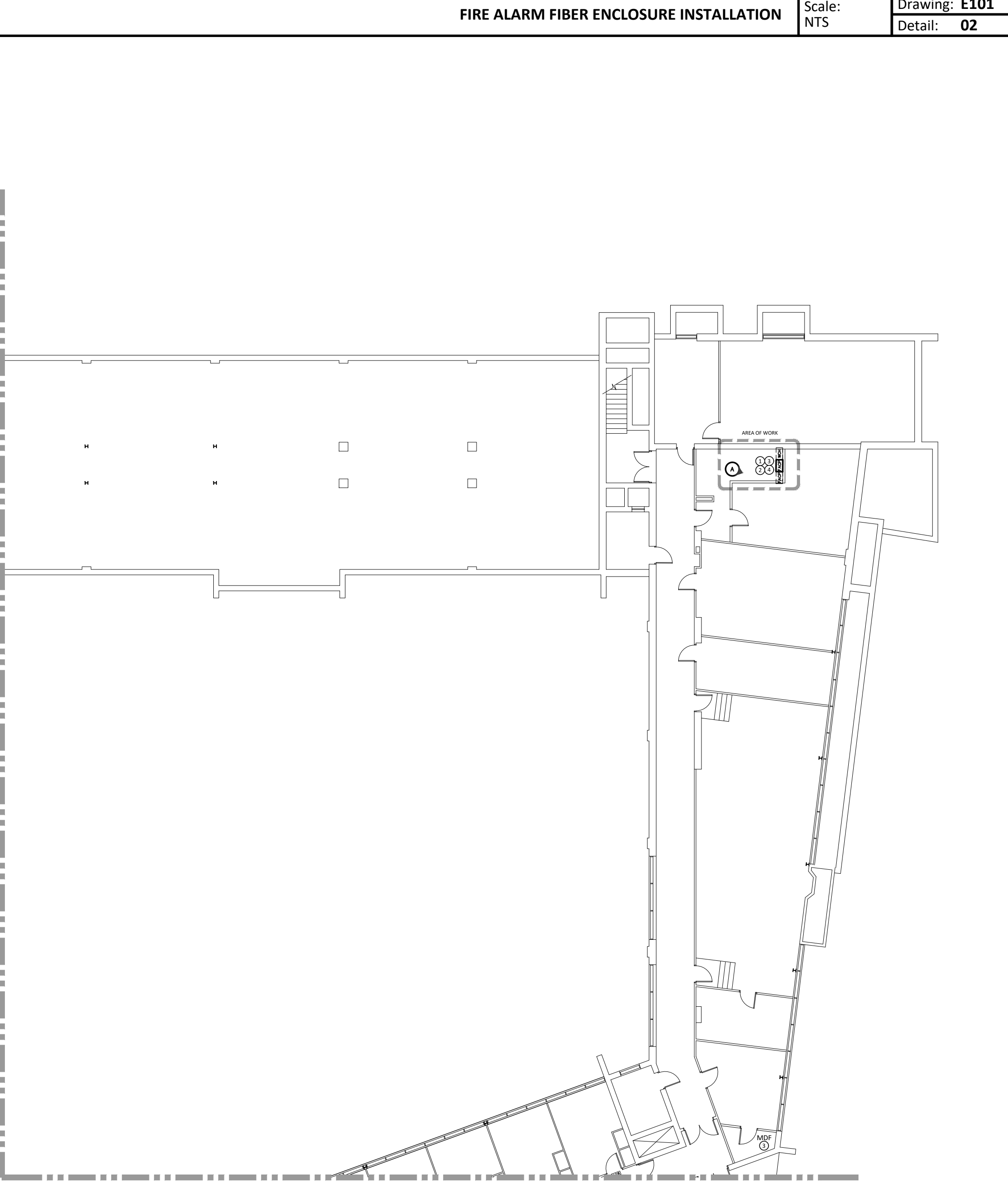


FIRE ALARM RISER (ZONE) Scale: NTS Drawing: **E101** Detail: **01**



NOTES:

- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNJ/IT
- Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
- Install Fiber Jumpers Between WCH And FACP.



KEY NOTES (SYMBOLS ①, ②, ETC.)

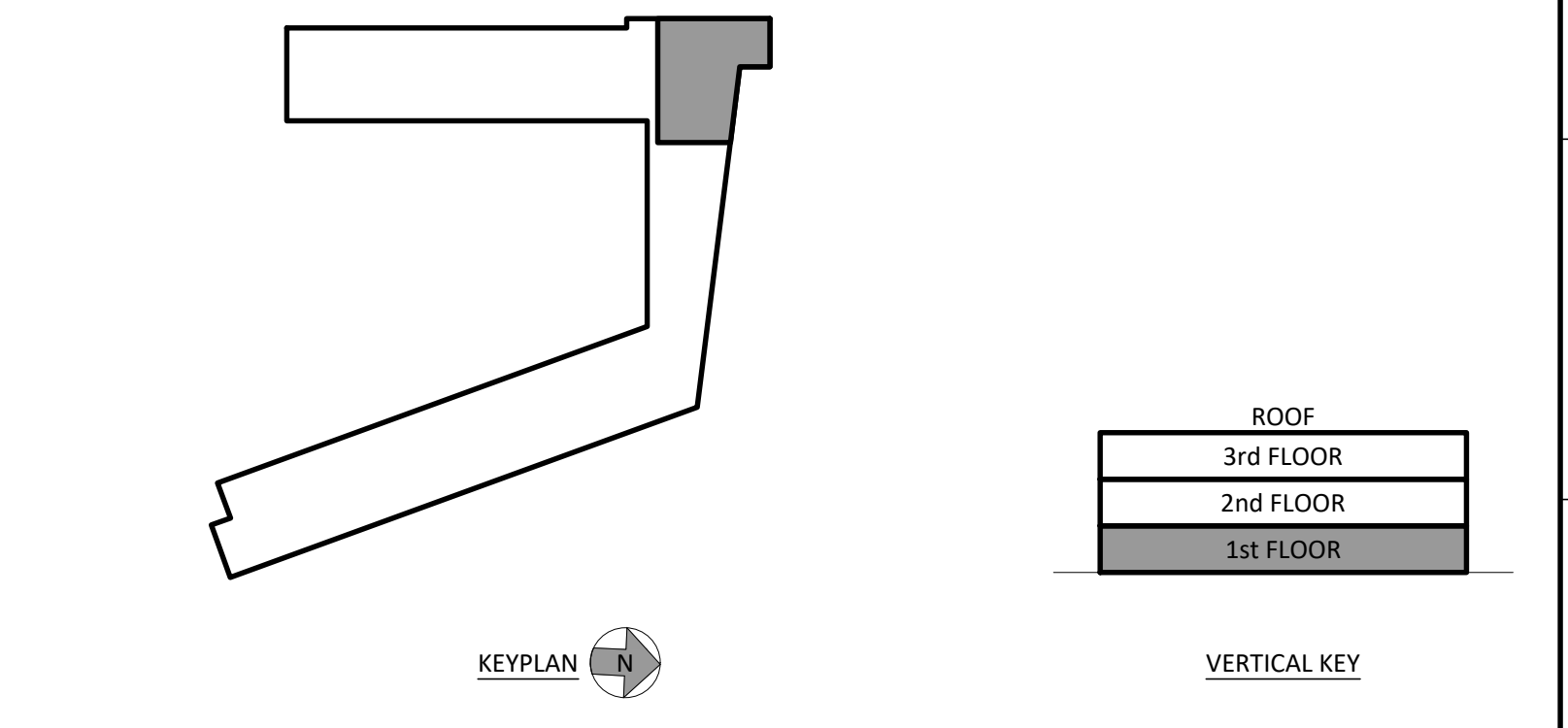
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
- Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
- Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
- Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.
- Provide New CO Devices Connected To New Panel. See Sheet E102 For Approximate Location.

GENERAL NOTES

- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
- The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments. Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
- Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
- Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
- When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently Reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.
- CO Detectors To Provide Local Audio Visual And Supervisory At FACP And LSMS Control Station.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
[FACP]	Fire Alarm Control Panel	[New Equipment Symbol]	New Equipment
[WCH]	Existing Wall-Mounted Connector Housing	[Existing Equipment Symbol]	Existing Equipment
[FACP]	Existing Fire Alarm Control Panel	[Photo Tag Symbol]	Photo Tag
		[Connect To Existing Symbol]	Connect To Existing



title **FIRE ALARM PANEL REPLACEMENT CENTENNIAL HALL** dwg. no. **E101-CENT**

scale AS SHOWN drawn by SC checked by SF date 5/03/2020

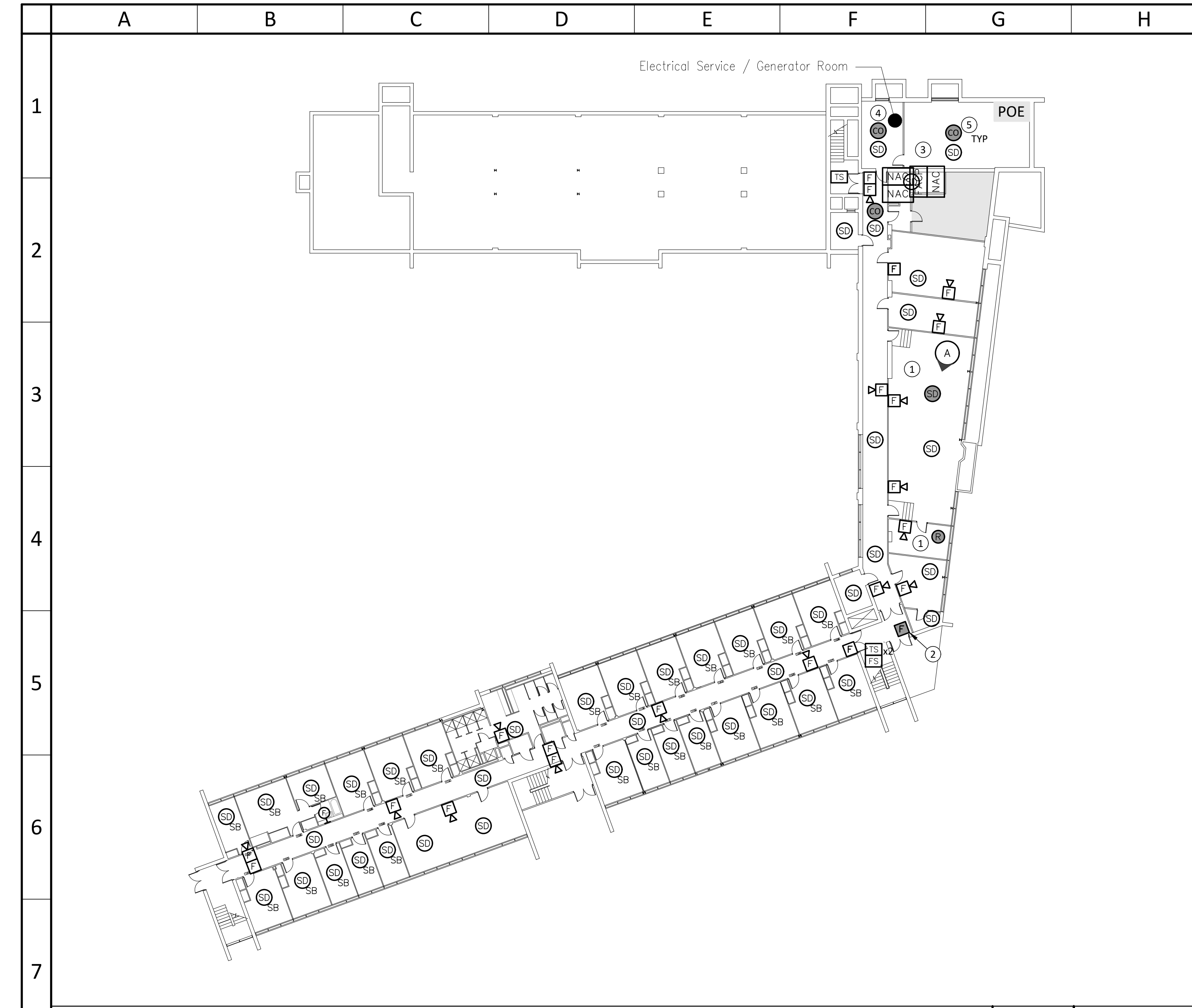
This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30442

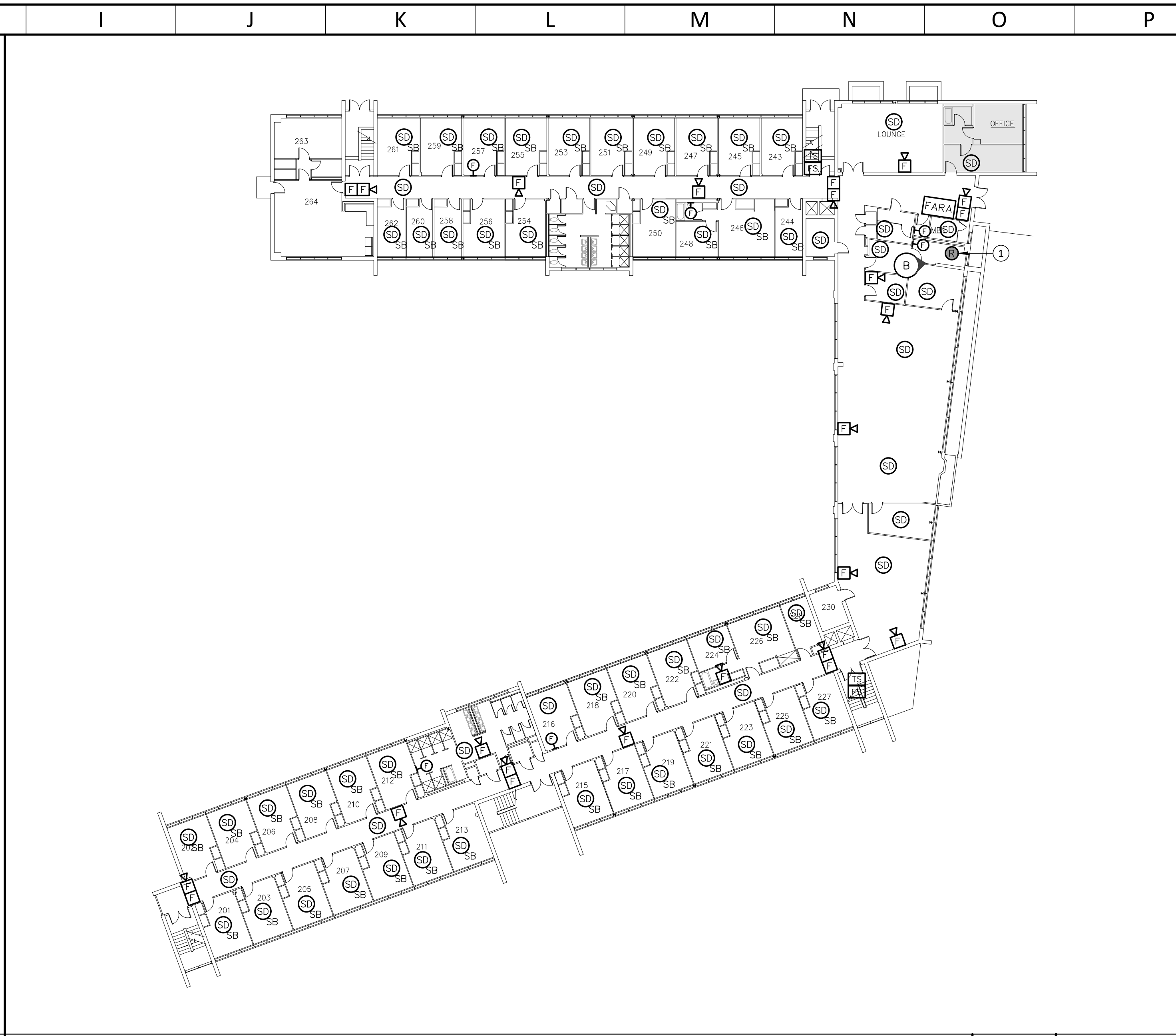
dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

Questions For DLB Call: Anthony Laskosky Phone: 732-927-5038

project **TCNJ - CAMPUS FIRE ALARM PROJECT PART B - HARDWARE & SOFTWARE UPGRADES**
2000 PENNINGTON ROAD, EWING NJ, 08618



FIRST FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **01**



SECOND FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **02**

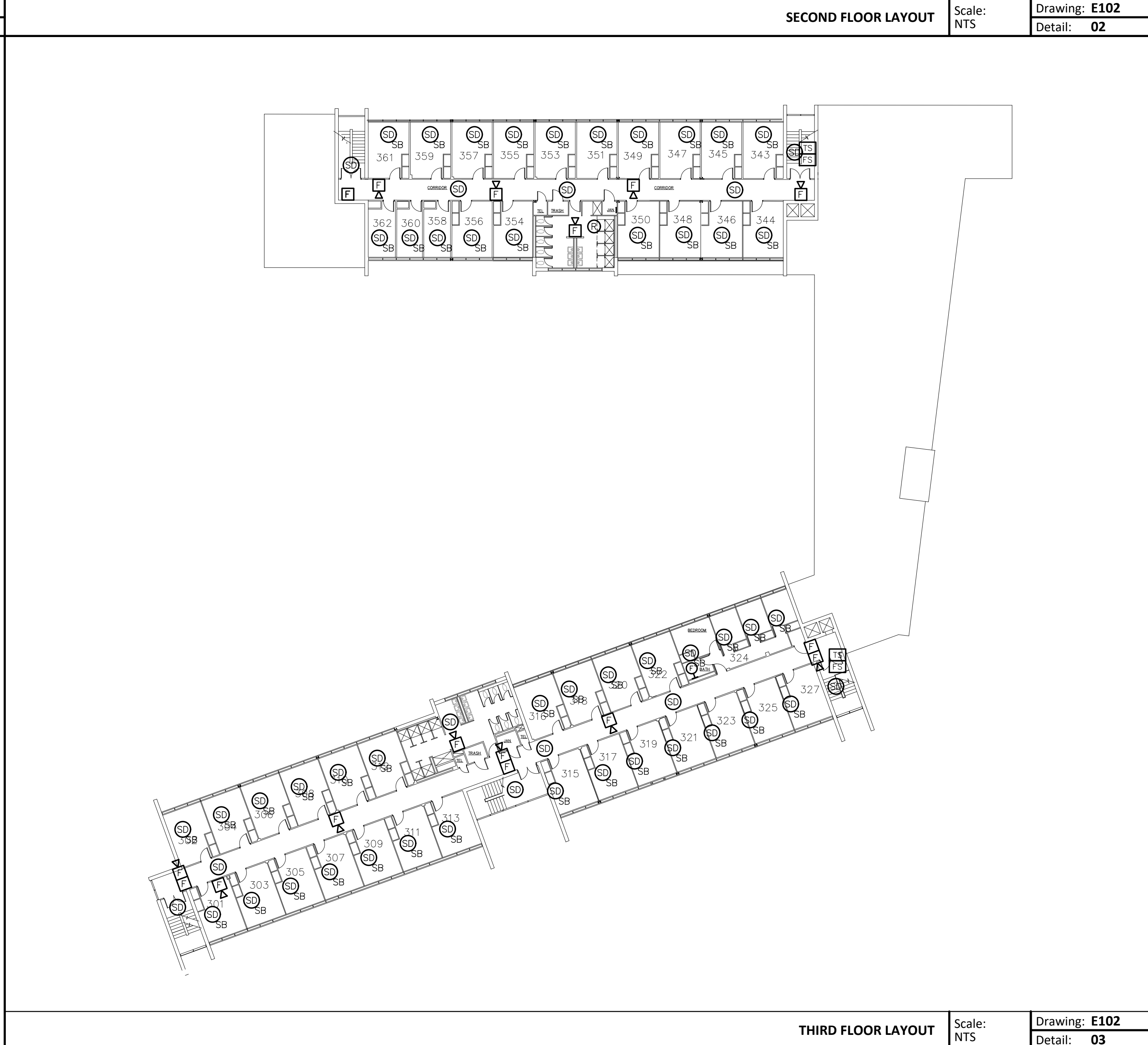
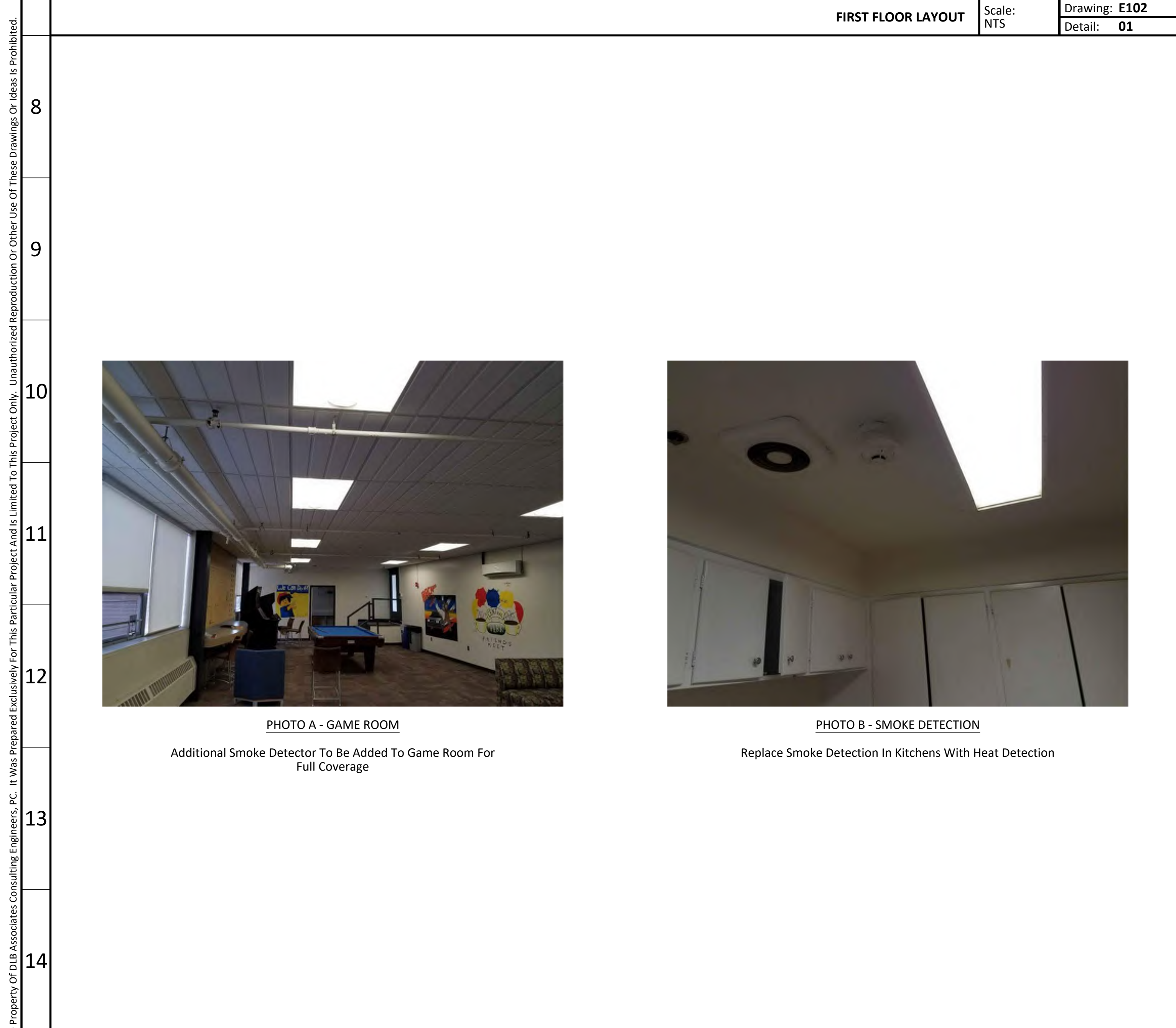
- KEY NOTES (SYMBOLS ①, ②, ETC.)**
1. Device To Be Added.
 2. Pull Station Required Along Path Of Egress.
 3. Existing Fire Alarm Control Panel.
 4. Gas Generator.
 5. New CO Detector.

GENERAL NOTES

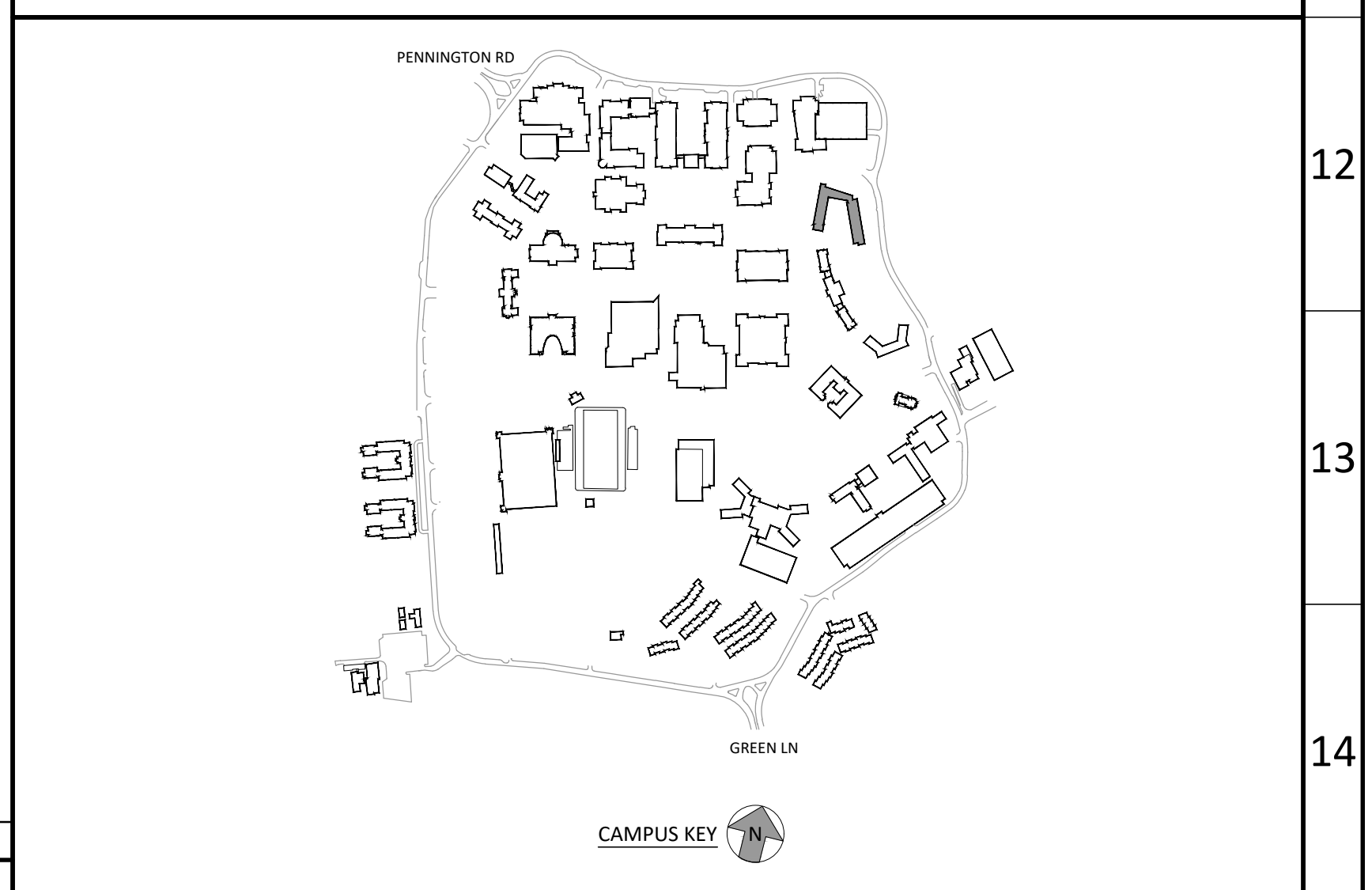
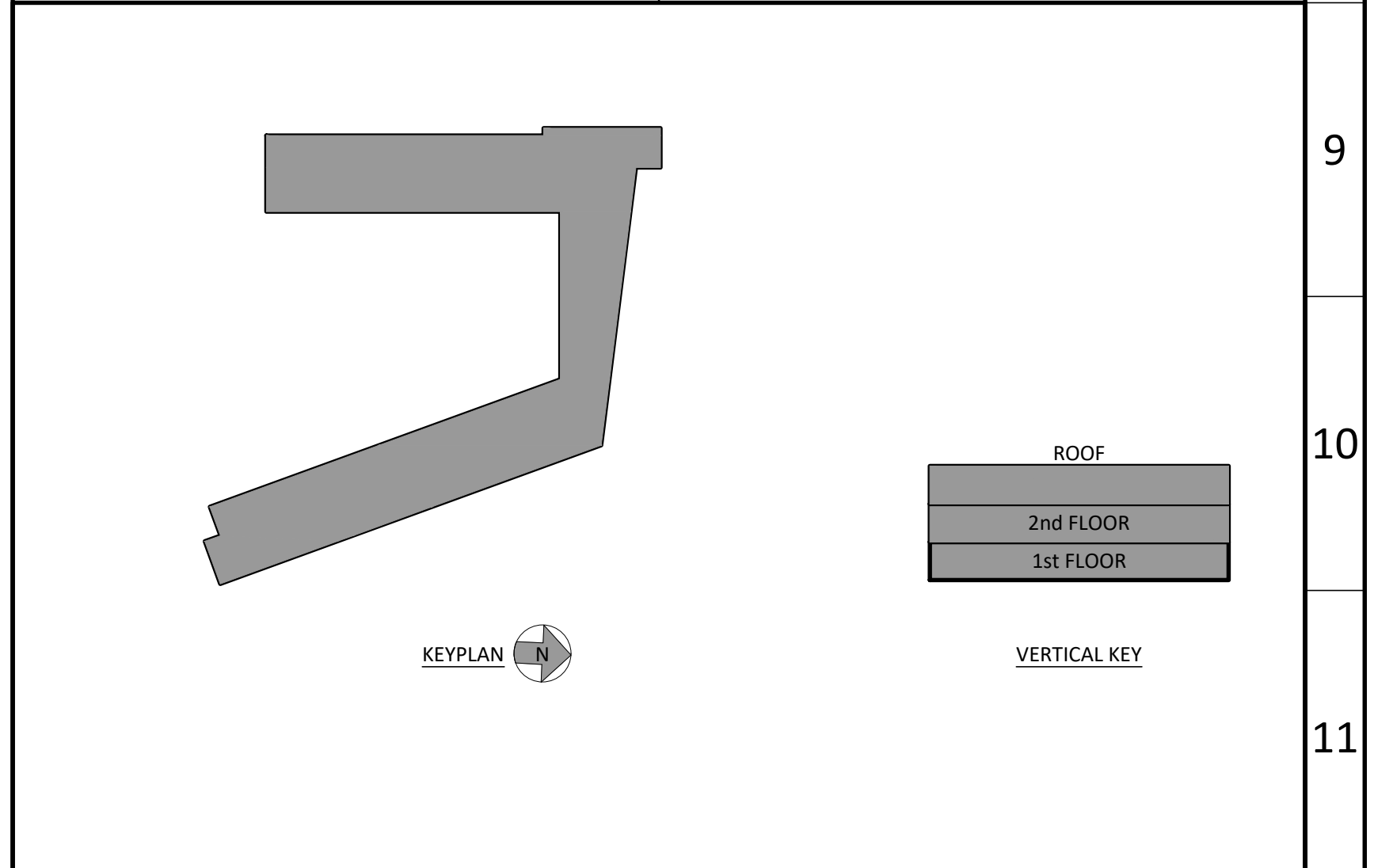
1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
F	Manual Pull Station	□	No Access
⊕	Strobe Only	⊙	New Smoke Detector
⊕	Horn/Strobe	⊕	New Manual Pull Station
⊙	Smoke Detector	⊕	New Strobe
⊙ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	⊕	New Horn / Strobe
⊙ _{SB}	Smoke Detector With Sounder Base	⊙	New Carbon Monoxide Detector With Local Audio And Visual Notification.
⊙	Heat Detector, Combination Fixed Temperature And Rate Of Rise	⊙	Photo Location Indicator
⊙	CO Detector	FACP	Fire Alarm Control Panel
⊕ _{SB}	Duct Mounted Smoke Detector	CO	Carbon Monoxide
FACP	Fire Alarm Control Panel	POE	Point Of Entry
FARA	Fire Alarm Remote Annunciator Panel		
FABP	Fire Alarm Booster Panel		
FS	Fire Sprinkler Tamper Switch		
FS	Fire Sprinkler Flow Switch		



THIRD FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **03**



1	05/01/2020	ISSUED FOR BID	ITEM	DATE	ISSUE DESCRIPTION

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM - EXISTING LAYOUT
CENTENNIAL HALL
dwg. no.
E102-CENT
scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30x42

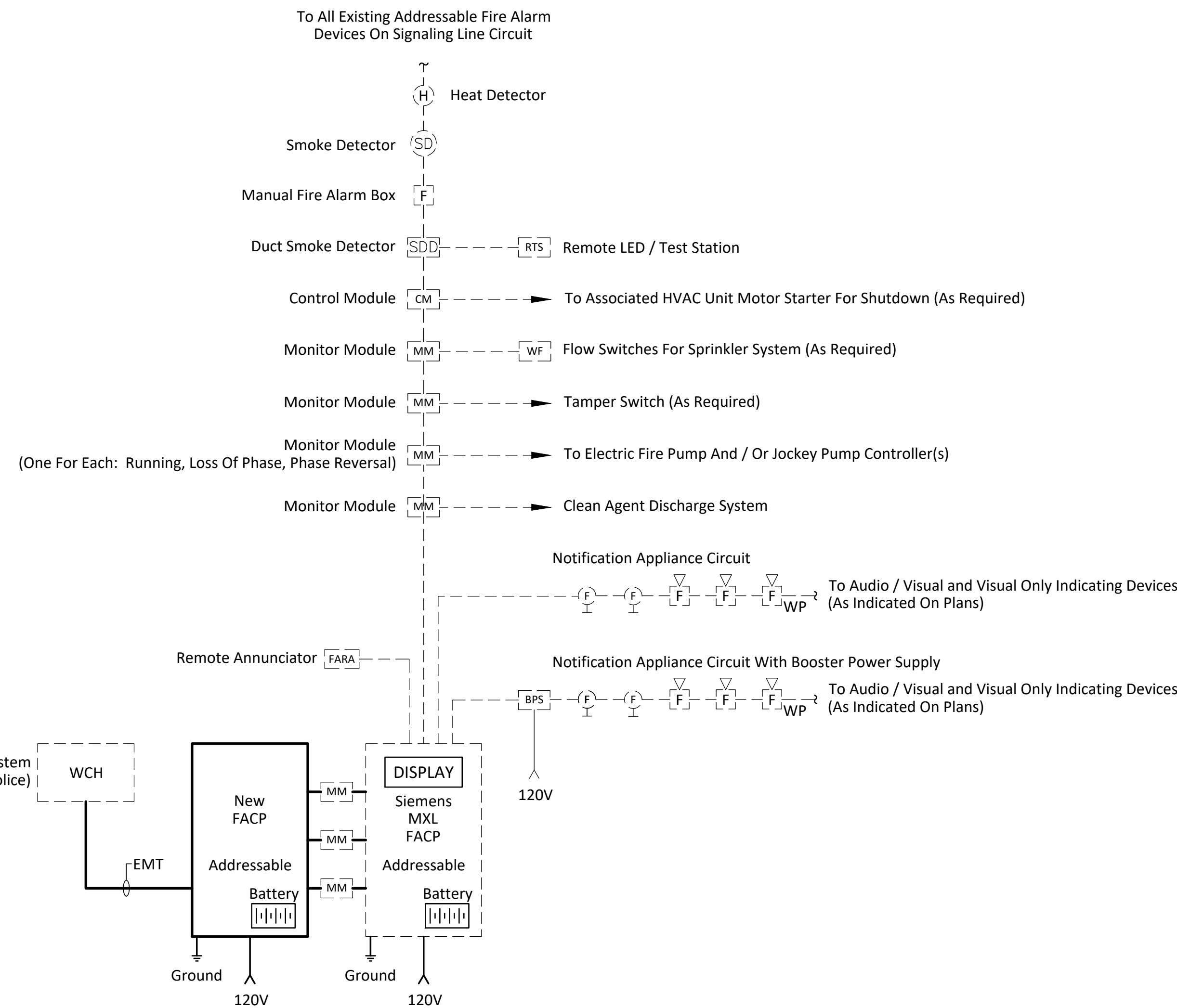
FIRE ALARM PHOTOS



PHOTO A - INTERMEDIARY FIRE ALARM CONTROL PANEL
Honeywell FS90 Intermediary Fire Alarm Control Panel With Exposed Conduit Located Within Lower Level Storage Room

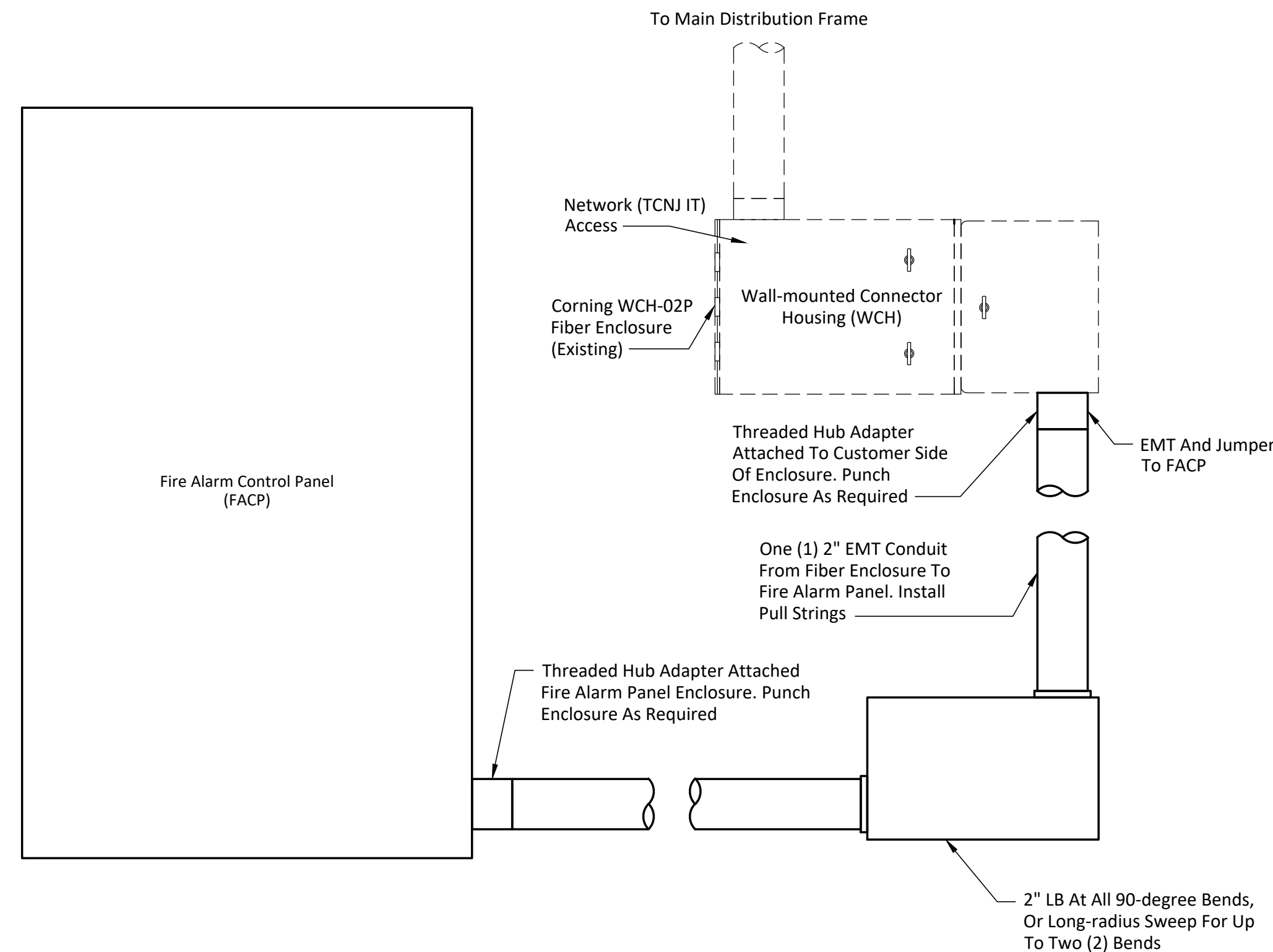


PHOTO B - SIEMENS FIRE ALARM CONTROL PANEL
Siemens MXL Addressable Fire Alarm Control Panel With Exposed Conduit Located Within Lower Level Generator Room



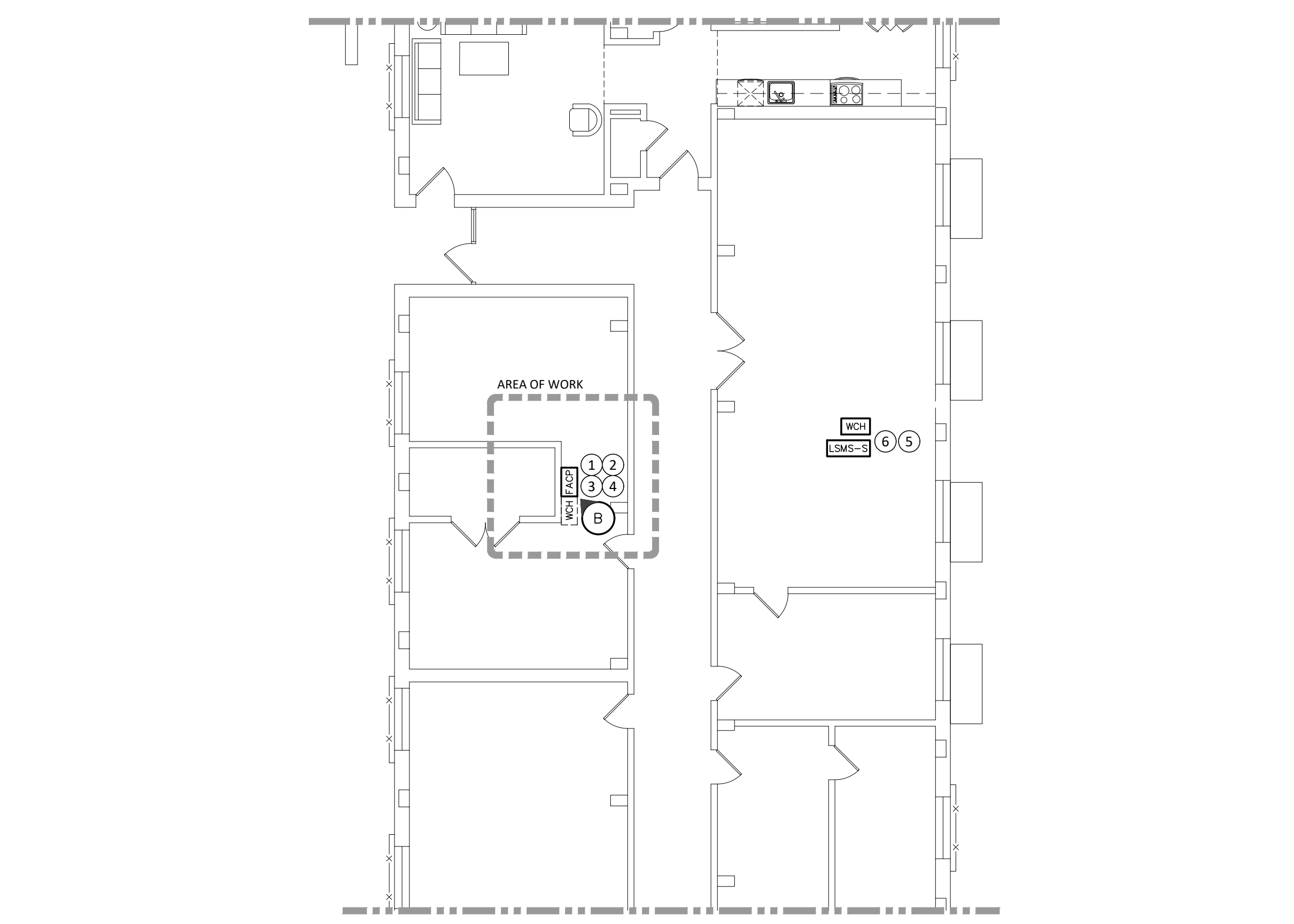
- NOTES:**
- General
 - A. The Riser Above Depicts A "Honeywell" Basis Of Design With A New Honeywell FACP. All Existing Siemens End Devices Would Not Be Compatible With The New FACP.
 - 1) Install New FACP With Capacity Noted Below.
 - 2) New Honeywell FACP Would Monitor Existing Siemens FACP For Alarm, Tamper, Trouble, And Other Points That Are Currently Monitored By The Front End At A Minimum.
 - 3) This Building Would NOT Be Considered A Fully Addressable Building.
 - B. The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - C. The FACP Shall Connect The Campus Life Safety Management System.
 - Equipment
 - A. Cromwell Hall Is Currently Covered By Fire Notification And Detection / Initiation Devices From An Addressable Siemens MXL System.
 - B. Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring
 - A. The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - B. The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - C. The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - D. The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - E. Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing
 - A. Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.

FIRE ALARM RISER Scale: NTS Drawing: **E101** Detail: **01**

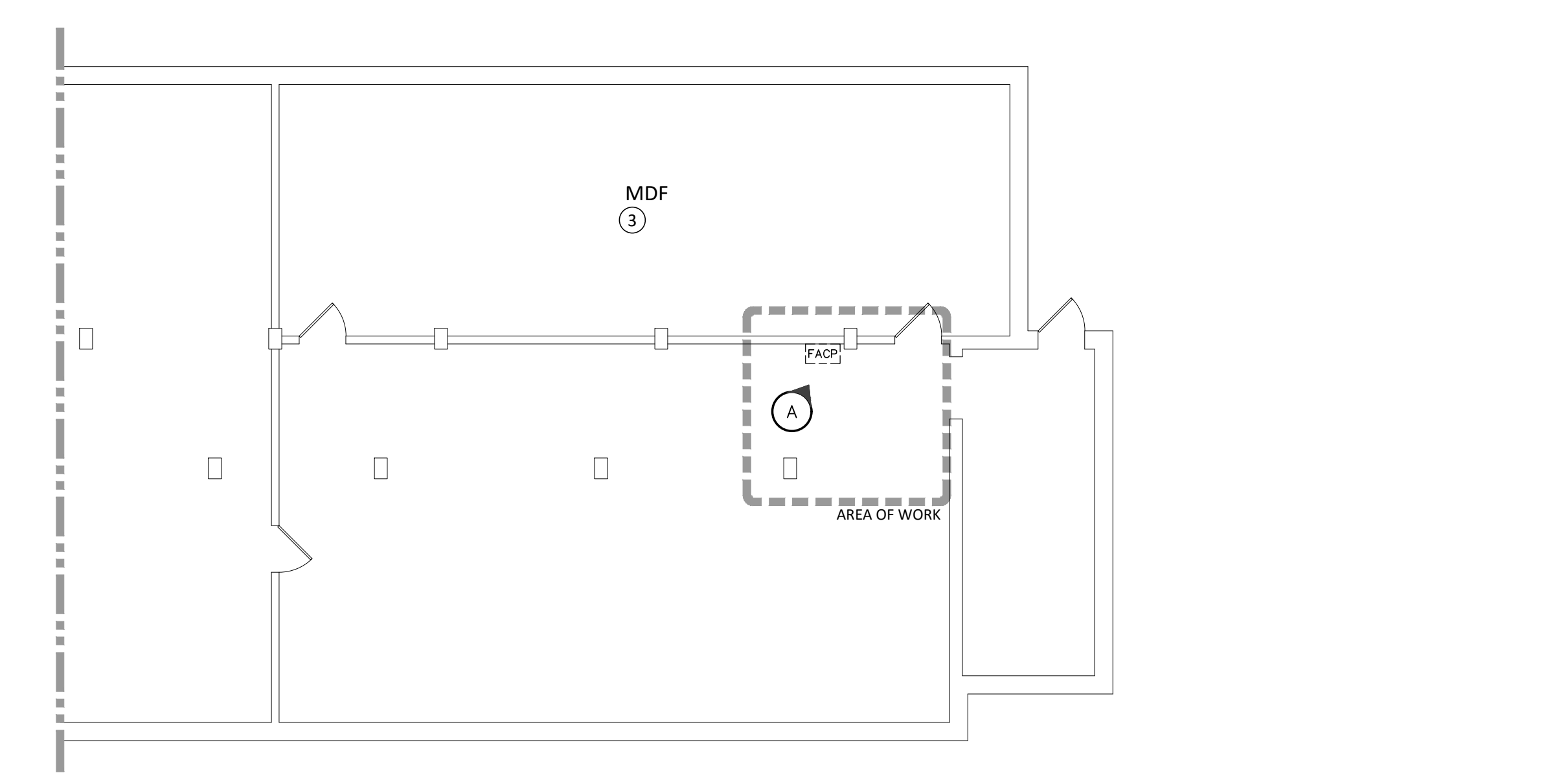


- NOTES:**
- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNJ/IT
 - Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
 - Install Fiber Jumpers Between WCH And FACP.

FIRE ALARM FIBER ENCLOSURE INSTALLATION Scale: NTS Drawing: **E101** Detail: **02**



PARTIAL FLOOR PLAN A - LOWER LEVEL Scale: 1/8"=1'-0" Drawing: **E101** Detail: **03**



PARTIAL FLOOR PLAN B - LOWER LEVEL Scale: 1/8"=1'-0" Drawing: **E101** Detail: **04**

KEY NOTES (SYMBOLS ①, ②, ETC.)

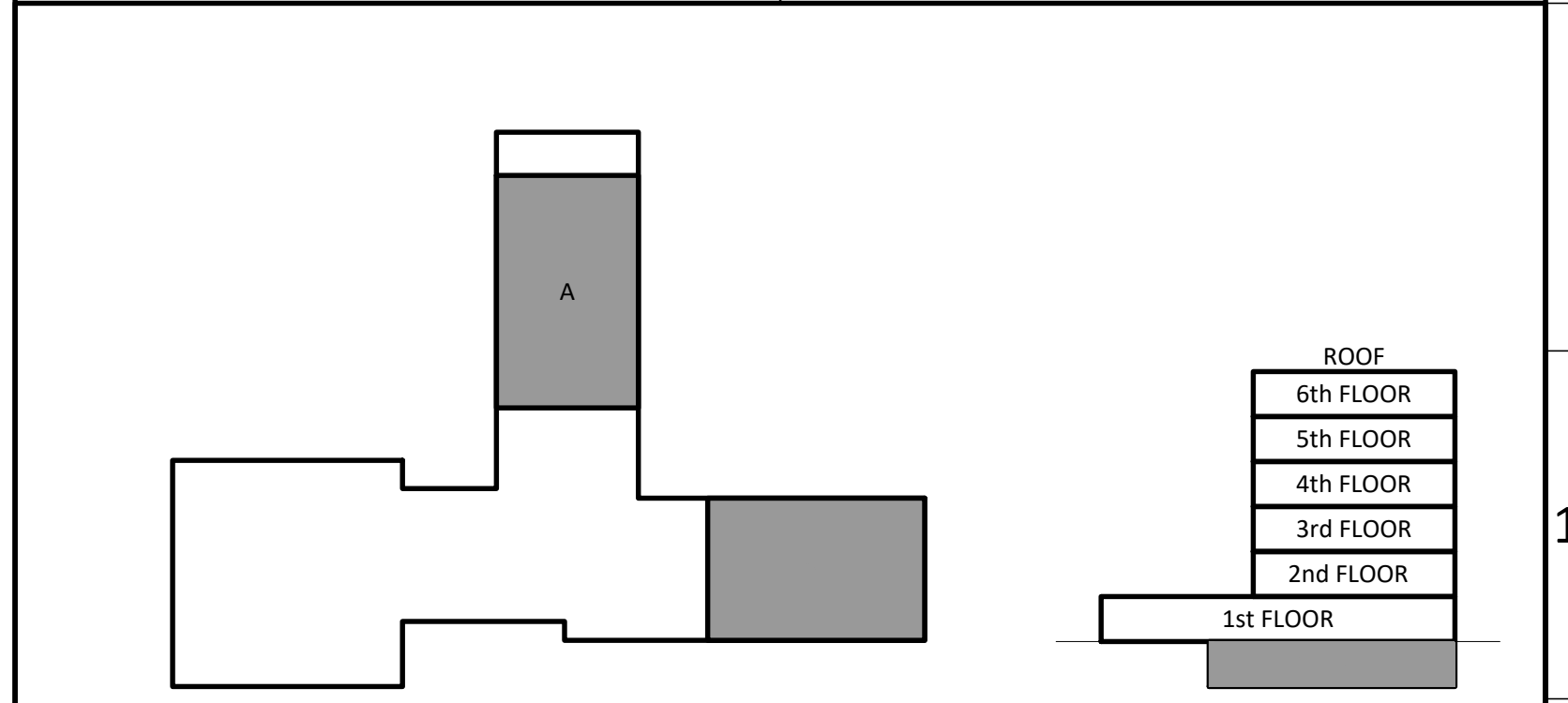
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
- Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
- Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
- Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.
- New Life Safety Management System Server And Cabling To Connect To LSMS Network In IT Server Room Location. See Specifications And Cable Infrastructure Package A Set For Additional Details.
- Provide New Fire Alarm Network Switch And Fiber Patch Cords As Required For New Life Safety Management System Network Architecture. Coordinate With TCNJ IT Department For Connection Of Switch To Fiber Network.

GENERAL NOTES

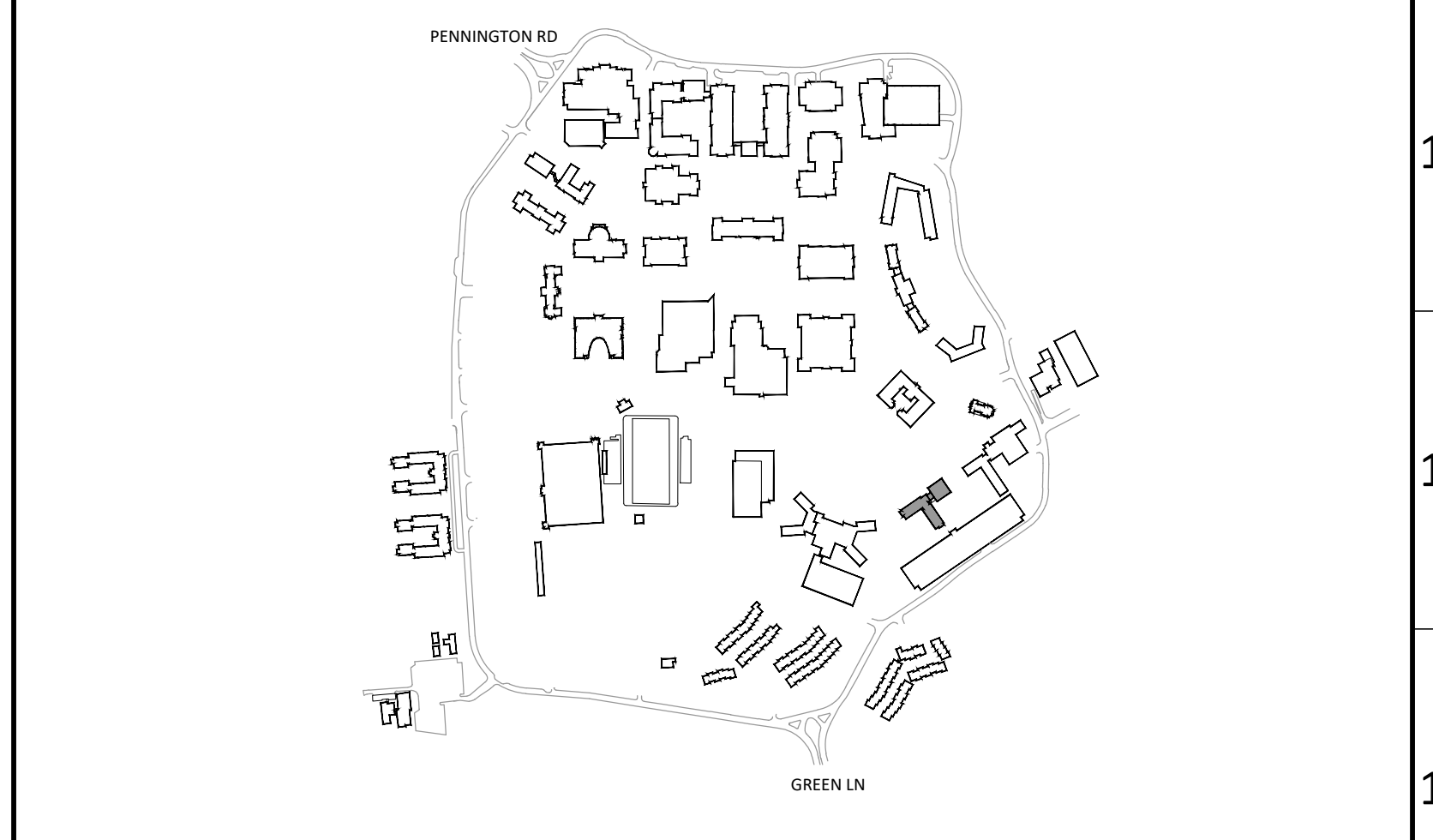
- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
- The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments.
- Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
- Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
- Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
- When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently Reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
FACP	Fire Alarm Control Panel	FACP	Fire Alarm Control Panel
WCH	Existing Wall-Mounted Connector Housing	EMT	Electrical Metallic Tubing
FACP	Existing Fire Alarm Control Panel	CM	Control Module
[Symbol]	New Equipment	MM	Monitor Module
[Symbol]	Existing Equipment	WCH	Wall-Mounted Connector Housing
ⓐ	Photo Tag	[Symbol]	Connect To Existing



KEYPLAN and **VERTICAL KEY**



CAMPUS KEY

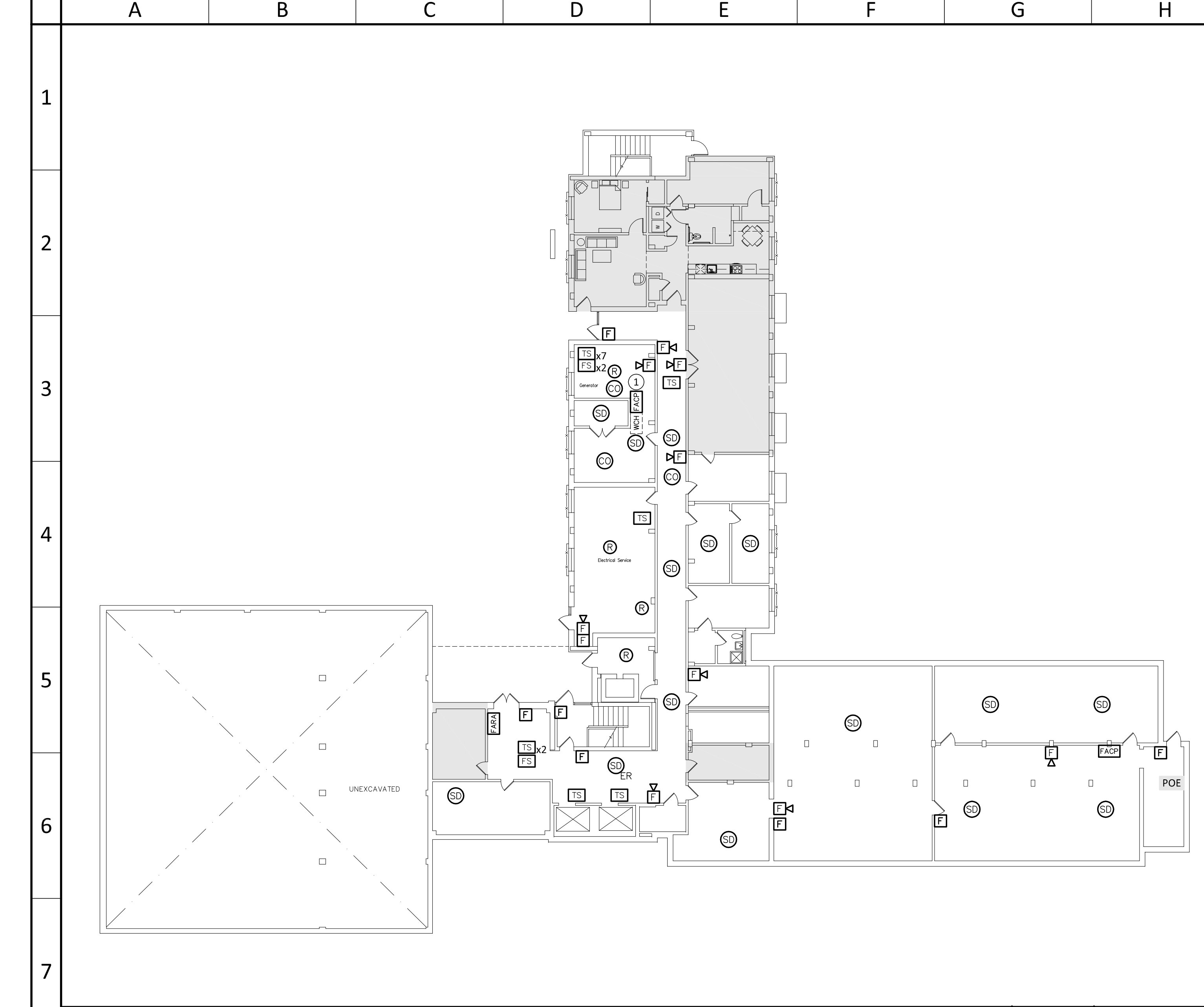
ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky Phone: 732-927-5038

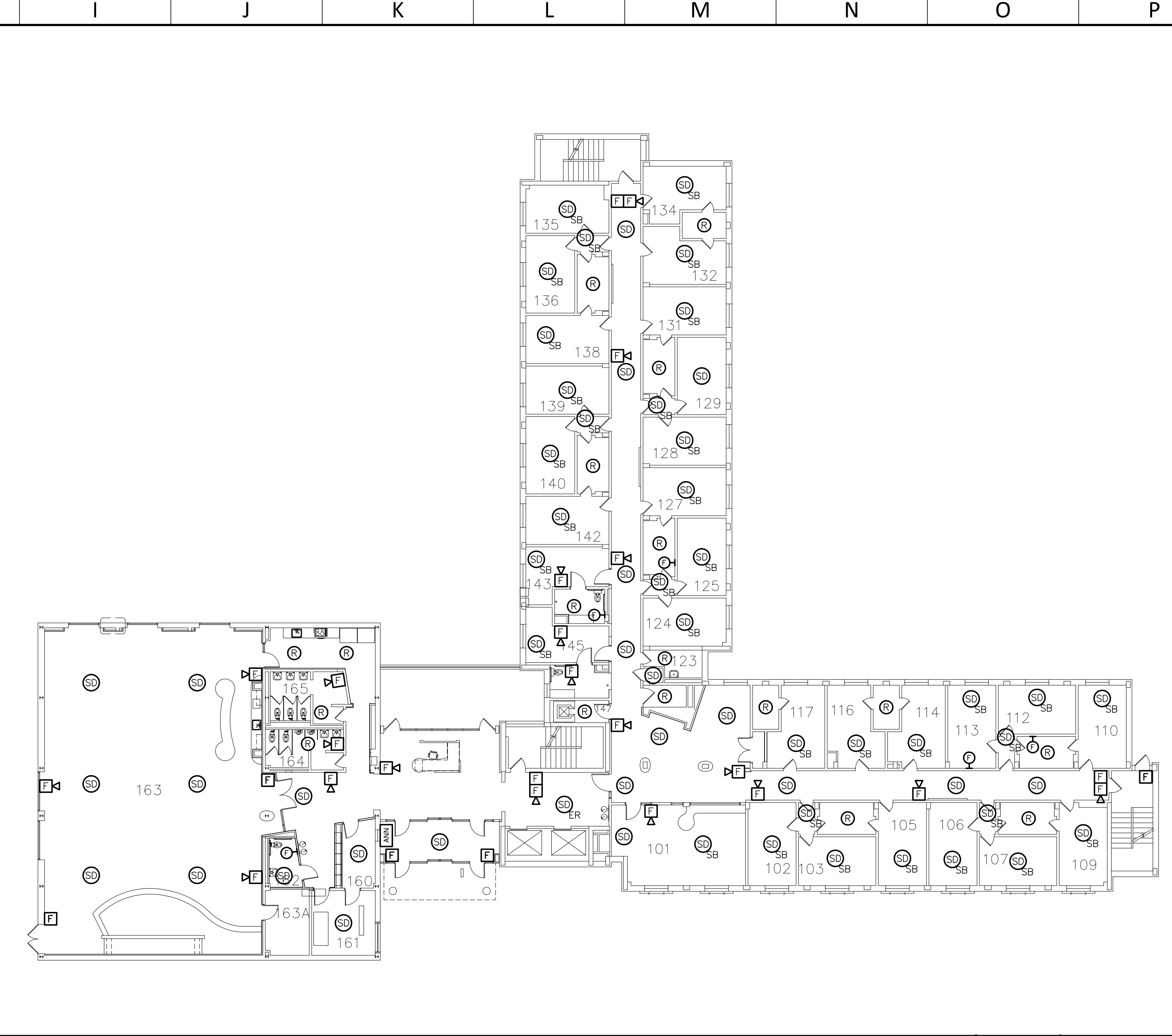
project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM PANEL REPLACEMENT
CROMWELL HALL
dwg. no.
E101-CROM
scale AS SHOWN drawn by SC checked by SF date 5/03/2020

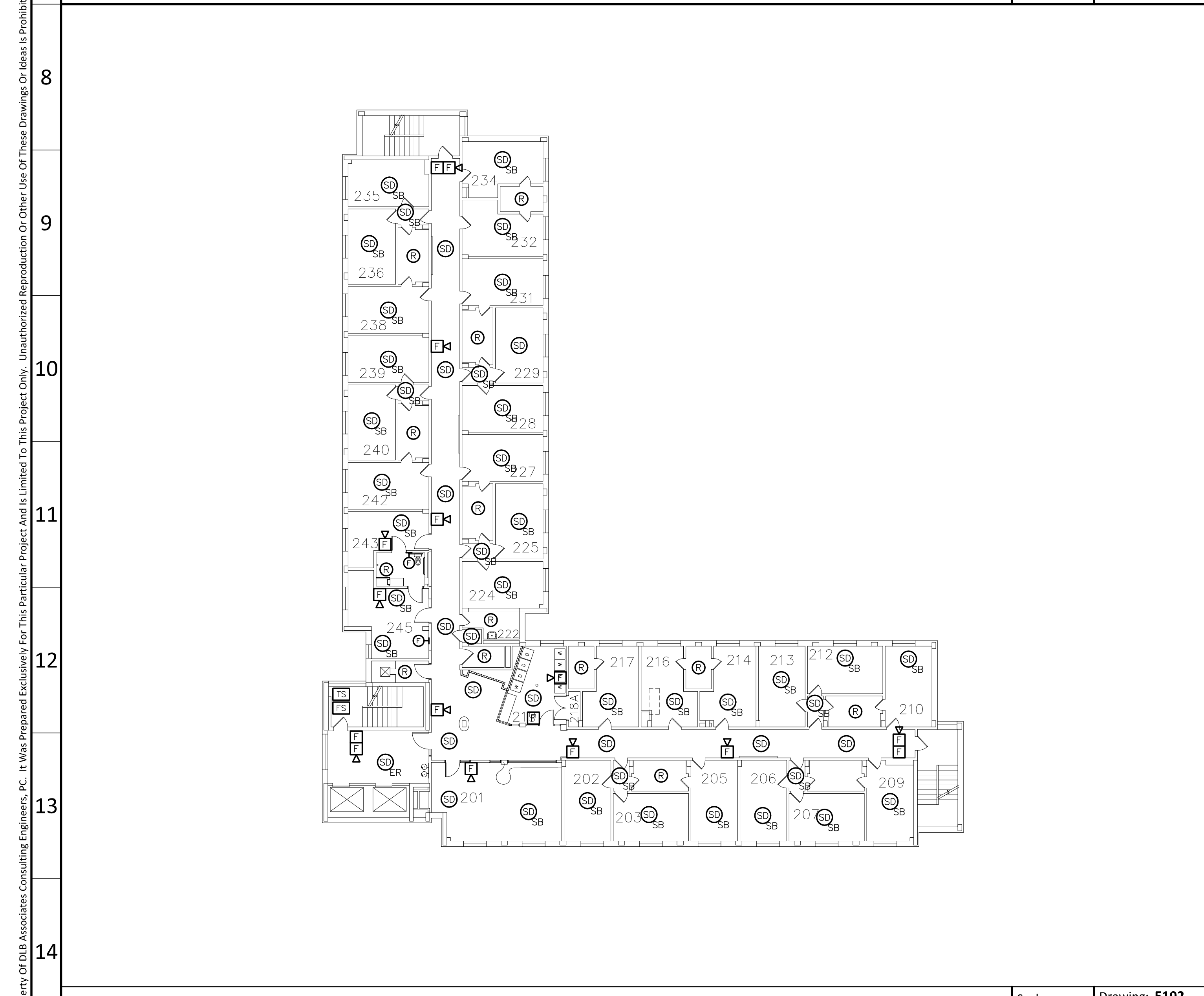
This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.



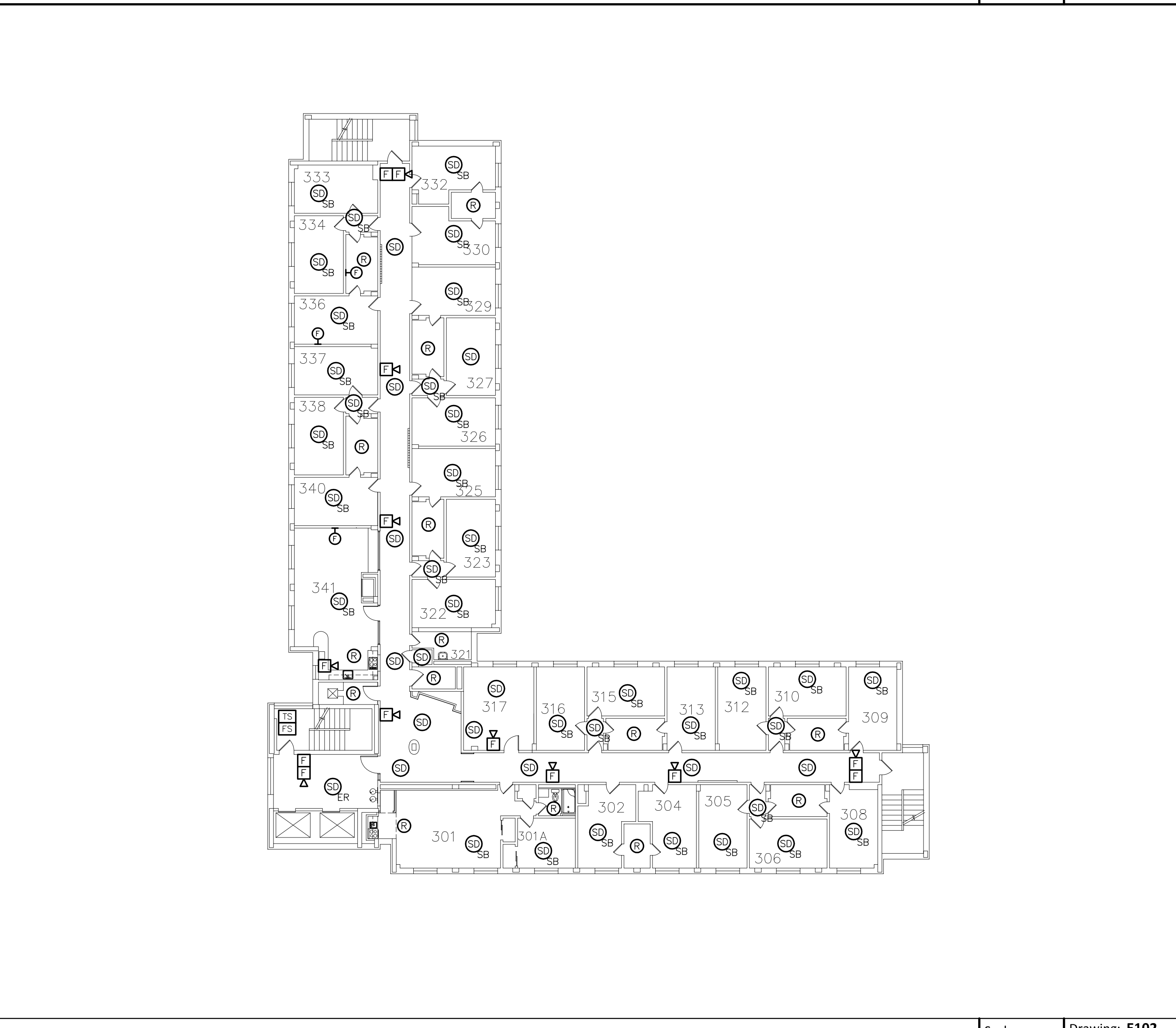
LOWER LEVEL LAYOUT Scale: NTS Drawing: **E102** Detail: **01**



FIRST FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **02**



SECOND FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **03**



THIRD FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **04**

KEY NOTES (SYMBOLS ①, ②, ETC.)

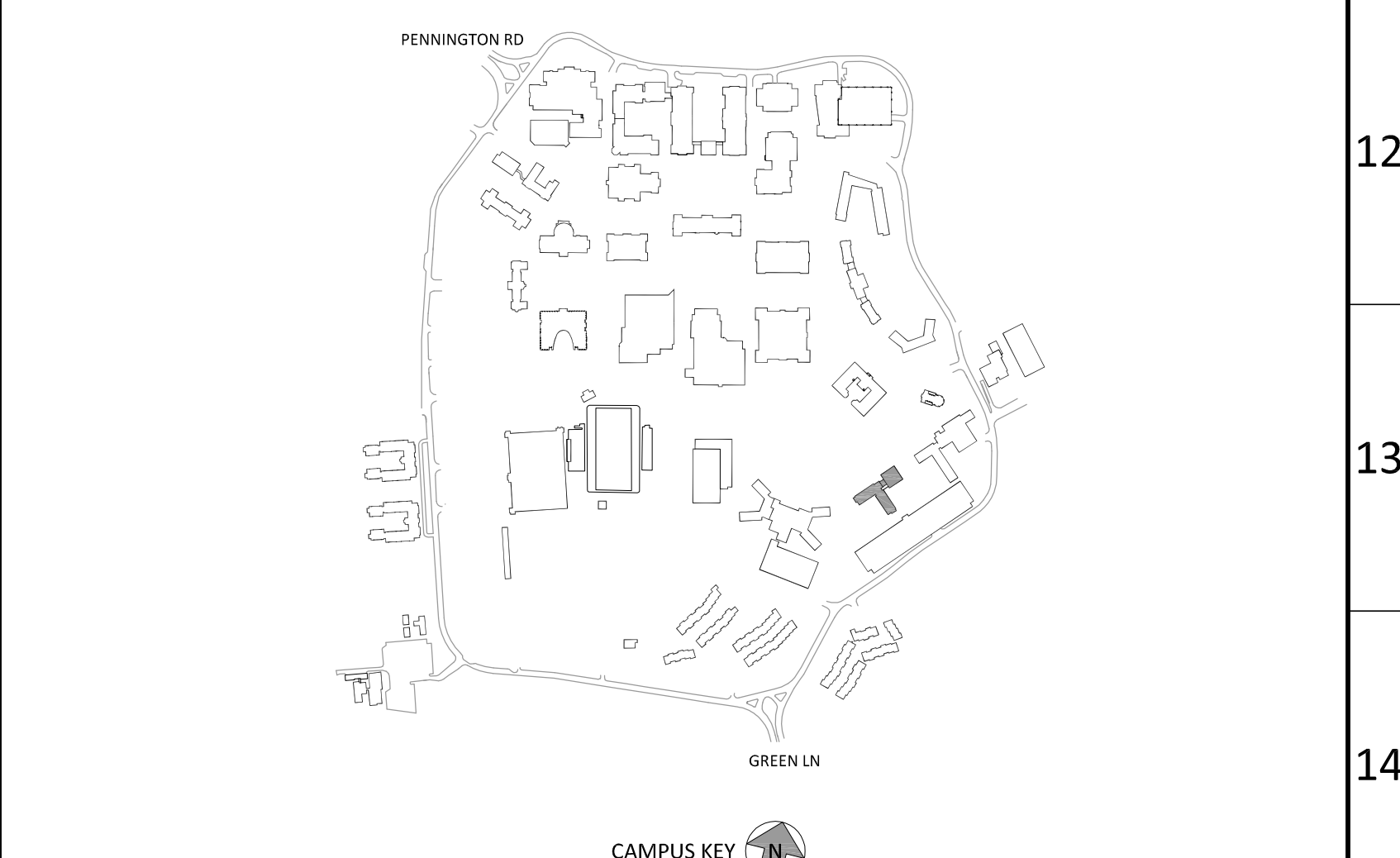
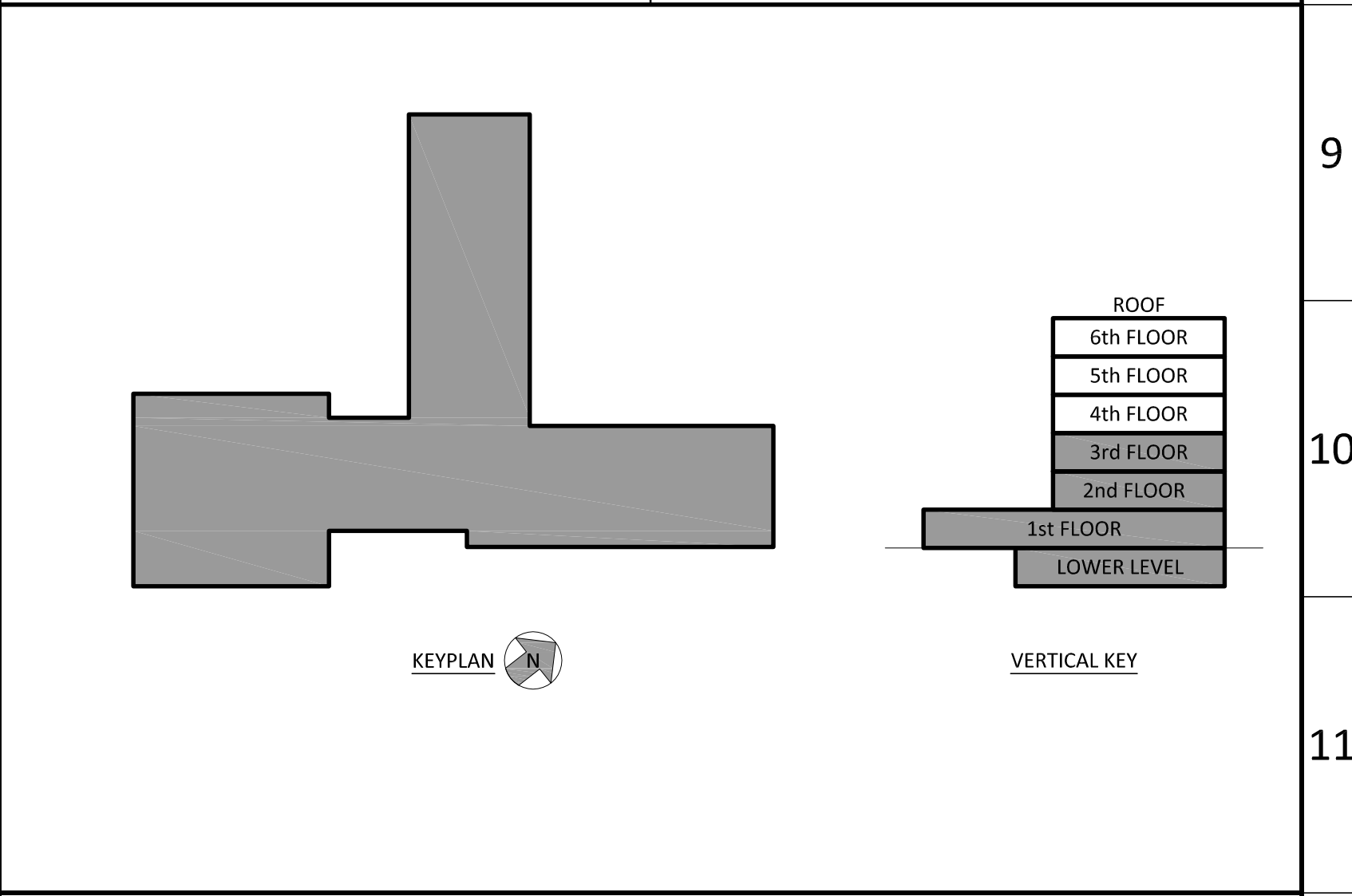
- Existing Fire Alarm Control Panel.

