

3 PARTIAL ROOF PLAN
SCALE: 1/8" = 1'-0"

FIRE ALARM LEGEND			
S	F.A. SMOKE DETECTOR	AM	F.A. MONITORING MODULE
H	F.A. HEAT DETECTOR	AC	F.A. CONTROL MODULE
CO	F.A. CO DETECTOR	WF	WATER FLOW
PS	F.A. PULL STATION	TS	TAMPER SWITCH
AV	F.A. AUDIO/VISUAL	ANN	F.A. REMOTE ANNUNCIATOR
V	F.A. VISUAL	FACR	F.A. CONTROL PANEL
TP	TAMPER PROOF	DSD	F.A. DUCT SMOKE DETECTOR
DR	FOR DOOR RELEASE	T	F.A. TEMPERATURE SENSOR
WG	WITH GUARD (MAX. SECURITY)		

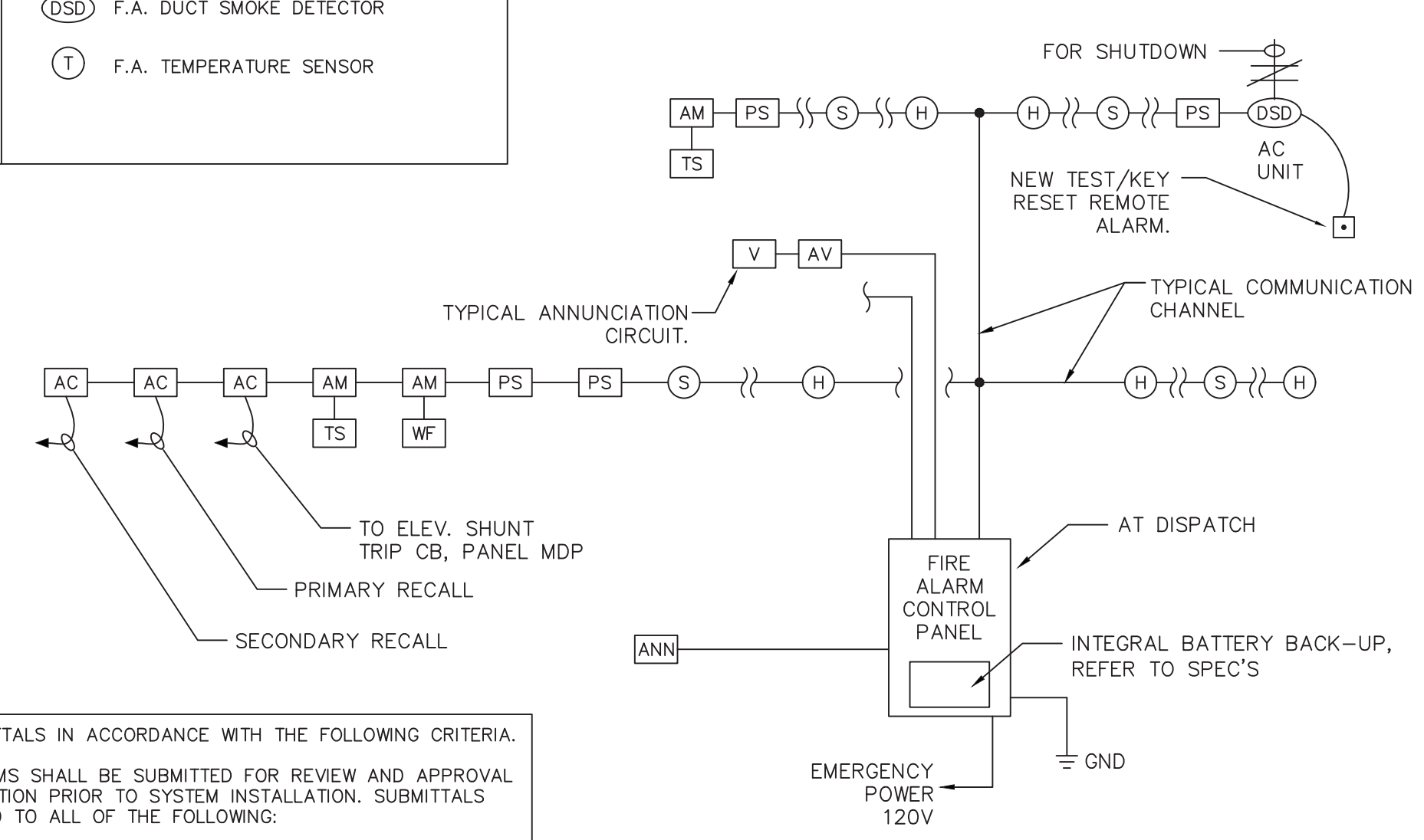
CONTRACTOR SHALL PROVIDE SUBMITTALS IN ACCORDANCE WITH THE FOLLOWING CRITERIA. DOCUMENTS FOR FIRE ALARM SYSTEMS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE AUTHORITY HAVING JURISDICTION PRIOR TO SYSTEM INSTALLATION. SUBMITTALS SHALL INCLUDE, BUT NOT BE LIMITED TO ALL OF THE FOLLOWING:

