

FACP BATTERY CALCULATIONS (FIRE-LITE ES-50X)								
MODEL NUMBER	DESCRIPTION	QUANTITY	STANDBY POWER		IN ALARM		STANDBY BATTERIES (24-VOLT)	CURRENT (mA)
			CURRENT PER DEVICE (mA)	TOTAL CURRENT (mA)	CURRENT PER DEVICE (mA)	TOTAL CURRENT (mA)		
FIRE-LITE ES-50X	FIRE ALARM CONTROL PANEL	1	141	141	267	267	STANDBY CURRENT	198.60
FIRE-LITE ANN-80	ANNUNCIATOR	1	15	15	40	40	HOURS	24
FIRE-LITE BG-12LX	MANUAL PULL STATION	1	0.30	0.30	SEE NOTE 1	SEE NOTE 1	STANDBY mA	4,764
FIRE-LITE SD365	SMOKE DETECTION	1	0.3	0.3	SEE NOTE 1	SEE NOTE 1	ALARM CURRENT	840
FIRE-LITE MMF-300	MONITOR MODULE	4	0.40	1.60	SEE NOTE 1	SEE NOTE 1	HOURS	0.083
FIRE-LITE CRF-300	CONTROL/RELAY MODULE	1	0.3	0.30	SEE NOTE 1	SEE NOTE 1	ALARM #A	70
FIRE-LITE IPTS-COM	COMMUNICATOR EXT	1	40.0	40.00	41	41	TOTAL #A	4,834
							TOTAL AH	4.8
							CONTINGENCY	20%
							BATTERY TOTAL	5.8
AS INDICATED	MAX DRAIN ALL DEVICES	1	0	0	200	200		
SYSTEM SENSOR	CIRCUIT AV01	1	0	0	176	176		
SYSTEM SENSOR	CIRCUIT AV02	1	0	0	63	63		
TOTAL				198.60		840	BATTERY PROVIDED	7

NOTES  
 1. ALARM CURRENT FOR ADDRESSABLE DEVICES IS CALCULATED BASED ON THE MAXIMUM CURRENT REQUIRED FOR ALL DEVICES.  
 2. BATTERIES IN EXCESS OF 18 AH CANNOT BE INSTALLED IN THE FIRE-LITE ES-50X FACP ENCLOSURE AND MUST BE INSTALLED IN A BATTERY BOX LISTED FOR THAT PURPOSE WITH A PROPERLY SIZED CHARGER.

FIRE ALARM NOTIFICATION APPLIANCE CIRCUIT VOLTAGE DROP CALCULATIONS						
SIGNAL CIRCUIT DESCRIPTION	APSP/CIRCUIT LOCATION	ACTUAL ALARM CURRENT (mA)	MAXIMUM DISTANCE TO LAST APPLIANCE		CALCULATED VOLTAGE DROP USING 14 AWG CABLING (BASED ON 20.4 VDC SOURCE)	
			12 AWG CABLING (FEET)	14 AWG CABLING (FEET)	APPROX CIRCUIT LENGTH (FEET)	VOLTAGE AT LAST APPLIANCE (VOLTS)
FACP	MAIN ELECTRICAL ROOM					
AVEX	EXTERIOR NOTIFICATION APPLIANCE	176	6,477	4,072	200	20.18
AV01	SALES FLOOR / RESTROOMS	63	18,094	11,375	150	20.34

NOTES  
 1. NOTIFICATION APPLIANCE (CIRCUITS) (NAC) DESIGNED FOR A MAXIMUM 1.6 AMPS, MAXIMUM 4.4 VDC DROP, AND MINIMUM OPERATING VOLTAGE OF 16 VDC.  
 2. FIELD VERIFY ALL VOLTAGE DROP AND POWER REQUIREMENTS.  
 3. NOTIFICATION APPLIANCE CIRCUITS BASED UPON THE ABOVE CURRENT AND VOLTAGE CRITERIA USING SYSTEM SENSOR NOTIFICATION APPLIANCE CRITERIA.