GENERAL NOTES

- This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
Ⓜ	Manual Pull Station	Ⓜ	No Access
Ⓢ	Strobe Only	Ⓢ	New Smoke Detector
Ⓜ	Horn/Strobe	Ⓜ	New Manual Pull Station
Ⓢ	Smoke Detector	Ⓢ	New Strobe
Ⓢ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	Ⓜ	New Horn / Strobe
Ⓢ _{SB}	Smoke Detector With Sounder Base	Ⓢ	Photo ID Tag
Ⓢ	Heat Detector, Combination Fixed Temperature And Rate Of Rise	FACP	Fire Alarm Control Panel
Ⓢ	CO Detector	CO	Carbon Monoxide
Ⓢ _{SD}	Duct Mounted Smoke Detector	POE	Point Of Entry
FACP	Fire Alarm Control Panel		
AMN	Fire Alarm Remote Annunciator Panel		
NAC	Fire Alarm Booster Panel		
TS	Fire Sprinkler Tamper Switch		
FS	Fire Sprinkler Flow Switch		
WCH	Existing Wall Mounted Connector Housing		



30x42

ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

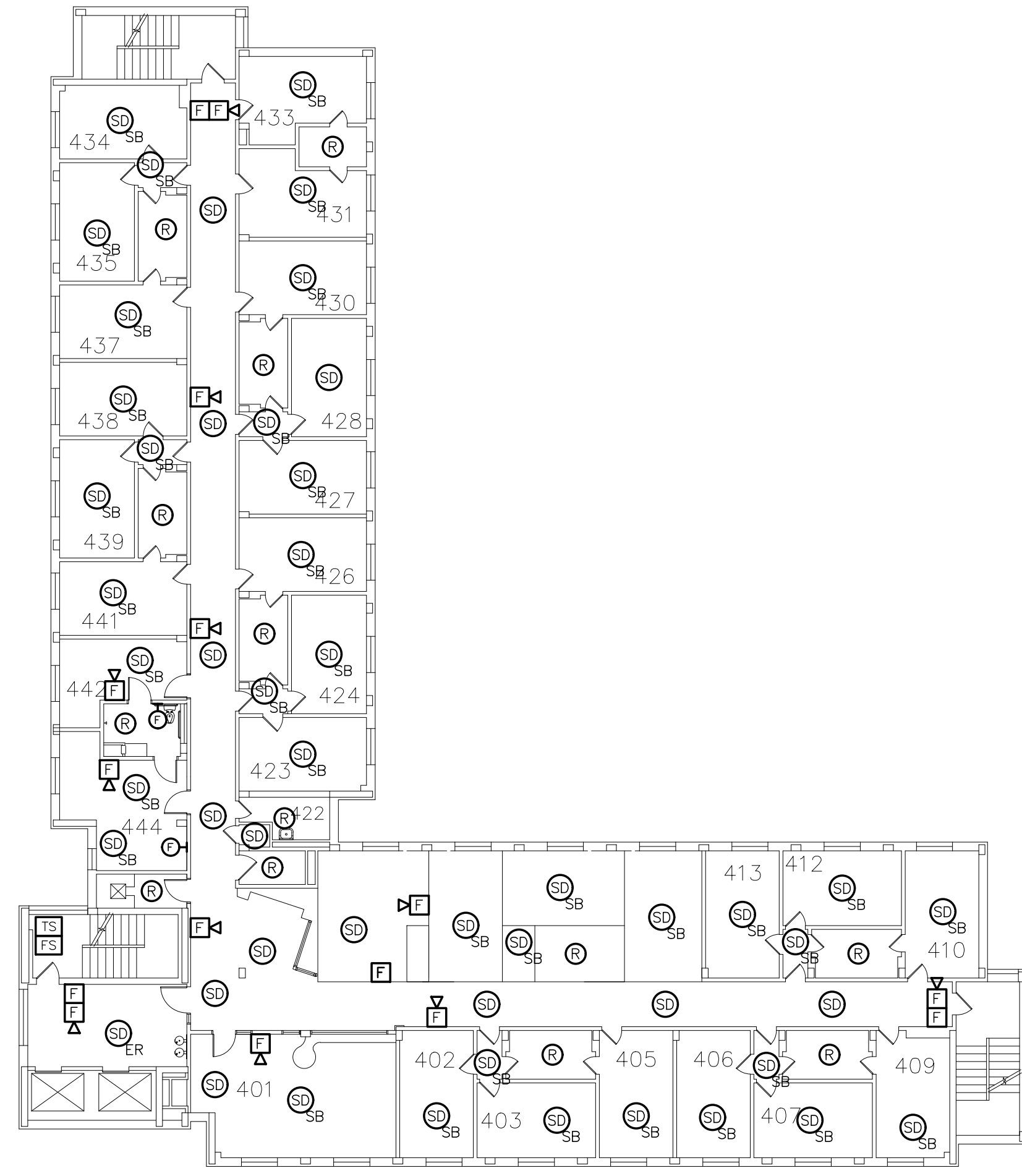
Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

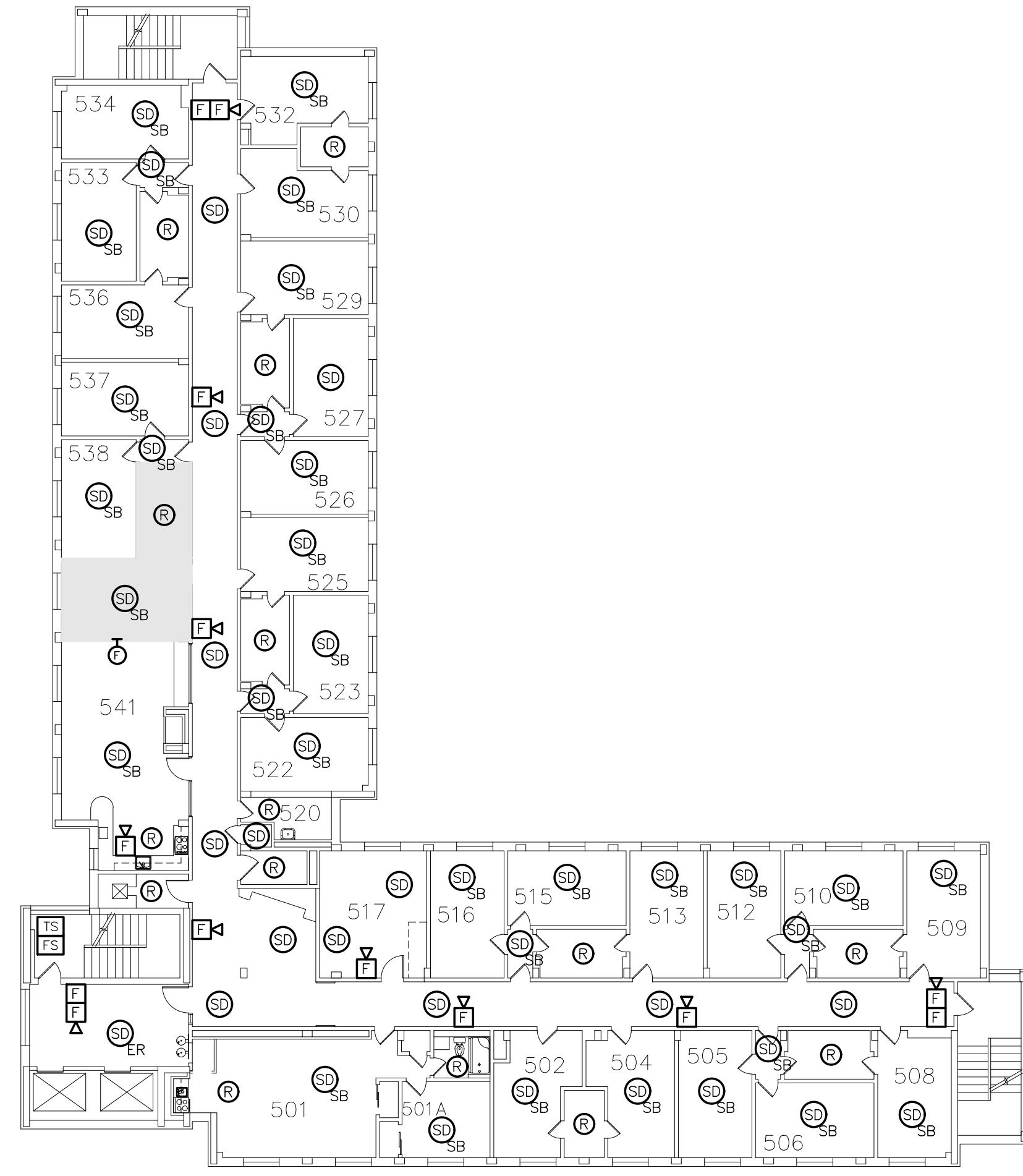
project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM - EXISTING LAYOUT
CROMWELL HALL
dwg. no.
E102-CROM
scale AS SHOWN drawn by SC checked by SF date 5/03/2020

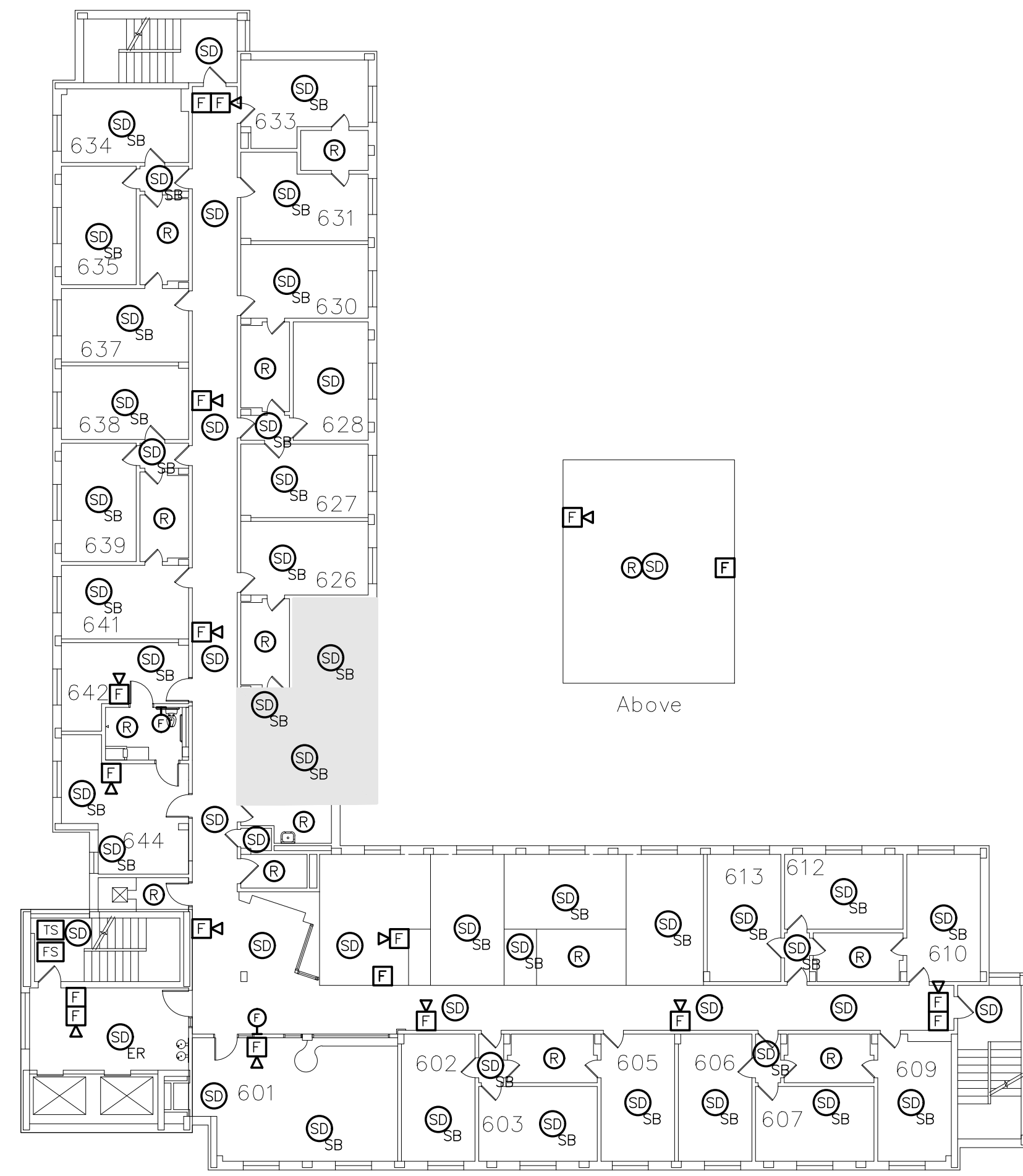
This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.



FOURTH FLOOR LAYOUT Scale: NTS Drawing: **E103** Detail: **01**



FIFTH FLOOR LAYOUT Scale: NTS Drawing: **E103** Detail: **02**



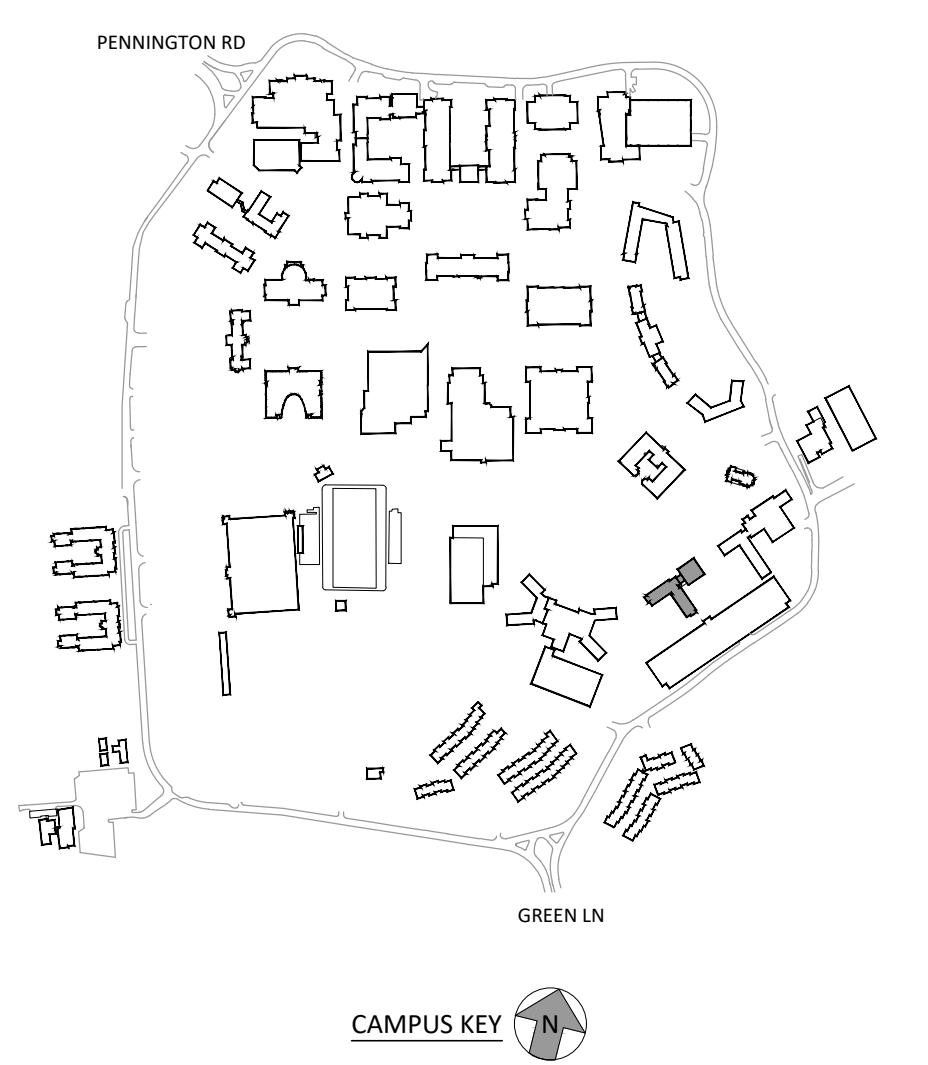
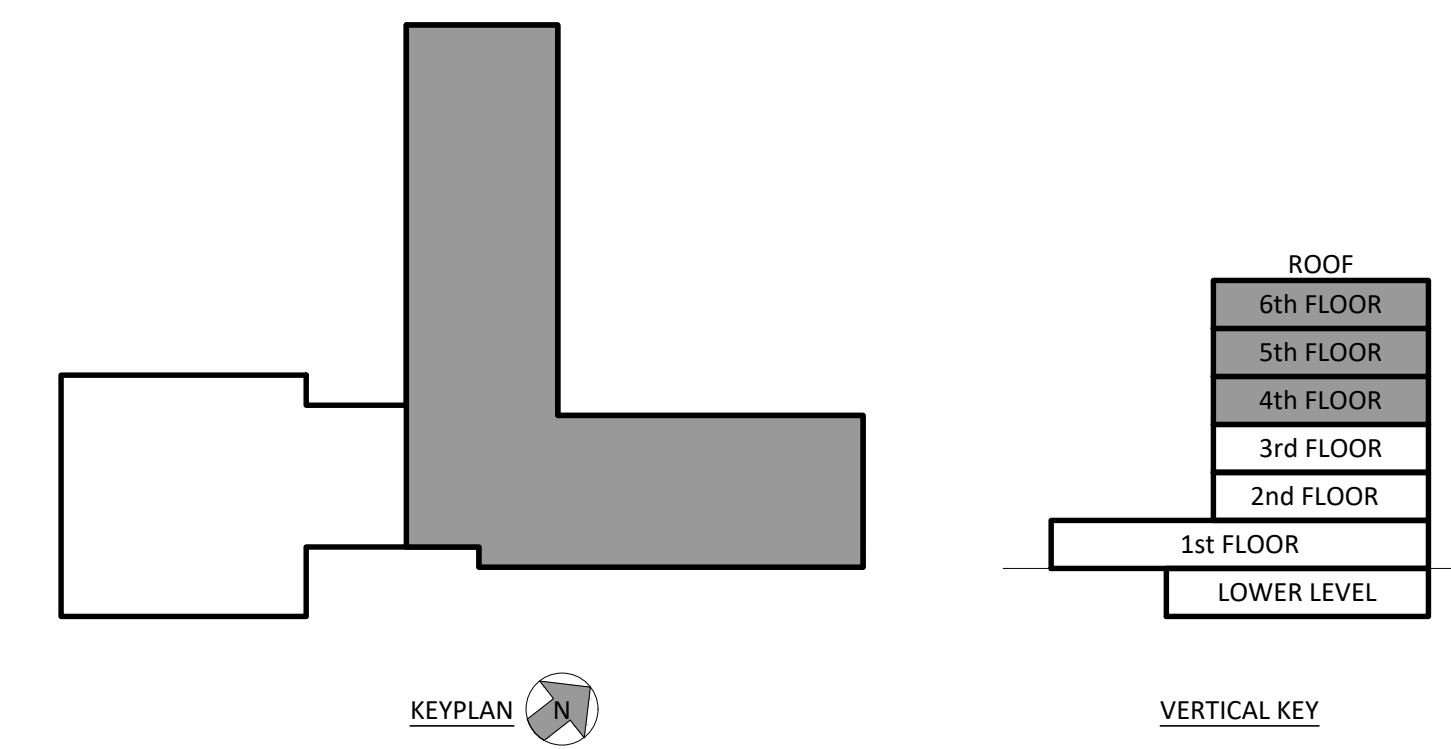
SIXTH FLOOR LAYOUT Scale: NTS Drawing: **E103** Detail: **03**

GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
F	Manual Pull Station	□	No Access
⊙	Strobe Only	⊙	New Smoke Detector
⊞	Horn/Strobe	⊞	New Manual Pull Station
⊙	Smoke Detector	⊙	New Strobe
⊙ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	⊞	New Horn / Strobe
⊙ _{SB}	Smoke Detector With Sounder Base	⊙	Photo ID Tag
⊙	Heat Detector, Combination Fixed Temperature And Rate Of Rise	FACP	Fire Alarm Control Panel
⊙	CO Detector	CO	Carbon Monoxide
⊞ _{DB}	Duct Mounted Smoke Detector	POE	Point Of Entry
FACP	Fire Alarm Control Panel		
FARA	Fire Alarm Remote Annunciator Panel		
FABP	Fire Alarm Booster Panel		
TS	Fire Sprinkler Tamper Switch		
FS	Fire Sprinkler Flow Switch		



This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM - EXISTING LAYOUT
CROMWELL HALL
dwg. no.
E103-CROM

ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

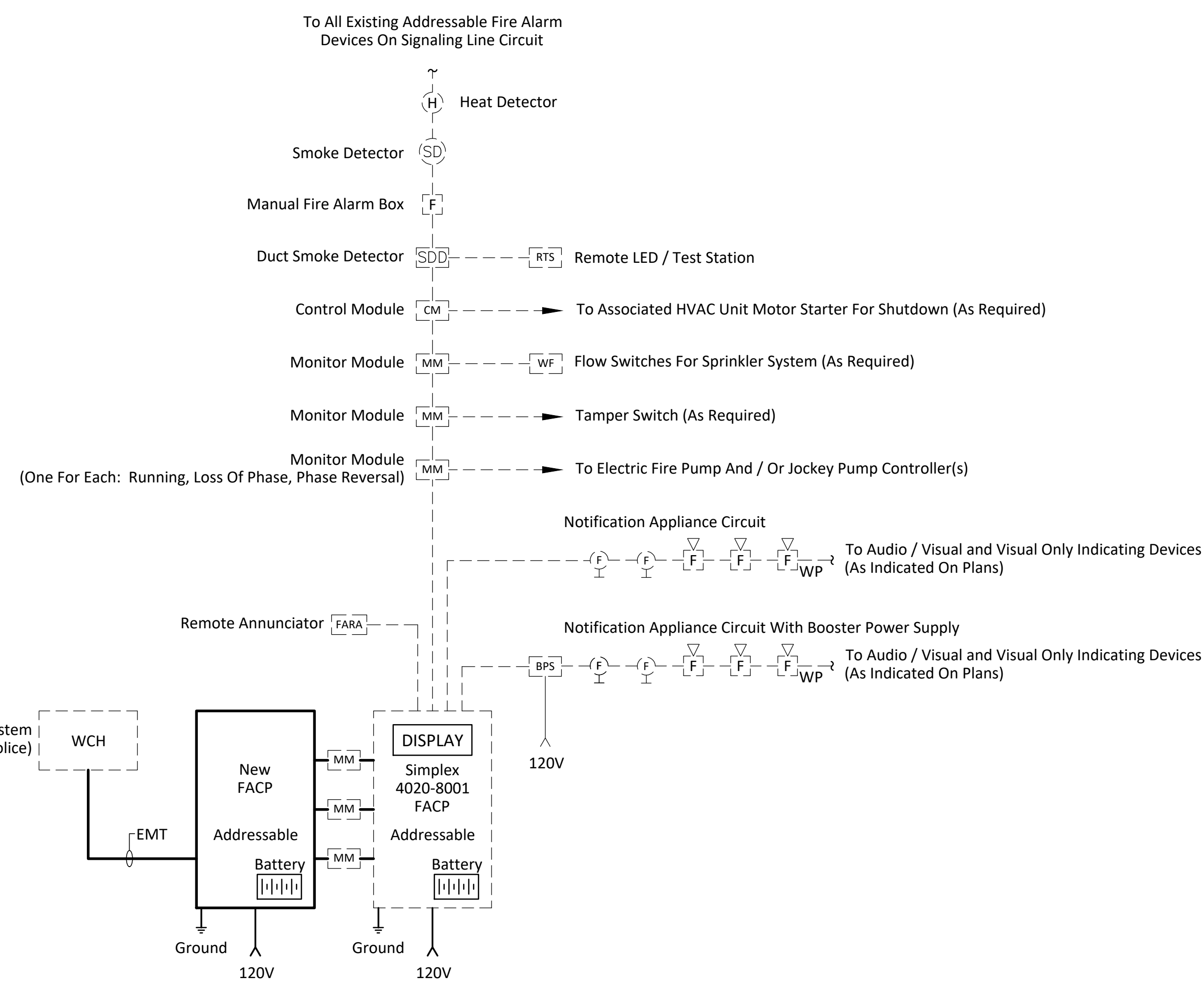
FIRE ALARM PHOTOS



PHOTO A - SIMPLEX FIRE ALARM CONTROL PANEL
Simplex 4020 Addressable Fire Alarm Control Panel And Booster Panel With Exposed Conduit Located Within First Floor Electrical Room

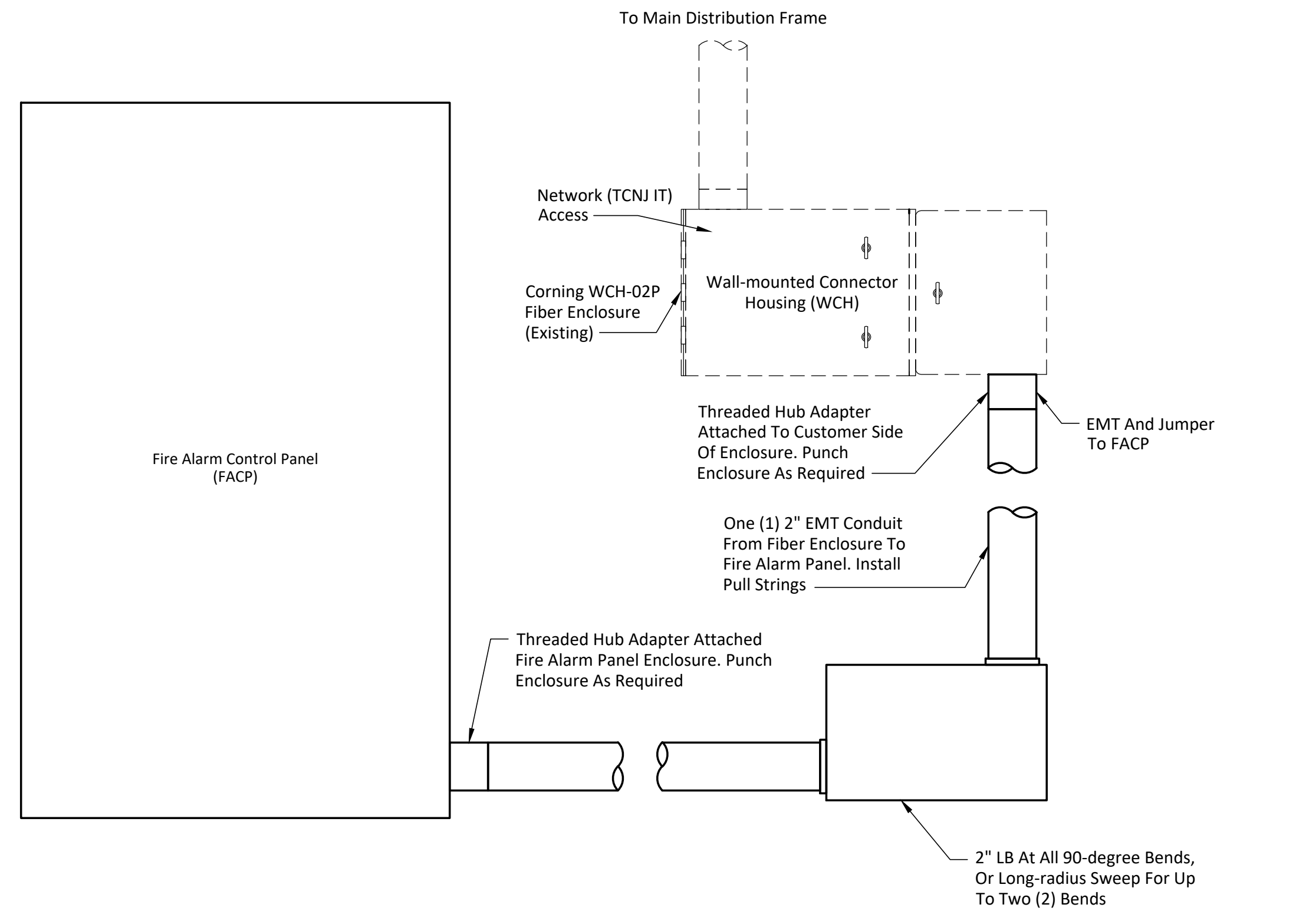


PHOTO B - INTERMEDIARY FIRE ALARM CONTROL PANEL
Honeywell FS90 Intermediary Fire Alarm Control Panel And Booster Panel With Exposed Conduit Located Within First Floor Electrical Room



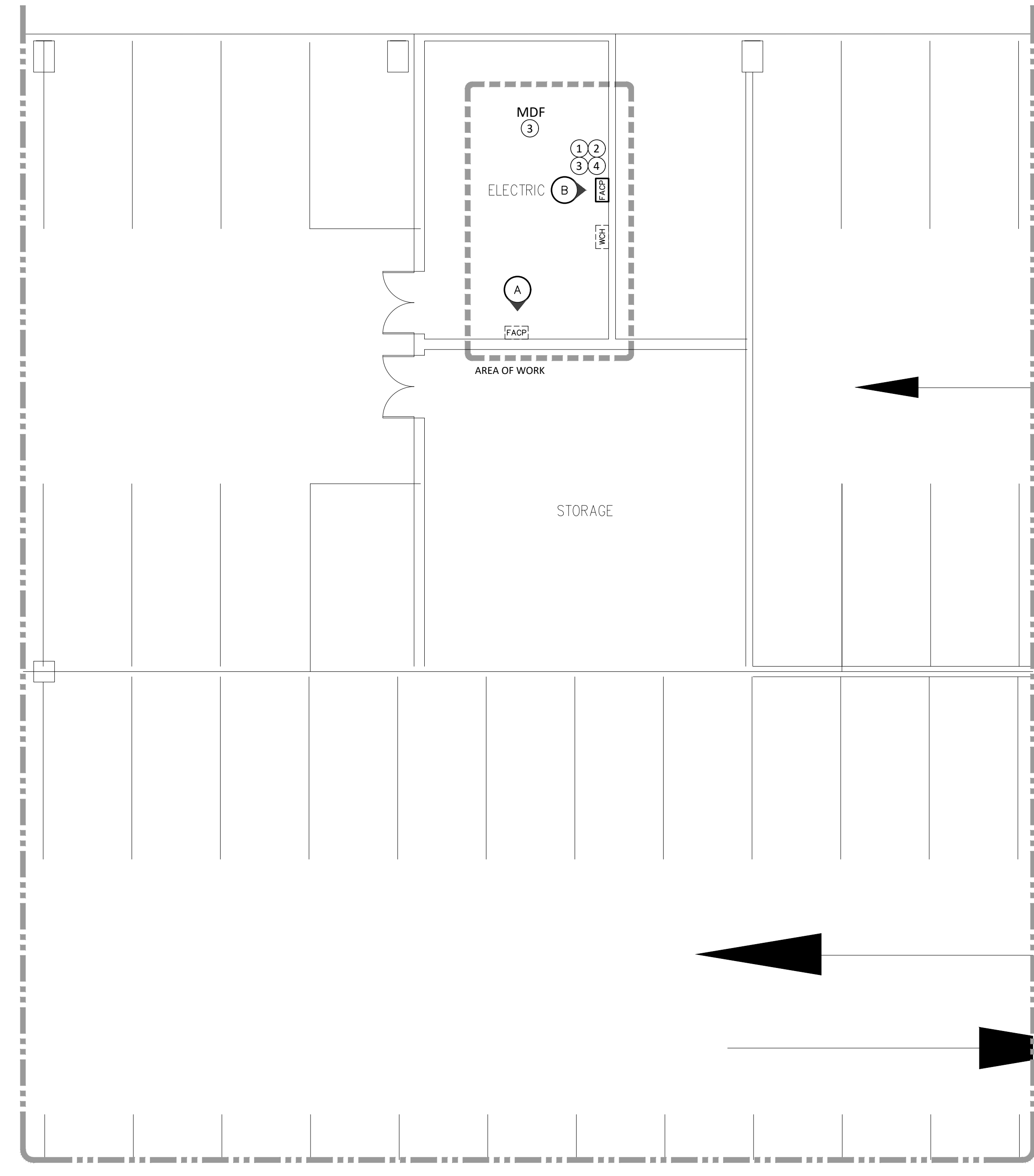
- NOTES:**
- General
 - The Riser Above Depicts A "Honeywell" Basis Of Design With A New Honeywell FACP. All Existing Simplex End Devices Would Not Be Compatible With The New FACP.
 - Install New FACP With Capacity Noted Below.
 - New Honeywell FACP Would Monitor Existing Simplex FACP For Alarm, Tamper, Trouble, And Other Points That Are Currently Monitored By The Front End At A Minimum.
 - This Building Would NOT Be Considered A Fully Addressable Building.
 - The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - The FACP Shall Connect The Campus Life Safety Management System.
 - Equipment
 - Decker Garage Is Currently Covered By Fire Notification And Detection / Initiation Devices From An Addressable Simplex 4020-8001 System.
 - Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring
 - The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing
 - Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.

FIRE ALARM RISER Scale: NTS Drawing: **E101** Detail: **01**



- NOTES:**
- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNJ/IT
 - Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-degree End Unless Swept Long-radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
 - Install Fiber Jumpers Between WCH And FACP.

FIRE ALARM FIBER ENCLOSURE INSTALLATION Scale: NTS Drawing: **E101** Detail: **02**



PARTIAL FLOOR PLAN - FIRST FLOOR Scale: 1/8"=1'-0" Drawing: **E101** Detail: **03**

KEY NOTES (SYMBOLS ①, ②, ETC.)

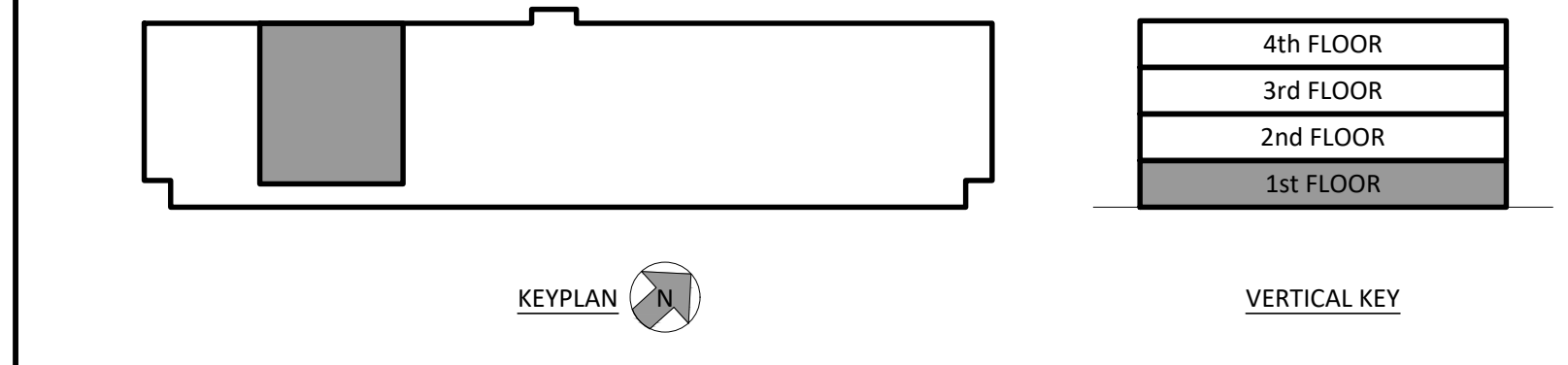
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
- Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
- Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
- Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.

GENERAL NOTES

- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
- The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments.
- Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
- Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
- Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
- When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
FACP	Fire Alarm Control Panel	FACP	Fire Alarm Control Panel
WCH	Existing Wall-Mounted Connector Housing	EMT	Electrical Metallic Tubing
FACP	Existing Fire Alarm Control Panel	CM	Control Module
[Symbol]	New Equipment	MM	Monitor Module
[Symbol]	Existing Equipment	WCH	Wall-Mounted Connector Housing
[Symbol]	Photo Tag		
[Symbol]	Connect To Existing		



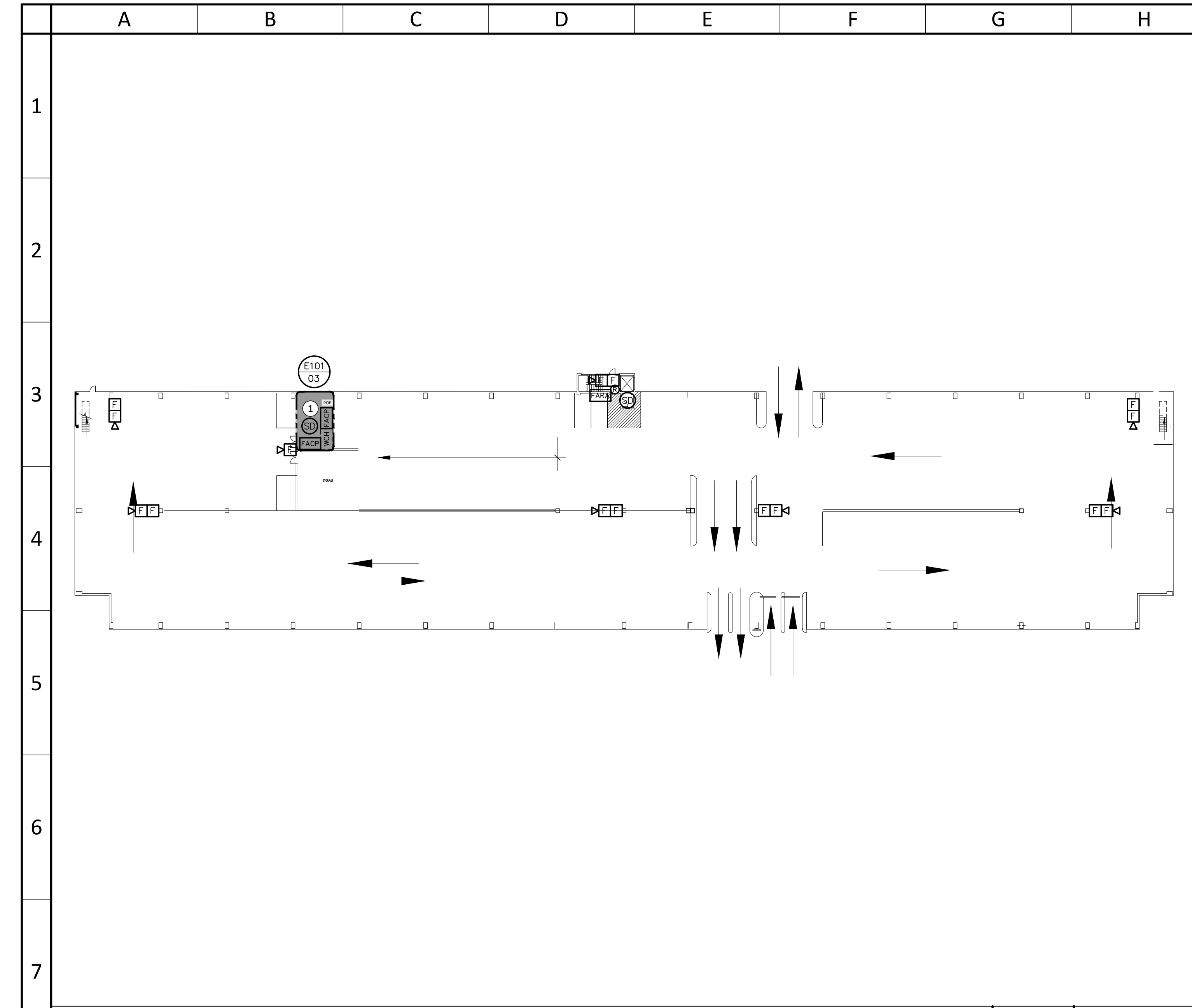
FIRE ALARM PANEL REPLACEMENT CROMWELL / DECKER GARAGE title
project: **TCNJ - CAMPUS FIRE ALARM PROJECT PART B - HARDWARE & SOFTWARE UPGRADES 2000 PENNINGTON ROAD, EWING NJ, 08618**
scale AS SHOWN drawn by SC checked by SF date 5/03/2020
dwg. no. **E101-DGRG**

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

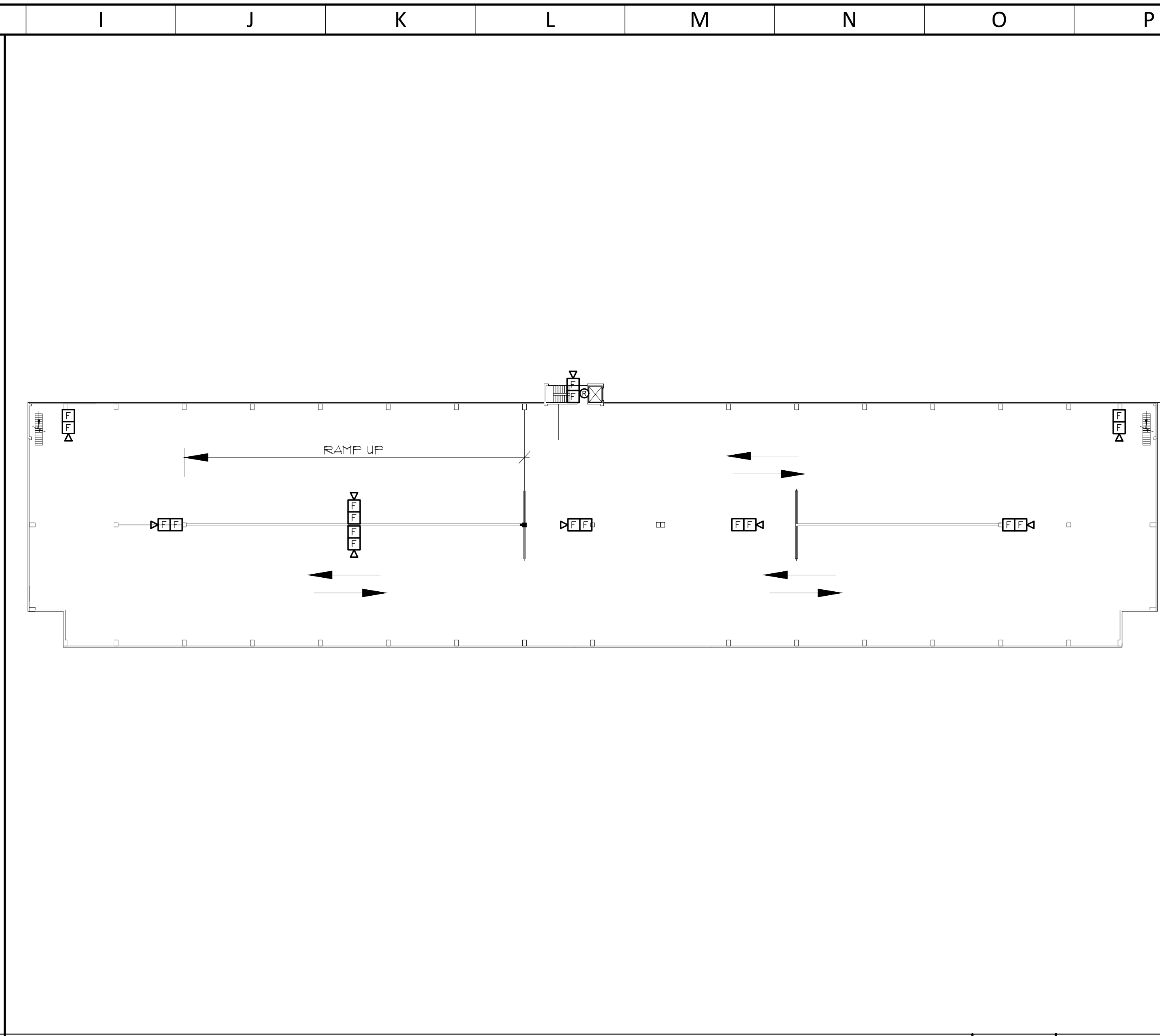
30x42

ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

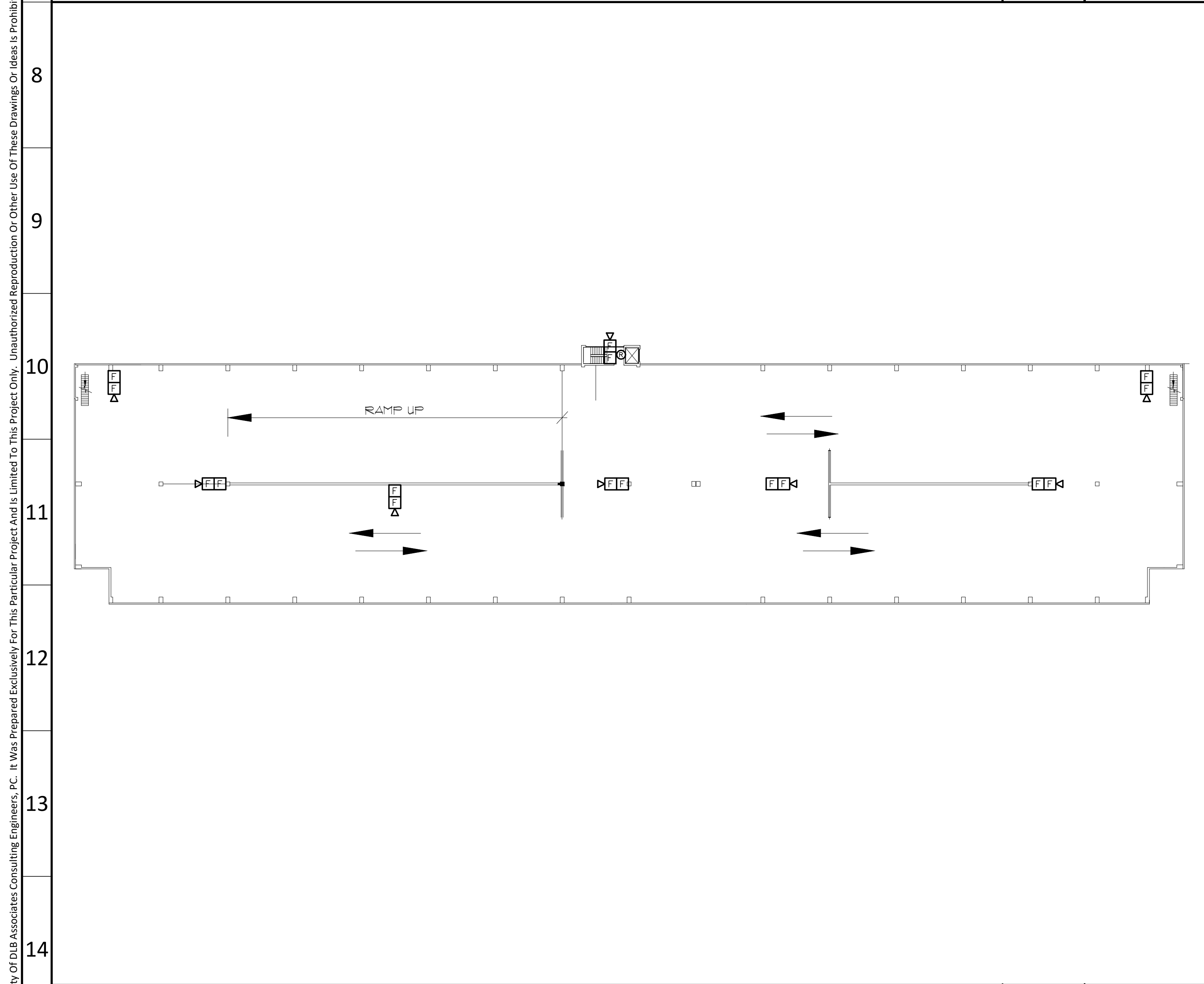
dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038



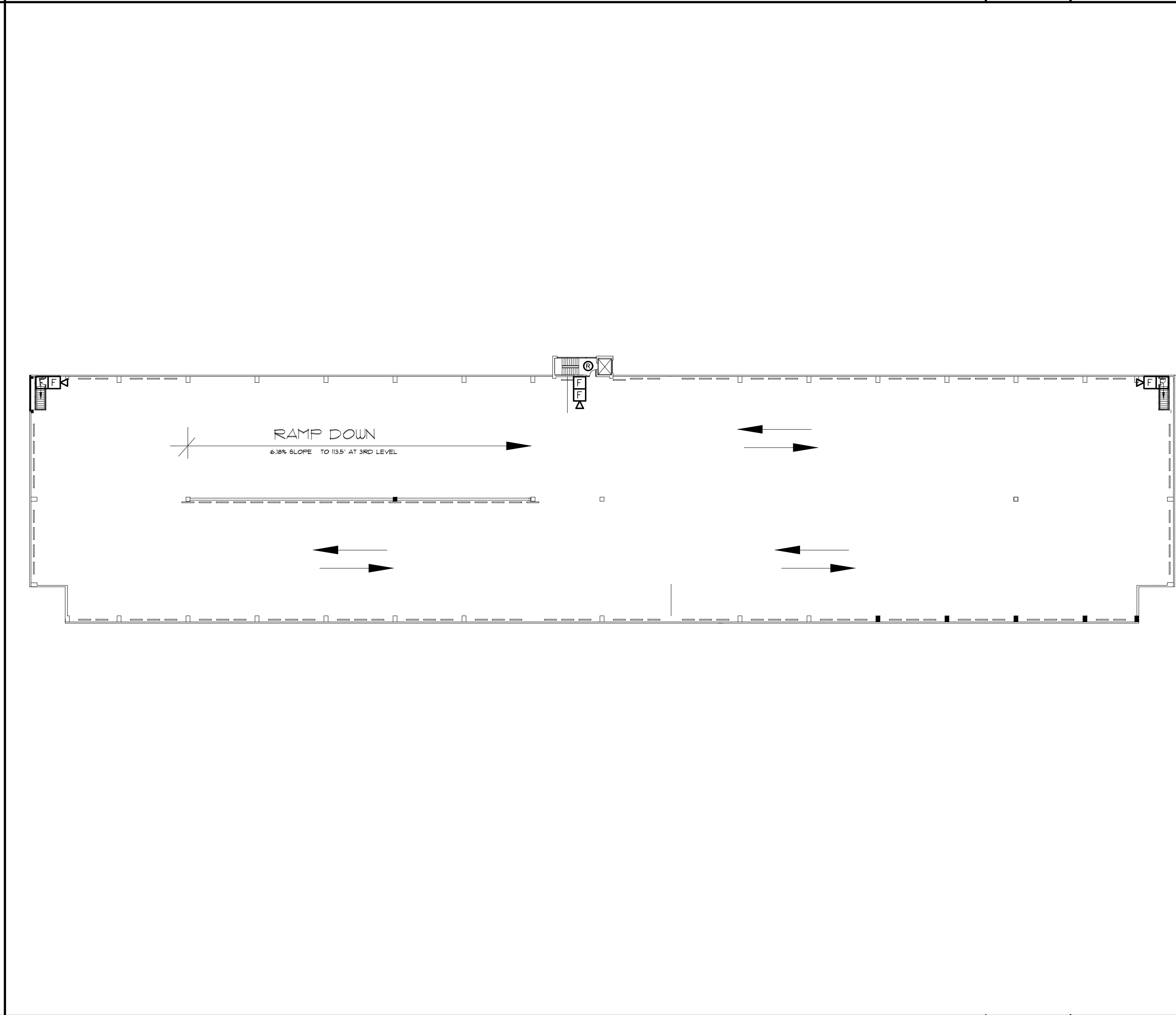
FIRST FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **01**



SECOND FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **02**



THIRD FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **03**



FOURTH FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **04**

KEY NOTES (SYMBOLS ①, ②, ETC.)

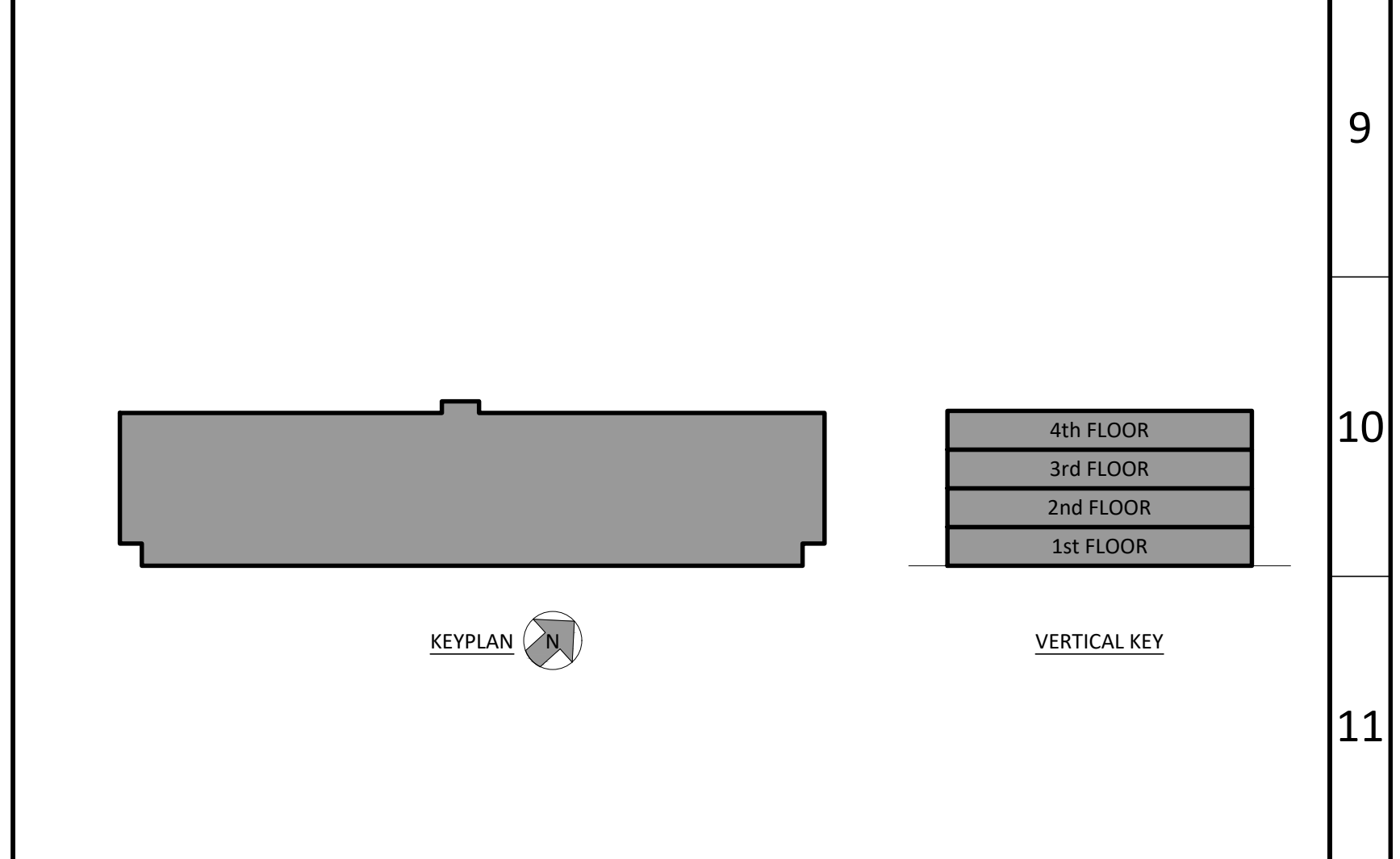
1. Existing Fire Alarm Control Panel.

GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
Ⓛ	Manual Pull Station	☐	No Access
Ⓢ	Strobe Only	Ⓢ	New Smoke Detector
Ⓜ	Horn/Strobe	Ⓛ	New Manual Pull Station
Ⓢ	Smoke Detector	Ⓢ	New Strobe
Ⓢ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	Ⓜ	New Horn / Strobe
Ⓢ _{SB}	Smoke Detector With Sounder Base	Ⓢ	Photo ID Tag
Ⓢ	Heat Detector, Combination Fixed Temperature And Rate Of Rise	FACP	Fire Alarm Control Panel
Ⓢ	CO Detector	CO	Carbon Monoxide
Ⓢ _{DC}	Duct Mounted Smoke Detector	POE	Point Of Entry
FACP	Fire Alarm Control Panel		
FARA	Fire Alarm Remote Annunciator Panel		
MAC	Fire Alarm Booster Panel		
TS	Fire Sprinkler Tamper Switch		
FS	Fire Sprinkler Flow Switch		
WCH	Existing Wall Mounted Connector Housing		



30442

ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

Scale: NTS
Detail: 03

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM - EXISTING LAYOUT
CROMWELL / DECKER GARAGE

scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020

dwg. no.
E102-DGRG

Confidential and Proprietary / ©DLB Associates 2020

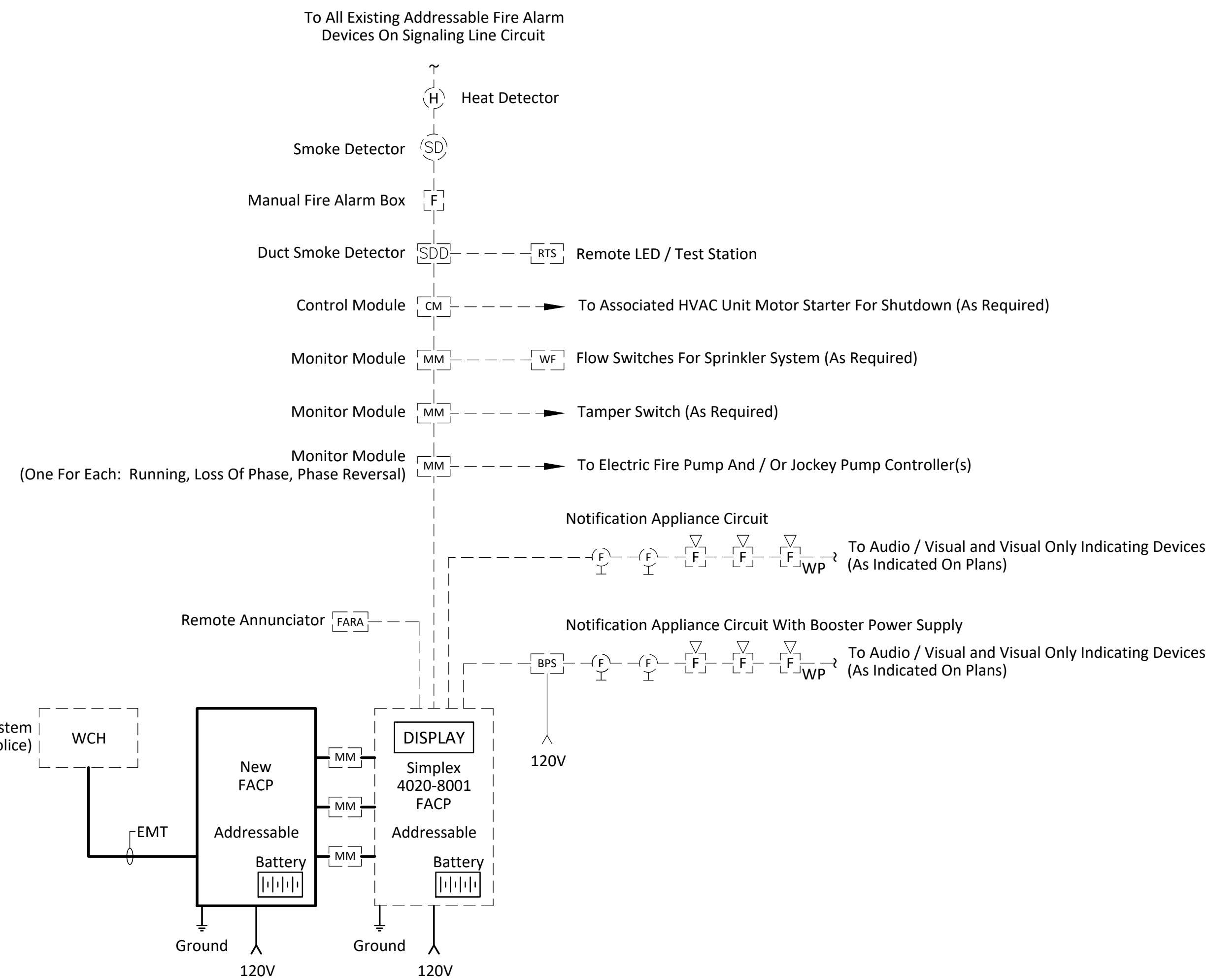
This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

FIRE ALARM PHOTOS



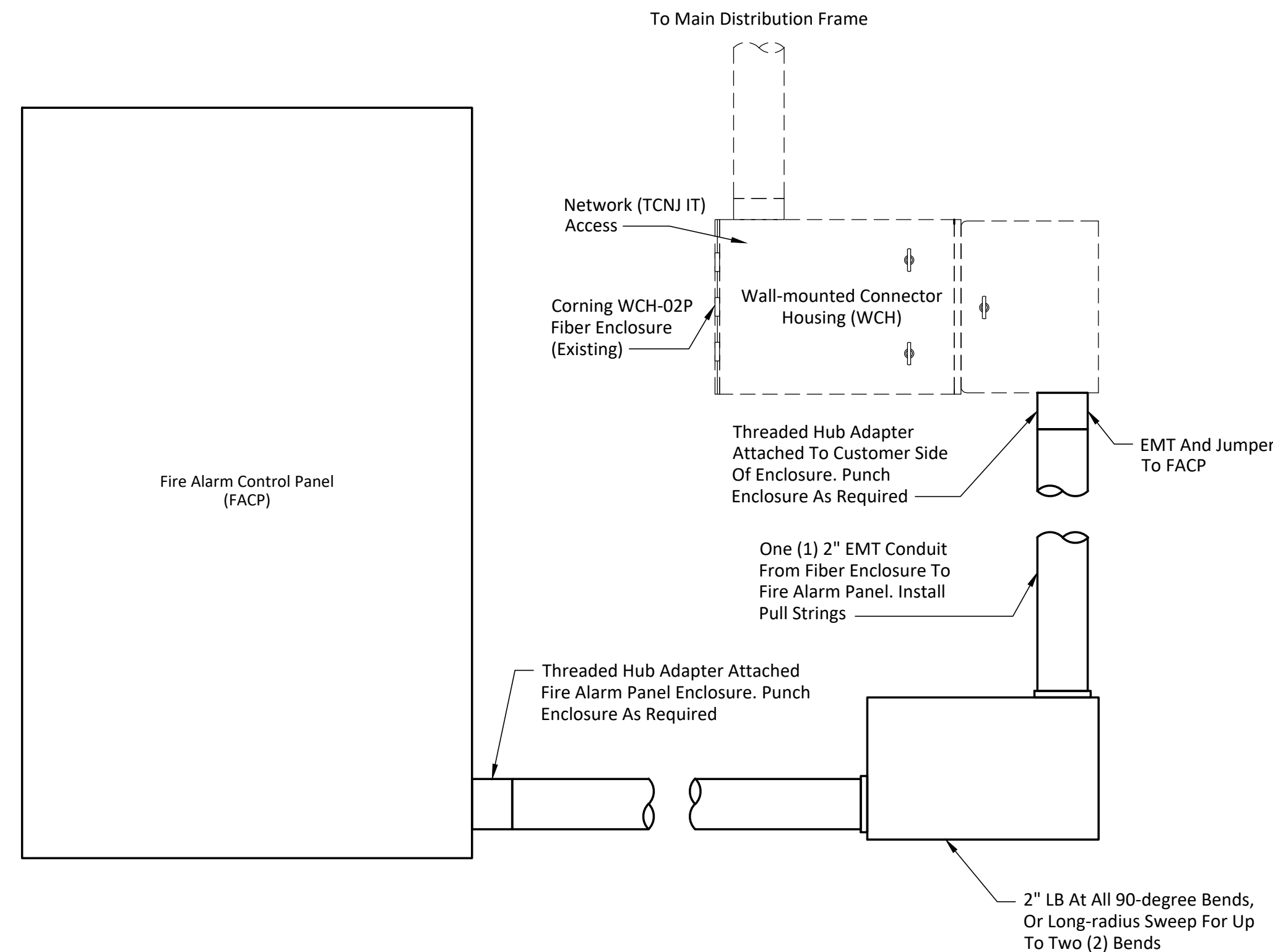
PHOTO A - SIMPLEX FIRE ALARM CONTROL PANEL
Simplex 4020 Addressable Fire Alarm Control Panel And Honeywell FS90 Intermediary Fire Alarm Control Panel With Exposed Conduit Located Within Lower Level Fire Pump Room

SIMPLEX FIRE ALARM DEVICES
Existing Simplex Addressable Fire Alarm Devices Located Throughout The Building



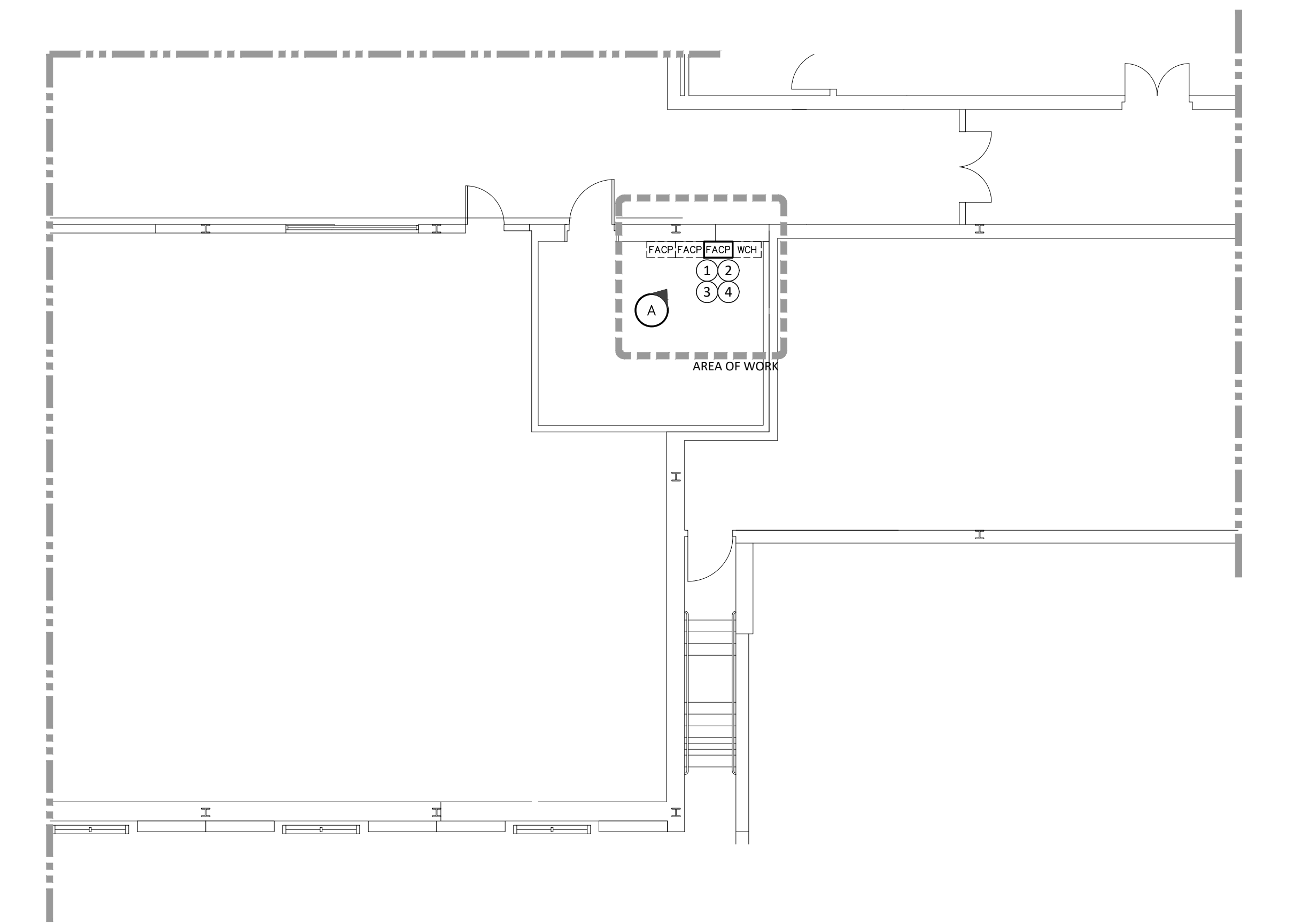
- NOTES:**
- General
 - The Riser Above Depicts A "Honeywell" Basis Of Design With A New Honeywell FACP. All Existing Simplex End Devices Would Not Be Compatible With The New FACP.
 - Install New FACP With Capacity Noted Below.
 - New Honeywell FACP Would Monitor Existing Simplex FACP For Alarm, Tamper, Trouble, And Other Points That Are Currently Monitored By The Front End At A Minimum.
 - This Building Would NOT Be Considered A Fully Addressable Building.
 - The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - The FACP Shall Connect The Campus Life Safety Management System.
 - Equipment
 - Decker Hall Is Currently Covered By Fire Notification And Detection / Initiation Devices From An Addressable Simplex 4020-8001 System.
 - Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring
 - The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing
 - Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.

FIRE ALARM RISER Scale: NTS Drawing: **E101** Detail: **01**

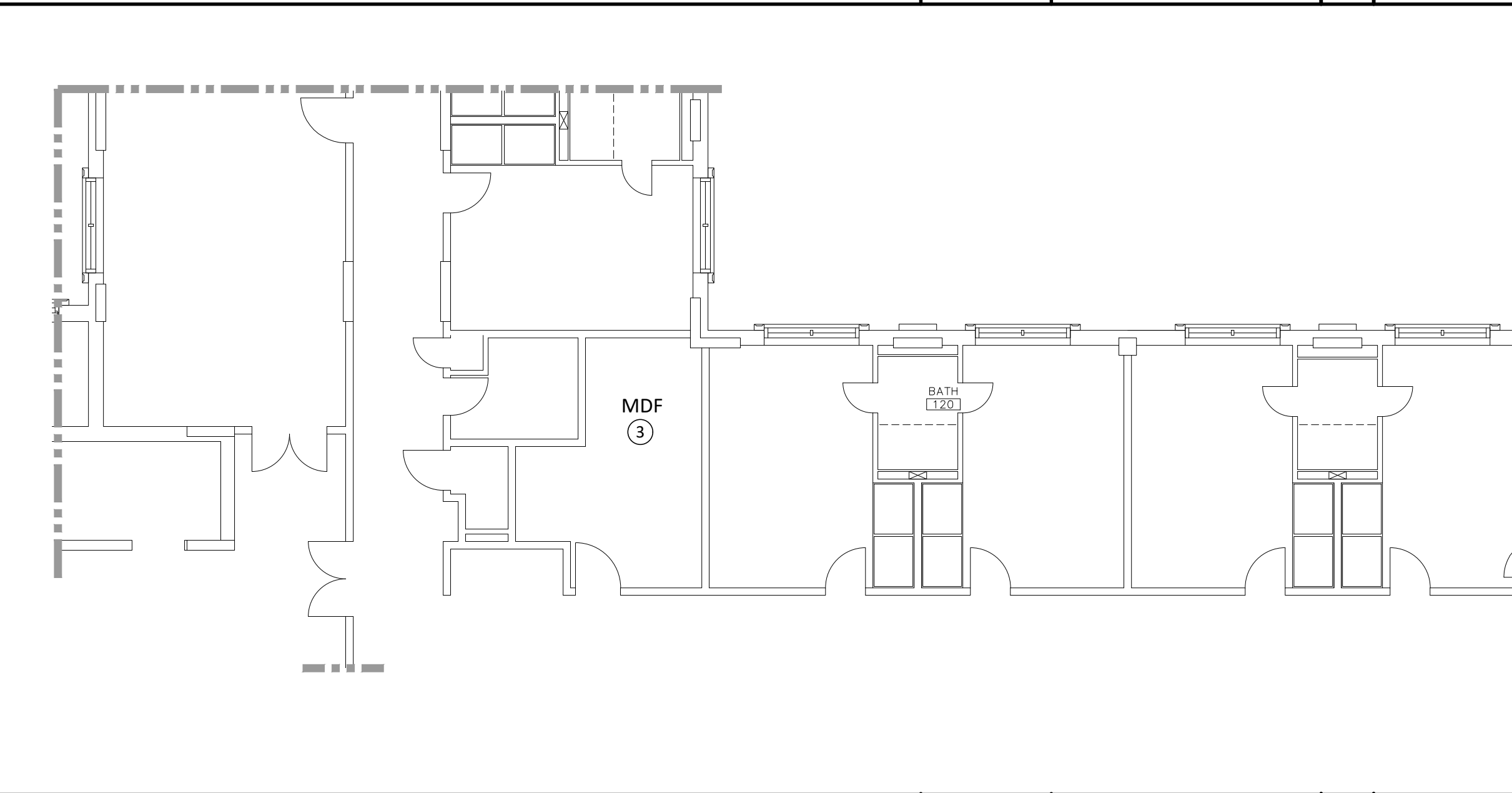


- NOTES:**
- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNJ/IT
 - Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
 - Install Fiber Jumpers Between WCH And FACP.

FIRE ALARM FIBER ENCLOSURE INSTALLATION Scale: NTS Drawing: **E101** Detail: **02**



LOWER LEVEL PART PLAN Scale: 1/8"=1'-0" Drawing: **E101** Detail: **03**



FIRST FLOOR PART PLAN Scale: 1/8"=1'-0" Drawing: **E101** Detail: **04**

KEY NOTES (SYMBOLS ①, ②, ETC.)

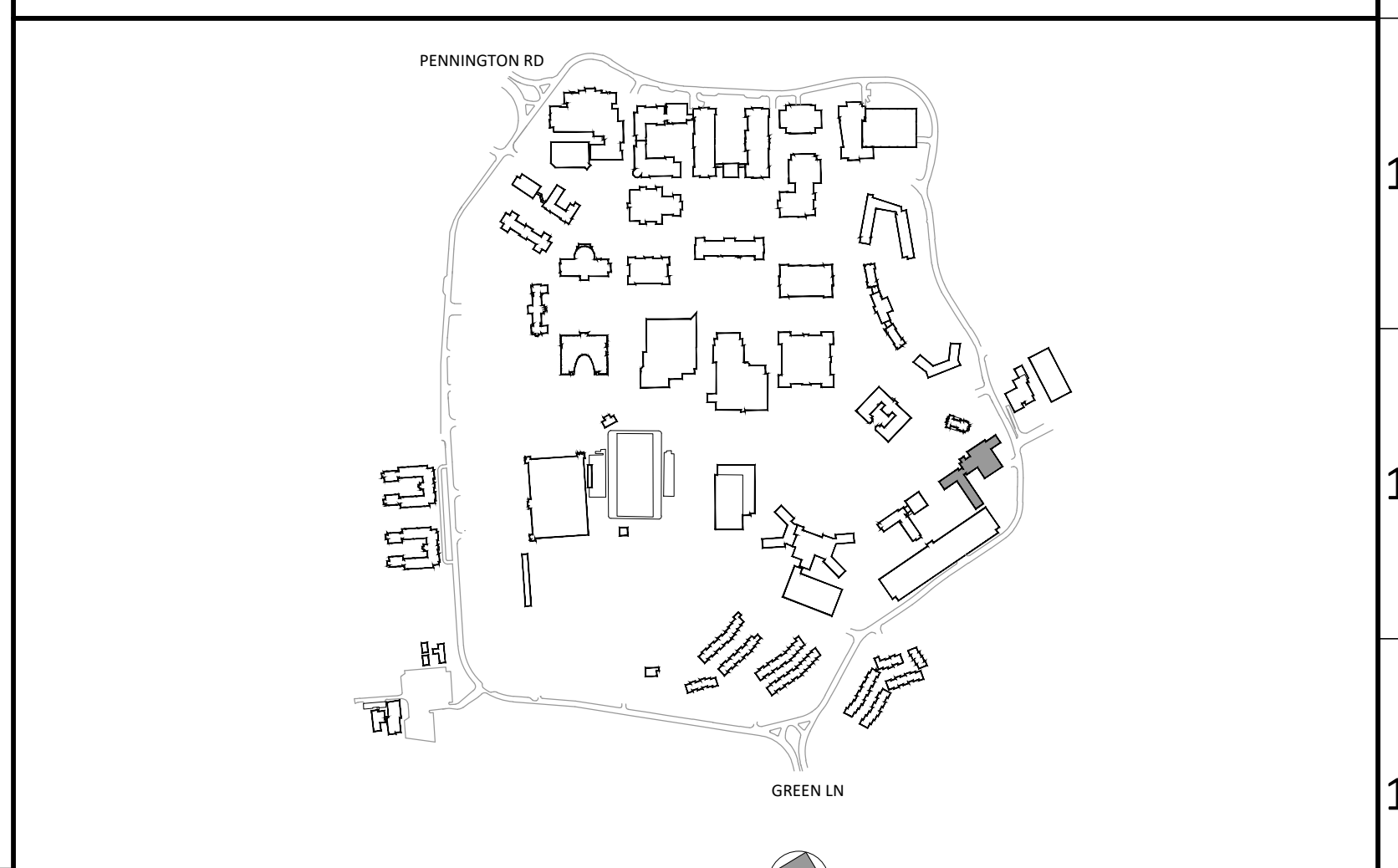
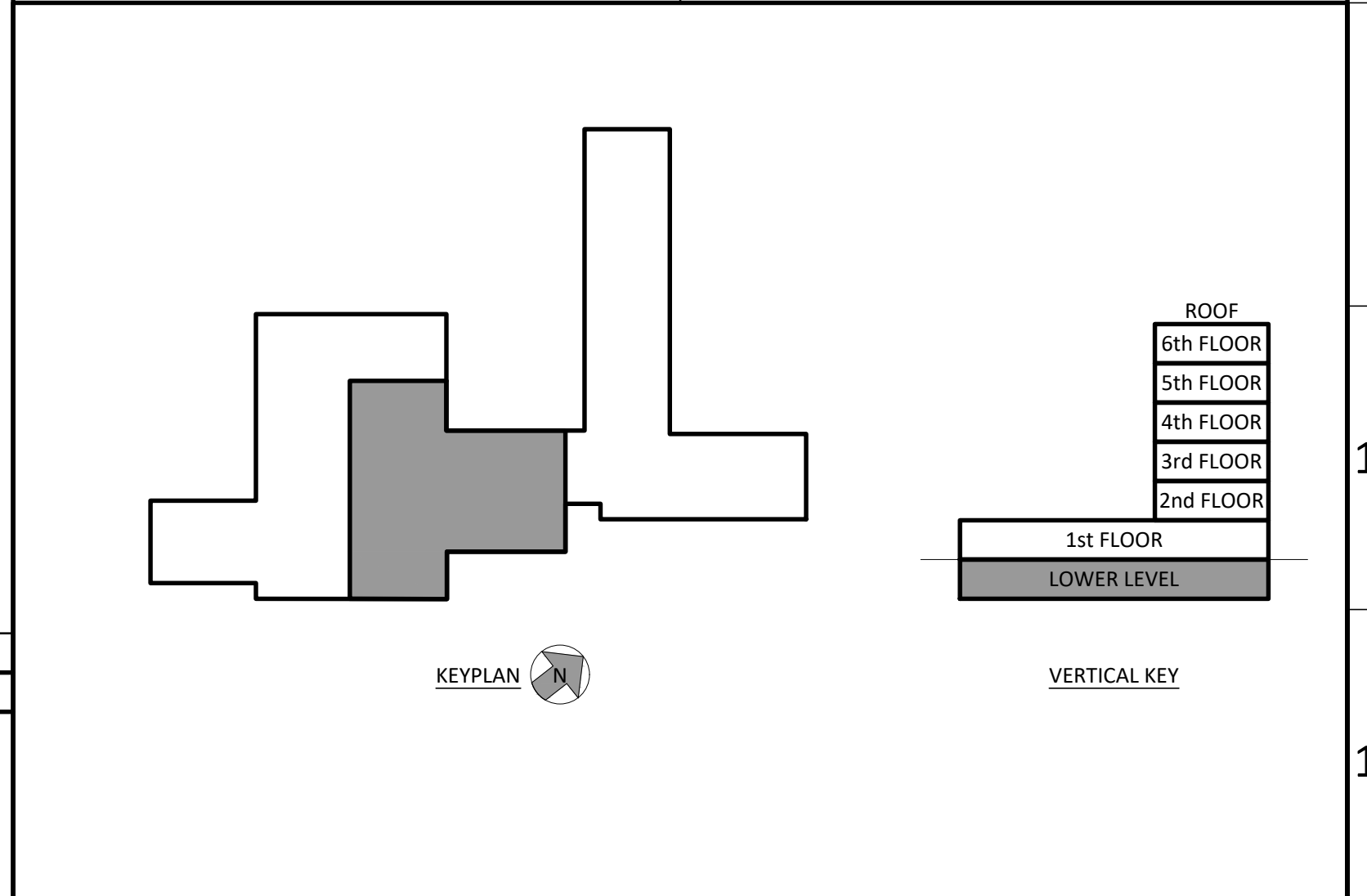
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
- Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
- Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
- Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.

GENERAL NOTES

- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
- The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments.
- Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
- Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
- Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
- When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently Reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.
- A Portion Of This Work Will Be Occurring In The Path Of An Emergency Egress Route. During All Phases Of This Project, A Protected Emergency Egress Route Must Be Maintained Through Each Affected Emergency Egress Route, Allowing Retreat From The Building. Approval From The Division Of Community Affairs Is Required To Close Or Re-Direct An Egress Route.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
FACP	Fire Alarm Control Panel	FACP	Fire Alarm Control Panel
WCH	Existing Wall-Mounted Connector Housing	EMT	Electrical Metallic Tubing
FACP	Existing Fire Alarm Control Panel	CM	Control Module
□	New Equipment	MM	Monitor Module
□	Existing Equipment	WCH	Wall-Mounted Connector Housing
⊙	Photo Tag		
→	Connect To Existing		



FIRE ALARM PANEL REPLACEMENT DECKER HALL title Drawing: **E101-DECK** dwg. no.

scale AS SHOWN	drawn by SC	checked by SF	date 5/03/2020
----------------	-------------	---------------	----------------

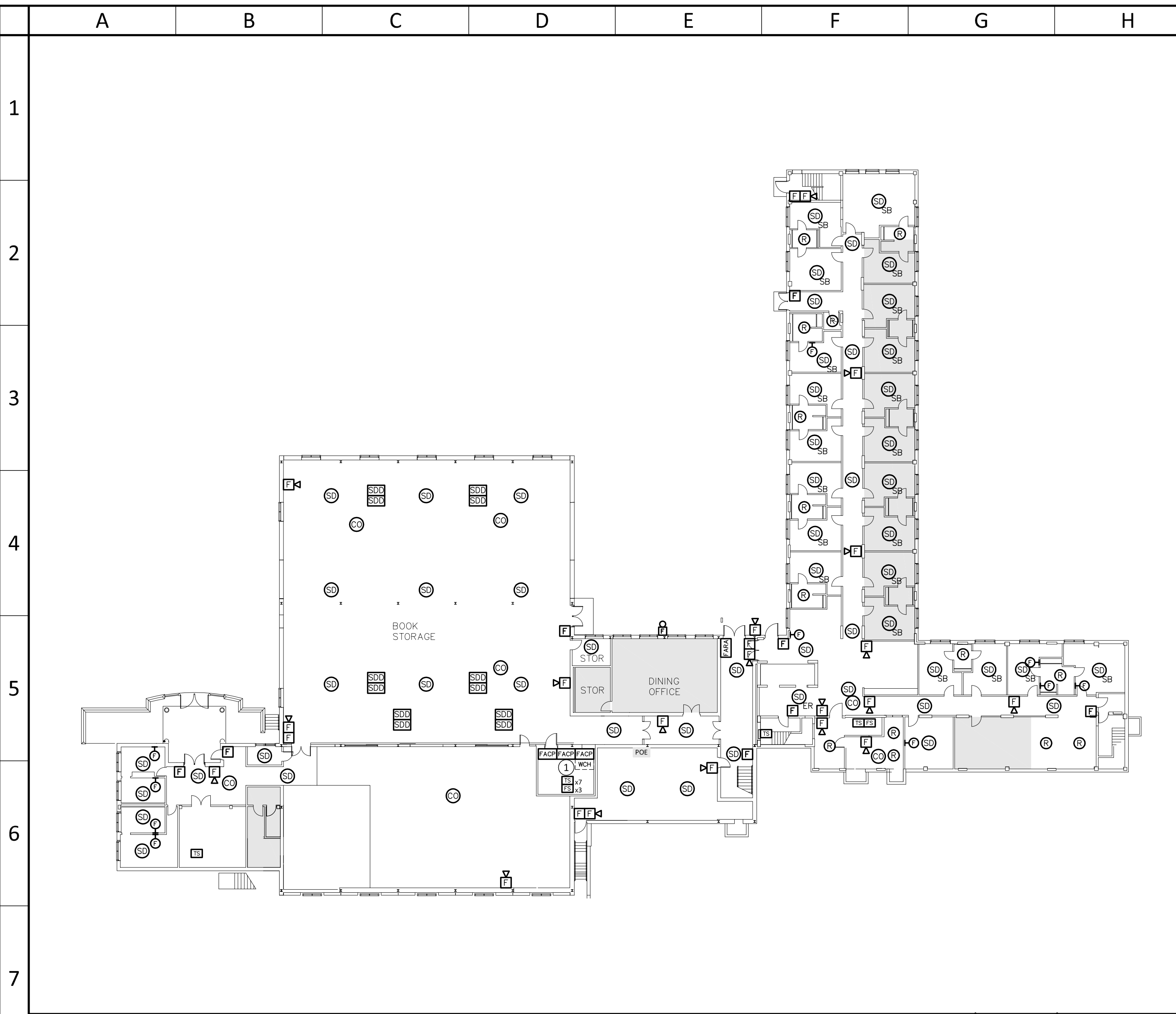
dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD, EWING NJ, 08618

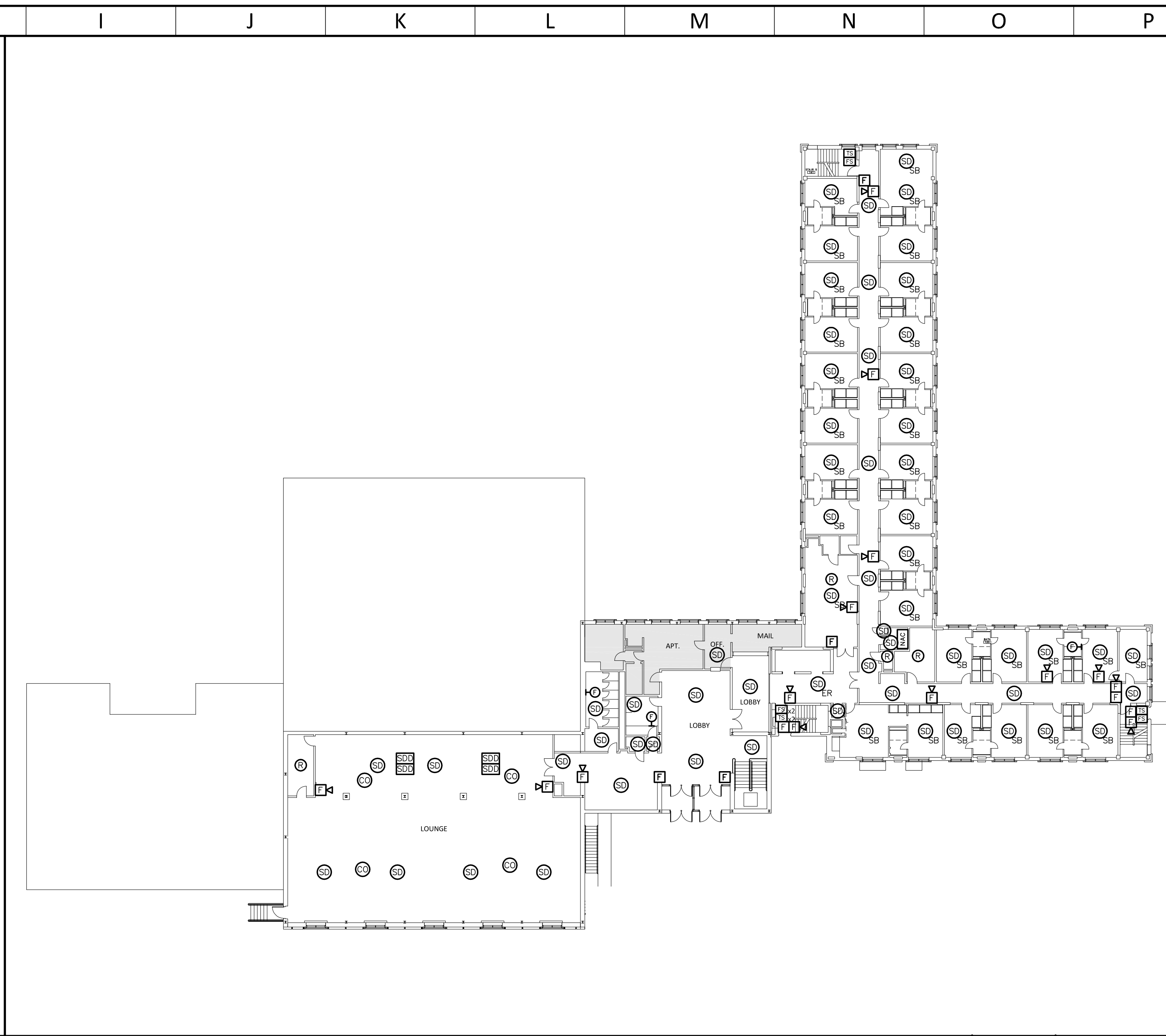
This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30x42

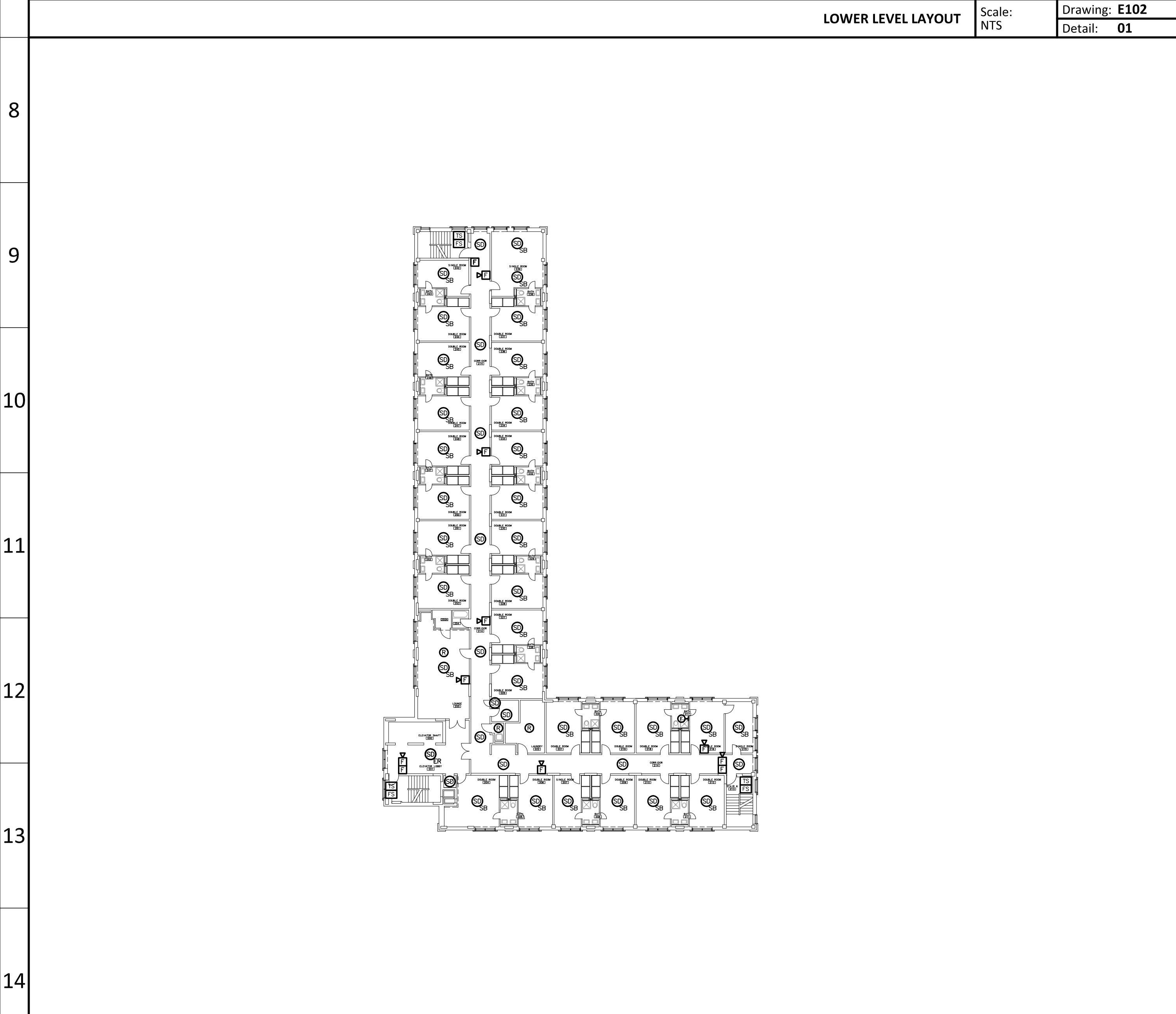
This Drawing is the Property of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project and is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.



