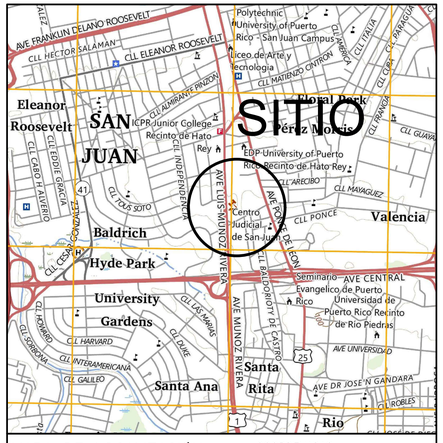
PLANO DE CONSTRUCCIÓN

ALARMA CONTRA INCENDIOS

TRIBUNAL GENERAL DE JUSTICIA

AVENIDA LUIS MUÑOZ RIVERA

SAN JUAN, PR



MAPA DE LOCALIZACIÓN
ESCALA: 1:20,000

COORDENADAS:
18.411694, -66.055974

INDICE DE HOJAS

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ISSUE FOR BID
03 SEP 2026

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ALARMA DE INCENDIOS

TRIBUNAL GENERAL DE JUSTICIA

SAN JUAN
Puerto Rico

REVISIONS

Rev	Date	Description
0	13 AUG 25	ISSUE FOR BIDS
0.1	20 OCT 25	GENERAL REVISION
0.2	03 SEP 26	REVISE CABLING CONDUIT

File Name: .

Scale: AS SHOWN Date: JUN 2024

DRAWING TITLE

HOJA TITULO

DRAWING NO.

T-1

ABBREVIATIONS:

1PH	SINGLE-PHASE
1P	SINGLE POLE
2/C	TWO-CONDUCTOR
3/C	THREE-CONDUCTOR
3PH	THREE-PHASE
4/C	FOUR-CONDUCTOR
4W	FOUR-WIRE
AFF	ABOVE FINISH FLOOR LEVEL
AFG	ABOVE FINISHED GRADE
AFC	ABOVE FINISHED COUNTER, AUTOMATIC FREQUENCY CONTROL, OR AVAILABLE FAULT CURRENT
ACT	ABOVE COUNTER TOP
AFF	ABOVE FINISH FLOOR
AC	ALTERNATING CURRENT OR ARMORED CABLE
A/E	ARCHITECT/ENGINEER
AHJ	AUTHORITY HAVING JURISDICTION
AFCI	ARC-FAULT CURRENT INTERRUPTER
AIC	AMPERE INTERRUPTING CAPACITY
AMP	AMPERE
ALT	ALTERNATE
ARCH	ARCHITECT
ASC	AMPS SHORT CIRCUIT
AF	AMPERE FRAME
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AV	AUDIO VISUAL
AAP	ALARM ANNUNCIATOR PANEL
ACC	ACCESSIBLE
ADDL	ADDITIONAL
AF	AMPERE FRAME OR AMP FUSE
Ah	AMPERE HOUR
BAT	BATTERY
BLDG	BUILDING
BRKR	BREAKER
CAB	CABINET
CATV	COMMUNITY ANTENNA TELEVISION
CCTV	CLOSED CIRCUIT TELEVISION
CD	CONSTRUCTION DOCUMENTS
CF	CONTRACTOR FURNISHED
CF/CI	CONTRACTOR FURNISHED/CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/OWNER INSTALLED
CFE	CONTRACTOR FURNISHED EQUIPMENT
CHW	CHILLED WATER
CHWP	CHILLED WATER PUMP
CKT	CIRCUIT
CKT BRKR OR CB	CIRCUIT BREAKER
CLF	CURRENT LIMITING FUSE
CLG	CEILING
COAX	COAX CABLE
COMM	COMMUNICATION
CONC	CONCRETE
COORD	COORDINATE
CPT	CONTROL POWER TRANSFORMER
CRI	COLOR RENDERING INDEX
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
dB	DECIBEL
DC	DIRECT CURRENT
DCP	DIMMER CONTROL PANEL
DEG C	DEGREES CELSIUS
DEG F	DEGREES FAHRENHEIT
DEMO	DEMOLITION
DIAG	DIAGRAM
DISC	DISCONNECT
DISTR PNL	DISTRIBUTION PANEL
DMR SW	DIMMER SWITCH
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DRSW	DOOR SWITCH
DS	DISCONNECT SWITCH
DWG	DRAWING
DTT	DRY TYPE TRANSFORMER
EL	ELEVATION
ELEC	ELECTRIC OR ELECTRICAL
ELEV	ELEVATOR
EMER	EMERGENCY
EMI	ELECTROMAGNETIC INTERFERENCE
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EP	EXPLOSION PROOF
ESMT	EASEMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXIST OR (E)	EXISTING
ER	EXISTING TO BE REPLACE
ERR	EXISTING TO REMOVE
EF	EXHAUST FAN
EDOR	ELECTRICAL DESIGNER OF RECORD
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FC	FOOTCANDLE
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLUOR	FLUORESCENT
FP	FIRE PROTECTION
FT	FEET OR FOOT
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING

G	ELECTRICAL GROUND
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GB	GROUND BAR
GRC	GALVANIZED RIGID CONDUIT
GND	GROUND
GFI	GROUND FAULT PROTECTION
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HT	HEIGHT
HZ	HERTZ
HP	HIGH PANEL BOARD 480/277 VOLTS
HV	HIGH VOLTAGE
HOA	HAND-OFF-AUTO
IESNA	ILLUMINATION ENGINEERING SOCIETY OF NORTH AMERICA
INCAND	INCANDESCENT
IR	INFRARED
IWH	INSTANTANEOUS WATER HEATER
IC	INTERRUPTING CAPACITY
IG	ISOLATED GROUND
IGB	ISOLATED GROUND BAR
JB	JUNCTION BOX
KA	SHORT CIRCUIT BRACING IN 1000 AMPS
kV	KILOVOLT
kVA	KILOVOLT AMPERE
kVAh	KILOVOLT AMPERE PER HOUR
kVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWh	KILOWATT HOUR
kWhM	KILOWATT HOUR METER
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET (FOOT)
LP	LIGHT POLE
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPS
LT	LIGHT
LTG	LIGHTING
LTG PNL	LIGHTING PANEL
LTNG	LIGHTNING
LP	LOW PANEL BOARD 208/120 VOLTS
LV	LOW VOLTAGE
LPS	LIGHTNING PROTECTION SYSTEM
MAX	MAXIMUM
MC	METAL-CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MLO	MAIN LUGS ONLY
MT	MOUNT
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
MVA	MEGAVOLT-AMPERE
MW	MEGAWATT
MB	MAIN BREAKER
MS	MANUAL STARTER
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N	NEUTRAL
NB	NEUTRAL BAR
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
NL	NIGHT LIGHT (UNSWITCHED CIRCUIT)
N3R	NEMA 3R
N4X	NEMA 4X
OC	ON CENTER
OD	OUTSIDE DIAMETER
OL	THERMAL OVERLOAD PROTECTION
P	POLE
PB	PULL BOX
PC	PHOTOELECTRIC CONTROL DEVICE
PED	PEDESTAL
PEND	PENDANT
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE (PLASTIC)
PWR	POWER
PL	PILOT LIGHT
PM	PAD MOUNTED TRANSFORMER
P	PANEL BOARD (LOAD CENTER)
RCP	REFLECTED CEILING PLAN
REC	RECESSED
RECPT	RECEPTACLE
RM	ROOM
RMS	ROOT MEAN SQUARE
REQD	REQUIRED
SCC	SHORT CIRCUIT CAPACITY
SD	SMOKE DETECTOR
SF	SQUARE FOOT (FEET)
SI	INTERNATIONAL SYSTEM OF UNITS

SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
SURF	SURFACE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SS	SAFETY SWITCH
SDT	STEP DOWN TRANSFORMER
SU	SWITCHING UNIT
TEL	TELEPHONE
TV	TELEVISION
TYP	TYPICAL
TTC	TELEPHONE TERMINAL CABINET
UGND	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTIL	UTILITY
UOS	UNLESS OTHERWISE SPECIFIED
V	VOLT
VA	VOLT AMPERE
VAR	VOLT AMPERE REACTIVE
VFD	VARIABLE FREQUENCY DRIVE
VOLT	VOLTAGE
W	WATT
WH	WATER HEATER
WP	WEATHERPROOF OR U.L. LISTED FOR WET LOCATION WITH COVER CLOSED.
XFMR	TRANSFORMER

GENERAL NOTES:

1. UNLESS OTHERWISE INDICATED ALL BRANCH CIRCUITS, WIRES AND CABLES SHALL BE #12 AWG (AMERICAN WIRE GAUGE) MINIMUM, STRANDED COPPER (NO ALUMINUM WIRES OR CABLES ARE ALLOWED).
2. ALL WIRES AND CABLES FOR GENERAL PURPOSE APPLICATIONS (FOR INTERIOR USE) IN COMMERCIAL AND RESIDENTIAL USE SHALL BE THHN/THWN-2, 600 VOLTS, 90°C, THERMOPLASTIC INSULATION, POLYVINYLCHLORIDE (PVC) JACKET.
3. ALL WIRES AND CABLES FOR GENERAL PURPOSE APPLICATIONS (FOR EXTERIOR USE) IN COMMERCIAL AND RESIDENTIAL USE SHALL BE XHHW-2, 600 VOLTS, 90° C, THERMOSET INSULATION, CROSS-LINKED POLYETHYLENE (XLPE) JACKET.
4. UNLESS OTHERWISE INDICATED ALL CONTROL WIRES AND CABLES SHALL BE #14 AWG (AMERICAN WIRE GAUGE) MINIMUM, STRANDED COPPER (NO ALUMINUM WIRES OR CABLES ARE ALLOWED).
5. ELECTRICAL CONTRACTOR SHALL PROVIDE A MECHANICAL GROUND WIRE PER CIRCUIT. ALL GROUND WIRES MUST BE GREEN COLOR UP TO #2 AWG. MINIMUM SIZE AS DETERMINED BY N.E.C. TABLE 250.122 (ADJUSTED FOR ANY VOLTAGE DROP). GROUND WIRES LARGER THAN #2 GAUGE MUST BE IDENTIFY WITH AT LEAST 6 TO 8 INCHES OF GREEN COLOR ELECTRICAL TAPE.
6. PROVIDE #12-AWG GREEN JUMPER BETWEEN RECEPTACLE GROUNDING SCREW TERMINAL AND OUTLET BOX GROUNDING SCREW.
7. CONTRACTOR MUST MAKE SURE THAT THE ENTIRE ELECTRICAL SYSTEM HAS GROUND CONTINUITY.
8. UNLESS OTHERWISE INDICATED ALL CONDUITS SHALL BE 3/4" IN DIAMETER MINIMUM.
9. ALL UNDERGROUND CONDUIT COUPLINGS AND CONNECTORS SHALL BE WATERTIGHT.
10. PROVIDE AN EXPANSION JOINT COUPLING OF THE REQUIRED TYPE AND SIZE WHENEVER A CONDUIT CROSSES AN EXPANSION JOINT.
11. PROVIDE PLASTIC CONDUIT DIVIDERS IN ALL UNDERGROUND CONDUIT RUNS. MAXIMUM DISTANCE BETWEEN DIVIDERS TO BE 4'-0'.
12. ALL THE ELECTRICAL INSTALLATION SHALL BE DONE IN A NEAT & WORKMANLIKE MANNER, ACCORDING TO THE LAST EDITION OF THE NATIONAL ELECTRICAL CODE, THE PUERTO RICO ELECTRIC POWER AUTHORITY LATEST STANDARD & THE PUERTO RICO TELEPHONE CO. LATEST PRACTICES.
13. THE CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME ACQUAINTED WITH THE EXISTING FIELD CONDITIONS. IT SHALL BE THE DIRECT RESPONSIBILITY OF THE CONTRACTOR TO BRING PROMPTLY TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES BETWEEN THE EXISTING FIELD CONDITIONS AND THOSE THAT WERE USED FOR DESIGN PURPOSES. THIS SHALL BE DONE BEFORE THE CONTRACTOR SUBMITS HIS BID, SO THAT THE ENGINEER CAN RENDER A DECISION ON THE MATTER BEFORE THE BIDS ARE RECEIVED. THE SUBMITTAL OF THE BID BY THE CONTRACTOR WILL BE HELD AS PROOF THAT THE CONTRACTOR UNDERSTAND THROUGHLY AND COMPLETELY THE SCOPE OF THE WORK INVOLVED, HAS FAMILIARIZED HIMSELF WITH THE EXISTING FIELD CONDITIONS, AND HAS INCLUDED IN HIS BID ALL THE ITEMS NECESSARY TO PERFORM THE ELECTRICAL WORK. NO ALLOWANCE WILL BE PERMITTED ON THIS MATTER AFTER THE BIDS ARE RECEIVED.
14. ALL INDICATED HEIGHTS ARE FROM CENTER OF BOX TO FINISHED FLOOR.
15. CONTRACTOR SHALL BALANCE ALL LOADS.
16. ROUTE OF CONDUITS SHOWN IN THE LAYOUT IS SCHEMATIC AND INTENDED ONLY TO INDICATE INTERCONNECTIONS BETWEEN OUTLETS. EXACT CONDUIT ROUTING SHALL BE DETERMINED AT THE JOB SITE TO CONFORM WITH THE STRUCTURAL CONDITIONS AND SHALL BE SUBJECT TO THE FINAL APPROVAL OF THE ARCHITECT/ENGINEER.
17. ELECTRICAL CONTRACTOR MUST LEAVE A #12 AWG WIRE OR A ROPE WITH A MINIMUM PULLING STRENGTH OF 220 POUNDS TO BE USED AS A FUTURE PULLING AID IN ALL EMPTY OR SPARE CONDUITS.
18. ALL PANELBOARDS AND LOAD CENTERS SHALL BE PROVIDED WITH A FACTORY INSTALLED GROUND BUS FOR CONNECTING TO GROUND ALL THE GROUND WIRES OR CABLES ENTERING OR LEAVING THE PANELBOARD. THE GROUND BUS SHALL BE SIMILAR IN SIZE AND CHARACTERISTICS TO THE NEUTRAL BUS. ALL PANELBOARDS SHALL HAVE A MONOFLAT FRONT AND KEY LOCK.
19. WHEN TWO OR MORE WIRING DEVICES ARE SHOWN TOGETHER IN ADJACENT POSITIONS AND AT THE SAME HEIGHT, THEY SHALL BE INSTALLED IN A MULTIPLE GANG OUTLET BOX OF THE PROPER SIZE SO THAT ONLY ONE RAISED COVER PLATE OF THE REQUIRED TYPE AND SIZE ARE USED. 120V AND 277V OUTLETS MUST BE INSTALLED ON SEPARATE BOXES.
20. UNLESS OTHERWISE INDICATED, ALL WIRING DEVICES SHALL BE WHITE COLORED WITH 302 STAINLESS STEEL COVER PLATES, EXCEPT THE WEATHERPROOF OUTLETS WHICH SHALL HAVE THEIR STANDARD GRAY COVER PLATES.
21. WHEN TWO OR MORE PANELBOARDS OR CABINETS ARE SHOWN TOGETHER IN ADJACENT LOCATIONS, THE TOP OF ALL PANELBOARDS OR CABINETS SHALL BE ALIGNED WITH THE TOP OF THE BIGGEST ONE SO THAT ALL THE TOPS ARE AT EXACTLY THE SAME HEIGHT FROM THE FINISHED FLOOR.
22. IN CONDUIT RUNS, THE NUMBER OF ARROWS DESIGNATE THE NUMBER OF CIRCUITS IN THE CONDUIT (ONE POLE IN THE PANELBOARD PER EACH CIRCUIT), THE NUMBER OF LINES DESIGNATE THE NUMBER OF CONDUCTORS IN THE CONDUIT, THE LONGER LINE BEING A NEUTRAL CONDUCTOR AND " / " BEING THE GROUND CONDUCTOR. " / " DENOTES ISOLATED GROUND WIRE.
23. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE VOLTAGE CHARACTERISTICS AT THE SITE WITH THE UTILITY COMPANY AT THE TIME OF INSTALLATION BEFORE ORDERING ANY PRIMARY EQUIPMENT.
24. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE.
25. ALL THE SELF-STANDING AND SURFACE MOUNTED ELECTRICAL EQUIPMENT AS WELL AS THE LUMINARIES SHALL ALL BE BRACED FOR SEISMIC SHOCK ACCORDING TO THE SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS. THE SAME APPLIES TO ALL THE CONDUIT WORK. THE DETAILS AND INSTALLATION METHODS IN SAID MANUAL SHALL BE MODIFIED AS REQUIRED TO FIT THE ELECTRICAL INSTALLATION OF THE PROJECT.
26. ALL NEW EQUIPMENT MUST BE GROUNDED AS PER THE LATEST N.E.C. PROVISIONS.
27. ALL WIRES AND CABLES SHALL BE #12-AWG, EXCEPT WHEN OTHERWISE INDICATED IN THE DRAWINGS <u>OR</u> AS INDICATED BELOW FOR 20 AMPS. CKTS. WIRE SIZING.