ZONING		
ZONE NUMBER	ACTUATED DEVICES	ALPHANUMERIC LABEL OF ZONE
Z01	FACP / FAAN / DACT	ALARM CONDITION AT FACP, FAAN, AND OFF-SITE MONITORING STATION
Z02	FACP / FAAN / DACT	SUPERVISORY CONDITION AT FACP, FAAN, AND OFF-SITE MONITORING STATION
Z03	FACP / FAAN / DACT	TROUBLE CONDITION AT FACP, FAAN, AND OFF-SITE MONITORING STATION
Z04		
Z05		
Z06	FACP	ACTIVATES INTERIOR AUDIBLE/VISUAL NOTIFICATION APPLIANCES
Z07		
Z08	FACP	ACTIVATES EXTERIOR NOTIFICATION APPLIANCE
Z09		
Z10	27	SHUTS DOWN HVAC UNITS
THRU		
Z20		

ADDRESSABLE DEVICES			
ADDRESS	TYPE ID	ACTUATED ZONES	ALPHANUMERIC LABEL OF DEVICE
01	MONITOR	Z01, Z06, Z08	WATERFLOW SWITCH
02	MONITOR	Z02	TAMPER SWITCH
03	MONITOR	Z02	EXTERIOR BACKFLOW PREVENTER TAMPER SWITCHES
04			
05			
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10	SMOKE	Z01, Z06	UTILITY AREA SMOKE DETECTOR
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20	PULL	Z01, Z02	ADJACENT TO FAAN
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26	MONITOR	Z10	RTU 1 RETURN DUCT SMOKE DETECTOR
27	ARM		RTU 1 SHUTDOWN
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- ### FIRE ALARM INSTALLATION NOTES
- ALL WORK SHALL BE IN ACCORDANCE WITH NFPA STANDARDS AND ALL LOCAL ADOPTED CODES.
  - FIRE ALARM CABLING SHALL BE ACCEPTABLE TO THE FIRE ALARM EQUIPMENT MANUFACTURER FOR THE INTENDED PURPOSE. SHOULD MANUFACTURER OF FIRE ALARM EQUIPMENT REQUIRE DIFFERENT TYPE OR SIZE OF CABLE THAN HEREIN SPECIFIED, THE LARGER OR MORE STRINGENT TYPE OF CABLE SHALL BE USED.
  - ALL FIRE ALARM CABLING SHALL BE FPL, FPLR OR FPLP AS REQUIRED BY THE ELECTRICAL CODE.
  - PROVIDE ALL REQUIRED CONDUIT, BACKBOXES, AND FITTINGS FOR THE FIRE ALARM SYSTEM CABLING.
  - FIRE ALARM CABLING SHALL BE RED IN COLOR.
  - FIRE ALARM CABLING SHALL NOT BE PAINTED.
  - CABLE ROUTING SHOWN ON DRAWINGS IS FOR INTENT. EXACT ROUTING SHALL BE COORDINATED WITH OTHER TRADES IN THE FIELD. SEE DRAWING NOTES AND DETAILS FOR ACCEPTABLE INSTALLATION METHODS.
  - ALL CABLING NOT IN RUNWAY SHALL BE NEATLY BUNDLED, WRAPPED TIGHT, AND PROPERLY SECURED. ANY CABLING NOT INSTALLED IN A NEAT AND PROFESSIONAL MANNER SHALL BE PULLED OUT AND RE-RUN BY INSTALLER AT NO ADDITIONAL COST TO OWNER.