1. A FLOOR PLAN WITH ALL DEVICES & WIRING.
2. LOCATIONS OF ALARM-INITIATING AND NOTIFICATION APPLIANCES.
3. ALARM CONTROL AND TROUBLE SIGNALING EQUIPMENT.
4. ANNUNCIATION.
5. POWER CONNECTION.
6. BATTERY CALCULATIONS.
7. CONDUCTOR TYPE AND SIZES.
8. VOLTAGE DROP CALCULATIONS.
9. MANUFACTURERS, MODEL NUMBERS AND LISTING INFORMATION FOR EQUIPMENT, DEVICES AND MATERIALS.
10. DETAILS OF CEILING HEIGHT AND CONSTRUCTION.
11. THE INTERFACE OF FIRE SAFETY CONTROL FUNCTIONS.

ALL PLANS AND CALCULATIONS SUBMITTED SHALL BE SIGNED & SEALED BY A REGISTERED, LICENSED ENGINEER AND SUBMIT TO AHJ FOR APPROVAL AND SIGN-OFF.

SEQUENCE OF OPERATION:

1. UPON INITIATION OF ANY SMOKE DETECTOR, HEAT DETECTOR, PULL STATION, OR WATER FLOW SWITCH; ALL HORNS & STROBES SHALL ANNUNCIATE.
2. UPON ACTIVATION OF EITHER TOP OF SHAFT OR ELEVATOR LOBBY OR ELEVATOR MACHINE ROOM SMOKE DETECTOR, ELEVATOR SHALL BE RECALLED TO ITS PRIMARY FLOOR. SHALL PRIMARY FLOOR ELEVATOR LOBBY SMOKE DETECTOR BE ACTIVATED, ELEVATOR SHALL BE RECALLED TO ITS SECONDARY FLOOR. ALL HORN STROBES SHALL ANNUNCIATE.
3. UPON ACTIVATION OF EITHER TOP OR BOTTOM OF SHAFT OR ELEVATOR MACHINE ROOM HEAT DETECTOR, ELEVATOR POWER SHALL BE SHUNTED.
4. UPON GENERAL ALARM, ALL ELECTRONICALLY HELD DOORS SHALL RELEASE. COORDINATE WITH ACCESS CONTROL VENDOR.



FIRE ALARM RISER DIAGRAM
NOT TO SCALE

NOTES:

1. FOR EXACT QUANTITY AND LOCATION OF ALL DEVICES REFER TO FLOOR PLANS.
2. EXACT WIRE SIZE & QUANTITY SHALL BE PER SYSTEM MANUFACTURER'S RECOMMENDATIONS. ALL WIRING SHALL BE RUN CONCEALED ABOVE THE CEILING AND/OR IN WALLS. SHALL HAVE INSULATION TYPE FPLR AS A MINIMUM. WHERE RUN IN EXPOSED AREAS I.E. MECHANICAL ROOMS, WIRING SHALL BE RUN IN EMT CONDUIT.
3. ENTIRE INSTALLATION SHALL BE IN CONFORMANCE WITH NJ UCC, NFPA, NEC, IBC-NJ.
4. PROVIDE MINIMUM 2 VISUAL STROBE CIRCUITS PER FLOOR, MORE IF REQUIRED. NO MORE THAN (10) STROBES PER CIRCUIT.
5. ALL VERTICAL WIRING RISERS SHALL BE RUN WITHIN CONDUIT RISER, PAINT CONDUIT RISER AND FAJ-B'S FIRE ENGINE RED, OIL BASE PAINT STENCIL FIRE ALARM.