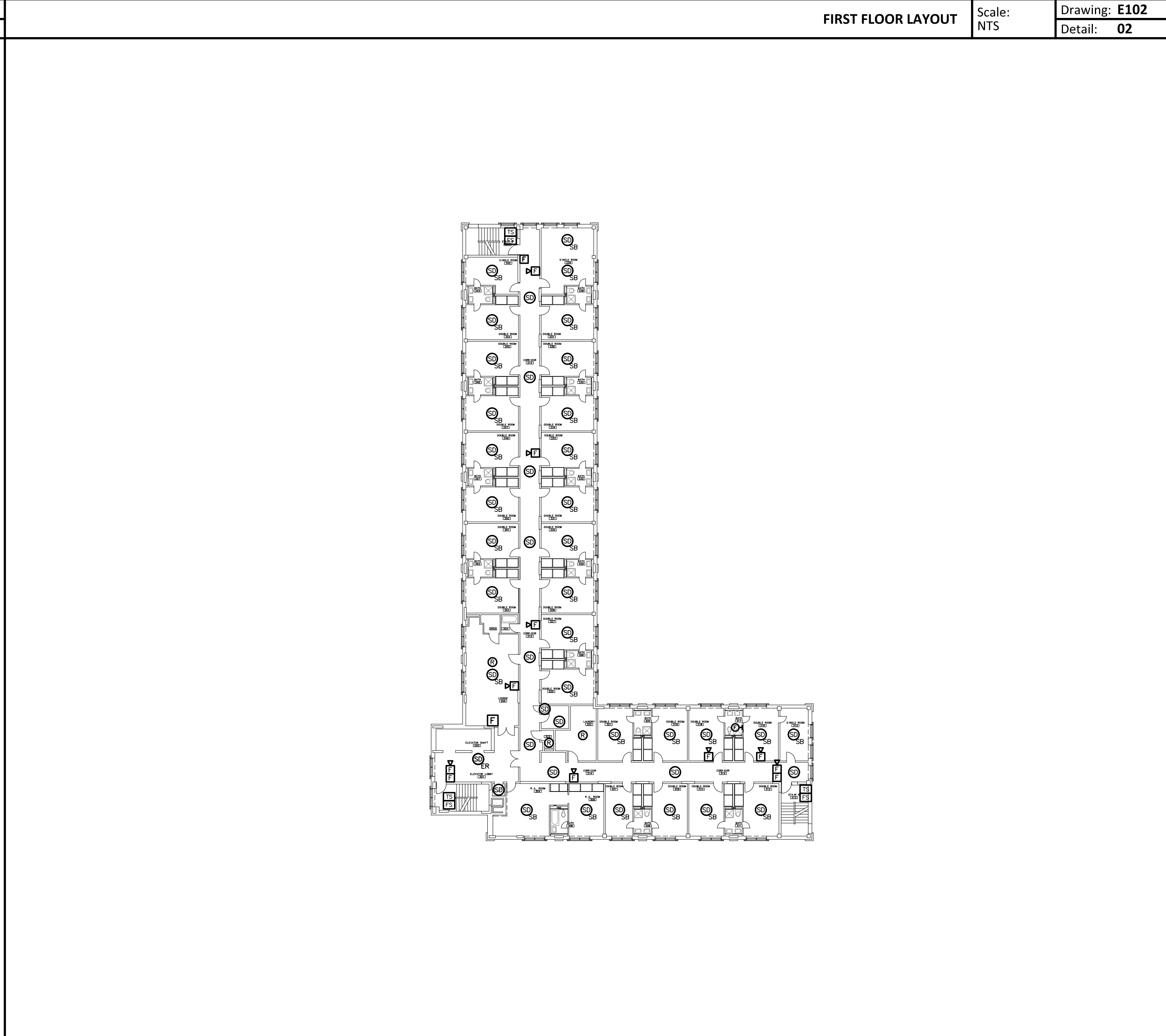
LOWER LEVEL LAYOUT Scale: NTS Drawing: **E102** Detail: **01**



FIRST FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **02**



SECOND FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **03**



THIRD FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **04**

KEY NOTES (SYMBOLS ①, ②, ETC.)

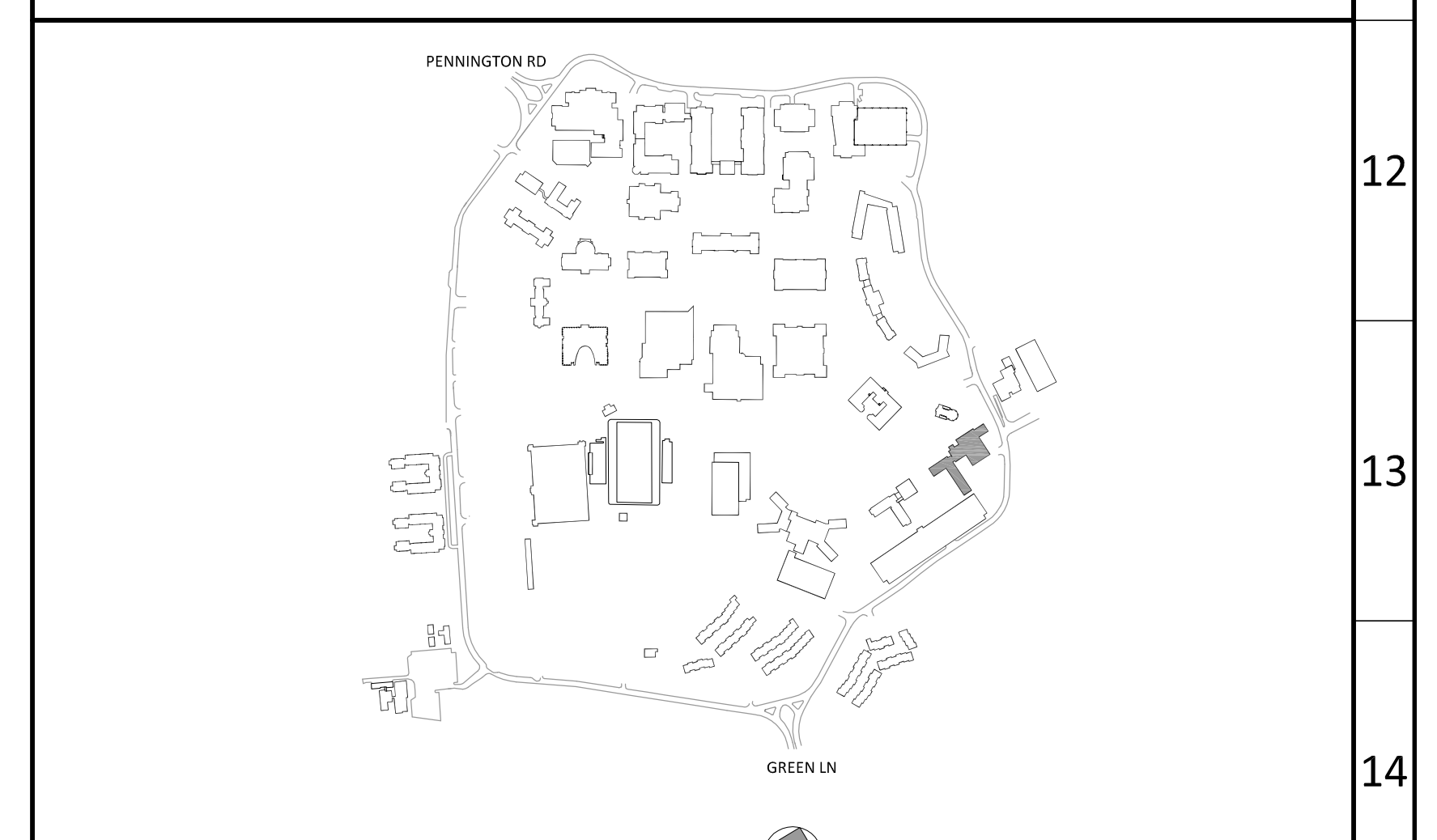
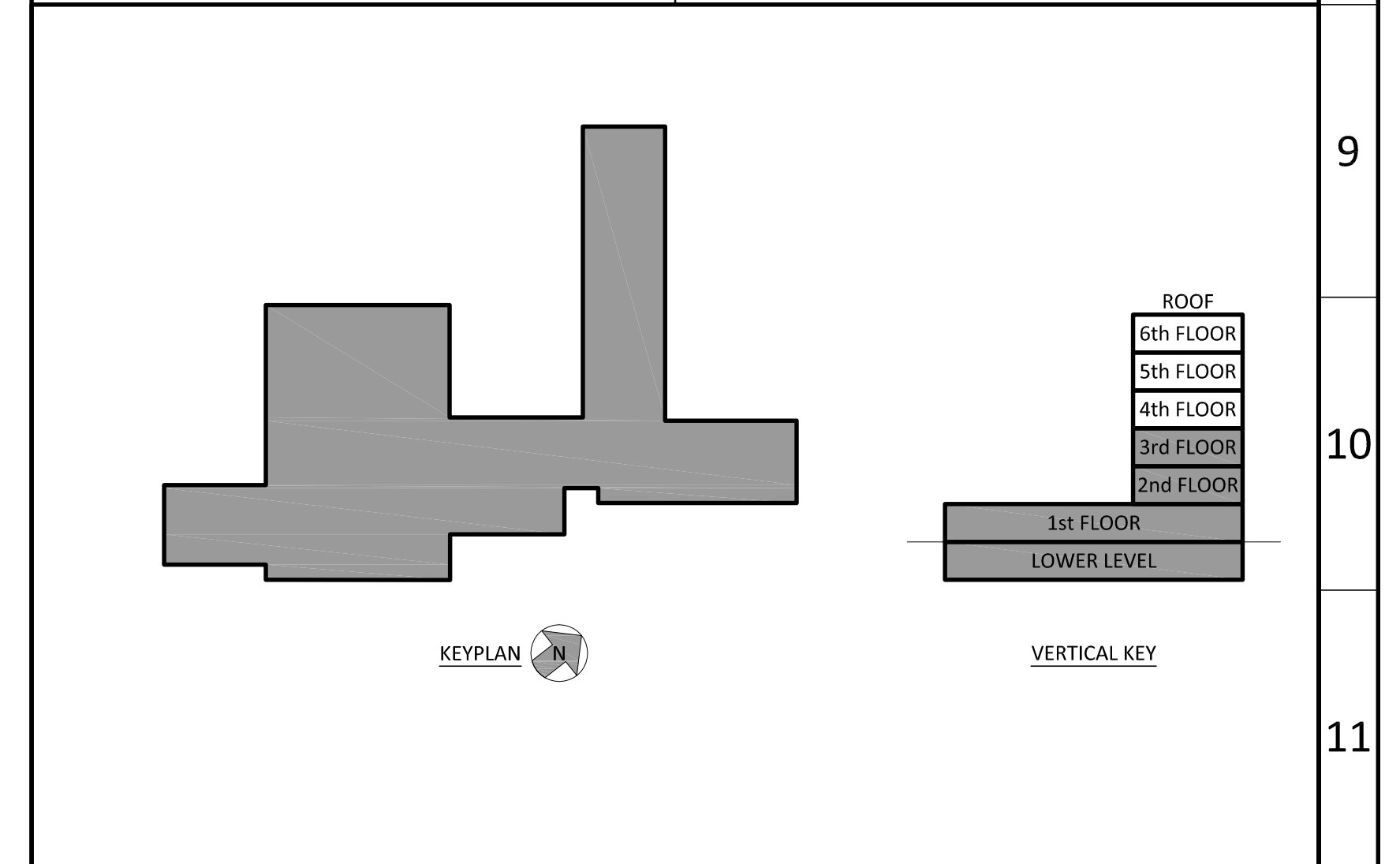
1. Existing Fire Alarm Control Panel.

GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
Ⓜ	Manual Pull Station	Ⓜ	No Access
Ⓢ	Strobe Only	Ⓢ	New Smoke Detector
Ⓜ	Horn/Strobe	Ⓜ	New Manual Pull Station
Ⓢ	Smoke Detector	Ⓢ	New Strobe
Ⓢ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	Ⓜ	New Horn / Strobe
Ⓢ _{SB}	Smoke Detector With Sounder Base	Ⓢ	Photo ID Tag
Ⓢ	Heat Detector, Combination Fixed Temperature And Rate Of Rise	FACP	Fire Alarm Control Panel
Ⓢ	CO Detector	CO	Carbon Monoxide
Ⓢ _{SD}	Duct Mounted Smoke Detector	POE	Point Of Entry
FACP	Fire Alarm Control Panel		
RAM	Fire Alarm Remote Annunciator Panel		
NAC	Fire Alarm Booster Panel		
TS	Fire Sprinkler Tamper Switch		
FS	Fire Sprinkler Flow Switch		
WCH	Existing Wall Mounted Connector Housing		



ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

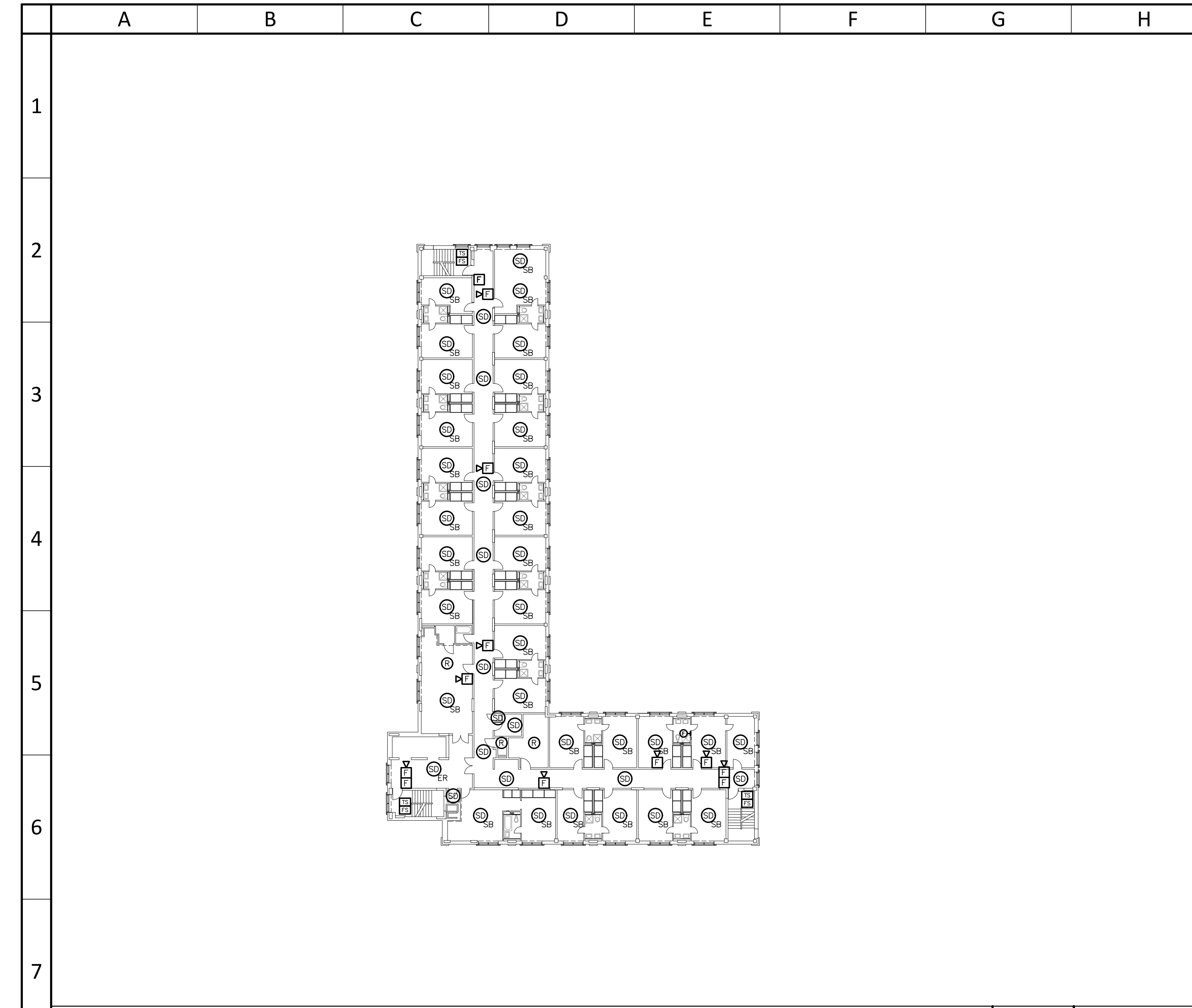
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project: TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

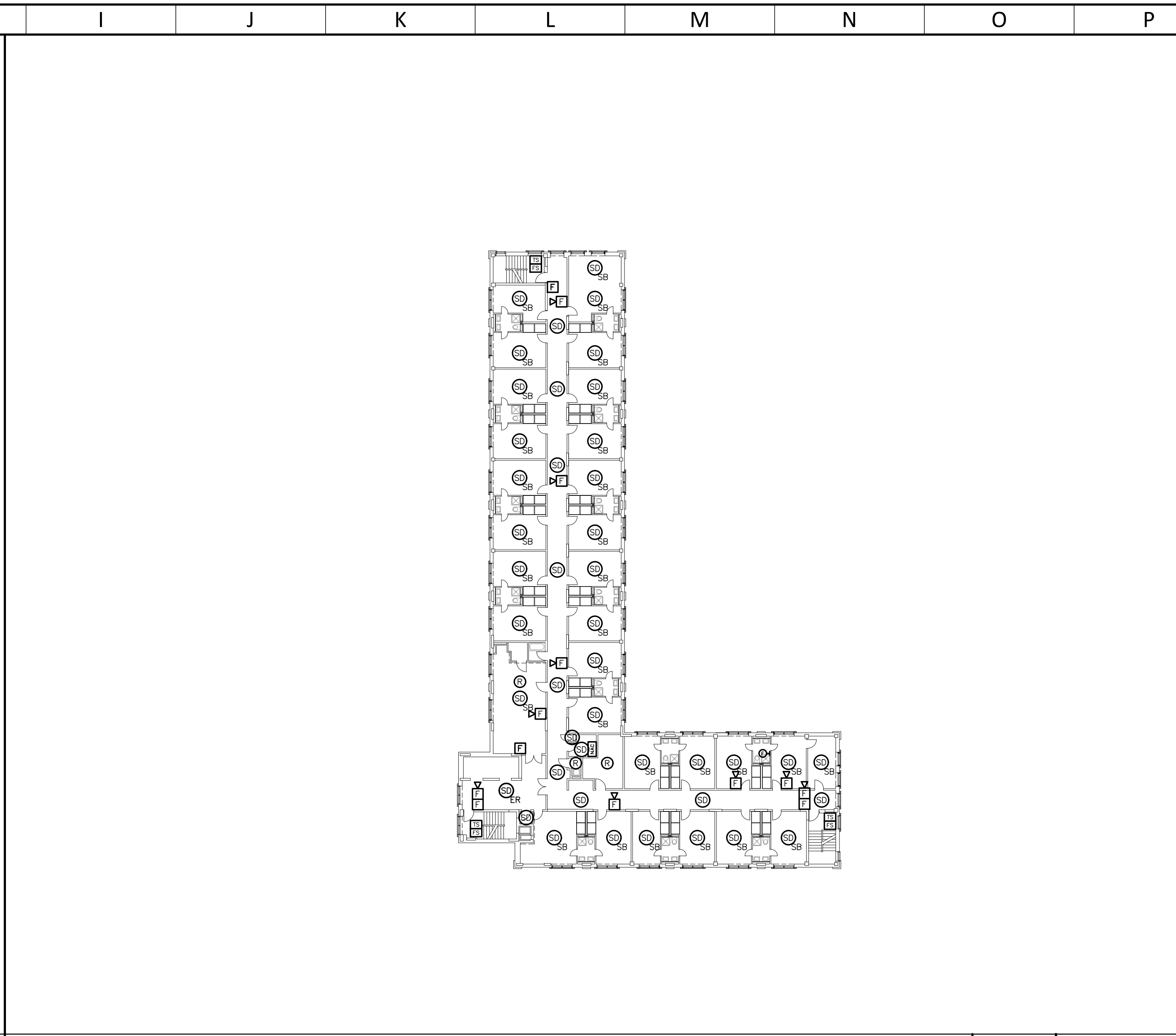
title: FIRE ALARM - EXISTING LAYOUT
DECKER HALL

scale: AS SHOWN
drawn by: SC
checked by: SF
date: 5/03/2020

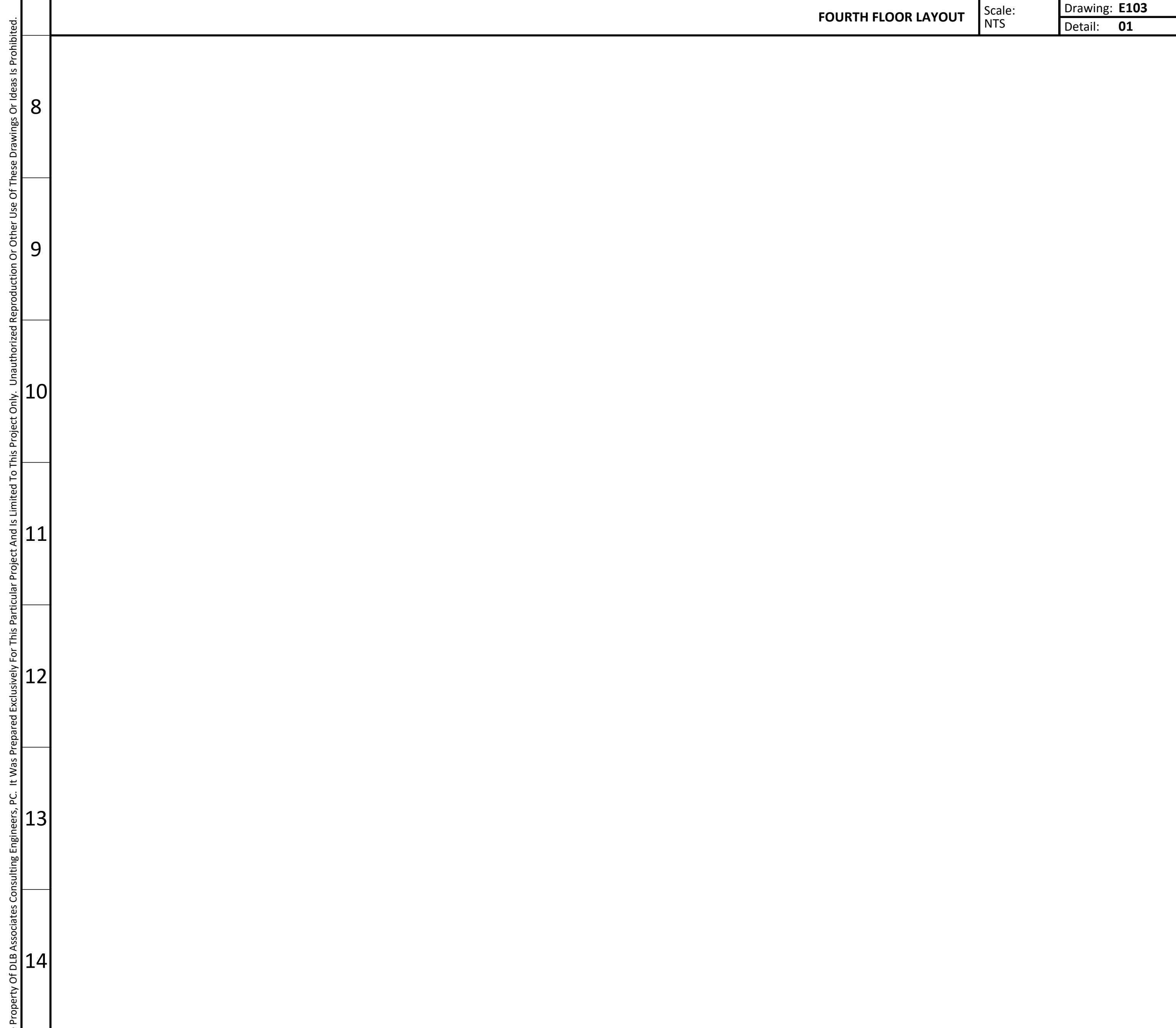
dwg. no. **E102-DECK**



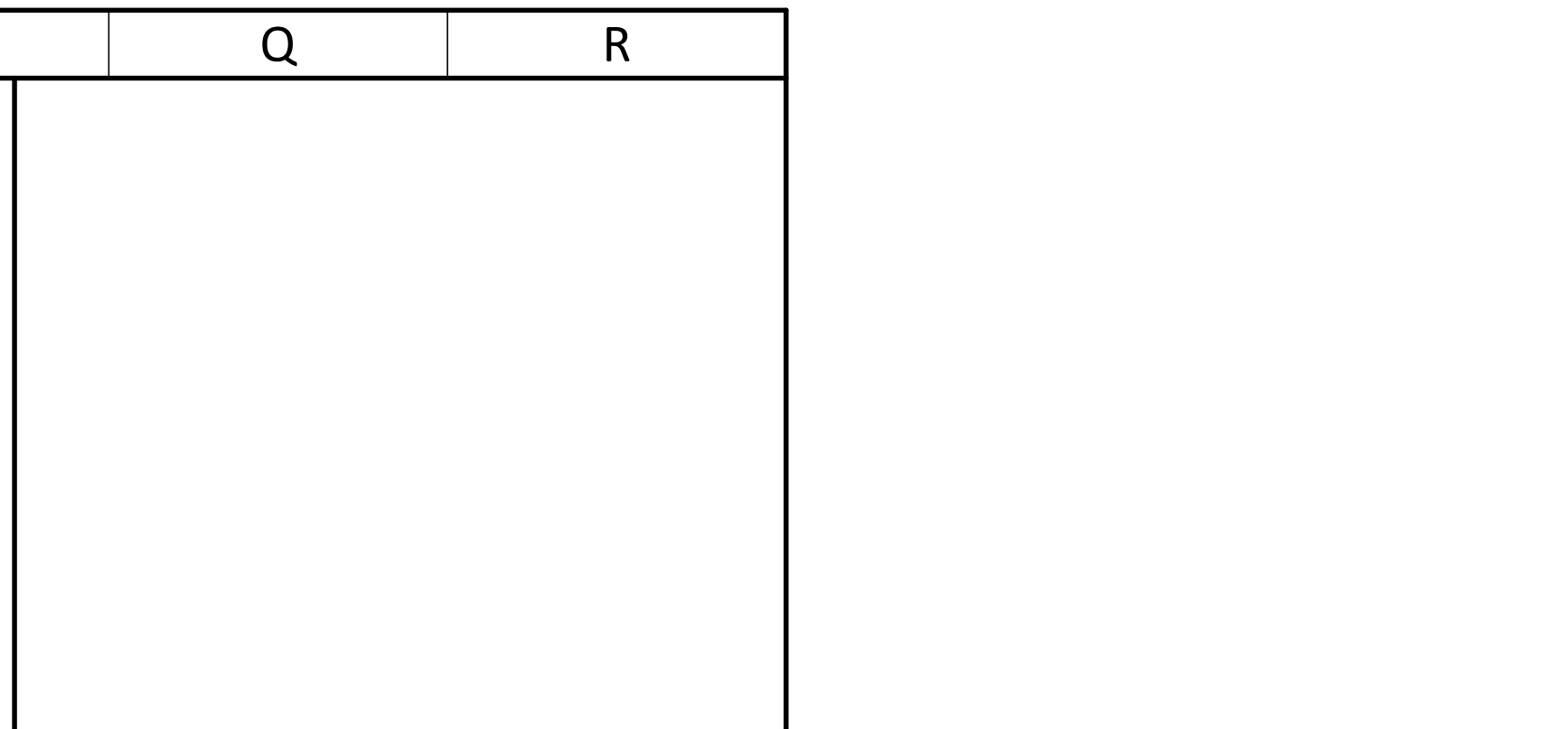
FOURTH FLOOR LAYOUT Scale: NTS Drawing: **E103** Detail: **01**



FIFTH FLOOR LAYOUT Scale: NTS Drawing: **E103** Detail: **02**



SIXTH FLOOR LAYOUT Scale: NTS Drawing: **E103** Detail: **03**

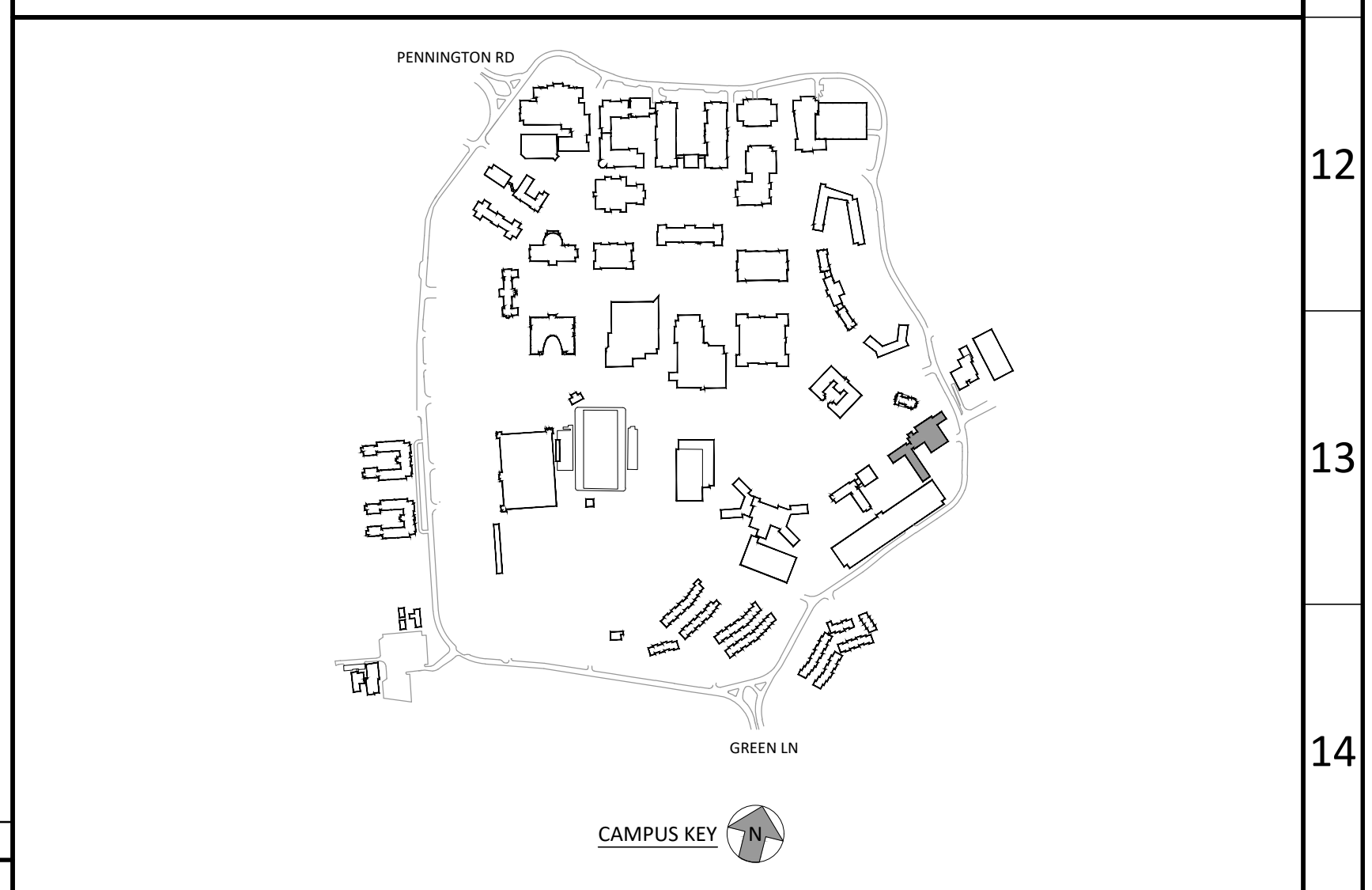
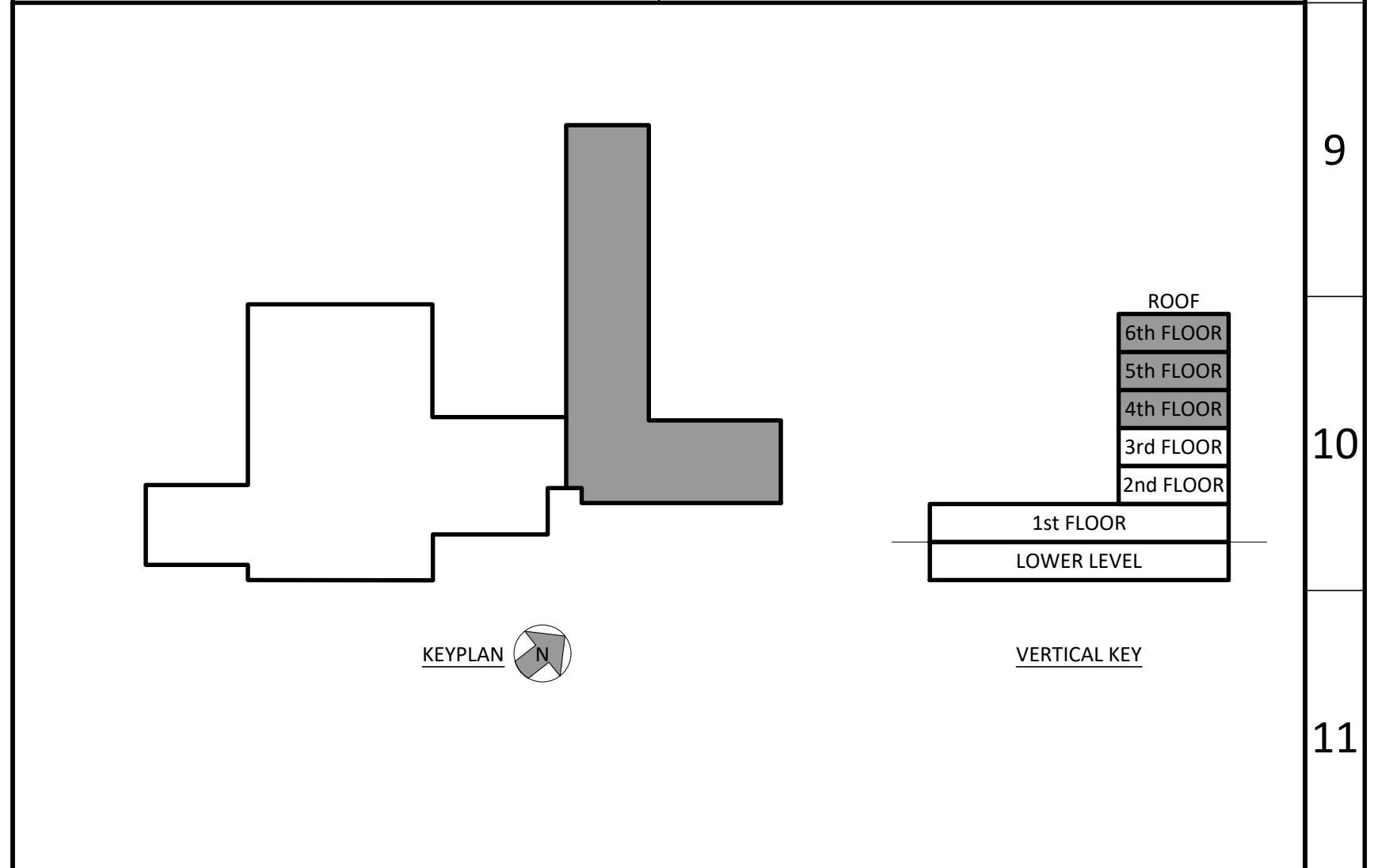


GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

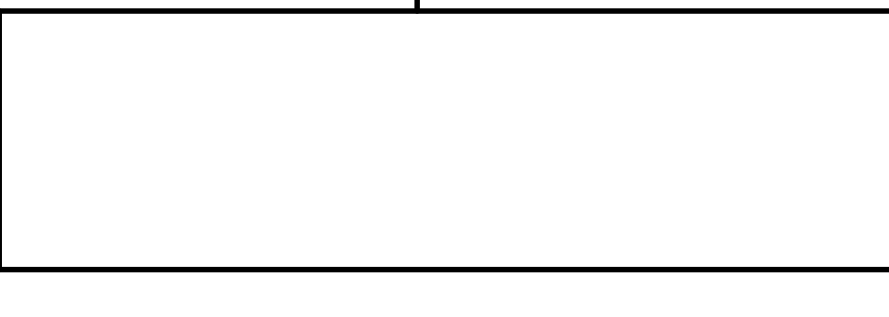
PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
[F]	Manual Pull Station	[]	No Access
[S]	Strobe Only	[SD]	New Smoke Detector
[H]	Horn/Strobe	[MPS]	New Manual Pull Station
[SD]	Smoke Detector	[S]	New Strobe
[SD_ER]	Smoke Detector (ER Indicates Elevator Recall)	[H/S]	New Horn / Strobe
[SD_SB]	Smoke Detector With Sounder Base	[PIT]	Photo ID Tag
[HTR]	Heat Detector, Combination Fixed Temperature And Rate Of Rise	FACP	Fire Alarm Control Panel
[CO]	CO Detector	CO	Carbon Monoxide
[SDM]	Duct Mounted Smoke Detector	POE	Point Of Entry
[FACP]	Fire Alarm Control Panel		
[FARA]	Fire Alarm Remote Annunciator Panel		
[FABP]	Fire Alarm Booster Panel		
[FS]	Fire Sprinkler Tamper Switch		
[FS]	Fire Sprinkler Flow Switch		



ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018



dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM - EXISTING LAYOUT
DECKER HALL
scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020
dwg. no.
E103-DECK

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30x42

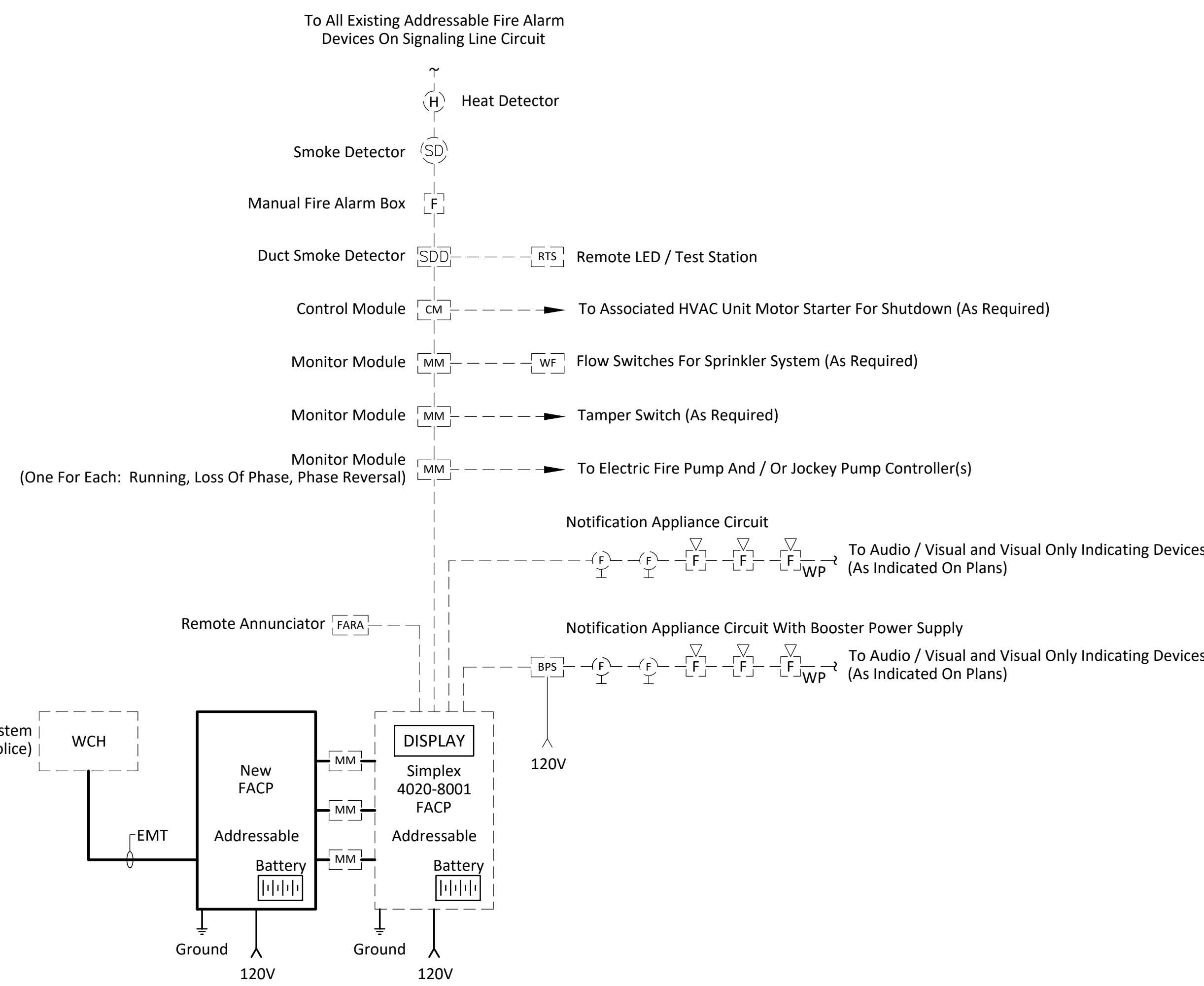
FIRE ALARM PHOTOS



PHOTO A - INTERMEDIARY FIRE ALARM CONTROL PANEL
Honeywell FS90 Intermediary Fire Alarm Control Panel With Exposed Conduit Located Within Basement Electrical Room.

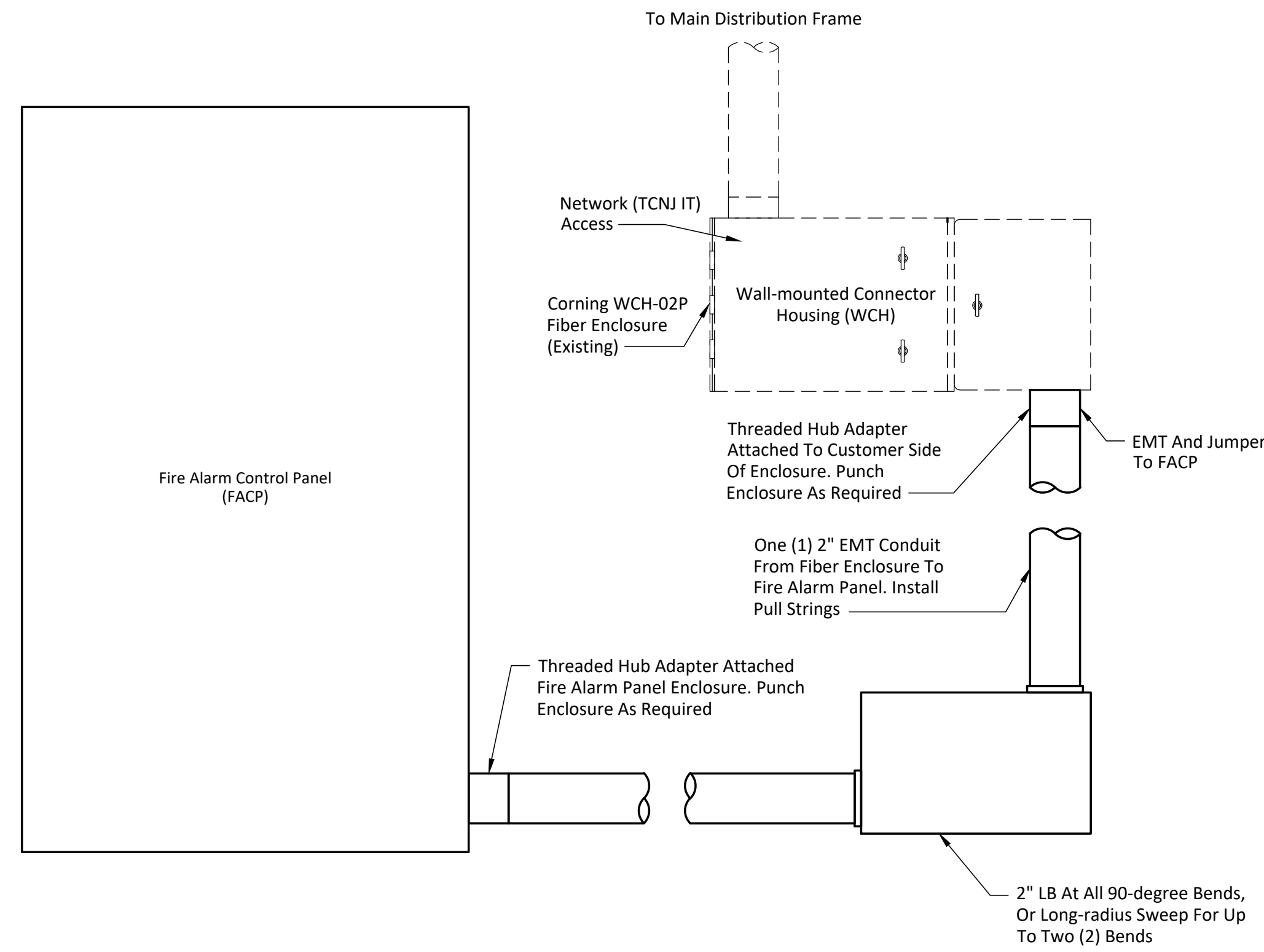


PHOTO B - SIMPLEX FIRE ALARM CONTROL PANEL
Simplex 4020 Addressable Fire Alarm Control Panel With Exposed Conduit Located Within Basement Electrical Room.



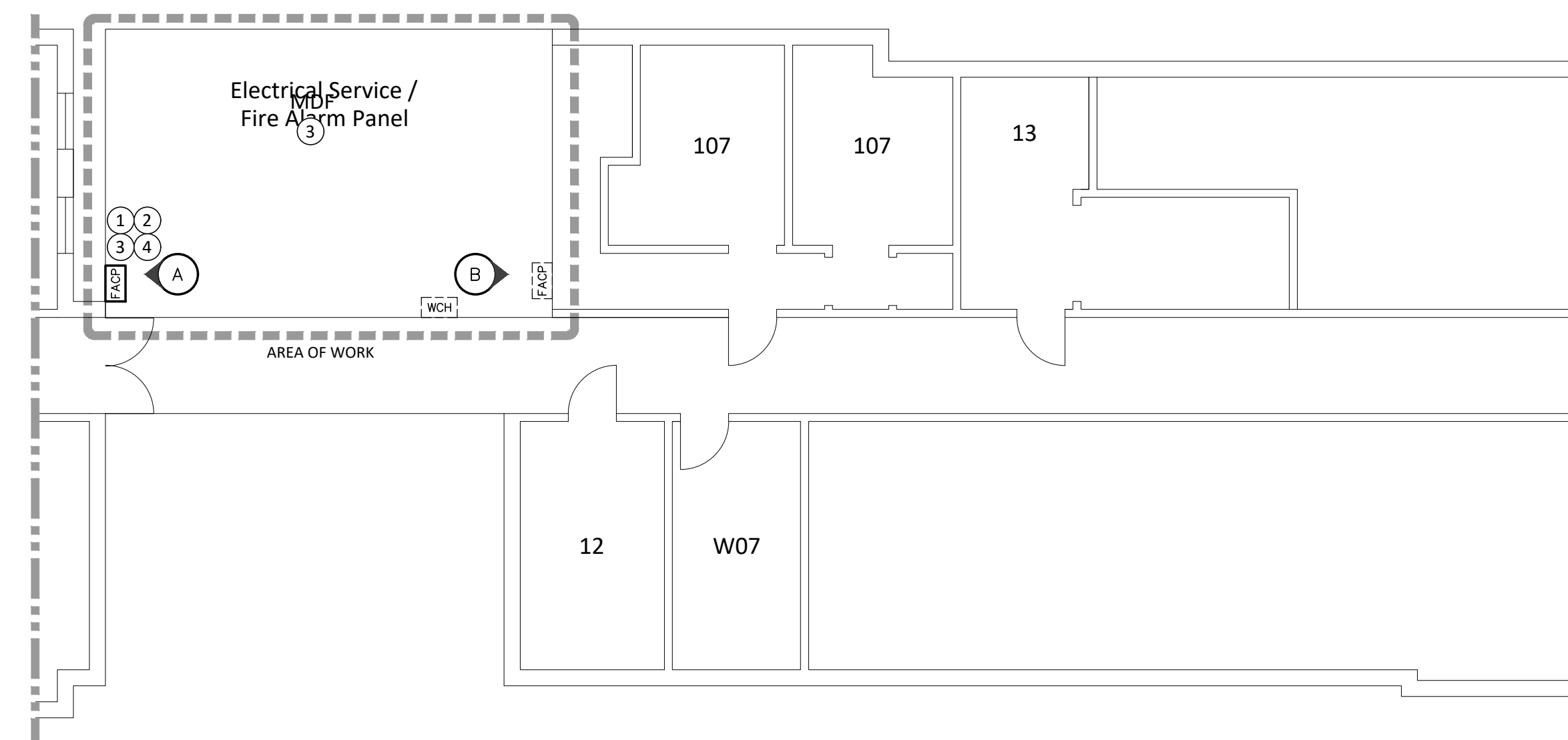
- NOTES:**
- General**
 - The Riser Above Depicts A "Honeywell" Basis of Design With A New Honeywell FACP. All Existing Simplex End Devices Would Not Be Compatible With The New FACP.
 - Install New FACP With Capacity Noted Below.
 - New Honeywell FACP Would Monitor Existing Simplex FACP For Alarm, Tamper, Trouble, And Other Points That Are Currently Monitored By The Front End At A Minimum.
 - This Building Would NOT Be Considered A Fully Addressable Building.
 - The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - The FACP Shall Connect The Campus Life Safety Management System.
 - Equipment**
 - Ely-Allen-Brewster Is Currently Covered By Fire Notification And Detection / Initiation Devices From An Addressable Simplex 4020-8001 System.
 - Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring**
 - The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing**
 - Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.

FIRE ALARM RISER Scale: NTS Drawing: **E101** Detail: **01**



- NOTES:**
- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNJ/IT
 - Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
 - Install Fiber Jumpers Between WCH And FACP.

FIRE ALARM FIBER ENCLOSURE INSTALLATION Scale: NTS Drawing: **E101** Detail: **02**



PARTIAL FLOOR PLAN - LOWER LEVEL Scale: 1/8"=1'-0" Drawing: **E101** Detail: **03**

KEY NOTES (SYMBOLS ①, ②, ETC.)

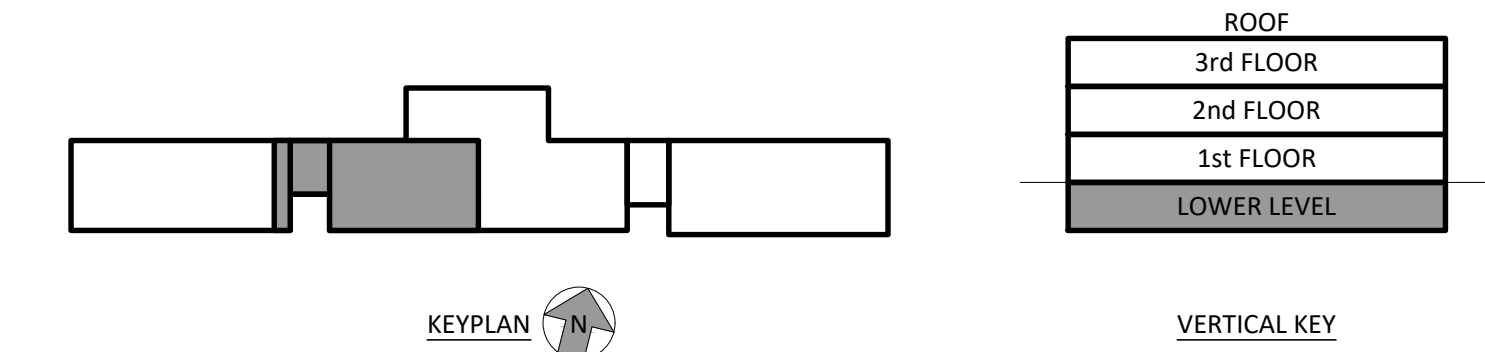
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
- Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
- Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
- Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.

GENERAL NOTES

- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
- The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments.
- Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
- Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
- Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
- When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently Reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
FACP	Fire Alarm Control Panel	FACP	Fire Alarm Control Panel
WCH	Existing Wall-Mounted Connector Housing	EMT	Electrical Metallic Tubing
FACP	Existing Fire Alarm Control Panel	CM	Control Module
[Symbol]	New Equipment	MM	Monitor Module
[Symbol]	Existing Equipment	WCH	Wall-Mounted Connector Housing
[Symbol]	Photo Tag		
[Symbol]	Connect To Existing		



FIRE ALARM PANEL REPLACEMENT ELY-ALLEN-BREWSTER
title
project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618
dwg. no.
E101-EAB
scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020

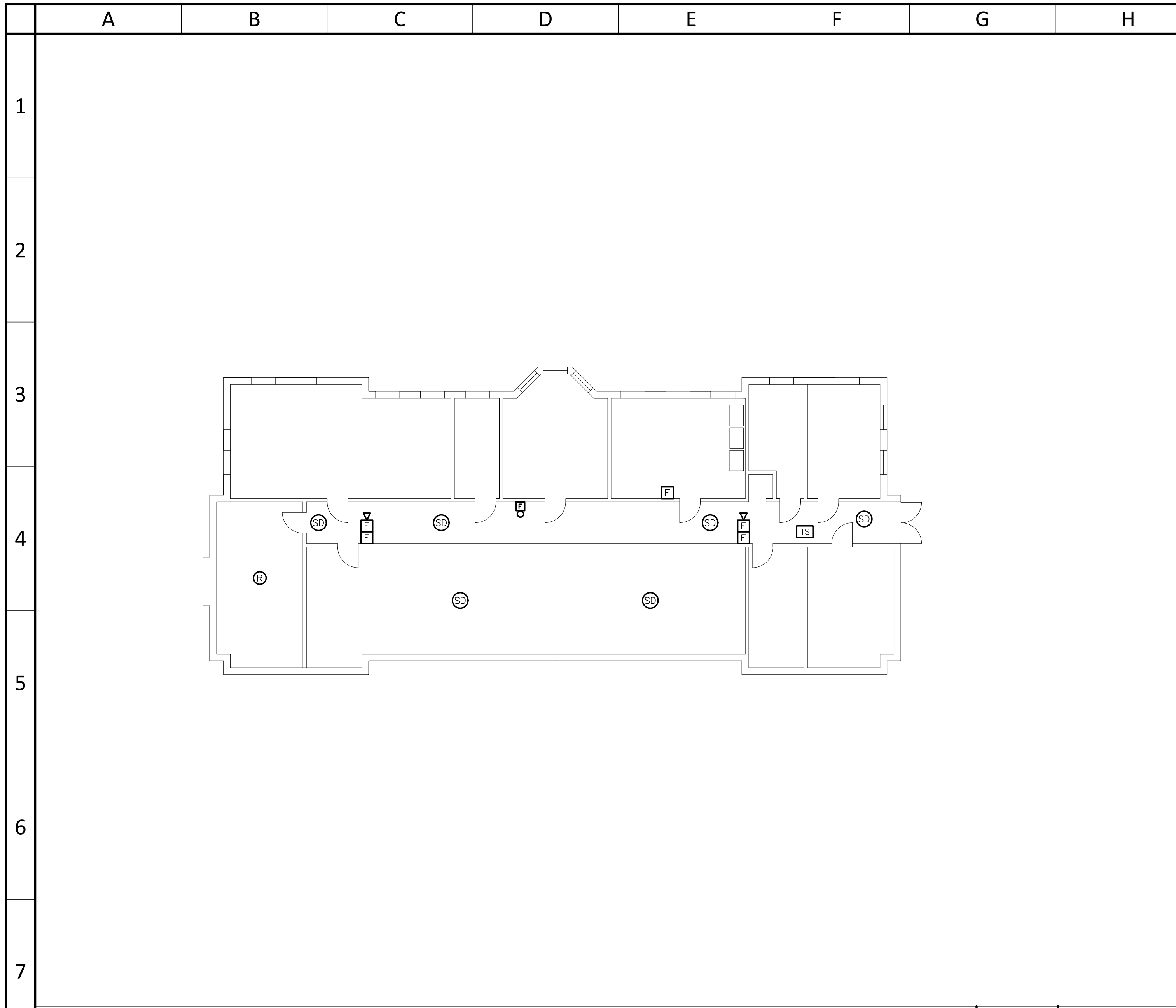
This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30x42

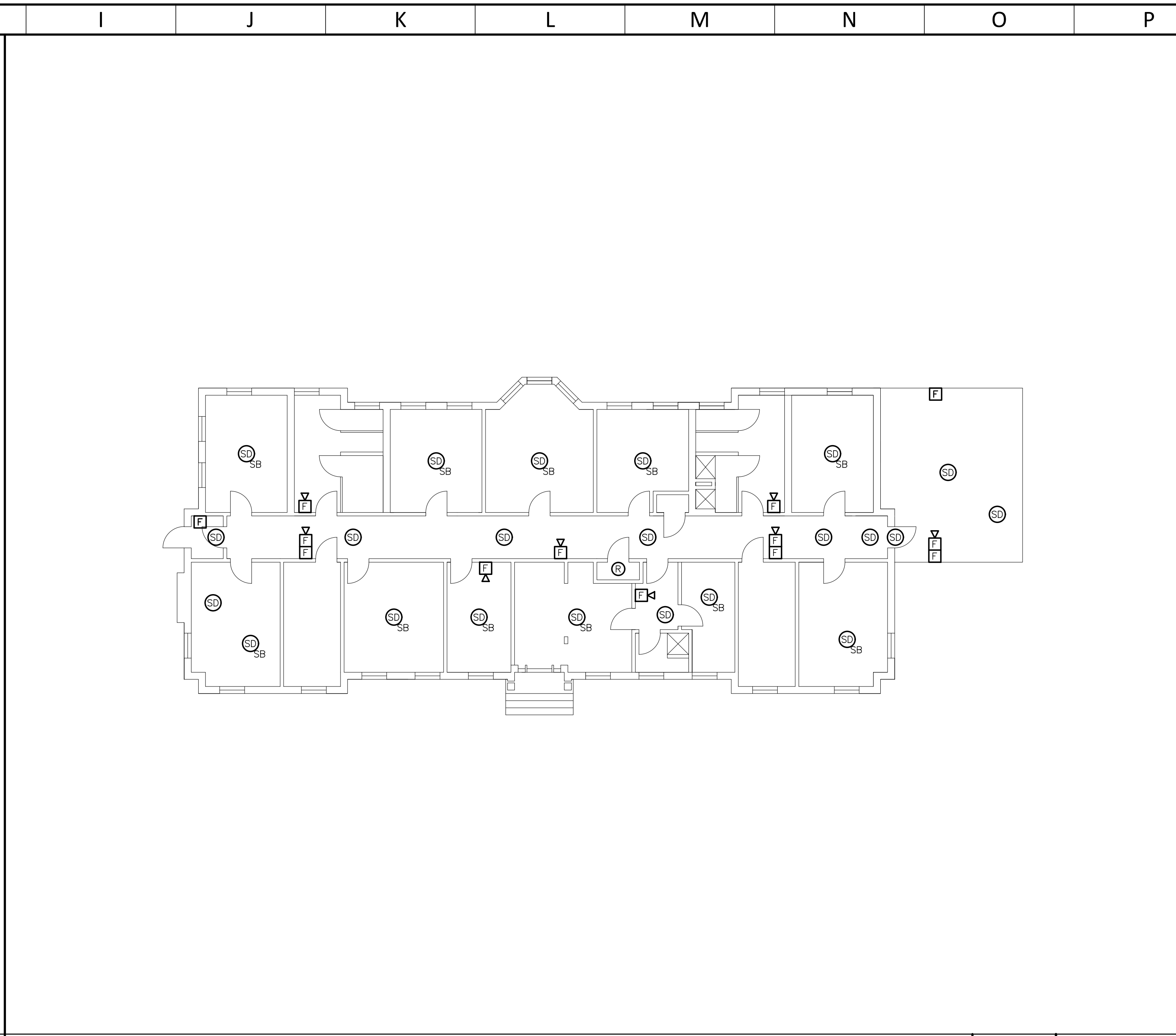
ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

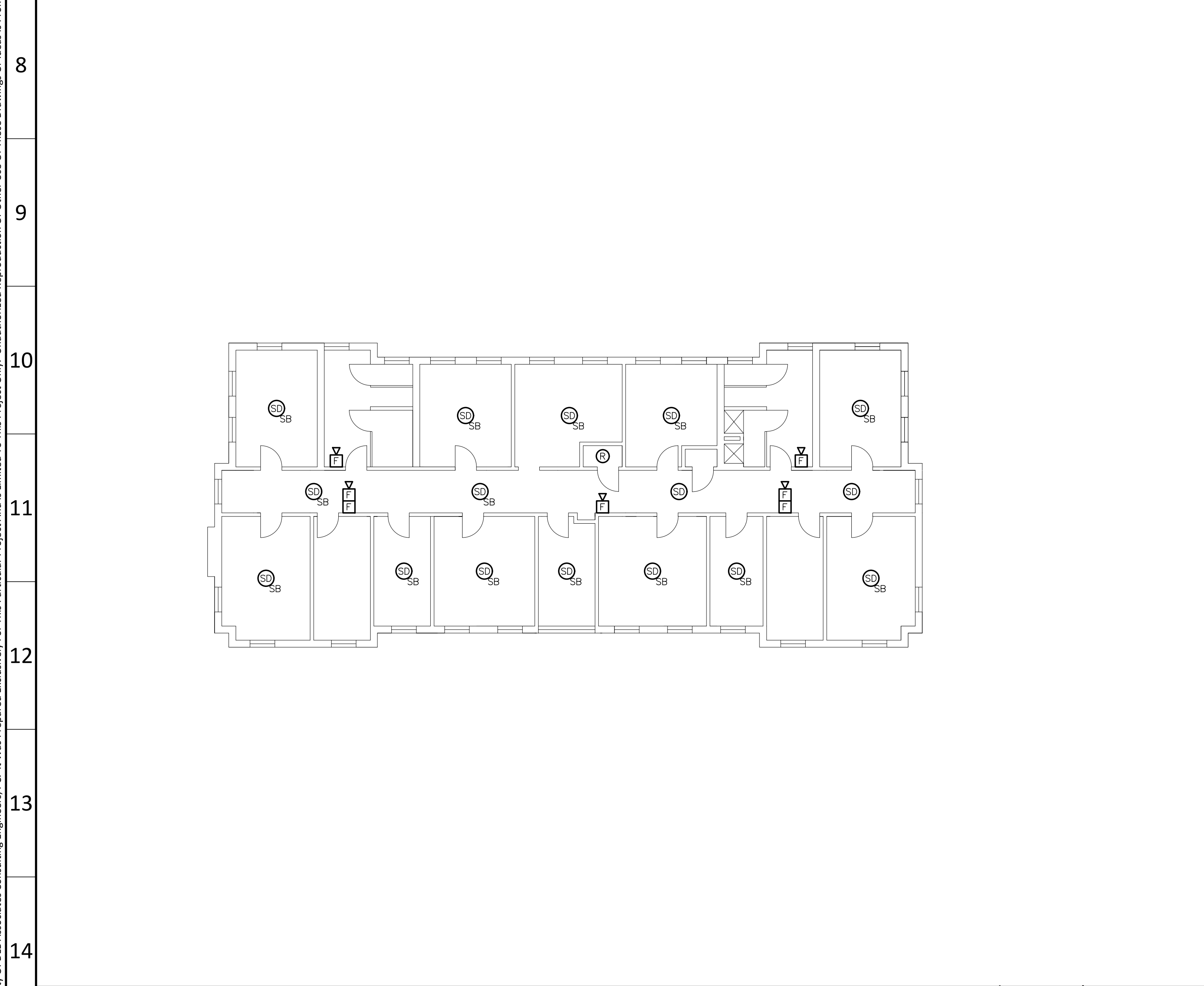
This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.



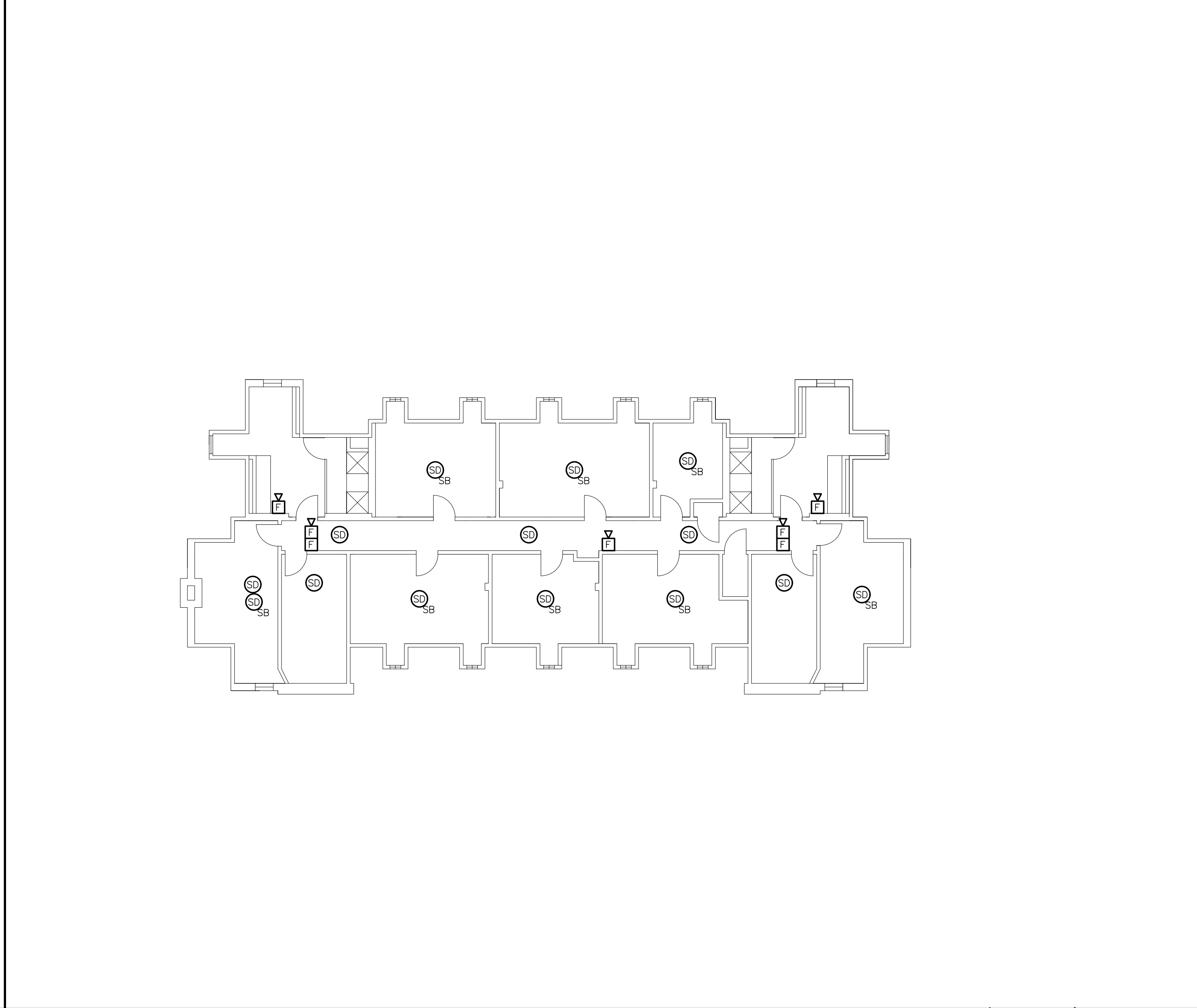
ELY HALL - LOWER LEVEL LAYOUT Scale: NTS Drawing: **E102** Detail: **01**



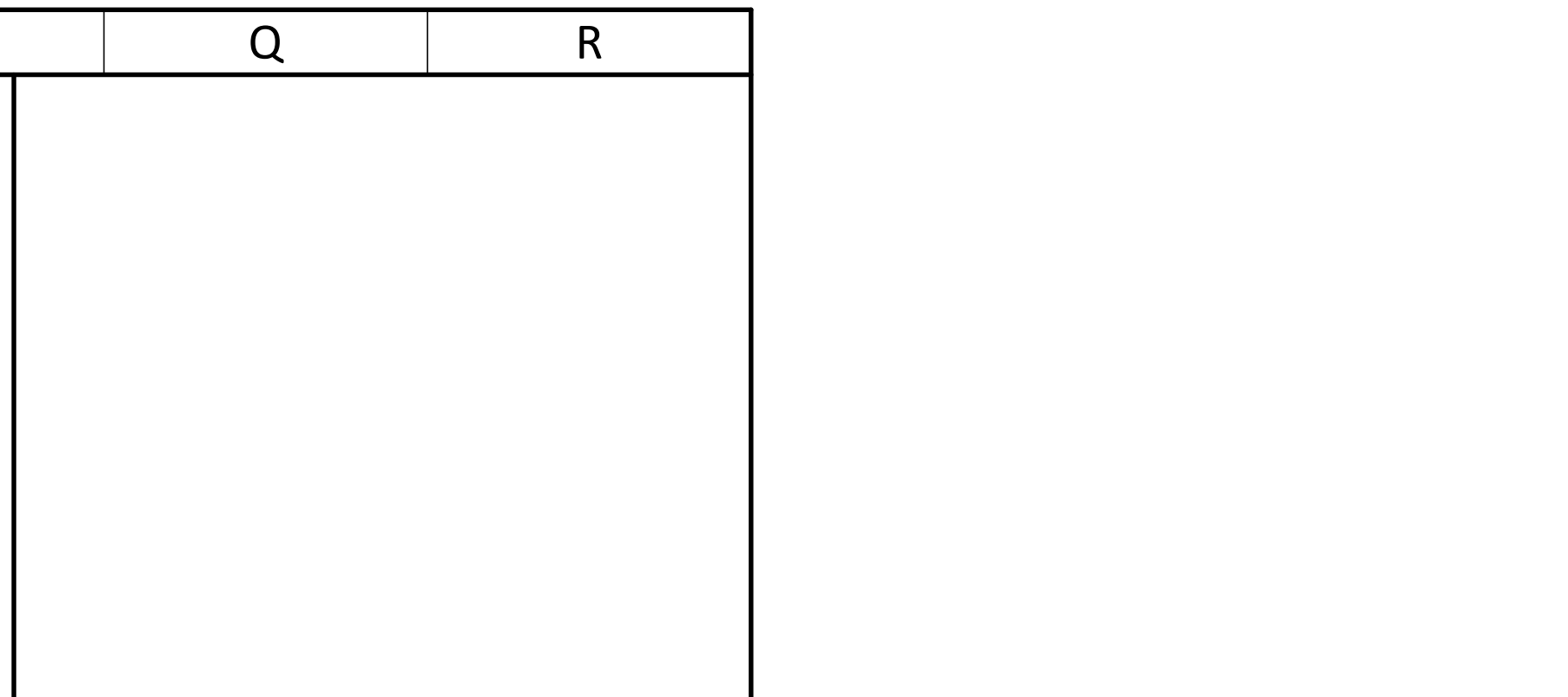
ELY HALL - FIRST FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **02**



ELY HALL - SECOND FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **03**



ELY HALL - THIRD FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **04**

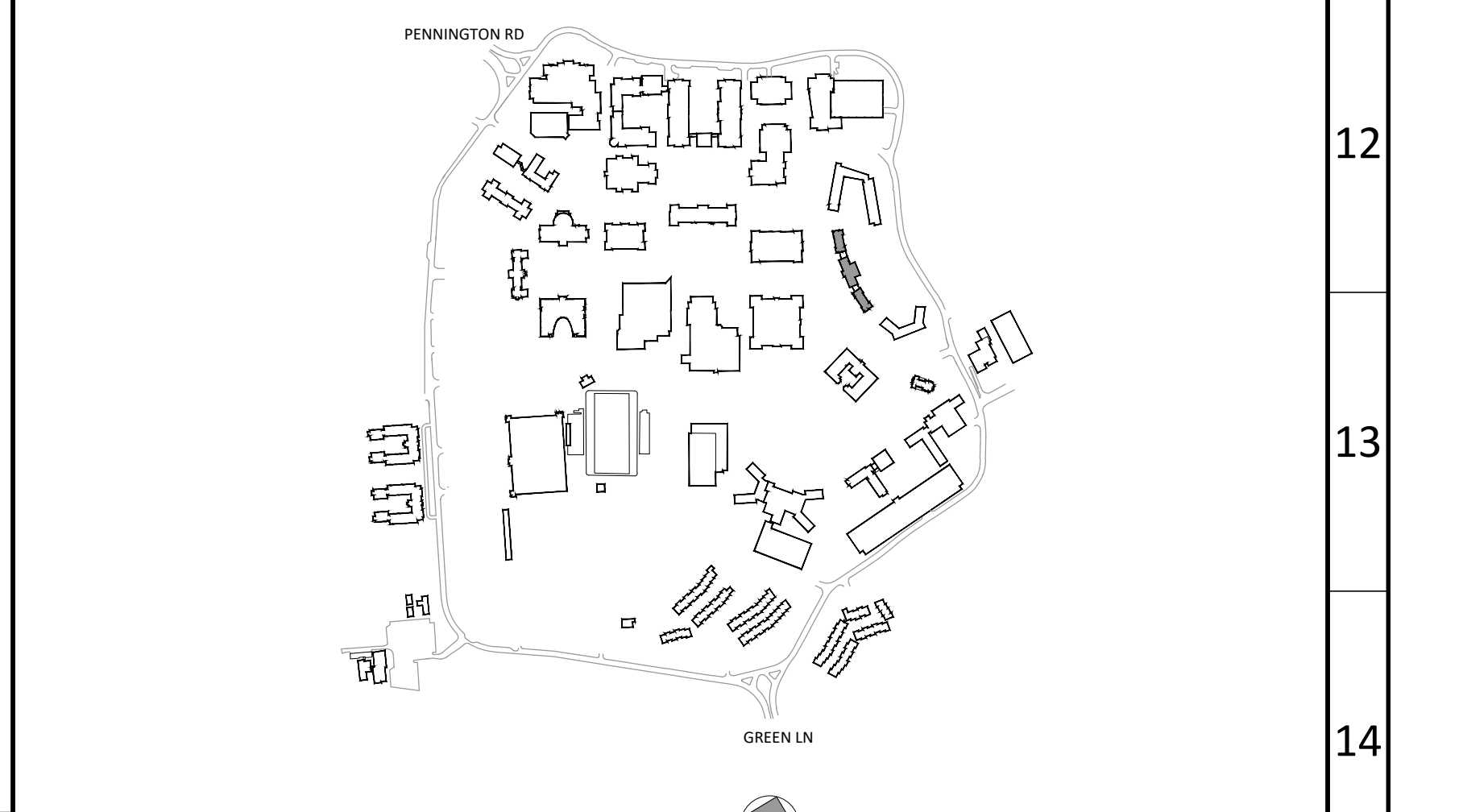
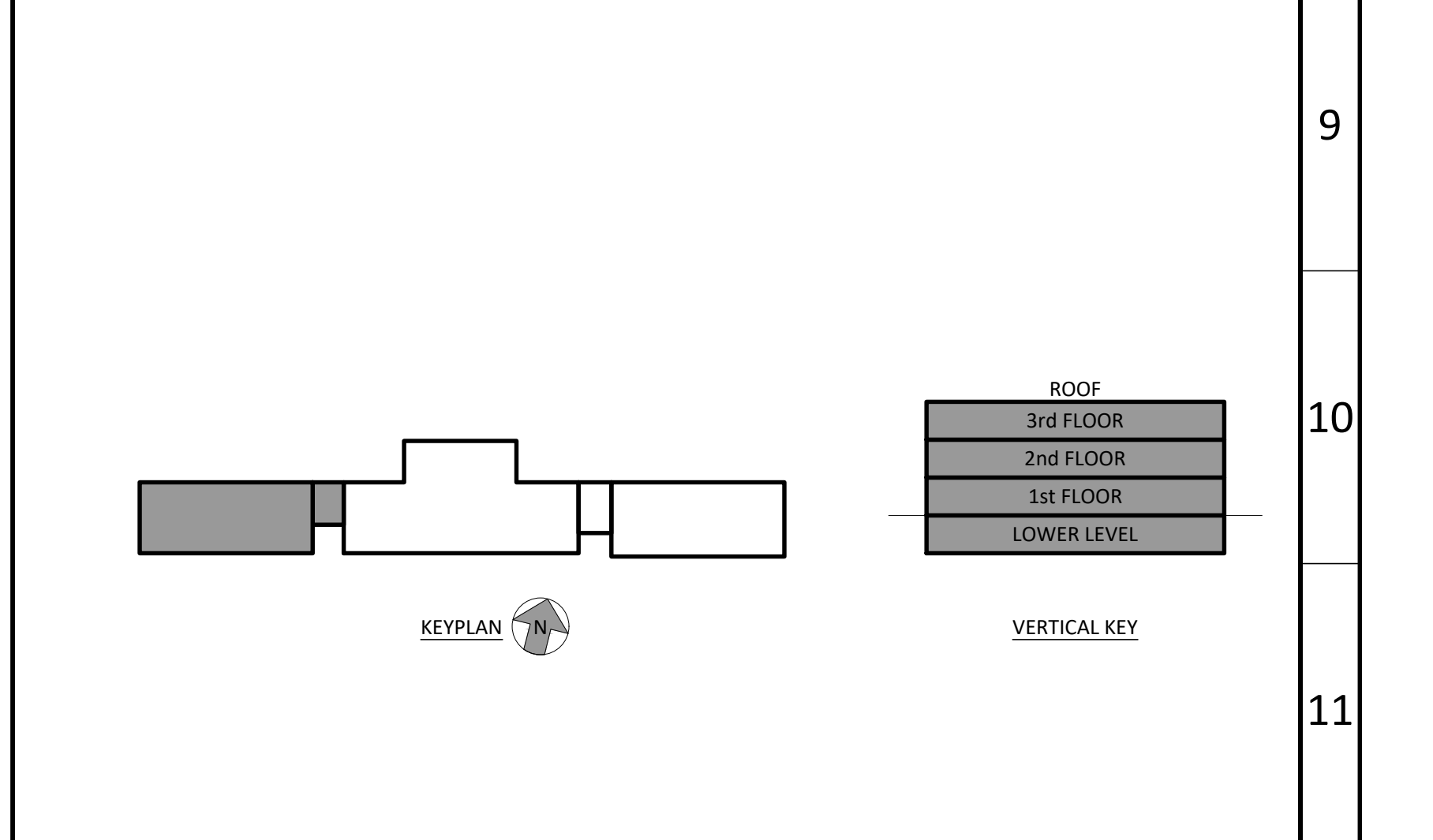


GENERAL NOTES

- This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
	Manual Pull Station		No Access
	Strobe Only		New Smoke Detector
	Horn/Strobe		New Manual Pull Station
	Smoke Detector		New Strobe
	Smoke Detector (ER Indicates Elevator Recall)		New Horn / Strobe
	Smoke Detector With Sounder Base		Photo ID Tag
	Heat Detector, Combination Fixed Temperature And Rate Of Rise	FACP	Fire Alarm Control Panel
	CO Detector	CO	Carbon Monoxide
	Duct Mounted Smoke Detector	POE	Point Of Entry
	Fire Alarm Control Panel		
	Fire Alarm Remote Annunciator Panel		
	Fire Alarm Booster Panel		
	Fire Sprinkler Tamper Switch		
	Fire Sprinkler Flow Switch		
	Existing Wall Mounted Connector Housing		



ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

Questions For DLB Call: DLB Project ID: 47211

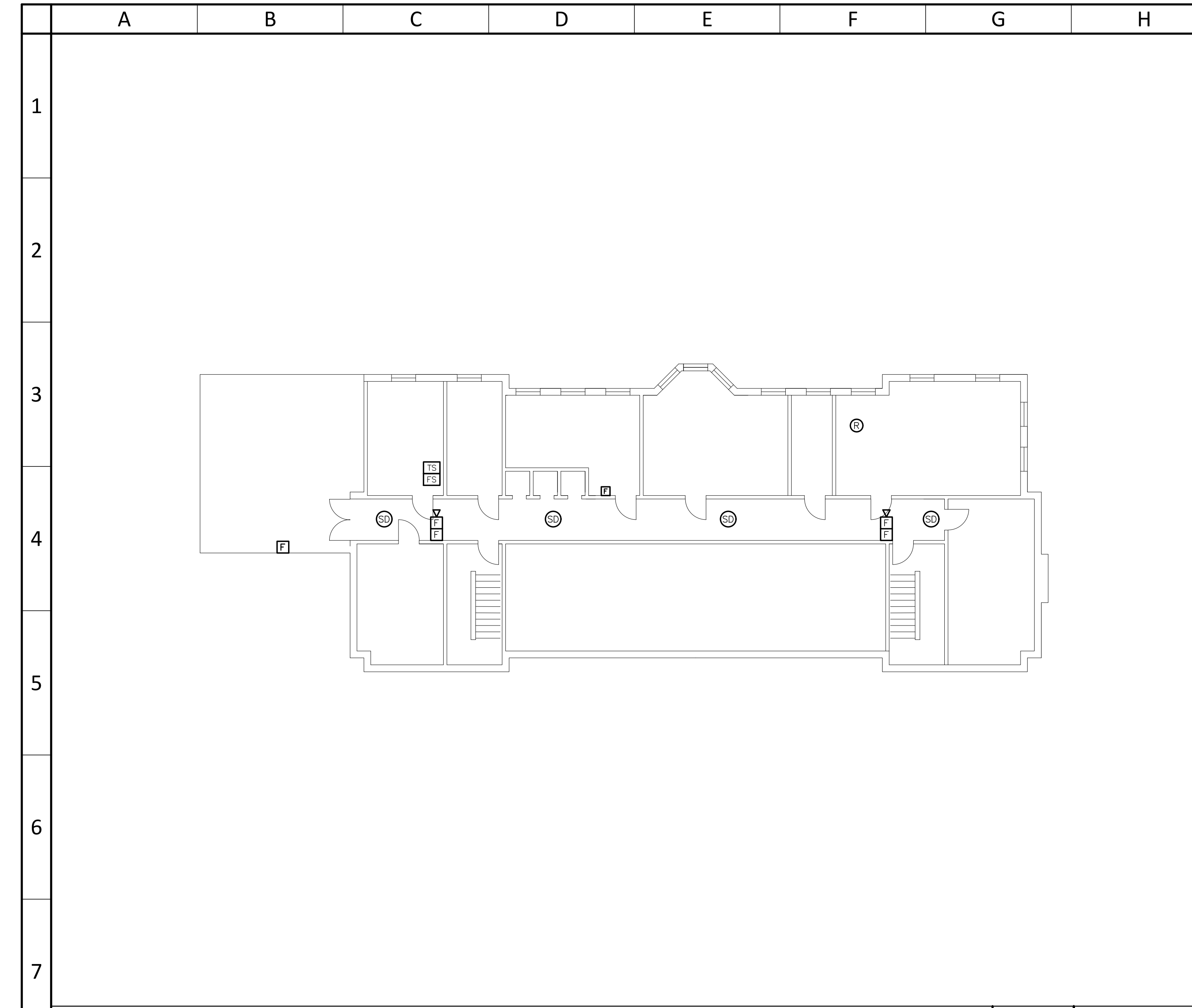
dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Anthony Laskosky
Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