  - CONTRACTOR RUNNING CABLING MUST MARK BOTH ENDS OF CABLING, PROVIDE A WIRE LEGEND FOR ALL LOCATIONS, AND PROVIDE A CONTINUITY TEST LOG FOR EACH CABLE.
  - EXPOSED CABLING SHALL BE RUN PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE. EXPOSED CABLING SHALL NOT BE RUN IN A 'SPAN' FASHION BETWEEN BAR JOISTS OR BEAMS (I.E. CABLING SHALL BE ROUTED ALONG PATH OF JOISTS AND BEAMS). ALL CABLING SHALL BE SECURED TO THE STRUCTURAL CEILING BETWEEN JOISTS OR BEAMS.
  - ALL CABLING SHALL BE SUPPORTED FROM BUILDING STRUCTURE AND NOT FROM GRID, TILES, OR SUPPORT WIRES. ALL CABLING NOT IN RACEWAY SHALL BE SUPPORTED BY BUILDING STRUCTURE AT NO MORE THAN FIVE (5) FOOT INTERVALS.
  - ALL FIRE ALARM CABLING BELOW THE ROOF STRUCTURE, IN ELECTRICAL AND MECHANICAL ROOMS (SUBJECT TO PHYSICAL DAMAGE), CONCEALED ABOVE CEILING, OR IN PARTITIONS (SUBJECT TO PHYSICAL DAMAGE) SHALL BE INSTALLED IN METALLIC CONDUIT.
  - ALL POWER LIMITED FIRE ALARM CABLING ABOVE THE STRUCTURE, ABOVE LAY-IN CEILING, OR CONCEALED ABOVE CEILING (NOT SUBJECT TO PHYSICAL DAMAGE) ARE NOT REQUIRED TO BE INSTALLED IN CONDUIT.
  - ALL NON-POWER LIMITED FIRE ALARM CABLING FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN CONDUIT.
  - ALL CONDUIT SHALL BE TERMINATED ABOVE THE WALL AT THE ROOF STRUCTURE LEVEL WITH SOME FORM OF GROMMET OR BOX CONNECTOR.
  - ALL CONDUIT LOCATED IN DRYWALL SHALL BE TERMINATED NO LESS THAN 18 INCHES ABOVE THE CEILING TILE/ROOF STRUCTURE.
  - FOR DRYWALL APPLICATIONS, ALL CONDUIT AND BACKBOXES SHALL BE RECESSED INSIDE THE WALL.
  - EXPOSED CABLING OR CONDUIT IS NOT ALLOWED IN THE SHOWROOM.
  - ALL FIRE ALARM CABLING IN FINISH AREAS SHALL BE CONCEALED.
  - COORDINATE DRILLING OF ANY HOLES, COLUMN PENETRATIONS WITH THE OWNER'S REPRESENTATIVE AND ALL OTHER TRADES PRIOR TO INSTALLATION.
  - ALL FIRE ALARM DEVICES SHALL BE INSTALLED ON A PROPER BACKBOX. NO DEVICES SHALL BE INSTALLED WITHOUT A BACKBOX.
  - ALL FINISHING, CONDUIT, AND BACKBOXES SHALL BE PROPERLY SUPPORTED AND SEISMICALLY GRADED, AS REQUIRED BY ALL APPLICABLE CODES AND THE LOCAL JURISDICTION.
  - CONDUIT AND CABLES SHALL ENTER INTO THE FACP ONLY AS APPROVED BY THE EQUIPMENT MANUFACTURER.
  - CONDUIT FILL SHALL NOT EXCEED 40%.
  - ALL FIRE ALARM JUNCTION BOXES SHALL BE RED IN COLOR.