    A – ALL 20 AMP. 120 VOLT CIRCUIT RUNS SHALL BE AS FOLLOWS:
    5' TO 50' IN LENGTH, #12-AWG.
    50' TO 100' IN LENGTH, #10-AWG.
    100' TO 150' IN LENGTH, #8-AWG.
    150' TO 200' IN LENGTH, #6-AWG.
28. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL THE POWER AND CONTROL INTERCONNECTIONS AMONG ALL THE DIFFERENT PARTS OF THE AIR CONDITIONING SYSTEMS (FAN COILS/AHU'S, CONDENSING UNITS, THERMOSTATS, ETC.). THE CONTRACTOR SHALL ALSO PROVIDE ALL THE STARTING AND DISCONNECT EQUIPMENT FOR SAID SYSTEMS.
29. ALL ELEVATIONS SHOWN ARE FOR REFERENCE ONLY, THEY MUST BE VERIFIED WITH THE LATEST ARCHITECTURAL DRAWINGS.
30. ELECTRICAL CONTRACTOR MUST COORDINATE WITH OTHER TRADES THEIR EXCAVATION AND CONDUITS INSTALLATIONS TO COMPLY WITH THE PROPER CLEARENCES.
31. THE ELECTRICAL CONTRACTOR MUST INFORM THE ENGINEER OF ANY DEVIATION TO THESE DRAWINGS.
32. THE ELECTRICAL CONTRACTOR MUST KEEP A SET OF DRAWINGS WITH ALL THE DEVIATIONS MADE DURING CONSTRUCTION TO ENSURE AN ACCURATE AS BUILT SET.
33. IF ANY EXISTING FINISHES ARE DISTURBED BECAUSE OF WORK UNDER THIS CONTRACT, THEY MUST BE RESTORED TO THEIR ORIGINAL CONDITION AFTER ALL WORKS ARE PERFORMED.
34. ALL EXISTING EQUIPMENT AND MATERIAL BEING DEMOLISHED AND REMOVED DURING THE CONSTRUCTION SHALL BE DISPOSED OF AS DIRECTED BY THE OWNER.
35. IT IS THE INTENT OF THE CONTRACT DRAWINGS TO CALL FOR A COMPLETE, TESTED AND OPERATIONAL ELECTRICAL SYSTEM. ANY MINOR DETAILS NOT SHOWN BUT REQUIRED FOR THE PROPER FUNCTION AND OPERATION OF THE SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST.
36. THE CONTRACTOR SHALL NOTIFY THE OWNER IN ADVANCE OF ANY IMPAIRMENTS TO THE BUILDING'S FUNCTIONS RESULTING FROM THE WORK UNDER THIS CONTRACT.
37. ALL ROOF OPENINGS, WALL OPENINGS, SUPPORTS, SPACE ARRANGEMENTS, FLOOR PADS, ANCHORING, CONNECTIONS AND ELECTRICAL PROVISIONS ARE BASED ON PRELIMINARY INFORMATION FROM THE SPECIFIED MANUFACTURER. THE CONTRACTOR SHALL VERIFY ALL THE ABOVE INFORMATION USING THE MANUFACTURERS CERTIFIED DRAWINGS OF THE EQUIPMENT TO BE INSTALLED AND MAKE MODIFICATIONS AS REQUIRED WITH THE APPROVAL OF THE OWNER AND THE ENGINEERS.
38. MAKE ALL PROVISIONS NECESSARY TO PREVENT CORROSION RESULTING FROM CONTACT BETWEEN DISSIMILAR METALS.
39. IF ANY ELECTRICAL CONDUIT RUN EXPOSE IN PUMP ROOM WITH CORROSIVE ENVIORMENTS USE RGC PVC COATED.
40. ALL WORK TO BE DONE IN A NEAT AND PROFESSIONAL MANNER IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), UL LISTING, ANSI, NECA AND ANY OTHER AGENCY OR APPLICABLE CODES AND REGULATIONS FOR SAID TYPE OF WORK.
41. ALL THE MATERIALS AND EQUIPMENT USED FOR THE ELECTRICAL INSTALLATION MUST BE UL LISTED FOR THEIR INTENDED USE.
42. THE ELECTRICAL CONTRACTOR MUST CONNECT AND LEAVE IN PERFECT WORKING ORDER THE ELECTRICAL SYSTEM FOR THIS PROJECT AS PER THE PROJECT'S SCOPE OF WORK. THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR ANY EXPENSES REQUIRED TO FIX OR REPAIR ANY ELECTRICAL WORK COMPLETED AND PAID FOR THAT IS NOT WORKING PROPERLY OR AS INTENDED.
43. THE CONTRACTOR SHALL SUPPLY, FURNISH AND INSTALL ALL NEW EQUIPMENT AND MATERIALS TO PROVIDE A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM AS INTENDED IN THE PROJECT'S SCOPE OF WORK.
44. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT FINAL LOCATION OF ALL THE ELECTRICAL EQUIPMENT AND ANY SPECIAL INSTALLATION DETAILS REQUIRED WITH THE EQUIPMENT'S SHOP DRAWINGS, THE PROJECT MANAGER, OR THE ARCHITECT.
45. DIFFERENCES BETWEEN ELECTRICAL DRAWINGS, SPECIFICATIONS AND ACTUAL FIELD CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE AND NO CHANGE SHALL BE MADE UNLESS SPECIFICALLY APPROVED BY THE ELECTRICAL DESIGNER, OWNER'S REPRESENTATIVE, OR PROJECT MANAGER. ANY WORK PERFORMED BY THE ELECTRICAL CONTRACTOR WITHOUT THE PROPER APPROVAL OR COORDINATION WILL BE AT ELECTRICAL CONTRACTOR'S RISK AND EXPENSE.
46. 2" X 4" BOXES SHALL NOT BE INSTALLED AND ARE NOT ALLOWED UNLESS APPROVED BY THE ELECTRICAL DESIGN ENGINEER OF RECORD, MINIMUM BOX SIZE SHALL BE 4" X 4" X 1-1/2" GALVANIZED STEEL EXCEPT OTHERWISE INDICATED.
47. ALL LIGHTING FIXTURES DIMMERS AND GROUND FAULT RECEPTACLES MUST BE INSTALLED IN 4" X 4" X 2-1/8" GALVANIZED STEEL BOXES UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
48. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE OF SUBMITTING ELECTRICAL EQUIPMENTS SHOP DRAWINGS/SUBMITTALS FOR APPROVAL. NO CHANGE ORDER WILL BE ALLOWED FOR ELECTRICAL EQUIPMENTS MODIFICATIONS RESULTING FROM NON-COORDINATED SHOP DRAWINGS OR SUBMITTALS.
49. MAXIMUM LOAD OF BRANCH CIRCUITS CAN NOT EXCEED 80% OF ITS NOMINAL AMPACITY.
50. MATERIALS, ELECTRICAL EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED FROM DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER, CORRECTIONS OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGES.
51. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO ESTABLISH TEMPORARY POWER UNTIL THE NORMAL POWER IS CONNECTED.
52. ELECTRICAL CONTRACTOR SHALL PURCHASE AND INSTALL ALL LIGHTING FIXTURES.
53. ELECTRICAL CONTRACTOR SHALL SUBMIT A SAMPLE OF EACH LIGHTING FIXTURES FOR OWNER'S APPROVAL PRIOR TO PURCHASING IF THIS IS SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.
54. ALL WIRING DEVICES MUST BE APPROVED BY THE ELECTRICAL ENGINEER OR ARCHITECT.
55. FINAL COLOR FOR WIRING DEVICES WILL BE DECIDED BY THE ARCHITECT OR OWNER'S REPRESENTATIVE. SEE NOTE 20.
56. CONTRACTOR MUST PROVIDE U.L. APPROVED FIRE STOPPING SEALANT TO PROTECT WITH 3 HOUR FIRE RATING TO ALL FLOOR AND WALL PENETRATIONS BY CONDUIT OR BUSWAY. FIRE STOPPING SEALANT MUST BE U.L. APPROVED. THIS NOTE APPLY ALL ELECTRICAL DRAWING.
57. THE USE OF ENT (ELECTRICAL NON-METALLIC CONDUIT) CONDUIT IS PROHIBITED UNLESS APPROVED BY THE ELECTRICAL DESIGN ENGINEER OF RECORD. IF THE USE OF ENT IS PERMITTED, THE ENT USED MUST BE UL LISTED FOR ITS INTENDED USE.
58. ALL ELECTRICAL INSTALLATION SHALL BE DONE IN STRICT ACCORDANCE WITH N.E.C. AND LUMA REGULATIONS LATEST EDITION.
59. DIMENSIONS OF JUNCTION OR PULL BOXES SHALL BE REVISED BY THE ELECTRICAL CONTRACTOR ACCORDING TO ACTUAL BUILDING CONDITIONS TO SECURE AT LEAST THE MINIMUM CABLE BENDING RADIUS.
60. ALL ELECTRICAL WIRES MUST BE IDENTIFY WITH THEIR RESPECTIVE CIRCUIT NUMBER AT EACH JUNCTION BOX. JUNCTION BOXES MUST BE COLOR CODED AS PER SPECIFICATIONS. IN CASE OF ELECTRICAL CIRCUITS, CIRCUITS IDENTIFICATION MUST BE WRITTEN WITH PERMANENT BLACK INK AND BOLD LETTERS.
61. ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO FAMILIARIZE ITSELF WITH THE PROJECT PRIOR TO THEIR BID.
62. ALL ELEVATIONS SHOWN ARE FOR REFERENCE ONLY. THEY MUST BE VERIFIED WITH THE LATEST ARCHITECTURAL DRAWINGS.
63. ALL BOLTS, WASHERS, SCREWS AND NUTS EXCEPT IF OTHERWISE SPECIFIED SHALL BE GALVANIZED STEEL.
64. PROVIDE FOUR INCH HIGH CONCRETE "HOUSEKEEPING" PAD FOR ALL FREE-STANDING DISTRIBUTION PANEL, SWITCHBOARD AND MOTOR CONTROL CENTERS (MCC'S). COORDINATE THE ACTUAL SIZE OF THE PAD WITH THE SIZE OF THE ACTUAL EQUIPMENT TO BE INSTALLED. EXTEND PAD TWO INCHES BEYOND EQUIPMENT ON ALL SIDE WITH 3/4 INCH CHAMFERED EDGES. REFER TO ARCHITECTURAL DRAWINGS FOR DETAIL.
65. RUN ALL WIRING TO EQUIPMENT OR DEVICES MOUNTED ON THE ROOF BELOW THE ROOF AND PENETRATE THE ROOF AS CLOSE AS POSSIBLE TO THE EQUIPMENT SERVED. FLASH PENETRATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ROOFING SYSTEM MANUFACTURER AND THE CONTRACT DOCUMENTS.
66. BROOM CLEAN ALL WORK AREAS UPON COMPLETION OF WORK EACH DAY.
67. PROVIDE CONDUIT SEALS IN ALL CONDUITS THAT CROSS CLEAN ROOM CLASSIFICATION BOUNDARIES.

CONSULTANT NOTES:

1. IN CASE OF CONFLICTS BETWEEN DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL NOT PROCEED WITH THAT PART OF THE WORK UNTIL SUCH DIFFERENCES HAVE BEEN BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
2. IN CASE THE CONTRACTOR BELIEVES HE HAS DISCOVERED DISCREPANCIES, ERRORS, OMISSIONS, ETC. IN THE DRAWINGS AND/OR SPECIFICATIONS, HE SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. IF THE CONTRACTOR FAILS TO GIVE SUCH NOTICE AND OBTAIN ADEQUATE CLARIFICATION, HE WILL BE HELD RESPONSIBLE FOR THE RESULT OF SUCH ERRORS OR OMISSIONS, AND HE WILL BE HELD RESPONSIBLE FOR THE COST OF RECTIFYING SUCH ERRORS.
3. BEFORE COMMENCING WORK, CONTRACTOR SHALL VERIFY MEASUREMENTS AT SITE AND THE EXISTING STRUCTURES (IF ANY). ANY DIFFERENCES BETWEEN ACTUAL MEASUREMENTS AND THOSE SHOWN ON PLANS, SHALL BE SUBMITTED TO THE ENGINEER FOR CONSIDERATIONS AND DECISIONS BEFORE PROCEEDING WITH THE WORK.
4. THE RIGHT TO CLARIFY THE WORK IS RESERVED BY THE ENGINEER. IF THE ENGINEER CONSIDERS IS NECESSARY, HE WILL PROVIDE ADDITIONAL DETAILS OR INFORMATION.
5. ANY SET OF ELECTRICAL DRAWINGS WHICH IS MISSING AT LEAST ONE OF PAGES OF SET IS AUTOMATICALLY VOID. THIS INFORMATION WAS DEVELOPED TO BE USED OR AND IN CONNECTION WITH THIS PROJECT ONLY. HOWEVER IT REMAINS THE PROPERTY OF THIS OFFICE AND SHALL BE USED ONLY BY AUTHORIZED PERSONS AND CANNOT BE REPRODUCE IN ANY MANNERS UNLESS IT BEARS THE WRITTEN PERMISSION OF THE ARCHITECT.
6. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
7. ALL PROGRAMS, DESIGN, DRAWINGS, SPECIFICATIONS AND PRINTED MATTERS HEREIN ISSUED BY THE ENGINEER ARE THE PROPERTY OF THE ENGINEER AND SHALL NOT BE USED ON ANY OTHER LOCATION OR PURPOSE EXCEPT THE ONE FOR WHICH THEY WERE EXPRESSLY DESIGN, IF THEY, OR ANY PART THEREOF IS REPRODUCED WITHOUT THE WRITTEN CONSENT OF THE ENGINEER, THE PERSON SO DOING WILL BE INDEBTED TO THE ENGINEER FOR HIS FULL
8. CONTRACTOR SHALL NOT USE FOR CONSTRUCTION PURPOSES ANY DOCUMENTS WITHOUT THE "ISSUE FOR CONSTRUCTION" STAMP. ALL SITE ELECTRICAL DRAWINGS THAT INTERACT WITH LUMA. MUST HAVE THE SEAL OF THE ENGINEER WITH LUMA'S ENDORSEMENT, THE ENGINEER'S SIGNATURE, AND ISSUE FOR CONSTRUCTION STAMP.
9. CONTRACTOR SHALL MAKE PROVISIONS TO ORDER ALL ELECTRICAL EQUIPMENT AND MATERIALS SPECIFIED HEREIN UPON CONTRACT AWARD IN ORDER TO AVOID DELAYS OR CHANGES IN THE SPECIFIED PRODUCTS.
10. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE THE CONSTRUCTION BEGINS.
11. IN CASE OF ANY DOUBT, OMISSIONS, ERRORS OR DISCREPANCIES IN ANY DRAWING, THE ELECTRICAL CONTRACTORS MUST NOTIFY THE ELECTRICAL DESIGN ENGINEER OF RECORD IN WRITING PRIOR TO TAKE ANY DECISIONS WITHOUT WRITTEN APPROVAL.
12. CONTRACTOR SHALL SUBMIT IN WRITING (ORIGINAL TO ENGINEER AND DUPLICATE TO THE OWNER). ANY REQUEST TO CHANGE A SPECIFIED ITEM SHALL WAIT FOR THE ENGINEER'S WRITTEN APPROVAL BEFORE PROCEEDING.
13. CONTRACTOR SHALL SUBMIT SAMPLES, SPECIFICATIONS, AND SHOP DRAWINGS AS PER SPECIFICATIONS AND DRAWINGS INSTRUCTIONS OF THE SPECIFIED MATERIALS AND EQUIPMENT PRIOR TO THEIR INSTALLATIONS.
14. THE ELECTRICAL CONTRACTOR MUST EVALUATE THE CONSTRUCTION DRAWINGS AND NOTIFY ANY CHANGES NEEDED FOR THE CONSTRUCTION OF THE ELECTRICAL SCOPE NEEDED FOR THE CONSTRUCTION OF THE ELECTRICAL SCOPE IN THESE DRAWINGS PRIOR TO BIDDING THIS PROJECT. NO NOTIFICATION WILL MEAN THE ELECTRICAL UNDERSTAND FULLY THE SCOPE OF WORK AND NO CHANGE ORDERS WILL BE PERMITTED.
15. ELECTRICAL CONTRACTOR SHALL FURNISH SHORT CIRCUIT AND OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY WHICH SHALL BE LUMARED BY THE EQUIPMENT MANUFACTURE AND/OR SPECIALIST QUALIFICATIONS. THE RESULTS OF THE SHORT-CIRCUIT AND COORDINATION STUDIES SHALL BE SUMMARIZED IN A FINAL REPORT AND SUBMIT TO ELECTRICAL ENGINEER. ADJUST ALL DEVICES SETTINGS ACCORDING TO THE RECOMMENDED SETTINGS TABLE AND NOTES PROVIDED BY THE COORDINATION STUDY. THE CONTRACTOR SHALL COMPLY WITH SECTION 260573 (OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY).
16. THE ELECTRICAL CONTRACTOR MUST KEEP A SET OF DRAWINGS WITH ALL THE DEVIATIONS MADE DURING CONSTRUCTION TO ENSURE AN ACCURATE AS BUILT SET DRAWINGS.
17. INSTALLATION DETAILS ARE ILLUSTRATIVE AND SHOULD NOT BE USED WITHOUT VERIFYING JOB SITE CONDITIONS, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING ANY DEVIATION THEY PERFORM.

ISSUE FOR BID
03 SEP 2026

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BID SET
NOT FOR CONSTRUCTION
SUBJECT TO CHANGES AND/OR REVISIONS
AUGUST 31, 2026

Yo, Daniel Rosell Suarez, Ingeniero, licencia #15699, certifico que soy el profesional que confeccionó, diseñó o preparó estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la 'Ley para la Inversión por la Industria Puertorriqueña" y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique]. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

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PROJECT

ALARMA DE INCENDIOS

TRIBUNAL GENERAL DE JUSTICIA

SAN JUAN
Puerto Rico

REVISIONS

Rev	Date	Description

File Name: .

Scale: AS SHOWN Date: JUN 2024

DRAWING TITLE

GENERAL NOTES

DRAWING NO.

FA-0.0

FIRE ALARM GENERAL NOTES:

1. THE DRAWINGS SHOW THE LAYOUT OF THE SYSTEM AND INDICATE THE APPROXIMATE LOCATIONS OF THE OUTLETS, DEVICES, AND EQUIPMENT. THE RUNS OF WIRING SHOWN ON THE DRAWINGS ARE SCHEMATIC ONLY. THE EXACT ROUTING OF CONDUIT SHALL BE DETERMINED BY THE STRUCTURAL CONDITIONS AND OTHER OBSTRUCTIONS. THIS SHALL NOT BE CONSTRUED TO MEAN THAT THE DESIGN OF THE SYSTEM MAY BE CHANGED WITHOUT AUTHORIZATION OF THE ENGINEER OF RECORD, BUT REFERS ONLY TO EXACT RUNS OF CONDUITS BETWEEN GIVEN POINTS.
2. CONDUITS SHALL BE 3/4" IPS MINIMUM SIZES UNLESS OTHERWISE NOTED. COORDINATE FINAL CONDUIT SIZES WITH SYSTEM MANUFACTURER.
3. INSTALLATION SHALL BE DONE IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
4. CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND/OR EQUIPMENT REQUIRED FOR A COMPLETE WORKING SYSTEM.
5. SUPPLY AND RETURN A/C DUCT SMOKE DETECTORS FURNISHED BY MECHANICAL CONTRACTOR SHALL BE CONNECTED TO FIRE ALARM PANEL.
6. ALL WIRING MUST BE DONE AS PER MANUFACTURER RECOMMENDATIONS.
7. FIRE ALARM SYSTEM SHALL COMPLY WITH THE LATEST EDITION OF THE NFPA 101, NFPA 72 AND DEPT. DE BOMBEROS DE P.R. REQUIREMENTS IN CASE OF DISCREPANCY THE STRONGEST CODE WILL APPLY.
8. FURNISH AND INSTALL A COMPLETE FIRE ALARM SYSTEM AS DESCRIBED IN THE SPECIFICATIONS AND INDICATED IN THE ELECTRICAL DRAWINGS. THE SYSTEM SHALL BE WIRED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND IT SHALL BE LEFT IN A COMPLETE WORKING ORDER. THE SYSTEM AND ITS COMPONENTS MUST BE U.L. LISTED. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE DRAWINGS FOR SPECIFIC INSTALLATION. THE DRAWING & WIRING DIAGRAMS SHALL BE SUBMITTED TO THE A/E FOR HIS APPROVAL PRIOR TO THE INSTALLATION OF THE SYSTEM. ALL THE INSTALLATION AND WIRING OF THE SYSTEM SHALL BE OF HIGH QUALITY WORKMANSHIP.
9. ALL FIRE ALARM JUNCTION BOXES AND CONDUIT SHALL BE PAINTED RED.
10. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH FIRE PROTECTION CONTRACTOR THE LOCATION & QUANTITY OF TAMPER & FLOW SWITCHES AND CONNECT THEM TO FIRE ALARM PANEL, AND PROVIDE ALL NECESSARY MODULES FOR THE CONNECTION.
11. IN ELEVATOR MACHINE ROOMS WHERE FIRE SPRINKLER ARE INSTALLED CONTRACTOR SHALL PROVIDE & INSTALLED A HEAT DETECTOR WITH RELAY BASE AT NO MORE THAN 2'-0" FROM EACH SPRINKLER HEAD, PROVIDE SHUNT TRIP AT BREAKER FEEDING ELEVATOR TO SHUT DOWN ELEVATOR PRIOR TO SPRINKLER ACTIVATION.
12. CONTRACTOR SHALL PROVIDE & INSTALL A SMOKE DETECTOR IN ALL ELEVATOR LOBBIES, HOIST WAYS, AND ELEVATORS CONTROL ROOMS.
13. FIRE ALARM SYSTEM SUPPLIER SHALL PROVIDE TRAINING TO BUILDING MAINTENANCE DEPARTMENT.
14. THE FIRE ALARM SYSTEM MUST TURN OFF THE MUSIC (IF AVAILABLE) SYSTEM IN CASE OF AN EMERGENCY. COORDINATE IN FIELD WITH MUSIC EQUIPMENT.
15. FINAL LOCATIONS OF DEVICES SHALL BE COORDINATED WITH ARCHITECTURAL FINISHES AND NFPA–72 REQUIREMENTS, THE LATTER TO PREVAIL IN CASE OF DISCREPANCIES.
16. LOUDSPEAKERS AND THEIR ENCLOSURES SHALL BE LISTED FOR VOICED/ALARM SIGNALING SERVICES.
17. ALL POWER BOOSTERS IF REQUIRED, ARE THE SOLE RESPONSIBILITY OF THE FIRE ALARM SYSTEM CONTRACTOR.
18. PROVIDE SEPARATE ZONES TO SERVE STAIRWAY SPEAKERS, PROVIDE SPEAKERS IN ALL ENCLOSED STAIRWAYS EXCEEDING TWO STORES IN HEIGHT. (ONE SPEAKER AT EACH LEVEL)
19. VISIBLE APPLIANCES SHALL BE LOCATED NO MORE THAN 15 FT. FROM THE END OF THE CORRIDOR WITH A SEPARATION NO GREATER THAN 100 FEET BETWEEN APPLIANCES.
20. ALL ELECTRICAL DOORS MUST OPEN OR DISCONNECT AUTOMATICALLY DURING A FIRE EVENT.
21. INITIATION/DATA LOOP DEVICES WIRING MUST RUN SEPARATE FROM THE NOTIFICATION DEVICES WIRING AT ALL TIMES.
22. PROVIDE A DEDICATED 120 VOLTS AC CIRCUIT FOR THE FIRE ALARM PANEL & DUCT SMOKE DETECTOR IN ALL AHU.
23. THE ELECTRICAL CONTRACTOR MUST COORDINATE WITH THE FIRE ALARM CONTRACTOR IN ORDER TO PROVIDE THE NECESSARY RELAYS AND CONTROL MODULES FOR ALL THE AIR HANDLING UNITS "AHU", FAN CONTROLS, AND ELEVATOR'S CAPTURE FUNCTIONS.
24. IN CASE THAT THE FIRE ALARM WORK IS PERFORMED IN AN EXISTING PROJECT THE FA OR THE ELECTRICAL CONTRACTOR MUST RESTORE TO THEIR ORIGINAL CONDITION ANY AREAS DISTURBED BY HIS/HER WORK OR NEGLIGENCE INCLUDING WALL, CEILING AND FLOORS. THIS SHALL INCLUDE PLASTERING, CARPENTRY, METAL WORK AND PAINTING. THE RESTORATION MUST BE DONE TO THE SATISFACTION OF THE OWNER.

REFER TO EACH BUILDING FIRE ALARM ONE LINE DIAGRAM FOR EACH BUILDING FA DISTRIBUTION.