GENERAL FIRE ALARM NOTES:

1. CIRCUIT RUNS ARE SHOWN DIAGRAMMATICALLY. CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS, DIMENSIONS, & ARRANGEMENTS PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL IDENTIFY INTERFERENCES BETWEEN WORK IN OTHER AREAS.
2. THE DUST COVERS FURNISHED WITH THE SMOKE DETECTORS MUST BE INSTALLED WITH EACH DEVICE UNTIL FINAL CHECKOUT.
3. INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE, LOCAL CODE(S), AND/OR AUTHORITY HAVING JURISDICTION.
4. INSTALLATION MATERIAL (I.E. CONDUIT WIRE, FITTINGS, HANGERS & STANDARD ELECTRICAL BOXES) ARE TO BE SUPPLIED BY CONTRACTOR.
5. WIRING SHALL BE PER PLAN WITH RESPECT TO CONDUCTOR SIZE, TYPE, & QUANTITY. CONDUCTORS SHALL BE PERMANENTLY MARKED FOR FUTURE IDENTIFICATION. PERMANENT WIRE MARKERS SHALL BE USED TO IDENTIFY THE TERMINATIONS OF ALL CONDUCTORS WITHIN THE FACP, PULL BOXES AND OTHER PANELS.
6. ALL CABLE AND WIRING SHALL BE COLOR CODED. DIFFERENT COLOR CODES SHALL BE USED FOR INITIATING, NOTIFICATION, CONTROL, AND COMMUNICATION CIRCUITS. CIRCUITS WHERE POLARITY MUST BE OBSERVED, TWO DIFFERENT COLORS SHALL BE USED.
7. THE NUMBER OF SPLICES SHALL BE HELD TO AN ABSOLUTE MINIMUM. WHERE SPLICES CANNOT BE AVOIDED AND AT THE TERMINATION OF ALL EQUIPMENT WHICH INCORPORATES PIGTAIL CONNECTING WIRES, EITHER PHENOLIC TERMINAL BLOCKS OR PRESSURE-TYPE CONNECTORS SHALL BE UTILIZED. WIRE NUTS SHALL NOT BE USED. ALL SUCH SPLICES SHALL TAKE PLACE WITHIN JUNCTION BOXES. WHERE PRESSURE-TYPE CONNECTORS ARE UTILIZED, BREAK THE WIRE RUN FOR PROPER SUPERVISION. DO NOT LOOP THE WIRE.
8. ALL FIRE ALARM SYSTEM JUNCTION BOXES, AND PULL BOXES SHALL BE PAINTED RED. COVER PLATES SHALL BE PAINTED RED & MARKED 'FA'.
9. IF CONDUIT IS UTILIZED, THE MINIMUM SIZE SHALL BE PROVIDED AS REQUIRED BY TABLE 4 CHAPTER 9 OF THE NATIONAL ELECTRICAL CODE, USING ACTUAL CROSS SECTION AREA OF THE WIRING TO BE INSTALLED.
10. DEDICATED 120vac POWER:
 - A) 120vac POWER SHALL NOT BE ALLOWED IN THE SAME CONDUIT AS 24vac.
 - B) ALL 120vac POWER CIRCUITS THAT FEED THE FIRE ALARM EQUIPMENT SHALL BE SHOWN ON THE AS BUILT DRAWINGS WITH THE CIRCUIT NUMBER & BREAKER PANEL LOCATION.
 - C) FIRE ALARM CONTROL PANEL 120vac POWER SHALL BE ON EMERGENCY POWER CIRCUITS & IN ADDITION BE PROVIDED WITH LOCKS ON THE CIRCUIT BREAKER TO PREVENT ACCIDENTAL POWER TURN OFF.
 - D) 120vac POWER SHALL NOT BE APPLIED TO FIRE ALARM PANEL WITHOUT DIRECT SUPERVISION OF TECHNICIAN.
 - E) AUXILIARY SURGE PROTECTION IS REQUIRED.
 - F) AC WIRING SHALL NOT BE RUN IN THE SAME CONDUIT AS POWER LIMITED WIRING.
 - G) WITHIN ENCLOSURES, MAINTAIN 2 INCHES BETWEEN AC AND POWER LIMITED WIRING.
11. ALL HORIZONTAL FIRE ALARM WIRING NOT IN CONDUIT SHALL BE TIED AND SUPPORTED AT 5'-0" (MAX) INTERVALS.
12. ALL FIRE WALL AND/OR MASONRY WALL PENETRATIONS SHALL BE DRILLED, SLEEVED, BUSHED AT BOTH ENDS, AND SEALED WITH THE REQUIRED FIRE RATED CAULK OR FIRE STOPPING MATERIAL TO MAINTAIN THE FIRE RATING.
13. IF NOT IN CONDUIT, ALL CABLE SHALL BE PLENUM RATED IN COMPLIANCE WITH UL-910, AND NEC (NFPA-70), ARTICLE 800.
14. THE INSTALLER IS RESPONSIBLE FOR METERING ALL WIRES TO ENSURE THAT THEY ARE FREE AND CLEAR OF GROUNDS, OPENS, SHORTS AND HAVE CORRECT RESISTANCE, CAPACITANCE AND PROPER SUPPORT PRIOR TO TERMINATION ON ANY FIRE ALARM EQUIPMENT. SYSTEM PROGRAMMING WILL NOT BEGIN WITHOUT WRITTEN DOCUMENTATION CONFIRMING THIS WORK BEING PERFORMED. IF GROUNDS AND/OR SHORTS ARE FOUND ON THE SYSTEM WIRING UPON INITIAL CHECKOUT, THAT INITIAL CHECKOUT WILL BE DISCONNECTED UNTIL ALL WIRING IS CORRECTED.
15. TEE BARS SHALL BE USED TO SUPPORT JUNCTION BOXES OF ALL SUSPENDED CEILING MOUNTED DEVICES.
16. INSTALLING CONTRACTOR SHALL RETURN ONE SET OF ACCURATELY MARKED DRAWINGS FOR 'AS BUILT' PURPOSES, WITH ACTUAL WIRE RUNS & AHJ EQUIPMENT LOCATIONS.
17. FOR ADDITIONAL INSTALLATION INSTRUCTIONS, REFER TO CATALOG CUT SHEETS AND/OR INSTALLATION INSTRUCTIONS.