- ### FIRESTOP NOTES
- ALL THROUGH-PENETRATIONS OF FIRE-RATED WALLS AND FLOORS SHALL BE FIRE-STOPPED.
  - FIRE-RATED GYPSUM BOARD WALLS CONSTRUCTED AS DESCRIBED IN THE INDIVIDUAL U300, U400, OR V400 SERIES DESIGNS IN THE U.L. FIRE RESISTANCE DIRECTORY (GENERALLY DOUBLE THICKNESS WALLBOARD) SHALL BE FIRE-STOPPED WITH U.L. SYSTEMS.
  - ALL REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOORS OR WALLS, AND ALL U.L. CLASSIFIED CONCRETE BLOCK WALLS SHALL BE FIRE-STOPPED WITH U.L. SYSTEMS.

- ### FIREPROOFING NOTES (WHERE REQUIRED)
- INSTALL ALL HANGERS, CLAMPS, CONDUIT, AND BACK BOXES FOR THE FIRE ALARM SYSTEM PRIOR TO THE APPLICATION OF FIREPROOFING ON STRUCTURAL MEMBERS.
  - INSTALL ALL HANGERS, CLAMPS, AND BACK BOXES FOR THE FIRE ALARM SYSTEM ON THE EDGE OF ANY JOIST REQUIRING FIREPROOFING. BACK BOXES SHALL BE FASTENED TO THE FLANGE OF THE JOIST UTILIZING BEAM CLAMPS, AND SHALL NOT BE ATTACHED DIRECTLY TO THE JOIST.
  - ANY DAMAGE TO FIREPROOFING ON THE BUILDING STRUCTURE AS A RESULT OF THE FIRE ALARM SYSTEM INSTALLATION SHALL BE REPAIRED BY A QUALIFIED FIREPROOFING CONTRACTOR. ALL DAMAGE AND REPAIR OF FIREPROOFING SHALL BE REPORTED TO AND COORDINATED THROUGH THE OWNER'S REPRESENTATIVE. THE FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIREPROOFING REPAIRS AT NO ADDITIONAL COST TO THE OWNER.
  - VERIFY THE LOCATIONS OF ALL FIREPROOFING, PRIOR TO THE INSTALLATION OF ANY FIRE ALARM CONDUIT AND BACKBOXES.