FIRE ALARM DESCRIPTION OF OPERATION

OPERATION OF A PULL STATION, DETECTOR OR OTHER INITIATING DEVICE WILL CAUSE ALL ALARM SIGNALS TO SOUND. AUXILIARY CIRCUITS CONTACTS FOR FIRE DEPARTMENT SIGNALING OR OTHER PURPOSED ARE PROVIDE. THE SIGNALS CONTINUE TO SOUND UNTIL MANUALLY SILENCE. THE ACTIVATED STATION MUST BE RETURNED TO NORMAL CONDITION AND THE CONTROL UNIT TO NORMAL RESET BOTTOM. SUBSEQUENTLY DEPRESSED TO RETURN THE UNIT TO NORMAL CONDITION. SMOKE DETECTORS AUTOMATICALLY RESET UPON DEPRESSION OF THE RESET BUTTON. IN THE EVENT OF BUILDING ELECTRICAL SUPPLY FAILURE, THE SYSTEM WILL AUTOMATICALLY SWITCH TO A SELF CONTAINED EMERGENCY STANDBY BATTERY. ALL BUILDINGS FA SYSTEM WILL COMMUNICATE WITH THE MFACP LOCATED AT THE SECURITY OFFICE. THE MFACP MUST BE PROVIDED WITH A COMMUNICATION PORT FOR THE MONITORING OF THE EMERGENCY GENERATORS STATUS, MAIN A/C UNITS, AND FIRE PUIMPS.

FIRE ALARM SYSTEM NOTES:

1. IT IS THE RESPONSIBILITY OF THE FIRE ALARM SYSTEM CONTRACTOR TO PROVIDE A DETAILED ONE LINE DIAGRAM OF EACH FLOOR SHOWING ALL DEVICES AND IP ADDRESSES.
2. IT IS THE RESPONSIBILITY OF THE FIRE ALARM SYSTEM CONTRACTOR TO PROVIDE ALL THE NECESSARY DEVICES (TERMINAL BOXES, AMPLIFIERS, ETC) REQUIRED FOR A COMPLETE FIRE ALARM DETECTION SYSTEM IN WORKING ORDER.

SYSTEM'S INSTALLATION NOTES:

RACEWAYS

1. INSTALL RACEWAY AND BOXES IN ACCORDANCE WITH NECA "STANDARD OF INSTALLATION."
2. GROUND AND BOND RACEWAY AND BOXES ACCORDING TO THE N.E.C. ARTICLE 517.
3. FASTEN RACEWAY AND BOX SUPPORTS TO STRUCTURE AND FINISHES UNDER PROVISIONS OF THE NEC.
4. IDENTIFY RACEWAY AND BOXES USING METHODS COMPATIBLE WITH THE ONES AT AEELA.
5. ARRANGE RACEWAY AND BOXES TO MAINTAIN HEADROOM AND PRESENT NEAT APPEARANCE.
6. RACEWAY ROUTING IS SHOWN IN APPROXIMATE LOCATIONS UNLESS DIMENSIONED. ROUTE AS REQUIRED TO COMPLETE WIRING SYSTEM.
7. ARRANGE RACEWAY SUPPORTS TO PREVENT MISALIGNMENT DURING WIRING INSTALLATION.
8. SUPPORT RACEWAY USING COATED STEEL OR MALLEABLE IRON STRAPS, LAY–IN ADJUSTABLE HANGERS, CLEVIS HANGERS, AND SPLIT HANGERS.
9. GROUP RELATED RACEWAY; SUPPORT USING CONDUIT RACK. CONSTRUCT RACK USING STEEL CHANNEL (UNISTRUT) PROVIDE ADDITIONAL SPACE ON EACH FOR 25 PERCENT ADDITIONAL RACEWAYS.
10. DO NOT SUPPORT RACEWAY WITH WIRE OR PERFORATED PIPE STRAPS. REMOVE WIRE USED FOR TEMPORARY SUPPORTS
11. DO NOT ATTACH RACEWAY TO CEILING SUPPORT WIRES OR OTHER PIPING SYSTEMS.
12. CONSTRUCT WIREWAY SUPPORTS FROM STEEL CHANNEL.
13. ROUTE EXPOSED RACEWAY PARALLEL AND PERPENDICULAR TO WALLS.
14. ROUTE RACEWAY INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND PERPENDICULAR TO WALLS.
15. MAINTAIN ADEQUATE CLEARANCE BETWEEN RACEWAY AND PIPING.
16. MAINTAIN 12 INCH CLEARANCE BETWEEN RACEWAY AND SURFACES WITH TEMPERATURES EXCEEDING 104 DEGREES F (40 DEGREES C).
17. CUT CONDUIT SQUARE USING SAW OR PIPE CUTTER; DE–BURR CUT ENDS.
18. BRING CONDUIT TO SHOULDER OF FITTINGS; FASTEN SECURELY.
19. USE TWO LOCKNUTS TO FASTEN CONDUIT TO SHEET METAL BOXES. PROVIDE AN INSULATED HUB IN ALL CONDUITS.
20. INSTALL NO MORE THAN EQUIVALENT OF THREE 90 DEGREE BENDS BETWEEN BOXES. USE CONDUIT BODIES TO MAKE SHARP CHANGES IN DIRECTION, AS AROUND BEAMS. USE HYDRAULIC ONE–SHOT BENDER TO FABRICATE BENDS IN METAL CONDUIT LARGER THAN 2 INCH (50 MM) SIZE.
21. AVOID MOISTURE TRAPS; PROVIDE JUNCTION BOX WITH DRAIN FITTING AT LOW POINTS IN CONDUIT SYSTEM.
22. PROVIDE SUITABLE FITTINGS TO ACCOMMODATE EXPANSION AND DEFLECTION WHERE RACEWAY CROSSES SEISMIC, CONTROL AND EXPANSION JOINTS.
23. PROVIDE SUITABLE PULL STRING OR CORD IN EACH EMPTY RACEWAY EXCEPT SLEEVES AND NIPPLES.
24. USE SUITABLE CAPS TO PROTECT INSTALLED CONDUIT AGAINST ENTRANCE OF DIRT AND MOISTURE.
25. INSTALL CONDUIT TO PRESERVE FIRE RESISTANCE RATING OF PARTITIONS AND OTHER ELEMENTS.

BOXES:

1. SET WALL MOUNTED BOXES AT ELEVATIONS TO ACCOMMODATE MOUNTING HEIGHTS INDICATED.
2. ORIENT BOXES TO ACCOMMODATE WIRING DEVICES ORIENTED AS SPECIFIED.
3. INSTALL PULL BOXES AND JUNCTION BOXES ABOVE ACCESSIBLE CEILINGS AND IN UNFINISHED AREAS ONLY.
4. INACCESSIBLE CEILING AREAS: INSTALL OUTLET AND JUNCTION BOXES NO MORE THAN 6 INCHES (150 MM) FROM CEILING ACCESS PANEL OR FROM REMOVABLE RECESSED LUMINAIRE.
5. DO NOT FASTEN BOXES TO CEILING SUPPORT WIRES OR OTHER PIPING SYSTEMS.
6. SUPPORT BOXES INDEPENDENTLY OF CONDUIT.
7. USE GANG BOX WHERE MORE THAN ONE DEVICE IS MOUNTED TOGETHER. DO NOT USE SECTIONAL BOX.
8. USE GANG BOX WITH PLASTER RING FOR SINGLE DEVICE OUTLETS.
9. ALIGN ADJACENT WALL MOUNTED OUTLET BOXES FOR SWITCHES, THERMOSTATS, AND SIMILAR DEVICES.
10. INSTALL IN ACCORDANCE WITH NECA "STANDARD OF INSTALLATION."
11. INSTALL DEVICES PLUMB AND LEVEL.
12. INSTALL RECEPTACLES WITH GROUNDING POLE TO THE RIGHT SIDE.
13. CONNECT WIRING DEVICE GROUNDING TERMINAL TO OUTLET BOX WITH BONDING JUMPER AND BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR.
14. CONNECT WIRING DEVICES BY WRAPPING SOLID CONDUCTOR AROUND SCREW TERMINAL. STRANDED CONDUCTOR MAY BE USED FOR BRANCH CIRCUITS 10 AWG AND SMALLER. HOWEVER, IF STRANDED CONDUCTORS ARE USED IN LIEU OF SOLID, THEN FORK TERMINALS SHALL BE CRIMPED ON FOR ALL DEVICE TERMINATIONS. BARE STRANDED CONDUCTORS SHALL NOT BE PLACED DIRECTLY UNDER THE DEVICE SCREWS.
15. INSTALL GALVANIZED STEEL PLATES ON OUTLET BOXES AND JUNCTION BOXES IN UNFINISHED AREAS, ABOVE ACCESSIBLE CEILINGS, AND ON SURFACE MOUNTED OUTLETS.
16. REMOVE EXPOSED ABANDONED RACEWAY, INCLUDING ABANDONED RACEWAY ABOVE ACCESSIBLE CEILING FINISHES. CUT RACEWAY FLUSH WITH WALLS AND FLOORS, AND PATCH SURFACES.
17. REMOVE CONCEALED ABANDONED RACEWAY TO ITS SOURCE.
18. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF RACEWAY SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS WHICH ARE NOT REMOVED.
19. ENSURE ACCESS TO EXISTING BOXES AND OTHER INSTALLATIONS WHICH REMAIN ACTIVE AND WHICH REQUIRE ACCESS. MODIFY INSTALLATION OR PROVIDE ACCESS PANEL AS APPROPRIATE.
20. EXTEND EXISTING RACEWAY AND BOX INSTALLATIONS USING MATERIALS AND METHODS AS SPECIFIED.
21. CLEAN AND REPAIR EXISTING RACEWAY AND BOXES WHICH REMAIN OR ARE TO BE REINSTALLED.

WIRING CONNECTIONS

1. CONTRACTOR IS RESPONSIBLE FOR MAKING ALL ELECTRICAL CONNECTIONS.
2. MAKE CONDUIT CONNECTIONS TO EQUIPMENT USING FLEXIBLE CONDUIT. USE LIQUIDTIGHT FLEXIBLE CONDUIT WITH WATERTIGHT CONNECTORS IN DAMP OR WET LOCATIONS.
3. CONNECT HEAT PRODUCING EQUIPMENT USING WIRE AND CABLE WITH INSULATION SUITABLE FOR TEMPERATURES ENCOUNTERED.
4. PROVIDE RECEPTACLE OUTLET TO ACCOMMODATE CONNECTION WITH ATTACHMENT PLUG. PROVIDE CORD AND CAP WHERE FIELD–SUPPLIED ATTACHMENT PLUG IS REQUIRED.
5. INSTALL SUITABLE STRAIN–RELIEF CLAMPS AND FITTINGS FOR CORD CONNECTIONS AT OUTLET BOXES AND EQUIPMENT CONNECTION BOXES.
6. INSTALL DISCONNECT SWITCHES, CONTROLLERS, CONTROL STATIONS, AND CONTROL DEVICES TO COMPLETE EQUIPMENT WIRING REQUIREMENTS.
7. INSTALL TERMINAL BLOCK JUMPERS TO COMPLETE EQUIPMENT WIRING REQUIREMENTS.
8. INSTALL INTERCONNECTING CONDUIT AND WIRING BETWEEN DEVICES AND EQUIPMENT TO COMPLETE EQUIPMENT WIRING REQUIREMENTS.

SUPPORTS

1. FABRICATE SUPPORTS FROM STRUCTURAL STEEL OR FORMED STEEL MEMBERS. RIGIDLY WELD MEMBERS OR USE HEXAGON–HEAD BOLTS TO PRESENT NEAT APPEARANCE WITH ADEQUATE STRENGTH AND RIGIDITY. USE SPRING LOCK WASHERS UNDER ALL NUTS.
2. INSTALL SURFACE–MOUNTED CABINETS AND PANELBOARDS WITH MINIMUM OF FOUR ANCHORS.
3. IN WET AND DAMP LOCATIONS USE GALVANIZED STEEL CHANNEL SUPPORTS TO STAND CABINETS AND PANEL BOARDS 1" OFF WALL.

NAMEPLATES

1. PROVIDE NAMEPLATES IDENTIFYING EACH EQUIPMENT AND CIRCUIT.
2. DEGREASE AND CLEAN SURFACES TO RECEIVE NAMEPLATES.
3. INSTALL NAMEPLATE PARALLEL TO EQUIPMENT LINES.
4. SECURE NAMEPLATE TO EQUIPMENT FRONT USING SCREWS.
5. SECURE NAMEPLATE TO INSIDE SURFACE OF DOOR ON PANELBOARD THAT IS RECESSED IN FINISHED LOCATIONS.

SYSTEM'S INSTALLATION NOTES CONT.:

FIRE RATING

A. FIRE RATED SURFACE:

1. WHEN THE OPENING IS THROUGH A FIRE RATED WALL, FLOOR, CEILING OR ROOF THE OPENING MUST BE SEALED BY INSTALLING A STEEL SLEEVE, MINIMUM 12GA., THROUGH THE OPENING AND EXTENDING BEYOND A MINIMUM OF 1 INCH. FURTHER, THE SLEEVE SHALL BE LARGE ENOUGH TO ALLOW A MINIMUM OF A 1 INCH VOID BETWEEN THE SLEEVE AND THE ITEM OF PENETRATION. THE VOID SHALL BE PACKED WITH AN APPROVED BACKING MATERIAL AND THE ENDS OF THE SLEEVE SEALED WITH A MINIMUM OF 1 INCH OF A LISTED FIRE–RESISTIVE SILICONE COMPOUND TO A DEPTH REQUIRED TO MEET THE FIRE RATING OF THE STRUCTURE PENETRATED.
2. INSTALL APPROVED PRODUCT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WHERE A P PIPE (I.E. CABLE TRAY, BUS, CABLE BUS, CONDUIT, WIREWAY, TROUGH, ETC.) PENETRATES A FIRE RATED SURFACE.

B. NON–RATED SURFACES:

1. WHEN THE OPENING IS THROUGH A NON–FIRE RATED WALL, FLOOR, CEILING OR ROOF THE OPENING MUST BE SEALED USING AN APPROVE TYPE OF MATERIAL.
2. USE GALVANIZED SHEET METAL SLEEVES IN HOLLOW WALL PENETRATIONS TO PROVIDE A BACKING FOR THE SEALANT. GROUT AREA AROUND SLEEVE IN MASONRY CONSTRUCTION.
3. INSTALL ESCUTCHEONS OR FLOOR/CEILING PLATES WHERE PIPE, PENETRATES NON–FIRE RATED SURFACES IN OCCUPIED SPACES. OCCUPIED SPACES FOR THIS PARAGRAPH INCLUDE ONLY THOSE ROOMS WITH FINISHED CEILINGS AND THE PENETRATION OCCURS BELOW THE CEILING.
4. IN EXTERIOR WALL OPENINGS BELOW GRADE, ASSEMBLE RUBBER LINKS OF MECHANICAL SEAL TO THE PROPER SIZE FOR THE PIPE AND TIGHTEN IN PLACE, IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

AT INTERIOR PARTITIONS, PIPE PENETRATIONS ARE REQUIRED TO BE SEALED FOR ALL CLEAN ROOMS, LABORATORIES, MOST HOSPITAL SPACES, COMPUTER ROOMS, TELE/DATA/COM ROOMS AND SIMILAR SPACES WHERE THE ROOM PRESSURE OR ODOR TRANSMISSION MUST BE CONTROLLED. APPLY SEALANT TO BOTH SIDES OF THE PENETRATION IN SUCH A MANNER THAT THE ANNULAR SPACE BETWEEN THE PIPE SLEEVE AND THE PIPE IS COMPLETELY FILLED.

GENERAL DEMOLITION NOTES:

1. THE CONTRACTOR MUST VISIT THE JOB SITE AND BECOME ACQUAINTED WITH THE EXISTING FIELD CONDITIONS AND FAMILIARIZE WITH THE WORK TO BE DONE. ANY DISCREPANCIES BETWEEN THE EXISTING FIELD CONDITIONS AND THOSE WERE USED FOR DESIGN PURPOSES SHALL BE BROUGHT TO THE ENGINEER ATTENTION BEFORE WORK IS DONE.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.
3. CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL SURPLUS MATERIALS, DEMOLISHED MATERIALS, AND DEBRIS GENERATED DURING ELECTRICAL WORK.
4. CONTRACTOR TO CLOSELY COORDINATE ALL DEMOLITION WORK WITH THE OWNER, ARCHITECT & OTHER TRADES.
5. LOCATION OF EXISTING ELECTRICAL EQUIPMENT TO BE VERIFIED ON FIELD.
6. CONTRACTOR TO VERIFY ARCHITECTURAL DRAWINGS THE EXISTING, DEMOLITION & NEW ARCHITECTURE.
7. CONTRACTOR TO COORDINATE WITH THE OWNER REPRESENTATIVE ALL WORK TO BE DONE AS TO NOT INTERFERE WITH THE BUILDING'S OPERATIONS.
8. THE DEMOLITION DRAWINGS DO NOT NECESSARILY SHOW THE SEQUENCE OF DEMOLITION WORK. PRIOR TO START THE CONTRACTOR, ARCHITECT AND THE OWNER REPRESENTATIVES SHALL MEET TO DETERMINE THE SEQUENCE OF DEMOLITION.
9. REMOVE EXPOSED ELECTRICAL INSTALLATION IN ITS ENTIRELY UOS.
10. DRAWINGS ARE BASED ON FIELD INVESTIGATION & EXISTING DRAWINGS. CONTRACTOR TO FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS & WORK TO AVOID CONFLICTS.
11. ALL EXISTING WIRE REMOVED SHALL NOT TO BE RELOCATED.
12. PROVIDE ALL DEMOLITION WORK NECESSARY TO ACCOMMODATE NEW WORK. REROUTE & RECONNECT ANY CIRCUIT THAT WILL REMAIN IN USE BUT INTERFERES WITH NEW CONSTRUCTION.
13. THE INFORMATION DRAWINGS AND NOTES INCLUDED OR THE INVOLUNTARILY OMISSION OF OTHER DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY OF VISITING THE SITE AND MAKE HIMSELF COMPLETELY AWARE OF ALL THE CONDITIONS INVOLVED IN THE PROJECT, OF LUMARING HIS OWN EXISTING CONDITION AND DEMOLITION RESEARCH AND TO INCLUDE THE NECESSARY COST ON HIS BID TO COVER ALL THE REQUIRED DEMOLITION TO COMPLETE THE CONSTRUCTION WORKS AS REQUIRED ON THE CONTRACT DOCUMENTS.
14. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CUTTING AND PATH.
15. CONTRACTOR TO REMOVE ALL WIRES AND EXPOSED ELECTRICAL CONDUITS.
16. ANY CUTTING OF THE EXISTING FLOOR SLAB OR WALLS MUST BE AUTHORIZED BY THE ENGINEER IN CHARGE OF THE PROJECT AND CONSULTED WITH THE STRUCTURAL ENGINEER. REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR DEMOLITION PLANS.
17. ALL MATERIALS REMOVED UNDER DEMOLITION (NOT TO BE RELOCATED) SHALL BECOME THE PROPERTY OF THE CONTRACTOR & SHALL BE REMOVED COMPLETELY FROM THE PROJECT, UNLESS OTHERWISE INDICATED.
18. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION OF SPACES ADJACENT TO AREAS WHERE DEMOLITION IS TO BE PERFORMED. THIS PROTECTION SHALL BE MADE IN SUCH A MANNER SO AS TO PROVIDE A SECURE CLOSURE AT ALL TIMES.
19. CONTRACTOR SHALL DISPOSE PROPERLY OF RUBBLE AT LEAST ONCE A WEEK.
20. ELECTRICAL CONTRACTOR SHALL LUMARE AN "AS–BUILT" OF ALL THE ELECTRICAL DISTRIBUTION SYSTEM WHEN FINISH ALL THE PROPOSED WORKS. DRAWINGS SHALL BE SIMILAR TO THE CONSTRUCTION ONES IN AUTOCAD PROGRAM, PROVIDE TWO COPIES TO THE OWNER AND ARCHITECT.
21. CONTRACTOR TO REPLACE OR REPAIR ANY DAMAGE TO EXISTING AREAS TO REMAIN AS DETERMINED BY OWNER.
22. THE CONTRACTOR SHALL TAKE PRECAUTIONS DURING DEMOLITION OF EXISTING SYSTEMS. ANY SYSTEM TO REMAIN THAT IS DAMAGED DURING THE DEMOLITION AND/OR CONSTRUCTION WORKS, SHALL BE RESTORED AND/OR REPLACED TO ORIGINAL CONDITION.