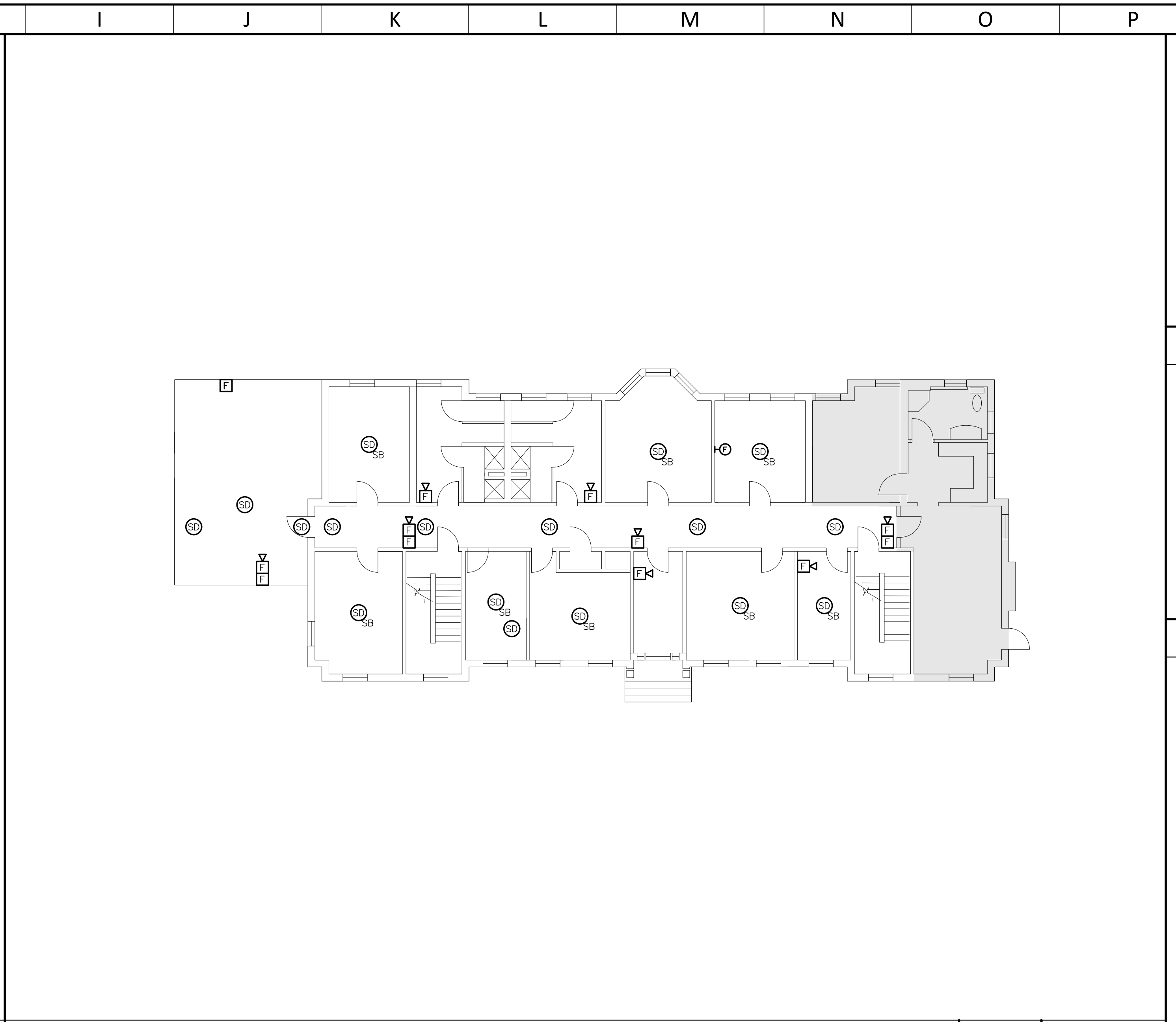
title
FIRE ALARM - EXISTING LAYOUT
ELY-ALLEN-BREWSTER

scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020

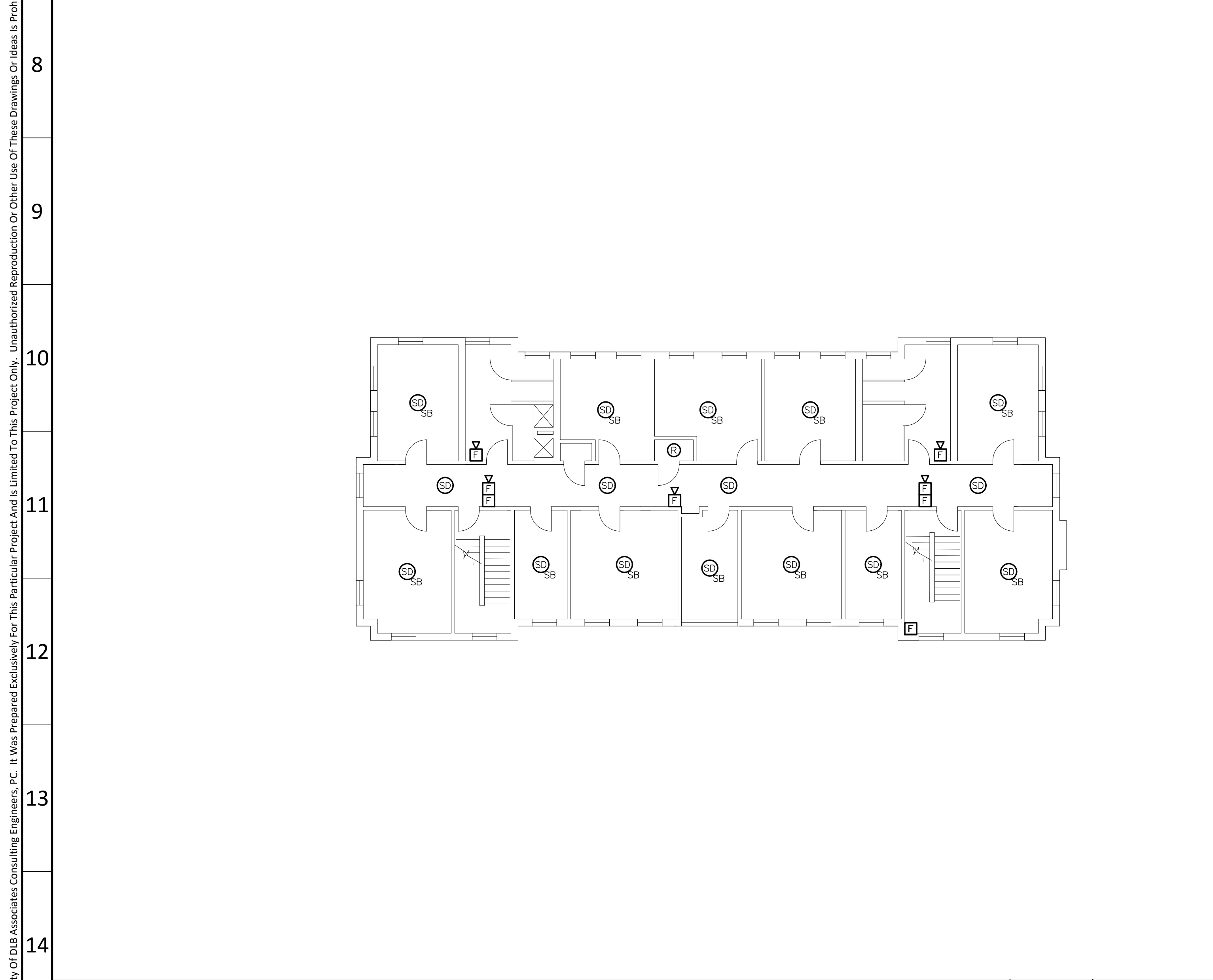
dwg. no.
E102-EAB



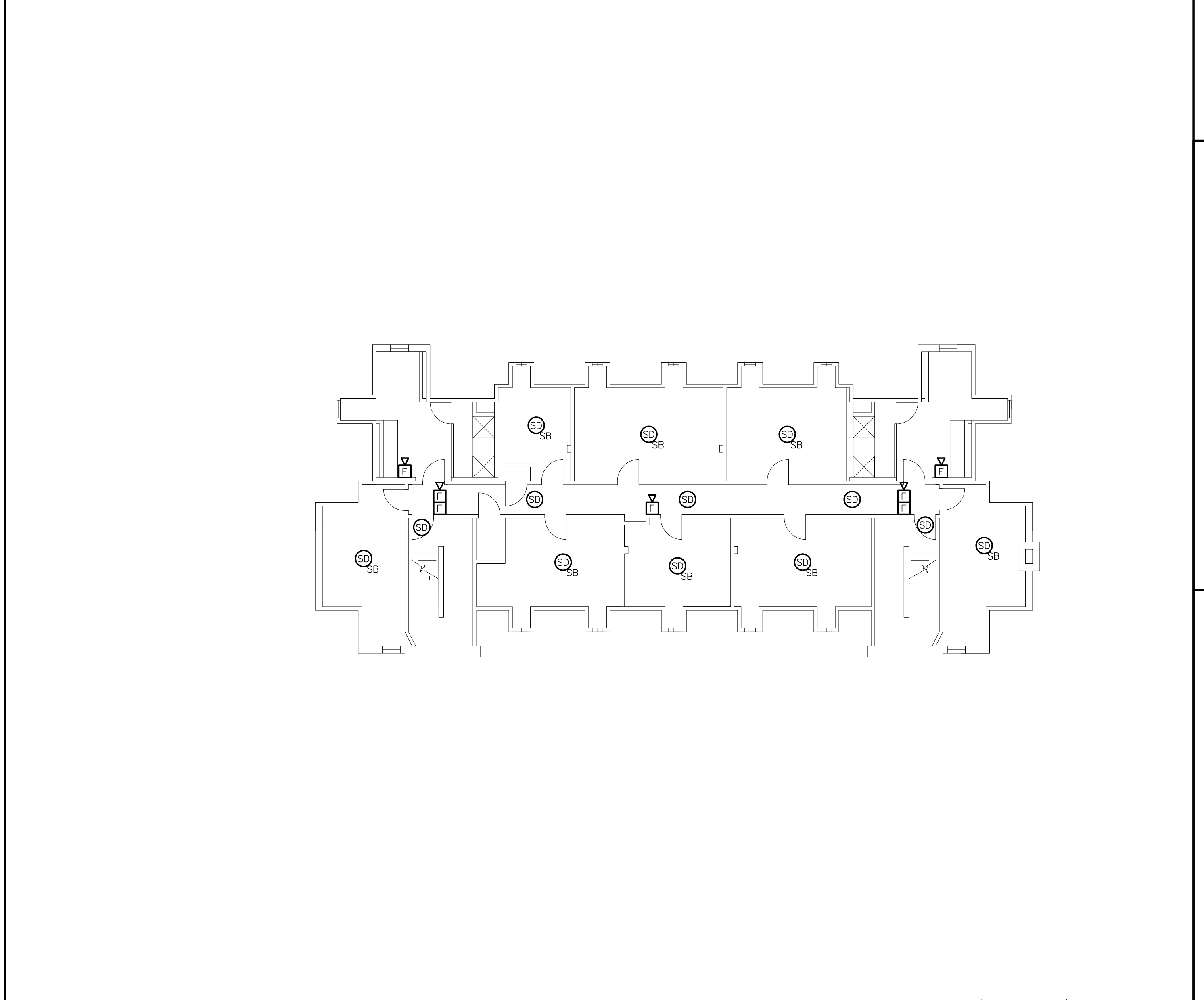
BREWSTER HALL - LOWER LEVEL LAYOUT
Scale: NTS
Drawing: **E103**
Detail: **01**



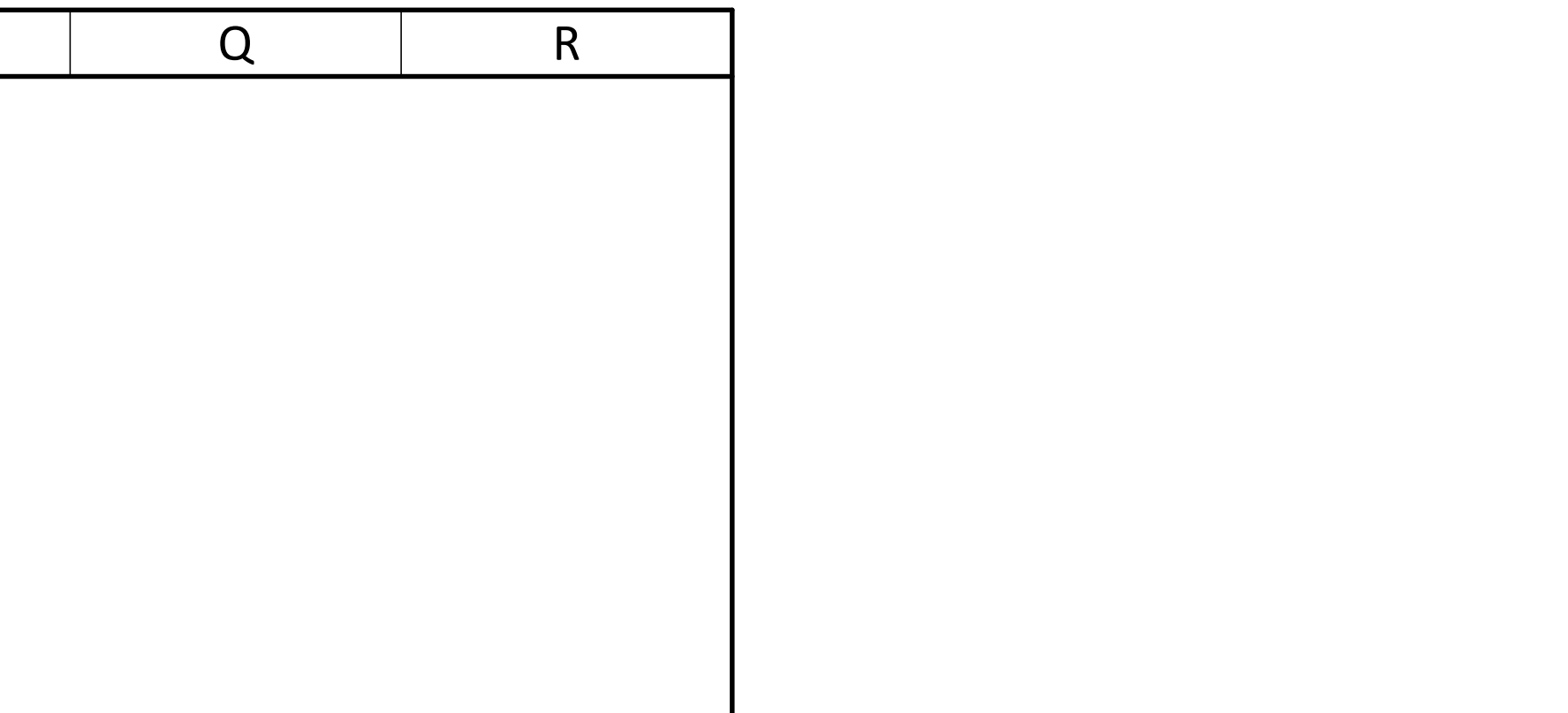
BREWSTER HALL - FIRST FLOOR LAYOUT
Scale: NTS
Drawing: **E103**
Detail: **02**



BREWSTER HALL - SECOND FLOOR LAYOUT
Scale: NTS
Drawing: **E103**
Detail: **03**



BREWSTER HALL - THIRD FLOOR LAYOUT
Scale: NTS
Drawing: **E103**
Detail: **04**

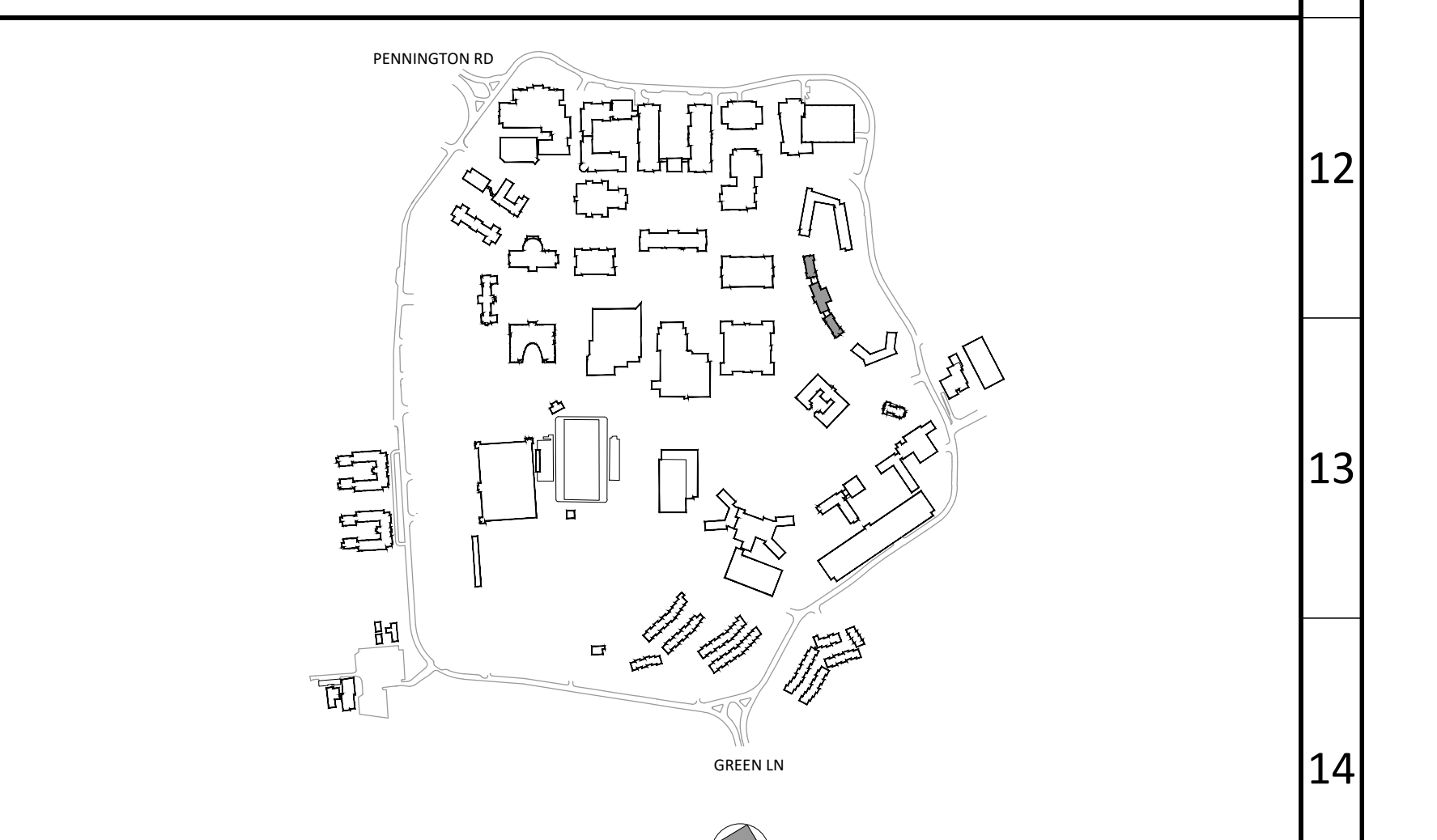
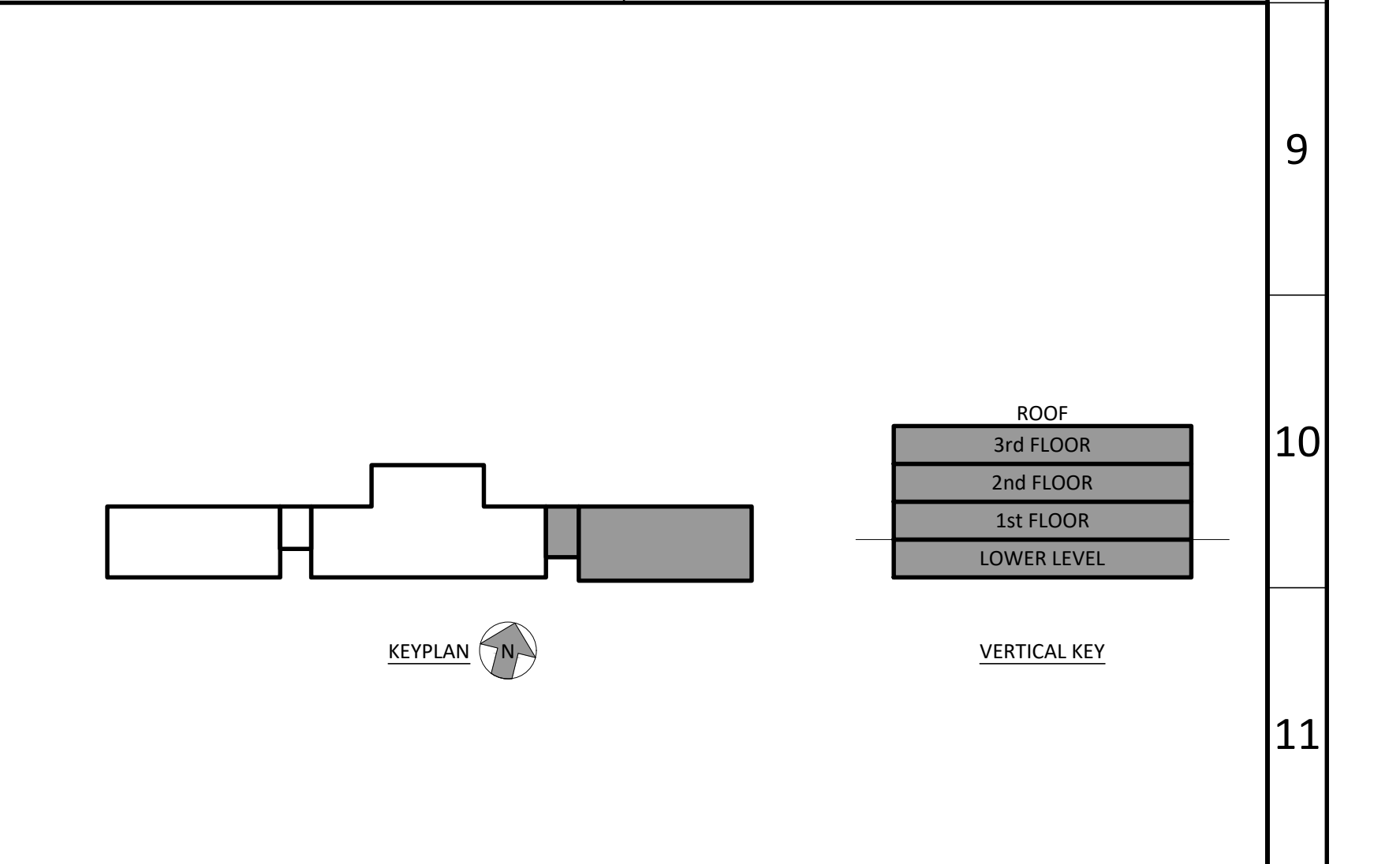


GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
F	Manual Pull Station	□	No Access
⊕	Strobe Only	⊙	New Smoke Detector
⊕	Horn/Strobe	⊕	New Manual Pull Station
⊙	Smoke Detector	⊕	New Strobe
⊙ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	⊕	New Horn / Strobe
⊙ _{SB}	Smoke Detector With Sounder Base	⊕	Photo ID Tag
⊙	Heat Detector, Combination Fixed Temperature And Rate Of Rise	FACP	Fire Alarm Control Panel
⊙	CO Detector	CO	Carbon Monoxide
⊕ _{DM}	Duct Mounted Smoke Detector	POE	Point Of Entry
FACP	Fire Alarm Control Panel		
FARA	Fire Alarm Remote Annunciator Panel		
FABP	Fire Alarm Booster Panel		
TS	Fire Sprinkler Tamper Switch		
FS	Fire Sprinkler Flow Switch		



ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

Scale: NTS
Drawing: **E103**
Detail: **03**

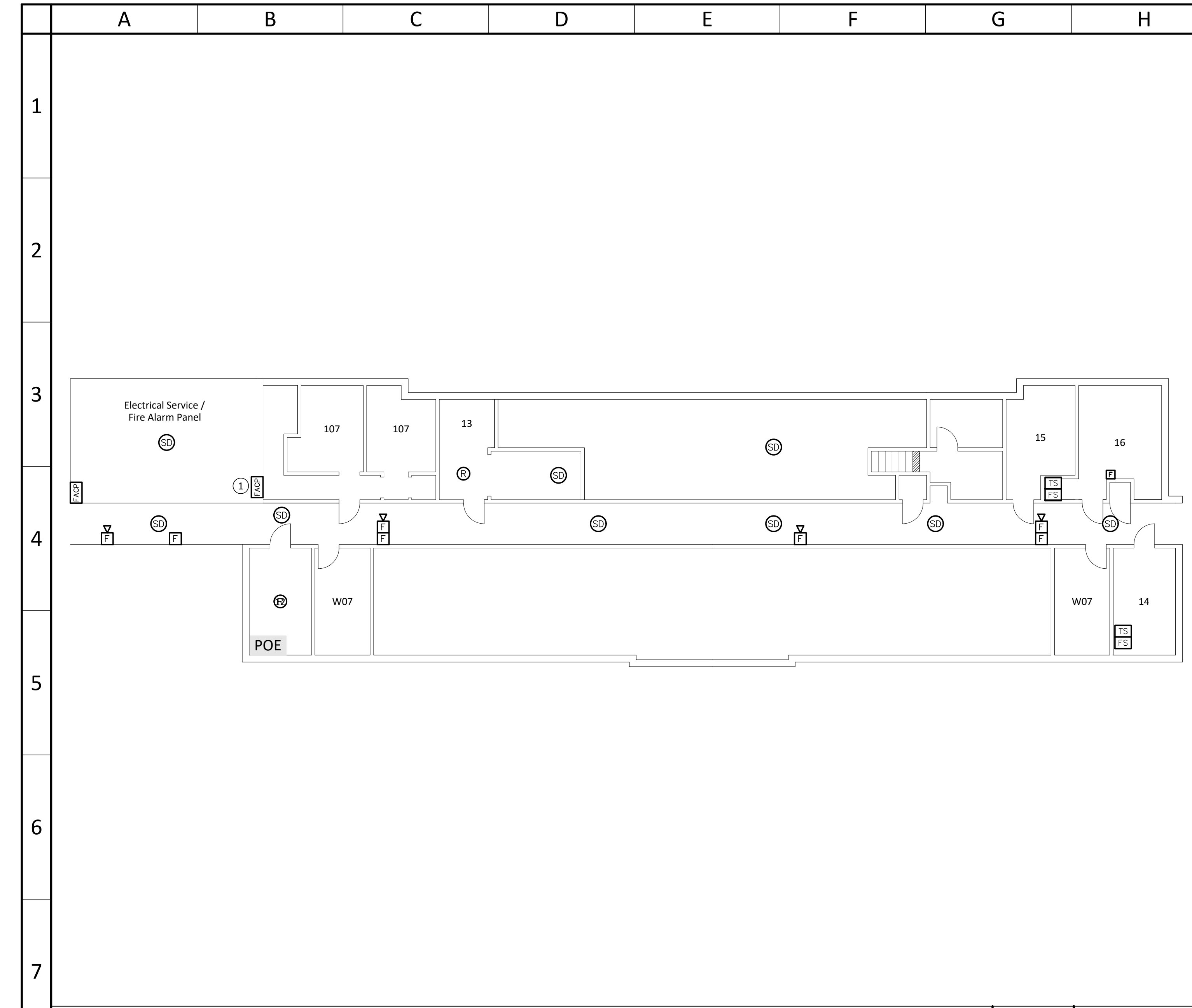
dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

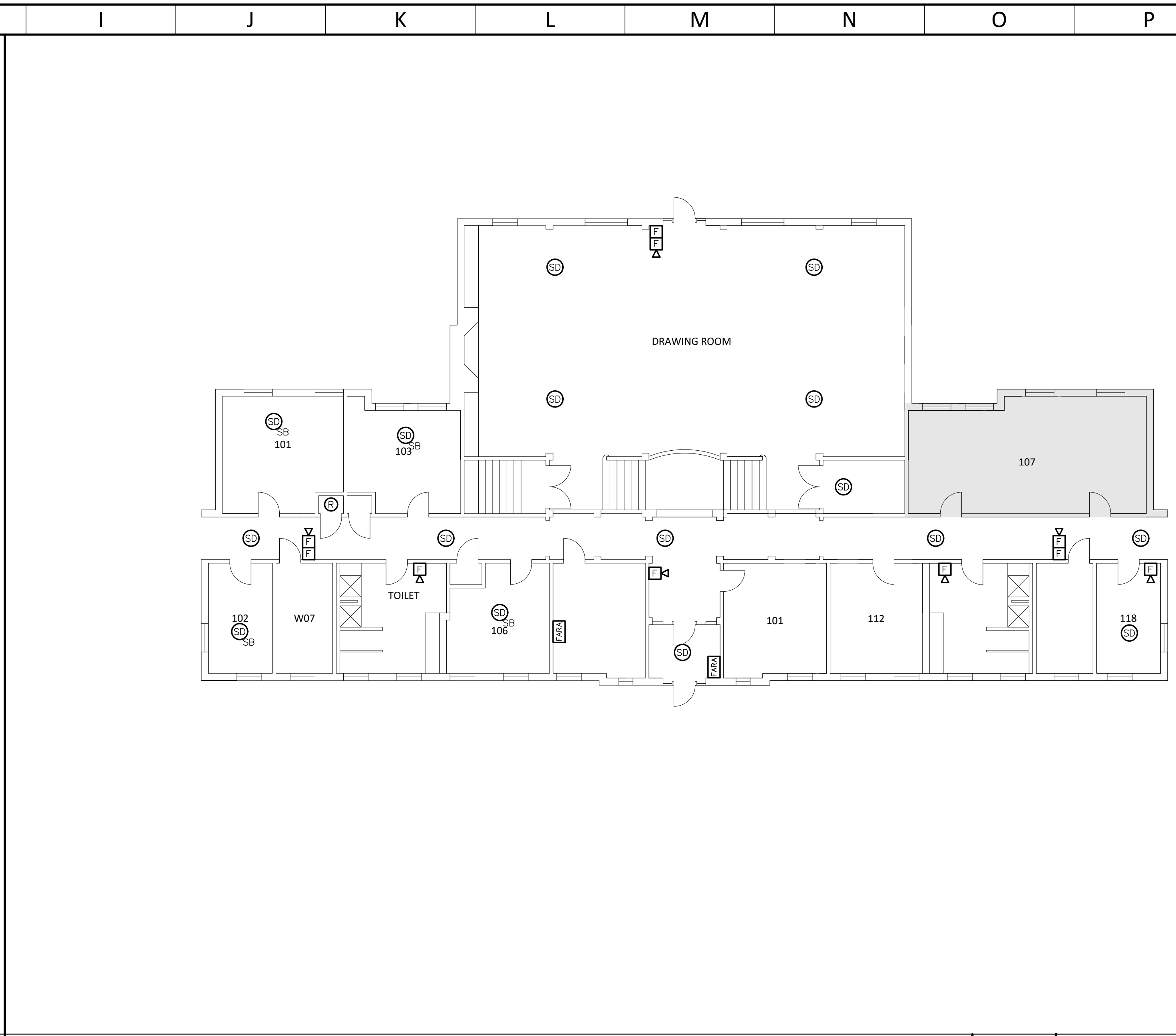
title
FIRE ALARM - EXISTING LAYOUT
ELY-ALLEN-BREWSTER
scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020
title
E103-EAB
dwg. no.

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

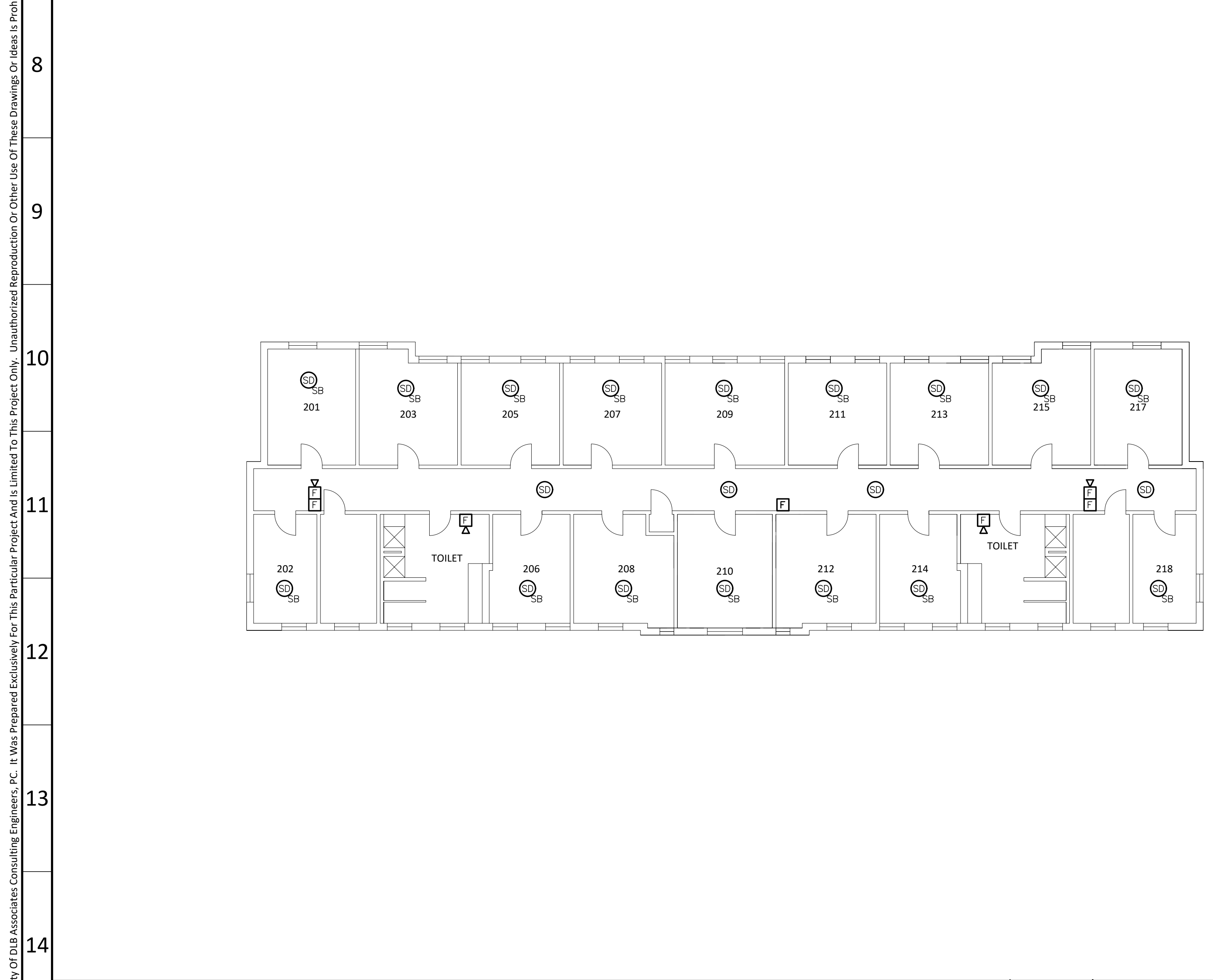
30x42



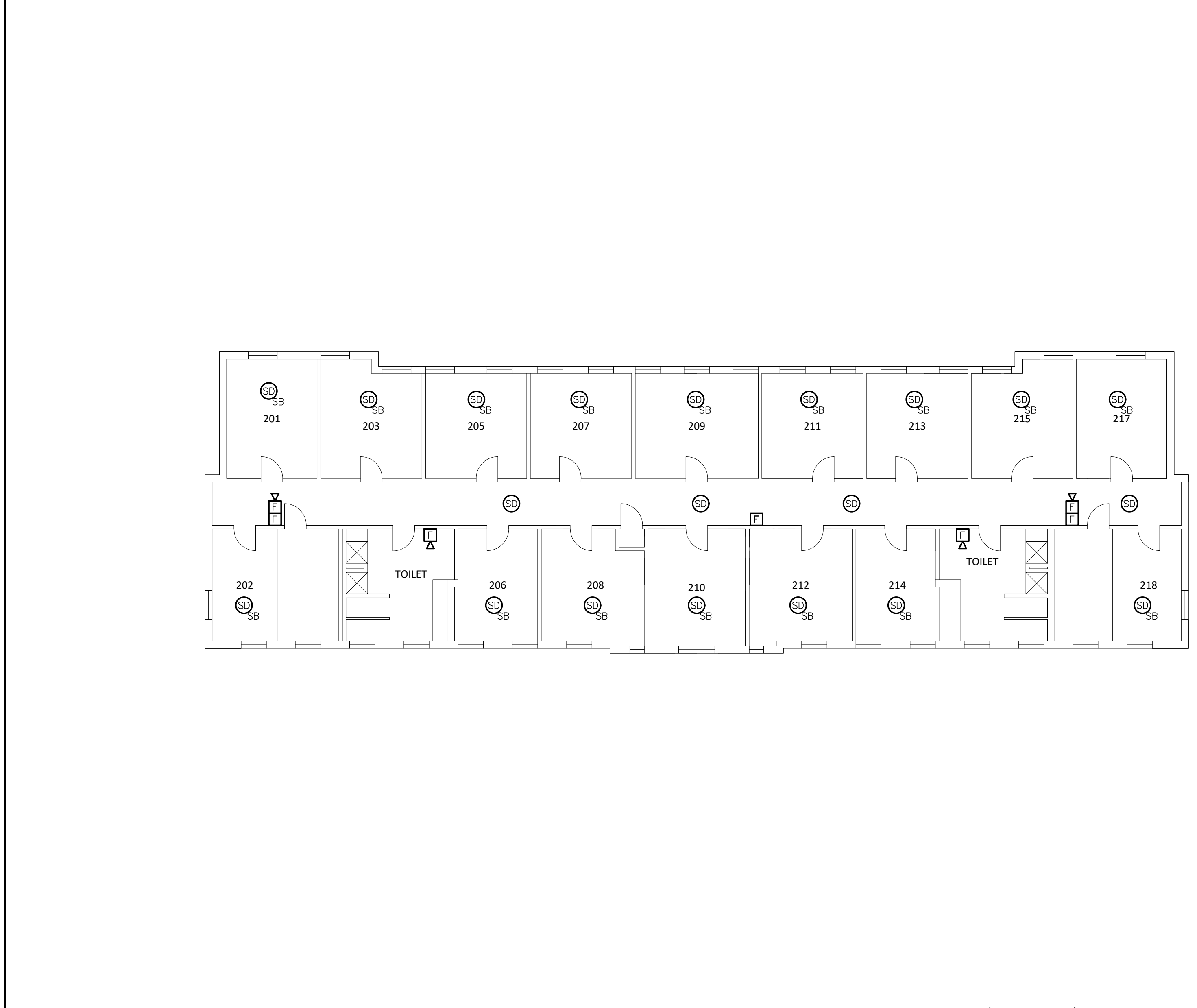
ALLEN HALL - LOWER LEVEL LAYOUT Scale: NTS Drawing: E104 Detail: 01



ALLEN HALL - FIRST FLOOR LAYOUT Scale: NTS Drawing: E104 Detail: 02



ALLEN HALL - SECOND FLOOR LAYOUT Scale: NTS Drawing: E104 Detail: 03



ALLEN HALL - THIRD FLOOR LAYOUT Scale: NTS Drawing: E104 Detail: 04

KEY NOTES (SYMBOLS ①, ②, ETC.)

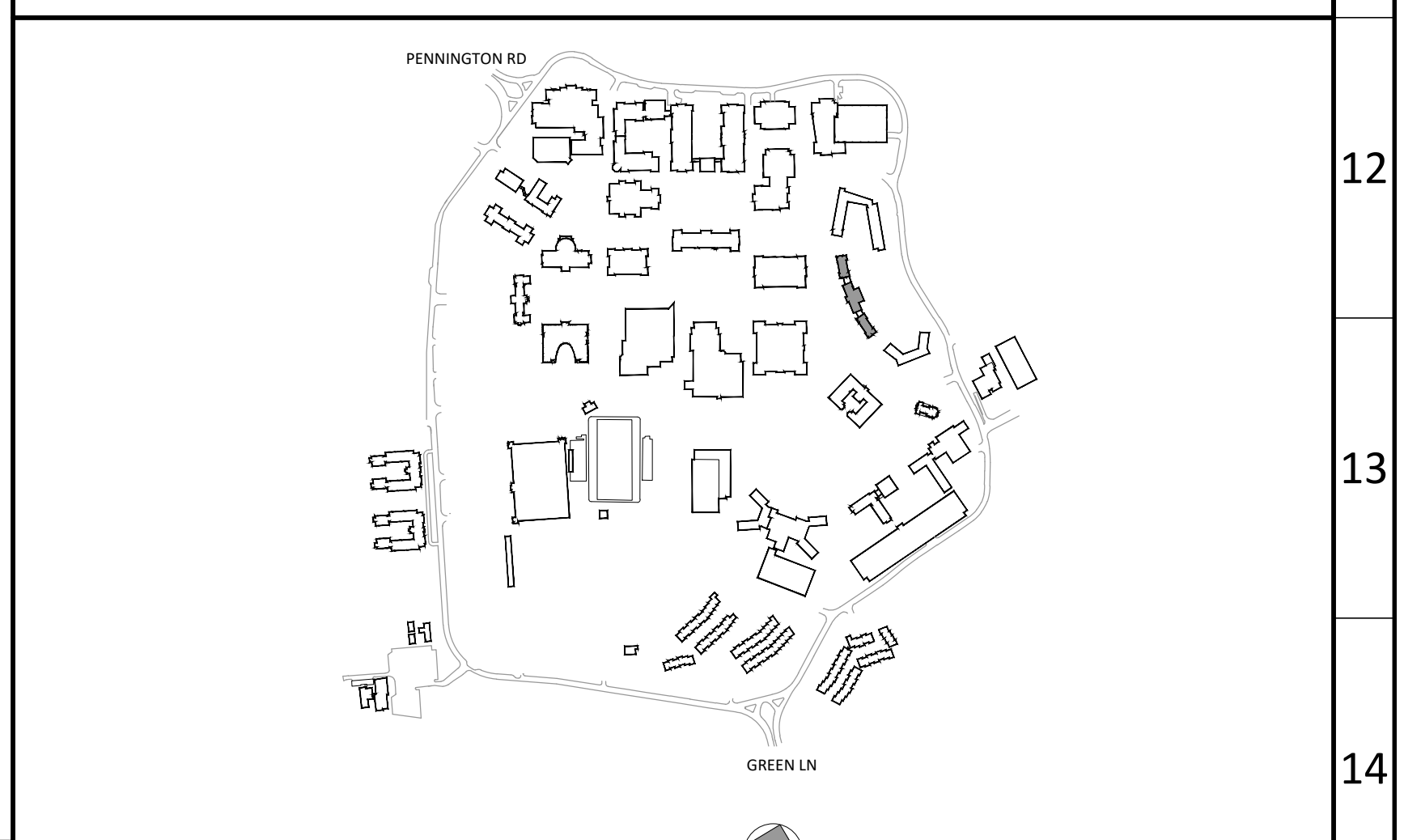
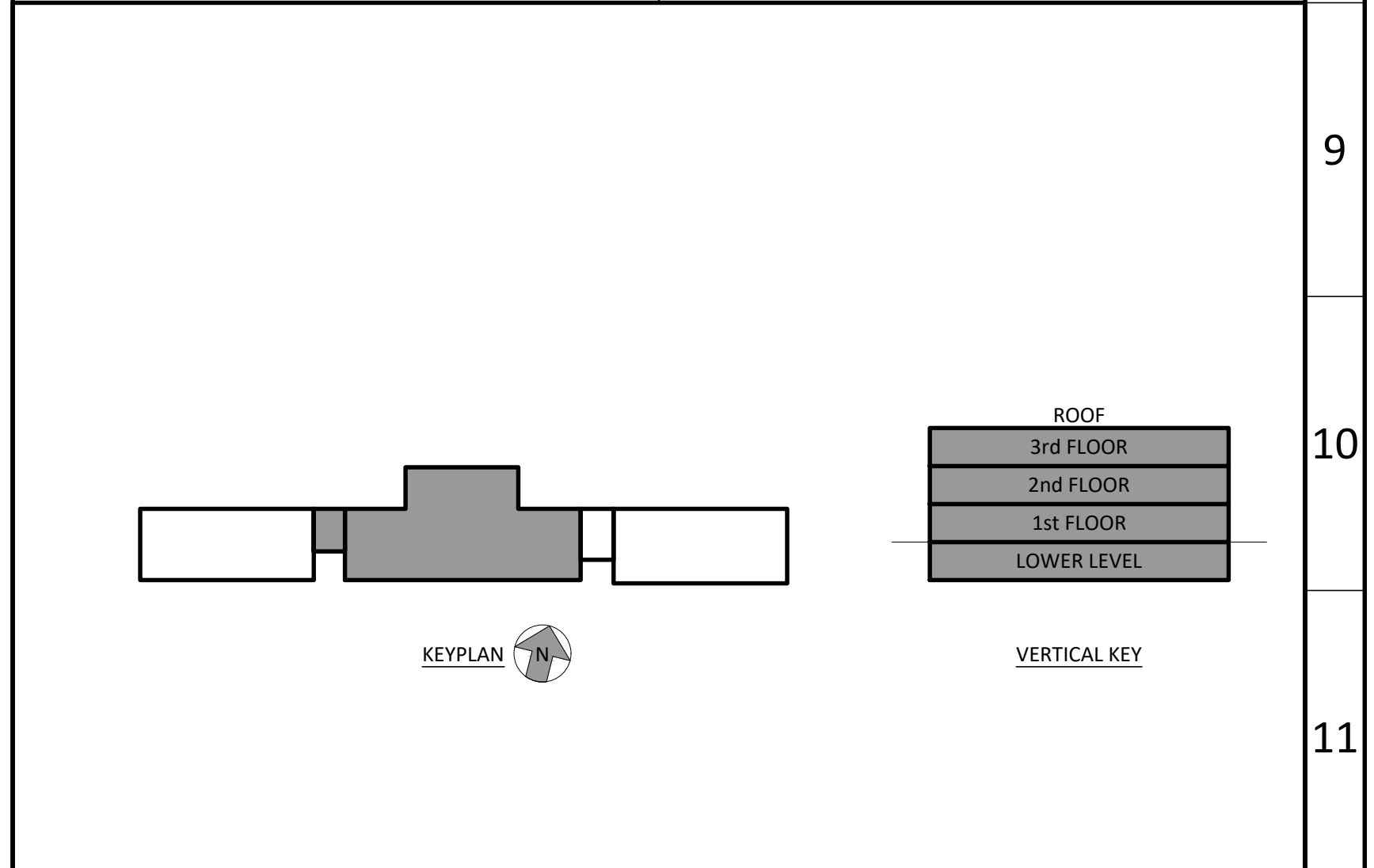
1. Existing Fire Alarm Control Panel.

GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
F	Manual Pull Station	□	No Access
S	Strobe Only	SD	New Smoke Detector
F/S	Horn/Strobe	F	New Manual Pull Station
SD	Smoke Detector	S	New Strobe
SD _{ER}	Smoke Detector (ER Indicates Elevator Recall)	F/S	New Horn / Strobe
SD _{SB}	Smoke Detector With Sounder Base	Ⓜ	Photo ID Tag
Ⓜ	Heat Detector, Combination Fixed Temperature And Rate Of Rise	FACP	Fire Alarm Control Panel
CO	CO Detector	CO	Carbon Monoxide.
SD _D	Duct Mounted Smoke Detector	POE	Point Of Entry
FACP	Fire Alarm Control Panel		
FARA	Fire Alarm Remote Annunciator Panel		
FABP	Fire Alarm Booster Panel		
FS	Fire Sprinkler Tamper Switch		
FS	Fire Sprinkler Flow Switch		



ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

Scale: NTS
Drawing: E104
Detail: 03

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM - EXISTING LAYOUT
ELY-ALLEN-BREWSTER

scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020

dwg. no.
E104-EAB

Confidential and Proprietary / ©DLB Associates 2020

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30x42

FIRE ALARM PHOTOS



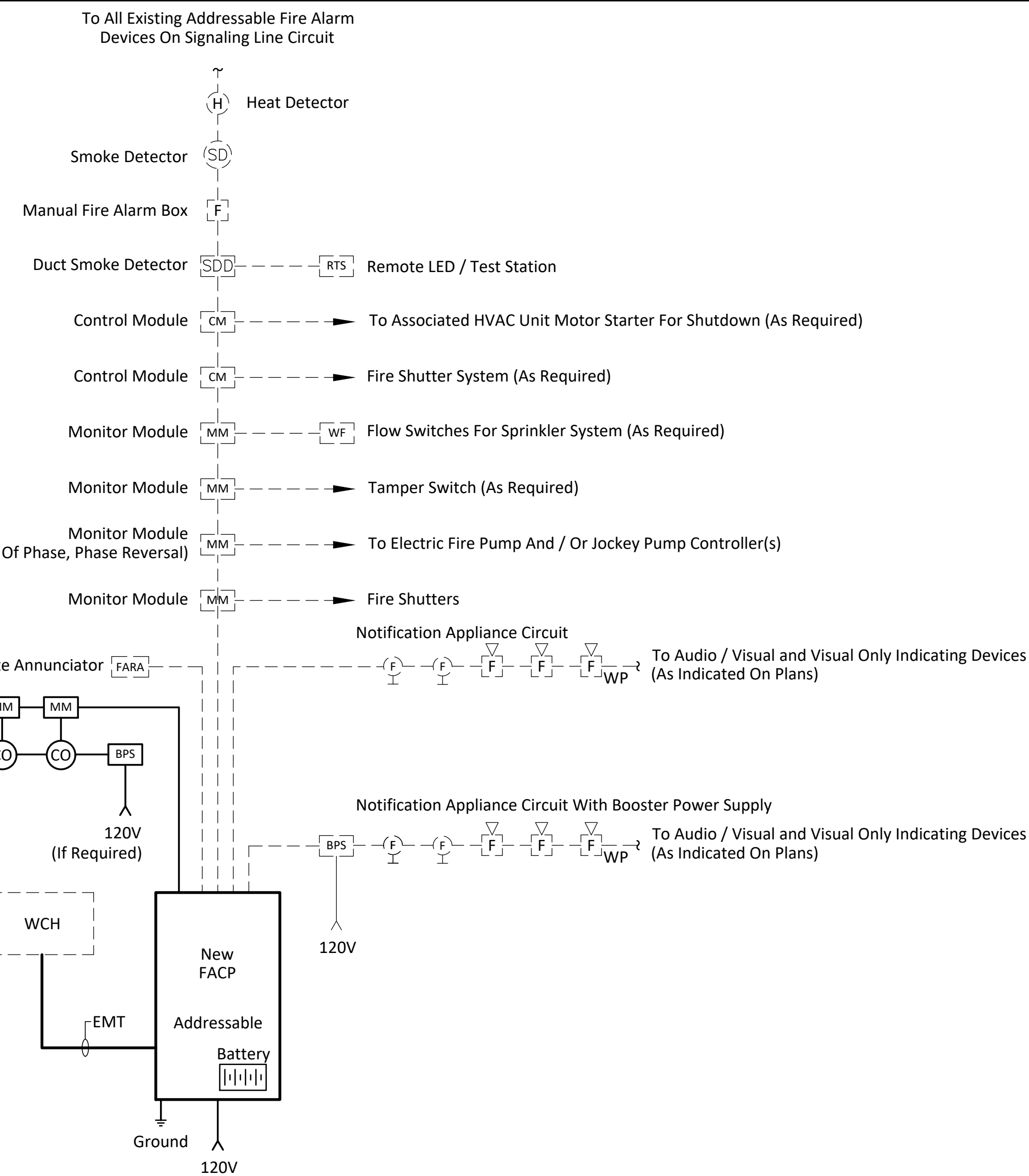
PHOTO A - HONEYWELL FIRE ALARM CONTROL PANEL
Honeywell XLS 1000 Addressable Fire Alarm Control Panel and Booster Panel With Exposed Conduit Located Within Lower Level Electrical Room



HONEYWELL FIRE ALARM DEVICES
Existing Honeywell Addressable Fire Alarm Devices Located Throughout The Building

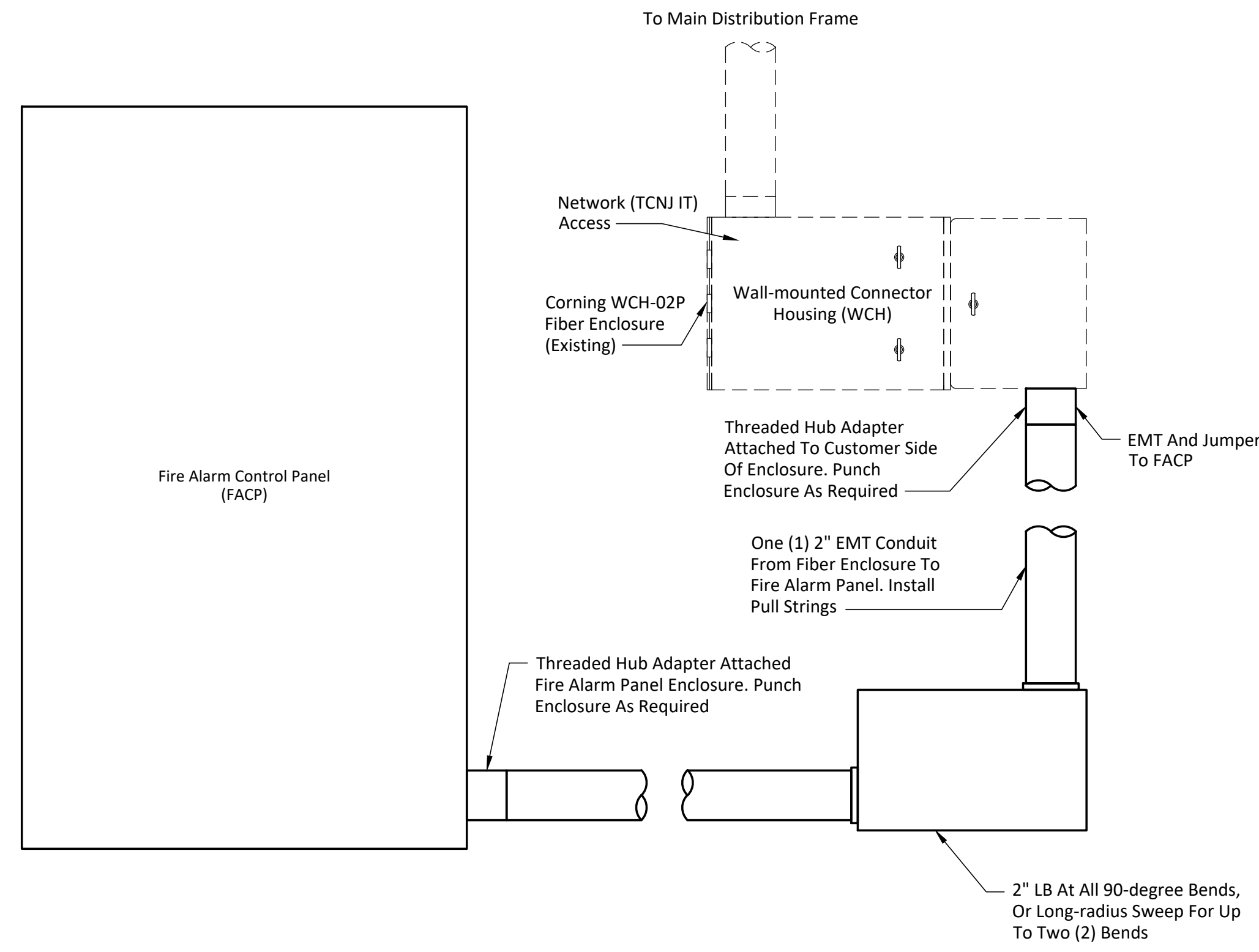
FIRE ALARM SCHEDULE

MARK	DESCRIPTION
[Symbol]	EXISTING FIRE ALARM DEVICES, PANEL, CIRCUITS, ETC
[Symbol]	CO DETECTOR (WITH LOCAL VISUAL AND AUDIO)
[Symbol]	FIRE ALARM MONITOR MODULE
[Symbol]	POWER OR SIGNALING LINE CIRCUIT
[Symbol]	BOOSTER POWER SUPPLY



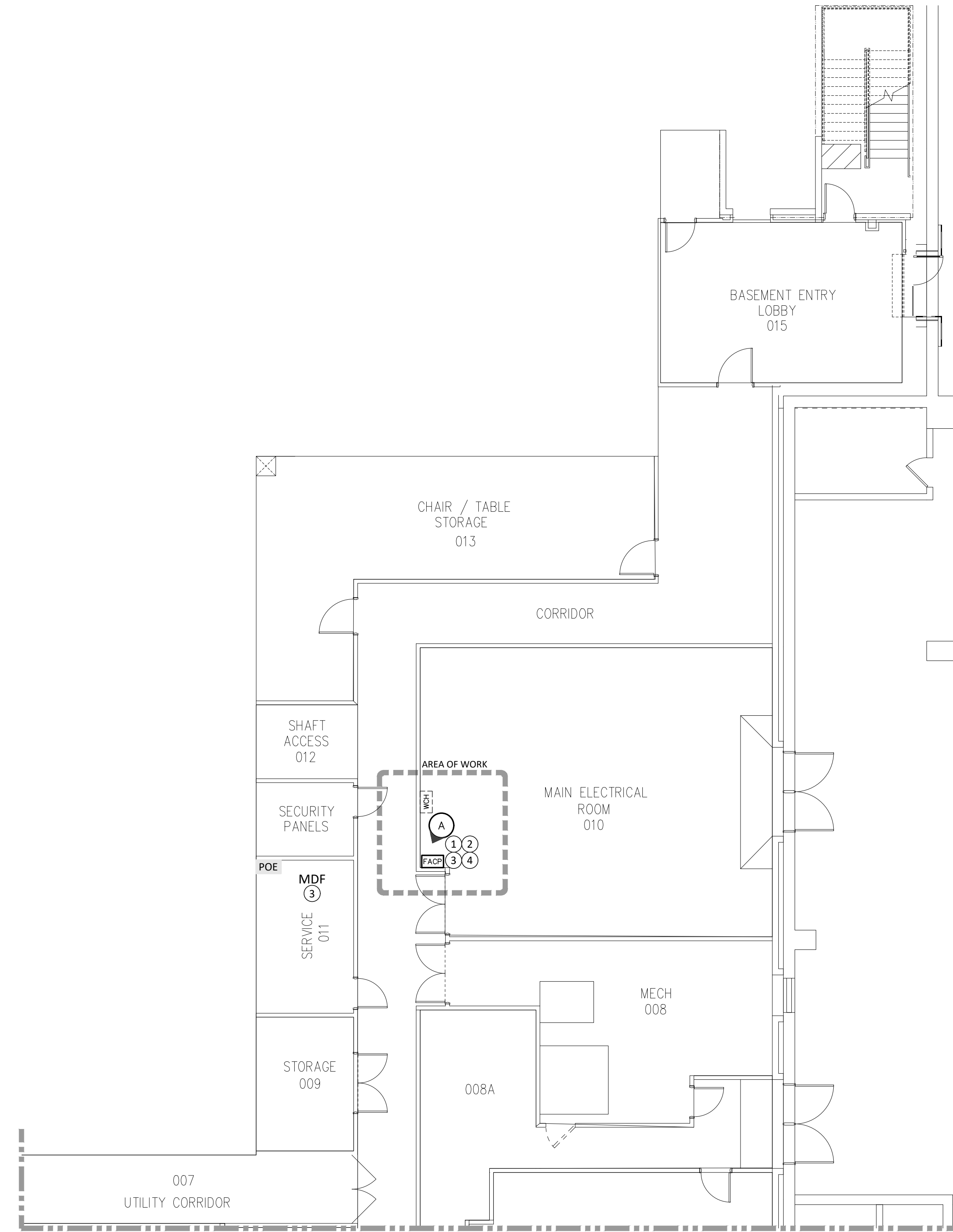
- NOTES:**
- General
 - The Riser Above Depicts A "Honeywell" Basis of Design With A New Honeywell FACP. All Existing Honeywell End Devices Would Be Compatible With The New FACP.
 - Install New FACP With Capacity Noted Below.
 - New Honeywell FACP Would Communicate The Point Identification Of Each Device To The New Front End.
 - This Building Would Be Considered A Fully Addressable Building.
 - The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - The FACP Shall Connect The Campus Life Safety Management System.
 - Equipment
 - The Education Building Is Currently Covered By Fire Notification And Detection / Initiation Devices From An Addressable Honeywell XLS 1000 System.
 - Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring
 - The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing
 - Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.

FIRE ALARM RISER Scale: NTS Drawing: **E101** Detail: **01**



- NOTES:**
- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNJ/IT
 - Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
 - Install Fiber Jumpers Between WCH And FACP.

FIRE ALARM FIBER ENCLOSURE INSTALLATION Scale: NTS Drawing: **E101** Detail: **02**



PARTIAL FLOOR PLAN - LOWER LEVEL Scale: 1/8"=1'-0" Drawing: **E101** Detail: **03**

KEY NOTES (SYMBOLS ①, ②, ETC.)

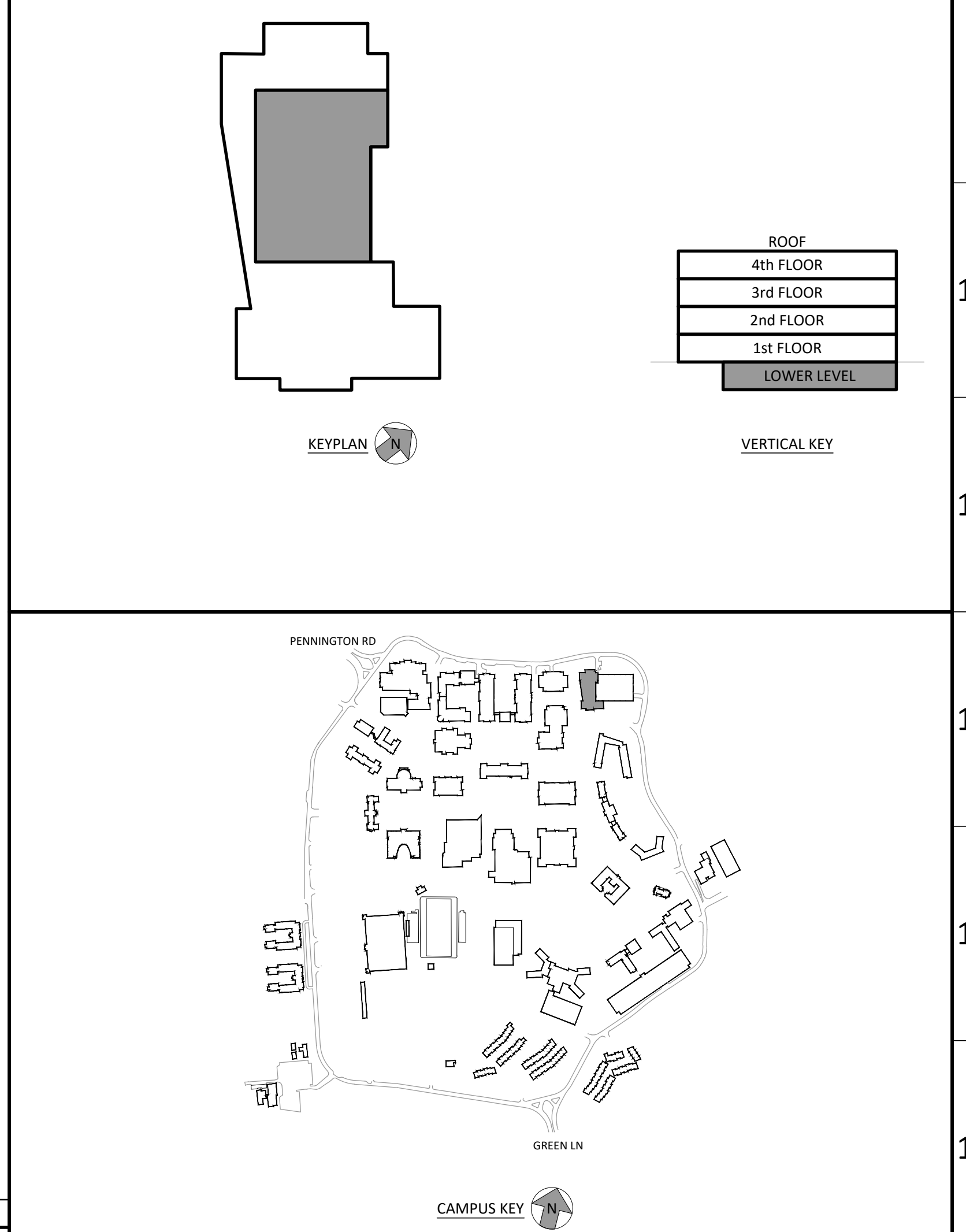
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
- Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
- Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
- Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.
- Provide New CO Devices Connected To New Panel. See Sheet E102 For Approximate Location.

GENERAL NOTES

- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
- The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments. Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
- Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
- Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
- When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.
- CO Detectors To Provide Local Audio Visual And Supervisory At FACP And LSMS Control Station.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
[Symbol]	Fire Alarm Control Panel	[Symbol]	New Equipment
[Symbol]	Existing Wall-Mounted Connector Housing	[Symbol]	Existing Equipment
[Symbol]	Existing Fire Alarm Control Panel	[Symbol]	Photo Tag
[Symbol]		[Symbol]	Connect To Existing



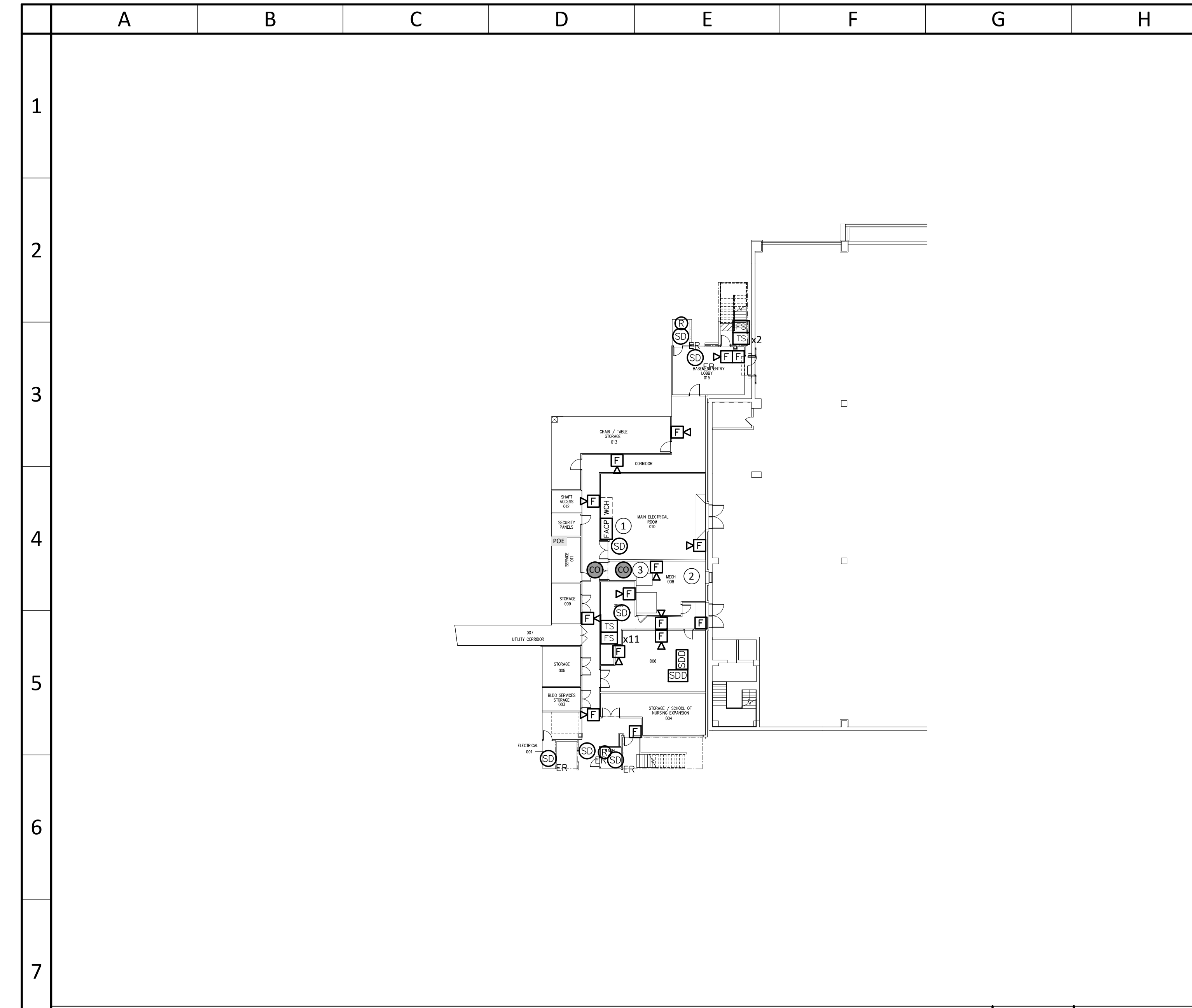
FIRE ALARM PANEL REPLACEMENT PART B - HARDWARE & SOFTWARE UPGRADES EDUCATION BUILDING title Drawing: **E101-EDU** dwg. no. scale AS SHOWN drawn by SC checked by SF date 5/03/2020

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky Phone: 732-927-5038

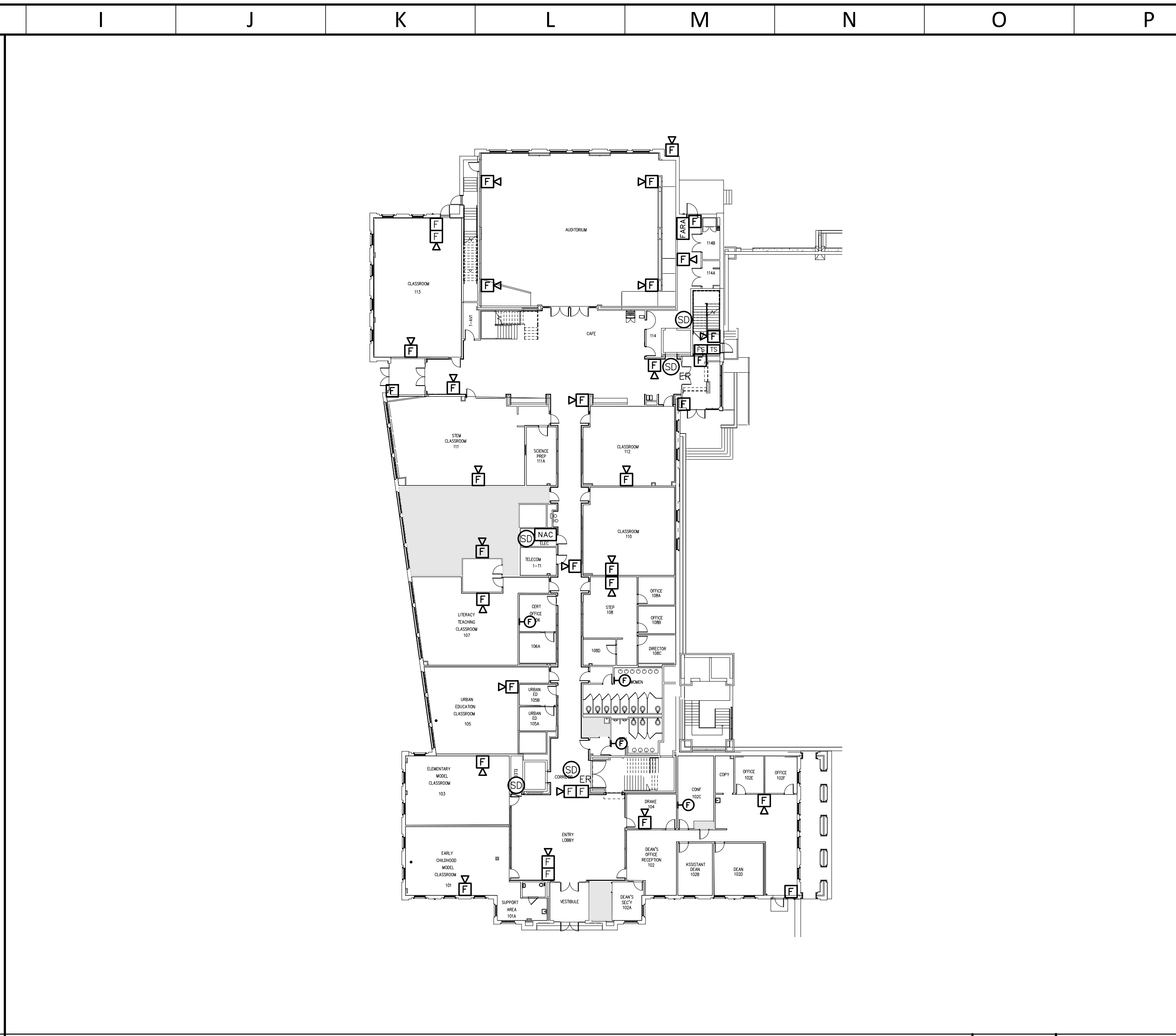
project **TCNJ - CAMPUS FIRE ALARM PROJECT PART B - HARDWARE & SOFTWARE UPGRADES 2000 PENNINGTON ROAD, EWING NJ, 08618**

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

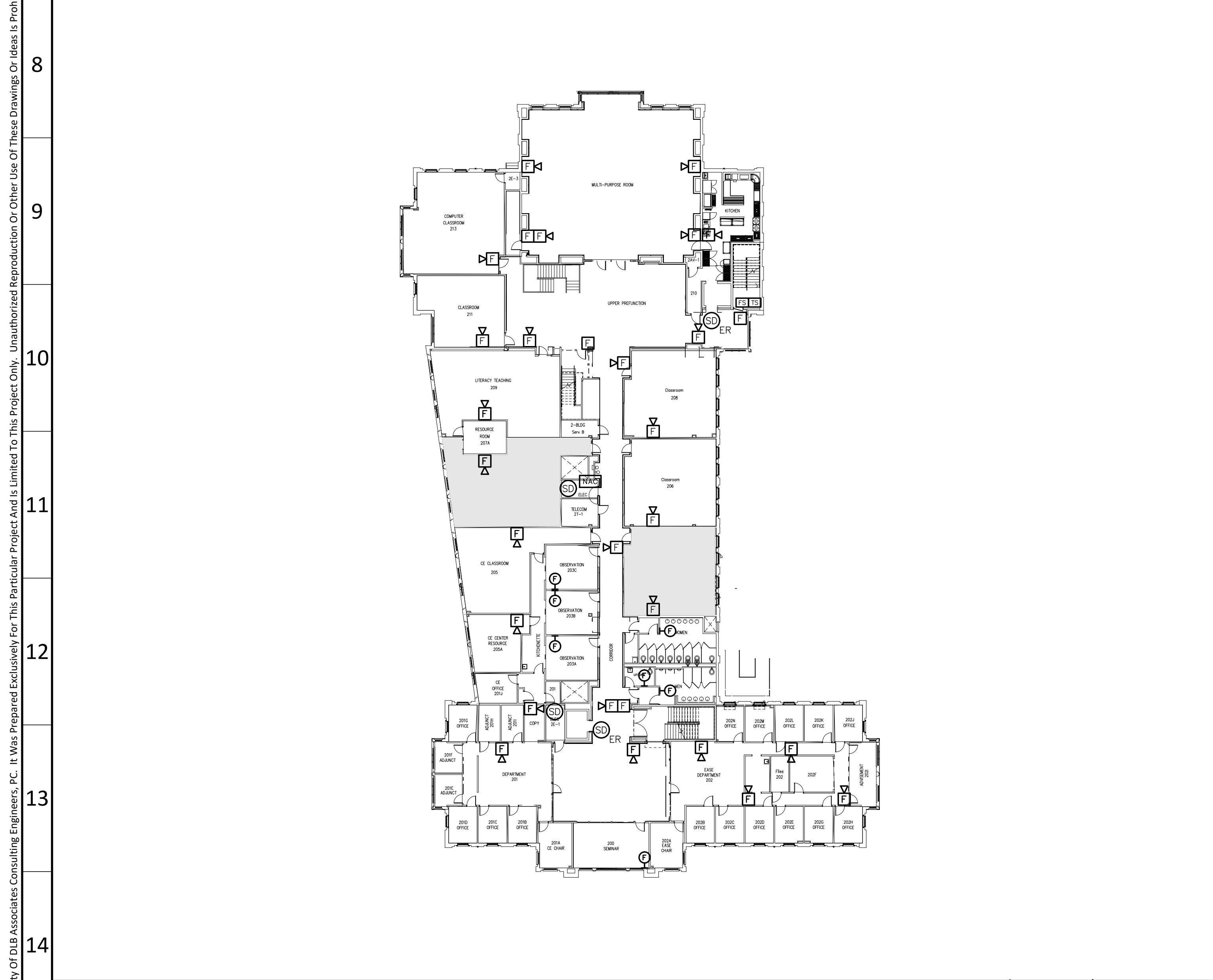
ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			



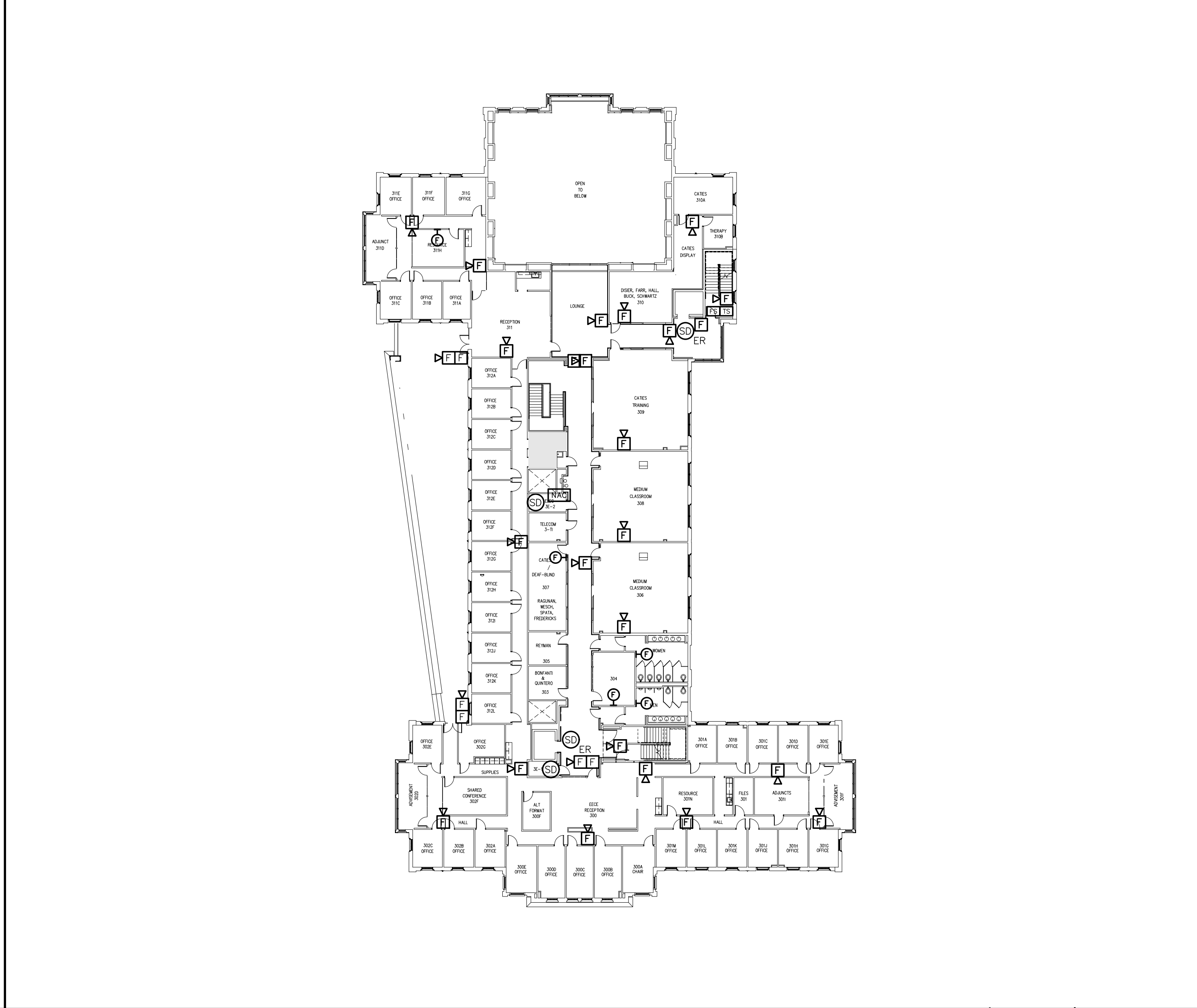
LOWER LEVEL PLAN Scale: NTS Drawing: **E102** Detail: **01**



FIRST FLOOR PLAN Scale: NTS Drawing: **E102** Detail: **02**



SECOND FLOOR PLAN Scale: NTS Drawing: **E102** Detail: **03**



THIRD FLOOR PLAN Scale: NTS Drawing: **E102** Detail: **04**

KEY NOTES (SYMBOLS ①, ②, ETC.)

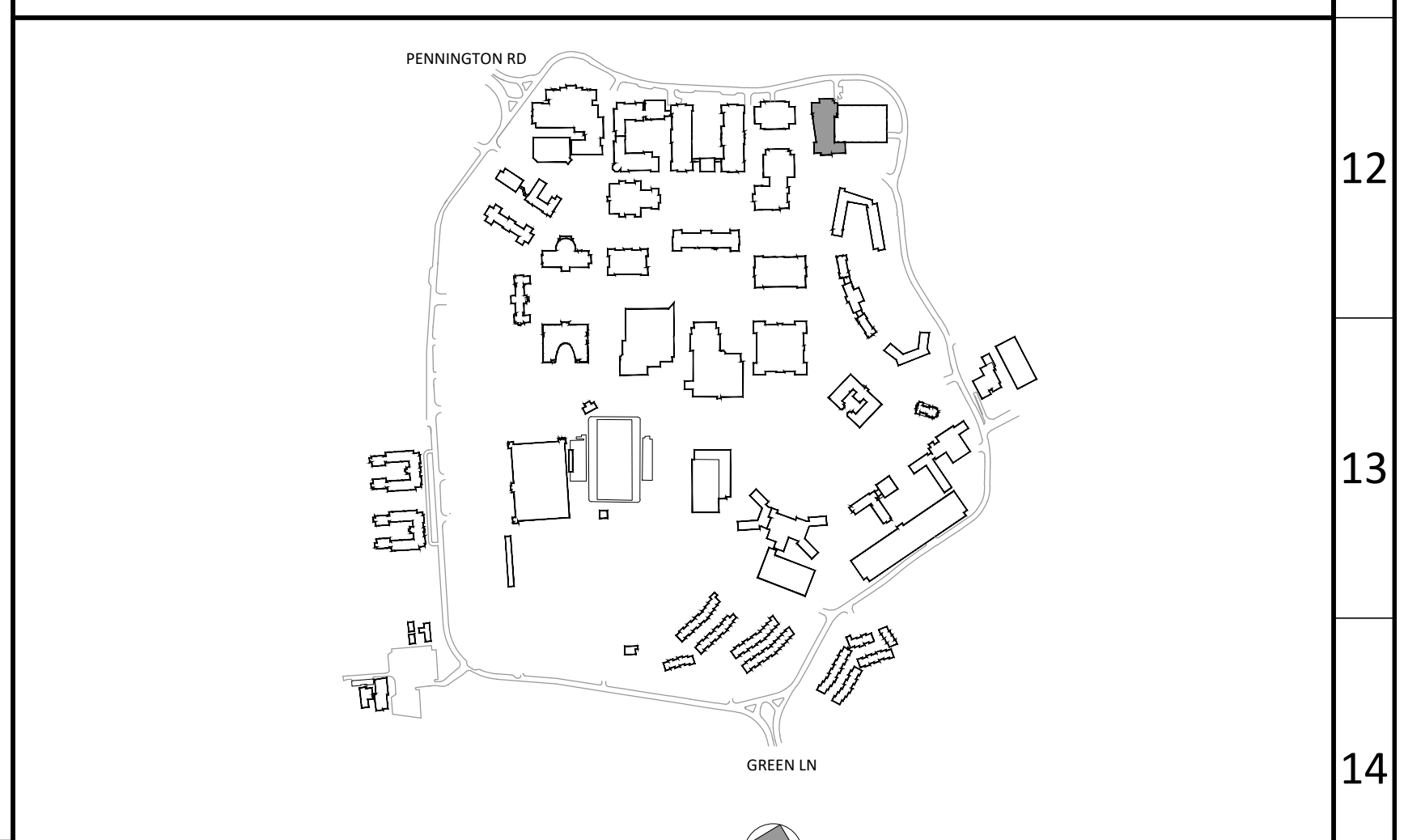
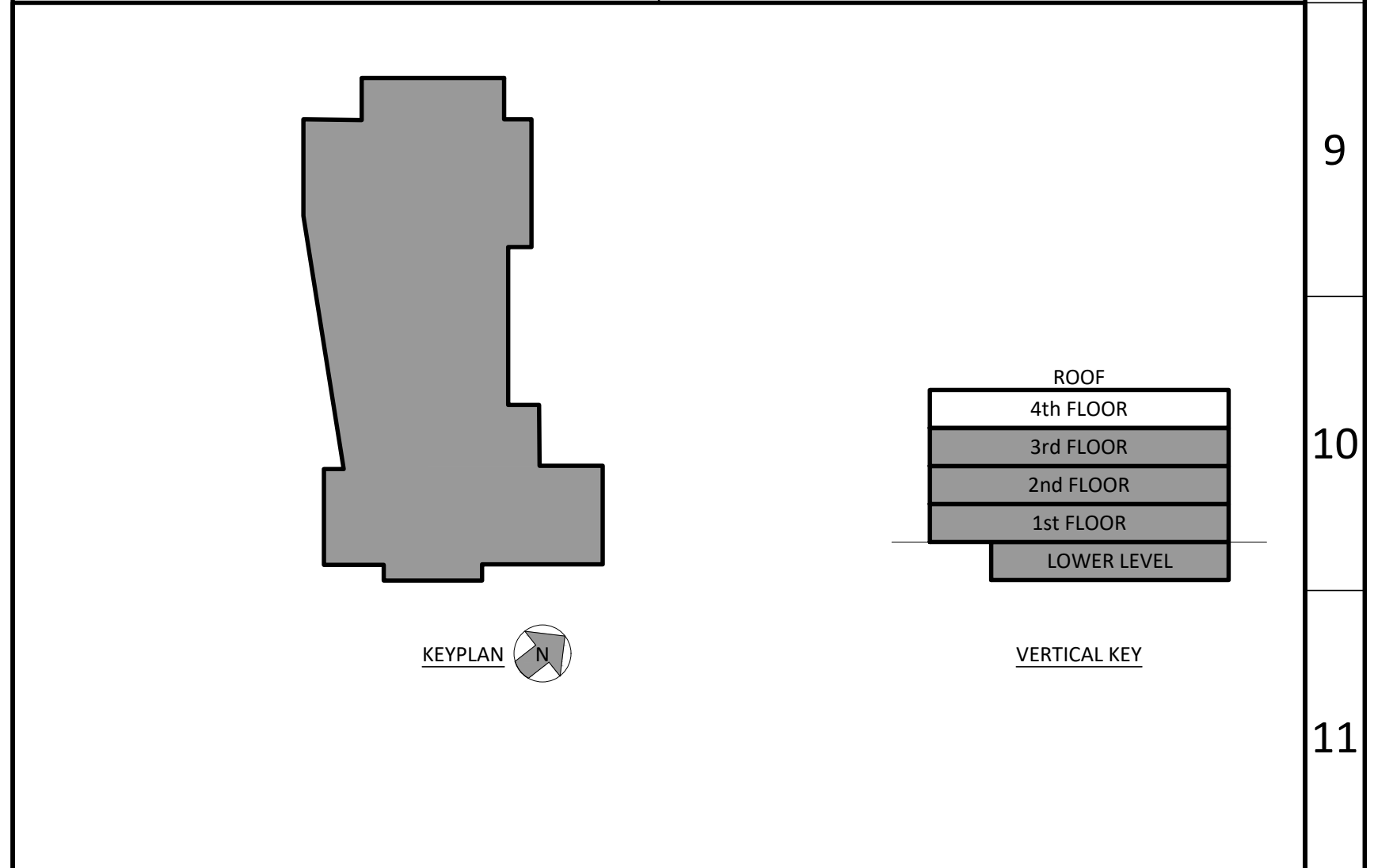
- Existing Fire Alarm Control Panel.
- Gas Generator.
- New CO Detector.