- ### FIRE ALARM GENERAL NOTES
- THE FIRE ALARM SYSTEM SHALL OPERATE AS A STANDALONE LOW VOLTAGE SYSTEM AND SHALL BE AN INTELLIGENT ADDRESSABLE SUPERVISED SYSTEM CIRCUITS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
    - INITIATING DEVICE CIRCUITS - CLASS B
    - NOTIFICATION APPLIANCE CIRCUITS - CLASS B
    - SIGNALING LINE CIRCUITS - CLASS A
    - CIRCUITS FOR RELAY COIL OPERATION SHALL BE 24 VDC MAXIMUM WITH A SEPARATE OR INTEGRAL FIELD COLLAPSING DIODE.
  - THE FIRE ALARM CABINETS AND DOCUMENTATION CABINET SHALL HAVE A HINGED DOOR KEYS IN COMMON WITH ALL OTHER KEYS DEVICES THROUGHOUT THE SYSTEM.
  - COORDINATE INSTALLATION OF A GROUND ROD OR ACCEPTABLE BUILDING GROUND FOR PROPER GROUNDING OF THE FACP WITH THE ELECTRICAL CONTRACTOR.
  - UPON LOSS OF BUILDING POWER, THE ENTIRE SYSTEM SHALL TRANSFER TO SECONDARY POWER WITHIN TEN (10) SECONDS, AND WITHOUT LOSS OF SIGNALS. THE SYSTEM SHALL OPERATE UNDER SECONDARY POWER IN NORMAL OR TROUBLE CONDITIONS FOR TWENTY-FOUR (24) HOURS AND HAVE SUFFICIENT POWER TO SUPPORT COMPLETE ALARM CONDITION OPERATION FOR A SUBSEQUENT FIVE (5) MINUTES AT MAXIMUM CONNECTED LOAD.
  - PROVIDE MONITORING CONNECTIONS TO SPRINKLER WATERFLOW SWITCHES AND TAMPER SWITCHES (BY OTHERS). PROVIDE ALL CABLING TO SWITCHES, FINAL WIRING CONNECTIONS AT SWITCHES, AND SUPERVISION OF ALL WIRING CONNECTIONS. COORDINATE ALL CONNECTIONS WITH THE SPRINKLER CONTRACTOR.
  - COORDINATE INSTALLATION OF A MINIMUM ONE (1) INCH UNDERGROUND CONDUIT, WITH PULL STRING, FOR FIRE ALARM CABLING CONNECTIONS TO ANY EXTERIOR BACKFLOW PREVENTER ASSOCIATED WITH THE BRIDGESTONE SPACE. PROVIDE MONITORING OF ALL TAMPER SWITCHES (BY OTHERS) ON THE ASSOCIATED BACKFLOW PREVENTER AND INTERFACE CONNECTIONS WITH THE OWNER'S REPRESENTATIVE, ELECTRICAL CONTRACTOR, FIRE SPRINKLER CONTRACTOR, AND SITE CIVIL CONTRACTOR.
  - ALL SIGNALING LINE CIRCUITS, INITIATING DEVICE CIRCUITS, AND NOTIFICATION APPLIANCE CIRCUITS SHALL BE SUPERVISED IN ACCORDANCE WITH NFPA 72.
  - PROVIDE END OF LINE RESISTORS FOR ALL INITIATING DEVICE CIRCUITS AND NOTIFICATION APPLIANCE CIRCUITS PER MANUFACTURER'S SPECIFICATIONS.
  - PROVIDE A COMPUTER GENERATED PRINT LABEL FOR EACH INITIATING DEVICE INDICATING THE SPECIFIC CIRCUIT NUMBER FOR THAT APPLIANCE. THE LABEL SHALL INCLUDE THE APPLIANCE ADDRESS FOR THAT APPLIANCE, INCLUDING THE APPLIANCE ADDRESS FOR THAT APPLIANCE, CIRCUIT NUMBER AND APPLIANCE NUMBER. THE LABEL SHALL BE LOCATED ON THE BASE OF ALL DETECTOR APPLIANCES.
  - PROVIDE A COMPUTER GENERATED PRINT LABEL FOR EACH NOTIFICATION APPLIANCE INDICATING THE SPECIFIC CIRCUIT NUMBER FOR THAT APPLIANCE. THE LABEL SHALL INCLUDE END OF LINE RESISTOR LOCATION, CIRCUIT NUMBER AND APPLIANCE NUMBER. THE LABEL SHALL BE LOCATED ON THE BASE OF ALL NOTIFICATION APPLIANCES.