FIRE ALARM LEGEND

FACP	ALARM, FIRE, PANEL; LETTERS INDICATE AS FOLLOWS: FACC = CENTRAL CONSOLE FACP = CONTROL PANEL MFACP= MASTER CONTROL PANEL FAAP = ANNUNCIATOR PANEL (SYSTEM STATUS DISPLAY) MASTER CONTROL PANEL (MFACP) SIMILAR TO SIEMENS PRO MODULAR SYSTEM ADDRESSABLE FIRE ALARM PANEL WITH VOICE NOTIFICATION. ANNUNCIATOR PANEL (FAAP) – SYSTEM CONTROL & DISPLAY. SIMILAR TO SIEMENS PRO MODULAR SYSTEM SSD–C–REM.
PAD–3	DISTRIBUTED POWER SUPPLY NOTIFICATION APPLIANCE CIRCUIT SIMILAR TO SIEMENS PAD–3
FAJP	FIRE ALARM JUNCTION PANEL. 24"W X 36"H X 8"D (MIN. SIZE) WITH ¾" PLYWOOD BACK BOARD. WITH HINGED DOOR. PAINTED RED.
SD	ADDRESSABLE SMOKE DETECTOR WITH ADDRESSABLE BASE, PHOTOELECTRIC DETECTOR, CEILING MOUNTED. SIMILAR TO SIEMENS OP921 WITH BASE. E=ELEVATOR WITH RECALL CONTACTS
D	ADDRESSABLE SMOKE DETECTOR WITH ADDRESSABLE BASE, PHOTOELECTRIC DETECTOR, MOUNTED ON A/C DUCTS. R=RETURN DUCT S=SUPPLY DUCT
HD	ADDRESSABLE HEAT DETECTOR WITH ADDRESSABLE BASE. SIMILAR TO SIEMENS MODEL HI921 WITH BASE.
BSK	AUTO ALIGNING, INFRARED–BEAM SMOKE DETECTOR. SIMILAR TO SIEMENS MODEL F5000.
IM	INTERFACE MODULE SIMILAR TO SIEMENS MODEL HTRI.
	INDOOR SELECTABLE OUTPUT SPEAKER/STROBE SYSTEM. CEILING MOUNTED. MUST PROVIDE SELECTABLE CANDELA AND SELECTABLE SOUND. SIMILAR TO SIEMENS ACEND MODEL SC–SS–CW–F FINAL COLOR TO BE SPECIFIED BY OWNER.
	INDOOR SELECTABLE OUTPUT SPEAKER/STROBE SYSTEM. WALL MOUNTED. MUST PROVIDE SELECTABLE CANDELA AND SELECTABLE SOUND. SIMILAR TO SIEMENS SC–SS–WR–F. FINAL COLOR TO BE SPECIFIED BY OWNER.
	INDOOR SELECTABLE OUTPUT HORN/STROBE SYSTEM. CEILING MOUNTED. MUST PROVIDE SELECTABLE CANDELA AND SELECTABLE SOUND. SIMILAR TO SIEMENS ACEND SERIES MODEL SC–HS–CW–F. FINAL COLOR TO BE SPECIFIED BY OWNER.
	INDOOR SELECTABLE OUTPUT HORN/STROBE SYSTEM. WALL MOUNTED. MUST PROVIDE SELECTABLE CANDELA AND SELECTABLE SOUND. SIMILAR TO SIEMENS ACEND SERIES MODEL SC–HS–WR–F. FINAL COLOR TO BE SPECIFIED BY OWNER.
S	INDOOR SELECTABLE OUTPUT SPEAKER SYSTEM. CEILING MOUNTED. MUST PROVIDE SELECTABLE SOUND. SIMILAR TO SIEMENS ACEND MODEL SC–SP–CR–F FINAL COLOR TO BE SPECIFIED BY OWNER.
S	INDOOR SELECTABLE OUTPUT SPEAKER. WALL MOUNTED. SIMILAR TO SIEMENS ACEND SERIES MODEL SC–SP–WW–F. MUST PROVIDE SELECTABLE SOUND. FINAL COLOR TO BE SPECIFIED BY OWNER.
P	DOUBLE ACTION, ADDRESSABLE, MANUAL PULL STATION. SIMILAR TO SIEMENS MODEL XMS–D.
TS	FIRE PROTECTION SYSTEM TAMPER MONITORING DEVICE.
FS	FIRE PROTECTION SYSTEM FLOW MONITORING DEVICE.
PJ	REMOTE FIREFIREFIGHTERS' TELEPHONE JACK. SIMILAR TO SIEMENS CAT. FJ–304. FOR BID PURPOSES PROVIDE TWELVE (12) PORTABLE FIREFIGHTERS' TELEPHONES SIMILAR TO CERBERUS CAT. PFT–SERIES
ML	ELECTROMAGNETIC DOOR DEVICE. DOOR MAGNET MUST DISCONNECT WHEN THE FIRE ALARM SYSTEM IS ACTIVATED. COORDINATE FINAL OPERATION SEQUENCE WITH THE CLIENT.
	HOME RUN TO F.A.P. IN 3/4" EMT CONDUIT (TYP. UOS) RUNNING INSIDE WALL AND ABOVE HUNG CEILING. SEEN FROM ABOVE.
A.F.F.	DENOTES ABOVE FINISHED FLOOR.
	¾" EMT CONDUIT WITH SET SCREW TYPE CONNECTIONS, WITH FIRE RATED CABLE AND PLENUM RATED. NO THHN CABLE ALLOWED FOR THE FIRE ALARM WIRING.

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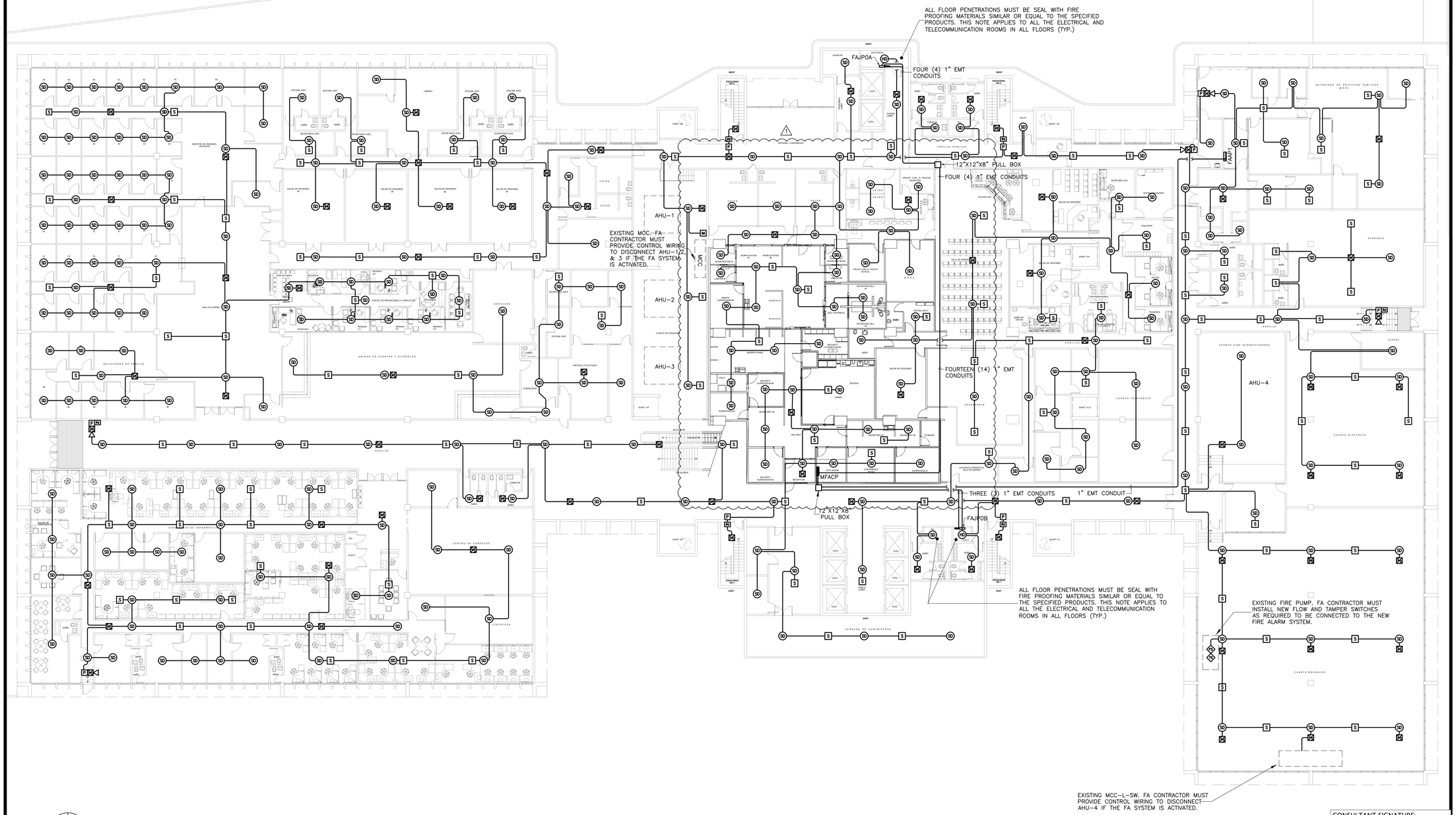
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GENERAL NOTES

DRAWING NO.

FA-0.1



BASEMENT LEVEL FIRE ALARM DIST. PLAN

SCALE 1/16"=1'-0"

IMPORTANT NOTE:

REFER TO SHEET (FA-6.0) FOR EQUIPMENT LEGEND, AND SHEET (FA-0.1) FOR EQUIPMENT SPECIFICATIONS.

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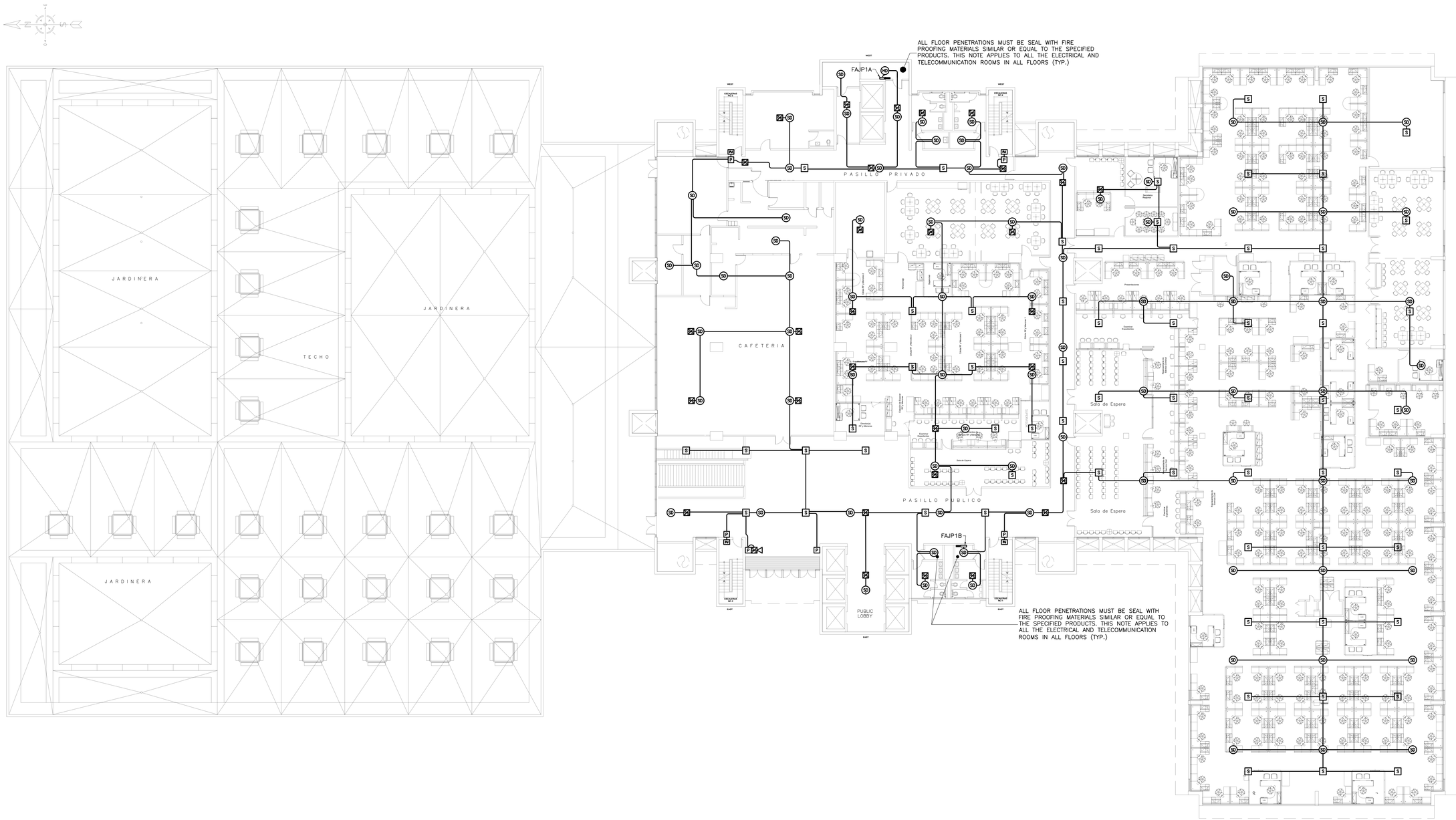
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DRAWING TITLE

BASEMENT LEVEL
FIRE ALARM DIST. PLAN

DRAWING NO.

FA-1.0



1ST LEVEL
FIRE ALARM DIST. PLAN
SCALE 1/16"=1'-0"

IMPORTANT NOTE:

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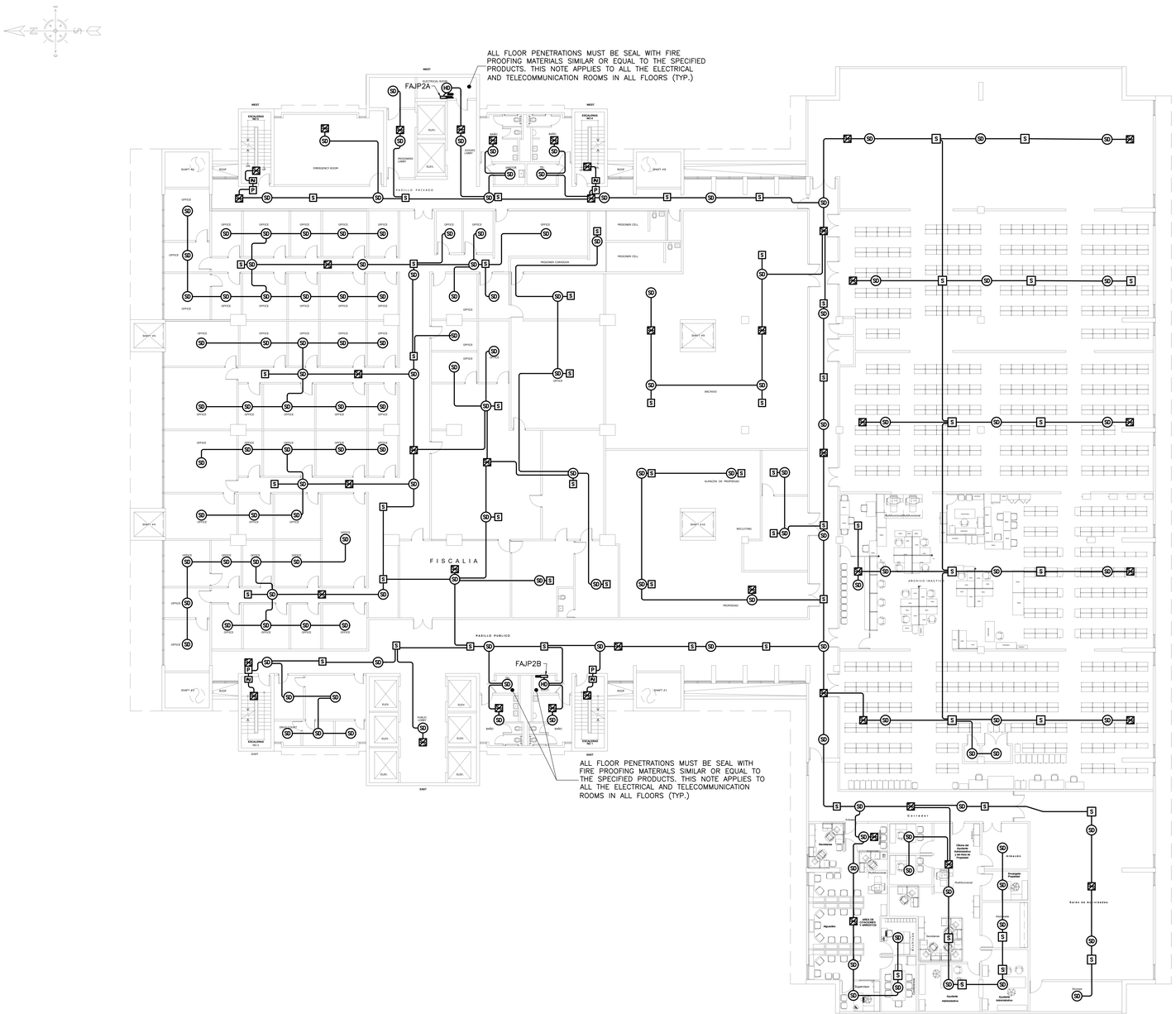
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DRAWING TITLE

1ST. LEVEL
FIRE ALARM DIST. PLAN

DRAWING NO.

FA-1.1



2ND LEVEL FIRE ALARM DIST. PLAN

SCALE 1/16"=1'-0"

IMPORTANT NOTE:

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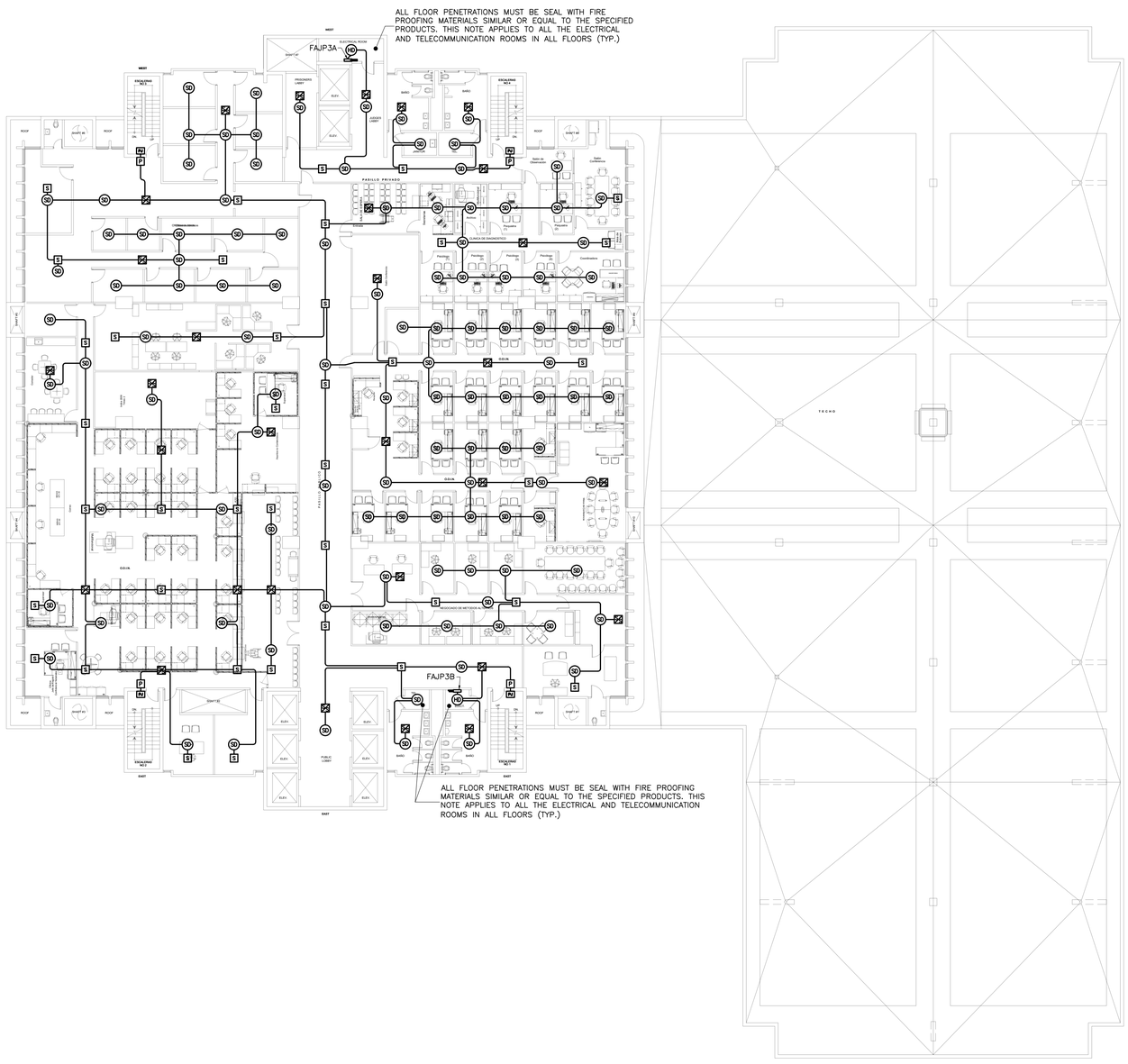
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DRAWING TITLE

2ND. LEVEL
FIRE ALARM DIST. PLAN

DRAWING NO.