GENERAL NOTES

- This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Protection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
Ⓜ	Manual Pull Station	Ⓜ	No Access
Ⓢ	Strobe Only	Ⓢ	New Smoke Detector
Ⓜ	Horn/Strobe	Ⓜ	New Manual Pull Station
Ⓢ	Smoke Detector	Ⓢ	New Strobe
Ⓢ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	Ⓜ	New Horn / Strobe
Ⓢ _{SB}	Smoke Detector With Sounder Base	Ⓢ	New Carbon Monoxide Detector With Local Audio And Visual Notification.
Ⓢ	Heat Detector, Combination Fixed Temperature And Rate Of Rise	Ⓢ	Photo Location Indicator
Ⓢ	CO Detector	FACP	Fire Alarm Control Panel
Ⓢ _{DM}	Duct Mounted Smoke Detector	CO	Carbon Monoxide
FACP	Fire Alarm Control Panel	POE	Point Of Entry
FARA	Fire Alarm Remote Annunciator Panel		
MAC	Fire Alarm Booster Panel		
TS	Fire Sprinkler Tamper Switch		
FS	Fire Sprinkler Flow Switch		
WCH	Existing Wall Mounted Connector Housing		



ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

30x42

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM - EXISTING LAYOUT
EDUCATION BUILDING

scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020

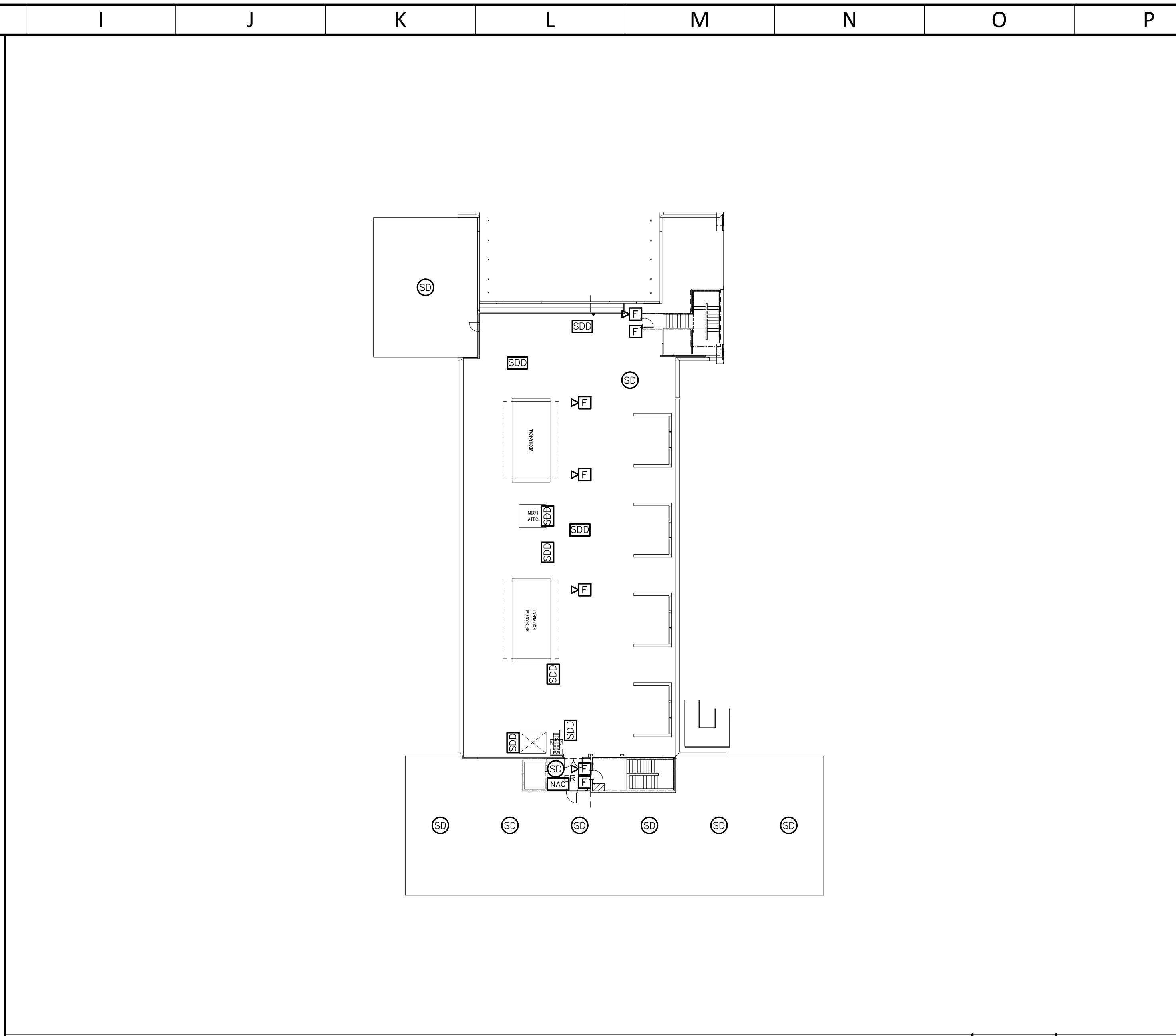
dwg. no.
E102-EDU

Confidential and Proprietary / ©DLB Associates 2020

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30x42

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		



FOURTH FLOOR LAYOUT Scale: NTS Drawing: **E103** Detail: **01**

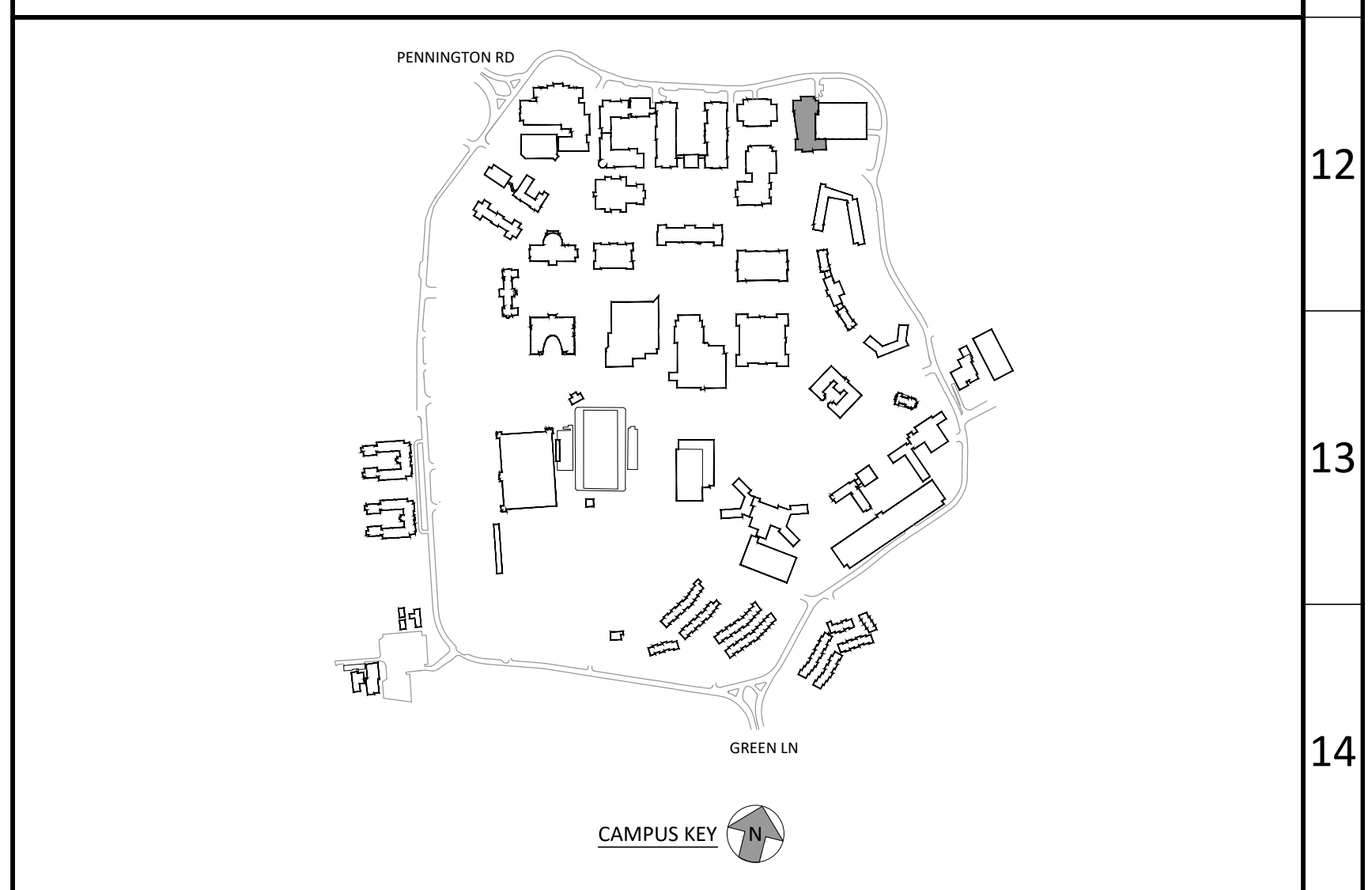
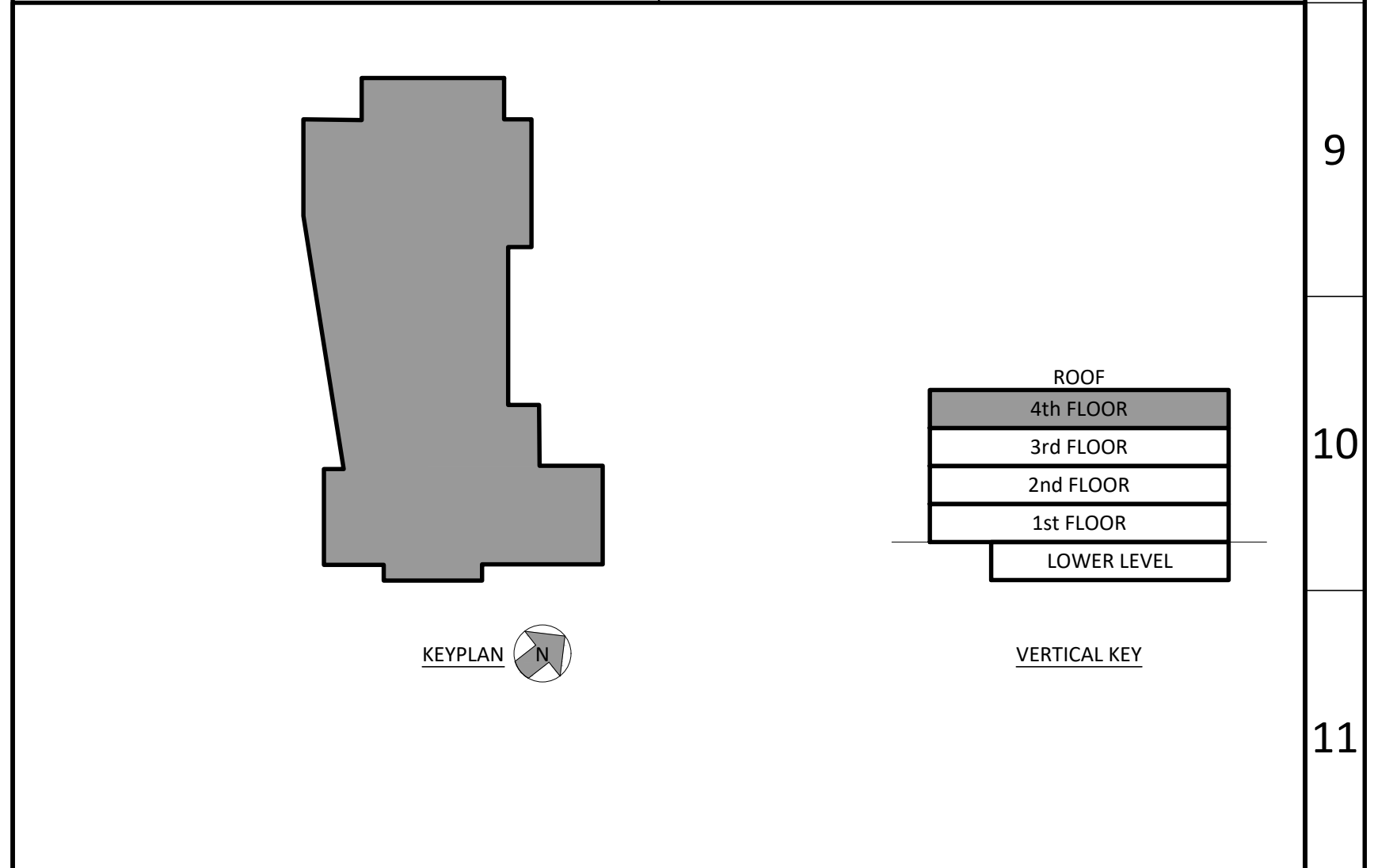
--	--

GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
F	Manual Pull Station	□	No Access
⊕	Strobe Only	⊙	New Smoke Detector
⊕F	Horn/Strobe	⊕	New Manual Pull Station
⊙	Smoke Detector	⊕	New Strobe
⊙ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	⊕	New Horn / Strobe
⊙ _{SB}	Smoke Detector With Sounder Base	⊕	Photo ID Tag
⊙	Heat Detector, Combination Fixed Temperature And Rate Of Rise	FACP	Fire Alarm Control Panel
⊙	CO Detector	CO	Carbon Monoxide
SD _D	Duct Mounted Smoke Detector	POE	Point Of Entry
FACP	Fire Alarm Control Panel		
FARA	Fire Alarm Remote Annunciator Panel		
FAC	Fire Alarm Booster Panel		
TS	Fire Sprinkler Tamper Switch		
FS	Fire Sprinkler Flow Switch		



1	05/01/2020	ISSUED FOR BID			
ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

Questions For DLB Call:
DLB Project ID: 47211

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Anthony Laskosky
Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

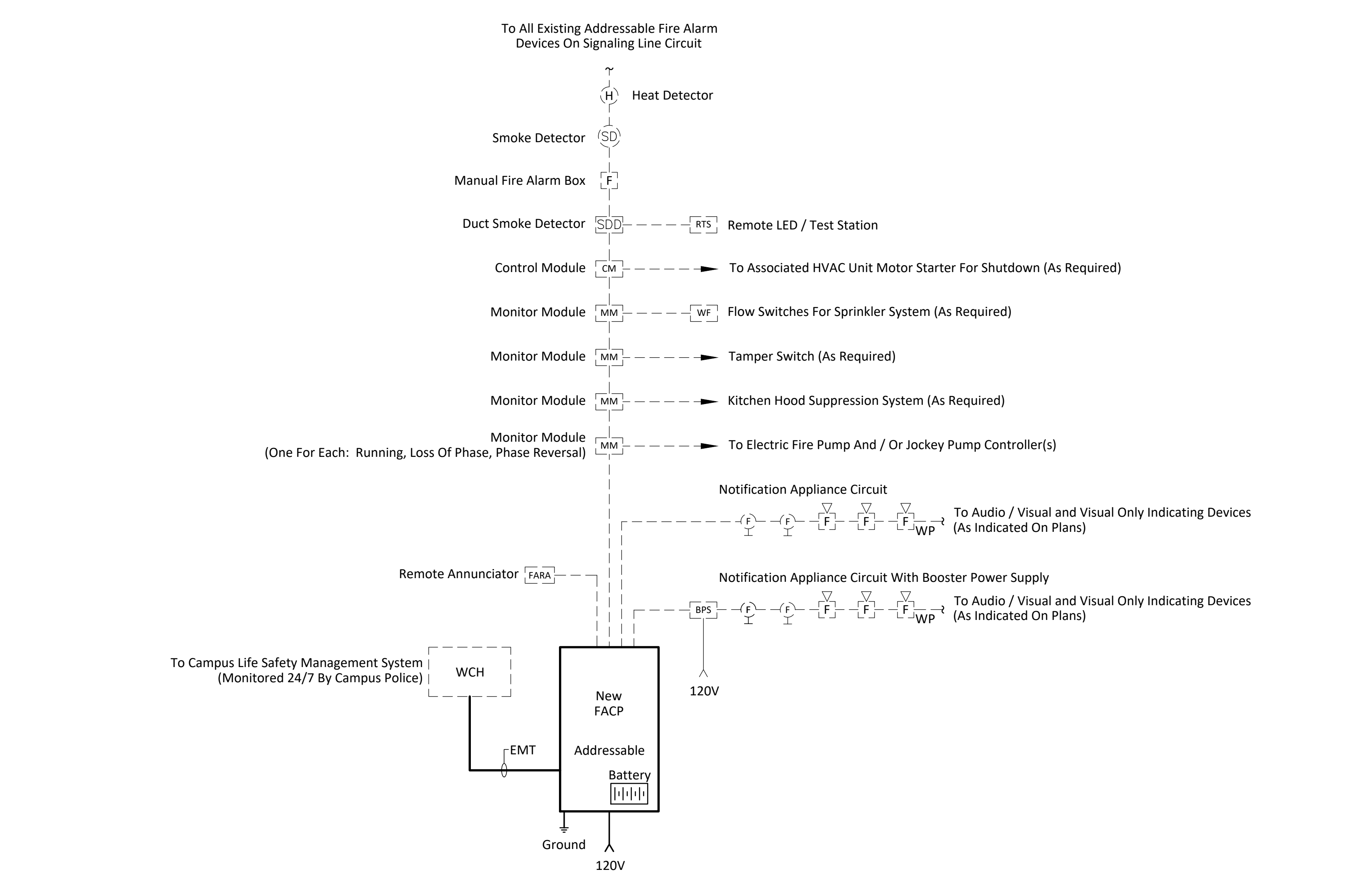
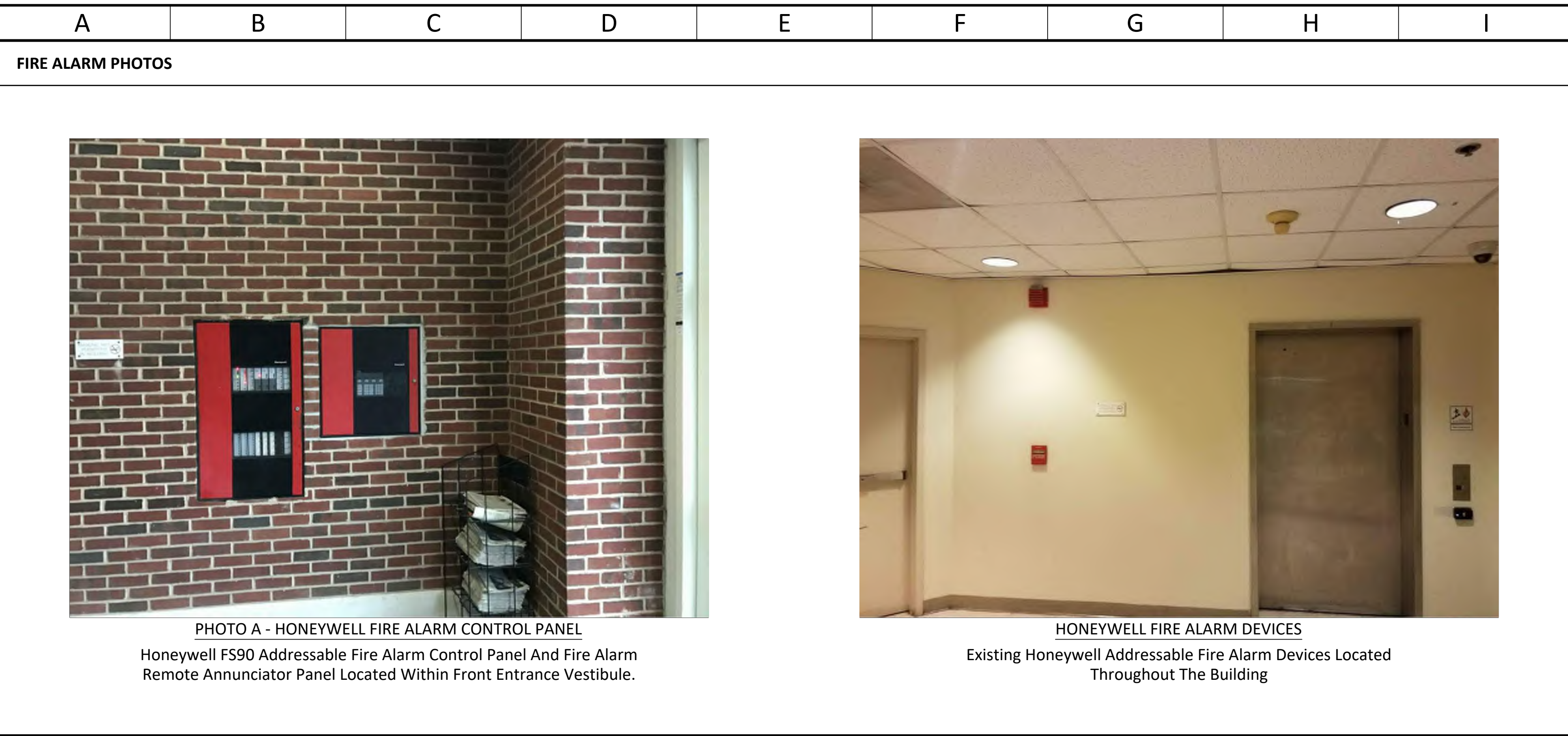
title
FIRE ALARM - EXISTING LAYOUT
EDUCATION BUILDING

scale AS SHOWN drawn by SC checked by SF date 5/03/2020

dwg. no.
E103-EDU

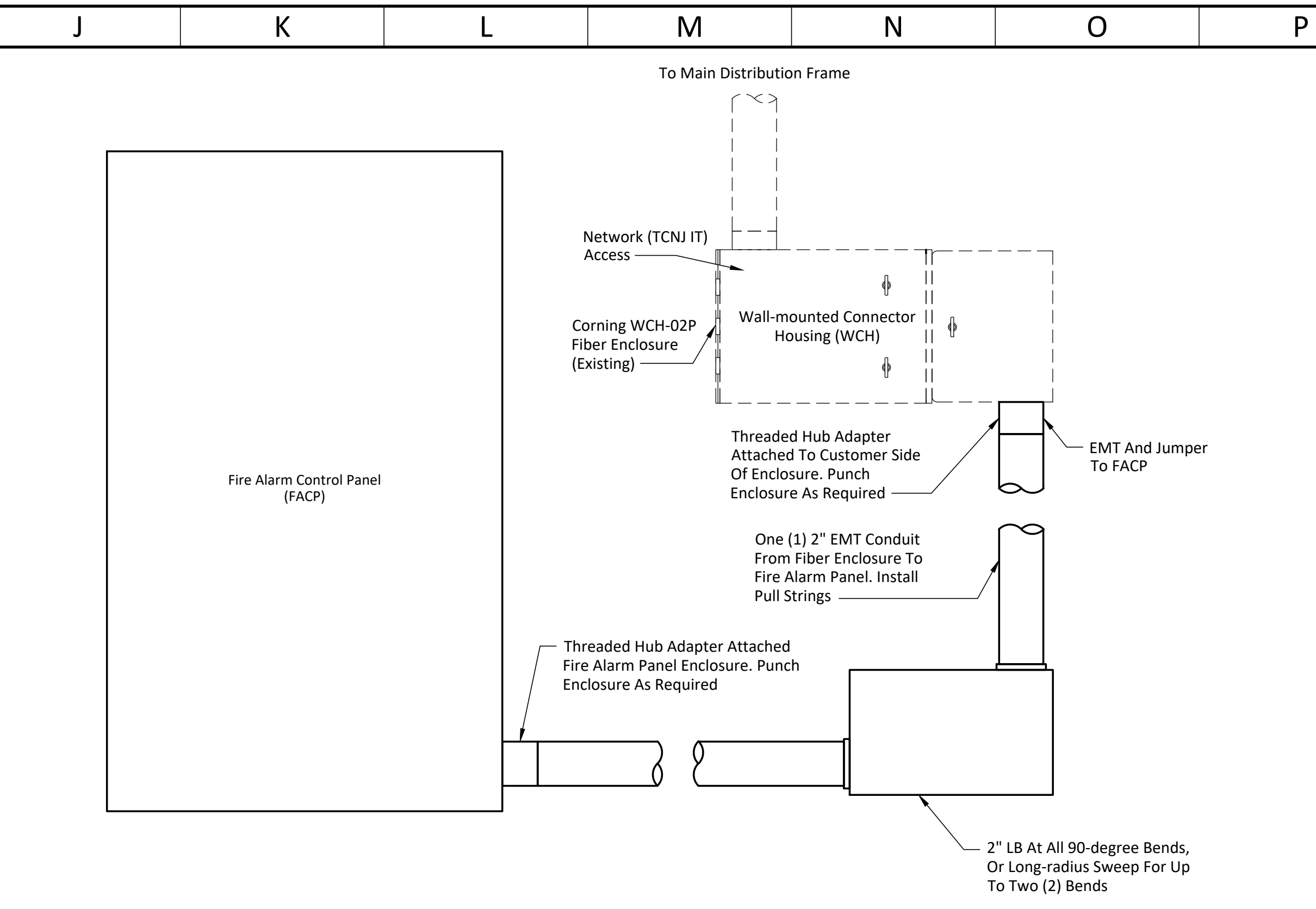
This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30442



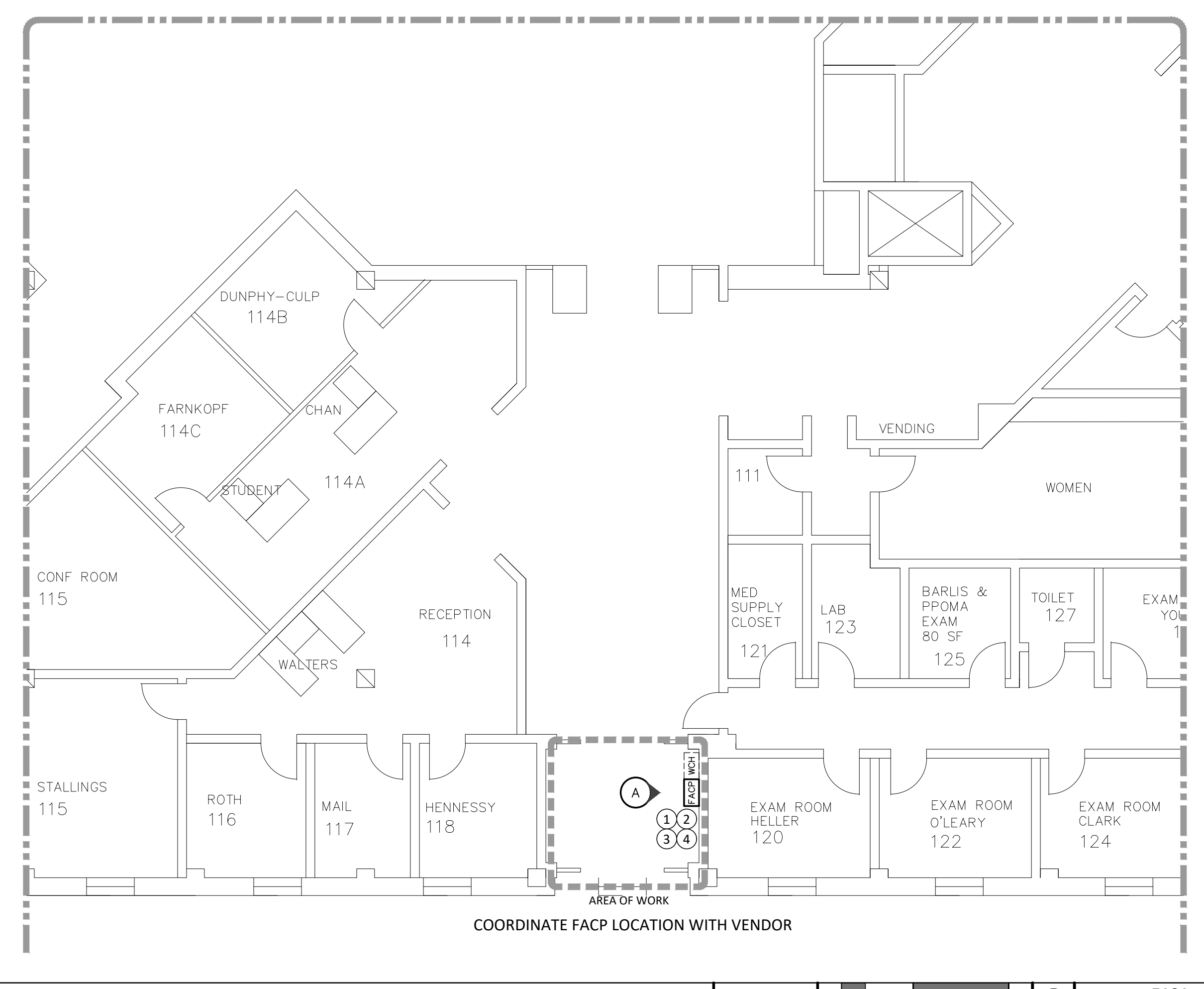
- NOTES:**
- General
 - The Riser Above Depicts A "Honeywell" Basis Of Design With A New Honeywell FACP. All Existing Honeywell End Devices Would Be Compatible With The New FACP.
 - Install New FACP With Capacity Noted Below.
 - New Honeywell FACP Would Communicate The Point Identification Of Each Device To The New Front End.
 - This Building Would Be Considered A Fully Addressable Building.
 - The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - The FACP Shall Connect The Campus Life Safety Management System.
 - Equipment
 - Eickhoff Hall Is Currently Covered By Fire Notification And Detection / Initiation Devices From An Addressable Honeywell FS90 System.
 - Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring
 - The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing
 - Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.

FIRE ALARM RISER Scale: NTS Drawing: **E101** Detail: **01**

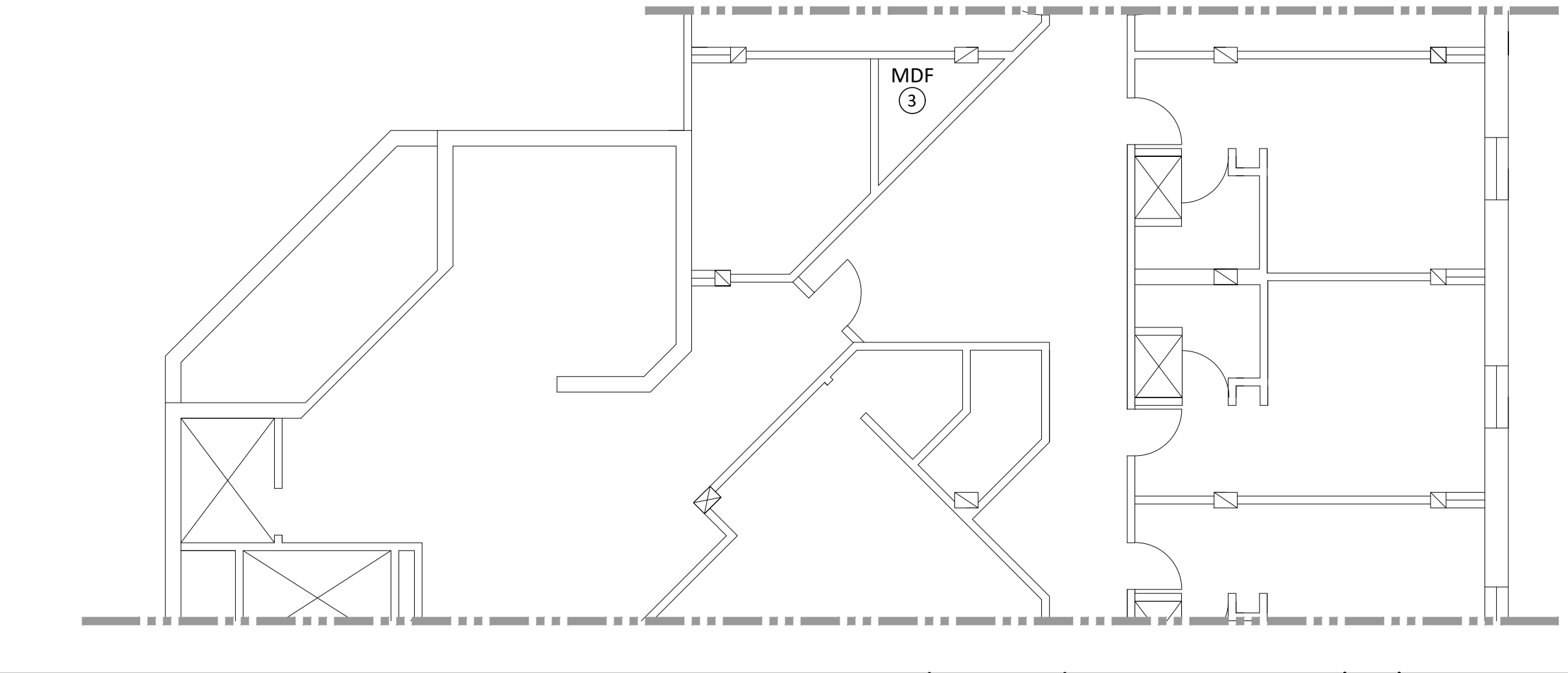


- NOTES:**
- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNU/IT
 - Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
 - Install Fiber Jumpers Between WCH And FACP.

FIRE ALARM FIBER ENCLOSURE INSTALLATION Scale: NTS Drawing: **E101** Detail: **02**



PARTIAL FLOOR PLAN - LOWER LEVEL Scale: 1/8"=1'-0" Drawing: **E101** Detail: **03**

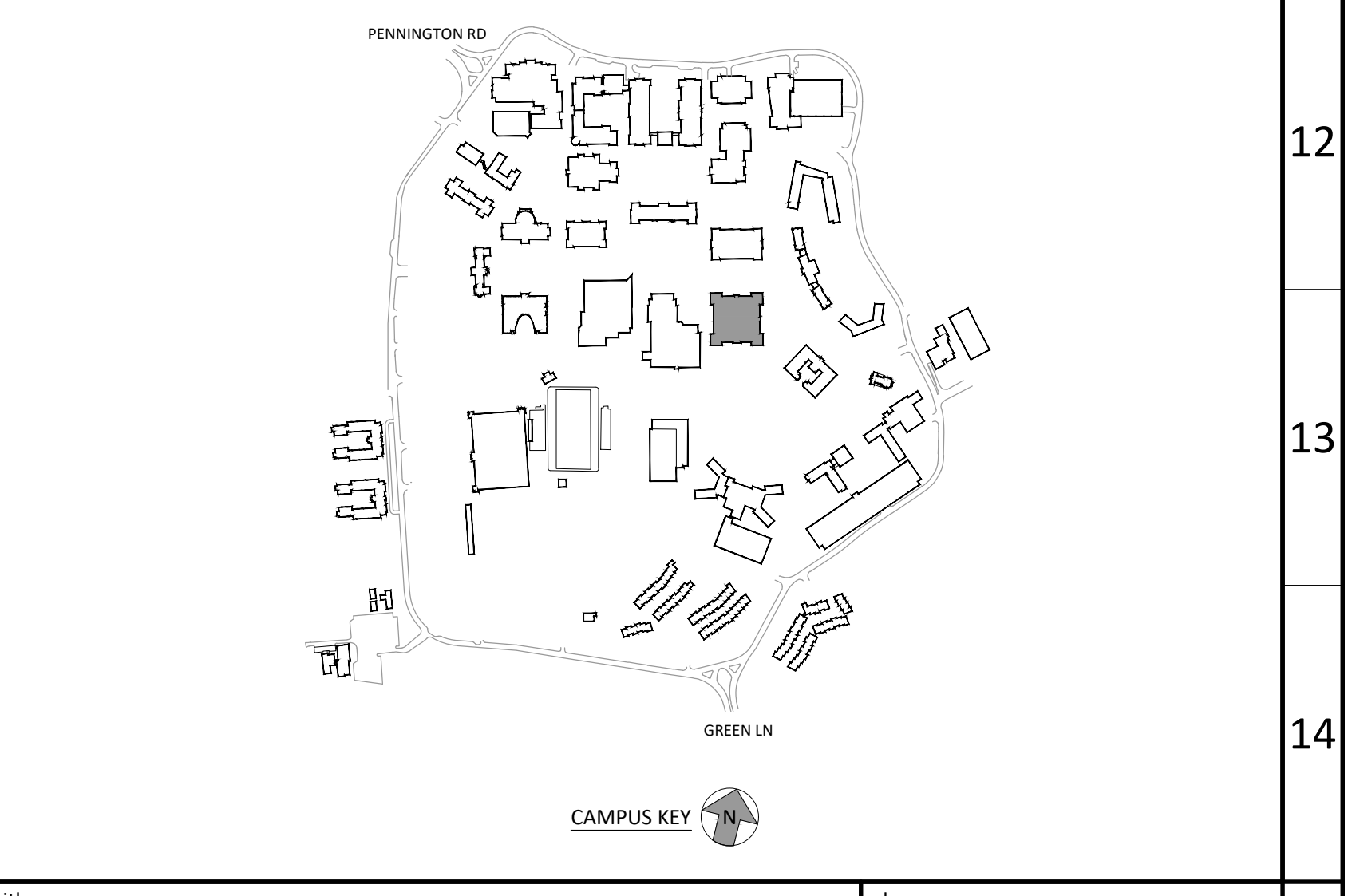
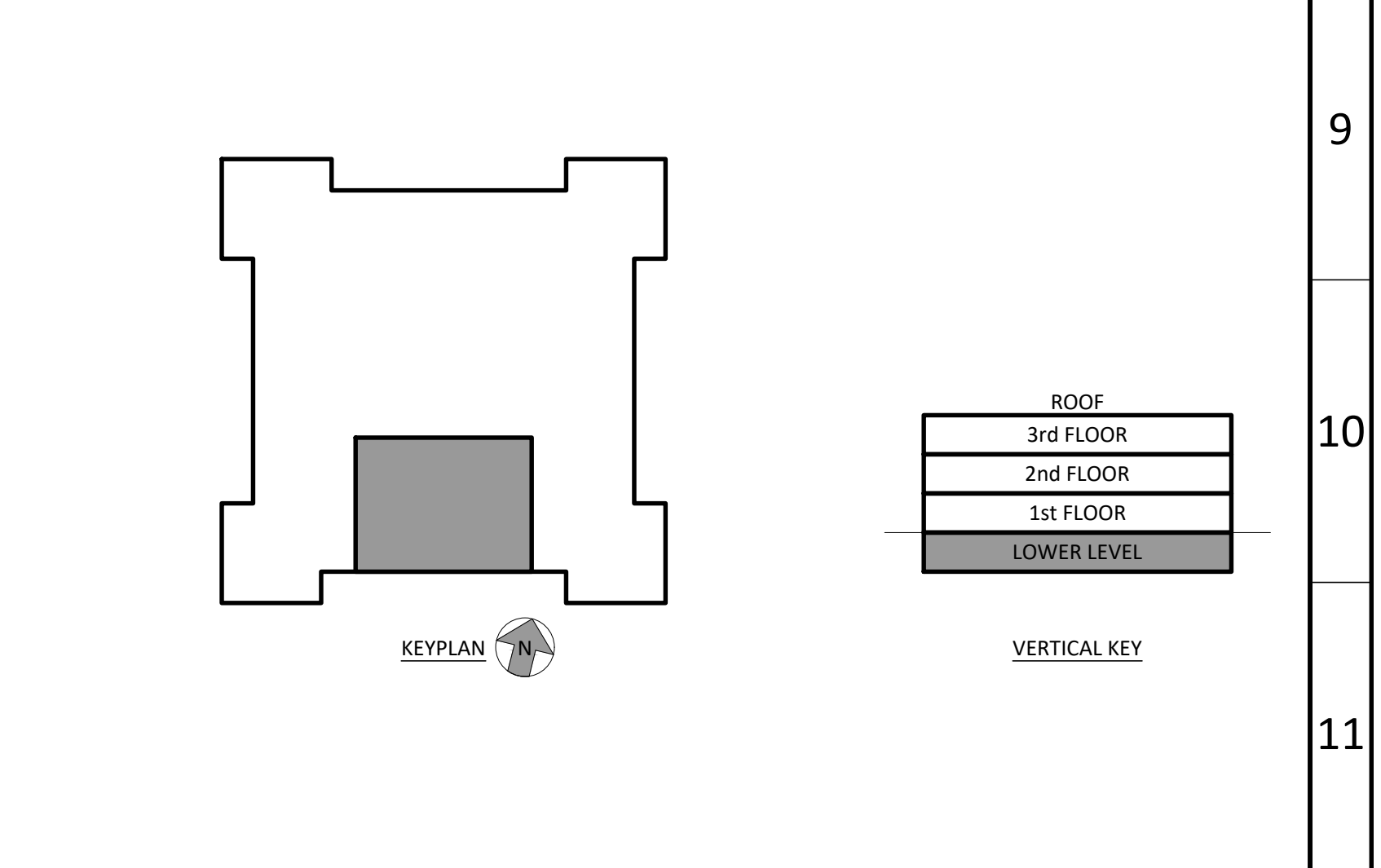


PARTIAL FLOOR PLAN - THIRD FLOOR Scale: 1/8"=1'-0" Drawing: **E101** Detail: **04**

- KEY NOTES (SYMBOLS ①, ②, ETC.)**
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
 - Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
 - Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNU IT Department For Fiber Connection And Labeling Information.
 - Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.
- GENERAL NOTES**
- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
 - The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments.
 - Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
 - Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
 - Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
 - When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently Reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.
 - Remove Pull Station Surround And Glass At Each Of The Existing Pull Stations.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
FACP	Fire Alarm Control Panel	FACP	Fire Alarm Control Panel
WCH	Existing Wall-Mounted Connector Housing	EMT	Electrical Metallic Tubing
FACP	Existing Fire Alarm Control Panel	CM	Control Module
□	New Equipment	MM	Monitor Module
□	Existing Equipment	WCH	Wall-Mounted Connector Housing
⊙	Photo Tag		
→	Connect To Existing		



title: **FIRE ALARM PANEL REPLACEMENT EICKHOFF HALL** dwg. no.: **E101-ECK**

scale: AS SHOWN drawn by: SC checked by: SF date: 5/03/2020

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

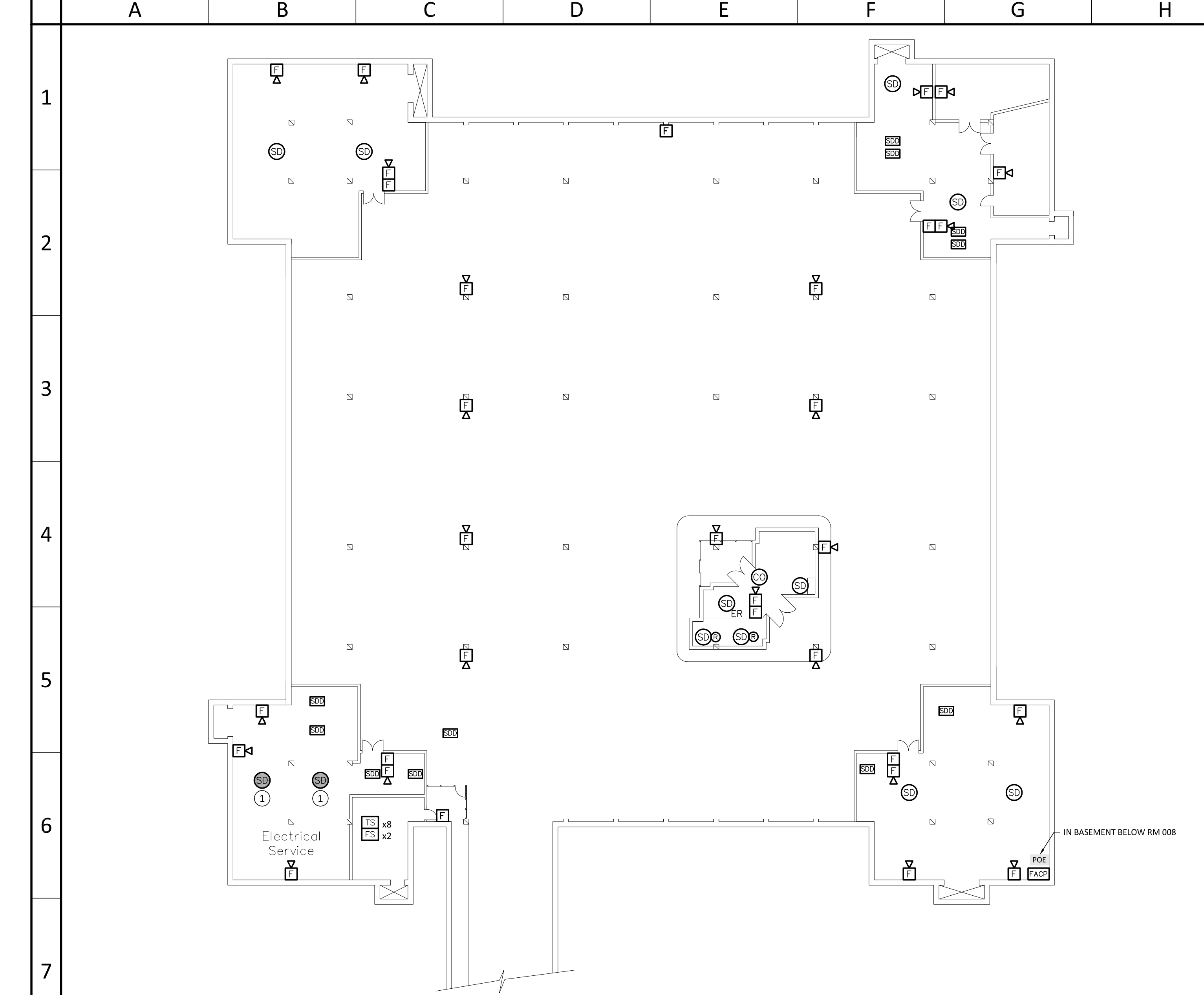
ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

Last Saved: \\w-fs\vol3\47\47211-TCNU Campus Fire Alarm\47211-314-E101 - Eickhoff.dwg, 5/1/20 at 6:36 PM By MHABIB - Last Printed: 5/4/20 at 5:27 PM By Gowers, Scot

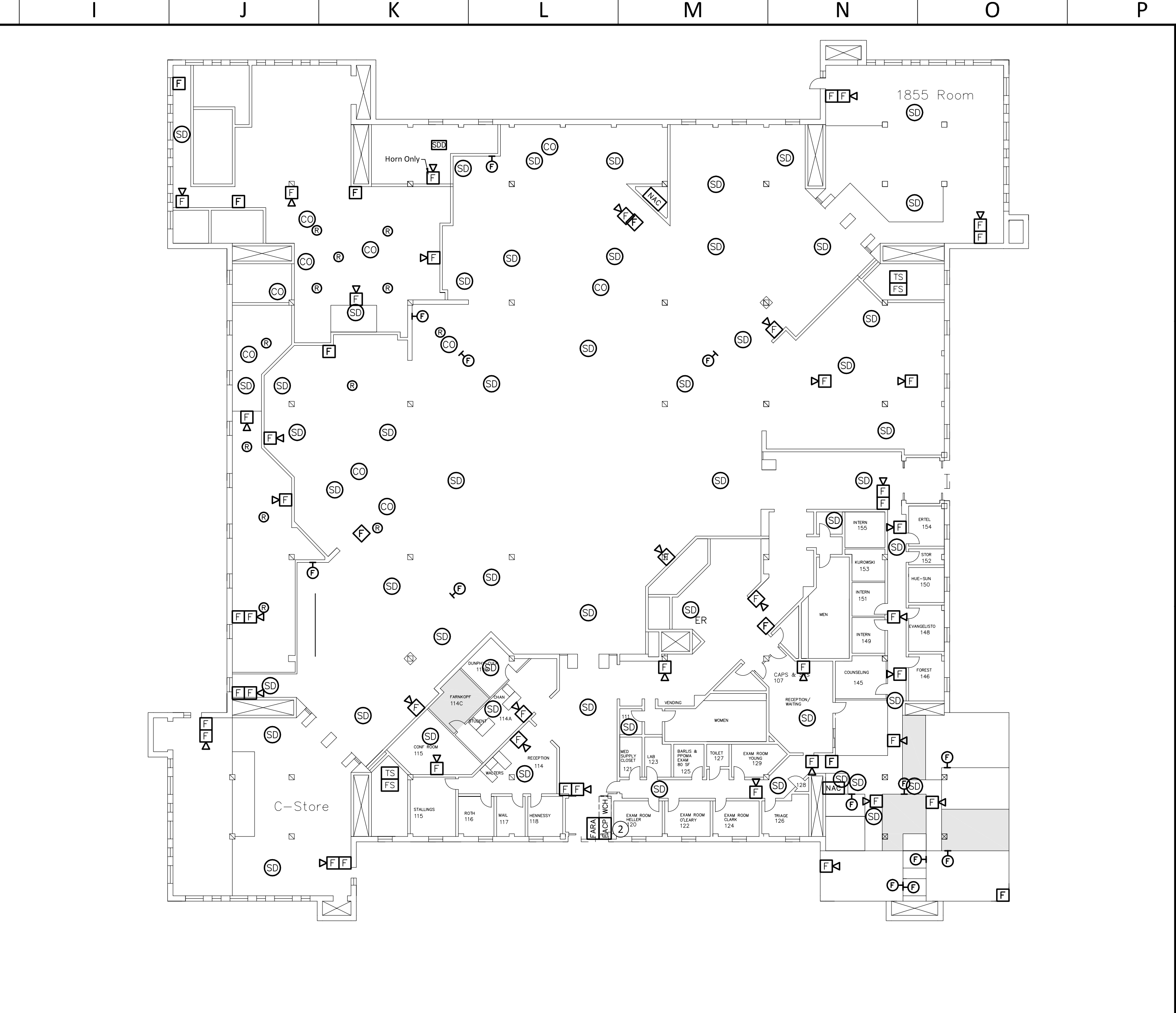
dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

Questions For DLB Call: **Anthony Laskosky** Phone: 732-927-5038

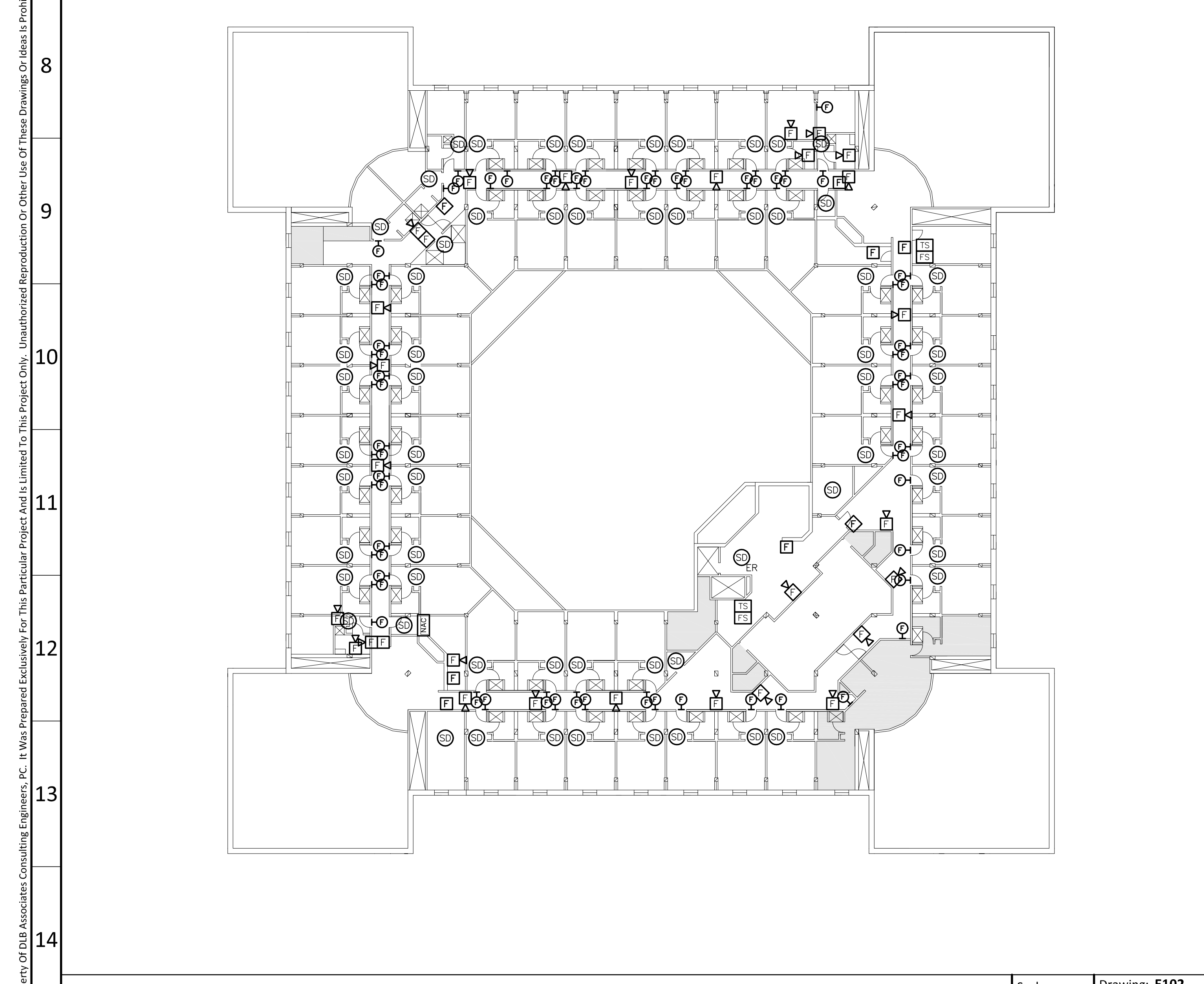
project: **TCNJ - CAMPUS FIRE ALARM PROJECT PART B - HARDWARE & SOFTWARE UPGRADES 2000 PENNINGTON ROAD, EWING NJ, 08618**



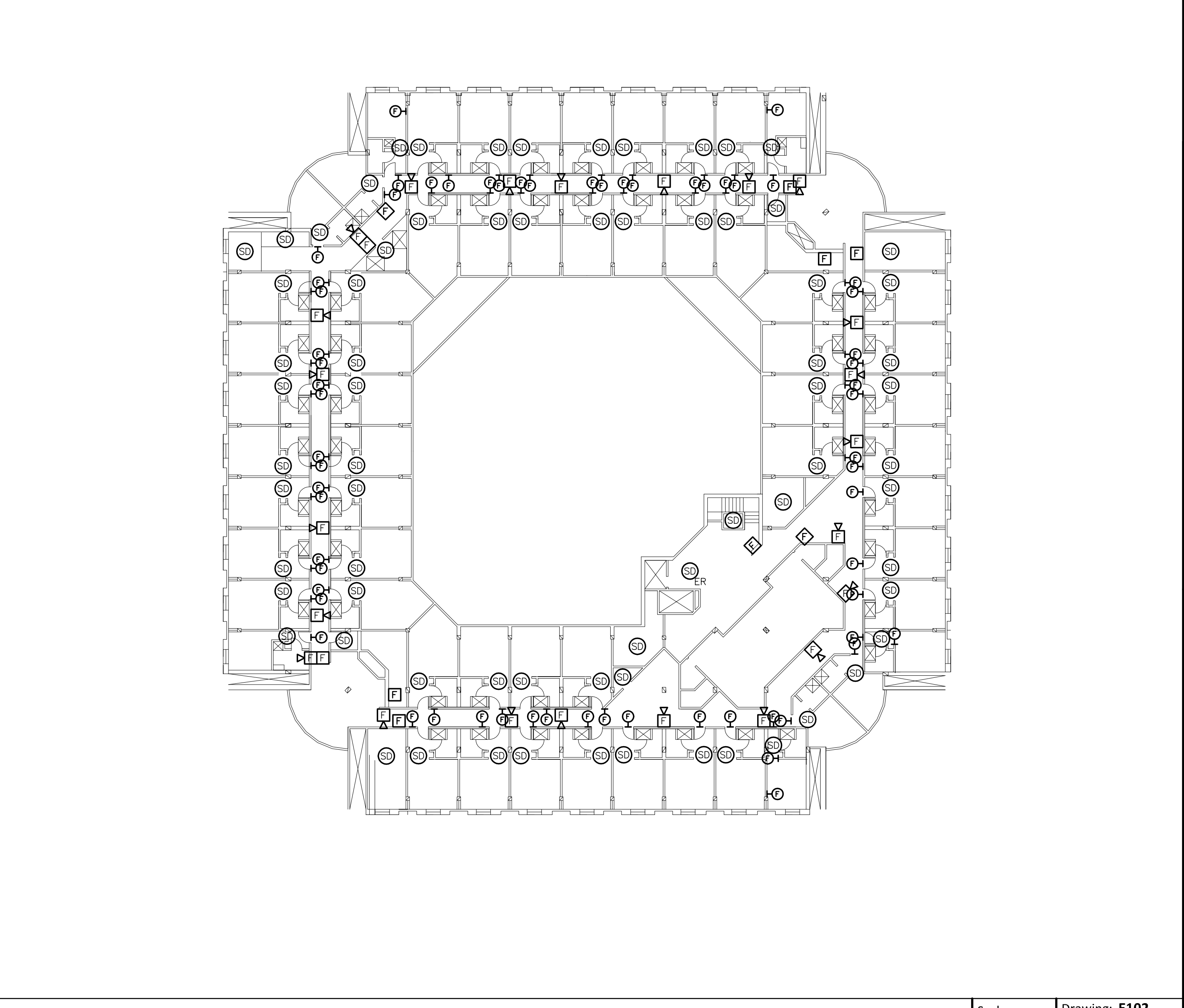
LOWER LEVEL LAYOUT Scale: NTS Drawing: **E102** Detail: **01**



FIRST FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **02**



SECOND FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **03**



THIRD FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **04**

KEY NOTES (SYMBOLS ①, ②, ETC.)

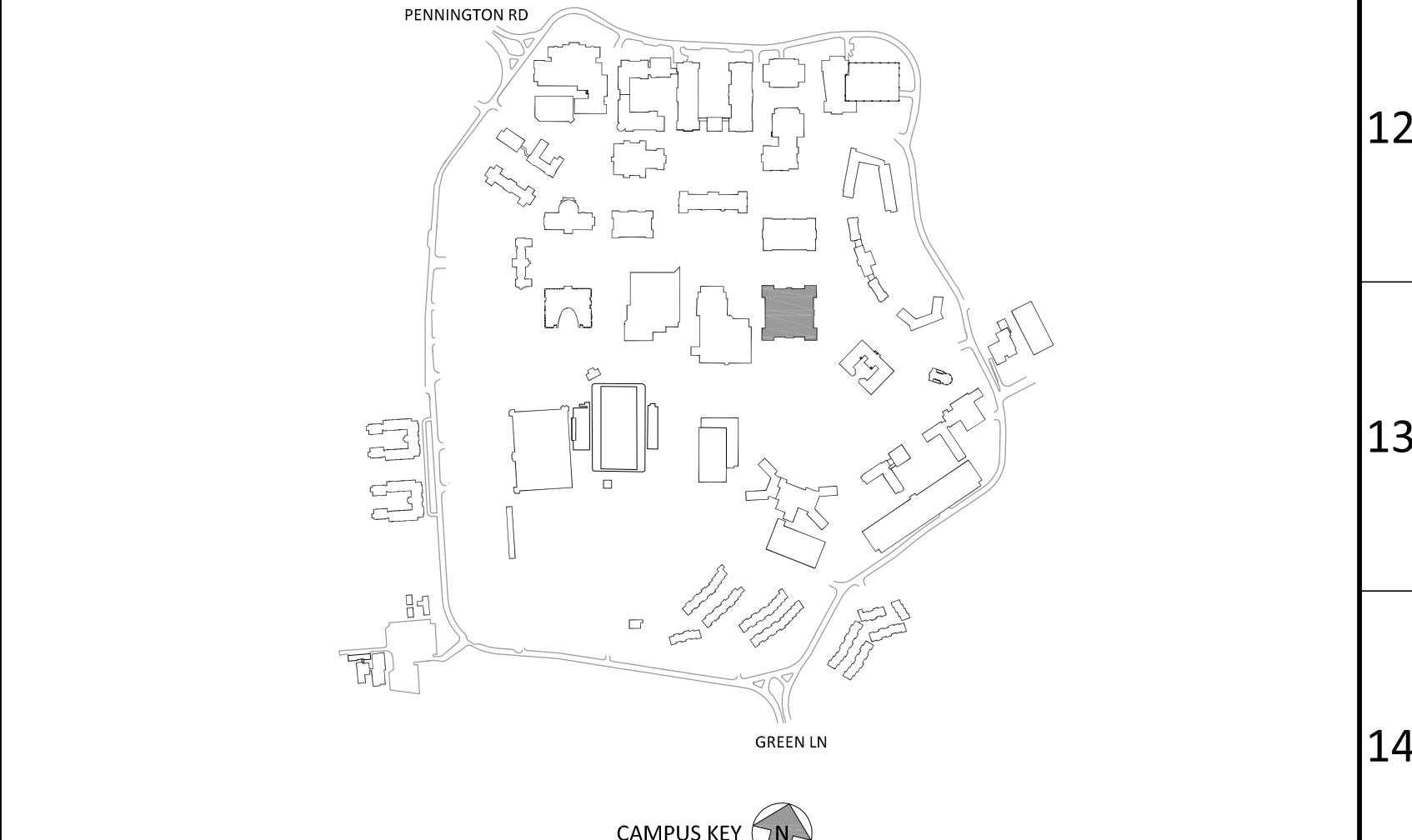
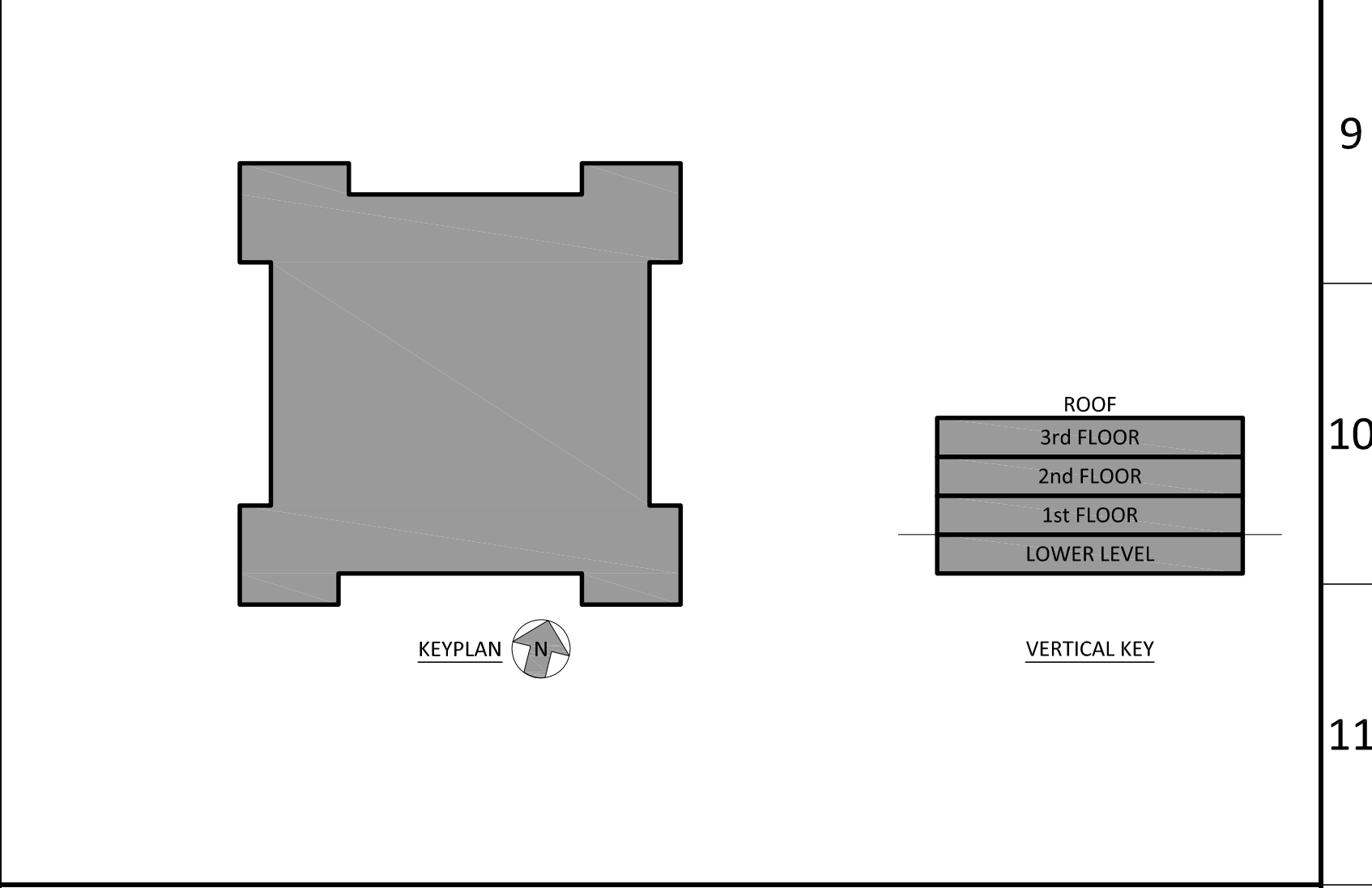
1. Replace Smoke Detector (TYP OF 2)
2. Existing Fire Alarm Control Panel To Be Replaced.

GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
[F]	Manual Pull Station	[No Access]	No Access
[S]	Strobe Only	[SD]	New Smoke Detector
[H]	Horn/Strobe	[MPS]	New Manual Pull Station
[SD]	Smoke Detector	[S]	New Strobe
[SD-ER]	Smoke Detector (ER Indicates Elevator Recall)	[H/S]	New Horn / Strobe
[SD-SB]	Smoke Detector With Sounder Base	[#]	Photo ID Tag
[HTR]	Heat Detector, Combination Fixed Temperature And Rate Of Rise	[FACP]	Fire Alarm Control Panel
[CO]	CO Detector	[CO]	Carbon Monoxide
[SDM]	Duct Mounted Smoke Detector	[POE]	Point Of Entry
[FACP]	Fire Alarm Control Panel		
[FARAP]	Fire Alarm Remote Annunciator Panel		
[FABP]	Fire Alarm Booster Panel		
[TS]	Fire Sprinkler Tamper Switch		
[FS]	Fire Sprinkler Flow Switch		
[WCH]	Existing Wall Mounted Connector Housing		



30x42

ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

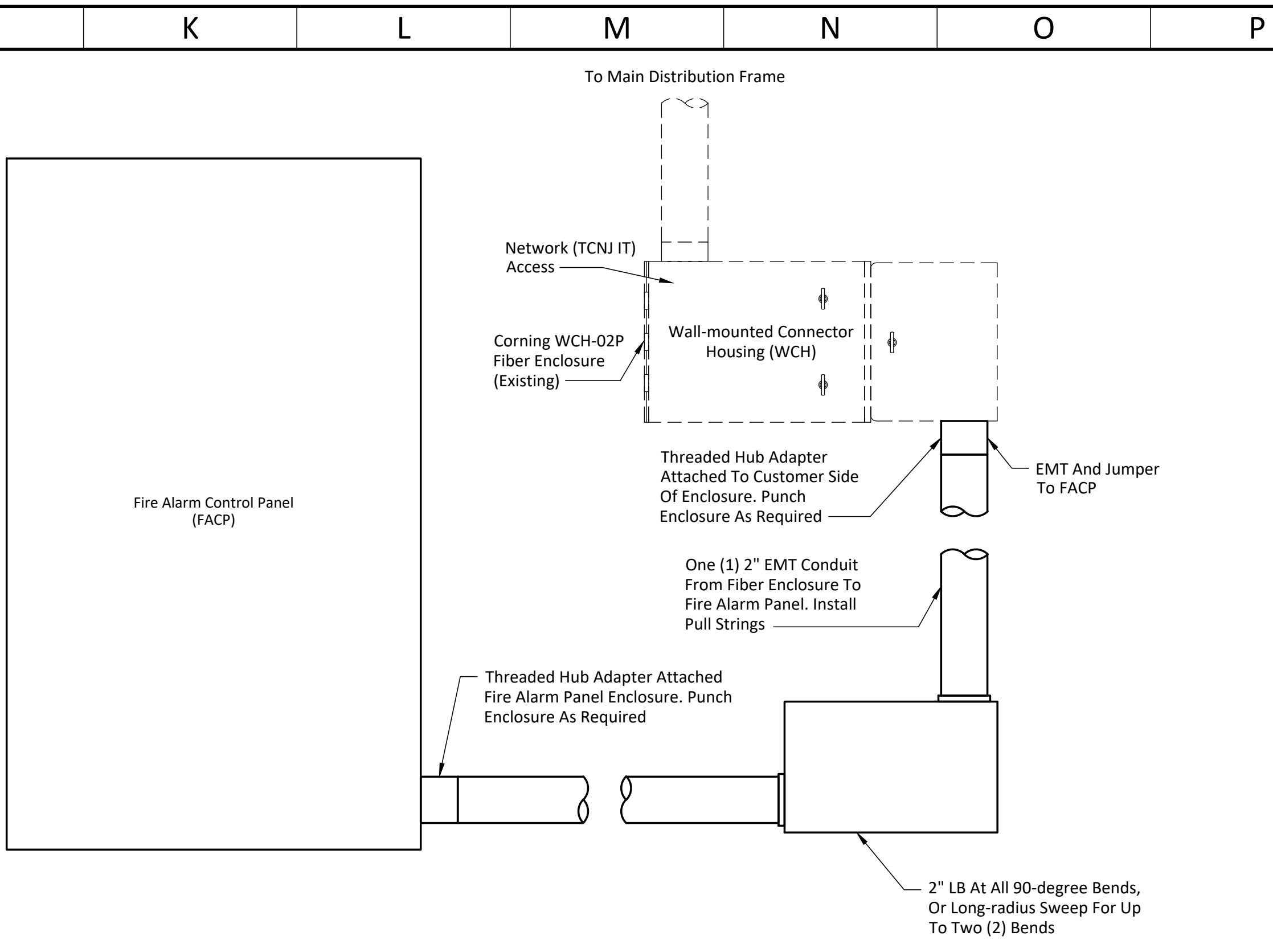
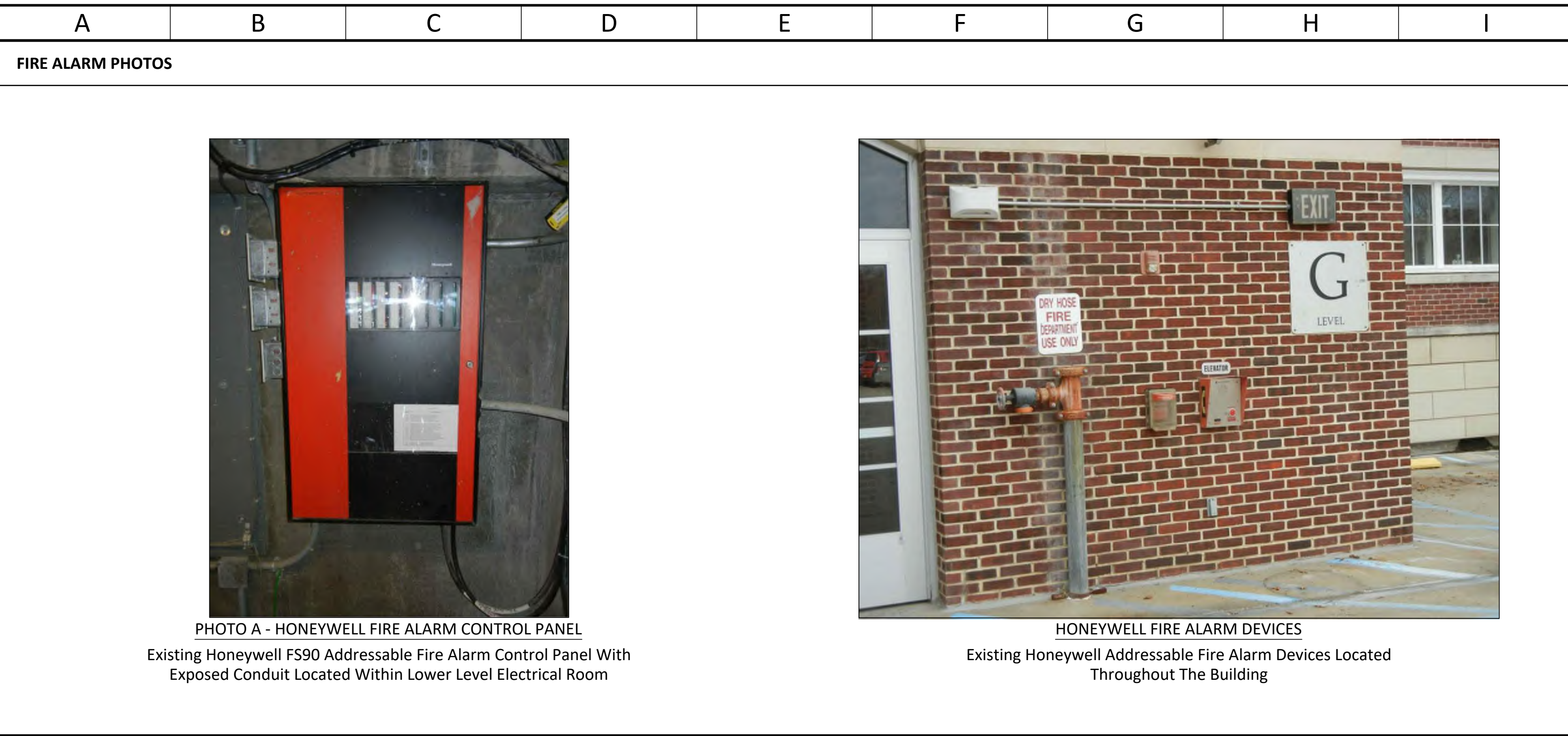
dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project: TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title: FIRE ALARM - EXISTING LAYOUT
EICKHOFF HALL
scale: AS SHOWN drawn by: SC checked by: SF date: 5/03/2020

dwg. no. **E102-ECK**

This Drawing is the Property of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project and is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas is Prohibited.

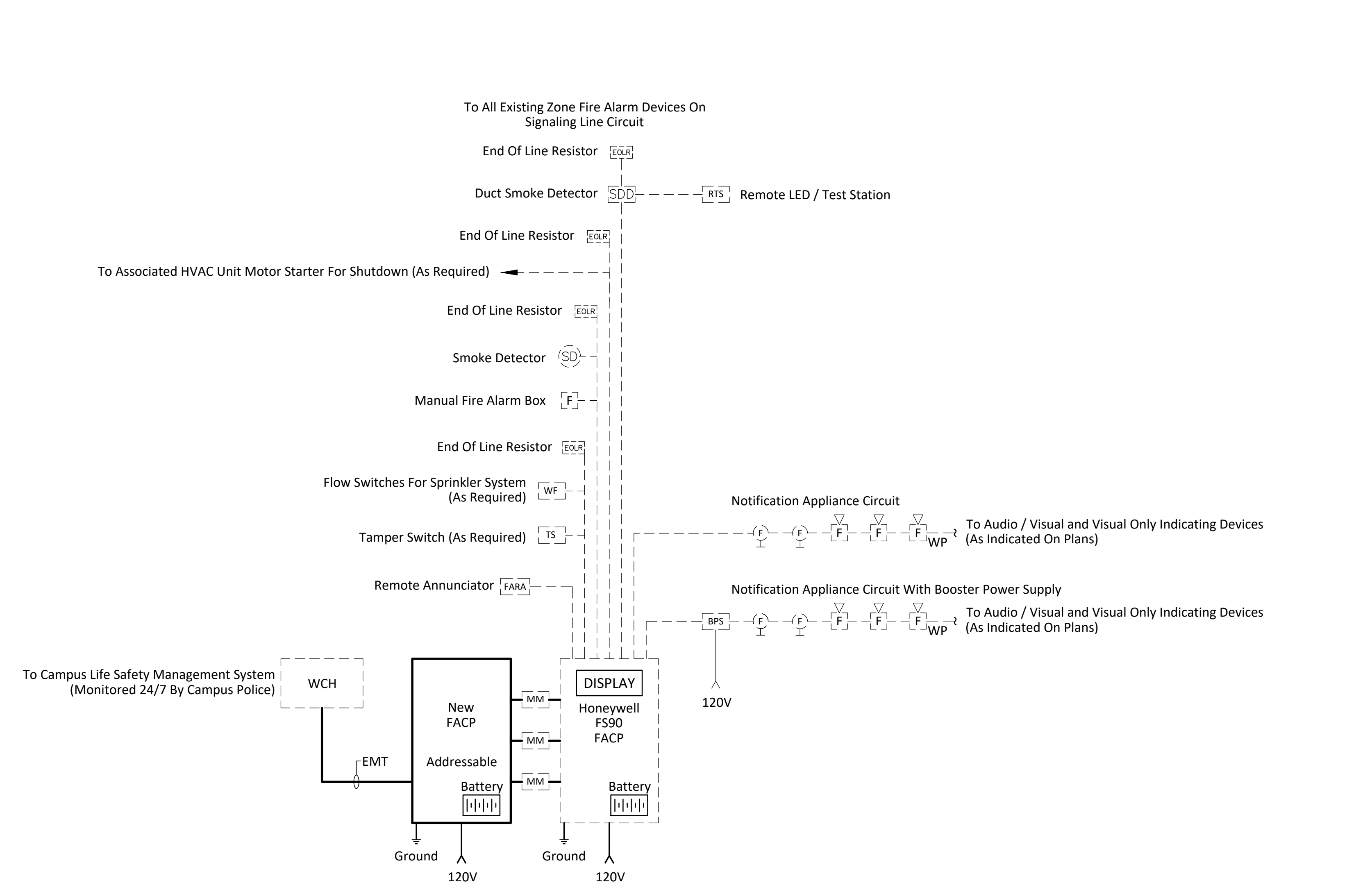


NOTES:

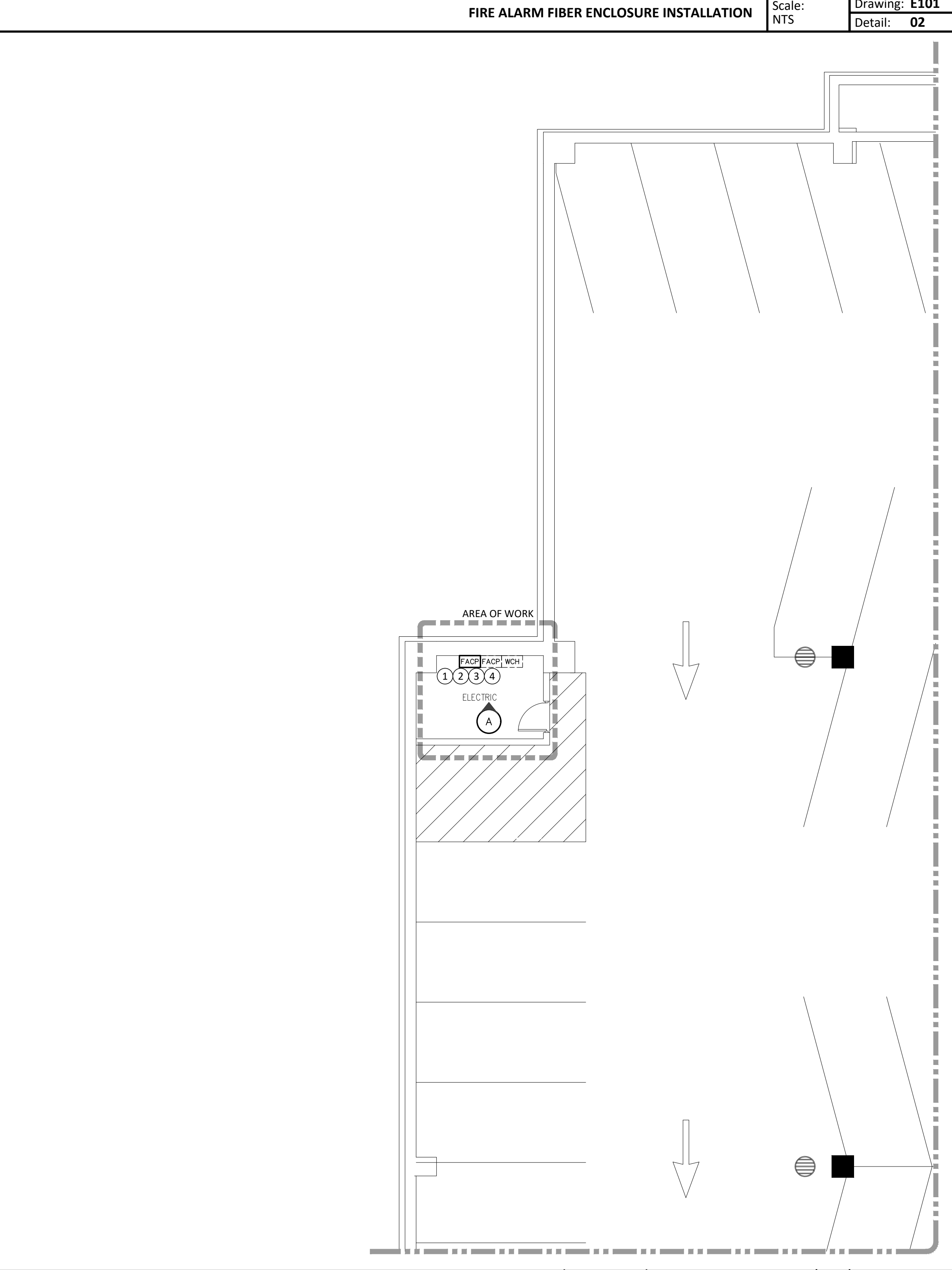
- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNJ/IT
- Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
- Install Fiber Jumpers Between WCH And FACP.

- KEY NOTES (SYMBOLS ①, ②, ETC.)**
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
 - Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
 - Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
 - Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.

- GENERAL NOTES**
- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
 - The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments. Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
 - Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
 - Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
 - When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently Reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.

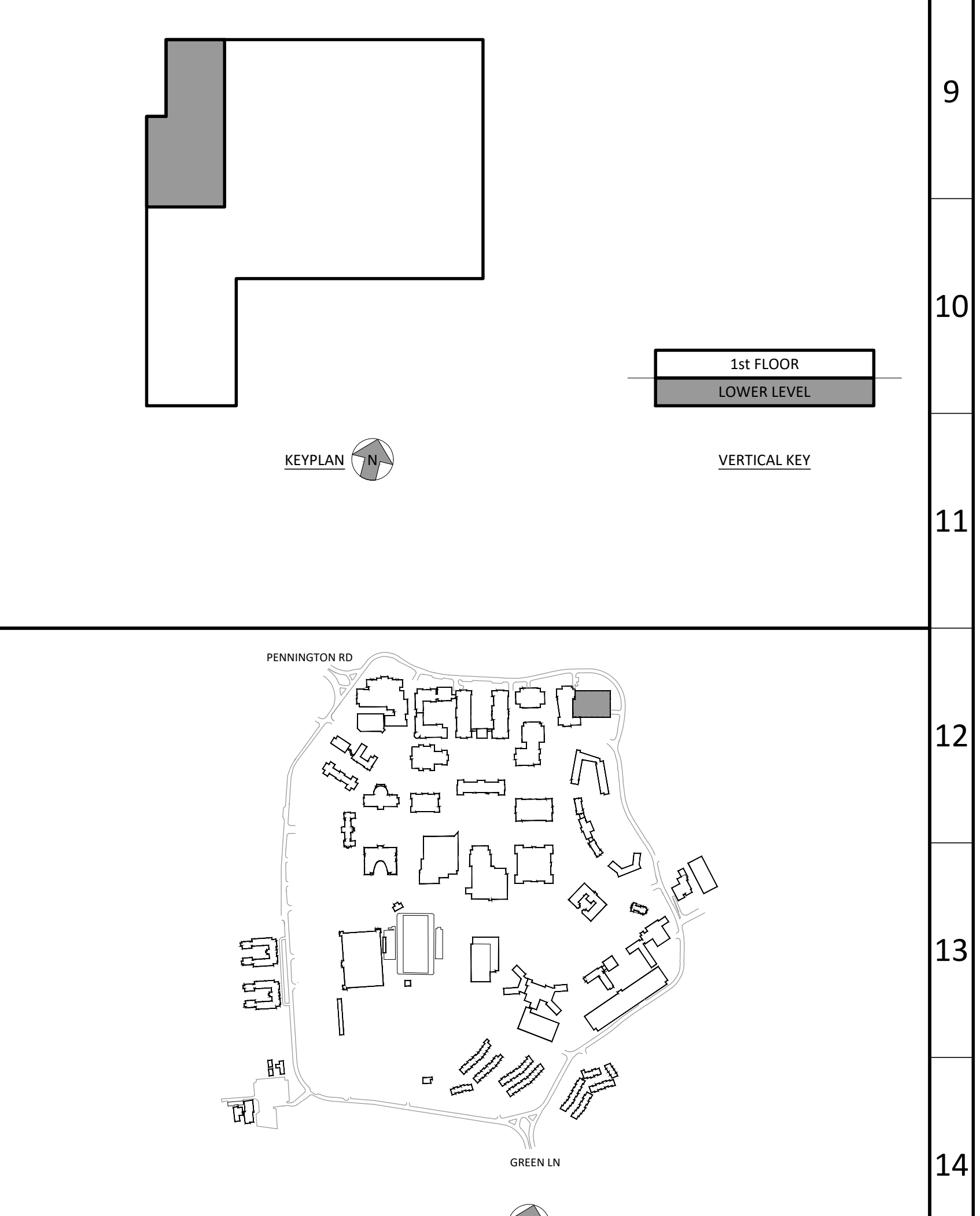


- NOTES:**
- General
 - The Riser Above Depicts A "Honeywell" Basis Of Design With A New Honeywell FACP. All Existing Honeywell End Devices Would Not Be Compatible With The New FACP.
 - Install New FACP With Enough Capacity To Accommodate Total Device Count And Will Monitor Existing Honeywell FACP System.
 - New Honeywell FACP Would Monitor Existing Honeywell FACP For Alarm, Tamper, Trouble, And Other Points That Are Currently Monitored By The Front End At A Minimum.
 - This Building Would NOT Be Considered A Fully Addressable Building.
 - The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - The FACP Shall Connect The Campus Life Safety Management System.
 - Equipment
 - Forcina Garage Is Currently Covered By Fire Notification And Detection / Initiation Devices From A Honeywell FS90 System.
 - Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring
 - The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing
 - Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.



PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
FACP	Fire Alarm Control Panel	FACP	Fire Alarm Control Panel
WCH	Existing Wall-Mounted Connector Housing	EMT	Electrical Metallic Tubing
FACP	Existing Fire Alarm Control Panel	CM	Control Module
□	New Equipment	MM	Monitor Module
□	Existing Equipment	WCH	Wall-Mounted Connector Housing
⊙	Photo Tag		
→	Connect To Existing		



ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project: TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title: FIRE ALARM PANEL REPLACEMENT
FORCINA GARAGE

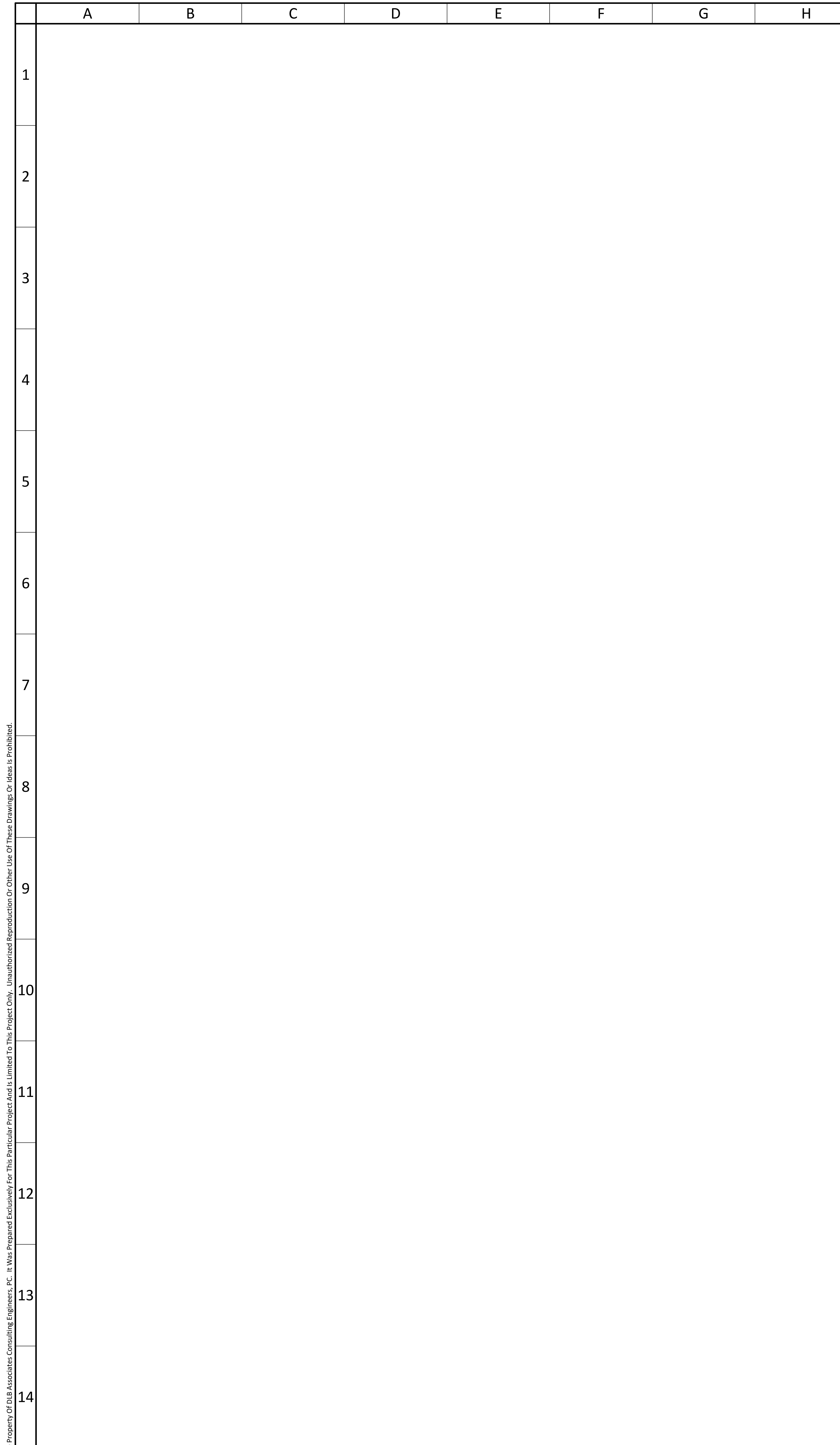
scale: AS SHOWN
drawn by: SC
checked by: SF
date: 5/03/2020

dwg. no.: **E101-FGRG**

Confidential and Proprietary / ©DLB Associates 2020

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30x42



KEY NOTES (SYMBOLS ①, ②, ETC.)

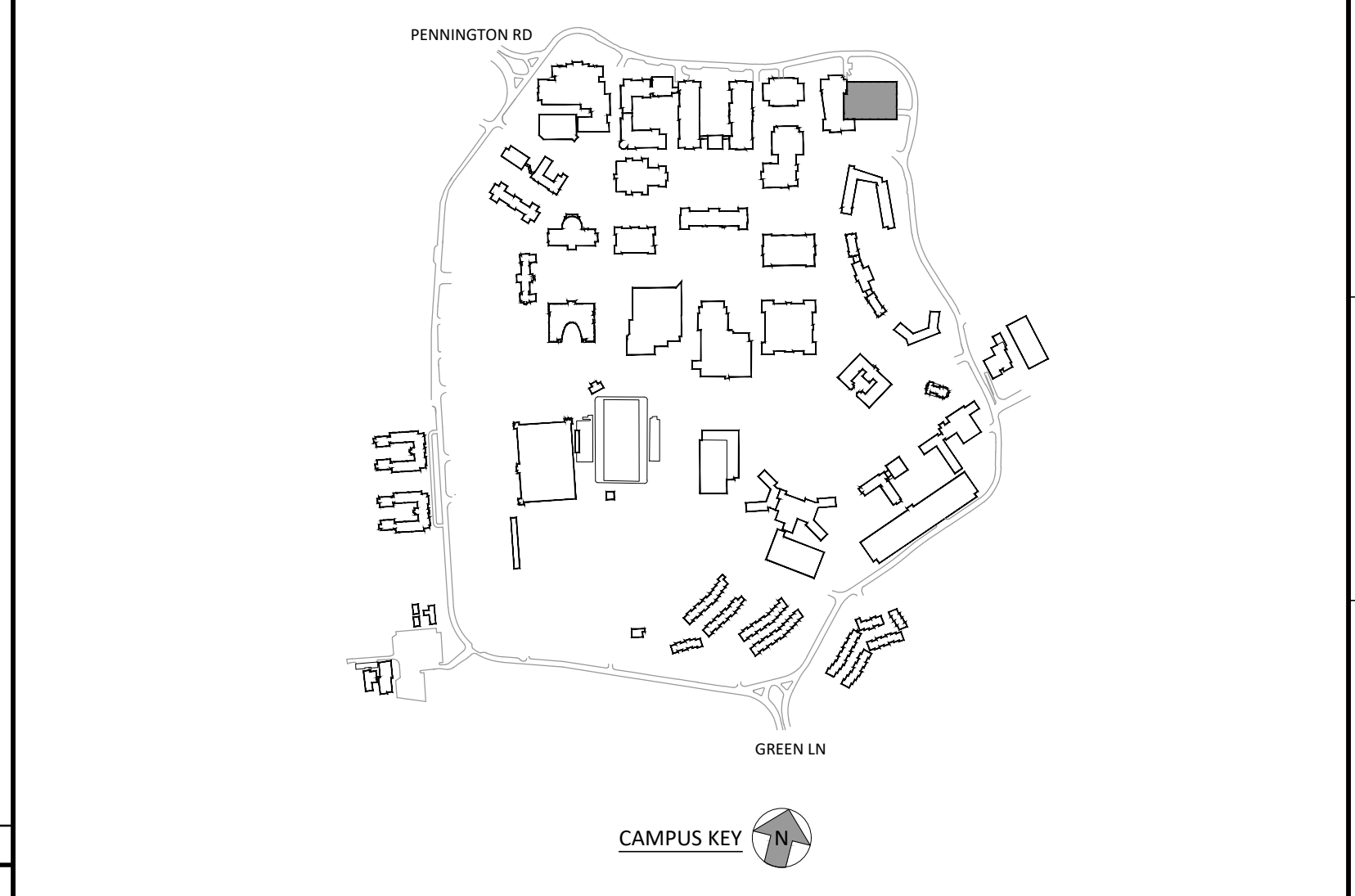
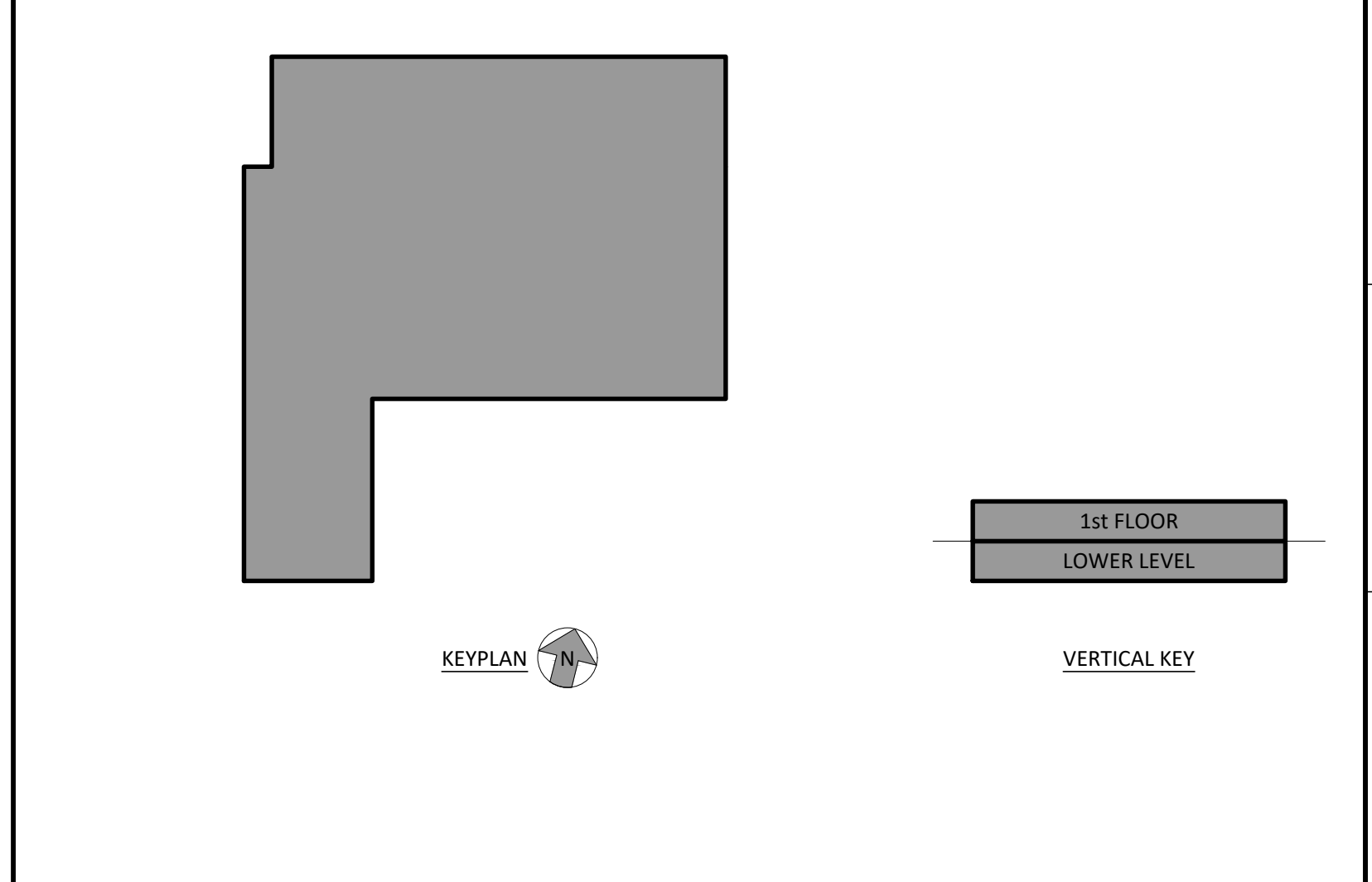
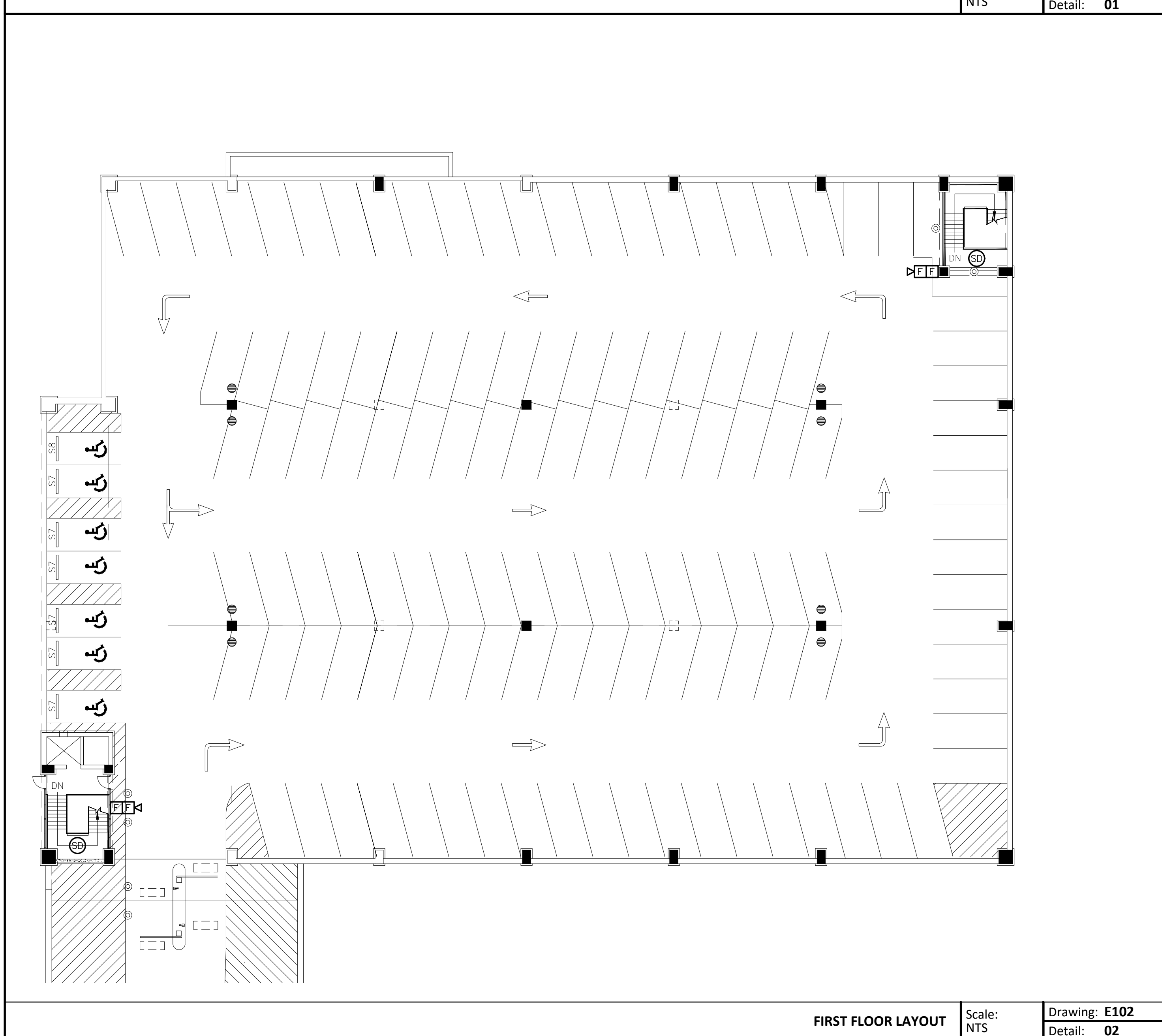
1. Existing Fire Alarm Control Panel.

GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
Ⓜ	Manual Pull Station	□	No Access
Ⓢ	Strobe Only	Ⓢ	New Smoke Detector
Ⓜ	Horn/Strobe	Ⓜ	New Manual Pull Station
Ⓢ	Smoke Detector	Ⓢ	New Strobe
Ⓢ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	Ⓜ	New Horn / Strobe
Ⓢ _{SB}	Smoke Detector With Sounder Base	Ⓜ	Photo ID Tag
Ⓢ	Heat Detector, Combination Fixed Temperature And Rate Of Rise	FACP	Fire Alarm Control Panel
Ⓢ	CO Detector	CO	Carbon Monoxide
Ⓢ _{DC}	Duct Mounted Smoke Detector	POE	Point Of Entry
FACP	Fire Alarm Control Panel		
FARA	Fire Alarm Remote Annunciator Panel		
FACB	Fire Alarm Booster Panel		
TS	Fire Sprinkler Tamper Switch		
FS	Fire Sprinkler Flow Switch		
WCH	Existing Wall Mounted Connector Housing		



Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018		
ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

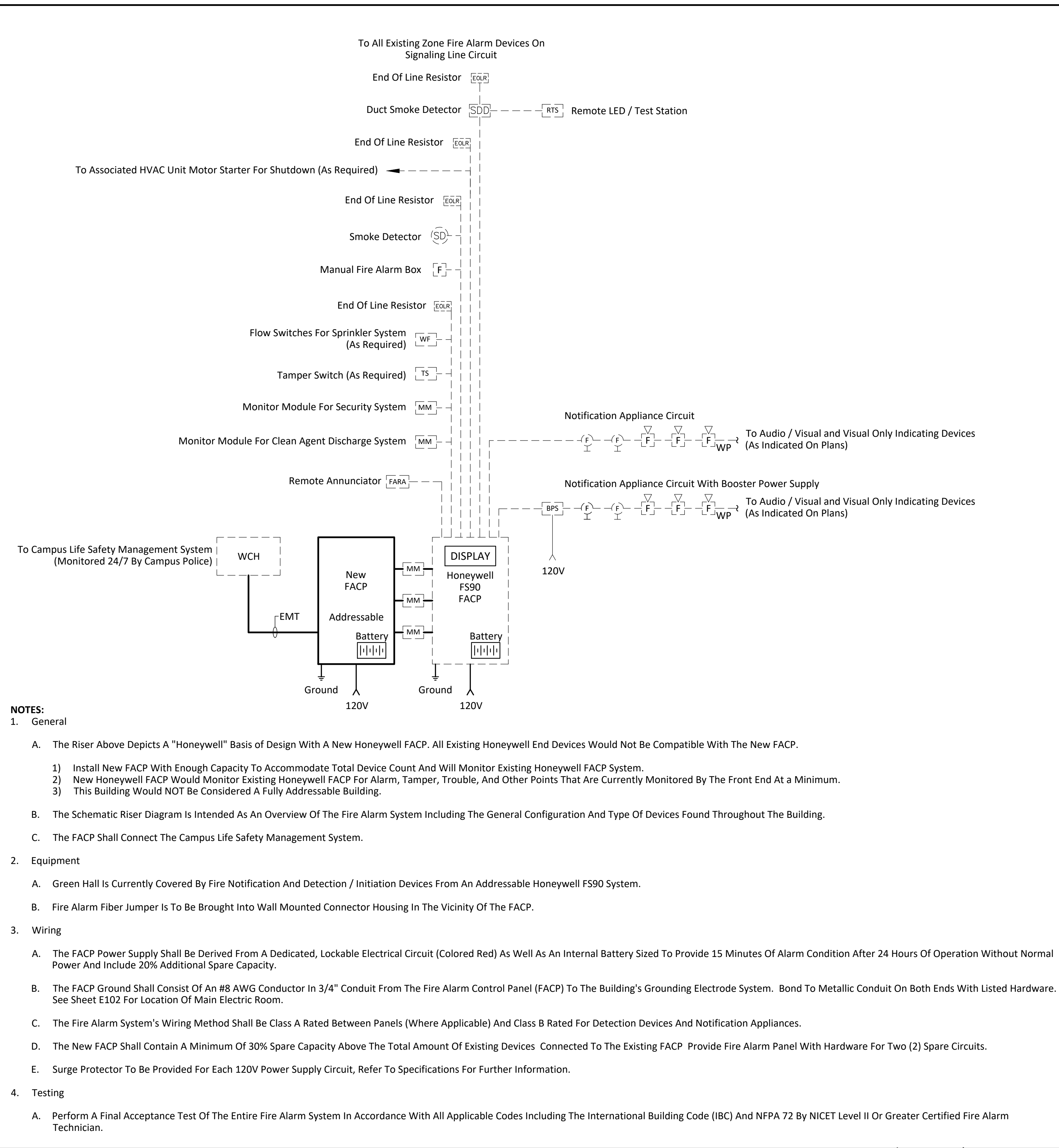
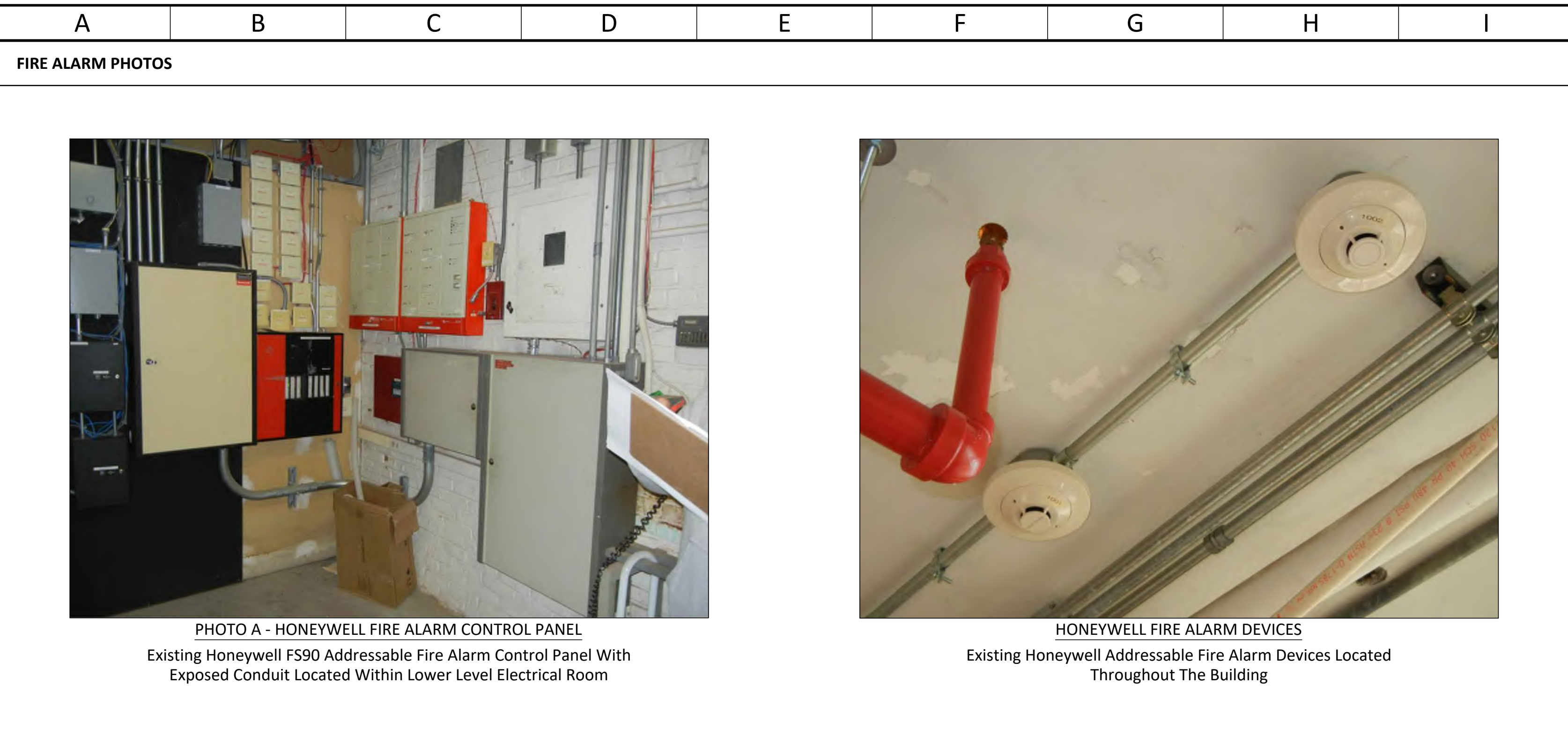
title
FIRE ALARM - EXISTING LAYOUT
FORCINA GARAGE

scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020

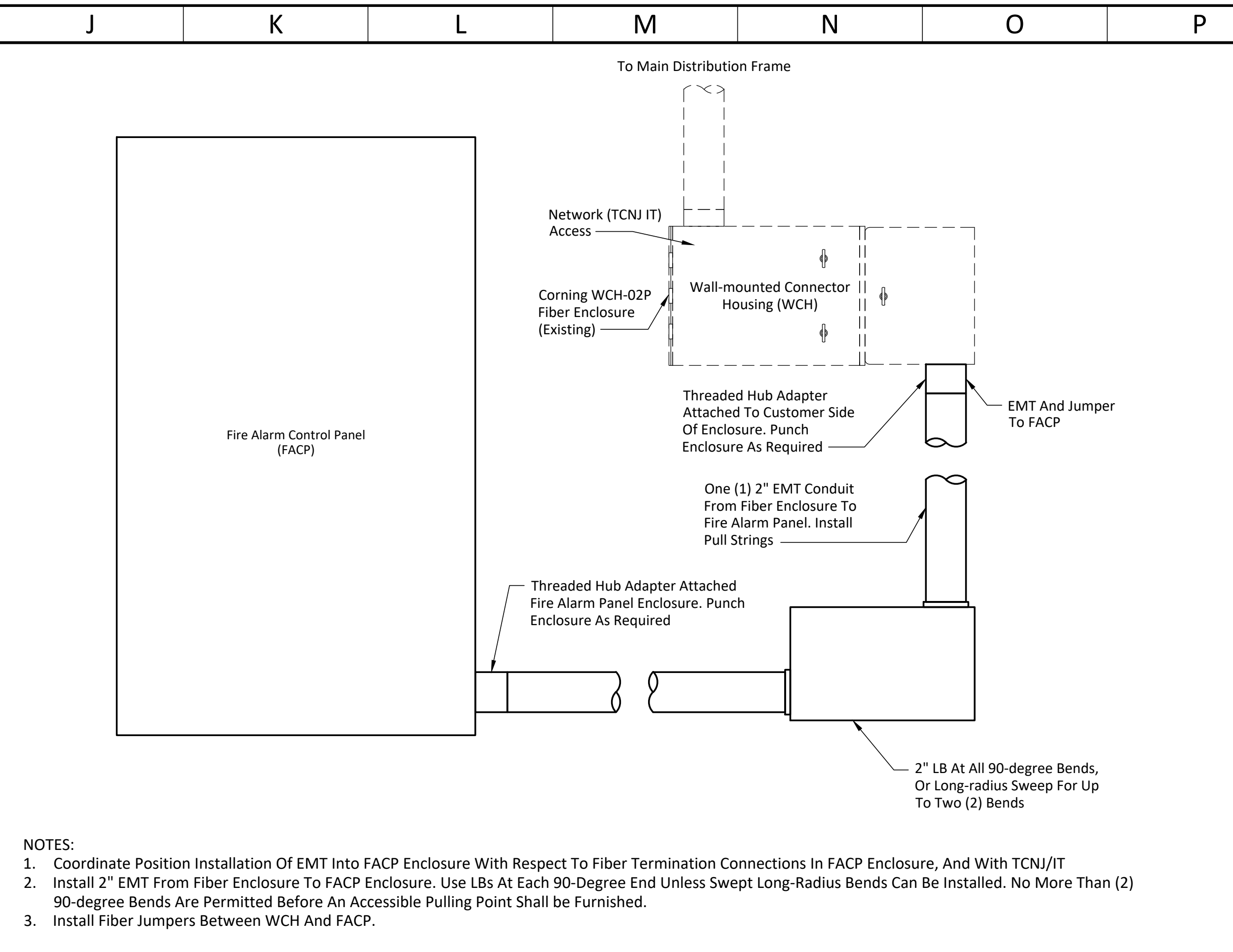
dwg. no.
E102-FGRG

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

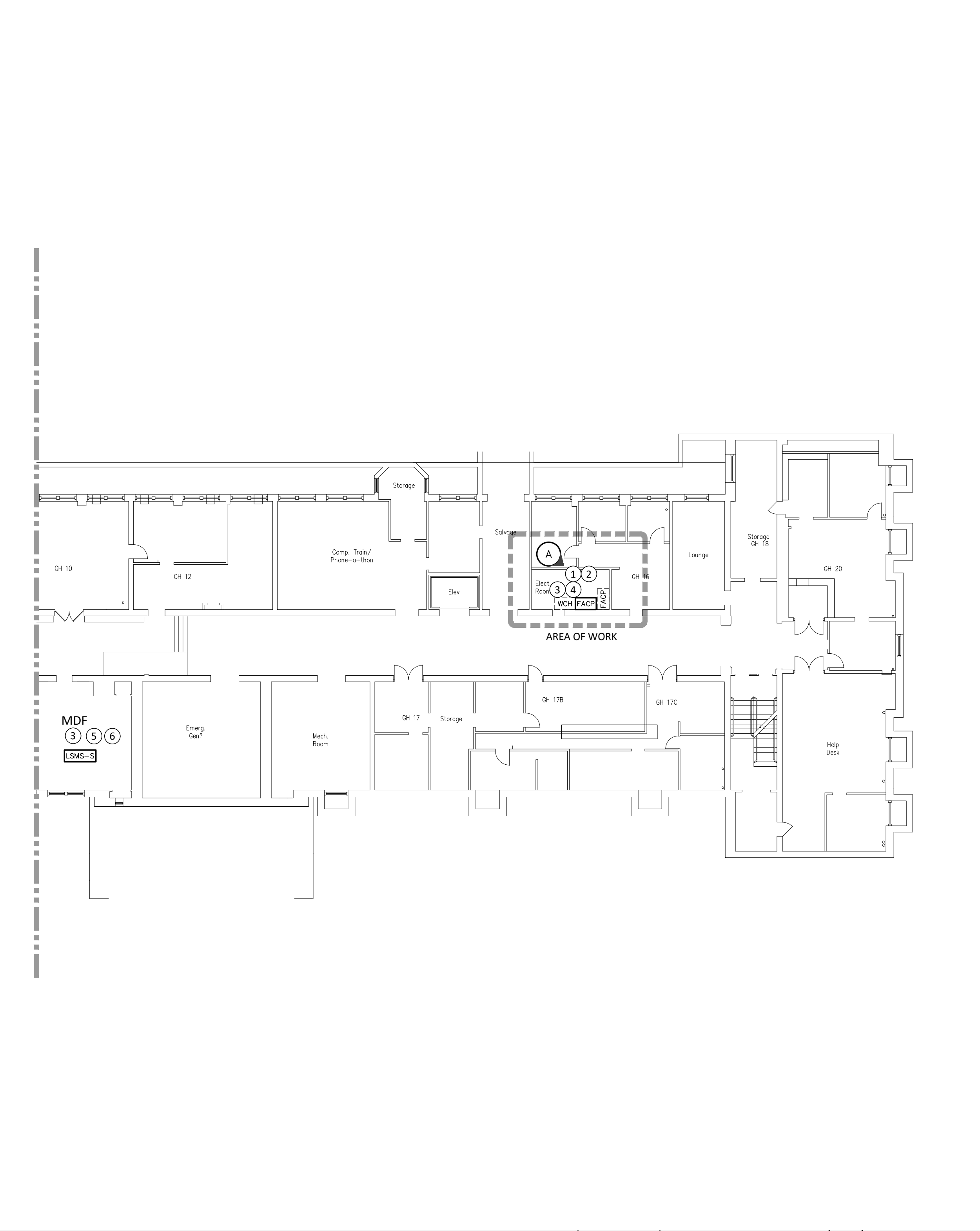
30442



FIRE ALARM RISER Scale: NTS Drawing: **E101** Detail: **01**



FIRE ALARM FIBER ENCLOSURE INSTALLATION Scale: NTS Drawing: **E101** Detail: **02**



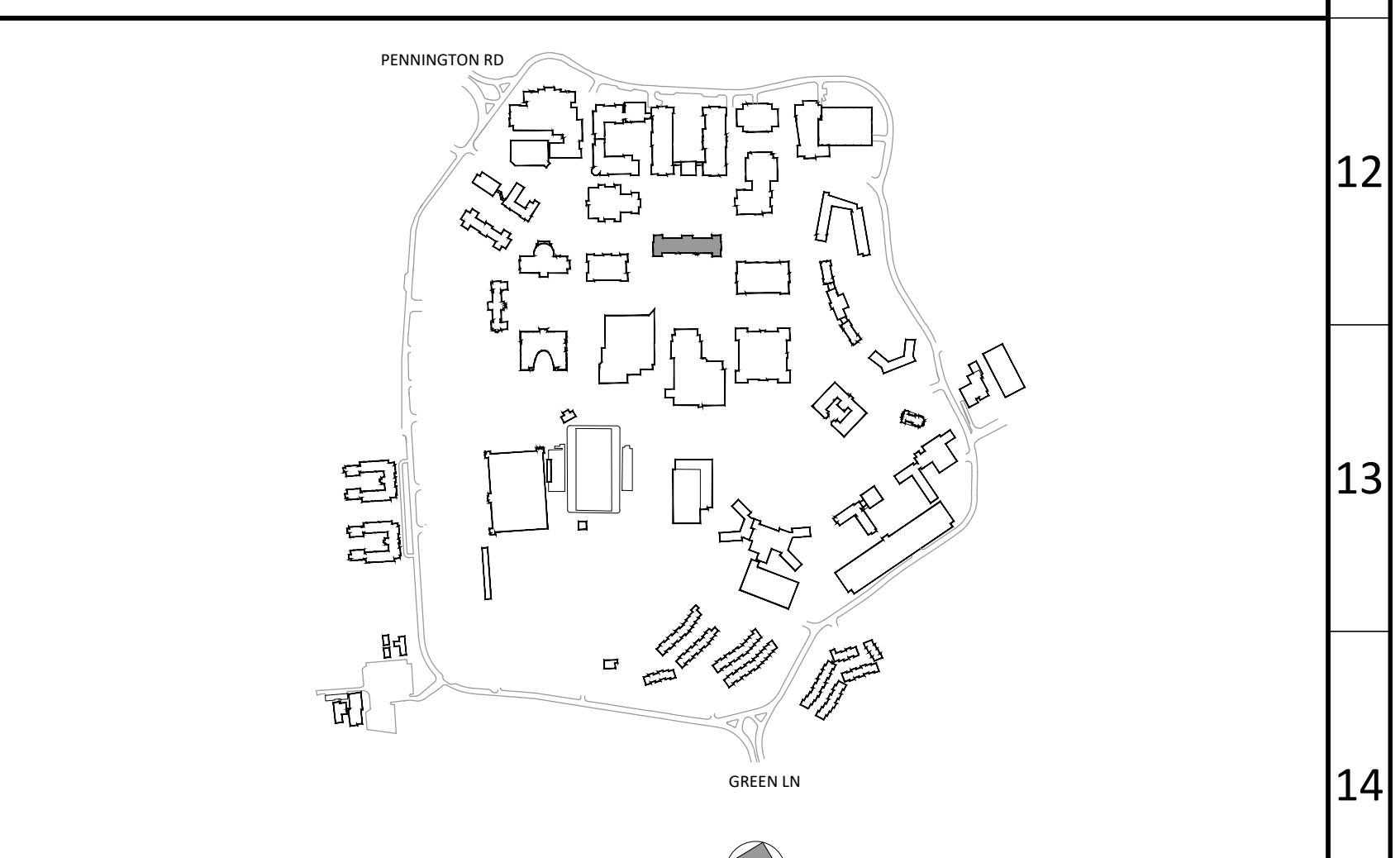
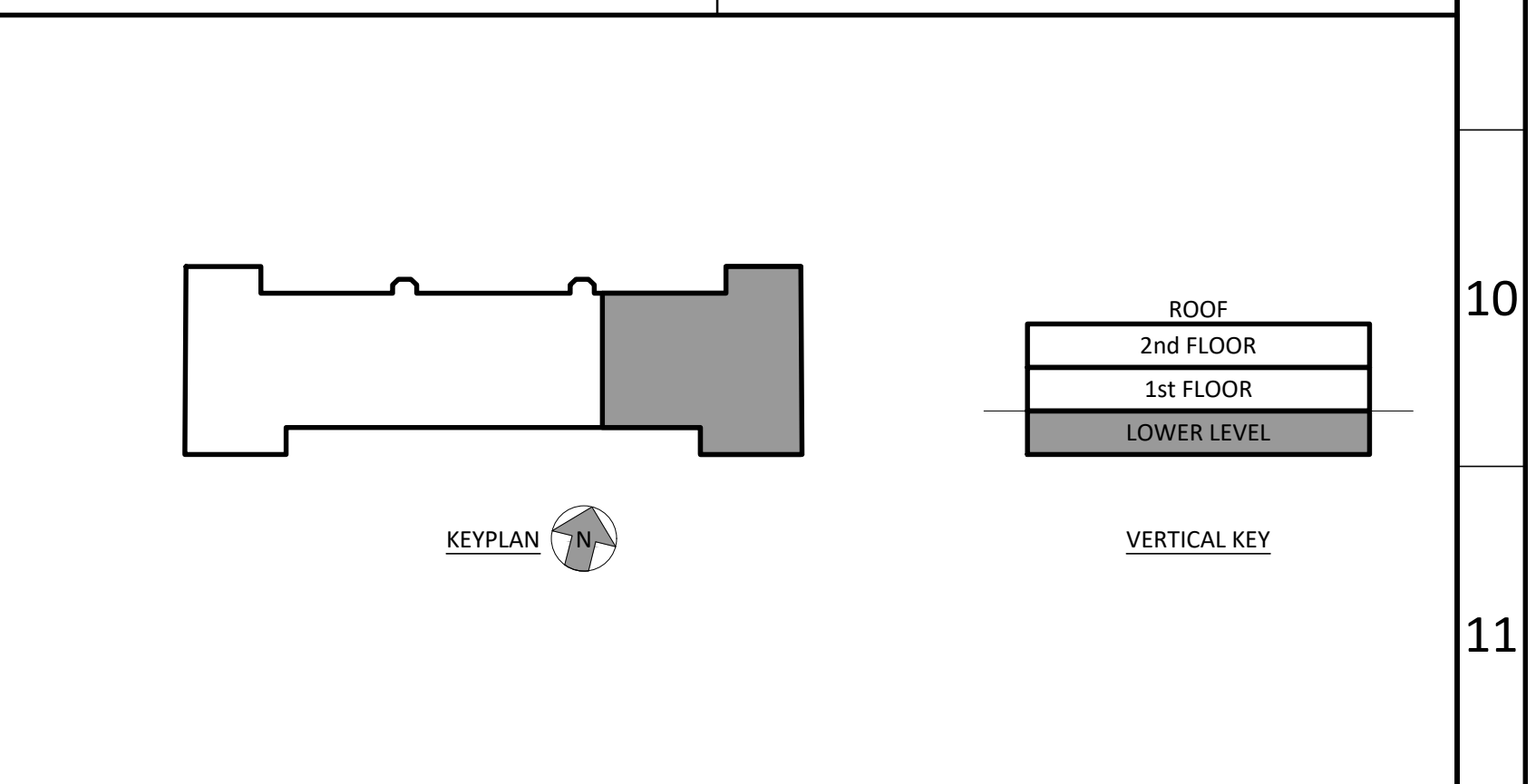
PARTIAL FLOOR PLAN - LOWER LEVEL Scale: 1/16"=1'-0" Drawing: **E101** Detail: **03**

- KEY NOTES (SYMBOLS ①, ②, ETC.)**
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
 - Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
 - Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Per-terminated On Both Ends At The MDF between required interconnection points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
 - Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.
 - New Life Safety Management System Server And Cabling To Connect To LSMS Network. See Specifications And Cable Infrastructure Package A Set For Additional Details.
 - Provide New Fire Alarm Network Switch And Fiber Patch Cords As Required For New Life Safety Management System Network Architecture. Coordinate With TCNJ IT Department For Connection Of Switch To Fiber Network.

- GENERAL NOTES**
- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
 - The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments.
 - Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
 - Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
 - Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
 - When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently Reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.
 - A Portion Of This Work Will Be Occurring In The Path Of An Emergency Egress Route. During All Phases Of This Project, A Protected Emergency Egress Route Must Be Maintained Through Each Affected Emergency Egress Route, Allowing Retreat From The Building. Approval From The Division Of Community Affairs Is Required To Close Or Re-Direct An Egress Route.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
FACP	Fire Alarm Control Panel	FACP	Fire Alarm Control Panel
WCH	Existing Wall-Mounted Connector Housing	EMT	Electrical Metallic Tubing
FACP	Existing Fire Alarm Control Panel	CM	Control Module
□	New Equipment	MM	Monitor Module
□	Existing Equipment	WCH	Wall-Mounted Connector Housing
⊙	Photo Tag	→	Connect To Existing



FIRE ALARM PANEL REPLACEMENT GREEN HALL Scale: 1/8"=1'-0" Drawing: **E101-GRN**

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

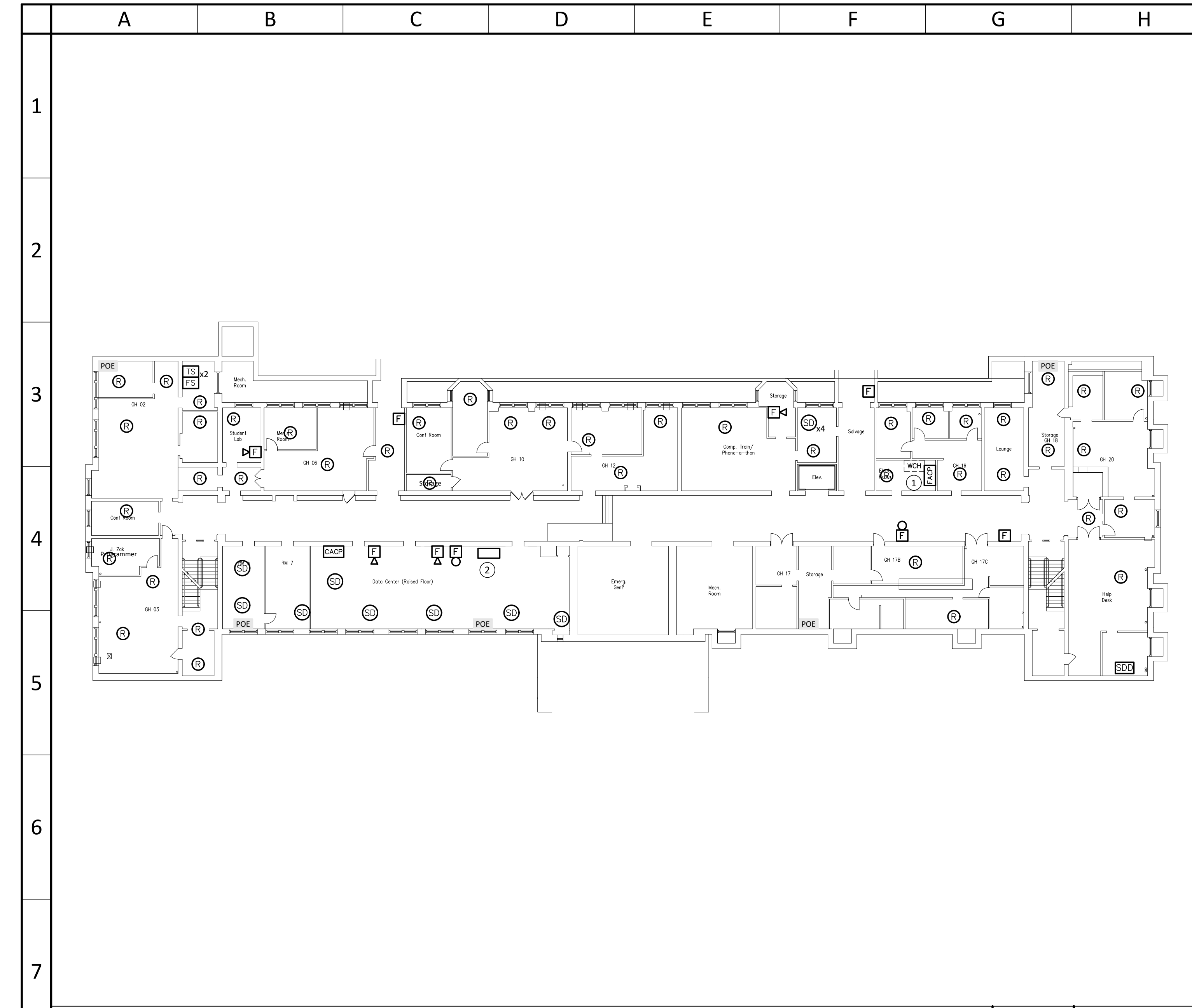
30442

ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

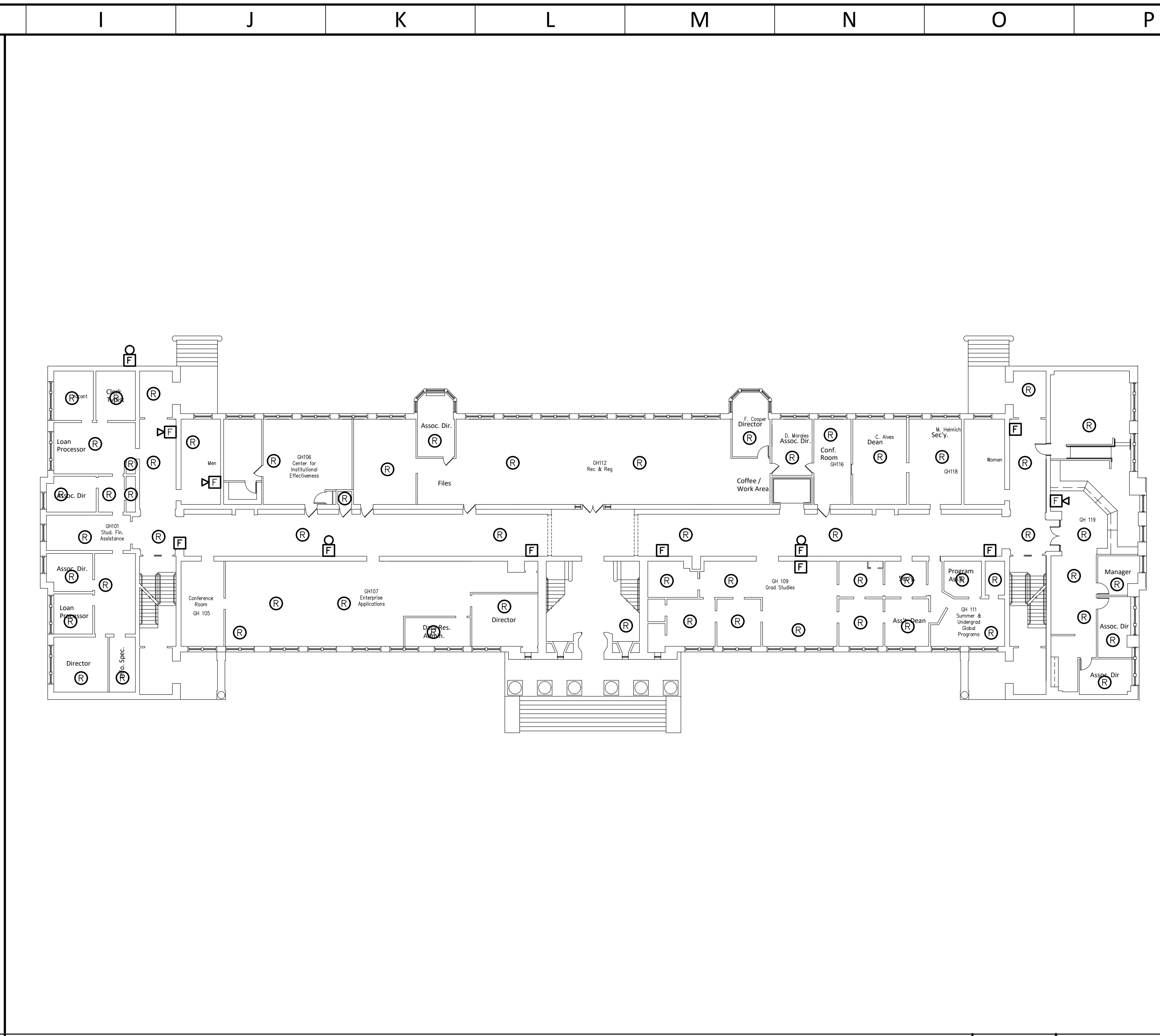
dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM PANEL REPLACEMENT GREEN HALL
dwg. no.
E101-GRN
scale
1/8"=1'-0"
drawn by
SC
checked by
SF
date
5/03/2020



LOWER LEVEL LAYOUT Scale: NTS Drawing: **E102** Detail: **01**



FIRST FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **02**

KEY NOTES (SYMBOLS ①, ②, ETC.)

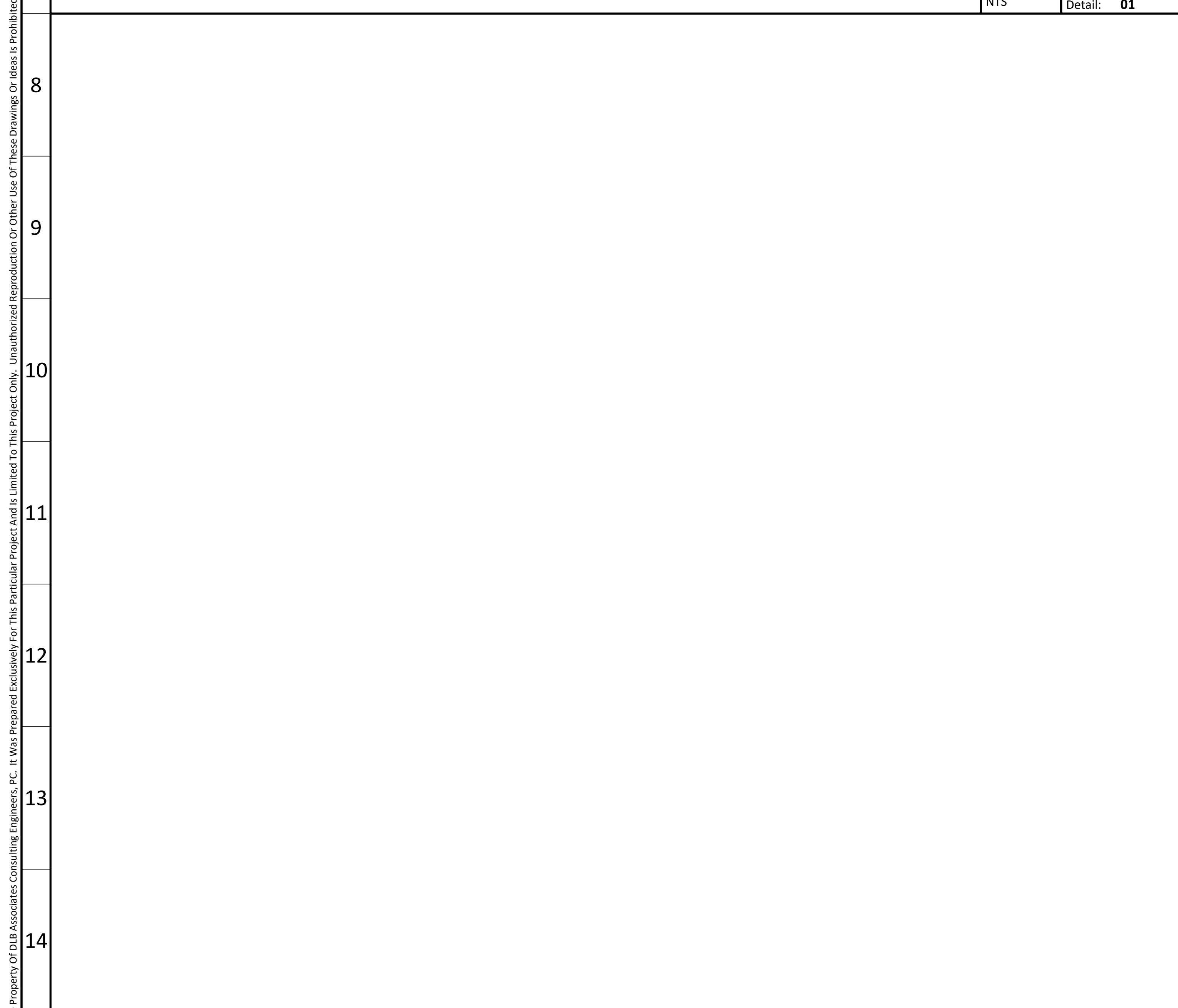
- Existing Fire Alarm Control Panel
- UPS Power Panel. Provide 20A Receptacle For Server Power UPS / Generator Backed Power.

GENERAL NOTES

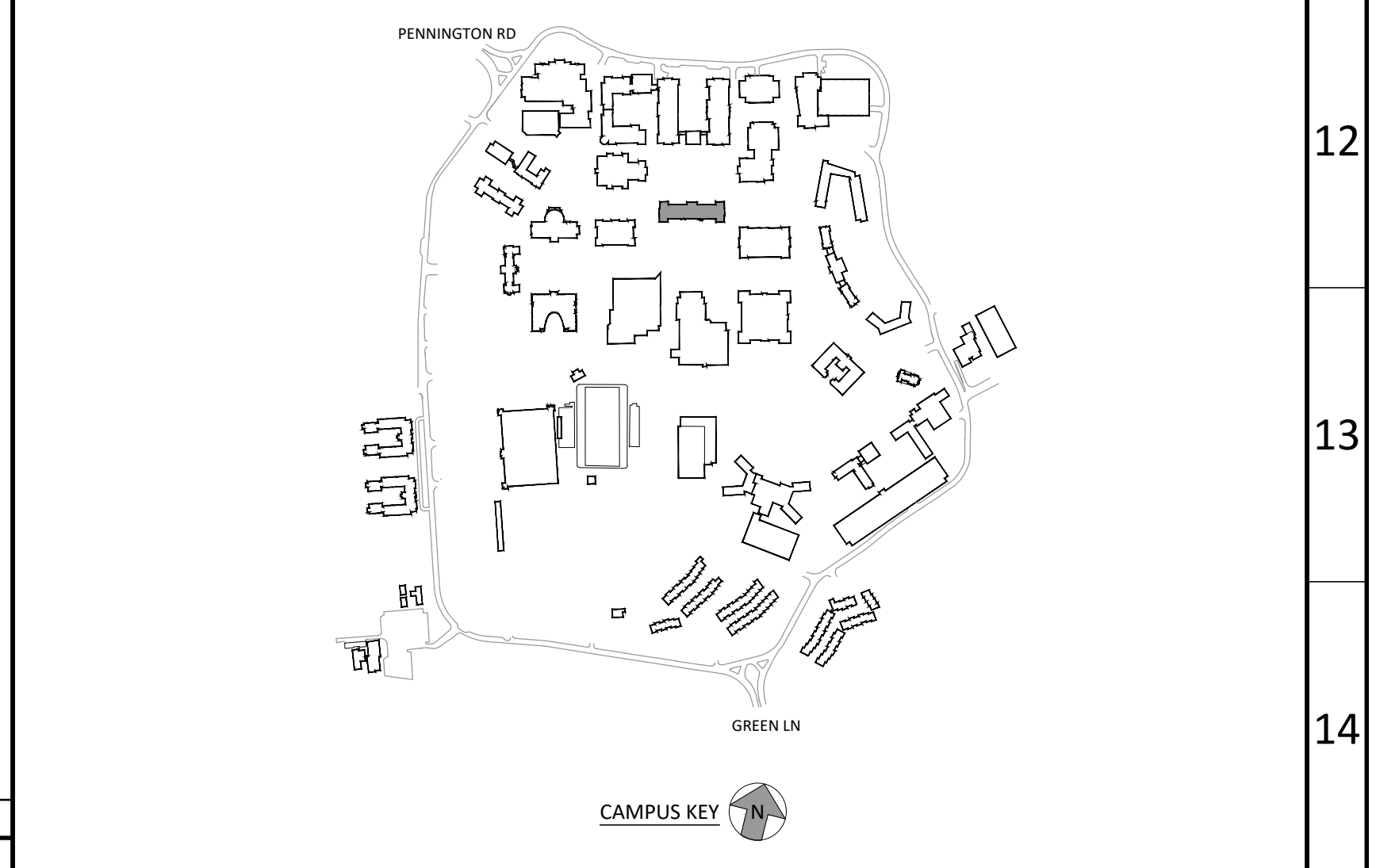
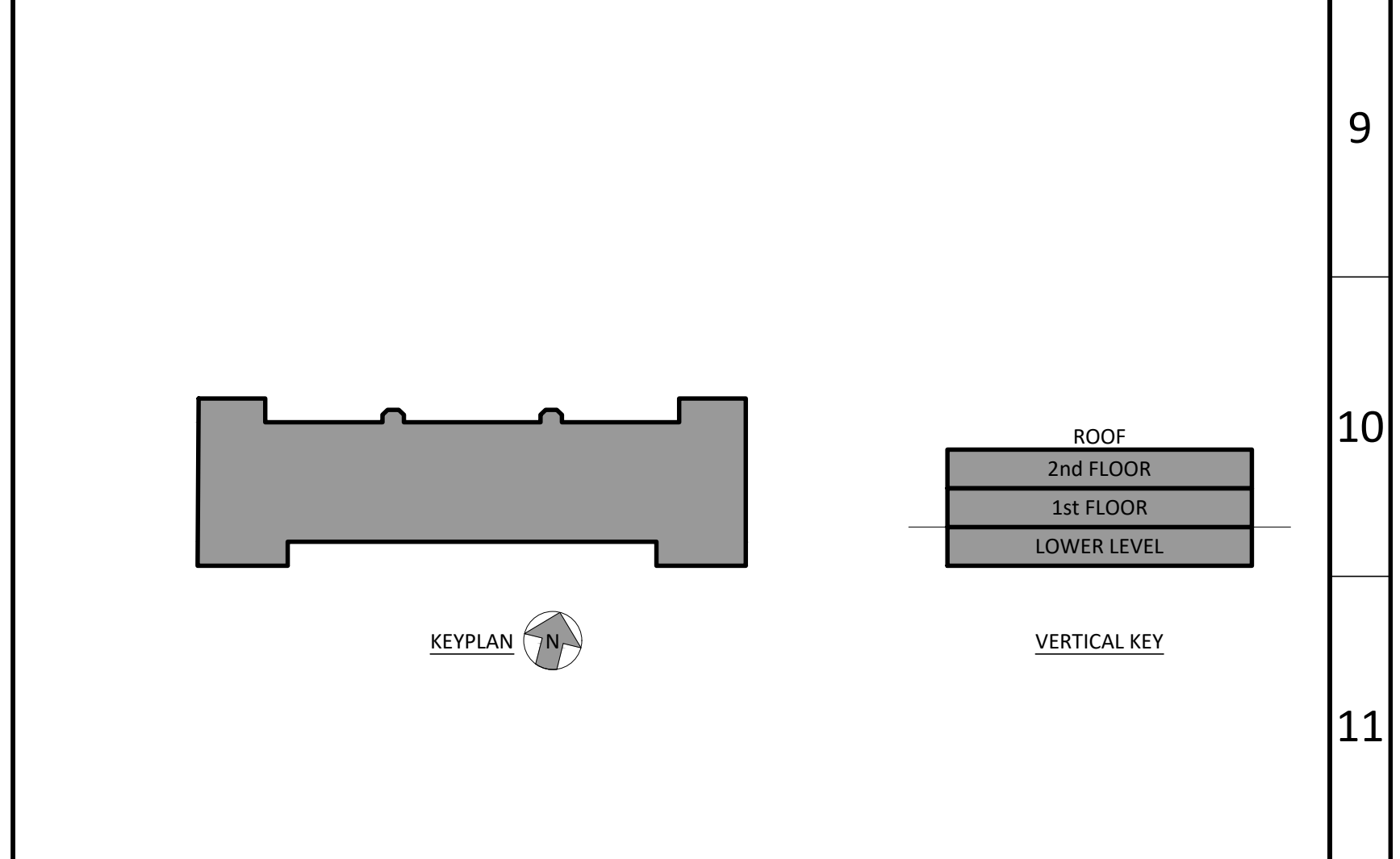
- This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
F	Manual Pull Station	TS	Fire Sprinkler Tamper Switch
⊕	Strobe Only	FS	Fire Sprinkler Flow Switch
⊕F	Horn/Strobe	□	No Access
SD	Smoke Detector	SD	New Smoke Detector
SD _{ER}	Smoke Detector (ER Indicates Elevator Recall)	MP	New Manual Pull Station
SD _{SB}	Smoke Detector With Sounder Base	⊕	New Strobe
⊕	Heat Detector, Combination Fixed Temperature And Rate Of Rise	⊕F	New Horn / Strobe
CO	CO Detector	⊕	Photo ID Tag
BD	Beam Detector	FACP	Fire Alarm Control Panel
SD _{DM}	Duct Mounted Smoke Detector	CO	Carbon Monoxide
FACP	Fire Alarm Control Panel	POE	Point Of Entry
FABA	Fire Alarm Remote Annunciator Panel		
FBAC	Fire Alarm Booster Panel		
CACP	Clean Agent Control Panel		
WCH	Existing Wall Mounted Connector Housing		



SECOND FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **03**



ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018



project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM - EXISTING LAYOUT
GREEN HALL

dwg. no.
E102-GRN

scale	drawn by	checked by	date
AS SHOWN	SC	SF	5/03/2020

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30x42

FIRE ALARM PHOTOS



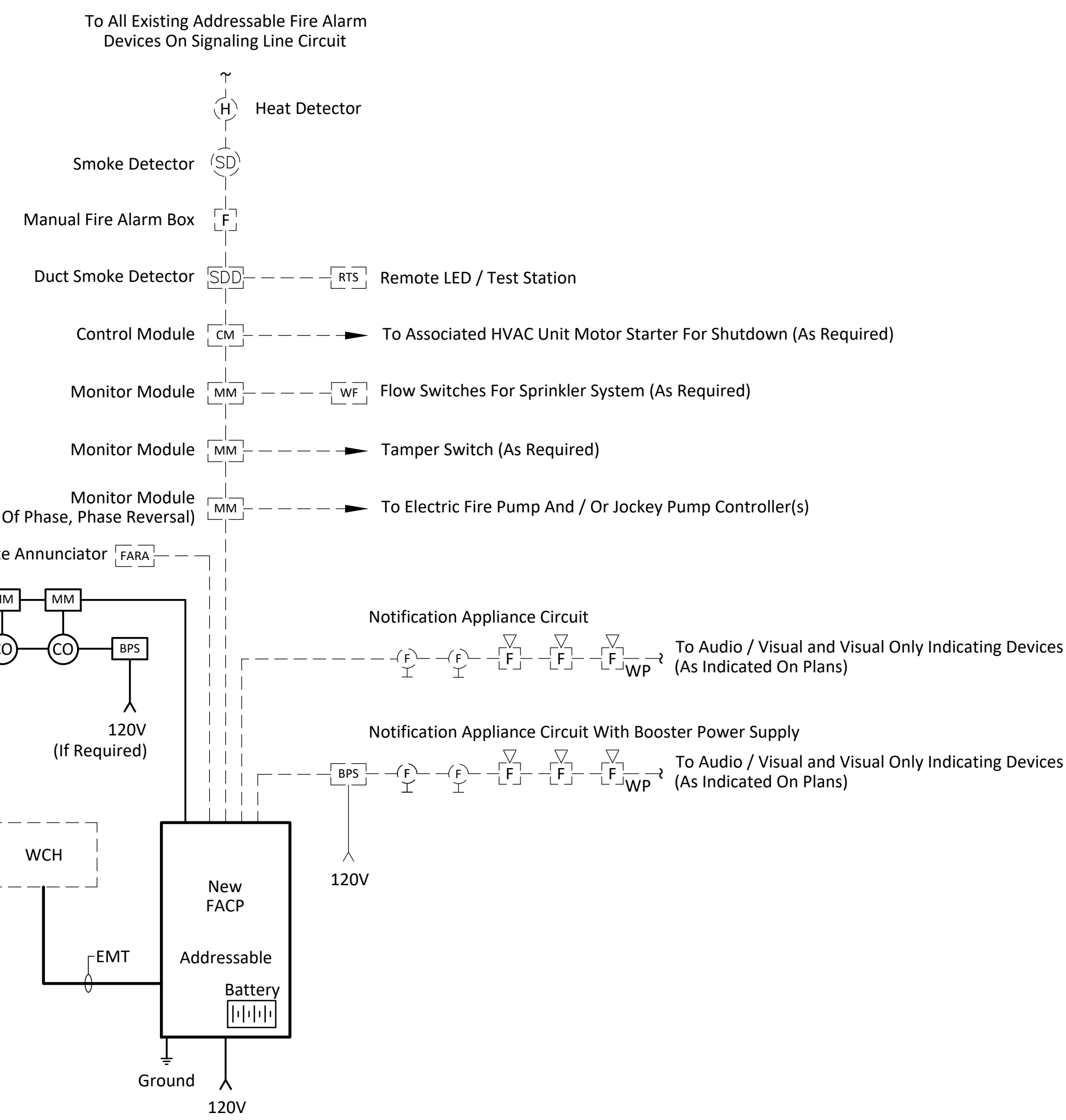
PHOTO A - HONEYWELL FIRE ALARM CONTROL PANEL
Honeywell XLS 1000 Addressable Fire Alarm Control Panel With Exposed Conduit Located Within First Floor Electrical Room



HONEYWELL FIRE ALARM DEVICES
Existing Honeywell Addressable Fire Alarm Devices Located Throughout The Building

FIRE ALARM SCHEDULE

MARK	DESCRIPTION
---	EXISTING FIRE ALARM DEVICES, PANEL, CIRCUITS, ETC
CO	CO DETECTOR (WITH LOCAL VISUAL AND AUDIO)
MM	FIRE ALARM MONITOR MODULE
---	POWER OR SIGNALING LINE CIRCUIT
BPS	BOOSTER POWER SUPPLY

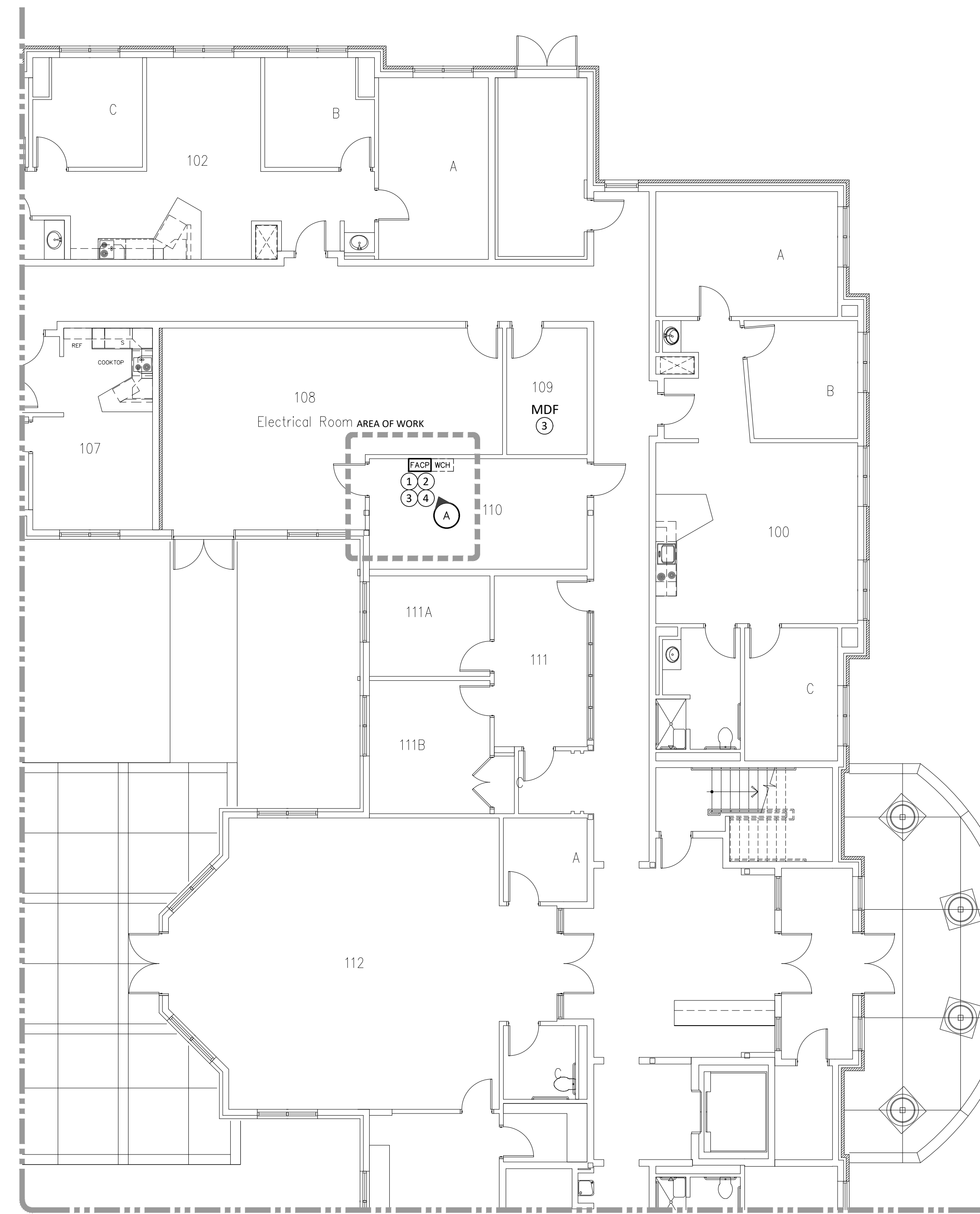


- NOTES:**
- General
 - The Riser Above Depicts A "Honeywell" Basis of Design With A New Honeywell FACP. All Existing Honeywell End Devices Would Be Compatible With The New FACP.
 - Install New FACP With Capacity Noted Below.
 - New Honeywell FACP Would Communicate The Point Identification Of Each Device To The New Front End.
 - This Building Would Be Considered A Fully Addressable Building.
 - The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - The FACP Shall Be Connected To The Campus Life Safety Management System.
 - Equipment
 - Hausdoerffer Hall Is Currently Covered By Fire Notification And Detection / Initiation Devices From An Addressable Honeywell XLS 1000 System.
 - Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring
 - The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing
 - Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.

FIRE ALARM RISER Scale: NTS Drawing: **E101** Detail: **01**

- NOTES:**
- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNJ/IT
 - Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
 - Install Fiber Jumpers Between WCH And FACP.

FIRE ALARM FIBER ENCLOSURE INSTALLATION Scale: NTS Drawing: **E101** Detail: **02**



PARTIAL FLOOR PLAN - FIRST FLOOR Scale: 1/8"=1'-0" Drawing: **E101** Detail: **03**

KEY NOTES (SYMBOLS ①, ②, ETC.)

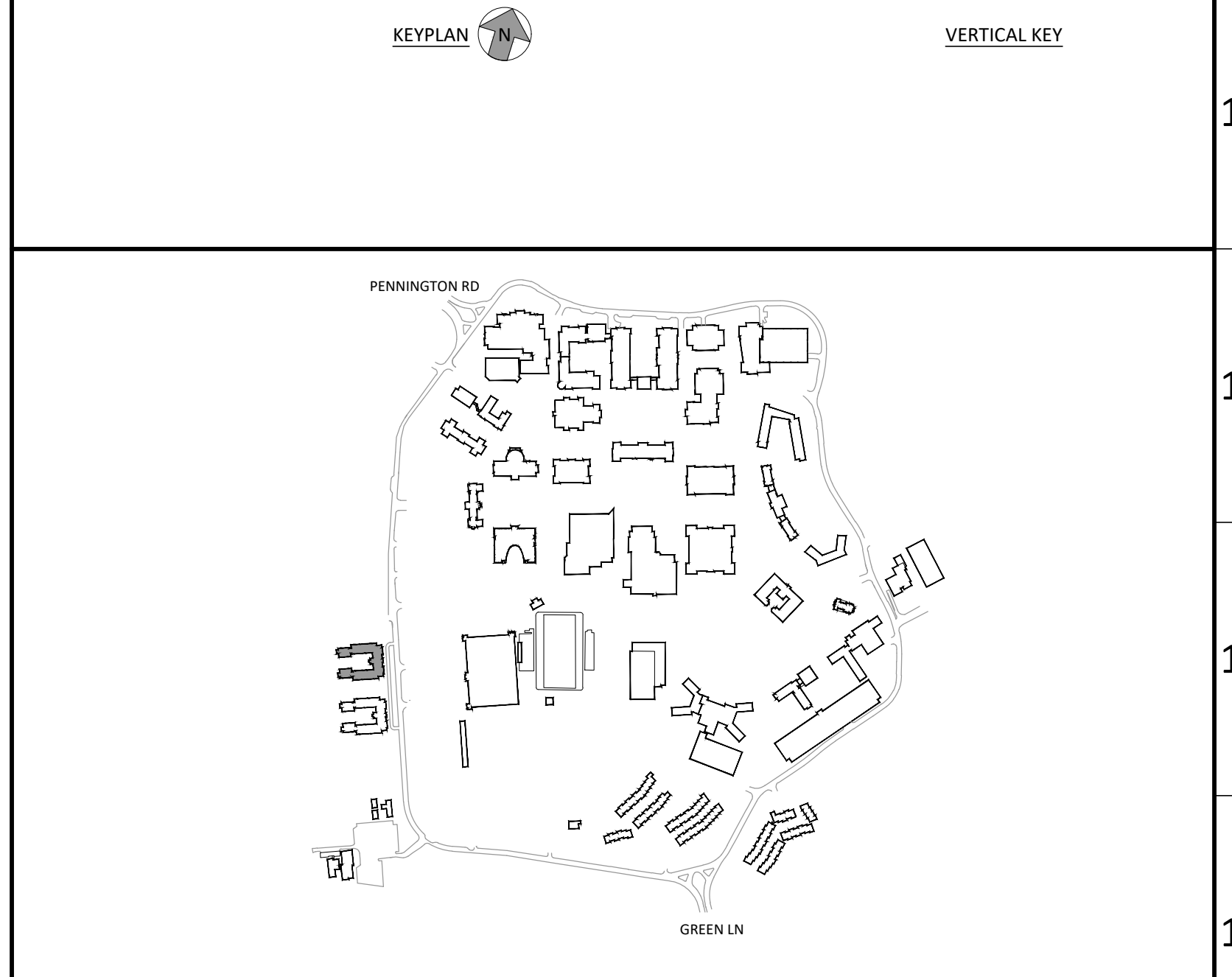
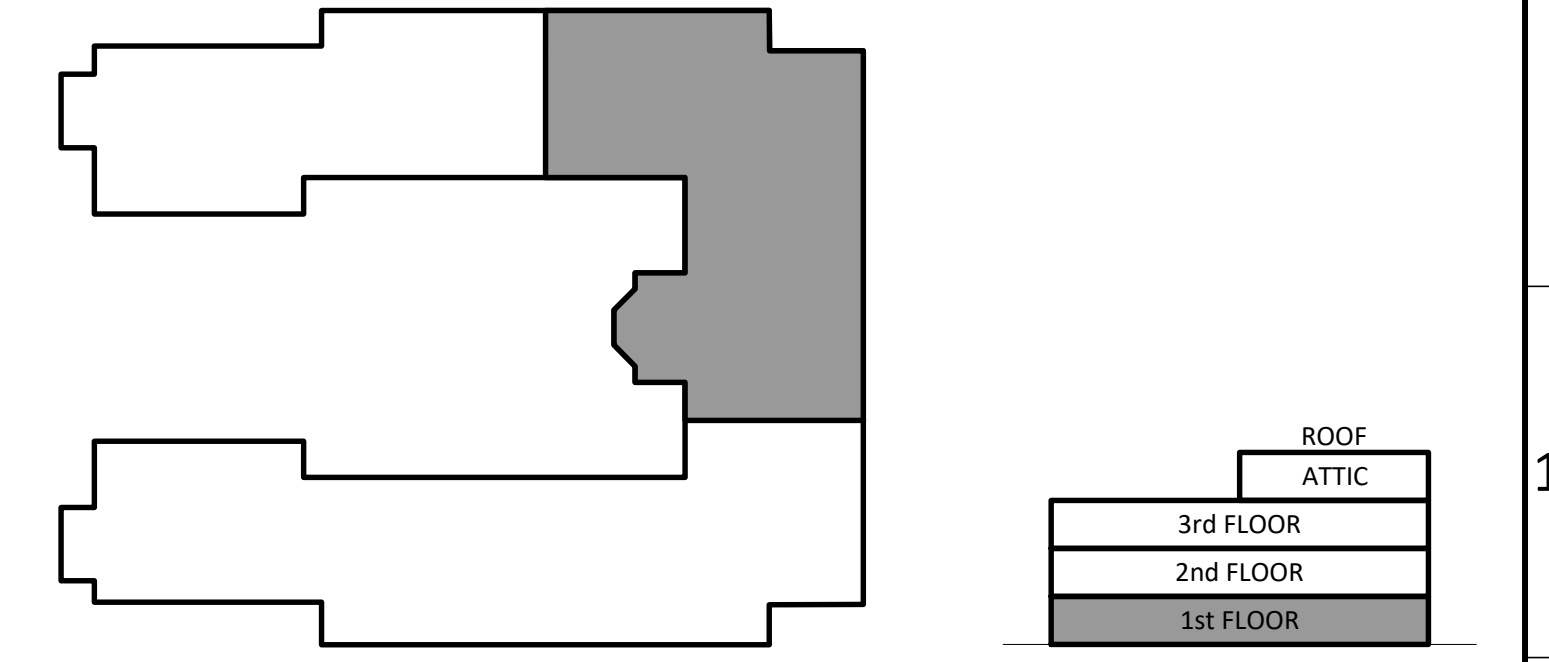
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
- Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
- Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
- Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.
- Provide New CO Devices Connected To New Panel. See Sheet E102 For Approximate Location.