  - NOTIFICATION APPLIANCE (CIRCUITS) (NAC) HAVE BEEN DESIGNED FOR A MAXIMUM 1.6 AMPS, MAXIMUM 4.4 VDC DROP, AND MINIMUM OPERATING VOLTAGE OF 16 VDC. SEE FIRE ALARM NAC VOLTAGE DROP CALCULATIONS ON THIS SHEET.
  - ALL AUDIBLE APPLIANCES SHALL BE SET TO THE HIGH DBA SETTINGS AND SHALL SOUND A THREE-PULSE TEMPORAL PATTERN EVACUATION SIGNAL.
  - PROVIDE SYNCHRONIZATION OF ALL AUDIBLE AND VISUAL NOTIFICATION APPLIANCE CIRCUITS THROUGHOUT. PROVIDE ALL REQUIRED SYNCHRONIZATION MODULES. PROVIDE MULTI-SYNC MODE SLAVE CONNECTIONS TO ALL AUXILIARY POWER SUPPLIES.
  - THE AUDIBLE/VISUAL AND VISUAL NOTIFICATION APPLIANCES SHALL BE RED IN COLOR, AND LISTED FOR THE INTENDED APPLICATION.
  - NOTIFICATION APPLIANCE POLARITY SHALL BE OBSERVED.
  - WHERE POSSIBLE, PROVIDE FLUSH MOUNTING OF NOTIFICATION APPLIANCES WHERE SURFACE-MOUNTED NOTIFICATION APPLIANCES ARE NECESSARY. PROVIDE DECORATIVE BACKBOX SKIRT COVERING THE APPLIANCE BACKBOX.
  - MANUALLY ACTIVATING THE 'ALARM SILENCE' AT THE FACP SHALL DE-ENERGIZE BOTH THE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES. AN ADDITIONAL ALARM REPORTED TO THE FACP SUBSEQUENT TO ACTIVATING THE 'ALARM SILENCE' SHALL RE-ENERGIZE THE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT THE BRIDGESTONE SPACE.
  - THE CEILING MOUNTED DEVICES AND APPLIANCES SHALL BE INSTALLED ALIGNED AESTHETICALLY WITH THE CEILING LIGHTING, SPRINKLERS, AND OTHER FIXTURES. COORDINATE INSTALLATION OF ALL CEILING MOUNTED FIRE ALARM DEVICES AND NOTIFICATION APPLIANCES WITH THE ARCHITECTURAL DRAWINGS AND ALL OTHER TRADES PRIOR TO INSTALLATION.
  - DEVICES AND APPLIANCE LOCATIONS AS SHOWN ON THE FIRE ALARM PLANS ARE NOT DIMENSIONED FOR EXACT INSTALLATION. COORDINATE EXACT PLACEMENT OF ALL DEVICES AND APPLIANCES WITH THE ARCHITECTURAL PLANS, APPLICABLE TRADES, AND OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
  - ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO THE PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES AND QUANTITIES OF OTHER TRADES WORK.
  - SMOKE DETECTOR HEADS SHALL NOT BE INSTALLED UNTIL AFTER THE CONSTRUCTION CLEAN-UP OF ALL TRADES IS COMPLETE AND FINAL.
  - VERIFY ALL EQUIPMENT QUANTITIES, LOCATIONS, AND REQUIREMENTS. IF DISCREPANCIES ARE FOUND, CONTRACTOR SHALL IMMEDIATELY BRING THEM TO THE ATTENTION OF THE FIRE PROTECTION ENGINEER (CPI) FOR RESOLUTION.
  - CONTRACTOR SHALL EXECUTE ALL WORK NECESSARY FOR A COMPLETE AND OPERATIONAL FIRE ALARM SYSTEM PER APPLICABLE NATIONAL AND LOCAL CODES, AND AS REQUIRED BY THE AHJ AND BY THE CLIENT/TOWNER OF THE FACILITY IN ACCORDANCE WITH THEIR NATIONAL CONTRACTOR WITH STANLEY ALARM SYSTEM.
  - BRIDGESTONE (BSRO) UTILIZES STANLEY SECURITY SOLUTIONS FOR THE PURPOSE OF MONITORING THE FIRE ALARM SYSTEM. THE CONTRACTOR SHALL CONTACT MAIER AT (617) 642-0817 OR AL.MAIER@SBDINC.COM WITH STANLEY SECURITY SOLUTIONS FOR THE SOLE PURPOSE OF ESTABLISHING MONITORING OF THE FIRE ALARM SYSTEM.