FA-1.2



3RD LEVEL
FIRE ALARM DIST. PLAN
SCALE 1/16"=1'-0"

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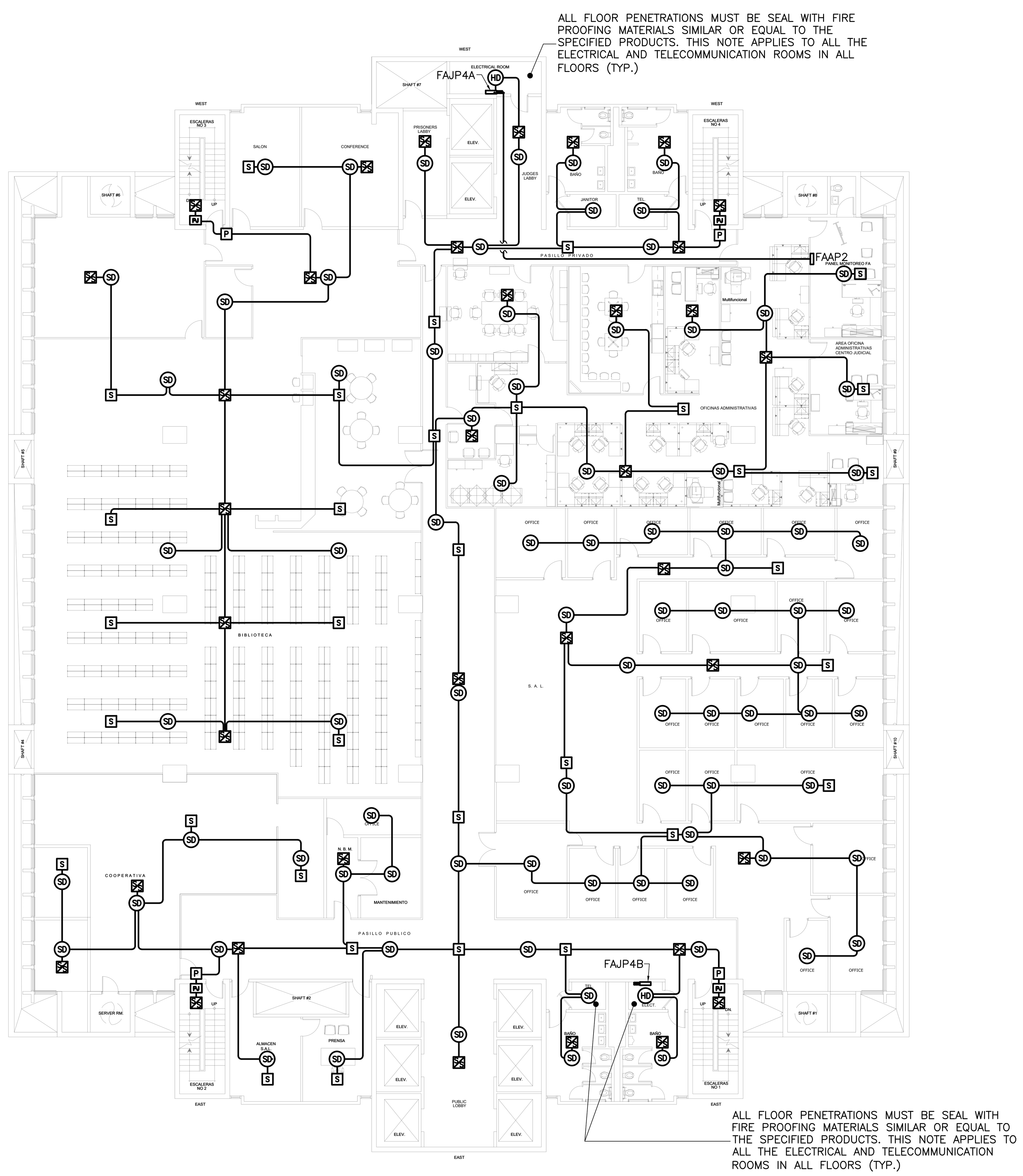
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DRAWING TITLE

3TH. LEVEL
FIRE ALARM DIST. PLAN

DRAWING NO.

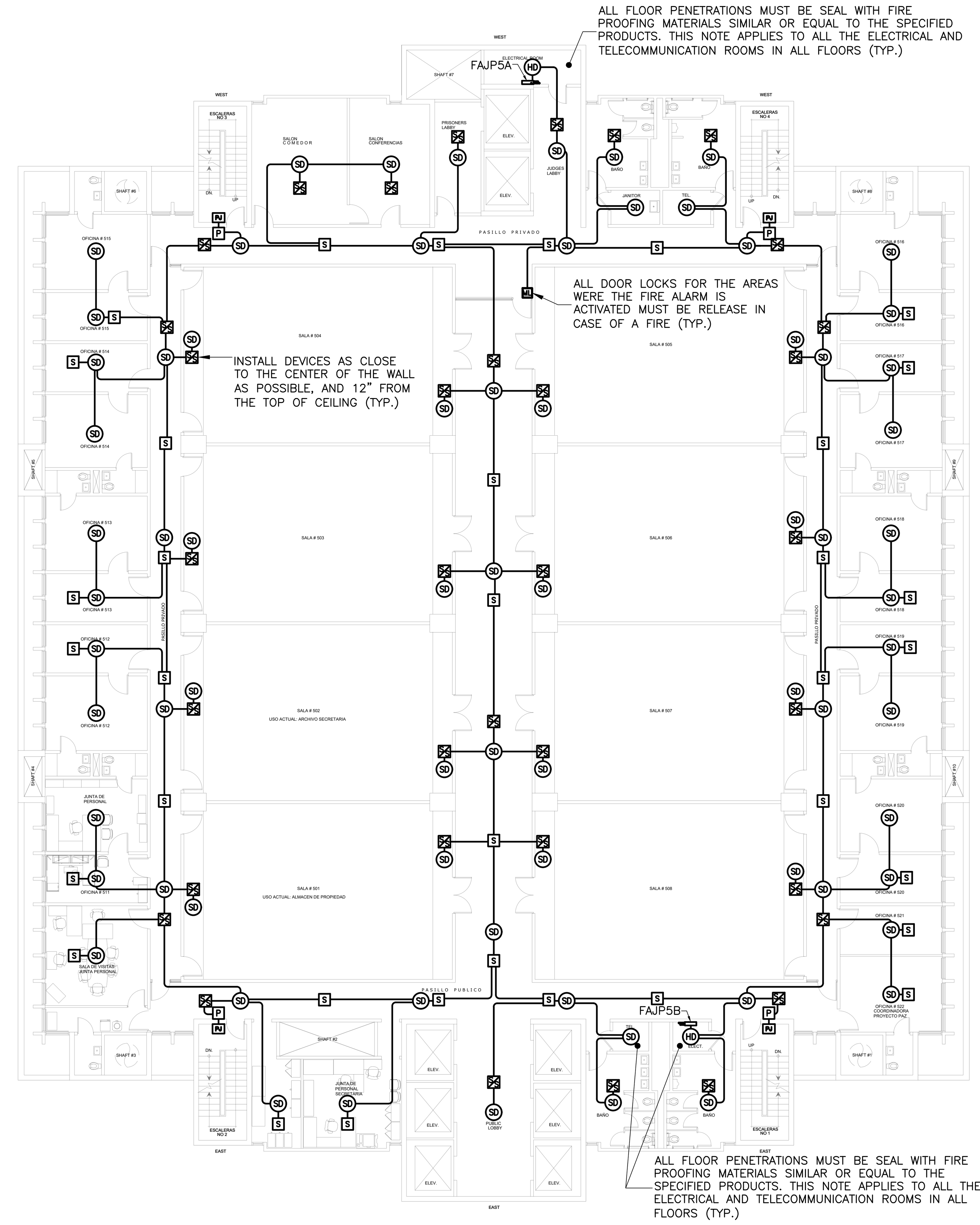
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4TH LEVEL
FIRE ALARM DIST. PLAN
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5TH LEVEL
FIRE ALARM DIST. PLAN
SCALE 1/16"=1'-0"

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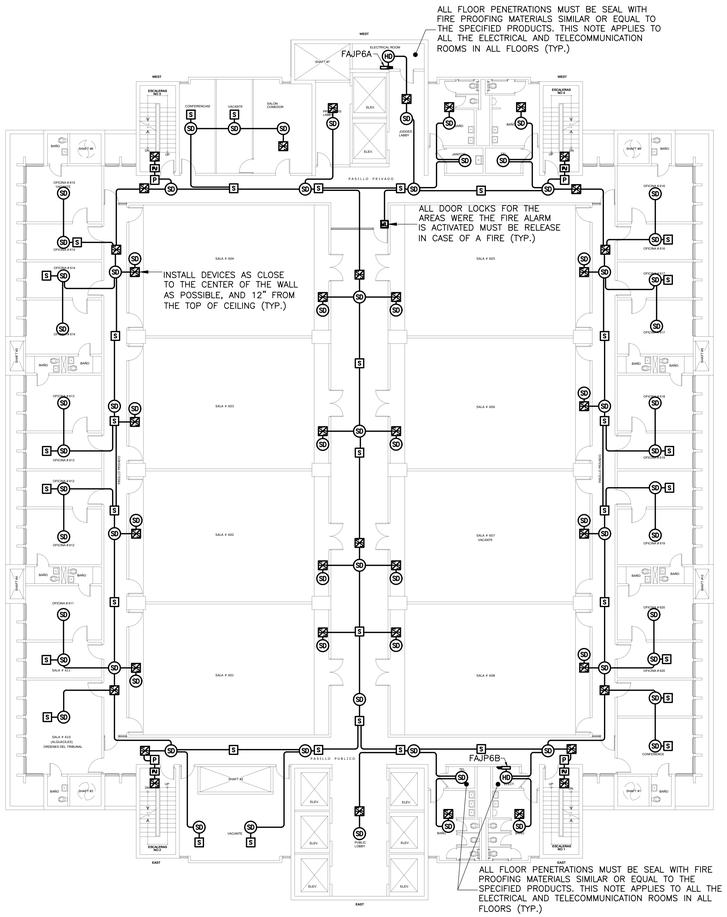
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4TH. & 5TH LEVEL FIRE ALARM DIST. PLAN

DRAWING NO.

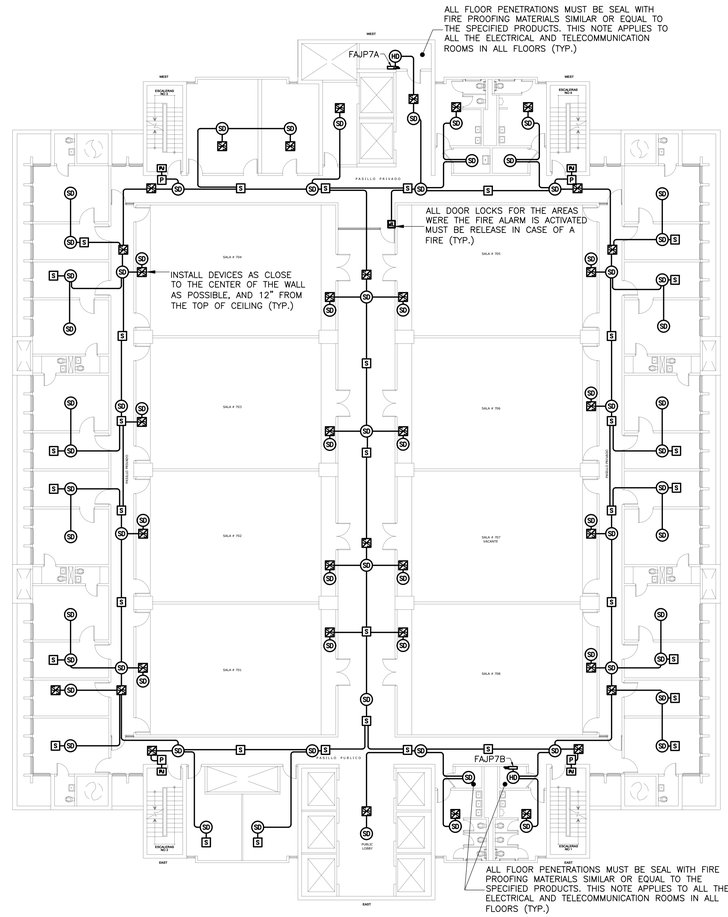
FA-1.4



6TH LEVEL
FIRE ALARM DIST. PLAN
SCALE 1/16"=1'-0"

IMPORTANT NOTE:

REFER TO SHEET (FA-6.0) FOR EQUIPMENT LEGEND, AND SHEET (FA-0.1) FOR EQUIPMENT SPECIFICATIONS.



7TH LEVEL
FIRE ALARM DIST. PLAN
SCALE 1/16"=1'-0"

ISSUE FOR BID
03 SEP 2026

CONSULTANT SIGNATURE:

DANIEL ROSELL SUAREZ
INGENIERO
LICENCIADO
LIC. #15699
PUERTO RICO

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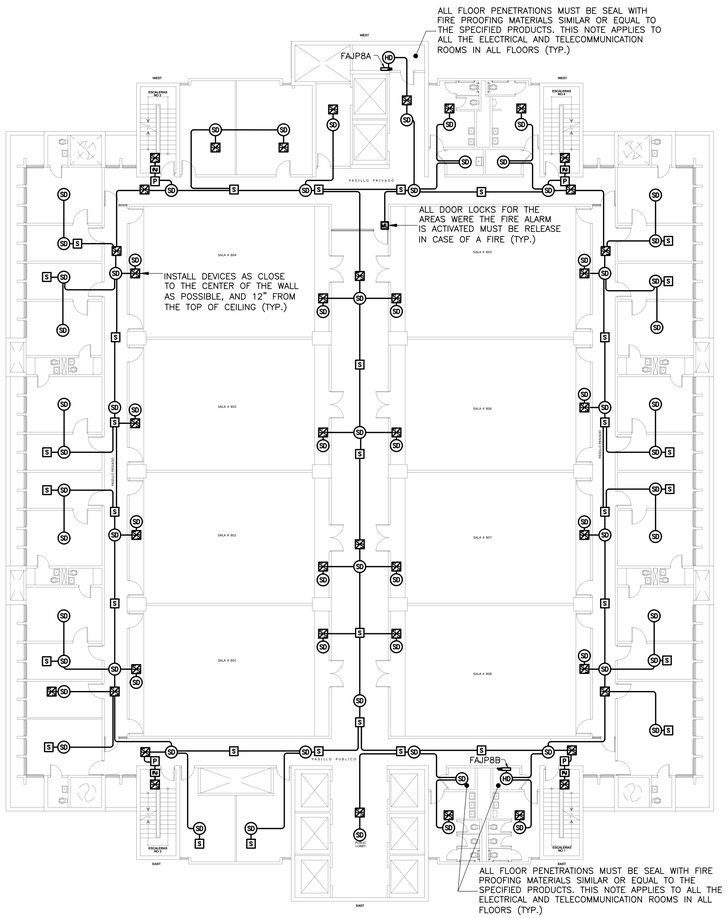
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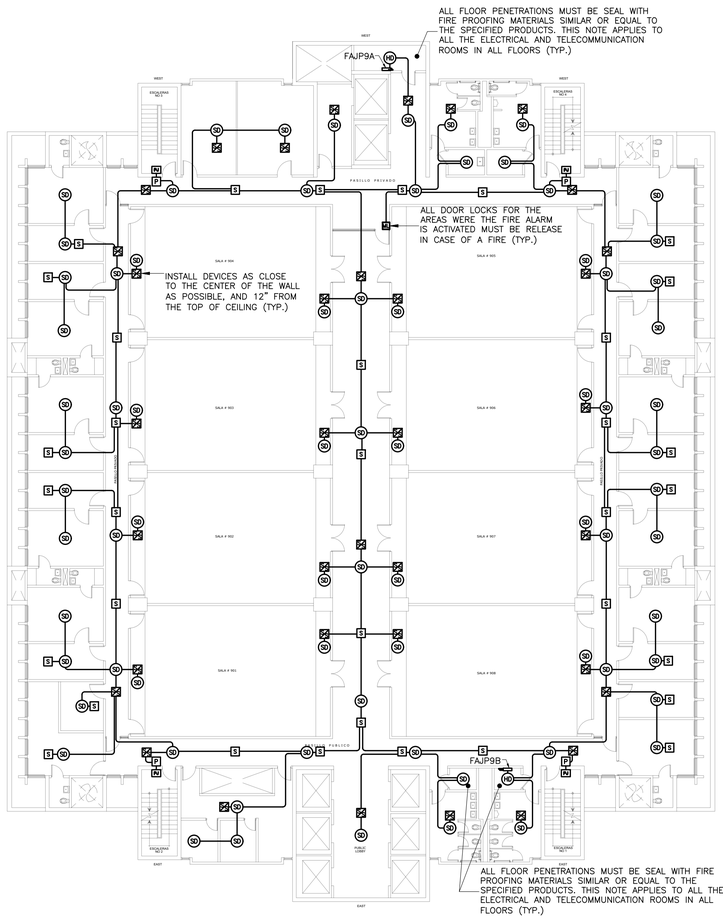
6TH. & 7TH LEVEL FIRE ALARM DIST. PLAN

DRAWING NO.

FA-1.5



8TH LEVEL
FIRE ALARM DIST. PLAN
SCALE 1/16"=1'-0"



9TH LEVEL
FIRE ALARM DIST. PLAN
SCALE 1/16"=1'-0"

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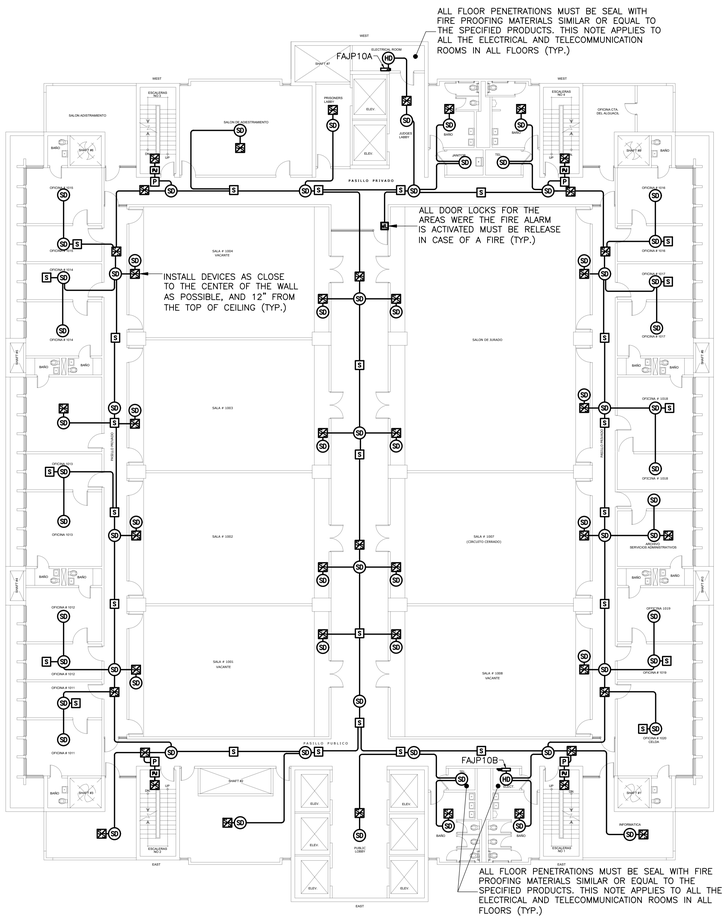
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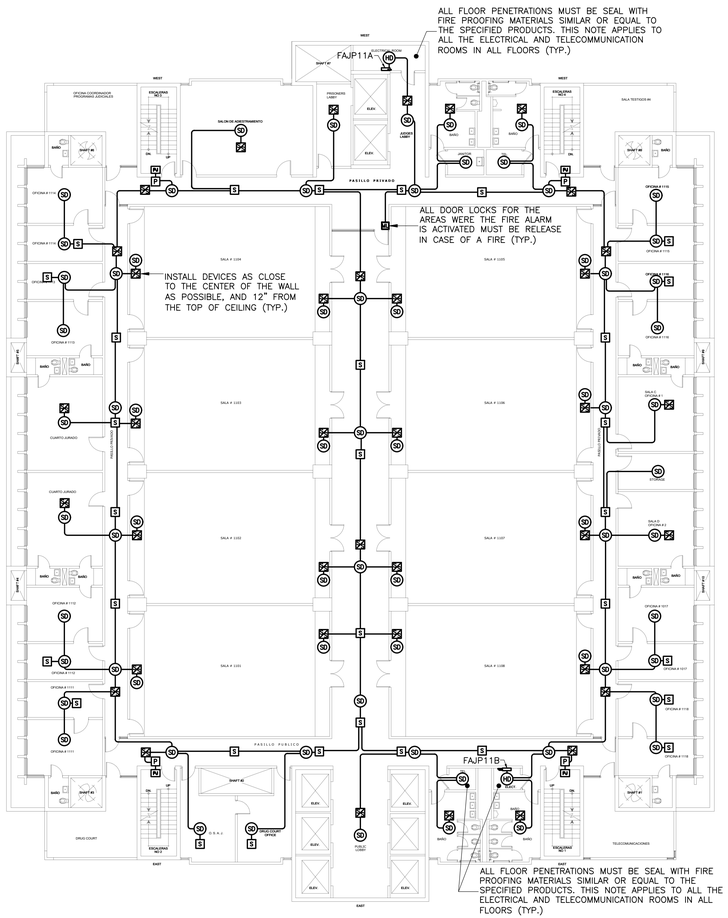
8TH. & 9TH. LEVEL
FIRE ALARM DIST. PLAN

DRAWING NO.