GENERAL NOTES

- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
- The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments. Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
- Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
- Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
- When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently Reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.
- CO Detectors To Provide Local Audio Visual And Supervisory At FACP And LSMS Control Station.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
FACP	Fire Alarm Control Panel	□	New Equipment
WCH	Existing Wall-Mounted Connector Housing	○	Existing Equipment
FACP	Existing Fire Alarm Control Panel	○	Photo Tag
		→	Connect To Existing



CAMPUS KEY

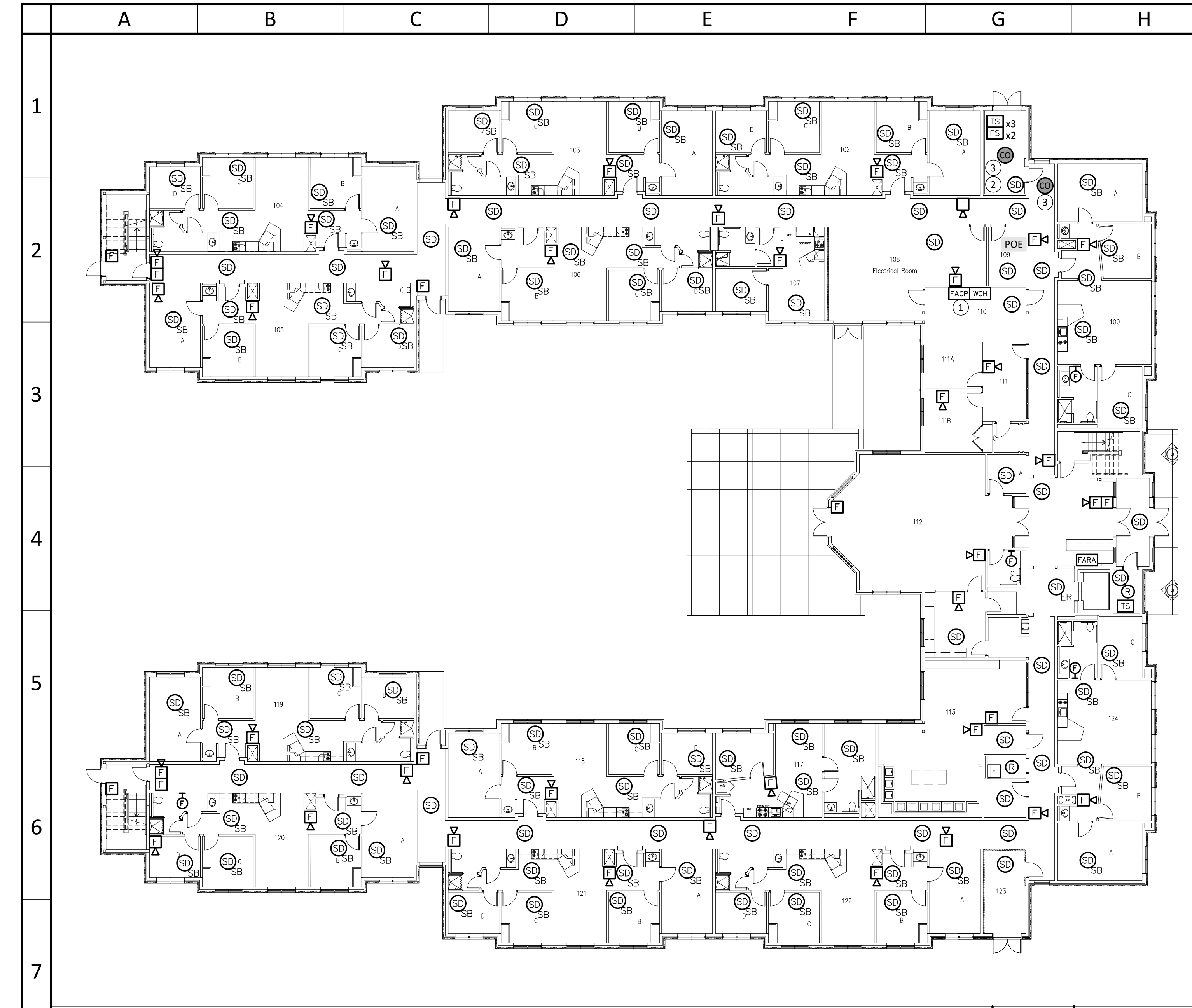
This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30442

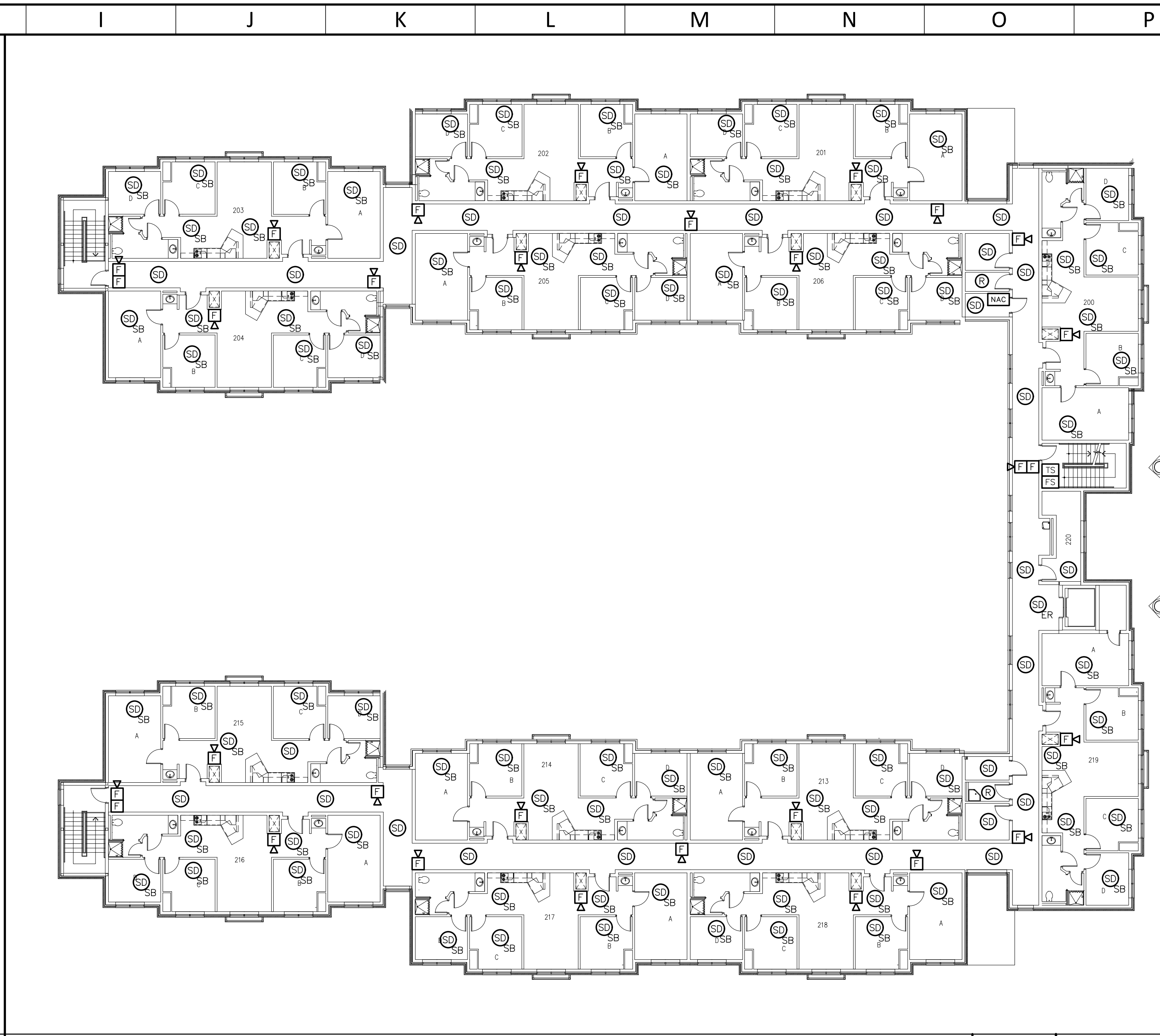
dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

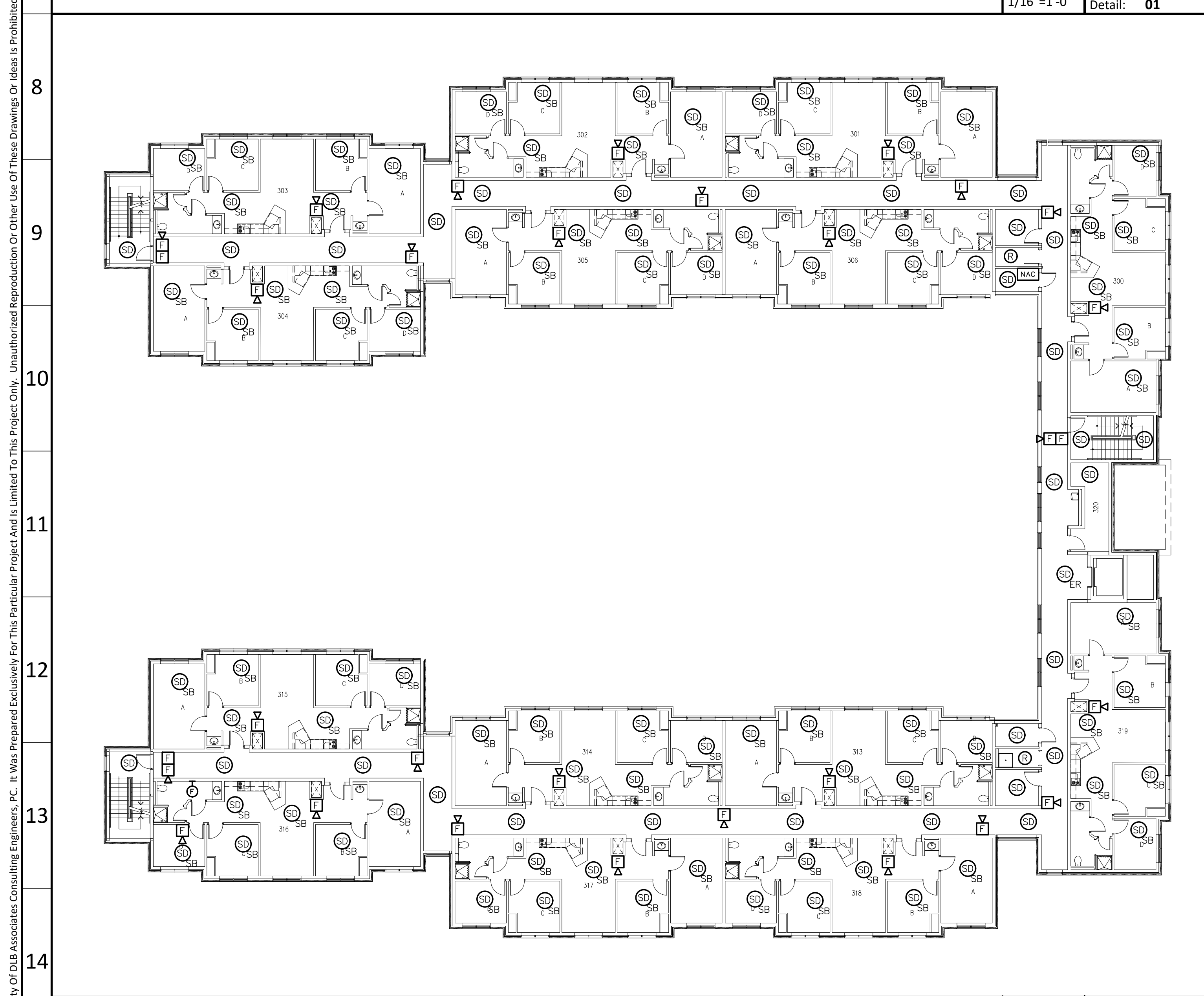
title
FIRE ALARM PANEL REPLACEMENT
HAUSDOERFFER HALL
dwg. no.
E101-HAUS
scale
1/8" = 1'-0"
drawn by
SC
checked by
SF
date
5/03/2020



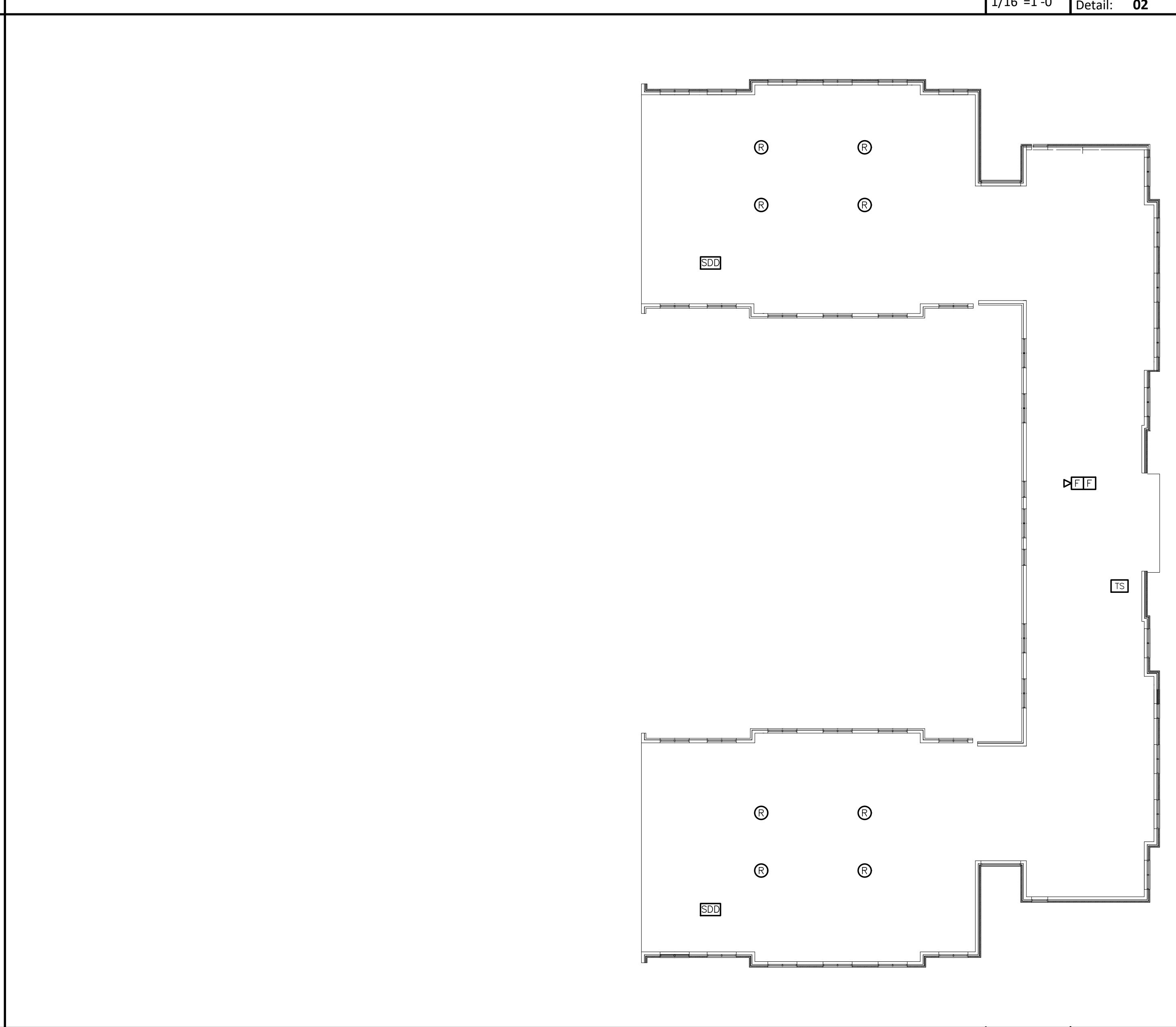
FIRST FLOOR LAYOUT Scale: 1/16"=1'-0" Drawing: **E102**
Detail: **01**



SECOND FLOOR LAYOUT Scale: 1/16"=1'-0" Drawing: **E102**
Detail: **02**



THIRD FLOOR LAYOUT Scale: 1/16"=1'-0" Drawing: **E102**
Detail: **03**



ATTIC LAYOUT Scale: 1/16"=1'-0" Drawing: **E102**
Detail: **04**

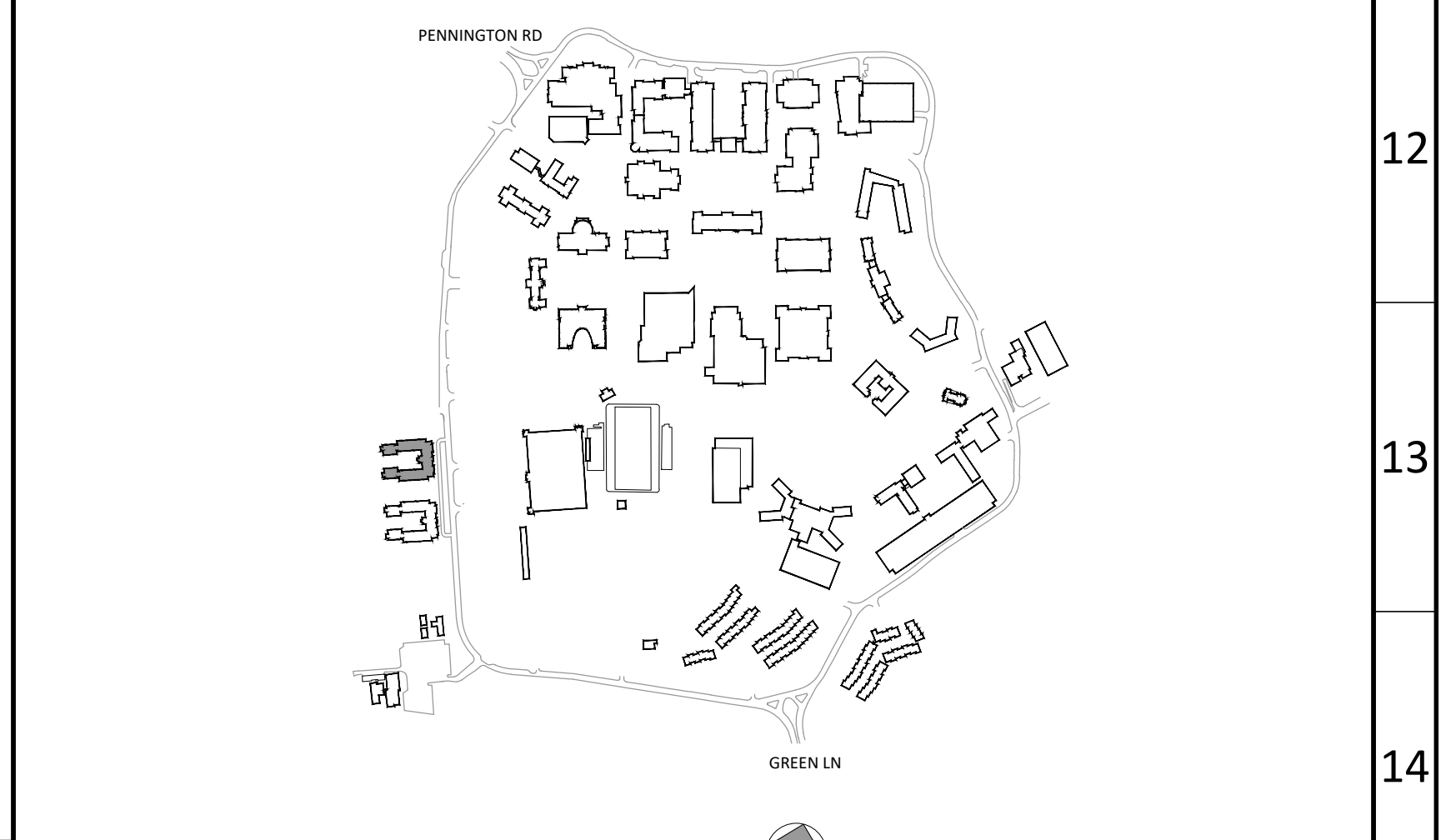
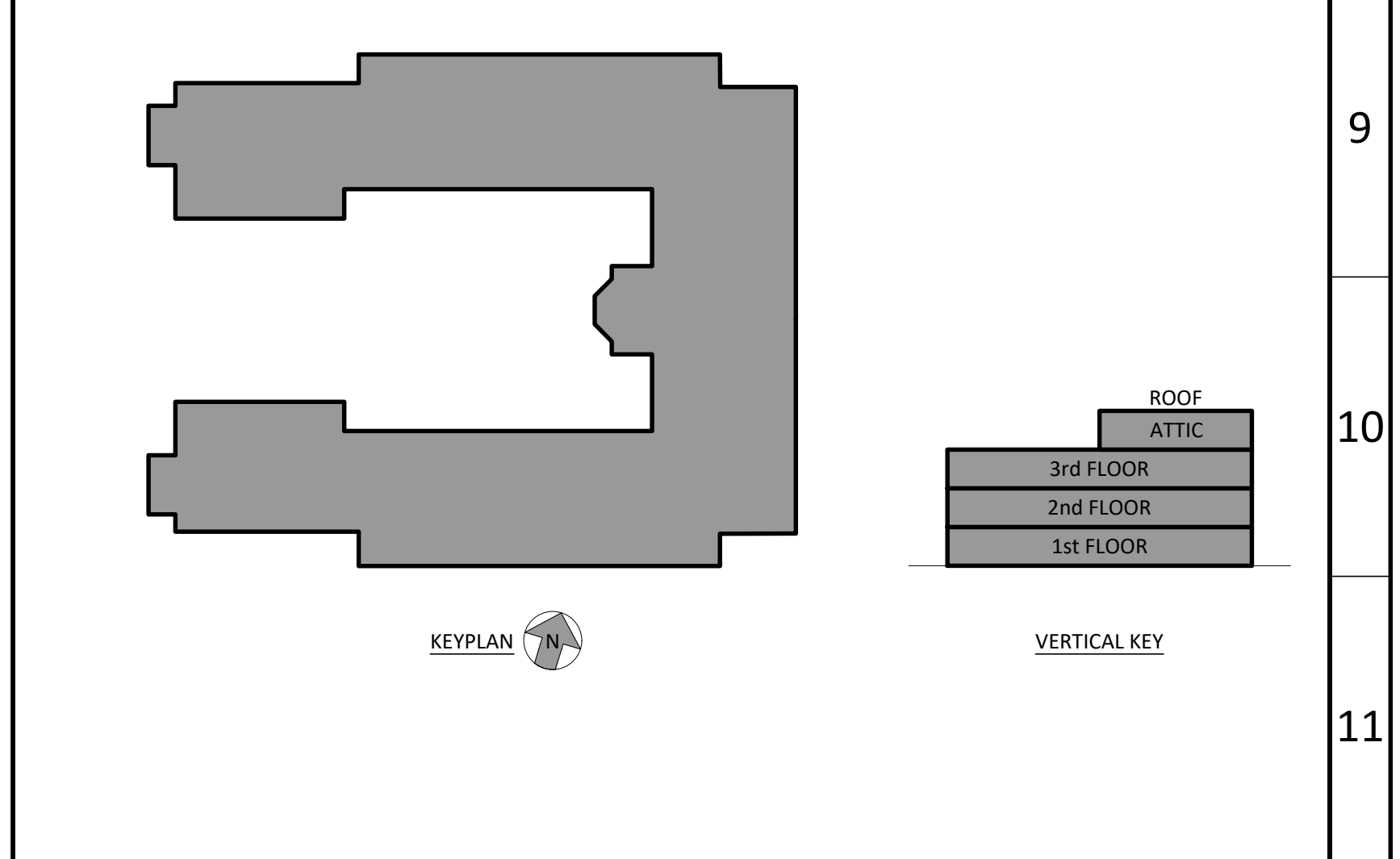
- KEY NOTES (SYMBOLS ①, ②, ETC.)**
- Existing Fire Alarm Control Panel.
 - Existing Gas Fired Water Heater.
 - New CO Detector.

GENERAL NOTES

- This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
☐	Manual Pull Station	☐	No Access
⊙	Strobe Only	⊙	New Smoke Detector
☐	Horn/Strobe	☐	New Manual Pull Station
⊙	Smoke Detector	⊙	New Strobe
⊙ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	☐	New Horn / Strobe
⊙ _{SB}	Smoke Detector With Sounder Base	⊙	New Carbon Monoxide Detector With Local Audio And Visual Notification.
⊙	Heat Detector, Combination Fixed Temperature And Rate Of Rise	⊙	Photo Location Indicator
⊙	CO Detector	FACP	Fire Alarm Control Panel
☐ _{SD}	Duct Mounted Smoke Detector	CO	Carbon Monoxide
☐	Fire Alarm Control Panel	POE	Point Of Entry
☐ _{ARA}	Fire Alarm Remote Annunciator Panel		
☐ _{MAC}	Fire Alarm Booster Panel		
☐ _{TS}	Fire Sprinkler Tamper Switch		
☐ _{FS}	Fire Sprinkler Flow Switch		
☐ _{WCH}	Existing Wall Mounted Connector Housing		

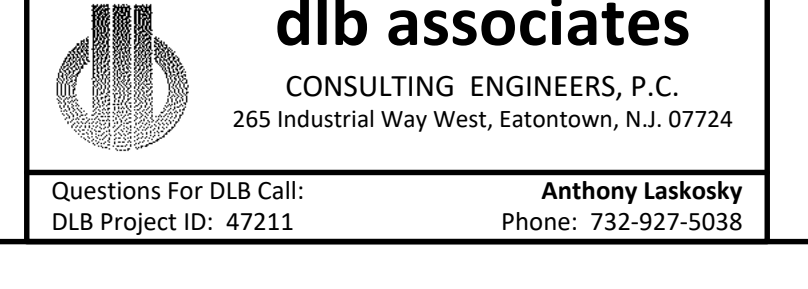


30442

ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

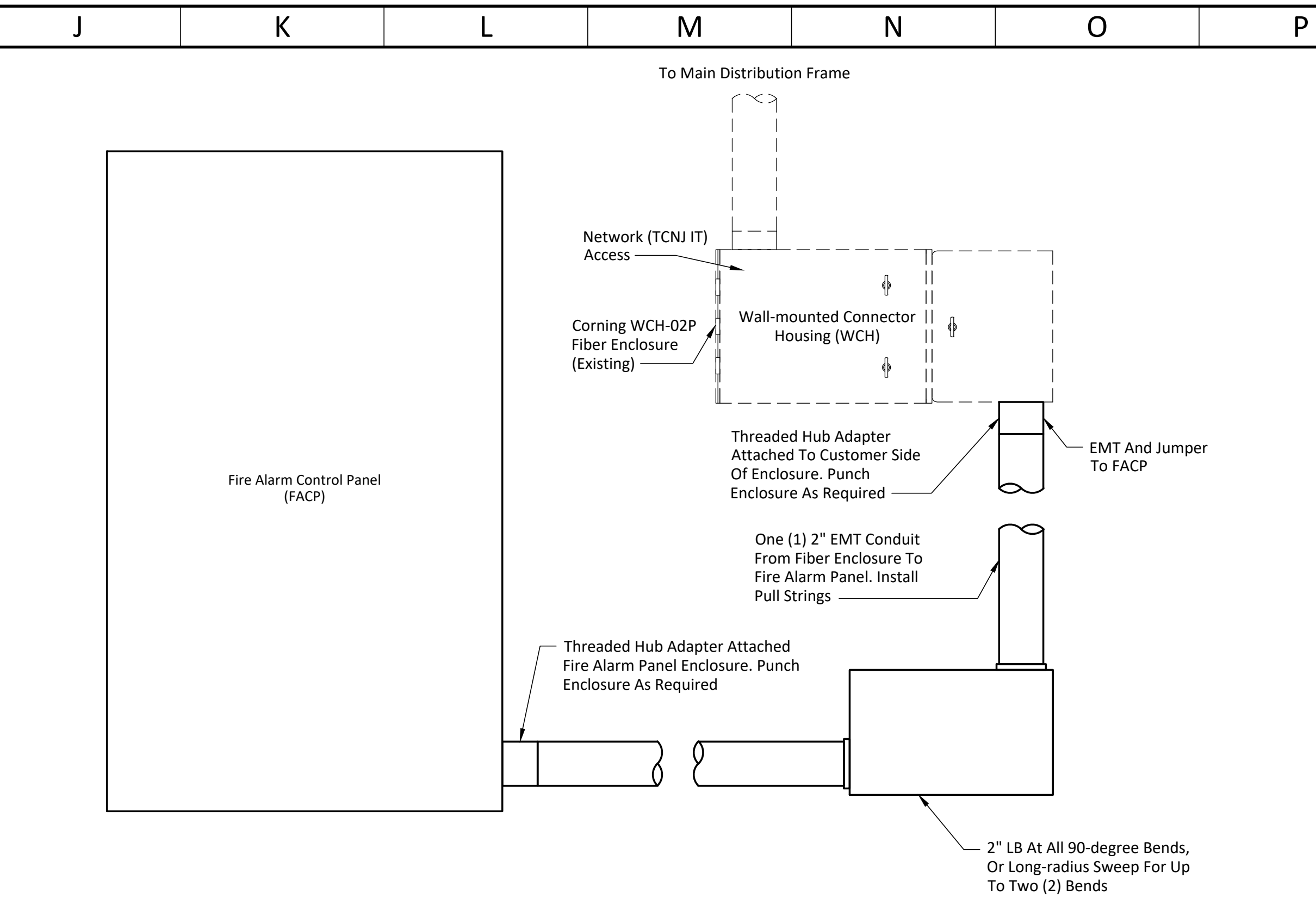
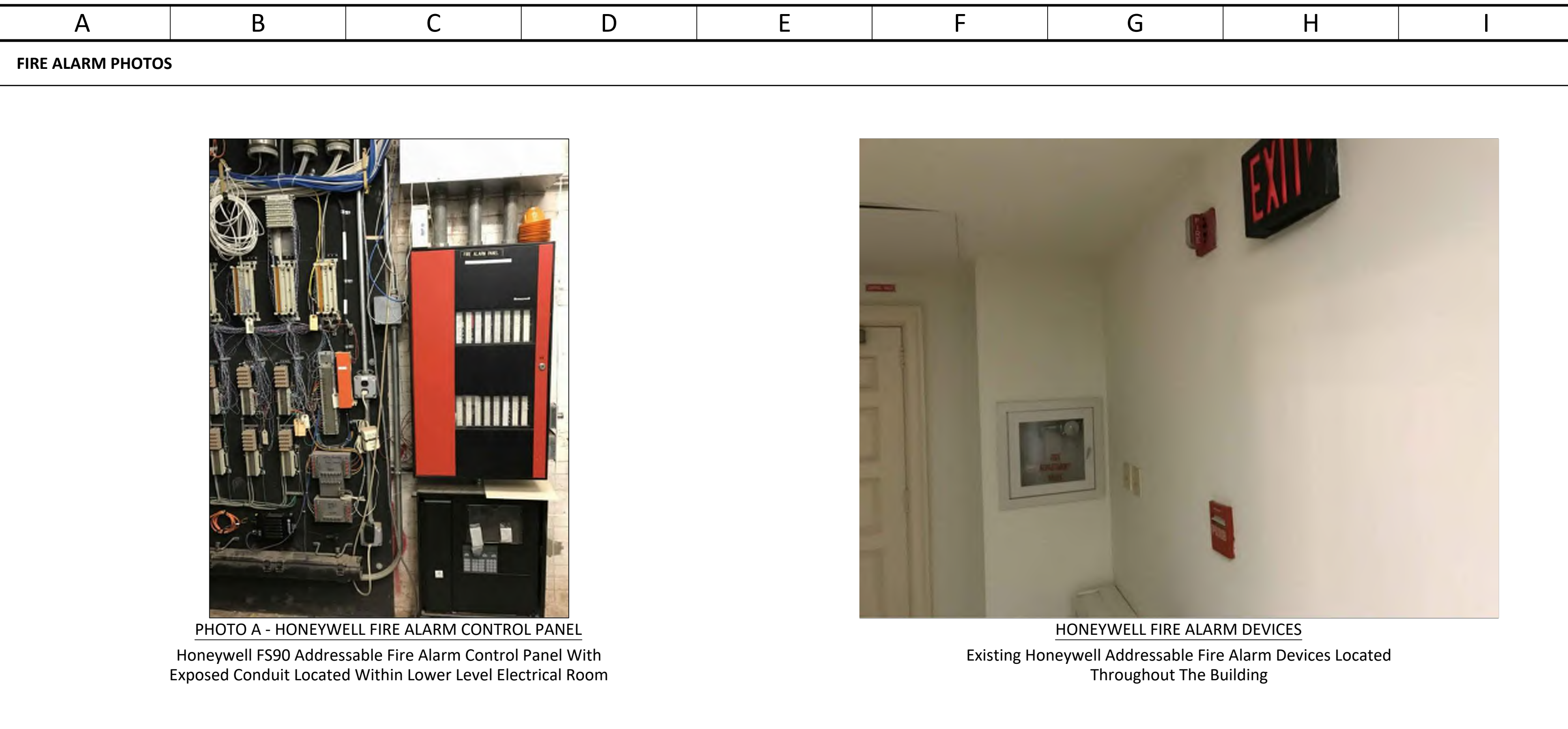
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038



project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM - EXISTING LAYOUT
HAUSDOERFFER HALL
dwg. no.
E102-HAUS
scale AS SHOWN drawn by SC checked by SF date 5/03/2020

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

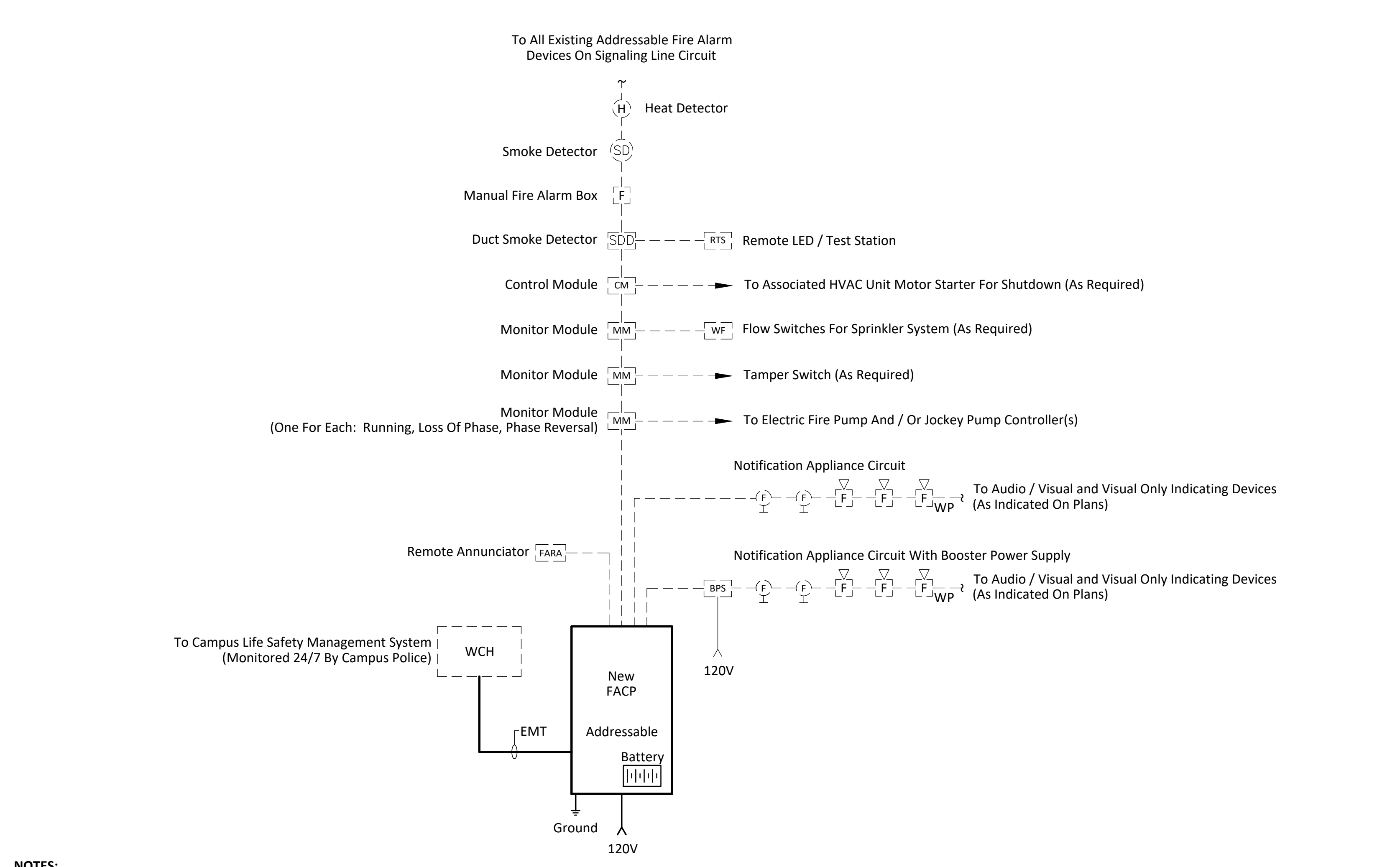


NOTES:

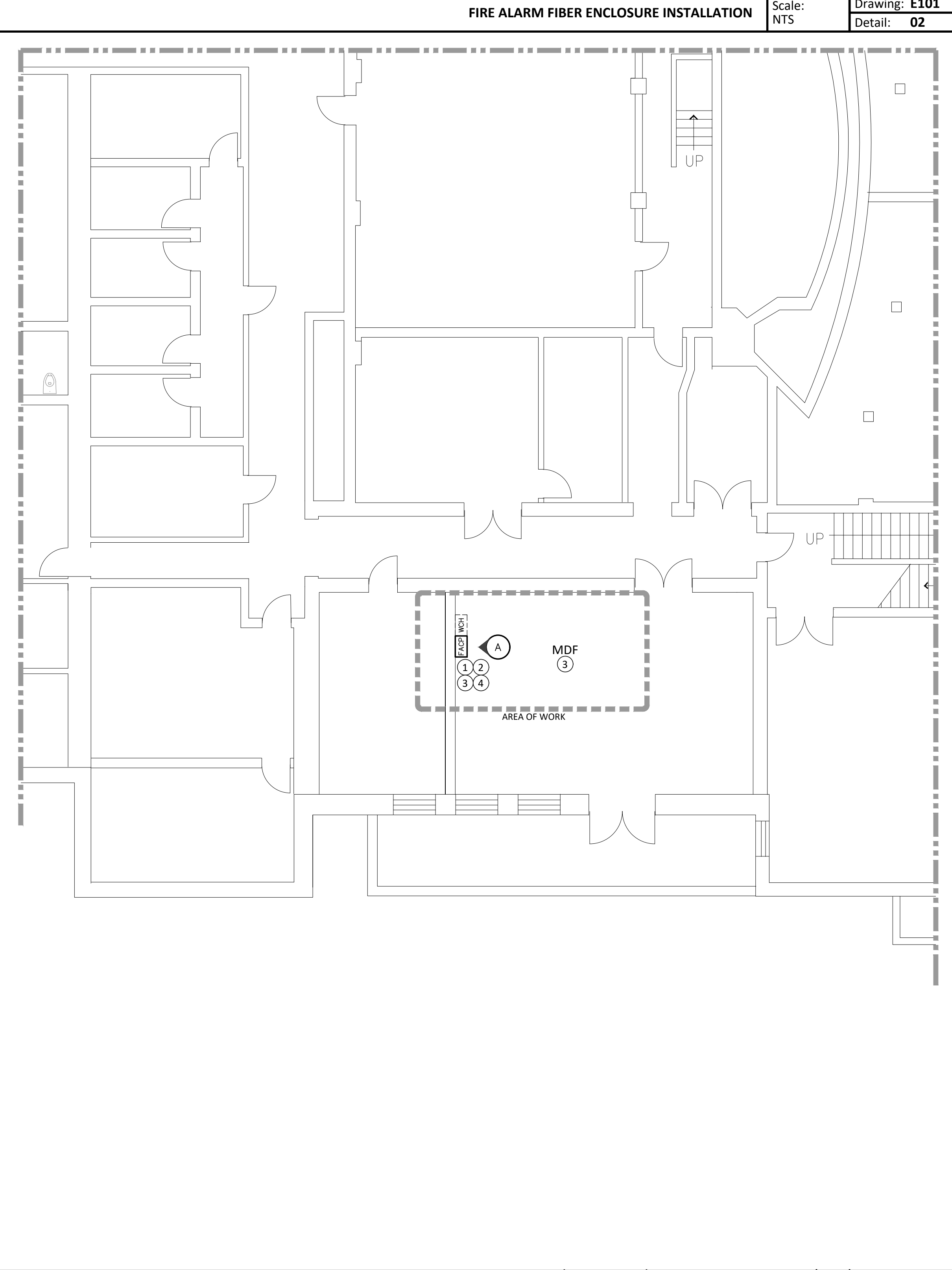
- Coordinate Position Installation of EMT into FACP Enclosure With Respect To Fiber Termination Connections in FACP Enclosure, And With TCNJ/IT
- Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
- Install Fiber Jumpers Between WCH And FACP.

- KEY NOTES (SYMBOLS ①, ②, ETC.)**
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
 - Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
 - Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, BETWEEN The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
 - Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.

- GENERAL NOTES**
- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
 - The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments.
 - Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
 - Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
 - Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
 - When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.

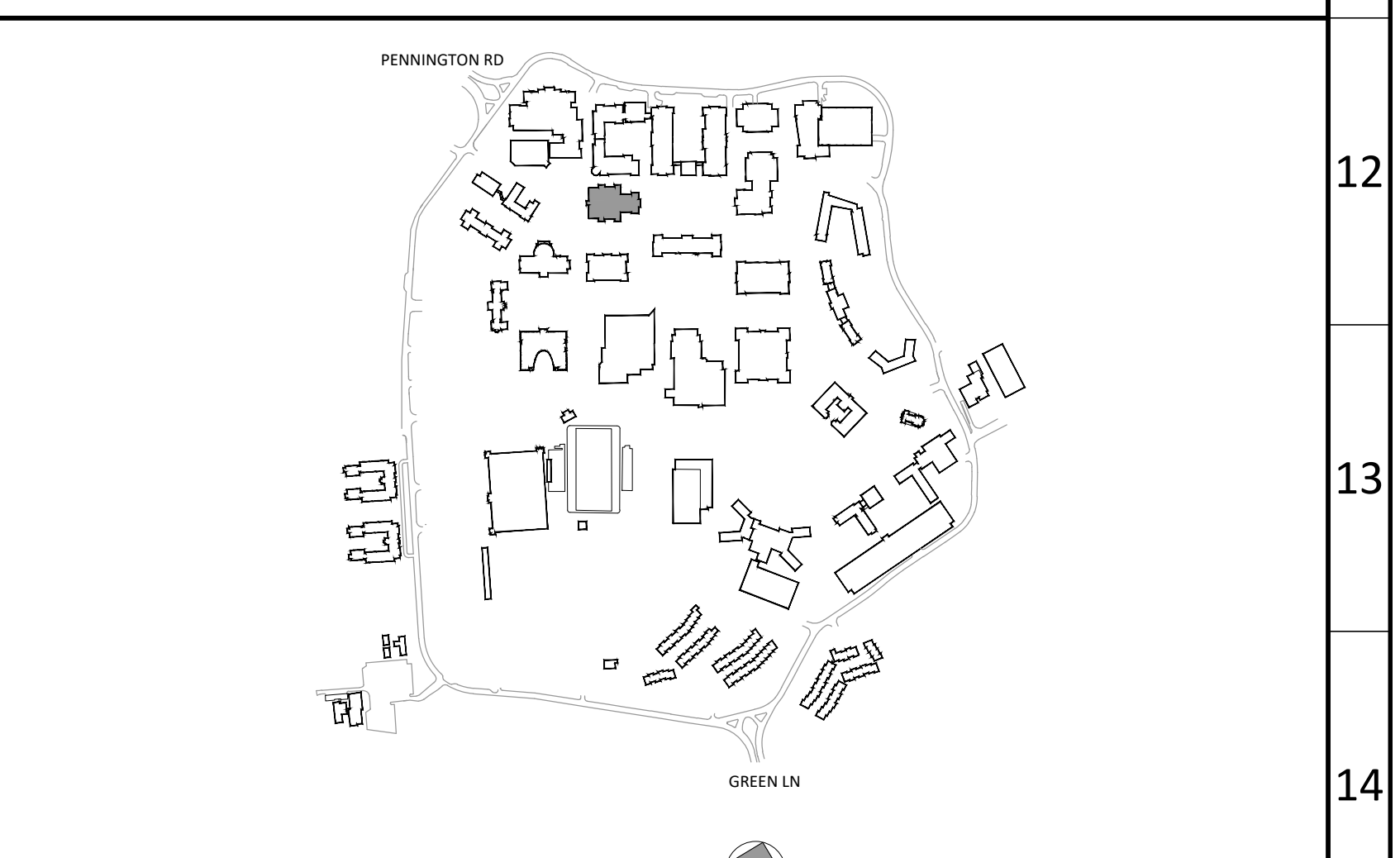
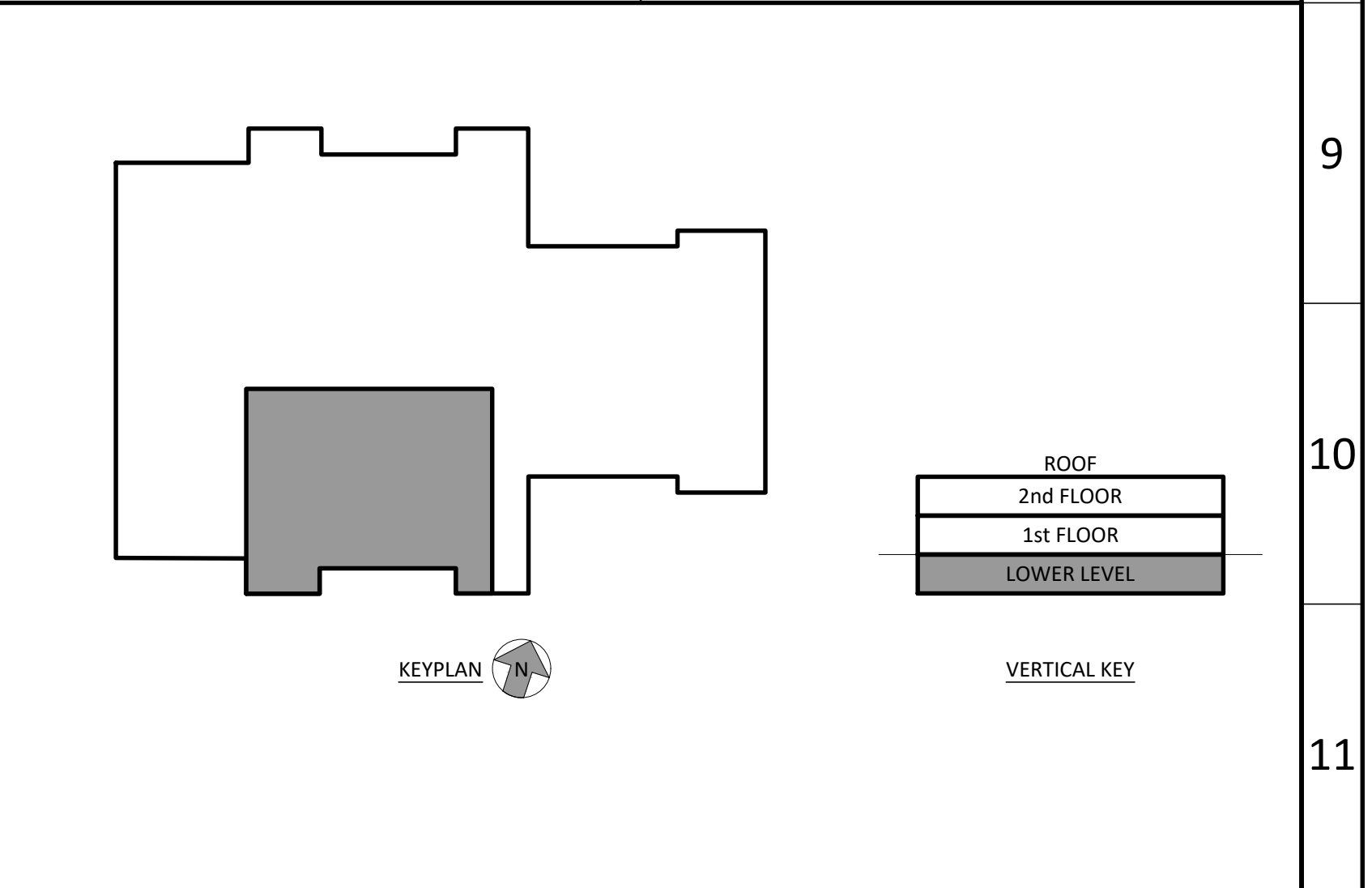


- NOTES:**
- General
 - The Riser Above Depicts A "Honeywell" Basis of Design With A New Honeywell FACP. All Existing Honeywell End Devices Would Be Compatible With The New FACP.
 - Install New FACP With Capacity Noted Below.
 - New Honeywell FACP Would Communicate The Point Identification Of Each Device To The New Front End.
 - This Building Would Be Considered A Fully Addressable Building.
 - The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - The FACP Shall Be Connected To The Campus Life Safety Management System.
 - Equipment
 - Kendall Hall Is Currently Covered By Fire Notification And Detection / Initiation Devices From An Addressable Honeywell FS90 System.
 - Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring
 - The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing
 - Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.



PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
FACP	Fire Alarm Control Panel	FACP	Fire Alarm Control Panel
WCH	Existing Wall-Mounted Connector Housing	EMT	Electrical Metallic Tubing
FACP	Existing Fire Alarm Control Panel	CM	Control Module
[Symbol]	New Equipment	MM	Monitor Module
[Symbol]	Existing Equipment	WCH	Wall-Mounted Connector Housing
[Symbol]	Photo Tag		
[Symbol]	Connect To Existing		



FIRE ALARM RISER Scale: NTS Drawing: E101 Detail: 01

PARTIAL FLOOR PLAN - LOWER LEVEL Scale: 1/8"=1'-0" Drawing: E101 Detail: 03

FIRE ALARM PANEL REPLACEMENT KENDALL HALL title

project: TCNJ - CAMPUS FIRE ALARM PROJECT PART B - HARDWARE & SOFTWARE UPGRADES 2000 PENNINGTON ROAD, EWING NJ, 08618

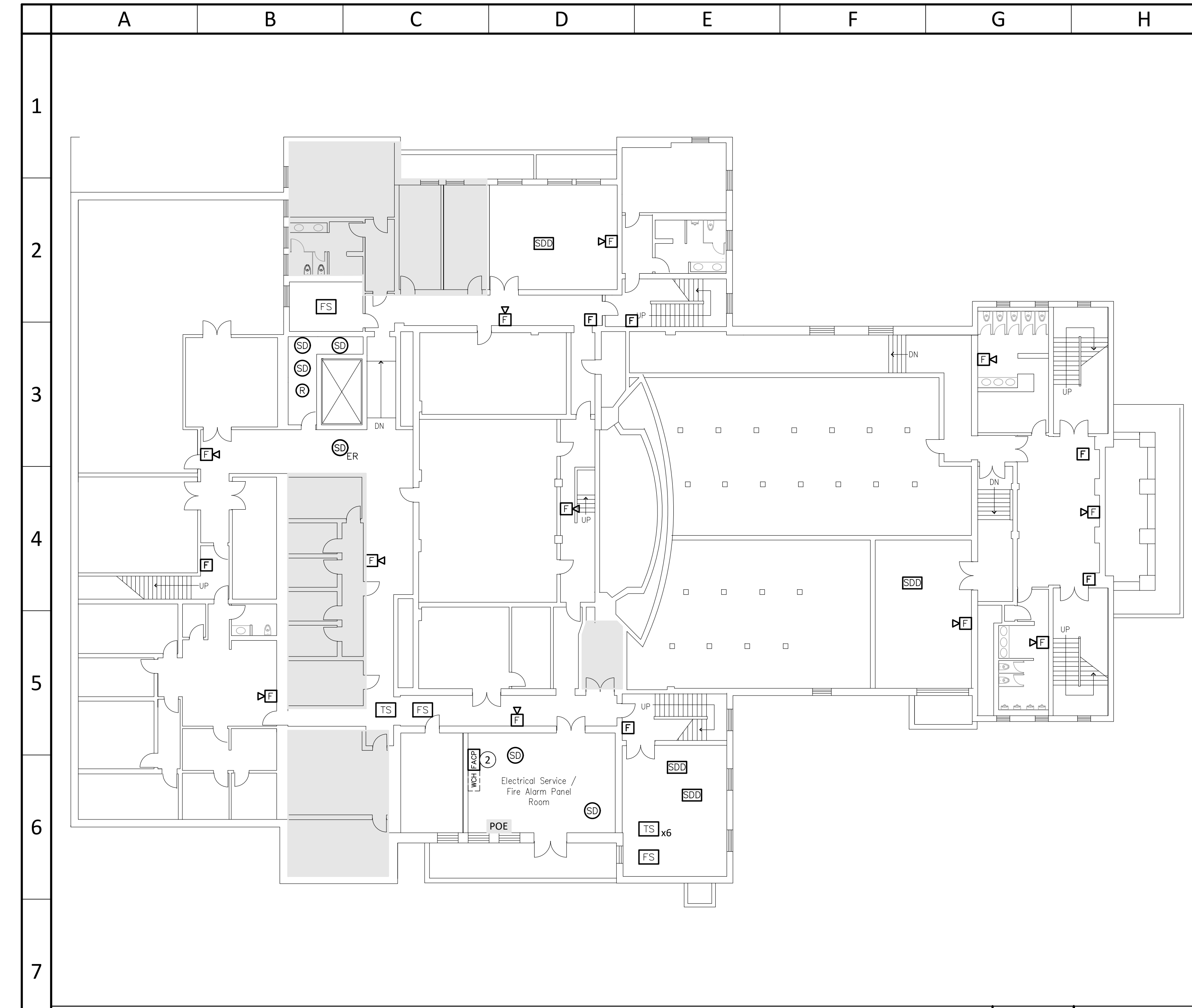
scale: 1/8" = 1'-0" drawn by: SC checked by: SF date: 5/03/2020

dwg. no.: E101-KEN

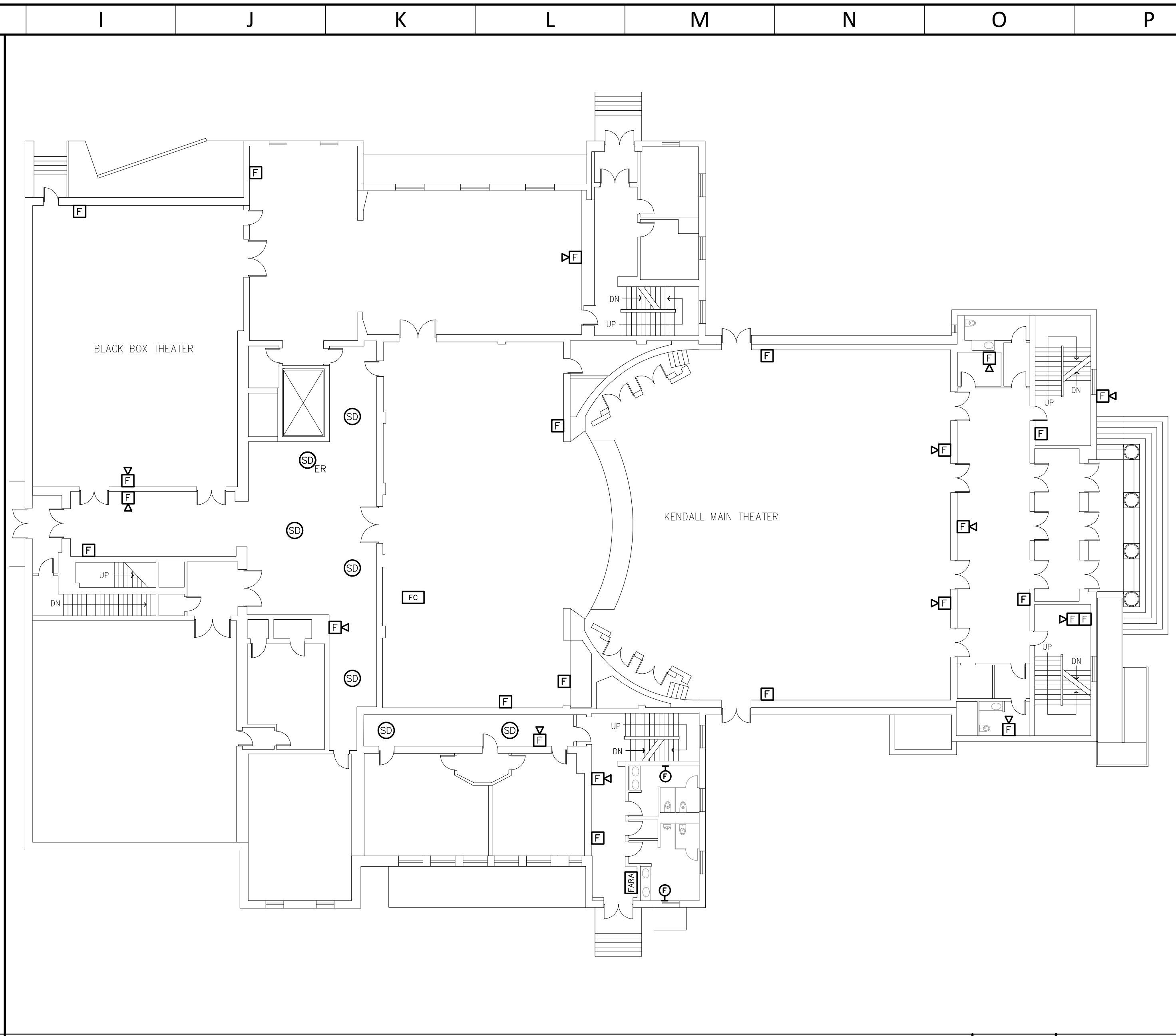
ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

Questions For DLB Call: Anthony Laskosky Phone: 732-927-5038



LOWER LEVEL LAYOUT Scale: NTS Drawing: **E102** Detail: **01**



FIRST FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **02**

KEY NOTES (SYMBOLS ①, ②, ETC.)

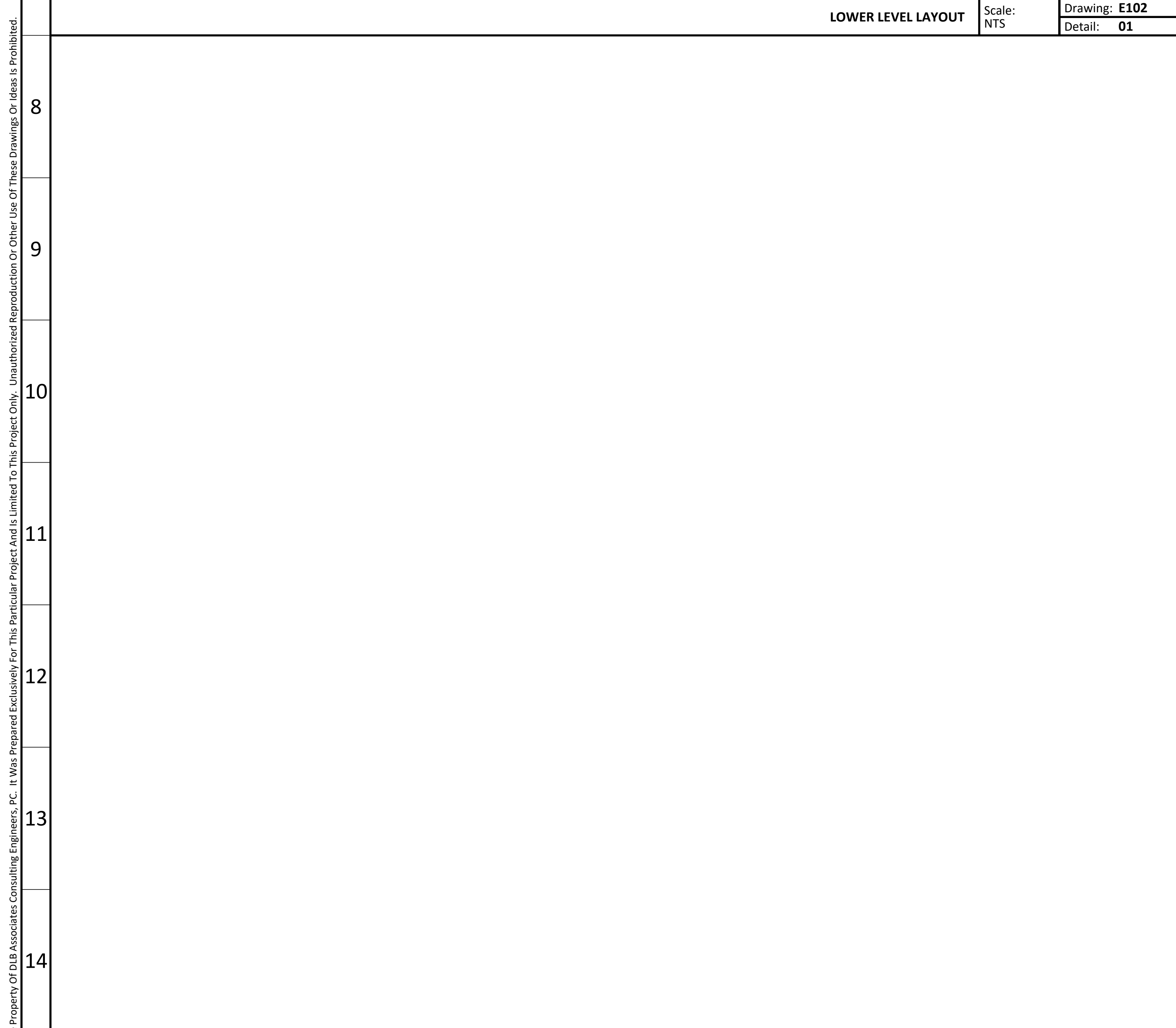
- Smoke Detection To Be Added To Top Of Stairwell.
- Existing Fire Alarm Control Panel.

GENERAL NOTES

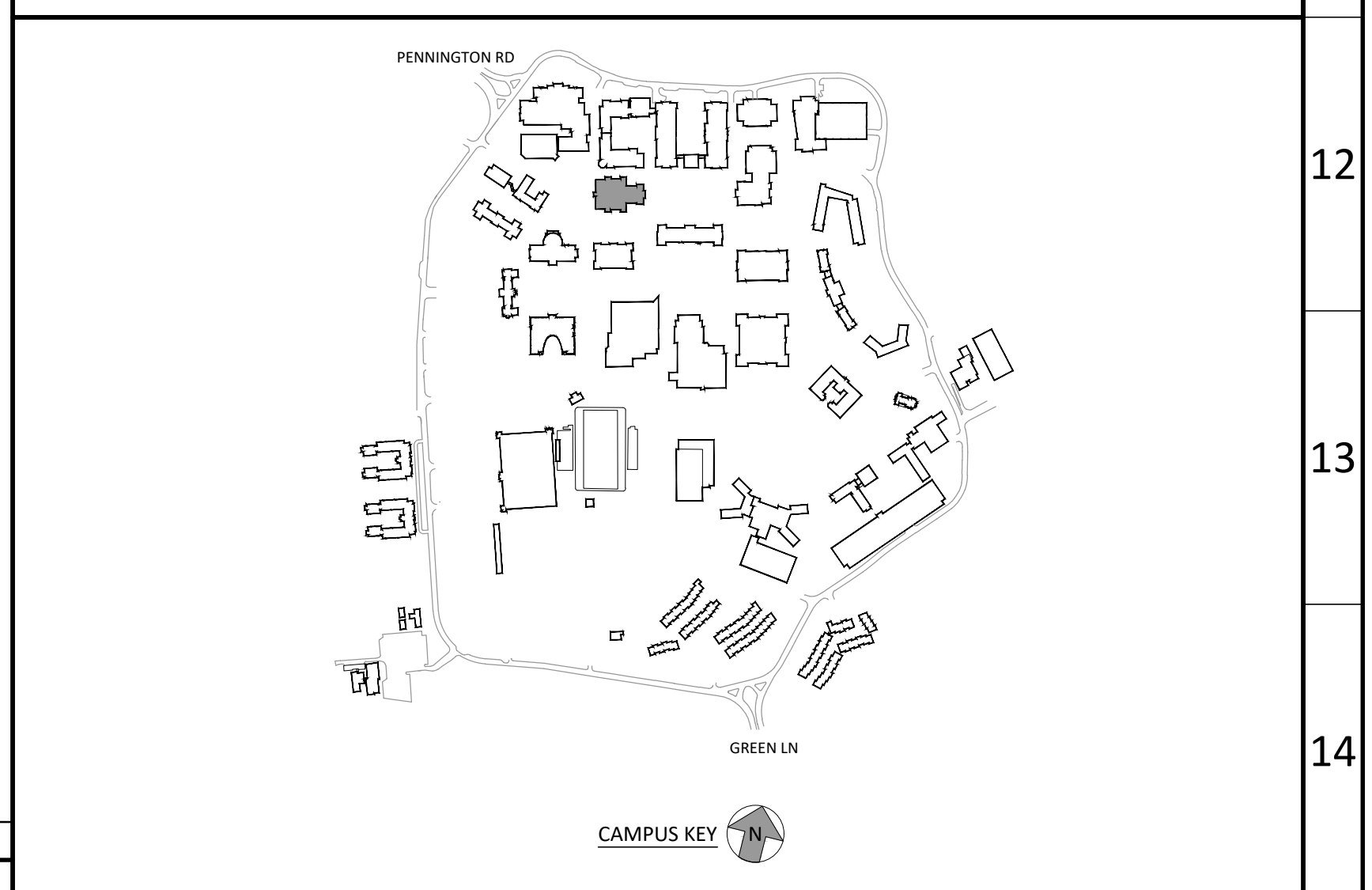
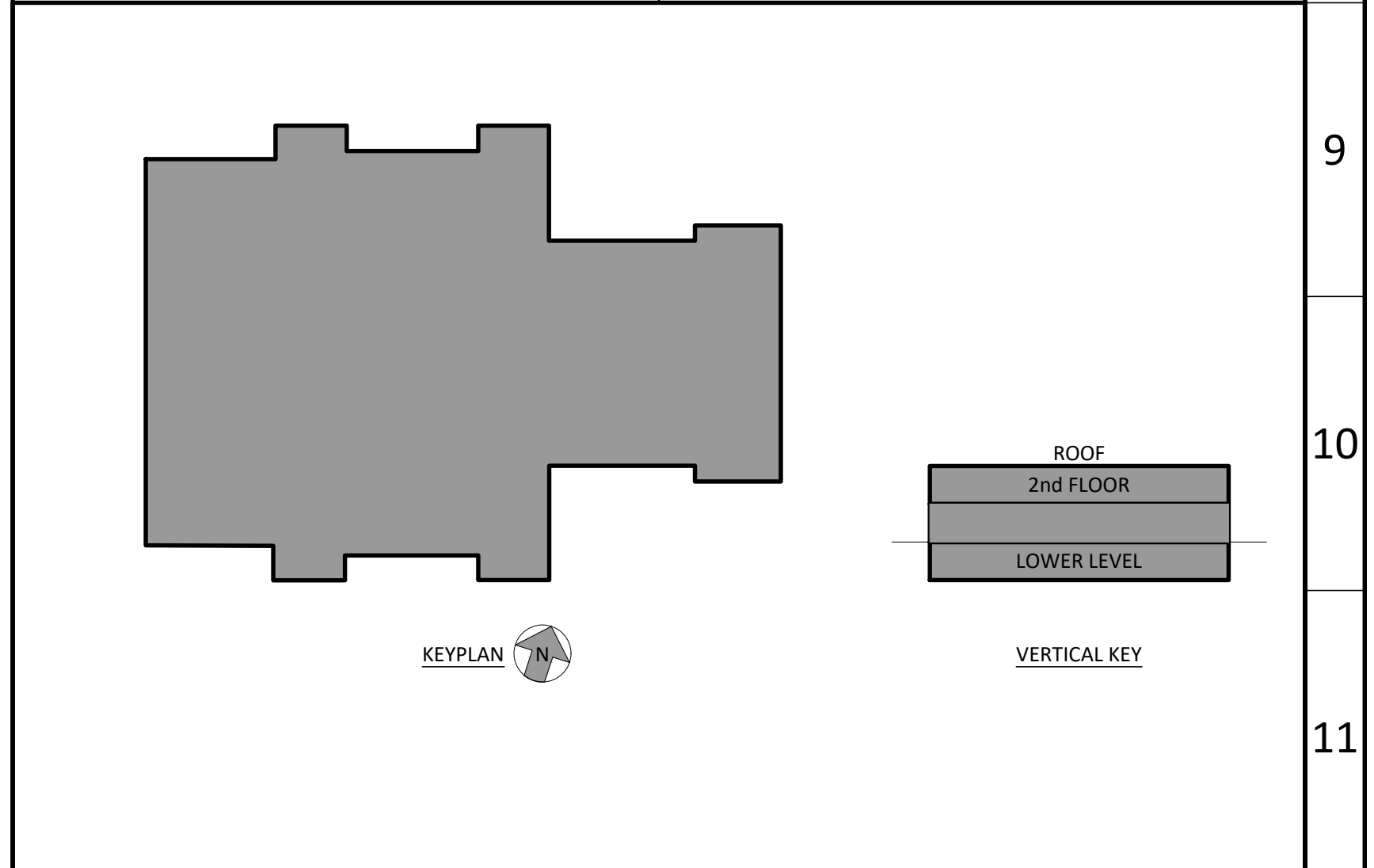
- This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
F	Manual Pull Station	TS	Fire Sprinkler Tamper Switch
⊕	Strobe Only	FS	Fire Sprinkler Flow Switch
⊕	Horn/Strobe	□	No Access
⊙	Smoke Detector	⊙	New Smoke Detector
⊙ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	⊕	New Manual Pull Station
⊙ _{SB}	Smoke Detector With Sounder Base	⊕	New Strobe
⊙	Heat Detector, Combination Fixed Temperature And Rate Of Rise	⊕	New Horn / Strobe
⊙	CO Detector	⊕	Photo ID Tag
⊙	Beam Detector	FACP	Fire Alarm Control Panel
⊙ _{DM}	Duct Mounted Smoke Detector	CO	Carbon Monoxide
FACP	Fire Alarm Control Panel	POE	Point Of Entry
FARA	Fire Alarm Remote Annunciator Panel		
FABP	Fire Alarm Booster Panel		
FC	Fire Curtain		
WCH	Existing Wall Mounted Connector Housing		



SECOND FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **03**



ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

title
FIRE ALARM - EXISTING LAYOUT
KENDALL HALL
scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020

dwg. no.
E102-KEN
Confidential and Proprietary / ©DLB Associates 2020

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30442

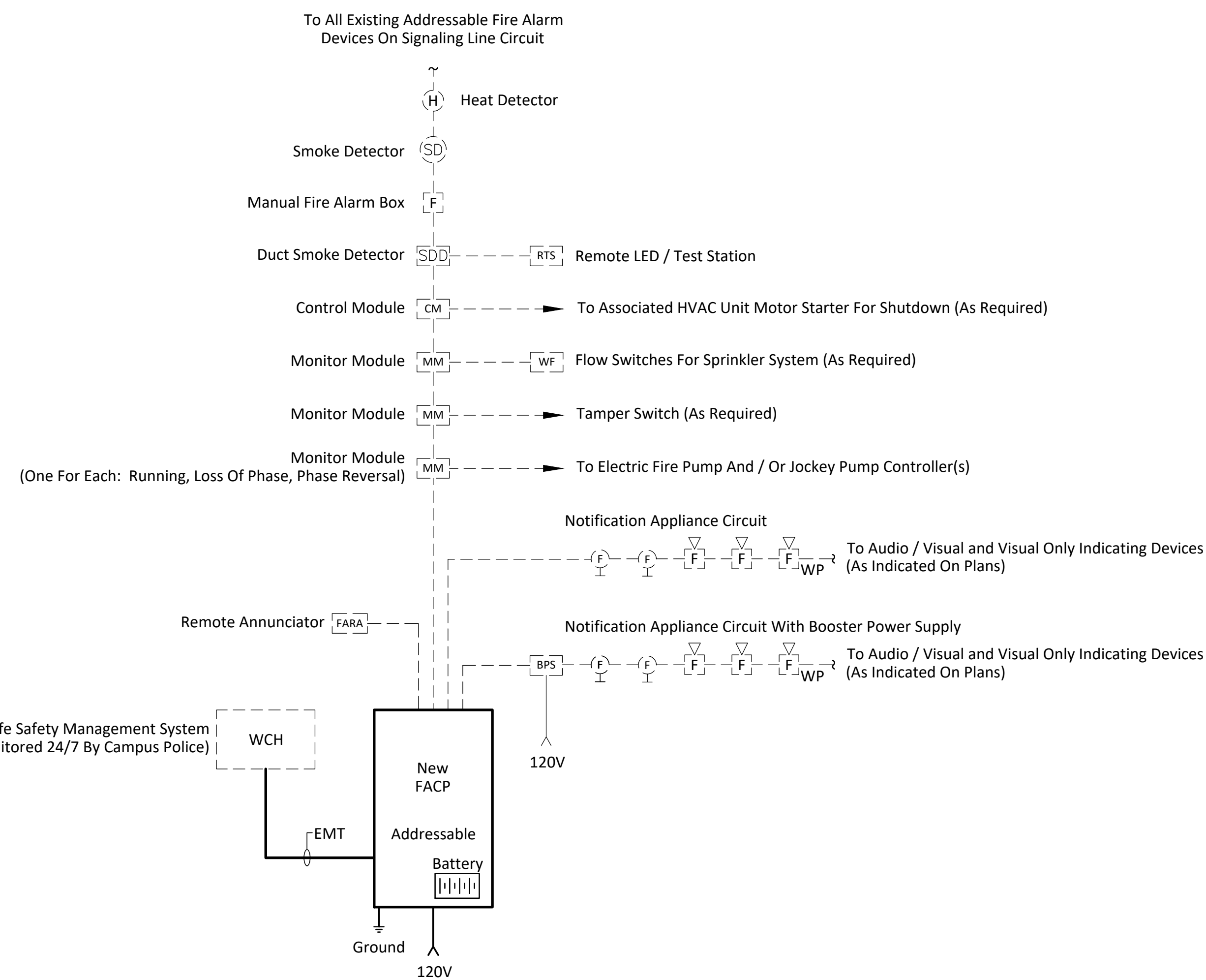
FIRE ALARM PHOTOS



PHOTO A - HONEYWELL FIRE ALARM CONTROL PANEL
Honeywell XLS1000 Addressable Fire Alarm Control Panel And Booster Panel With Exposed Conduit Located Within Lower Level Electrical Room

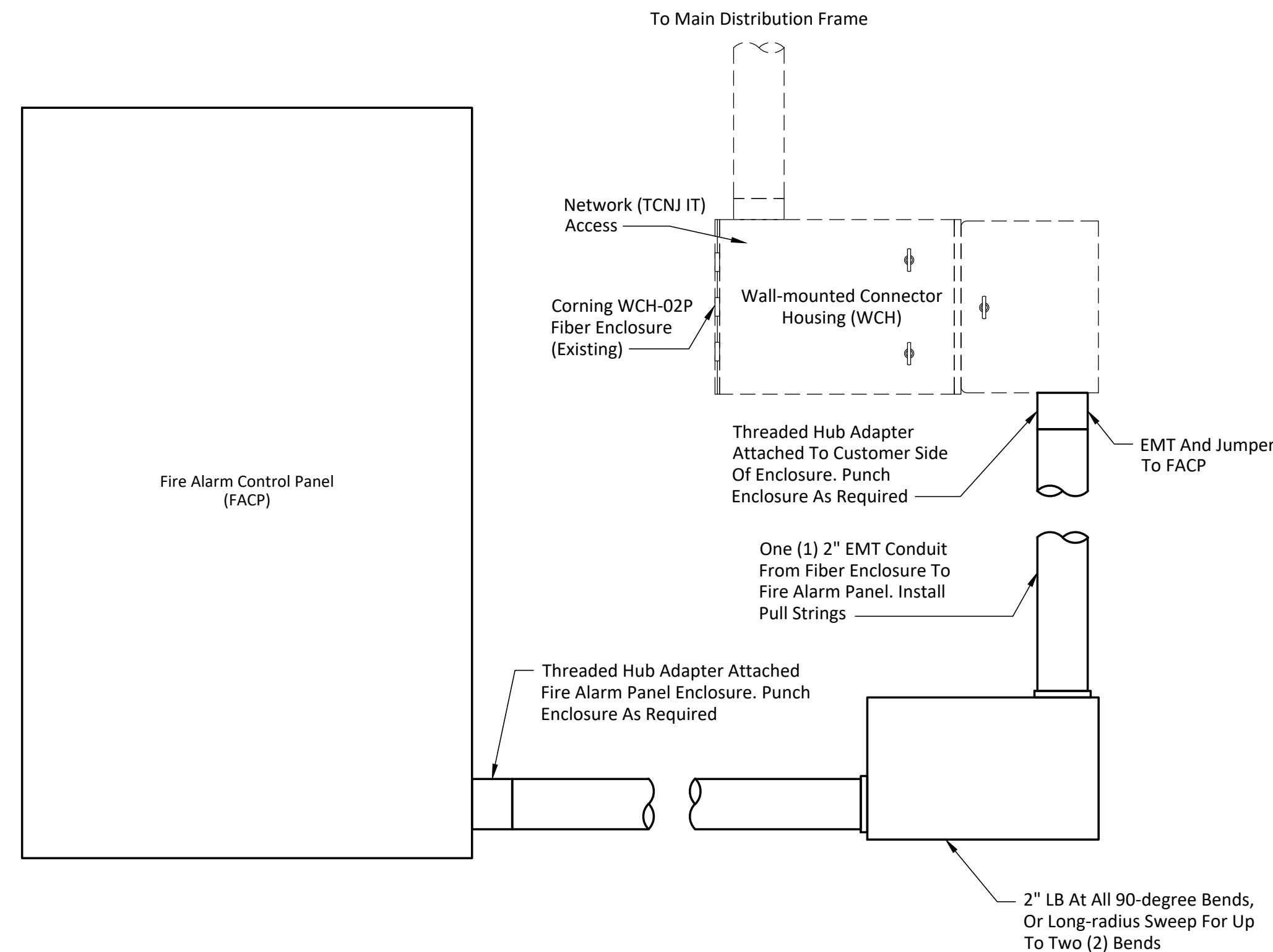


HONEYWELL FIRE ALARM DEVICES
Existing Honeywell Addressable Fire Alarm Devices Located Throughout The Building



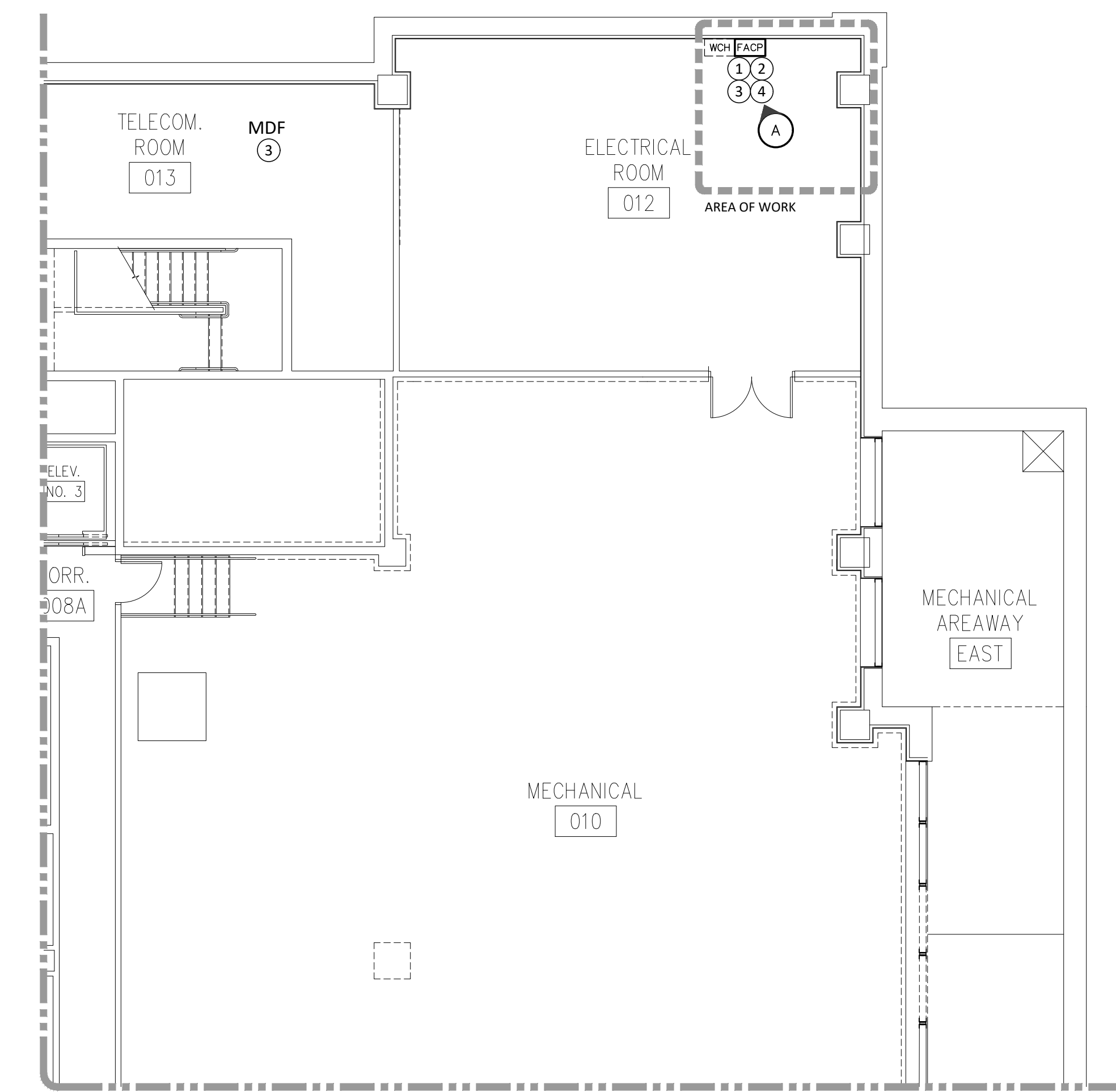
- NOTES:**
- General**
 - The Riser Above Depicts A "Honeywell" Basis Of Design With A New Honeywell FACP. All Existing Honeywell End Devices Would Be Compatible With The New FACP.
 - Install New FACP With Capacity Noted Below.
 - New Honeywell FACP Would Communicate The Point Identification Of Each Device To The New Front End.
 - This Building Would Be Considered A Fully Addressable Building.
 - The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - The FACP Shall Connect The Campus Life Safety Management System.
 - Equipment**
 - Gitenstein Library Is Currently Covered By Fire Notification And Detection / Initiation Devices From An Addressable Honeywell XLS 1000 System.
 - Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring**
 - The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing**
 - Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.

FIRE ALARM RISER Scale: NTS Drawing: **E101** Detail: **01**



- NOTES:**
- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNJ/IT
 - Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
 - Install Fiber Jumpers Between WCH And FACP.

FIRE ALARM FIBER ENCLOSURE INSTALLATION Scale: NTS Drawing: **E101** Detail: **02**



PARTIAL FLOOR PLAN - LOWER LEVEL Scale: 1/8"=1'-0" Drawing: **E101** Detail: **03**

KEY NOTES (SYMBOLS ①, ②, ETC.)

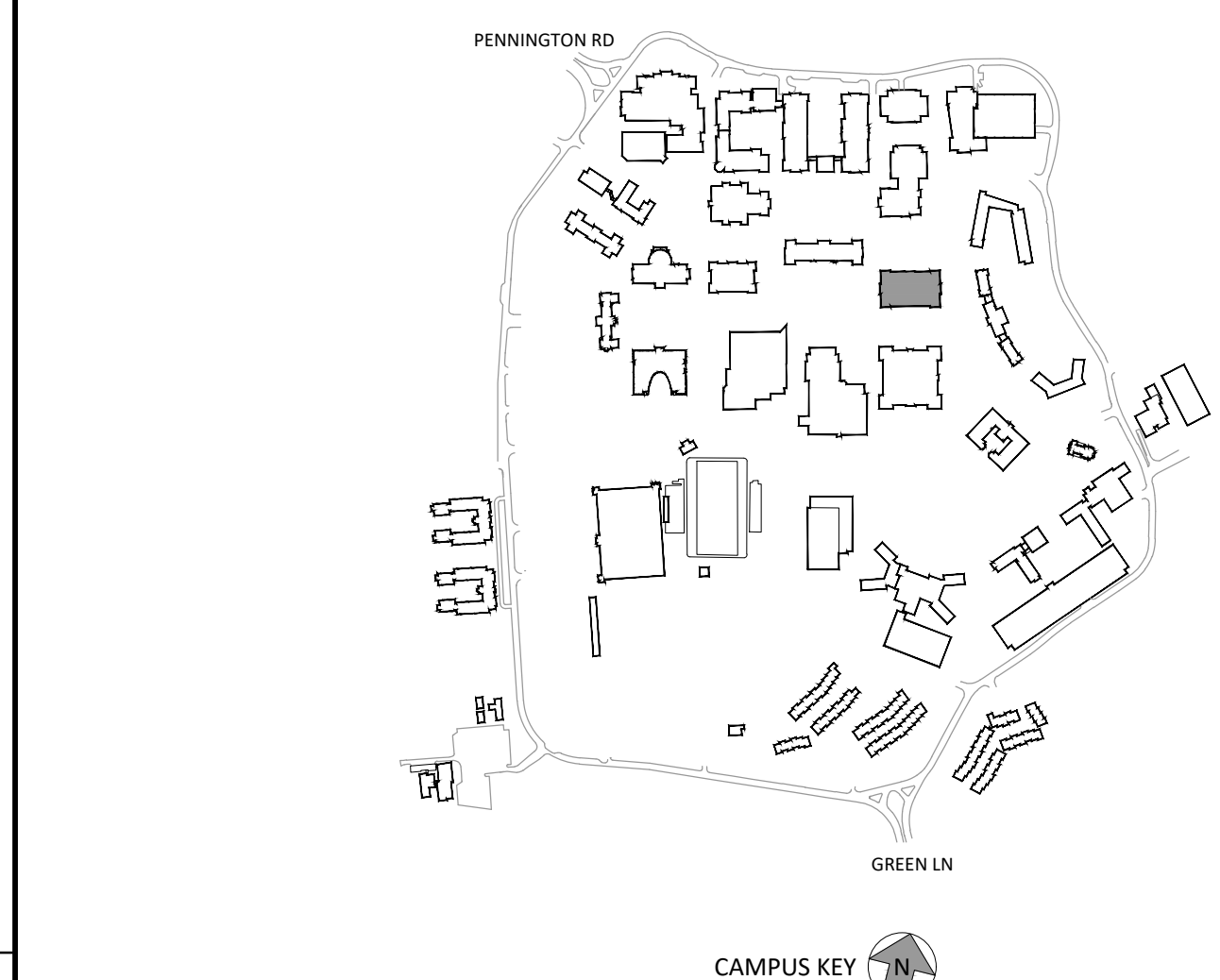
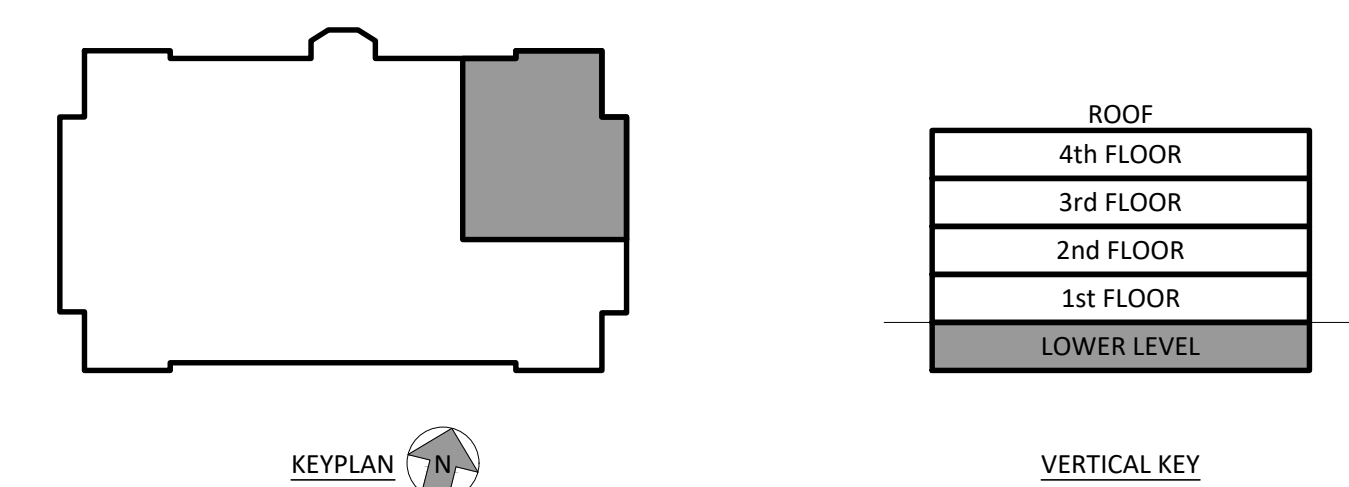
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
- Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
- Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, BETWEEN THE EXISTING WCH AND FIRE ALARM CONTROL PANEL AS PER DETAIL 2. ALSO PROVIDE DUPLEX FIBER JUMPER CABLES PRE-TERMINATED ON BOTH ENDS AT THE MDF BETWEEN REQUIRED INTERCONNECTION POINTS. CONTRACTOR SHALL COORDINATE AND CONFIRM JUMPER CONNECTION TYPES, FIBER TYPE, LENGTH, ROUTING CONDITIONS, ETC WITH FIELD CONDITIONS. COORDINATE WITH TCNJ IT DEPARTMENT FOR FIBER CONNECTION AND LABELING INFORMATION.
- Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.