- ### FIRE ALARM KEYED NOTES
- COORDINATE CONNECTIONS TO DEDICATED 120 VAC POWER CIRCUITS WITH THE ELECTRICAL CONTRACTOR. THE DEDICATED CIRCUIT DISCONNECT SHALL BE RED IN COLOR, LABELED 'FIRE ALARM CIRCUIT', AND HAVE A LOCKABLE TAB. ALL FIRE ALARM CIRCUIT BREAKERS SHALL BE CLEARLY MARKED AND MECHANICALLY SECURED TO PREVENT ANY UNAUTHORIZED TAMPERING. IDENTIFY THE LOCATION OF THE CIRCUIT DISCONNECT AT THE FACP. COORDINATE EXACT MOUNTING LOCATION OF CONTROL PANEL WITH THE OWNER'S REPRESENTATIVE AND ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
  - PROVIDE TWO (2) MEANS OF SIGNAL TRANSMISSION TO THE OFF-SITE MONITORING FACILITY. PROVIDE A DEDICATED PHONE LINE FOR THE PRIMARY MEANS OF TRANSMISSION. THE SECONDARY MEANS SHALL UTILIZE A VOICE OVER INTERNET PROTOCOL (SESSION INITIATION PROTOCOL (VOIP/SIP)) CONNECTION TO OWNERS NETWORK. PROVIDE THE SERVICE PHONE NUMBER STICKER ON THE SURFACE OF THE FACP AND THE ASSOCIATED PHONE NUMBER USING DIRECTLY ON THE RACK BOXES. COORDINATE ALL PROGRAMMING, SIGNAL TRANSMISSION AND CONNECTIONS WITH THE OFF-SITE MONITORING COMPANY.
  - PROVIDE TRANSIENT SURGE SUPPRESSION MODULE (TSS) (120V-120W OR EQUIVALENT) ELECTRICAL PANEL. THE SURGE SUPPRESSION MODULE SHALL BE CONNECTED TO THE DEDICATED FIRE ALARM CIRCUIT PER MANUFACTURER'S SPECIFICATIONS. COORDINATE WITH ELECTRICAL CONTRACTOR FOR INSTALLATION.
  - PROVIDE A PHONE SUPPRESSION MODULE (ELK) OR EQUIVALENT AT EACH PHONE LINE. THE PHONE SUPPRESSION MODULE SHALL BE CONNECTED TO THE PRIMARY AND SECONDARY PHONE LINES PER MANUFACTURER'S SPECIFICATION. COORDINATE WITH ELECTRICAL CONTRACTOR FOR INSTALLATION.
  - PROVIDE A DOCUMENTATION CABINET (RED ENCLOSURE) ADJACENT TO THE FIRE ALARM CONTROL PANEL TO HOUSE ALL SYSTEM DOCUMENTS IN ACCORDANCE WITH NFPA 72. SYSTEM DOCUMENTS SHALL INCLUDE (AT A MINIMUM) RECORD DRAWINGS, EQUIPMENT DATA SHEETS, SOFTWARE, AND FIRMWARE CONTROL DOCUMENTS. THE DOCUMENTATION CABINET SHALL BE PROMINENTLY IDENTIFIED 'SYSTEM RECORD DOCUMENTS' AND SHALL BE ACCESSIBLE BY AUTHORIZED PERSONNEL ONLY AND PROTECTED FROM PUBLIC ACCESS.
  - MOUNT SMOKE DETECTOR ON THE BOTTOM OF THE DECK (NOT ON THE BOTTOM OF STRUCTURAL MEMBERS) AND LOCATED MORE THAN THREE (3) FEET FROM MECHANICAL DIFFUSERS, AS INDICATED IN NFPA 72. THE SMOKE DETECTOR FOR FIRE ALARM CABLING SHALL BE INSTALLED AND SUPPORTED A MINIMUM 1-1/2 INCHES FROM THE LOWEST SURFACE OF THE ROOF DECKING IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.
  - PROVIDE A FIRE ALARM ANNUNCIATOR (FAAN) ADJACENT TO THE FRONT ENTRANCE. THE FAAN SHALL BE FLUSH MOUNTED. COORDINATE EXACT MOUNTING LOCATION OF THE FIRE ALARM ANNUNCIATOR KEYPAD WITH THE OWNER'S REPRESENTATIVE AND AHJ PRIOR TO INSTALLATION.
  - PROVIDE ELECTRONIC MONITORING OF ALL SPRINKLER WATERFLOW AND TAMPER SWITCHES (BY OTHERS). MONITOR ANY ADDITIONAL WATERFLOW SWITCHES WITH A SEPARATE ADDRESSABLE INPUT MODULE. COORDINATE EXACT QUANTITIES, LOCATION AND INTERFACE CONNECTIONS WITH THE SPRINKLER CONTRACTOR.
  - PROVIDE CONDUIT FOR FIRE ALARM CABLING CONNECTIONS TO THE WALL POST INDICATING VALVE. FIRE ALARM CABLING SHALL BE LISTED FOR WALL LOCATIONS. COORDINATE INTERFERENCE CONNECTIONS WITH THE ELECTRICAL CONTRACTOR, FIRE SPRINKLER CONTRACTOR AND OWNER'S REPRESENTATIVE.