FA-1.6



10TH LEVEL
FIRE ALARM DIST. PLAN
SCALE 1/16"=1'-0"



11TH LEVEL
FIRE ALARM DIST. PLAN
SCALE 1/16"=1'-0"

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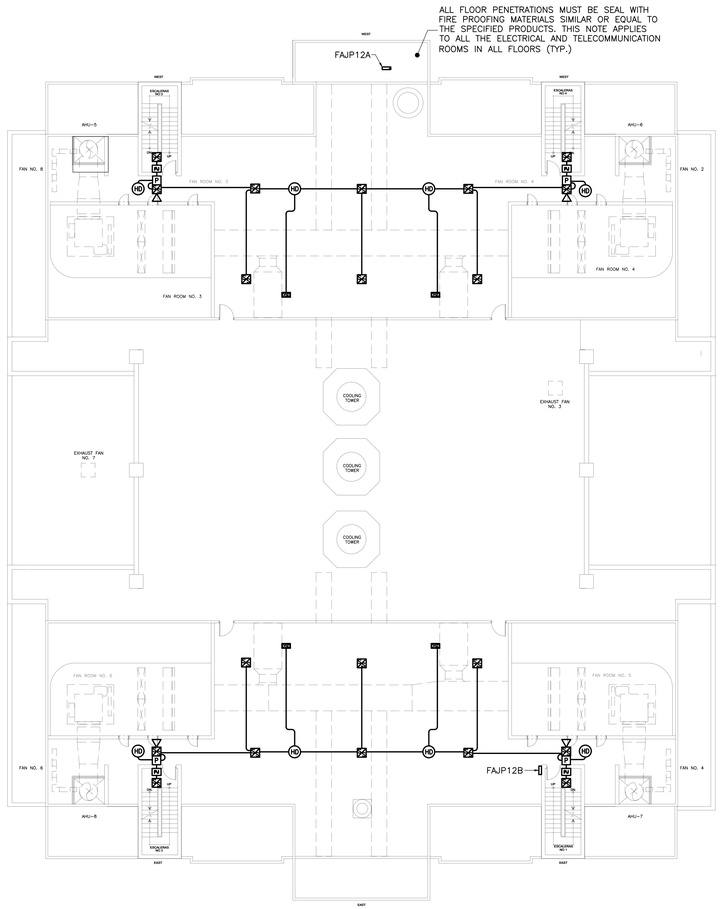
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10TH. & 11TH. LEVEL FIRE ALARM DIST. PLAN

DRAWING NO.

FA-1.7



12TH LEVEL FIRE ALARM DIST. PLAN

SCALE 1/16"=1'-0"

IMPORTANT NOTE:

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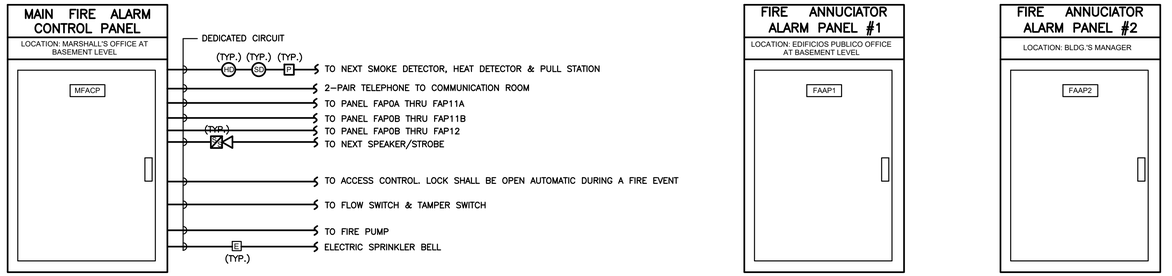
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DRAWING TITLE

12TH. LEVEL
FIRE ALARM DIST. PLAN

DRAWING NO.

FA-1.8



FIRE ALARM PARTIAL ONE-LINE DIAGRAM

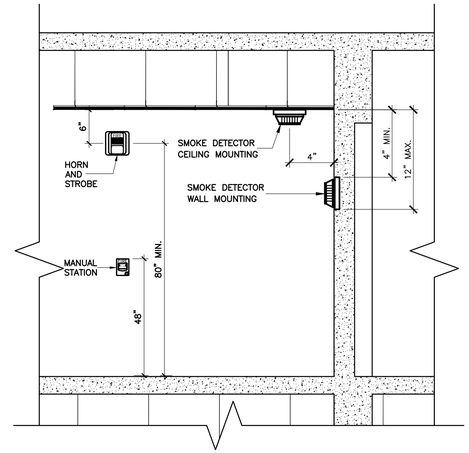
NOT TO SCALE FOR REFERENCE ONLY

NOTE:

1- PROVIDE CONNECTION TO PUBLIC ADDRESS SYSTEM REMOTE MUTE INPUT FOR FIRE ALARM SYSTEM OVERRIDE DURING ALERT CONDITION.

FIRE ALARM DESCRIPTION OF OPERATION

OPERATION OF A PULL STATION, DETECTOR OR OTHER INITIATING DEVICE WILL CAUSE ALL ALARM SIGNALS TO SOUND. AUXILIARY CIRCUITS CONTACTS FOR FIRE DEPARTEMENT SIGNALING OR OTHER PURPOSED ARE PROVIDE. THE SIGNALS CONTINUE TO SOUND UNTIL MANUALLY SILENCE. THE ACTIVATED STATION MUST BE RETURNED TO NORMAL CONDITION AND THE CONTROL UNIT TO NORMAL RESET BOTTOM. SUBSEQUENTLY DEPRESSED TO RETURN THE UNIT TO NORMAL CONDITION. SMOKE DETECTORS AUTOMATICALLY RESET UPON DEPRESSION OF THE RESET BUTTON. IN THE EVENT OF BUILDING ELECTRICAL SUPPLY FAILURE, THE SYSTEM WILL AUTOMATICALLY SWITCH TO A SELF CONTAINED EMERGENCY STANBY BATTERY.

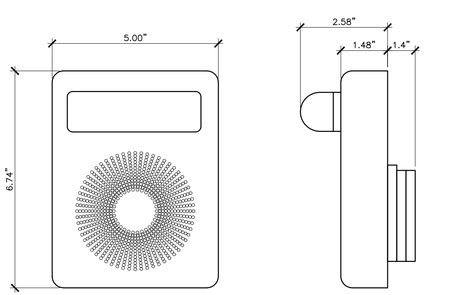


TYPICAL INSTALLATION HEIGHTS FOR MOUNTING DEVICES

NOT TO SCALE

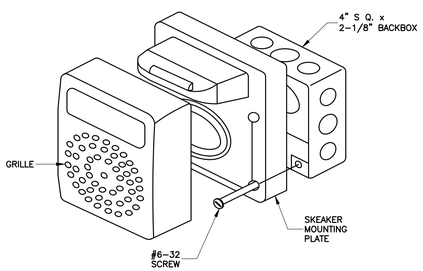
FIRE ALARM RISER NOTES:

1. MOUNT VISUAL APPLIANCES AT LEAST 80" A.F.F. OR A MINIMUM OF 6" BELOW CEILING; WHICHEVER HEIGHT IS LOWER.
2. ALL CIRCUITS MUST HAVE 40% SPARE CAPACITY.
3. COORDINATE THE INSTALLATION OF THE DUCT SMOKE DETECTORS WITH THE MECHANICAL DRAWINGS. DUCT SMOKE DETECTORS WILL BE SUPPLY BY THE MECHANICAL CONTRACTOR AND INSTALLED IN COORDINATION WITH THE FIRE ALARM CONTRACTOR.



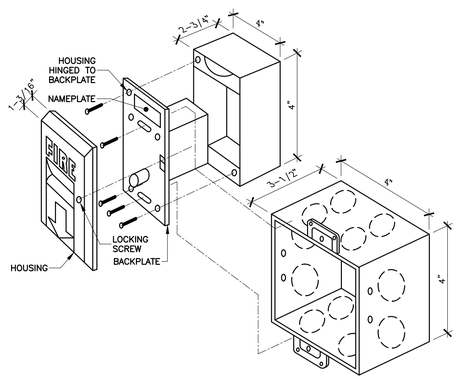
SPEAKER STROBE DETAIL

NOT TO SCALE



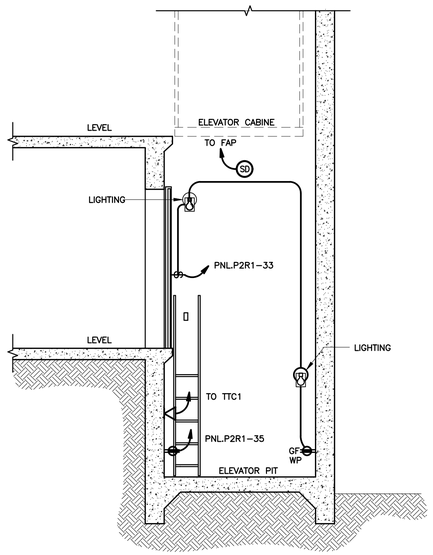
SPEAKER STROBE MOUNTING DETAIL

NOT TO SCALE



SURFACE MOUNTED PULL STATION DEVICE

NOT TO SCALE



ELEVATOR'S PIT NOTES:

1. COORDINATE EXACT LOCATION OF RECEPTACLE AND LIGHT FIXTURE IN THE ELEVATOR'S PIT WITH THE ELEVATOR'S MANUFACTURER.
2. INSTALL TELEPHONE OUTLET IN ELEVATOR'S PIT. COORDINATE DETAILS WITH ELEVATOR'S INSTALLER OR MANUFACTURER.
3. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL THE COORDINATION AND INSTALLATION DETAILS FOR THE ELEVATOR.
4. COORDINATE FINAL LOCATION FOR ELEVATOR'S ELECTRICAL EQUIPMENT AT SITE IN COORDINATION WITH THE ELEVATOR'S MANUFACTURER.
5. ELECTRICAL CONTRACTOR MUST INSTALL TWO LIGHT FIXTURES IN PIT AS PER SPECIFICATION: ENCLOSE & GASKETED. DIE CAST ALUMINUM. UL LISTED FOR WET LOCATION. EQUAL TO LITHONIA MODEL RAL VP-W-100W-G-G.

ELEVATORS NOTES:

1. ELECTRICAL CONTRACTOR MUST COORDINATE WITH MECHANICAL CONTRACTOR OR ELEVATOR INSTALLER THE FINAL LOCATION FOR ALL OF THE ELEVATOR'S EQUIPMENTS AND PARTS.
2. IT IS RESPONSABILITY OF THE ELECTRICAL CONTRACTOR ALL ELECTRICAL CONNECTIONS AND DEVICE NECESSARY FOR THE PROPER OPERATION OF THE ELEVATOR IN ACCORDANCE WITH REQUIREMENTS OF THE NEC ART. 620 AND ASME A17.1..
3. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE OF SUPPLYING AND INSTALLING ALL THE DISCONNECT AND SAFETY SWITCHES SHOWN IN THE ELECTRICAL DRAWINGS.
4. ALL FLEXIBLE CONNECTIONS BETWEEN THE ELECTRICAL EQUIPMENT AND THE ELEVATOR'S EQUIPMENT MUST BE WITH SEALTITE CONDUIT.
5. ALL EXPOSED CONDUIT MUST BE RIGID GALVANIZED STEEL.
6. COORDINATE ALL THE FUSE SIZES WITH THE EQUIPMENT'S SUBMITTALS.
7. IN CASE THAT THE FIRE ALARM SYSTEM IS ACTIVATED THE ELEVATOR MUST RETURN TO THE GROUND LEVEL.
8. INSTALL SHUNT TRIP DEVICE WHEN SPRINKLER SYSTEM INSTALLED IN MACHINE ROOM &/OR HOISTWAY AS REQUIRED BY ASME A17.1 RULE 2.8.2.3.2.

TYP. POWER, SMOKE DETECTOR & LIGHTING PIT ELEVATOR DETAIL

SCALE : N.T.S. FOR REFERENCE ONLY

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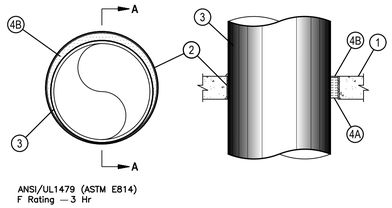
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DRAWING TITLE

FIRE ALARM GENERAL DETAILS

DRAWING NO.

FA-5.0



ANSI/UL1479 (ASTM E814)
F Rating — 3 Hr

SECTION A-A

1. FLOOR OR WALL ASSEMBLY – MIN 4–1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100–150 PCF OR 1600–2400 KG/M³) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAM OF OPENING IS 32".
2. METALLIC SLEEVE – (OPTIONAL) NOM 32" DIAM (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL SLEEVE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL SURFACES OR EXTENDING A MAX OF 3" ABOVE FLOOR OR BEYOND BOTH SURFACES OF WALL.

2A. SHEET METAL SLEEVE – (OPTIONAL) MAX 6" DIAM, MIN 26 GA. GALV STEEL PROVIDED WITH A 26 GA GALV STEEL SQUARE FLANGE SPOT WELDED TO THE SLEEVE AT APPROX MID–HEIGHT, OR FLUSH WITH BOTTOM OF SLEEVE IN FLOORS, AND SIZED TO BE A MIN OF 2" LARGER THAN THE SLEEVE DIAM. THE SLEEVE IS TO BE CAST IN PLACE AND MAY EXTEND A MAX OF 4" BELOW THE BOTTOM OF THE DECK AND A MAX OF 1" ABOVE THE TOP SURFACE OF THE CONCRETE FLOOR.

2B. SHEET METAL SLEEVE – (OPTIONAL) – MAX 12" DIAM MIN 24 GA GALV STEEL PROVIDED WITH A 24 GA GALV STEEL SQUARE FLANGE SPOT WELDED TO THE SLEEVE AT APPROX MID–HEIGHT, OR FLUSH WITH BOTTOM OF SLEEVE IN FLOORS, AND SIZED TO BE A MIN OF 2". LARGER THAN THE SLEEVE DIAM. THE SLEEVE IS TO BE CAST IN PLACE AND MAY EXTEND A MAX OF 4" BELOW THE BOTTOM OF THE DECK AND A MAX OF 1" ABOVE THE TOP SURFACE OF THE CONCRETE FLOOR.

3. THROUGH–PENETRANT – ONE METALLIC PIPE, TUBE OR CONDUIT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PENETRANT AND PERIPHERY OF OPENING SHALL BE MIN 0". (POINT CONTACT) TO MAX 1–7/8". PENETRANT MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PENETRANT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PENETRANTS MAY BE USED:

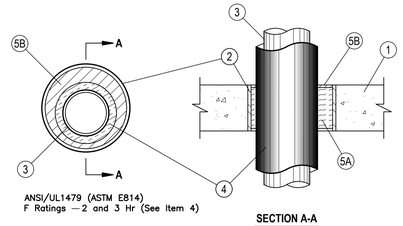
   A. STEEL PIPE – NOM 30" DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE – NOM 30" DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. COPPER PIPE – NOM 6" DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
   D. COPPER TUBING – NOM 6" DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. CONDUIT – NOM 6" DIAM (OR SMALLER) STEEL CONDUIT.
   F. CONDUIT – NOM 4" DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING (EMT).

4. FIRESTOP SYSTEM – THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

   A. PACKING MATERIAL – MIN 4" THICKNESS OF MIN 4 PCF (64 KG/M³) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR SLEEVE OR FROM BOTH SURFACES OF WALL OR SLEEVE AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   B. FILL, VOID OR CAVITY MATERIAL* – SEALANT – MIN ¾" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR SLEEVE OR WITH BOTH SURFACES OF WALL OR SLEEVE. AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PENETRANT AND CONCRETE OR SLEEVE, A MIN ¼" DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE CONCRETE OR SLEEVE/ PIPE PENETRANT INTERFACE ON THE TOP SURFACE OF FLOOR AND ON BOTH SURFACES OF WALL. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC – FS–ONE SEALANT OR FS–ONE MAX INTUMESCENT SEALANT

   * INDICATES SUCH PRODUCTS SHALL BEAR THE UL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL CERTIFICATION.

SIMILAR TO HILTI FIRE STOP SYSTEM NO. C-AJ-1226



ANSI/UL1479 (ASTM E814)
F Ratings — 2 and 3 Hr (See Item 4)

SECTION A-A

1. FLOOR OR WALL ASSEMBLY – MIN 4–1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100–150 PCF OR 1600–2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAM OF OPENING IS 18".
2. METALLIC SLEEVE – (OPTIONAL) – NOM 18" DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL SLEEVE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL SURFACES OR EXTENDING A MAX OF 3" ABOVE FLOOR OR BEYOND BOTH SURFACES OF WALL.
3. THROUGH PENETRANTS – ONE METALLIC PIPE OR TUBING TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:

   A. STEEL PIPE – NOM 4" DIAM (OR SMALLER) SCHEDULE 5 (OR HEAVIER) STEEL PIPE.
   B. COPPER PIPE – NOM 4" DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER TUBING.
   C. COPPER TUBING – NOM 4" DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.

4. TUBE INSULATION – PLASTICS* MIN 1/2" TO MAX 3/4" THICK ACRYLONITRILE BUTADIENE/POLYVINYL CHLORIDE (AB/PVC) FLEXIBLE FOAM FURNISHED IN THE FORM OF TUBING. NOM 1" THICK AB/PVC FLEXIBLE FOAM INSULATION MAY BE USED FOR MAX 2 HR F AND FH RATINGS WHEN MAX 3" DIAM PIPE OR TUBING IS USED. THE ANNULAR SPACE SHALL BE MIN 1/2" TO MAX 12" WHEN MAX ANNULAR SPACE EXCEEDS 1–1/2" THE F AND FH RATINGS ARE 2 HR.

   SEE PLASTICS* (QMFZ2) CATEGORY IN THE RECOGNIZED COMPONENT DIRECTORY FOR NAMES OF MANUFACTURERS. ANY RECOGNIZED COMPONENT TUBE INSULATION MATERIAL MEETING THE ABOVE SPECIFICATIONS AND HAVING A UL 94 FLAMMABILITY CLASSIFICATION OF 94–5VA MAY BE USED.

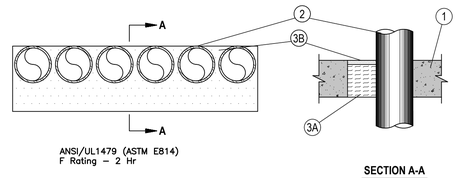
5. FIRESTOP SYSTEM – THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

   A. PACKING MATERIAL – MIN 4" THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   B. FILL, VOID OR CAVITY MATERIAL* – SEALANT – MIN ¾" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL. WHEN MAX ANNULAR SPACE EXCEEDS 1–1/2" THE MIN THICKNESS OF FILL MATERIAL IS ¾".