CONTROL MODULES:

- A) ALL CONTROL MODULES SHALL BE CLEARLY MARKED IN THE FIELD, AS WELL AS ON THE AS BUILT DRAWINGS. THEY SHOULD BE MARKED WITH THE TYPE OF FUNCTION THEY PERFORM & THE MODULE ADDRESS.
- B) THEY SHALL BE READILY ACCESSIBLE WHERE INSTALLED.
- C) EACH MODULE SHALL BE MOUNTED WITH A BACKBOX.
- D) IF THE MODULE IS USED TO INTERRUPT 24vac/120vac POWER THE INSTALLER SHALL VERIFY THAT THE CONTACT RATING IS NOT EXCEEDED.

NOTIFICATION APPLIANCE CIRCUITS - INDICATING (SIGNAL) APPLIANCES:

INSTALLATION OF INDICATING CIRCUITS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS & THE FOLLOWING:

- A) ALL CIRCUITS SHALL BE CONTINUOUS; NO T-TAPPING (PARALLEL WIRING).
- B) WHEN SHIELDED CABLE IS UTILIZED, THE SHIELDING SHALL BE CONTINUOUS, AND THE SHIELD SHALL ONLY BE GROUND AT ITS POINT OF ORIGIN. SEE THE RISER DIAGRAM FOR MORE INFORMATION.
- C) EACH CIRCUIT SHALL HAVE AN END OF LINE DEVICE (SUPPLIED).
- D) WIRE UTILIZED SHALL BE MINIMUM #14 AWG & IN ACCORDANCE WITH NEC 70.

SIGNAL LINE CIRCUITS (SLC) - INITIATING LOOPS FOR ADDRESSABLE DEVICES:

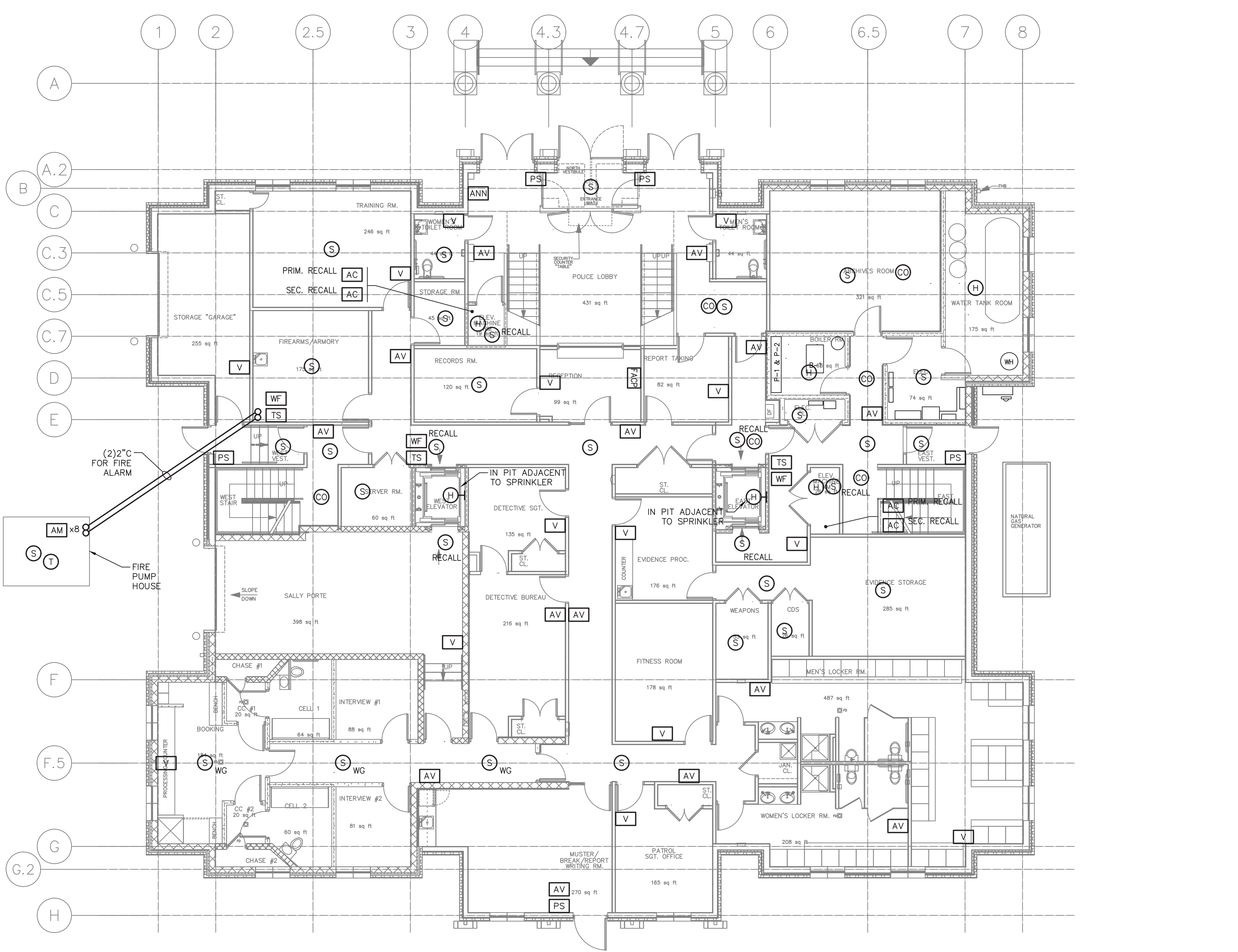
INSTALLATION OF INITIATING LOOPS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS & THE FOLLOWING:

- A) EACH BOX SHALL BE MARKED IN THE FIELD & AS BUILT DRAWINGS. RECORD THE LOOP NUMBER ALONG WITH ALL THE DEVICES TO BE LISTED IN SEQUENTIAL ORDER.
- B) MINIMUM WIRE SIZE SHALL BE #18 AWG & MAXIMUM #14 AWG, AS REQUIRED IN ACCORDANCE WITH NEC 70.
- C) THE MAXIMUM LINE RESISTANCE:
 1. STYLE 4 (CLASS B) LOOP (BOTH WIRES): 100 OHMS
 2. THE MAXIMUM LINE CAPACITANCE:
 1. 0.4 UF OF LINE TO LINE
 2. 0.8 UF OF LINE TO GROUND
- D) THE SHIELD SHOULD NOT BE ALLOWED TO BE ATTACHED TO ANY DEVICE IN THE FIELD.
- E) IF THERE IS ANY CONNECTION OF THE SHIELD THAT IS NOT INSULATED, A PIECE OF ELECTRICAL TAPE SHOULD BE APPLIED AROUND THE SHIELD SO THAT IT CANNOT TOUCH ANYTHING.
- F) NO END OF LINE RESISTOR ON THE SLC.