  - COORDINATE INSTALLATION OF A MINIMUM ONE (1) INCH UNDERGROUND CONDUIT, WITH PULL STRING, FOR FIRE ALARM CABLING CONNECTIONS TO ANY EXTERIOR BACKFLOW PREVENTER OR EXTERIOR POST INDICATOR VALVE (PIV) ASSOCIATED WITH THE BRIDGESTONE SPACE. PROVIDE MONITORING OF ALL TAMPER SWITCHES (BY OTHERS) ON THE ASSOCIATED BACKFLOW PREVENTER OR PIV. COORDINATE ANY REQUIRED UNDERGROUND CONDUIT AND INTERFACE CONNECTIONS WITH THE OWNER'S REPRESENTATIVE, ELECTRICAL CONTRACTOR, FIRE SPRINKLER CONTRACTOR, AND SITE CIVIL CONTRACTOR.
  - PROVIDE TRANSIENT SUPPRESSION ON ALL FIRE ALARM CIRCUITS LOCATED IN UNDERGROUND CONDUIT. PROVIDE ONE (1) TRANSIENT SUPPRESSION MODULE FOR EACH FIRE ALARM CIRCUIT. FIRE ALARM CABLING IN UNDERGROUND OR EXTERIOR CONDUIT SHALL BE LISTED FOR WET LOCATIONS.
  - PROVIDE AN EXTERIOR NOTIFICATION APPLIANCE AT TEN (10) FEET ABOVE GRADE AND LOCATED ABOVE THE FIRE DEPARTMENT CONNECTION. COORDINATE EXACT MOUNTING LOCATION WITH THE OWNER'S REPRESENTATIVE AND AHJ PRIOR TO INSTALLATION.
  - PROVIDE MONITORING OF THE DUCT SMOKE DETECTOR (FACTORY) PROVIDED, INSTALLED BY MECHANICAL CONTRACTOR AND POWERED BY THE RTU. PROVIDE WIRING CONNECTIONS TO THE ALARM AND TROUBLE CONTACTS ON THE DUCT DETECTORS TO ALLOW AN ALARM CONDITION TO TAKE PRIORITY OVER A TROUBLE CONDITION. COORDINATE ALL CABLING / CONDUIT ROUTING AND WIRING CONNECTION WITH THE MECHANICAL AND ELECTRICAL CONTRACTORS PRIOR TO INSTALLATION.
  - PROVIDE A SEPARATE ADDRESSABLE RELAY MODULE (ARM) FOR SHUTDOWN OF ASSOCIATED AHJ. LOCATED ARM AT AN ACCESSIBLE LOCATION WITHIN THREE (3) FEET OF THE ASSOCIATED AHJ MOTOR CONTROLLER OR CONTROL CIRCUIT. PROVIDE ANY REQUIRED POWER CONNECTIONS AND SUPERVISION FOR DUCT DETECTOR AND ARM. COORDINATE ALL CABLING / CONDUIT ROUTING AND WIRING CONNECTION WITH THE MECHANICAL AND ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
  - PROVIDE A REMOTE TEST STATION / ANNUNCIATOR FOR EACH DUCT SMOKE DETECTOR. PROVIDE ALL REQUIRED CABLING CONNECTIONS AND CONDUIT FROM DETECTORS TO REMOTE TEST STATION / ANNUNCIATORS. MOUNT ALL REMOTE TEST STATION / ANNUNCIATORS ON AN ADJACENT COLUMN OR WALL AND AT AN ACCESSIBLE LOCATION THAT DOES NOT CONFLICT WITH STORE FIXTURES. COORDINATE EXACT MOUNTING LOCATIONS WITH THE OWNER'S REPRESENTATIVE AND LOCAL AHJ PRIOR TO INSTALLATION.
  - PROVIDE A MANUAL PULL STATION WITH A PROTECTIVE COVER (INTEGRAL SOUNDER) ADJACENT TO THE FIRE ALARM ANNUNCIATOR FROM THE EXIT DOOR IN ACCORDANCE WITH NFPA 72. THE INTEGRAL SOUNDER SHALL BE POWERED BY A 9V BATTERY.

Order Plans @

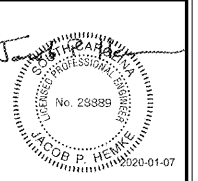


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**NEW FCAC STORE**  
 2020 ER  
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ISSUE BLOCK	
Δ	REV #

PROPERTY NO.: 317910  
 6 DIGIT NO.: 799862  
 4 DIGIT NO.: 013K  
 AOR PROJECT NUMBER: 1965867  
 TO PERMIT: DATE: 12-20-19  
 TO BID: DATE: ##-##-##

SHEET TITLE:  
**FIRE ALARM NOTES, PROGRAMMING AND CALCULATIONS**

SHEET NUMBER:  
**FA2**