   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC – FS–ONE SEALANT OR FS–ONE MAX INTUMESCENT SEALANT

   * INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

SIMILAR TO HILTI FIRE STOP SYSTEM NO. C-AJ-5090



ANSI/UL1479 (ASTM E814)
F Rating – 2 Hr

SECTION A-A

1. FLOOR OR WALL ASSEMBLY – MIN 4–1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100–150 PCF OR 1600–2400 KG/M3) CONCRETE FLOOR. MIN 5" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100–150 PCF OR 1600–2400 KG/M3) CONCRETE WALL. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX SIZE OF OPENING IS 8" BY 30". SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. THROUGH PENETRANTS – ONE OR MORE METALLIC PENETRANTS TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE TOTAL NUMBER OF PENETRANTS IS DEPENDENT ON THE SIZE OF THE OPENING AND SIZES OF PENETRANTS. THE ANNULAR SPACE BETWEEN THE PENETRANTS AND PERIPHERY OF OPENING SHALL BE MIN 0" (POINT CONTACT). THE ANNULAR SPACE BETWEEN NOM 2" DIAM (AND SMALLER) PENETRANTS SHALL BE A MIN 0" (POINT CONTACT). THE ANNULAR SPACE BETWEEN PENETRANTS GREATER THAN NOM 2" DIAM SHALL BE A MIN. ½". A MAX ANNULAR SPACE IN THE SYSTEM SHALL BE 12". PENETRANTS TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF PENETRANTS MAY BE USED:

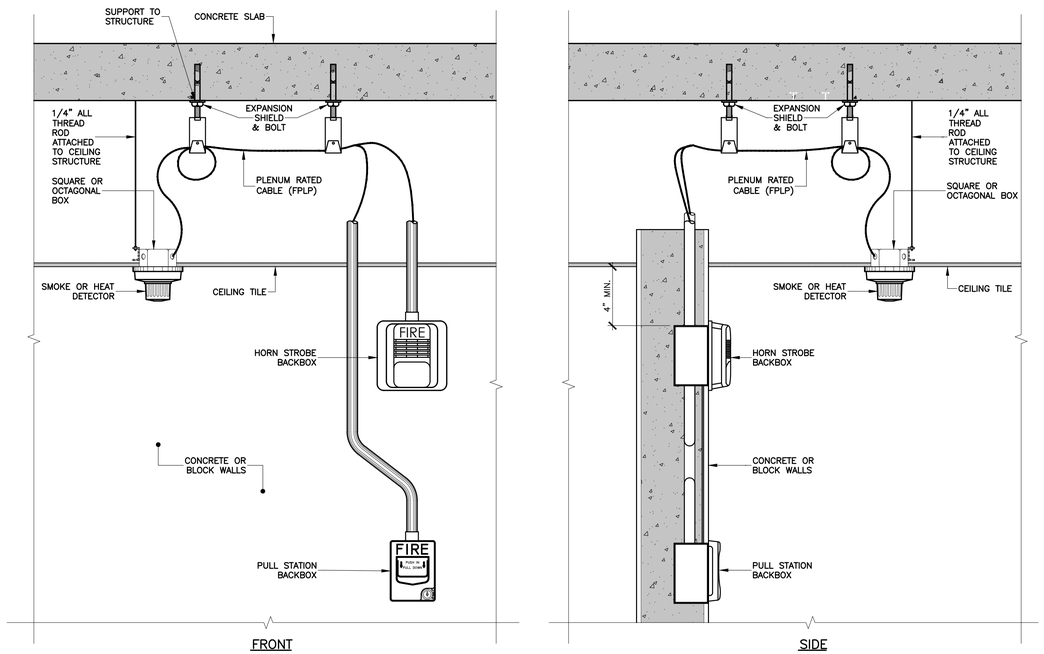
   A. CONDUIT – NOM 4" DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR RIGID STEEL CONDUIT
   B. THROUGH PENETRATING PRODUCT* – FLEXIBLE METAL PIPING – THE FOLLOWING TYPES OF STEEL FLEXIBLE METAL GAS PIPING MAY BE USED:
      1.) NOM 2" DIAM (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. OMEGA FLEX INC
      2.) NOM 1" DIAM (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. GASTITE, DIV OF TITEFLEX
      3.) NOM 2" DIAM (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. WARD MFG L L C

3. FIRESTOP SYSTEM – THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

   A. PACKING MATERIAL – MIN 4" THICKNESS OF 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION TIGHTLY PACKED INTO THE OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   B. FILL, VOID OR CAVITY MATERIAL – SEALANT* – MIN 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS FLUSH WITH THE TOP SURFACE OF THE FLOOR OR BOTH SURFACES OF THE WALL. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC – FS–ONE SEALANT OR FS–ONE MAX INTUMESCENT SEALANT.

   * INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

SIMILAR TO HILTI FIRE STOP SYSTEM NO. C-AJ-1513



SMOKE/HEAT DETECTOR MOUNTING AT HUNG CEILING DETAIL
NOT TO SCALE

ISSUE FOR BID
03 SEP 2026

CONSULTANT SIGNATURE:

DANIEL ROSELL SUAREZ
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BID SET
NOT FOR CONSTRUCTION
SUBJECT TO CHANGES AND/OR REVISIONS
AUGUST 31, 2026

Yo, Daniel Rosell Suarez, Ingeniero, licencia #15699, certifico que soy el profesional que contecconió, diseñó o preparó estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con la dispuesto en la Ley 14-2004, según enmendada, conocida como la "Ley para la Inversión por la Industria Puertorriqueña" y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique). Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

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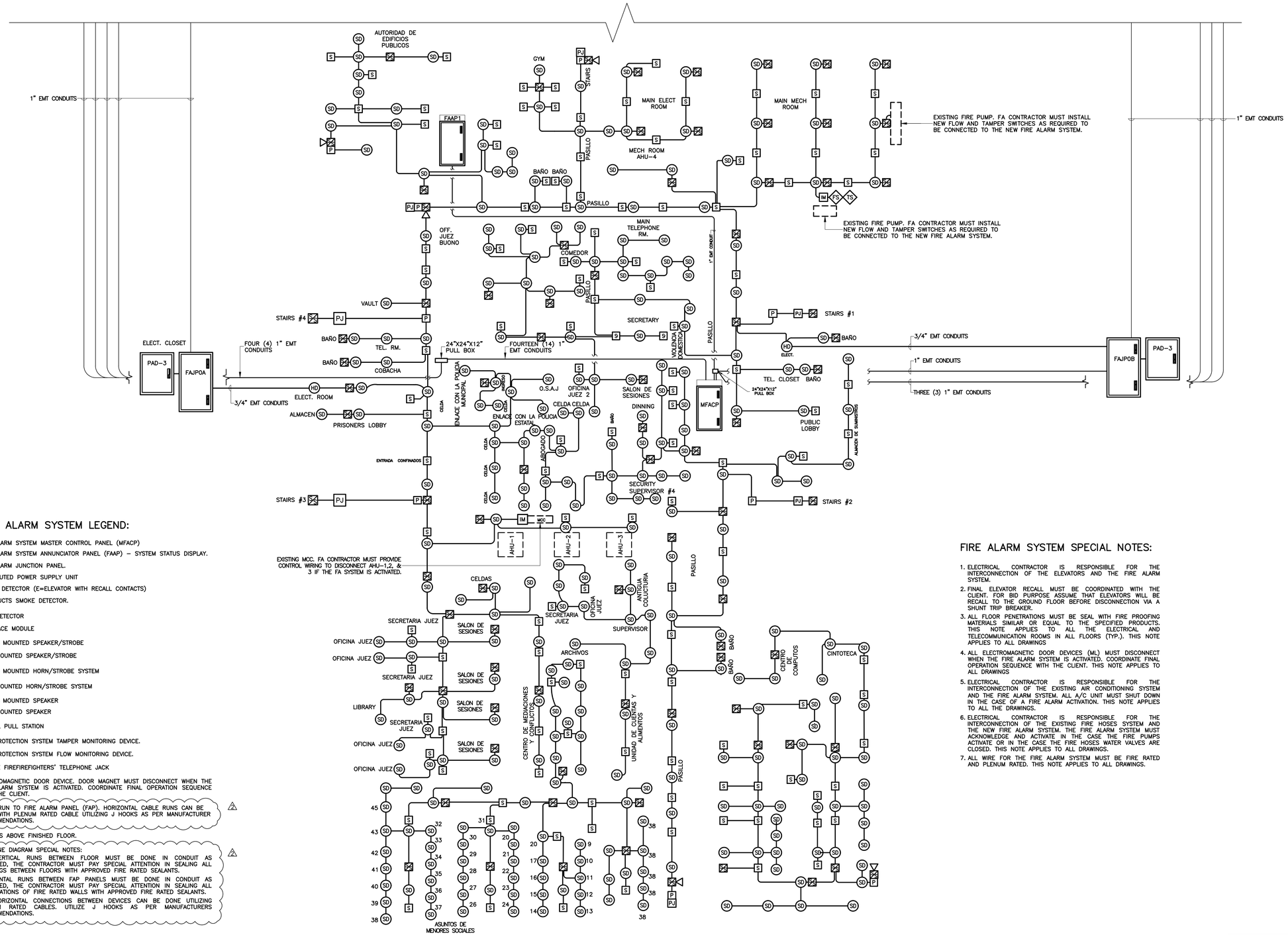
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DRAWING TITLE

FLOOR AND WALL PENETRATION DETAILS

DRAWING NO.

FA-5.1



FIRE ALARM SYSTEM LEGEND:

MFACP	FIRE ALARM SYSTEM MASTER CONTROL PANEL (MFACP)
FAAP	FIRE ALARM SYSTEM ANNUNCIATOR PANEL (FAAP) – SYSTEM STATUS DISPLAY.
FAJP	FIRE ALARM JUNCTION PANEL.
PAD-3	DISTRIBUTED POWER SUPPLY UNIT
SD	SMOKE DETECTOR (E=ELEVATOR WITH RECALL CONTACTS)
D	A/C DUCTS SMOKE DETECTOR.
HD	HEAT DETECTOR
IM	INTERFACE MODULE
	CEILING MOUNTED SPEAKER/STROBE
	WALL MOUNTED SPEAKER/STROBE
	CEILING MOUNTED HORN/STROBE SYSTEM
	WALL MOUNTED HORN/STROBE SYSTEM
S	CEILING MOUNTED SPEAKER
S	WALL MOUNTED SPEAKER
P	MANUAL PULL STATION
TS	FIRE PROTECTION SYSTEM TAMPER MONITORING DEVICE.
FS	FIRE PROTECTION SYSTEM FLOW MONITORING DEVICE.
PJ	REMOTE FIREFIREFIGHTERS' TELEPHONE JACK
ML	ELECTROMAGNETIC DOOR DEVICE. DOOR MAGNET MUST DISCONNECT WHEN THE FIRE ALARM SYSTEM IS ACTIVATED. COORDINATE FINAL OPERATION SEQUENCE WITH THE CLIENT.

HOME RUN TO FIRE ALARM PANEL (FAP). HORIZONTAL CABLE RUNS CAN BE DONE WITH PLENUM RATED CABLE UTILIZING J HOOKS AS PER MANUFACTURER RECOMMENDATIONS. (2)

A.F.F. DENOTES ABOVE FINISHED FLOOR.

ONE LINE DIAGRAM SPECIAL NOTES: (2)

1. ALL VERTICAL RUNS BETWEEN FLOOR MUST BE DONE IN CONDUIT AS SPECIFIED, THE CONTRACTOR MUST PAY SPECIAL ATTENTION IN SEALING ALL OPENINGS BETWEEN FLOORS WITH APPROVED FIRE RATED SEALANTS.
2. HORIZONTAL RUNS BETWEEN FAP PANELS MUST BE DONE IN CONDUIT AS SPECIFIED, THE CONTRACTOR MUST PAY SPECIAL ATTENTION IN SEALING ALL PENETRATIONS OF FIRE RATED WALLS WITH APPROVED FIRE RATED SEALANTS.
3. ALL HORIZONTAL CONNECTIONS BETWEEN DEVICES CAN BE DONE UTILIZING PLENUM RATED CABLES. UTILIZE J HOOKS AS PER MANUFACTURERS RECOMMENDATIONS.

FIRE ALARM SYSTEM SPECIAL NOTES:

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE INTERCONNECTION OF THE ELEVATORS AND THE FIRE ALARM SYSTEM.
2. FINAL ELEVATOR RECALL, MUST BE COORDINATED WITH THE CLIENT. FOR BID PURPOSE ASSUME THAT ELEVATORS WILL BE RECALL TO THE GROUND FLOOR BEFORE DISCONNECTION VIA A SHUNT TRIP BREAKER.
3. ALL FLOOR PENETRATIONS MUST BE SEAL WITH FIRE PROOFING MATERIALS SIMILAR OR EQUAL TO THE SPECIFIED PRODUCTS. THIS NOTE APPLIES TO ALL THE ELECTRICAL AND TELECOMMUNICATION ROOMS IN ALL FLOORS (TYP.). THIS NOTE APPLIES TO ALL DRAWINGS
4. ALL ELECTROMAGNETIC DOOR DEVICES (ML) MUST DISCONNECT WHEN THE FIRE ALARM SYSTEM IS ACTIVATED. COORDINATE FINAL OPERATION SEQUENCE WITH THE CLIENT. THIS NOTE APPLIES TO ALL DRAWINGS
5. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE INTERCONNECTION OF THE EXISTING AIR CONDITIONING SYSTEM AND THE FIRE ALARM SYSTEM. ALL A/C UNIT MUST SHUT DOWN IN THE CASE OF A FIRE ALARM ACTIVATION. THIS NOTE APPLIES TO ALL THE DRAWINGS.
6. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE INTERCONNECTION OF THE EXISTING FIRE HOSES SYSTEM AND THE NEW FIRE ALARM SYSTEM. THE FIRE ALARM SYSTEM MUST ACKNOWLEDGE AND ACTIVATE IN THE CASE THE FIRE PUMPS ACTIVATE OR IN THE CASE THE FIRE HOSES WATER VALVES ARE CLOSED. THIS NOTE APPLIES TO ALL DRAWINGS.
7. ALL WIRE FOR THE FIRE ALARM SYSTEM MUST BE FIRE RATED AND PLENUM RATED. THIS NOTE APPLIES TO ALL DRAWINGS.

BASEMENT LEVEL FIRE ALARM ONE LINE DIAGRAM

SCALE NONE

ISSUE FOR BID
03 SEP 2026

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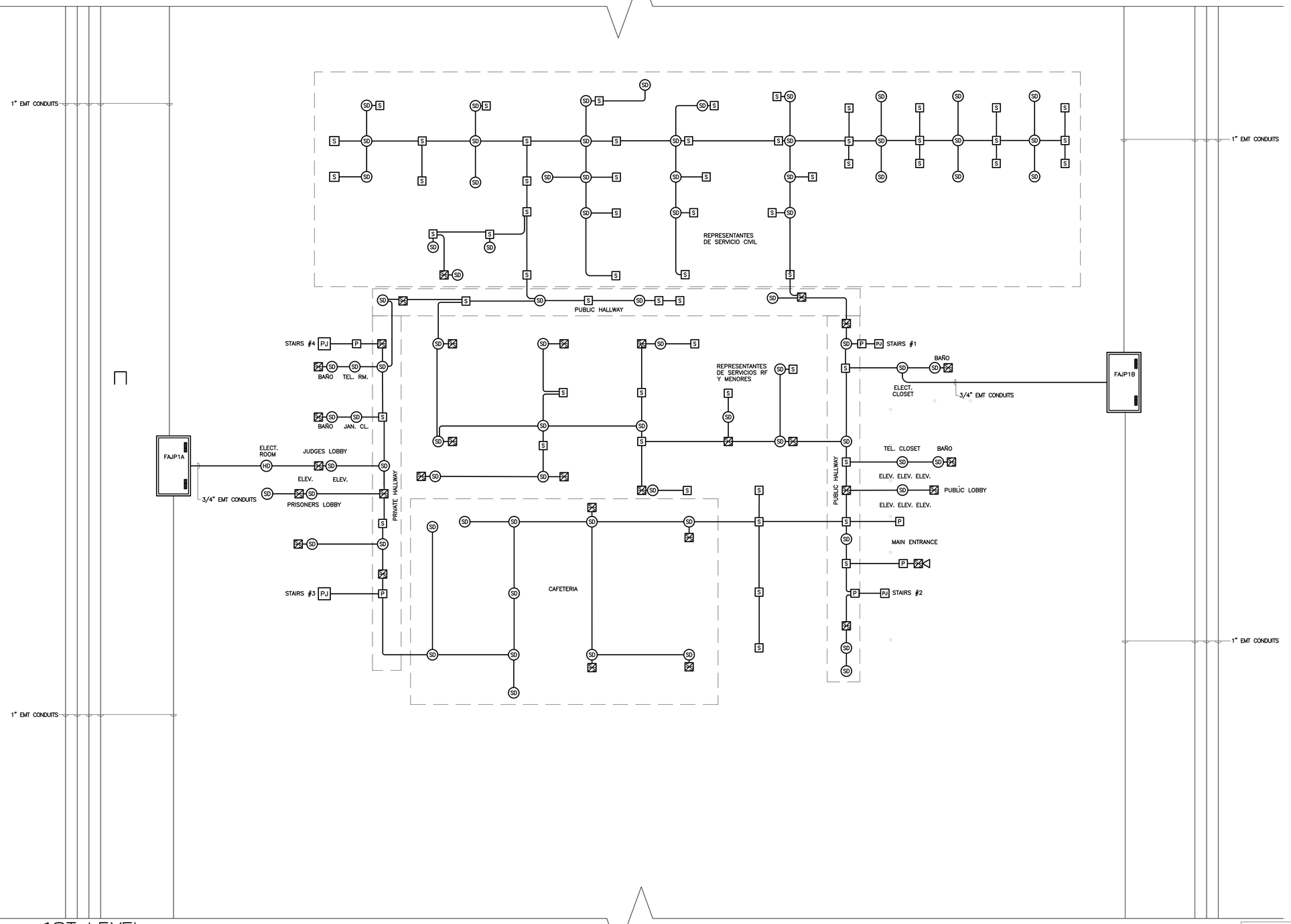
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DRAWING TITLE

BASEMENT LEVEL
F.A. ONE LINE DIAGRAM

DRAWING NO.

FA-6.0



1ST LEVEL
FIRE ALARM ONE LINE DIAGRAM
SCALE NONE

IMPORTANT NOTE:

REFER TO SHEET (FA-6.0) FOR EQUIPMENT LEGEND, AND SHEET (FA-0.1) FOR EQUIPMENT SPECIFICATIONS.

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03 SEP 2026

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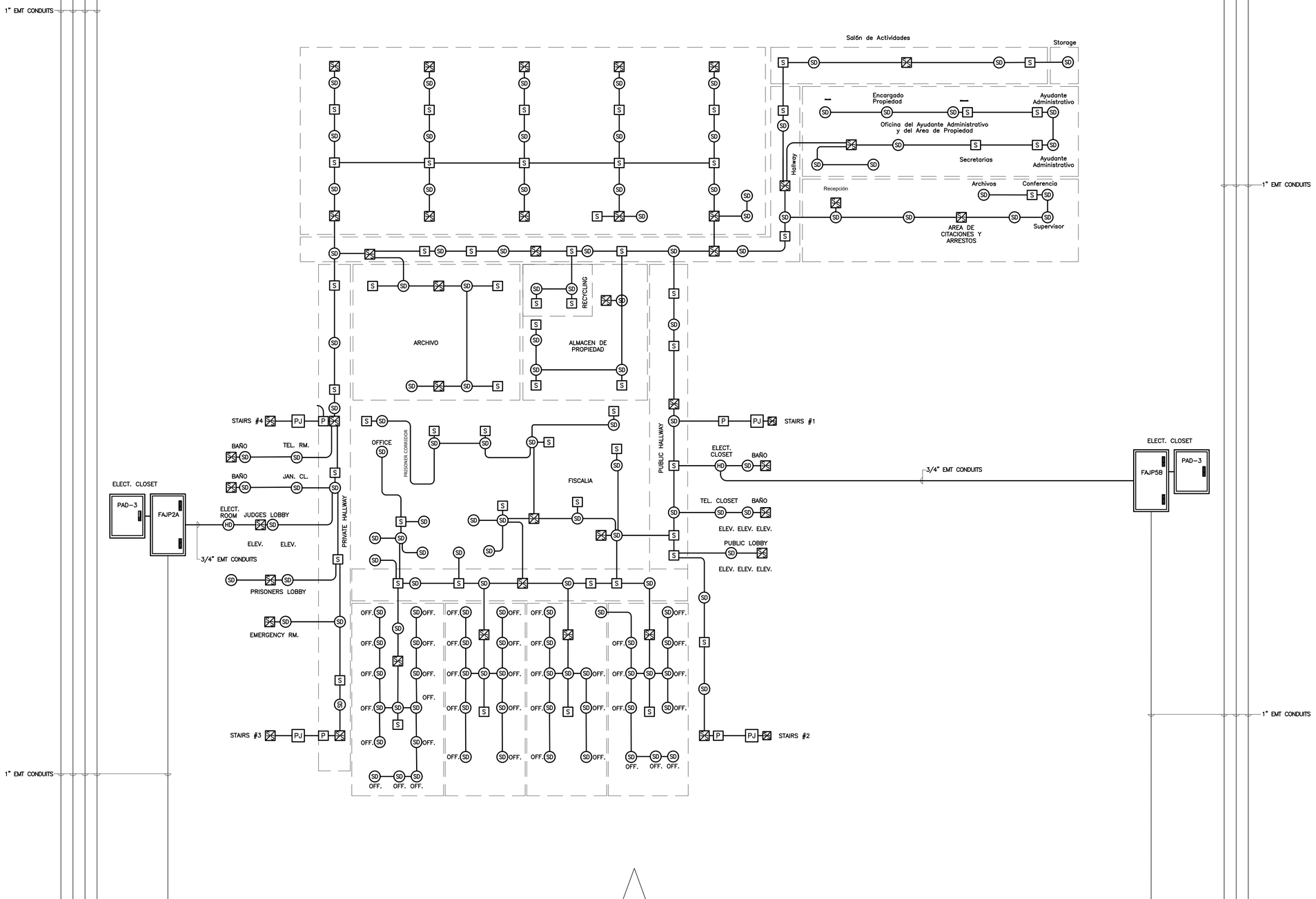
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DRAWING TITLE

1ST LEVEL
F.A. ONE LINE DIAGRAM

DRAWING NO.

FA-6.1



2DN LEVEL
FIRE ALARM ONE LINE DIAGRAM
SCALE NONE

IMPORTANT NOTE:

REFER TO SHEET (FA-6.0) FOR EQUIPMENT LEGEND, AND SHEET (FA-0.1) FOR EQUIPMENT SPECIFICATIONS.