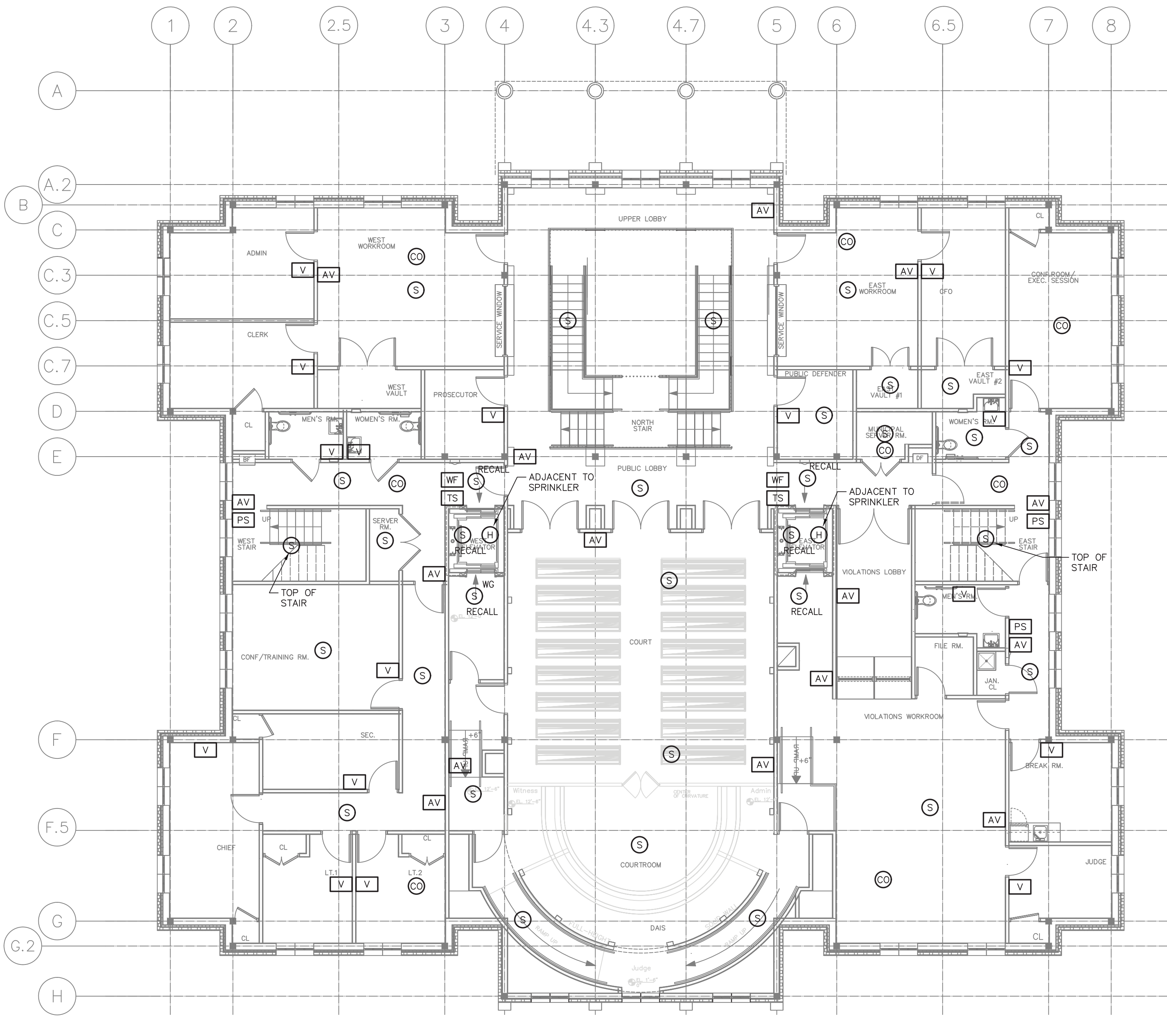
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1 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



2 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

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NEW MUNICIPAL BUILDING
COLTS NECK TOWNSHIP
BLOCK 18, LOT 11
COLTS NECK TOWNSHIP
MONMOUTH COUNTY, NEW JERSEY

FIRE ALARM FLOOR PLANS
DYAN GRAN
CKD/MARP
SCALE: AS NOTED
DATE: 01/10/20 REV 1

THIS DRAWING IS INCOMPLETE UNLESS USED WITH ALL OTHER CONTRACT DOCUMENTS.

DRAWING NUMBER
FA-1
SHEET 39 OF 62