GENERAL NOTES

- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
- The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments.
- Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
- Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
- Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
- When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently Reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
FACP	Fire Alarm Control Panel	FACP	Fire Alarm Control Panel
WCH	Existing Wall-Mounted Connector Housing	EMT	Electrical Metallic Tubing
FACP	Existing Fire Alarm Control Panel	CM	Control Module
[New Equipment Symbol]	New Equipment	MM	Monitor Module
[Existing Equipment Symbol]	Existing Equipment	WCH	Wall-Mounted Connector Housing
Ⓢ	Photo Tag		
[Connect To Existing Symbol]	Connect To Existing		



FIRE ALARM PANEL REPLACEMENT GITENSTEIN LIBRARY title

scale: 1/8" = 1'-0" drawn by: SC checked by: SF date: 5/03/2020

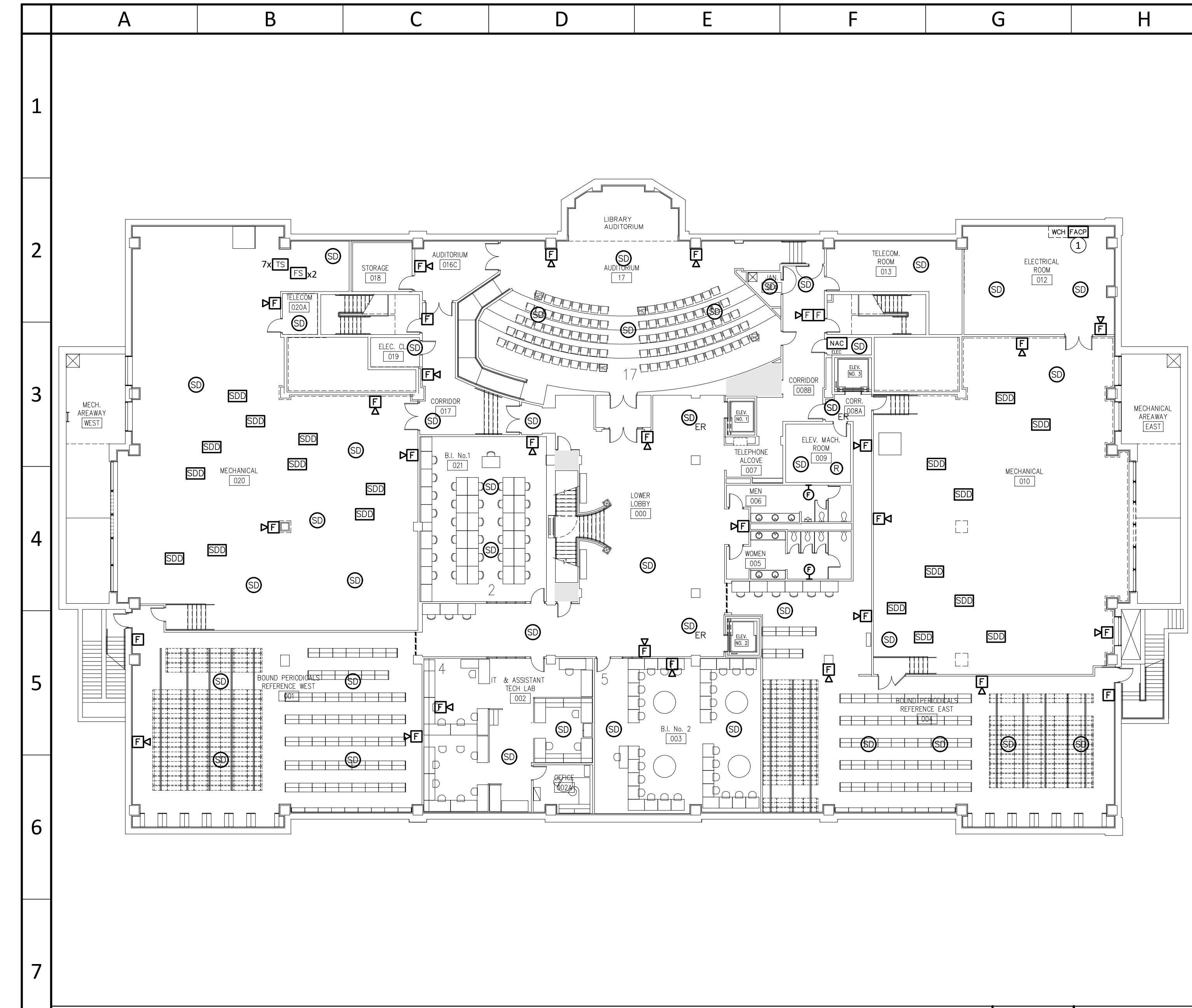
dwg. no. **E101-LIB**

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

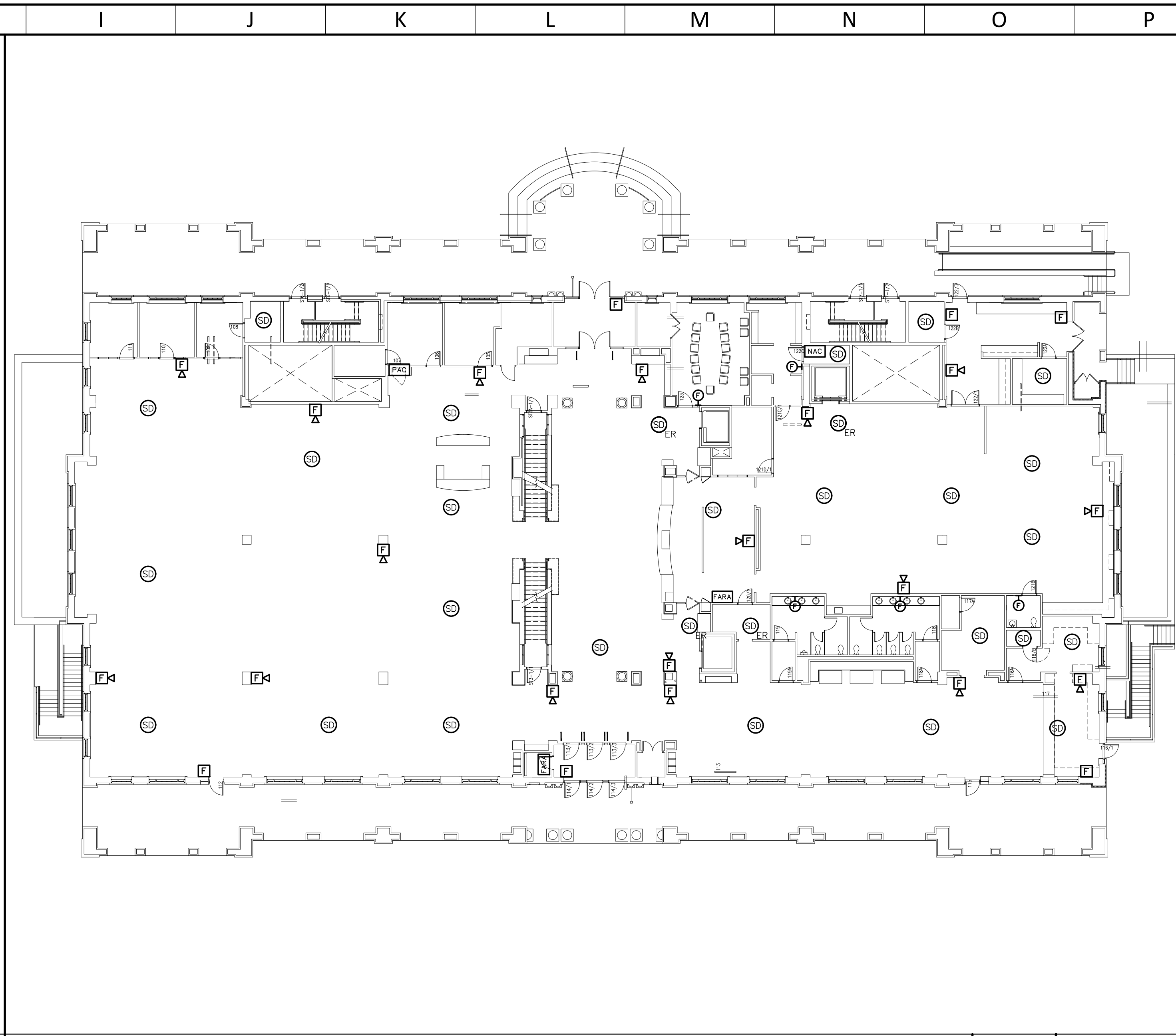
30x42

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky Phone: 732-927-5038

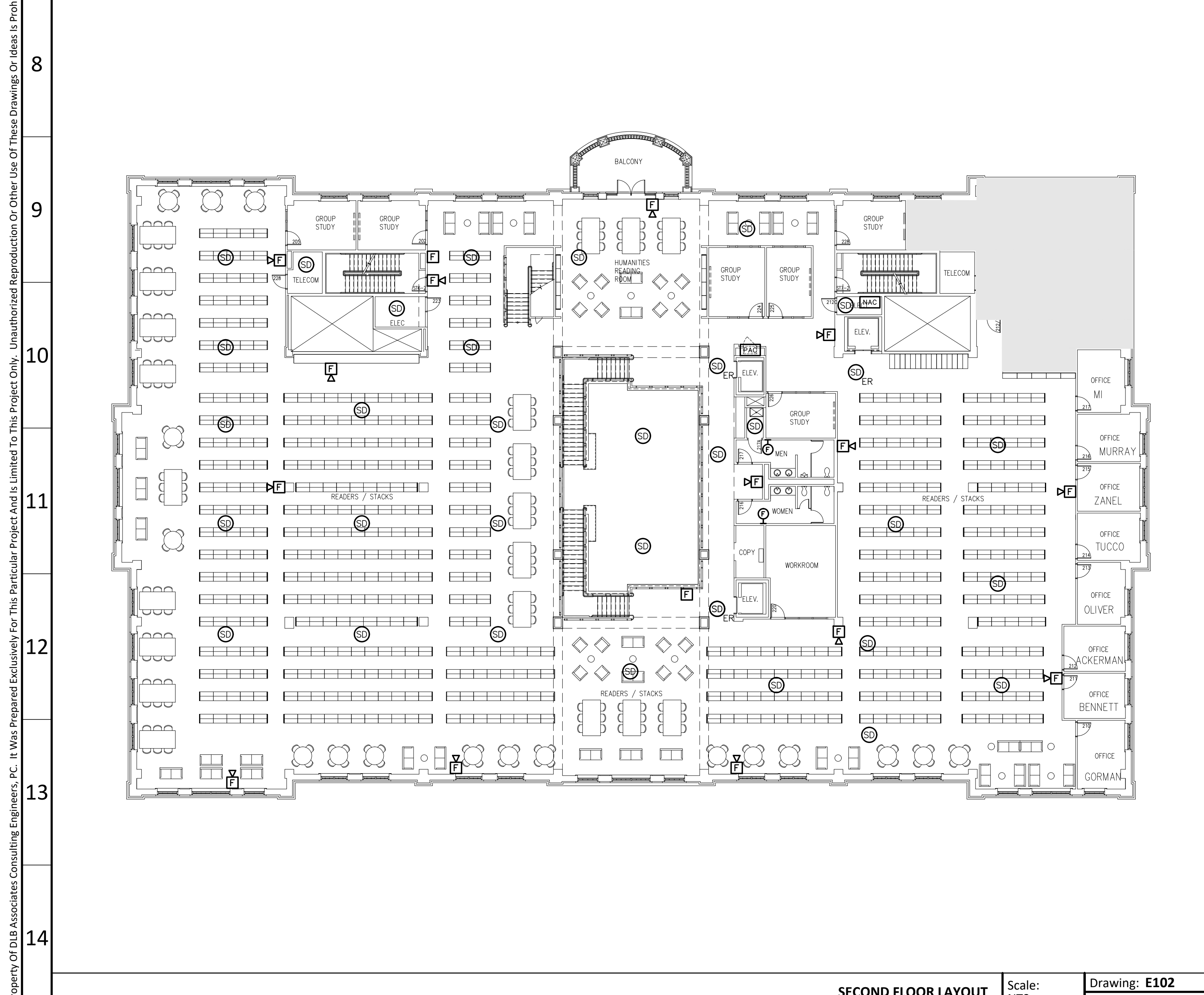
project
TCNJ - CAMPUS FIRE ALARM PROJECT PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD, EWING NJ, 08618



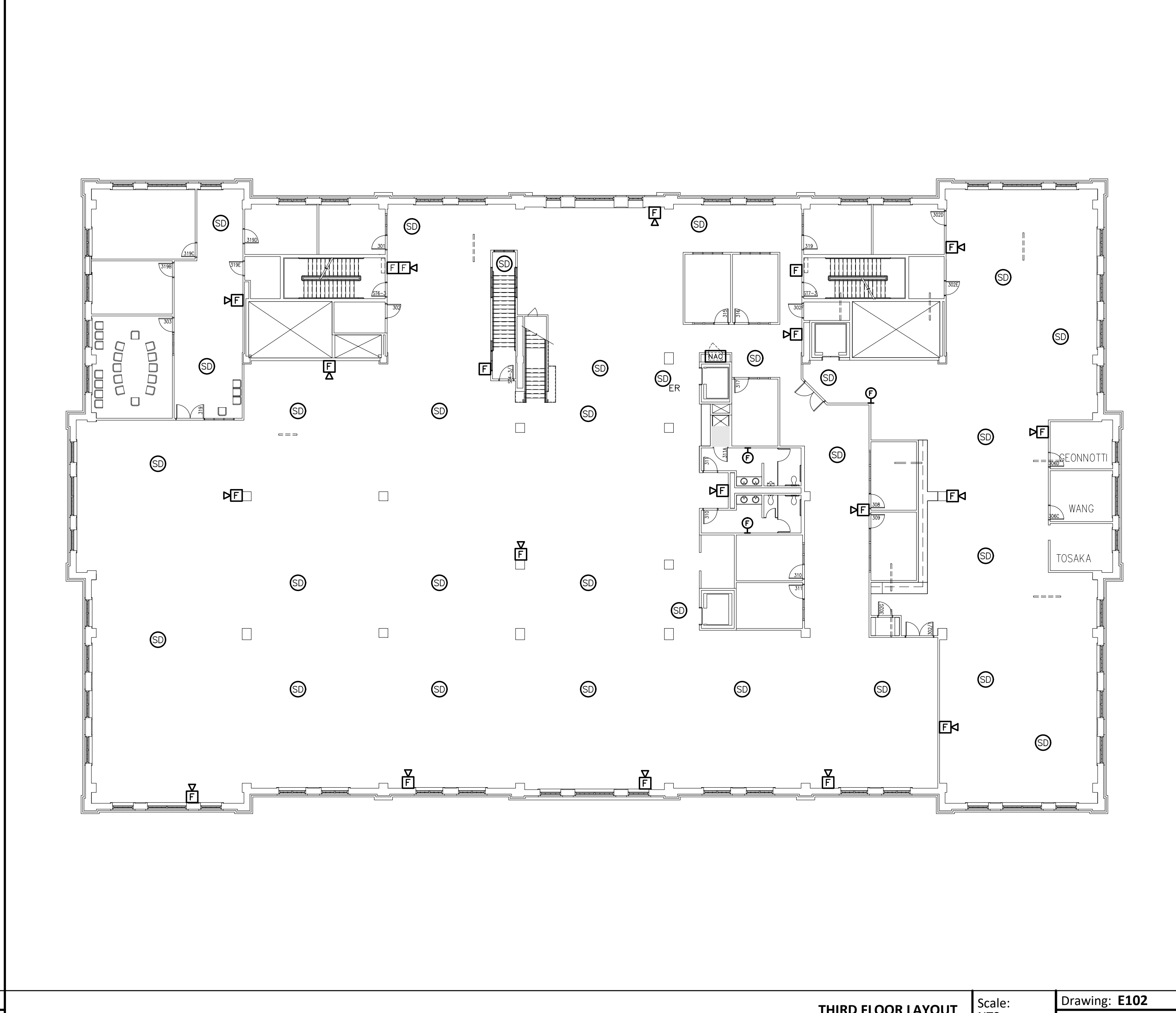
LOWER LEVEL LAYOUT Scale: NTS Drawing: **E102** Detail: **01**



FIRST FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **02**



SECOND FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **03**



THIRD FLOOR LAYOUT Scale: NTS Drawing: **E102** Detail: **04**

KEY NOTES (SYMBOLS ①, ②, ETC.)

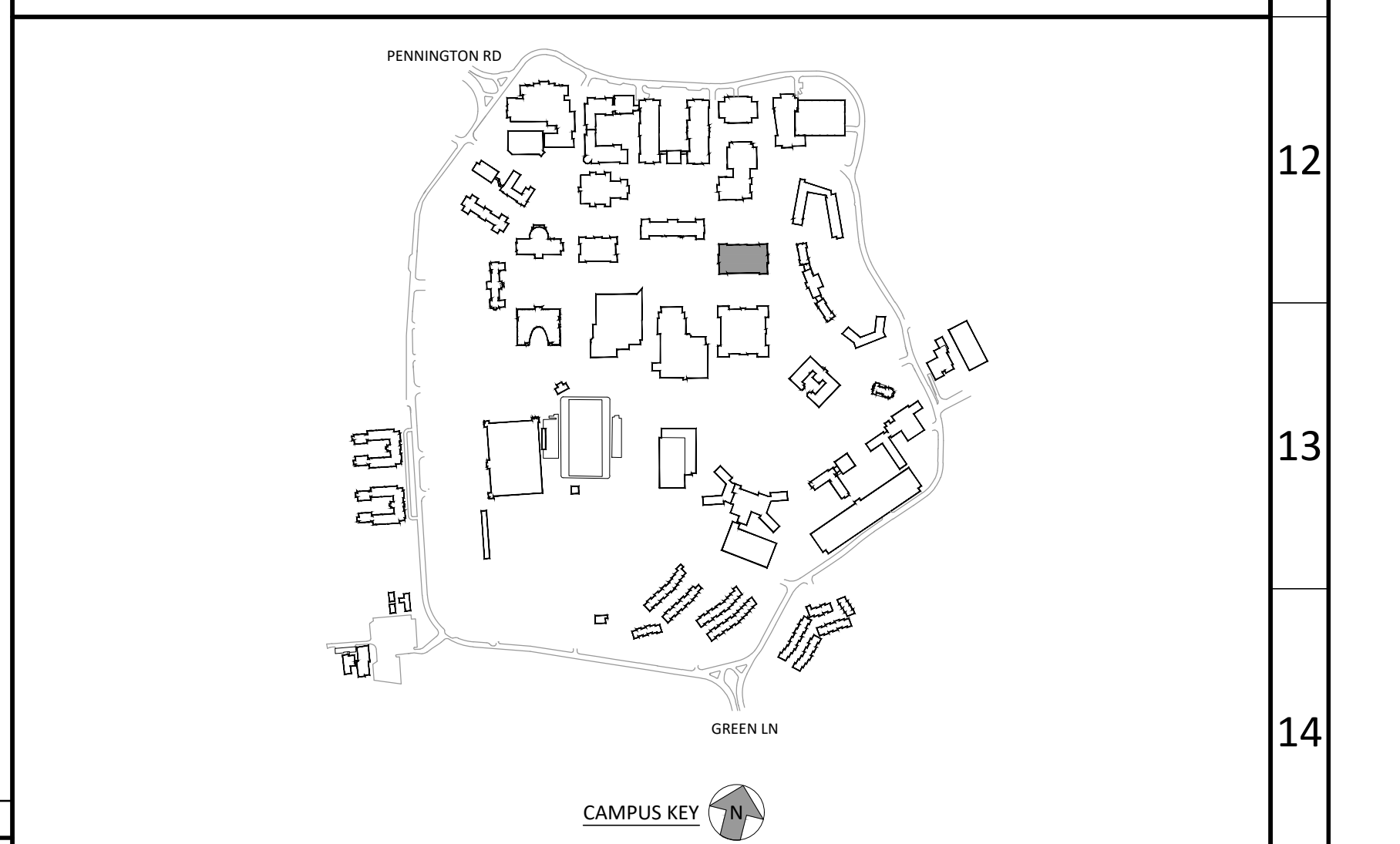
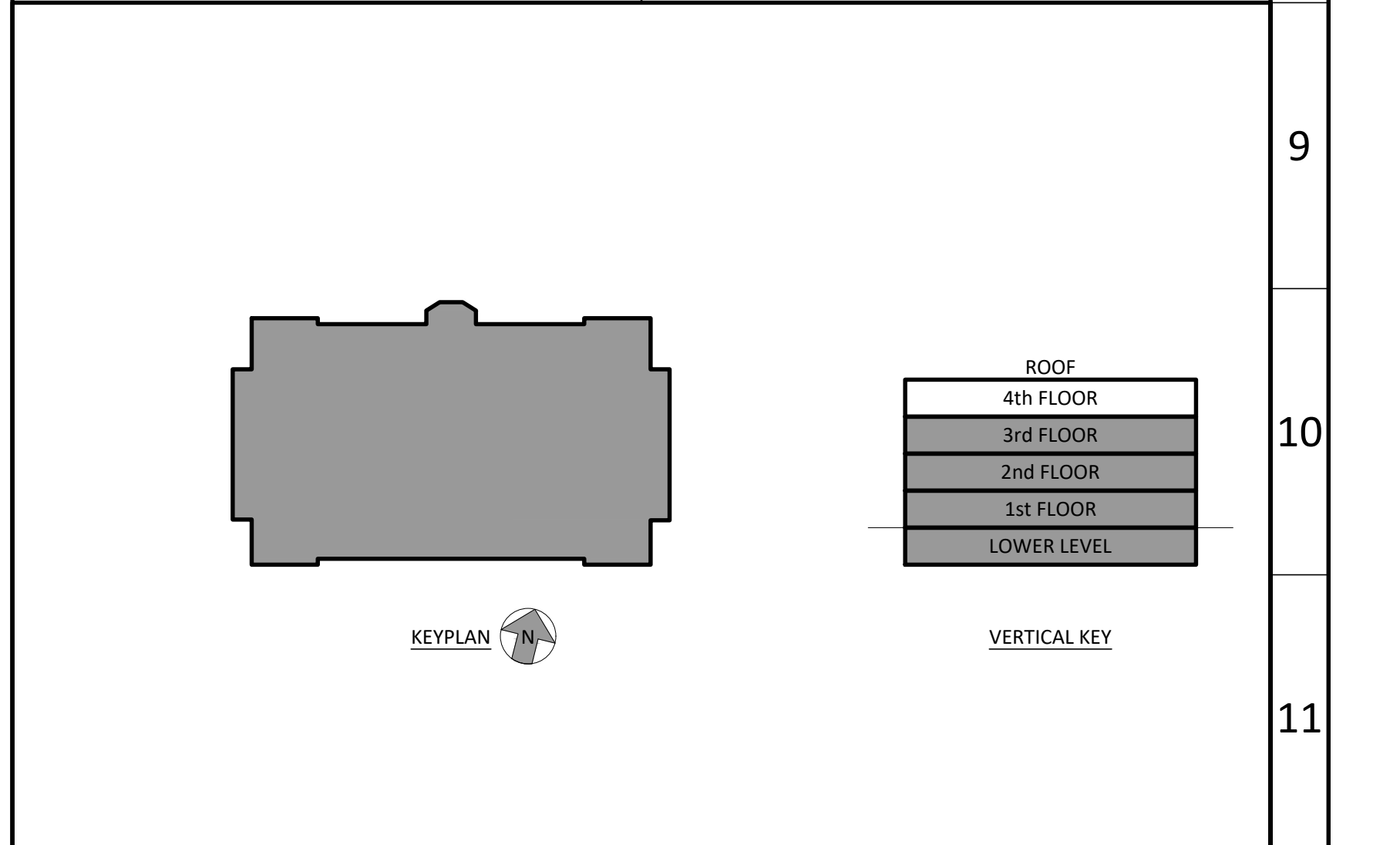
1. Existing Fire Alarm Control Panel.

GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
Ⓜ	Manual Pull Station	Ⓜ	Fire Sprinkler Tamper Switch
Ⓢ	Strobe Only	Ⓜ	Fire Sprinkler Flow Switch
Ⓜ	Horn/Strobe	Ⓜ	No Access
Ⓢ	Smoke Detector	Ⓜ	New Smoke Detector
Ⓢ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	Ⓜ	New Manual Pull Station
Ⓢ _{SB}	Smoke Detector With Sounder Base	Ⓜ	New Strobe
Ⓢ	Heat Detector, Combination Fixed Temperature And Rate Of Rise	Ⓜ	New Horn / Strobe
Ⓢ	CO Detector	Ⓜ	Photo ID Tag
Ⓢ	Beam Detector	FACP	Fire Alarm Control Panel
Ⓢ _{DM}	Duct Mounted Smoke Detector	CO	Carbon Monoxide
FACP	Fire Alarm Control Panel	POE	Point Of Entry
FARA	Fire Alarm Remote Annunciator Panel		
FABP	Fire Alarm Booster Panel		
PAC	Pre-Action Valve		
WCH	Existing Wall Mounted Connector Housing		



This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

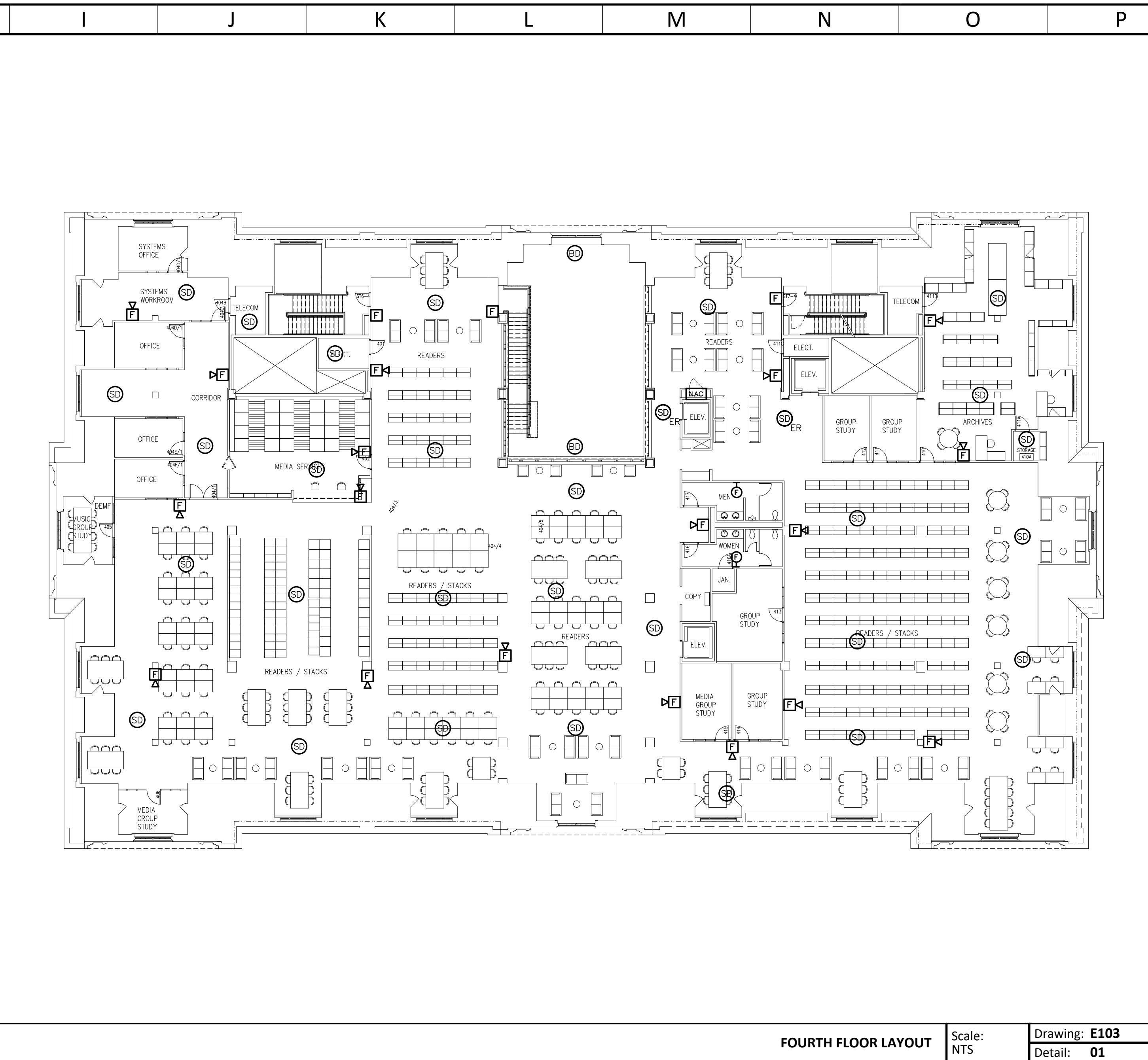
title
FIRE ALARM - EXISTING LAYOUT
GITENSTEIN LIBRARY

scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020

dwg. no.
E102-LIB

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.

30442



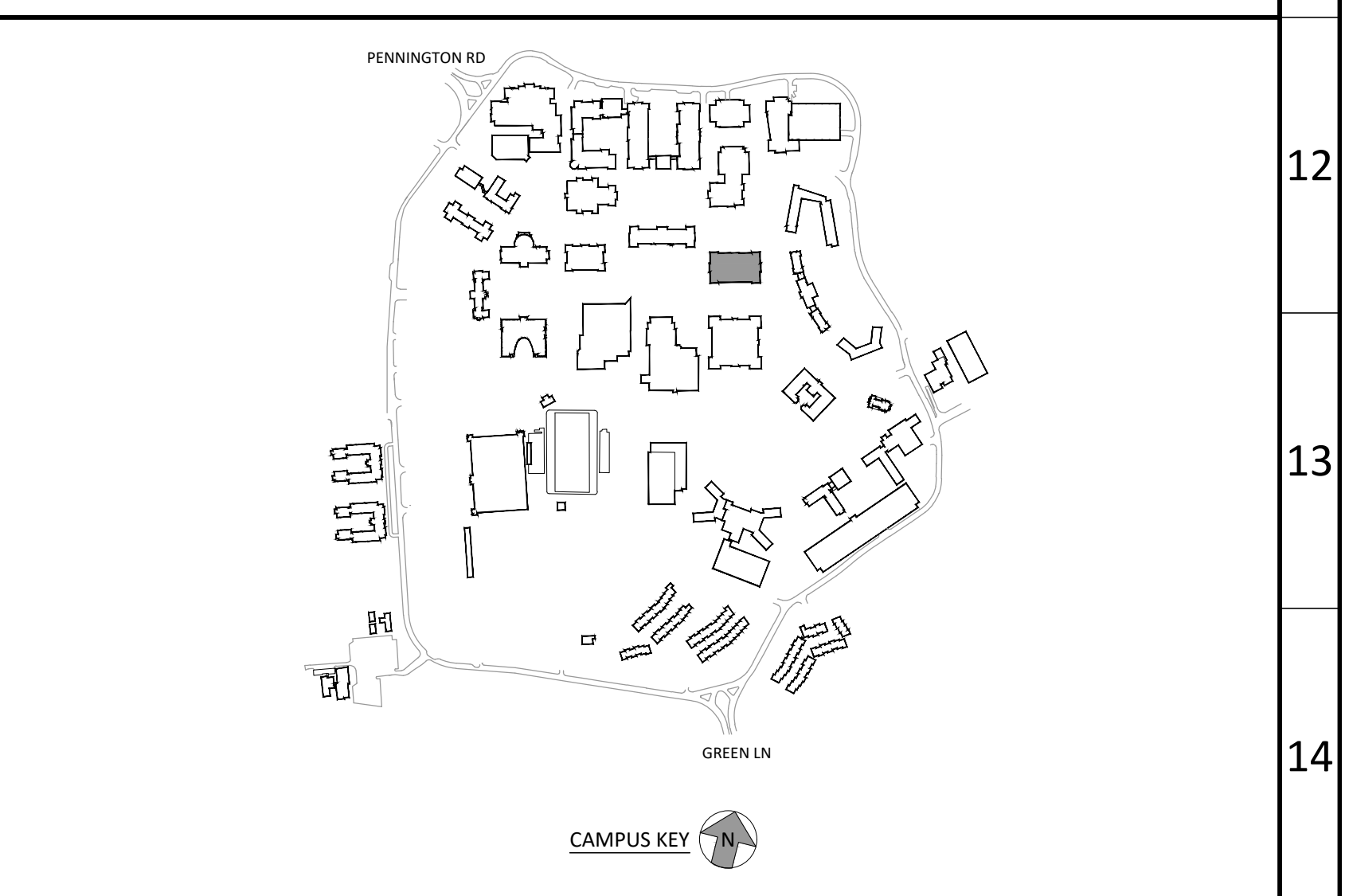
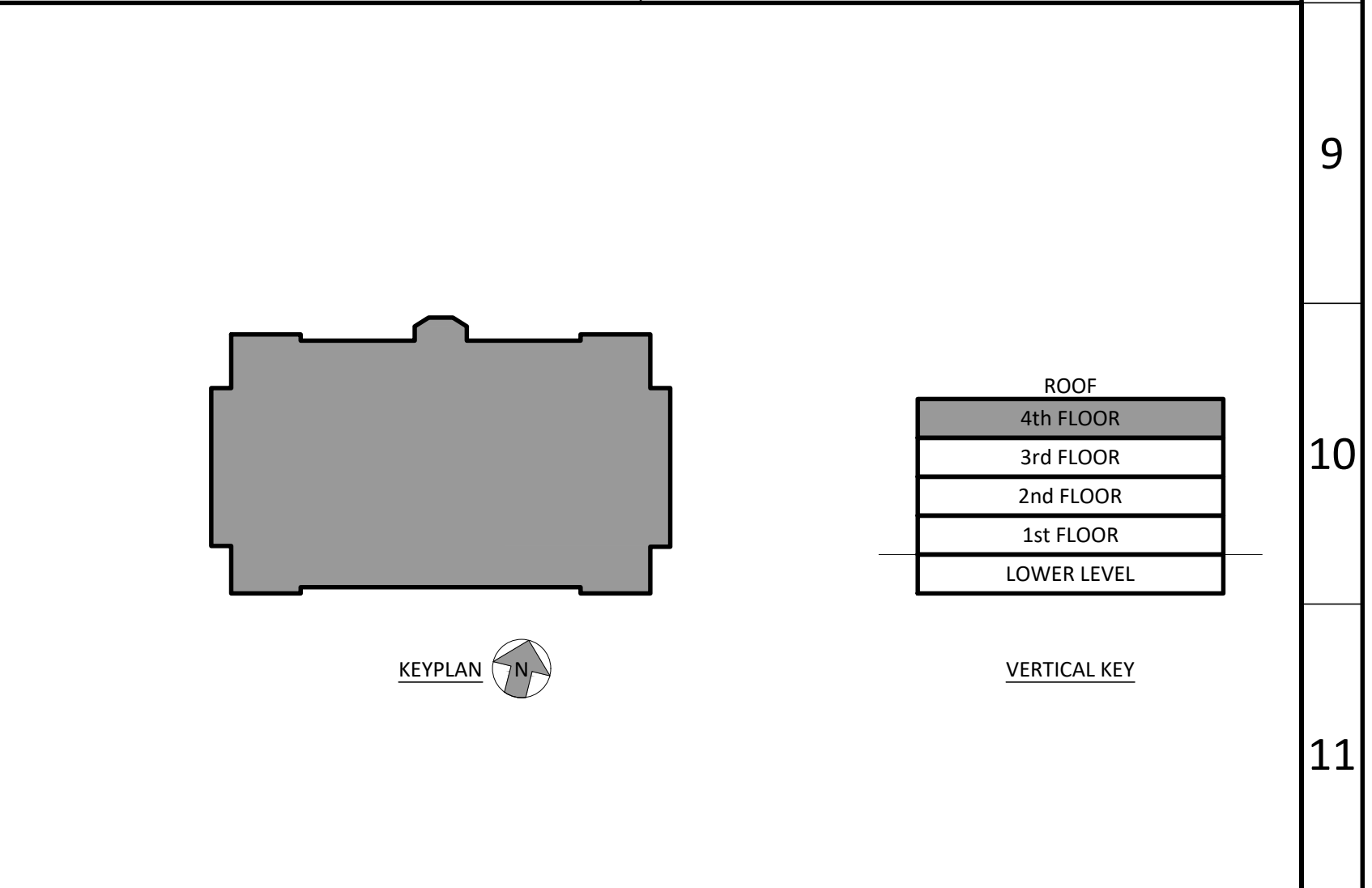
FOURTH FLOOR LAYOUT Scale: NTS Drawing: **E103** Detail: **01**

GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
F	Manual Pull Station	TS	Fire Sprinkler Tamper Switch
S	Strobe Only	FS	Fire Sprinkler Flow Switch
VF	Horn/Strobe	NA	No Access
SD	Smoke Detector	NSD	New Smoke Detector
SD _{ER}	Smoke Detector (ER Indicates Elevator Recall)	MP	New Manual Pull Station
SD _{SB}	Smoke Detector With Sounder Base	NS	New Strobe
HT	Heat Detector, Combination Fixed Temperature And Rate Of Rise	NHS	New Horn / Strobe
CD	CO Detector	PT	Photo ID Tag
BD	Beam Detector	FACP	Fire Alarm Control Panel
SDM	Duct Mounted Smoke Detector	CO	Carbon Monoxide
FACP	Fire Alarm Control Panel	POE	Point Of Entry
FARA	Fire Alarm Remote Annunciator Panel		
FBAC	Fire Alarm Booster Panel		
PAC	Pre-Action Valve		



Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

title
FIRE ALARM - EXISTING LAYOUT
GITENSTEIN LIBRARY

scale AS SHOWN drawn by SC checked by SF date 5/03/2020

dwg. no.
E103-LIB

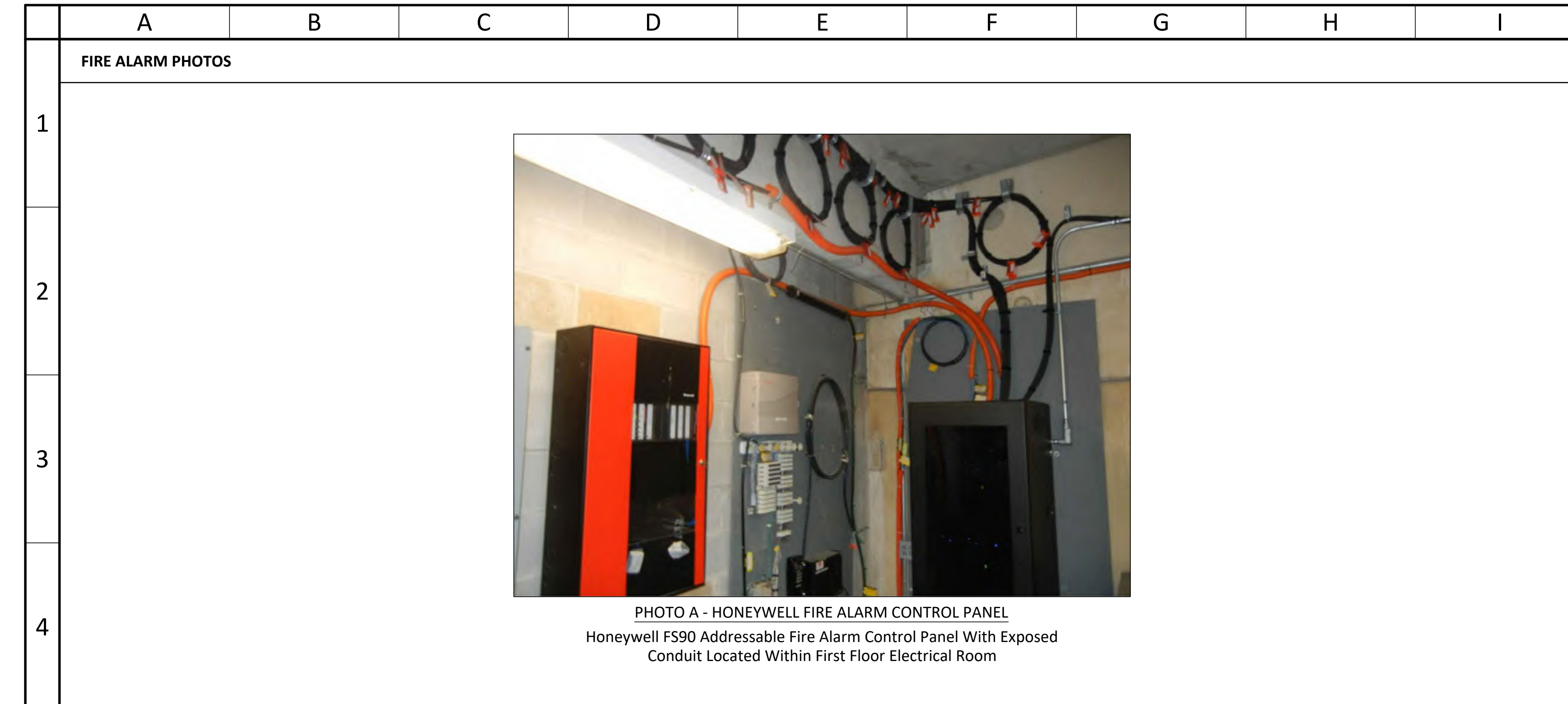
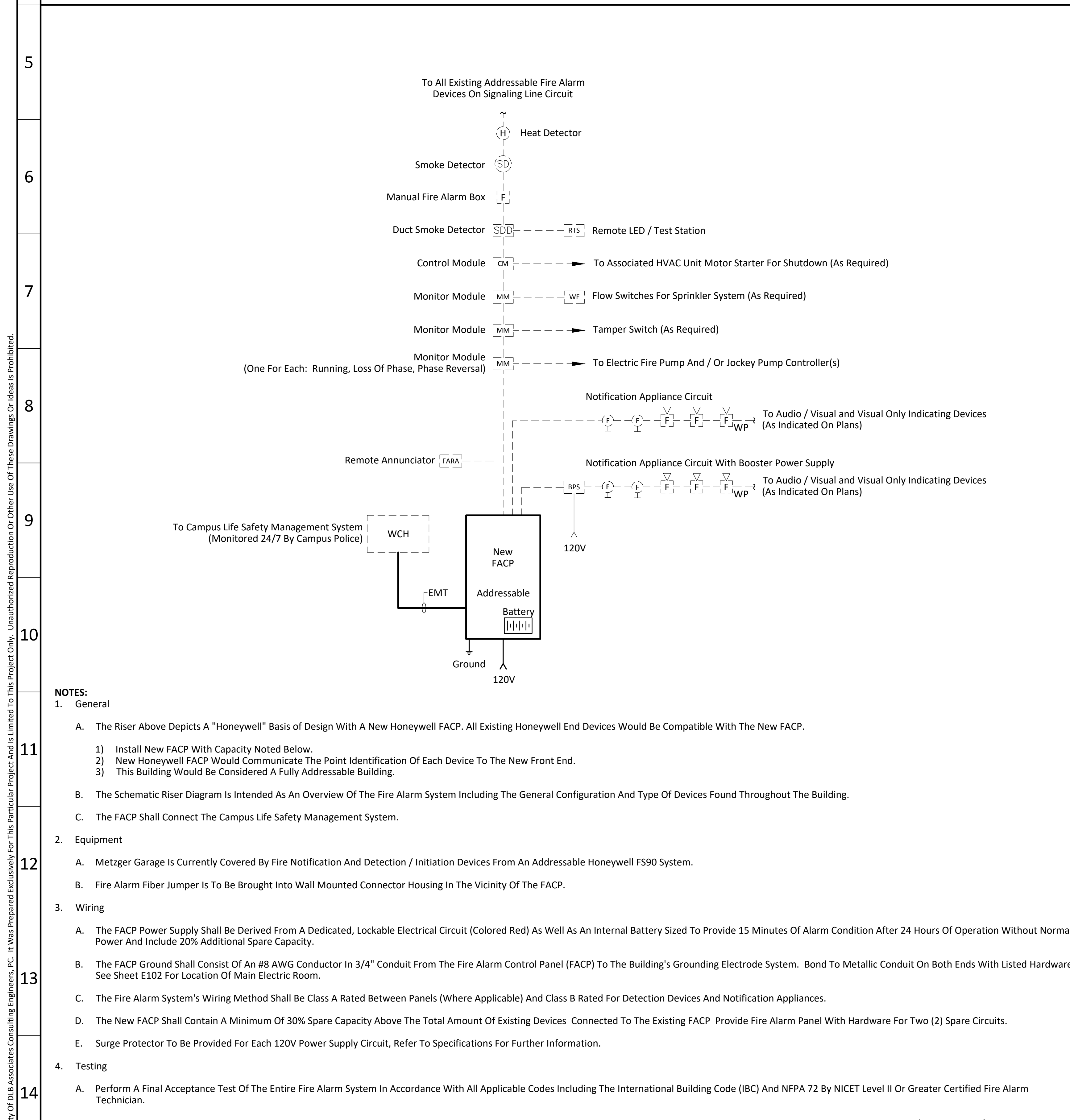
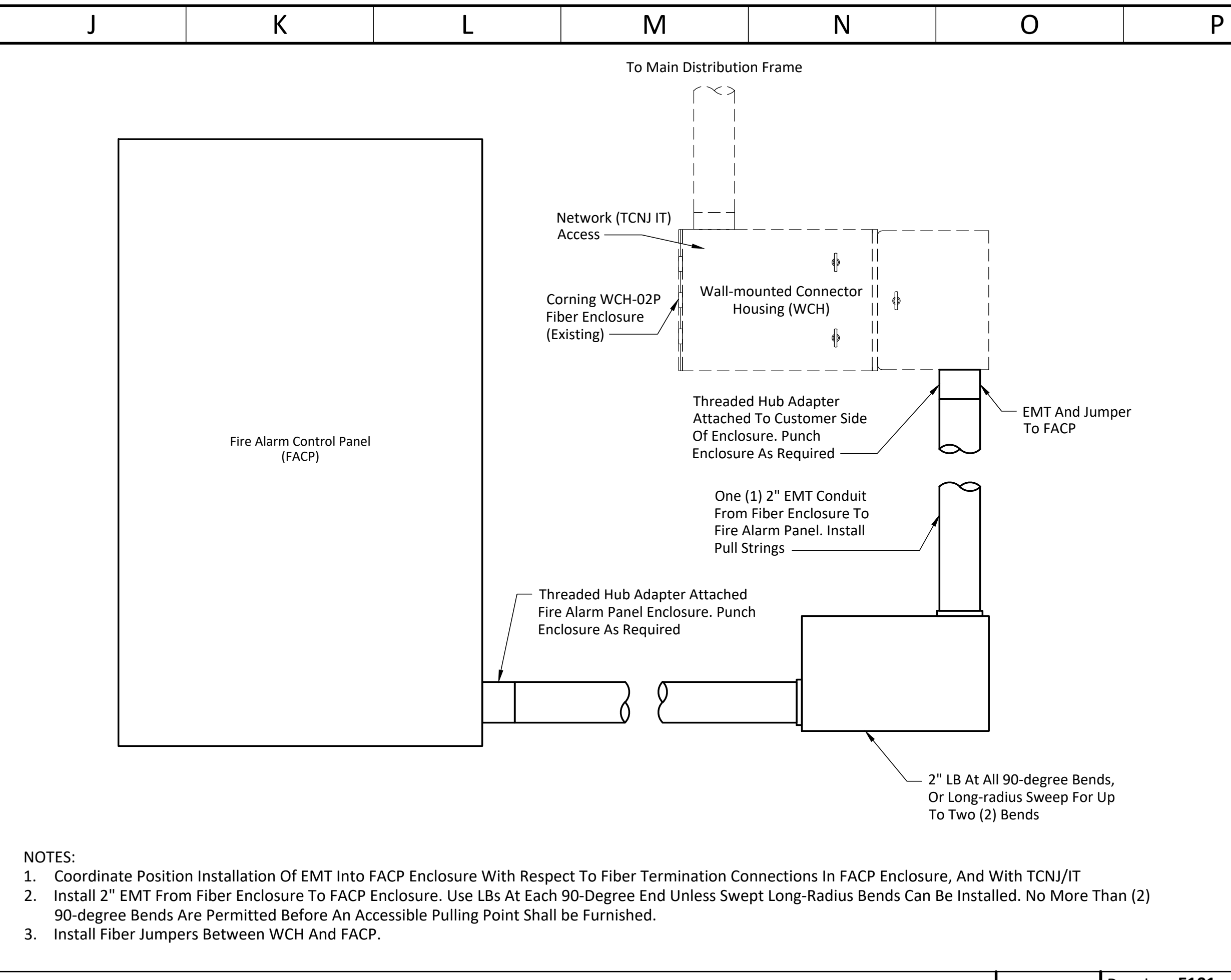


PHOTO A - HONEYWELL FIRE ALARM CONTROL PANEL
Honeywell FS90 Addressable Fire Alarm Control Panel With Exposed Conduit Located Within First Floor Electrical Room



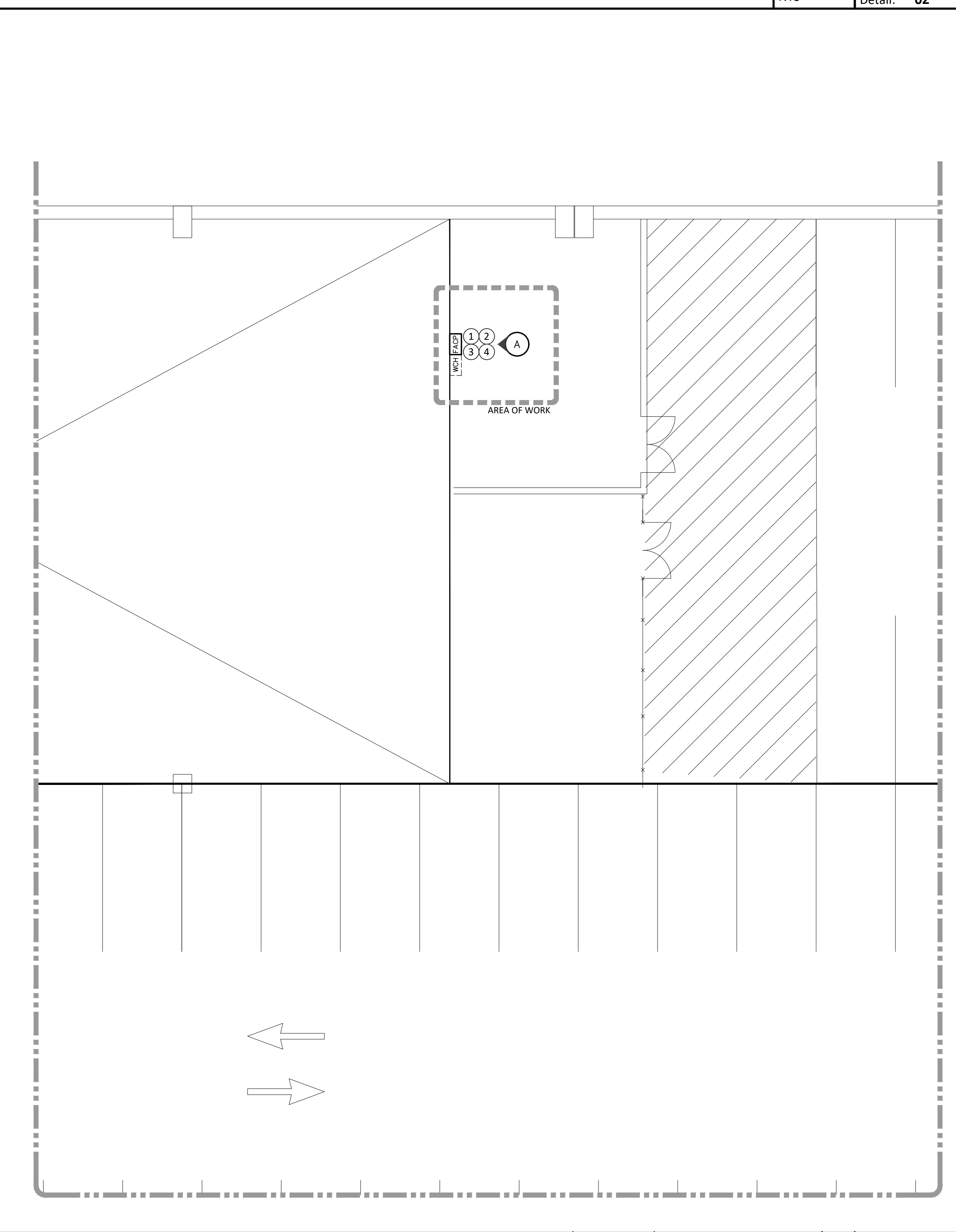
- NOTES:**
- General
 - The Riser Above Depicts A "Honeywell" Basis of Design With A New Honeywell FACP. All Existing Honeywell End Devices Would Be Compatible With The New FACP.
 - Install New FACP With Capacity Noted Below.
 - New Honeywell FACP Would Communicate The Point Identification Of Each Device To The New Front End.
 - This Building Would Be Considered A Fully Addressable Building.
 - The Schematic Riser Diagram Is Intended As An Overview Of The Fire Alarm System Including The General Configuration And Type Of Devices Found Throughout The Building.
 - The FACP Shall Connect The Campus Life Safety Management System.
 - Equipment
 - Metzger Garage Is Currently Covered By Fire Notification And Detection / Initiation Devices From An Addressable Honeywell FS90 System.
 - Fire Alarm Fiber Jumper Is To Be Brought Into Wall Mounted Connector Housing In The Vicinity Of The FACP.
 - Wiring
 - The FACP Power Supply Shall Be Derived From A Dedicated, Lockable Electrical Circuit (Colored Red) As Well As An Internal Battery Sized To Provide 15 Minutes Of Alarm Condition After 24 Hours Of Operation Without Normal Power And Include 20% Additional Spare Capacity.
 - The FACP Ground Shall Consist Of An #8 AWG Conductor In 3/4" Conduit From The Fire Alarm Control Panel (FACP) To The Building's Grounding Electrode System. Bond To Metallic Conduit On Both Ends With Listed Hardware. See Sheet E102 For Location Of Main Electric Room.
 - The Fire Alarm System's Wiring Method Shall Be Class A Rated Between Panels (Where Applicable) And Class B Rated For Detection Devices And Notification Appliances.
 - The New FACP Shall Contain A Minimum Of 30% Spare Capacity Above The Total Amount Of Existing Devices Connected To The Existing FACP Provide Fire Alarm Panel With Hardware For Two (2) Spare Circuits.
 - Surge Protector To Be Provided For Each 120V Power Supply Circuit, Refer To Specifications For Further Information.
 - Testing
 - Perform A Final Acceptance Test Of The Entire Fire Alarm System In Accordance With All Applicable Codes Including The International Building Code (IBC) And NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.

FIRE ALARM RISER Scale: NTS Drawing: E101 Detail: 01



- NOTES:**
- Coordinate Position Installation Of EMT Into FACP Enclosure With Respect To Fiber Termination Connections In FACP Enclosure, And With TCNJ/IT
 - Install 2" EMT From Fiber Enclosure To FACP Enclosure. Use LBs At Each 90-Degree End Unless Swept Long-Radius Bends Can Be Installed. No More Than (2) 90-degree Bends Are Permitted Before An Accessible Pulling Point Shall Be Furnished.
 - Install Fiber Jumpers Between WCH And FACP.

FIRE ALARM FIBER ENCLOSURE INSTALLATION Scale: NTS Drawing: E101 Detail: 02

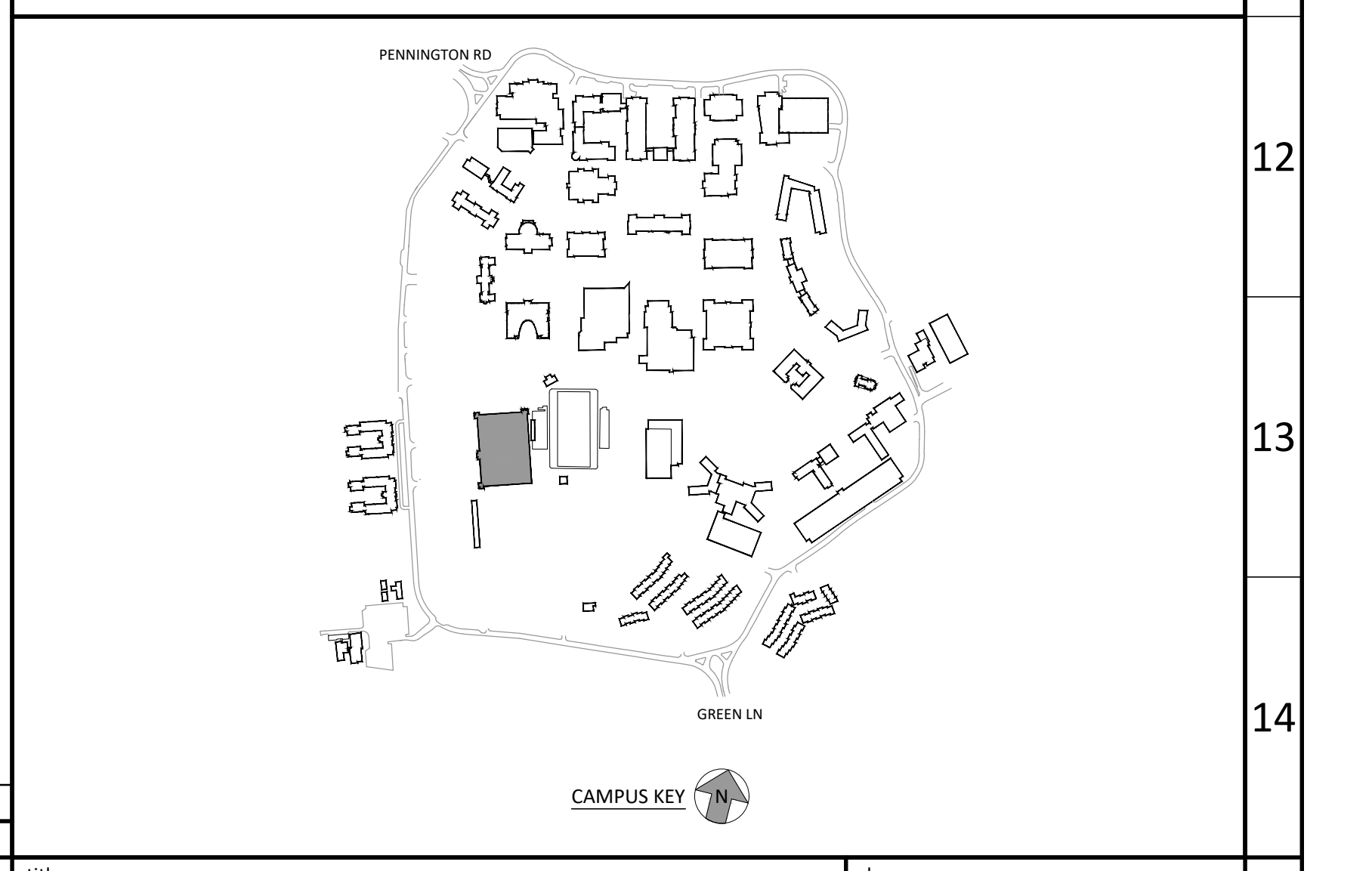
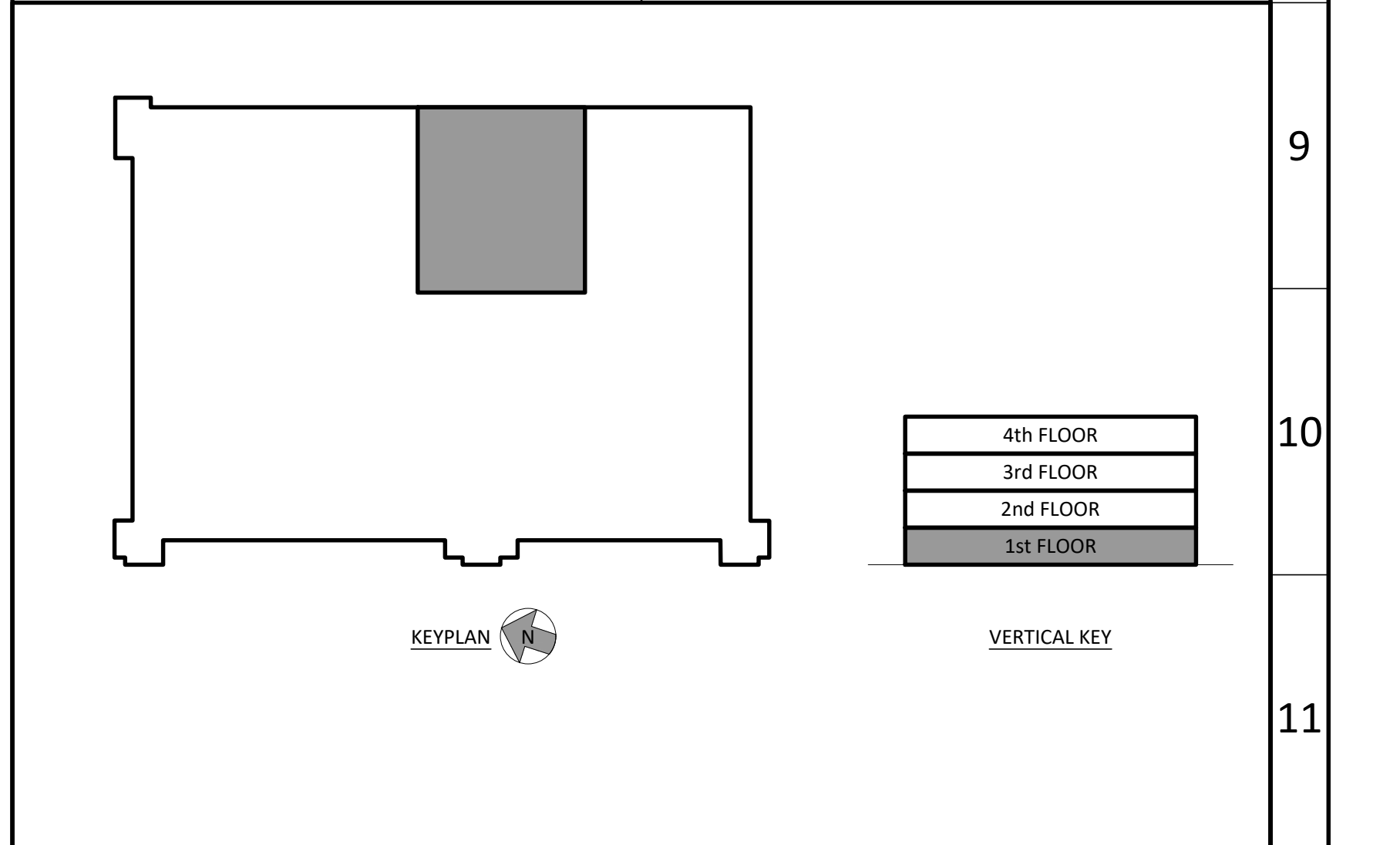


PARTIAL FLOOR PLAN - FIRST FLOOR Scale: 1/8"=1'-0" Drawing: E101 Detail: 03

- KEY NOTES (SYMBOLS ①, ②, ETC.)**
- Provide A New Fire Alarm Panel, Or Replace Existing Fire Alarm Panel, Or Replace Existing Fire Alarm System To Enable Addressable Communication With The New Campus Front End. To Count As One Of The Fully Addressable Buildings, Each Device Point Must Be Communicated To The Front End System.
 - Provide UL Listed Alarm System Loop Circuit Surge Protection For Each 24V Alarm System Loop Circuits In A Field-Replaceable Module. Includes Hardwired Mounting Base For Each Module.
 - Provide Two Duplex Fiber Jumper Cables Pre-terminated On Both Ends, Between The Existing WCH And Fire Alarm Control Panel As Per Detail 2. Also Provide Duplex Fiber Jumper Cables Pre-terminated On Both Ends At The MDF Between Required Interconnection Points. Contractor Shall Coordinate And Confirm Jumper Connection Types, Fiber Type, Length, Routing Conditions, Etc With Field Conditions. Coordinate With TCNJ IT Department For Fiber Connection And Labeling Information.
 - Provide Branch Circuit For The New Fire Alarm Panel From Existing Electrical Panel In Electric Room That Currently Supplies The Existing Fire Alarm Panel. Utilize 2#12, #12G In 3/4" Conduit And Provide New 20Amp Circuit Breaker (Red And Clearly Identify FACP Circuit). Match Existing Type/Ratings For Circuit Breaker.
- GENERAL NOTES**
- The Fire Alarm Plan Shows The General Layout And Intent Of The Fire Alarm System. It Does Not Necessarily Reflect Exact Quantities Required By Code. The Contractor Shall Determine The Actual Quantity And Location Of Devices Required Based Upon Actual Field Conditions Required As Per NFPA 72.
 - The Fire Alarm System Shall Comply With NFPA 72 And All Local Codes And Amendments.
 - Fire Alarm Cabling That Cannot Be Concealed Shall Be Neatly Surface Mounted Utilizing Wire Mold In Finished Areas Or EMT In Non-Finished Areas. All Exposed EMT Shall Be Prepped And Painted To Match Adjacent Wall Surface.
 - Panel Board Circuit Breaker Supplying Fire Alarm Control Panel And Associated Equipment Shall Have A Handle "Lock On" Device.
 - Provide Installation Testing Per NFPA 72 By NICET Level II Or Greater Certified Fire Alarm Technician.
 - When Replacing An Existing FACP It Is The Contractors Responsibility To Transfer All Systems That Are Currently Reporting To The Existing Panel. There Are Certain Panels That Monitor Accessory Systems Such As Security, Fire Shutters Clean Agent Systems, CO Detectors, Access Control Etc. Contractor Shall Survey The Buildings And Include All Accessory Systems And Intermediary Devices Required To Integrate Said Systems On Their Shop Drawings.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
FACP	Fire Alarm Control Panel	FACP	Fire Alarm Control Panel
WCH	Existing Wall-Mounted Connector Housing	EMT	Electrical Metallic Tubing
FACP	Existing Fire Alarm Control Panel	CM	Control Module
□	New Equipment	MM	Monitor Module
□	Existing Equipment	WCH	Wall-Mounted Connector Housing
⊙	Photo Tag		
→	Connect To Existing		



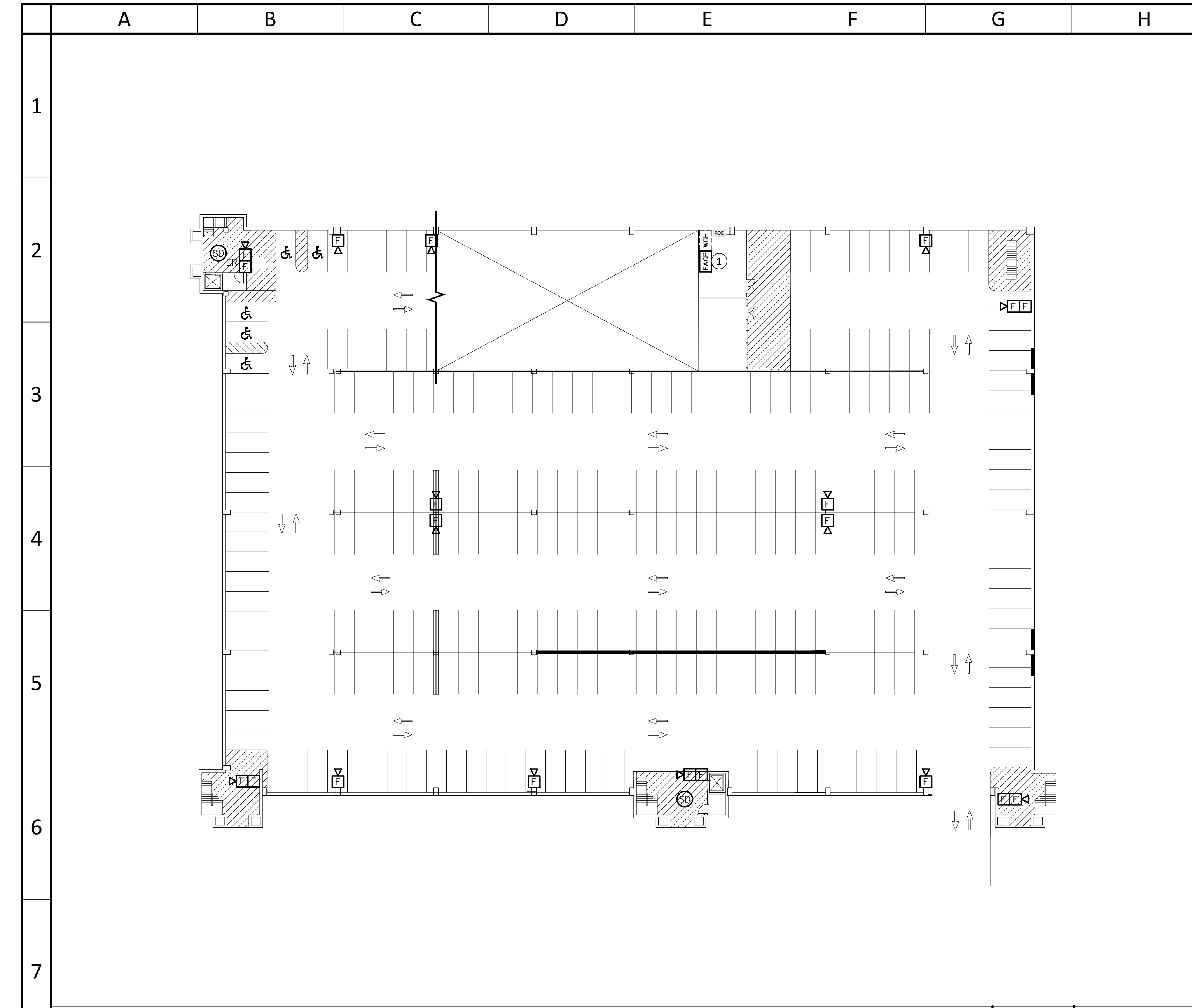
30442

ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

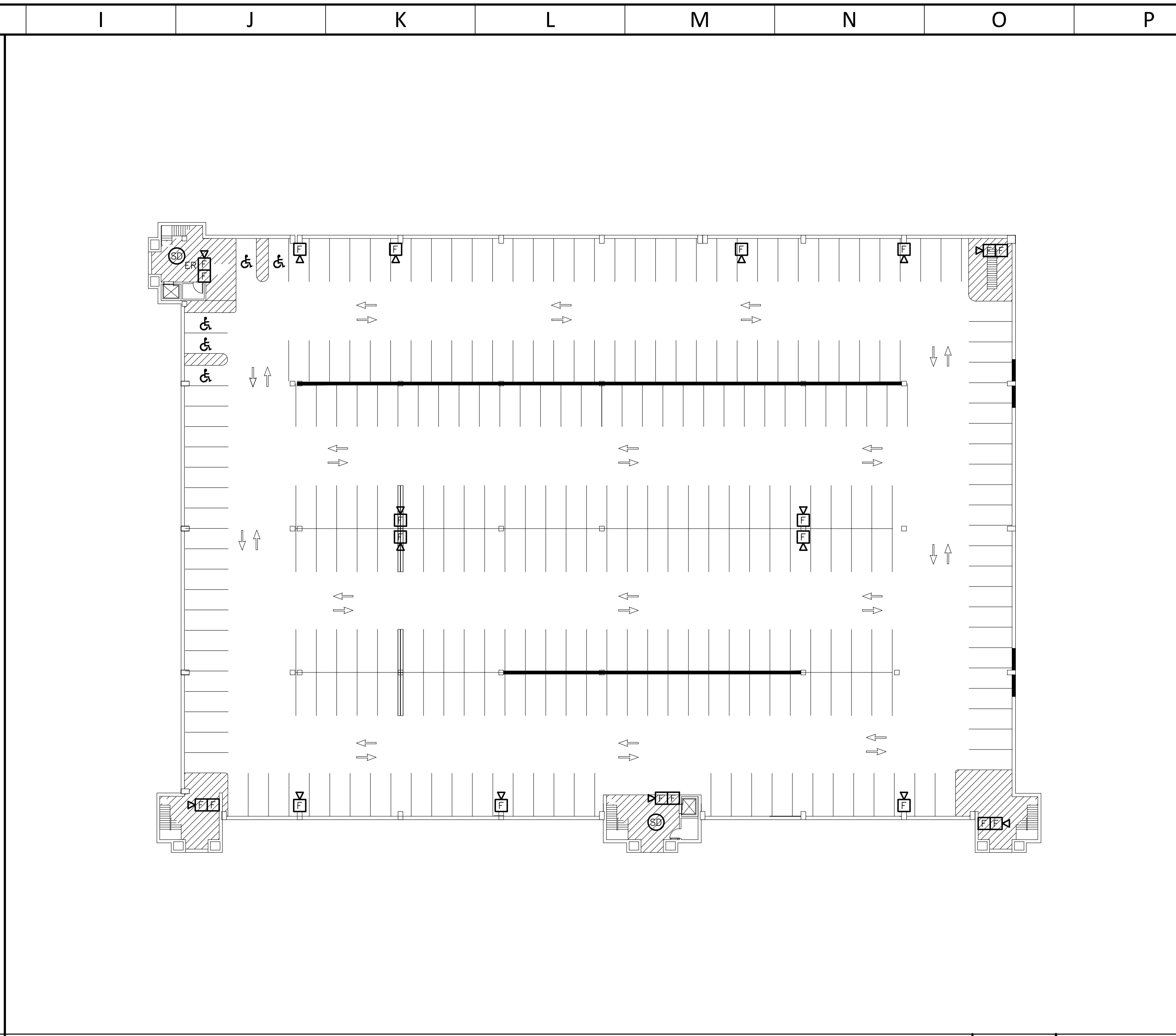
dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Anthony Laskosky
DLB Project ID: 47211 Phone: 732-927-5038

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

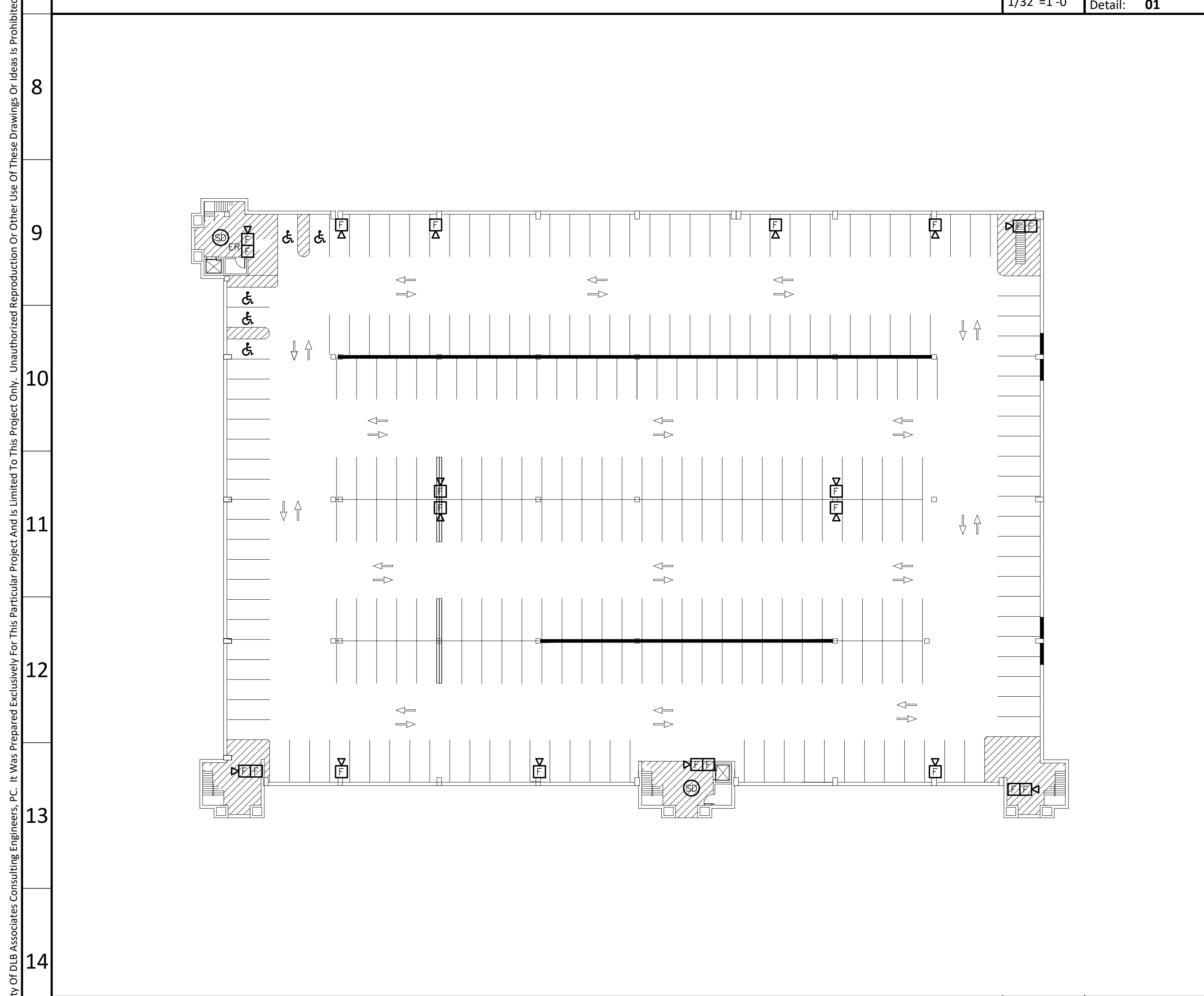
title
FIRE ALARM PANEL REPLACEMENT
METZGER GARAGE
dwg. no.
E101-MGRG
scale
1/8" = 1'-0"
drawn by
SC
checked by
SF
date
5/03/2020



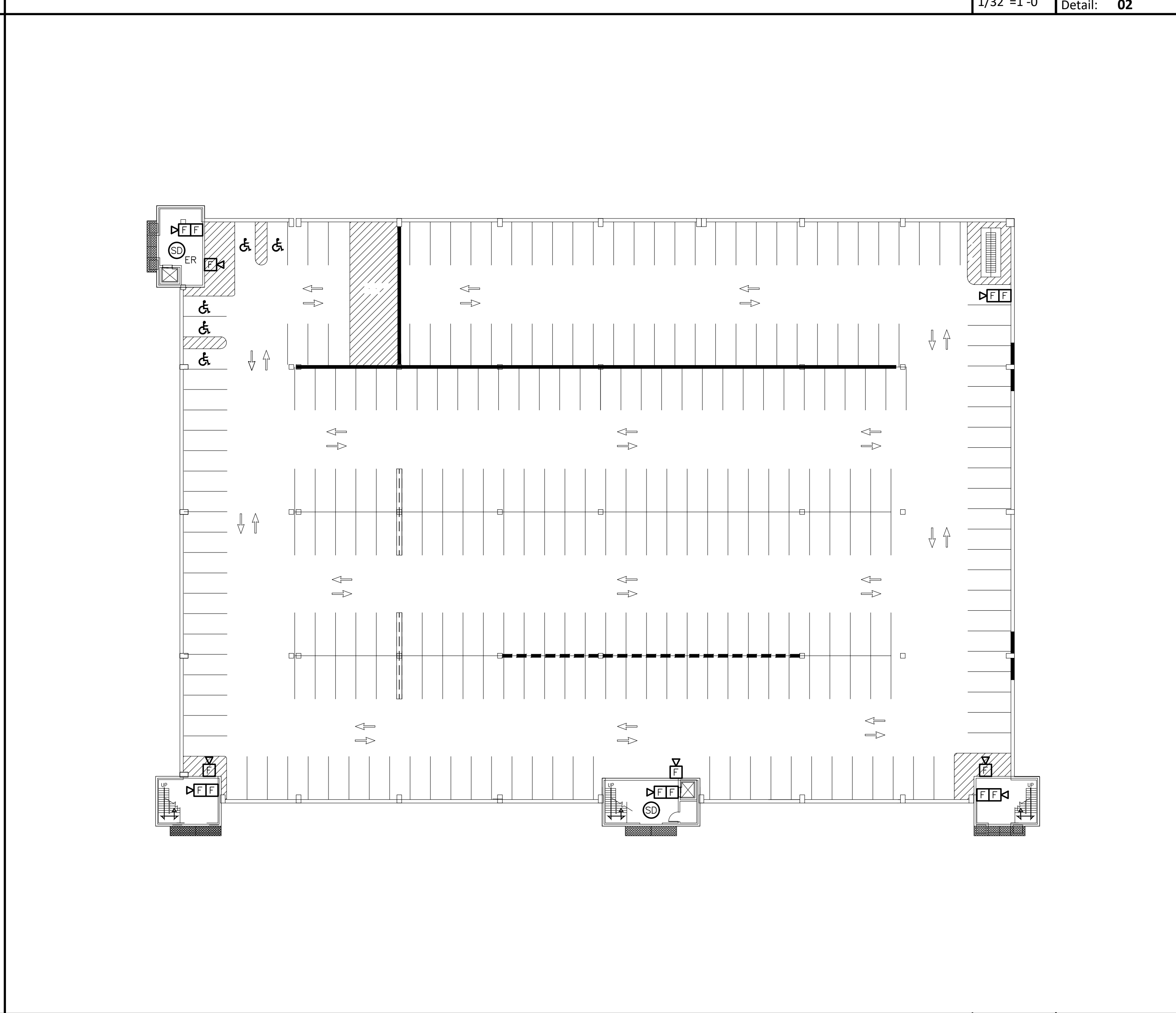
FIRST FLOOR LAYOUT Scale: 1/32"=1'-0" Drawing: **E102** Detail: **01**



SECOND FLOOR LAYOUT Scale: 1/32"=1'-0" Drawing: **E102** Detail: **02**



THIRD FLOOR LAYOUT Scale: 1/32"=1'-0" Drawing: **E102** Detail: **03**



FOURTH FLOOR LAYOUT Scale: 1/32"=1'-0" Drawing: **E102** Detail: **04**

KEY NOTES (SYMBOLS ①, ②, ETC.)

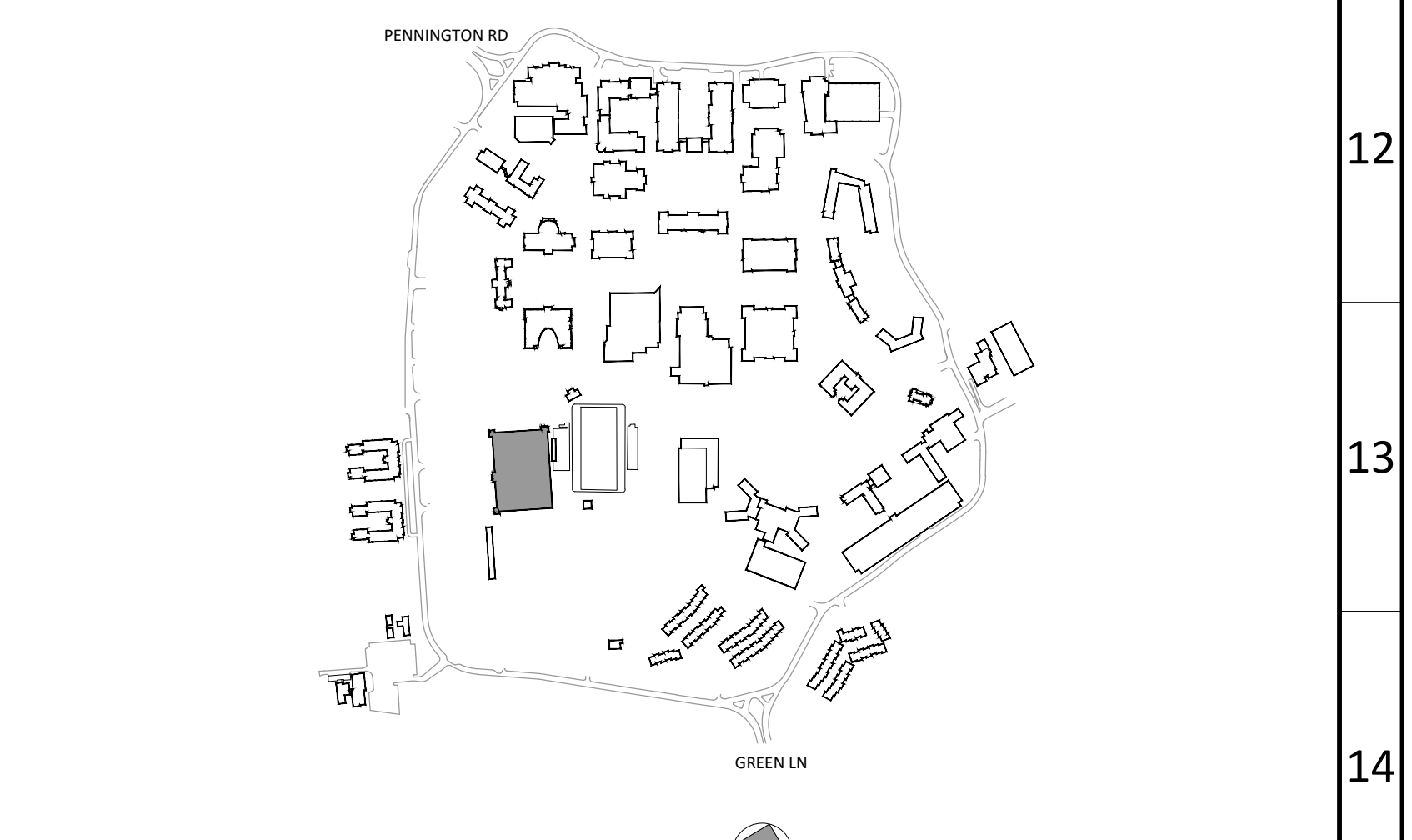
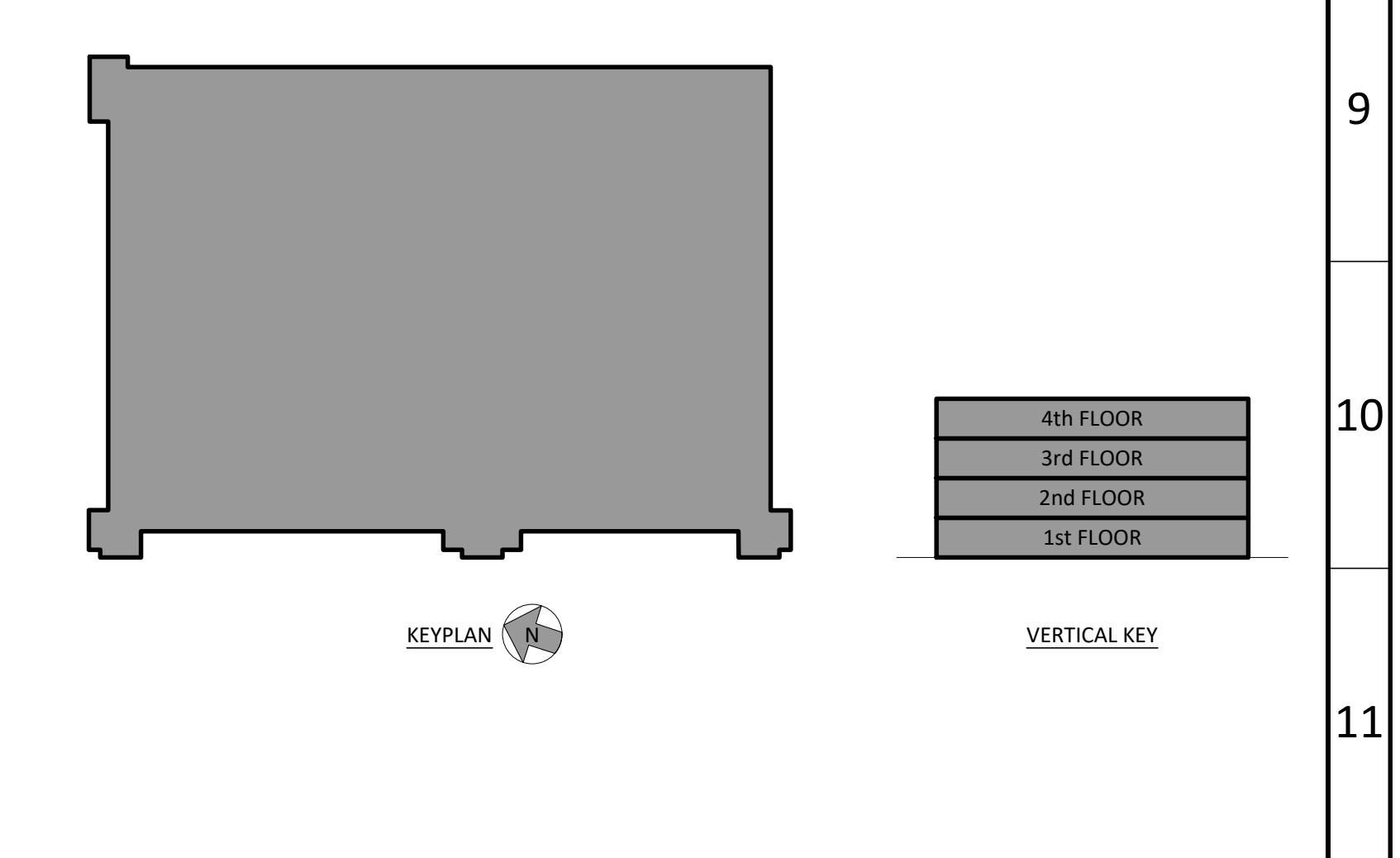
1. Existing Fire Alarm Control Panel.

GENERAL NOTES

1. This Drawing Is Provided For Reference Only And Includes Existing Fire Alarm Devices Noted During A Visual Walk Through To Provide An Understanding Of The Existing Level Of Detection Within Each Building. The Intent Of This Reference Drawing Is To Provide A Baseline Or Minimum Level Of Protection That Shall Be Maintained In Within The Building. It Is Not Intended To Depict The Requirements For A Complete System Replacement Or Layout Of New Devices For This Building.

PARTIAL SYMBOLS & ABBREVIATIONS

Identifier	Description	Identifier	Description
Ⓜ	Manual Pull Station	□	No Access
Ⓢ	Strobe Only	Ⓢ	New Smoke Detector
Ⓜ	Horn/Strobe	Ⓜ	New Manual Pull Station
Ⓢ	Smoke Detector	Ⓢ	New Strobe
Ⓢ _{ER}	Smoke Detector (ER Indicates Elevator Recall)	Ⓜ	New Horn / Strobe
Ⓢ _{SB}	Smoke Detector With Sounder Base	Ⓢ	Photo ID Tag
Ⓢ	Heat Detector, Combination Fixed Temperature And Rate Of Rise	FACP	Fire Alarm Control Panel
Ⓢ	CO Detector	CO	Carbon Monoxide
Ⓢ _{DC}	Duct Mounted Smoke Detector	POE	Point Of Entry
FACP	Fire Alarm Control Panel		
FARA	Fire Alarm Remote Annunciator Panel		
FABAC	Fire Alarm Booster Panel		
FS	Fire Sprinkler Tamper Switch		
FS	Fire Sprinkler Flow Switch		
WCH	Existing Wall Mounted Connector Housing		



30x42

ITEM	DATE	ISSUE DESCRIPTION	ITEM	DATE	ISSUE DESCRIPTION
1	05/01/2020	ISSUED FOR BID			

Drawings Based On Visual Inspection Site Walk Through Completed During Nov 2017 - March 2018

Anthony Laskosky
732-927-5038

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724

Questions For DLB Call: DLB Project ID: 47211

project
TCNJ - CAMPUS FIRE ALARM PROJECT
PART B - HARDWARE & SOFTWARE UPGRADES
2000 PENNINGTON ROAD,
EWING NJ, 08618

scale AS SHOWN
drawn by SC
checked by SF
date 5/03/2020

title
FIRE ALARM - EXISTING LAYOUT
METZGER GARAGE

dwg. no.
E102-MGRG

This Drawing Is The Property Of DLB Associates Consulting Engineers, P.C. It Was Prepared Exclusively For This Particular Project And Is Limited To This Project Only. Unauthorized Reproduction Or Other Use Of These Drawings Or Ideas Is Prohibited.