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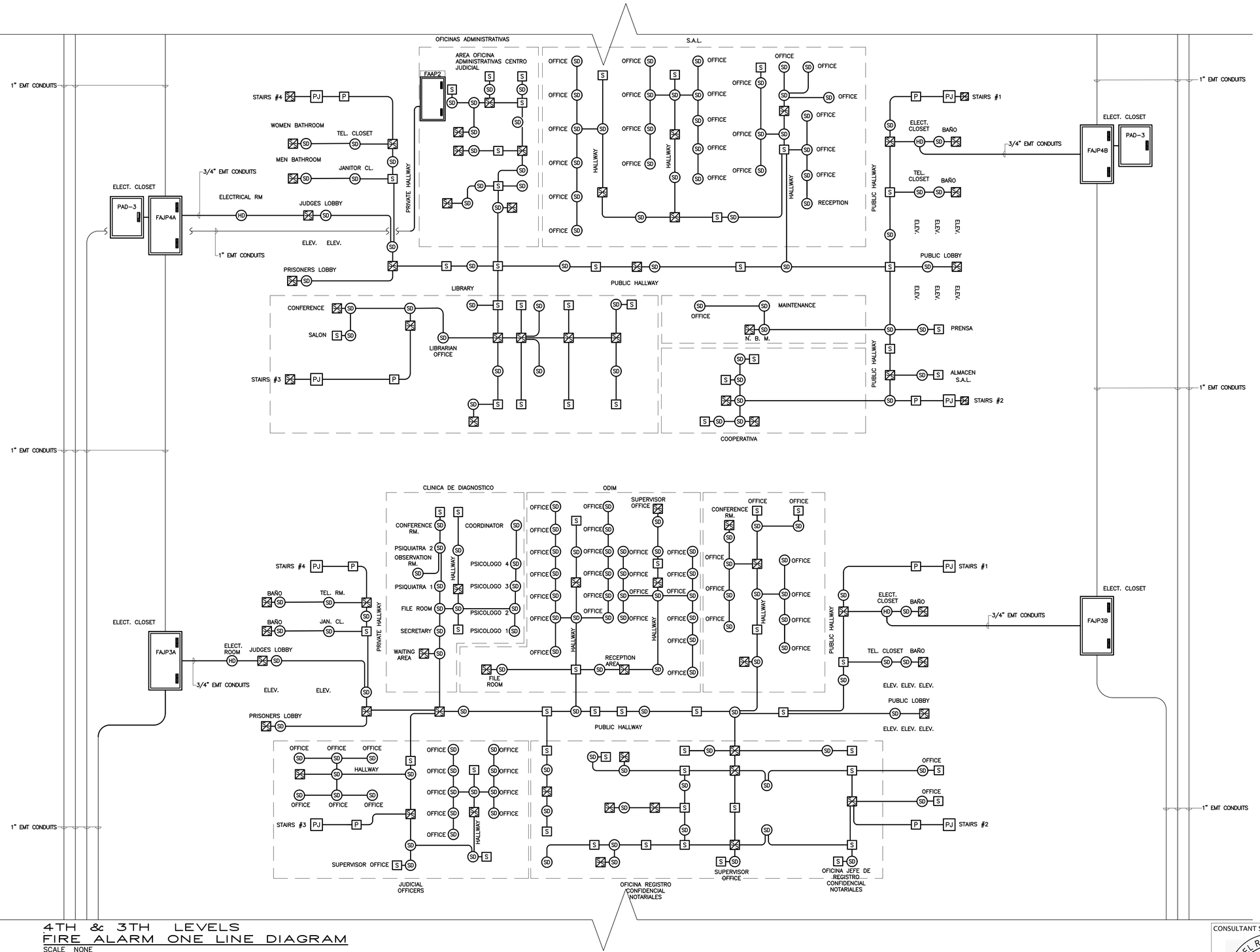
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DRAWING TITLE

2ND LEVEL
F.A. ONE LINE DIAGRAM

DRAWING NO.

FA-6.2



4TH & 3TH LEVELS
FIRE ALARM ONE LINE DIAGRAM

SCALE NONE

IMPORTANT NOTE:

REFER TO SHEET (FA-6.0) FOR EQUIPMENT LEGEND, AND SHEET (FA-0.1) FOR EQUIPMENT SPECIFICATIONS.

ISSUE FOR BID
03 SEP 2026

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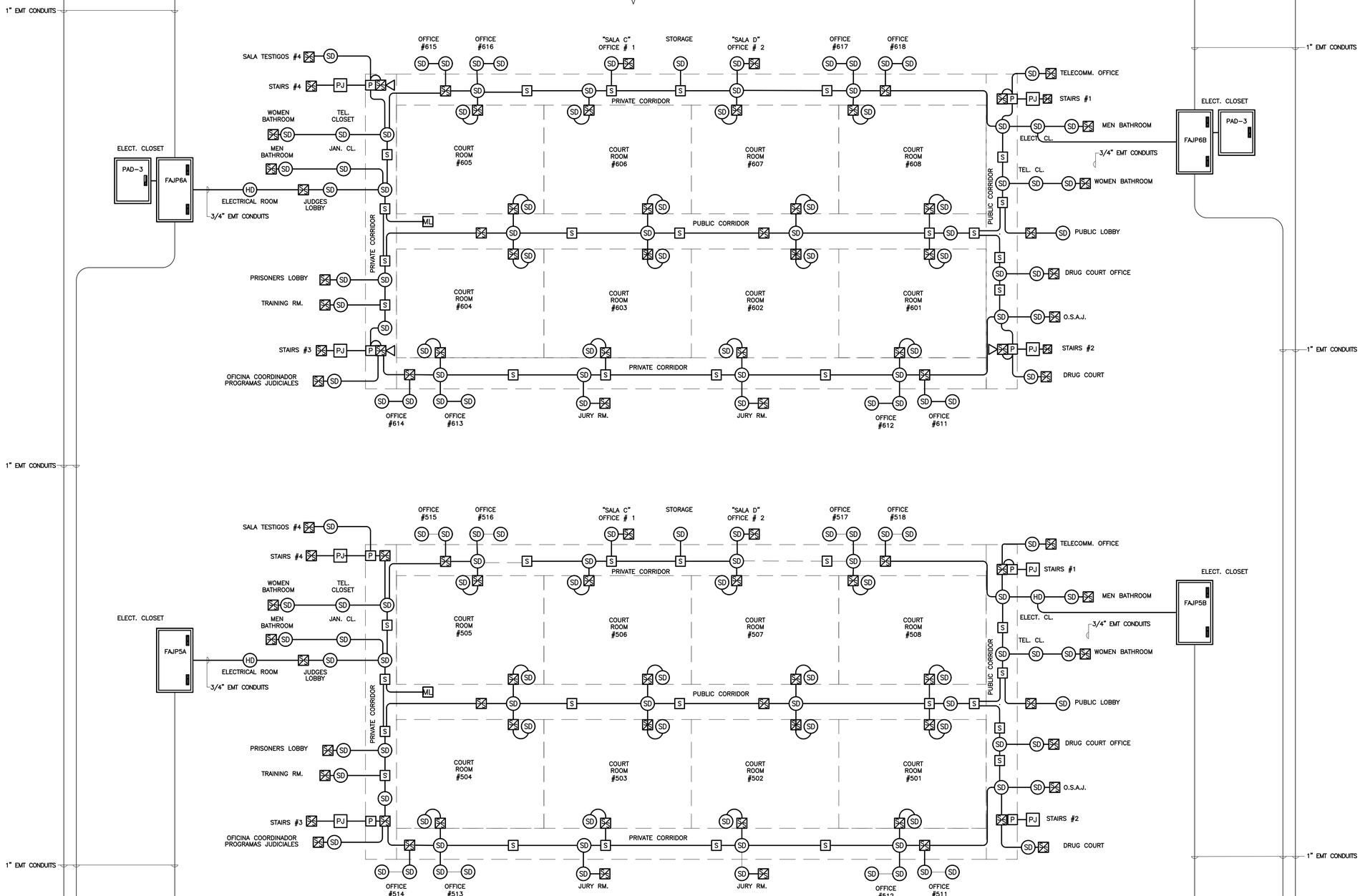
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DRAWING TITLE

4TH & 3TH LEVELS
F.A. ONE LINE DIAGRAM

DRAWING NO.

FA-6.3



6TH & 5TH LEVELS
FIRE ALARM ONE LINE DIAGRAM
SCALE NONE

IMPORTANT NOTE:

REFER TO SHEET (FA-6.0) FOR EQUIPMENT LEGEND, AND SHEET (FA-0.1) FOR EQUIPMENT SPECIFICATIONS.

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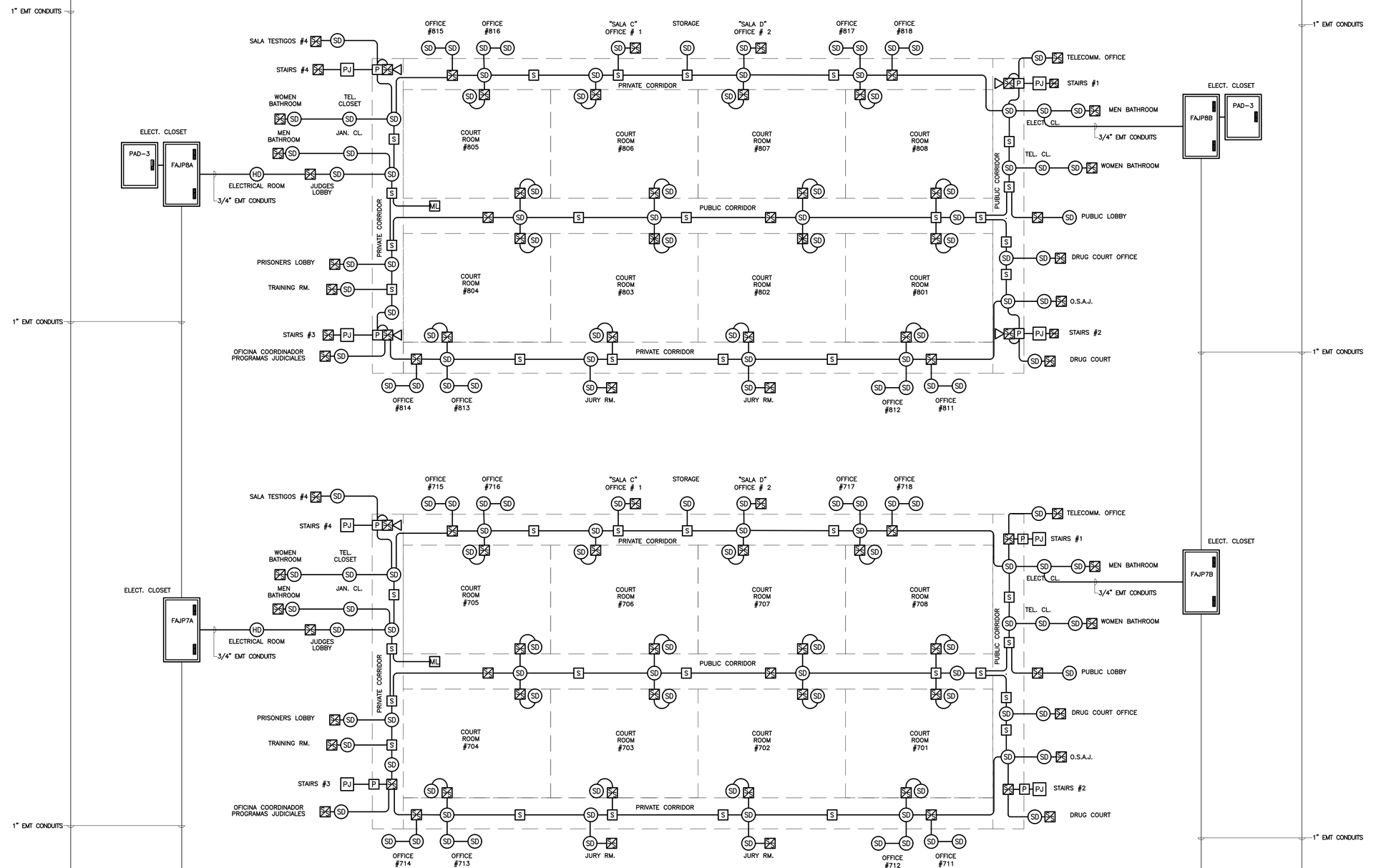
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DRAWING TITLE

6TH & 5TH LEVELS
F.A. ONE LINE DIAGRAM

DRAWING NO.

FA-6.4



8TH & 7TH LEVELS
FIRE ALARM ONE LINE DIAGRAM

SCALE NONE

IMPORTANT NOTE:

REFER TO SHEET (FA-6.0) FOR EQUIPMENT LEGEND, AND SHEET (FA-0.1) FOR EQUIPMENT SPECIFICATIONS.

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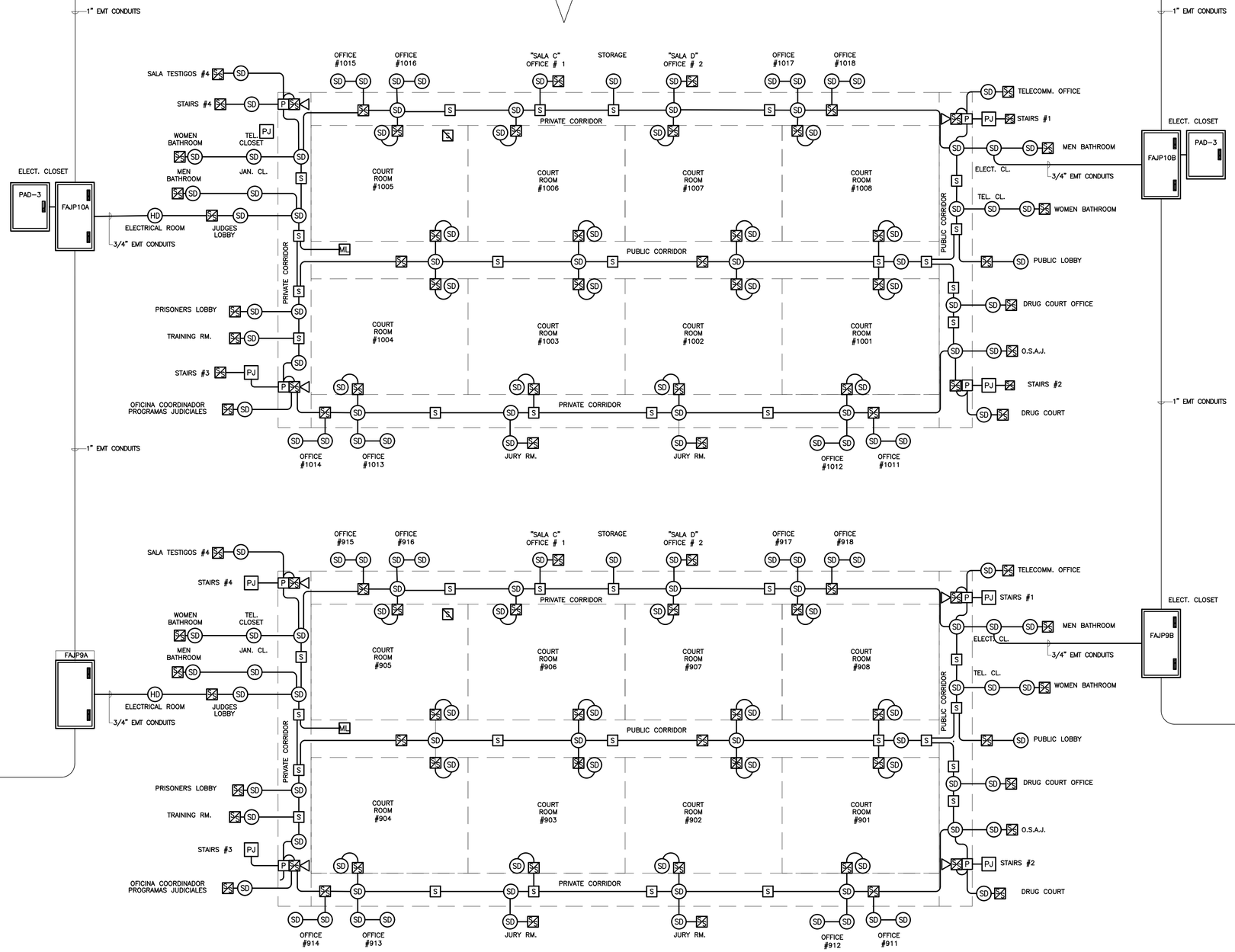
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DRAWING TITLE

8TH & 7TH LEVELS
F.A. ONE LINE DIAGRAM

DRAWING NO.

FA-6.5



10TH & 9TH LEVELS
FIRE ALARM ONE LINE DIAGRAM
SCALE NONE

IMPORTANT NOTE:

REFER TO SHEET (FA-6.0) FOR EQUIPMENT LEGEND, AND SHEET (FA-0.1) FOR EQUIPMENT SPECIFICATIONS.

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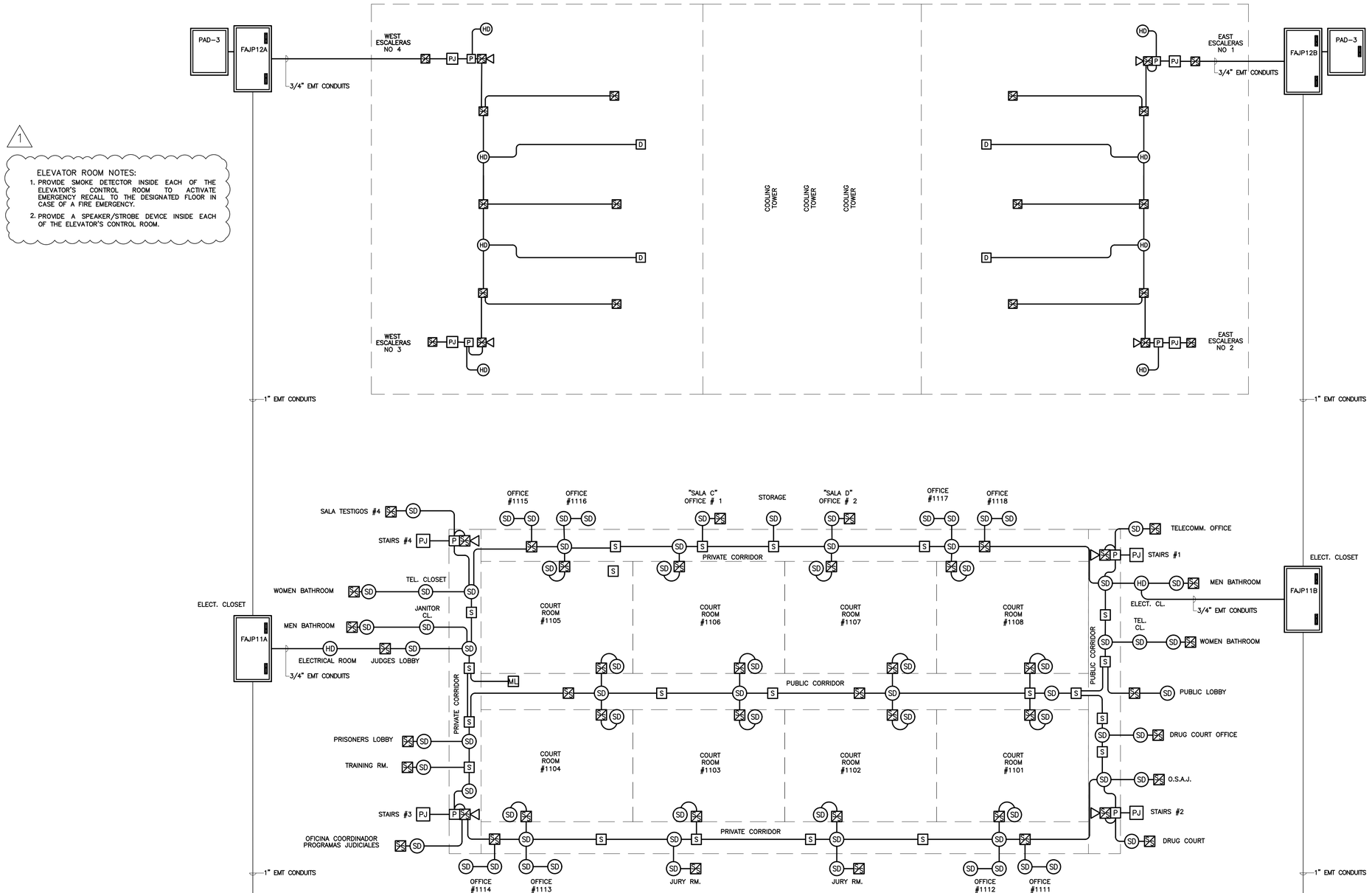
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DRAWING TITLE

10TH & 9TH LEVELS
F.A. ONE LINE DIAGRAM

DRAWING NO.

FA-6.6



1

ELEVATOR ROOM NOTES:

1. PROVIDE SMOKE DETECTOR INSIDE EACH OF THE ELEVATOR'S CONTROL ROOM TO ACTIVATE EMERGENCY RECALL TO THE DESIGNATED FLOOR IN CASE OF A FIRE EMERGENCY.
2. PROVIDE A SPEAKER/STROBE DEVICE INSIDE EACH OF THE ELEVATOR'S CONTROL ROOM.

12TH & 11TH LEVELS
FIRE ALARM ONE LINE DIAGRAM

SCALE NONE

IMPORTANT NOTE:

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12TH & 11TH LEVELS
F.A. ONE LINE DIAGRAM

DRAWING NO.

FA-6.7