

SECTION 26 56 00
EXTERIOR LIGHTING

PART 1 GENERAL
1.01 SUBMITTALS
A. Shop Drawings:

PART 2 PRODUCTS
2.01 LUMINAIRE TYPES
A. Furnish products as indicated in luminaire schedule included on the drawings.

2.02 LUMINAIRES
A. Provide products that comply with requirements of NFPA 70.
B. Provide products that are listed and labeled as complying with UL 1598, where applicable.
C. Provide products listed, classified, and labeled as suitable for the purpose intended.
D. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.
E. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, poles, foundations, supports, trims, accessories, etc. as necessary for a complete operating system.
F. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.

2.03 POLES
A. All Poles:
1. Provide poles and associated support components suitable for the luminaire(s) and associated supports and accessories to be installed.

PART 3 EXECUTION
3.01 INSTALLATION
A. Coordinate locations of outlet boxes provided under Section 26 05 33.16 as required for installation of luminaires provided under this section.
B. Install products in accordance with manufacturer's instructions.
C. Install luminaires in accordance with NECA/IESNA 501.
D. Provide required support and attachment in accordance with Section 26 05 29.
E. Install luminaires plumb and square and aligned with building lines and with adjacent luminaires.
F. Pole-Mounted Luminaires:
1. Grounding:
a. Bond luminaires, metal accessories, metal poles, and foundation reinforcement to branch circuit equipment grounding conductor.
2. Install separate service conductors, 12 AWG copper, from each luminaire down to handhole for connection to branch circuit conductors.
G. Bond products and metal accessories to branch circuit equipment grounding conductor.
H. Install lamps in each luminaire.

DIVISION 27 - COMMUNICATIONS
SECTION 27 05 33.13
CONDUIT FOR COMMUNICATIONS SYSTEMS

PART 1 GENERAL
1.01 SUBMITTALS
PART 2 PRODUCTS
2.01 CONDUIT APPLICATIONS
A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70, TIA-569, BICSI ITSIMM, BICSI TDDM, manufacturers' instructions, and product listing.
B. Unless otherwise indicated and where not otherwise restricted, use conduit types indicated for specified applications. Where more than one listed application applies, comply with most restrictive requirements. Where conduit type for particular application is not specified, use galvanized steel rigid metal conduit.
C. Underground:
1. Under Slab on Grade: Use galvanized steel rigid metal conduit (RMC) or rigid PVC conduit.
D. Concealed Within Hollow Stud Walls: Use galvanized steel electrical metallic tubing (EMT).
E. Concealed Above Accessible Ceilings: Use galvanized steel electrical metallic tubing (EMT).
F. Interior, Damp or Wet Locations: Use galvanized steel intermediate metal conduit (IMC).
G. Exposed, Interior, Not Subject to Physical Damage: Use galvanized steel intermediate metal conduit (IMC).
H. Exposed, Interior, Subject to Physical Damage: Use galvanized steel rigid metal conduit (RMC).

2.02 CONDUIT - GENERAL REQUIREMENTS
A. Comply with NFPA 70 and TIA-569.

2.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)
A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.
B. Fittings:
1. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 6.
2. Material: Use steel or malleable iron.
3. Connectors and Couplings: Use threaded fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.
4. Conduit Bodies: Use only conduit bodies specifically designed for communications cabling. Standard conduit bodies designed for electrical raceways are not permitted.
a. Comply with TIA-568.0 minimum bend radius requirements for fiber optic cables.

2.04 GALVANIZED STEEL INTERMEDIATE METAL CONDUIT (IMC)
A. Description: NFPA 70, Type IMC galvanized steel intermediate metal conduit complying with ANSI C80.6 and listed and labeled as complying with UL 1242.
B. Fittings:
1. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 1242.
2. Material: Use steel or malleable iron.
3. Connectors and Couplings: Use threaded fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.
4. Conduit Bodies: Use only conduit bodies specifically designed for communications cabling. Standard conduit bodies designed for electrical raceways are not permitted.
a. Comply with TIA-568.0 minimum bend radius requirements for fiber optic cables.

2.05 GALVANIZED STEEL ELECTRICAL METALLIC TUBING (EMT)
A. Description: NFPA 70, Type EMT galvanized steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797.
B. Fittings:
1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
2. Material: Use steel or malleable iron.
3. Connectors and Couplings: Use compression/gland or set-screw type.
a. Do not use indenter type connectors and couplings.
4. Conduit Bodies: Use only conduit bodies specifically designed for communications cabling. Standard conduit bodies designed for electrical raceways are not permitted.
a. Comply with TIA-568.0 minimum bend radius requirements for fiber optic cables.

2.06 RIGID POLYVINYL CHLORIDE (PVC) CONDUIT
A. Description: NFPA 70, Type PVC rigid polyvinyl chloride conduit complying with NEMA TC 2 and listed and labeled as complying with UL 651; Schedule 40 unless otherwise indicated, Schedule 80 where subject to physical damage.
B. Fittings:
1. Description: Fittings complying with NEMA TC 3 and listed and labeled as complying with UL 651; material to match conduit.
2. Conduit Bodies: Use only conduit bodies specifically designed for communications cabling. Standard conduit bodies designed for electrical raceways are not permitted.
a. Comply with TIA-568.0 minimum bend radius requirements for fiber optic cables.

PART 3 EXECUTION
3.01 INSTALLATION
A. Install products in accordance with manufacturer's instructions.

- B. Install conduit in accordance with NECA 1, BICSI ITSIMM, and BICSI N1.
C. Galvanized Steel Rigid Metal Conduit (RMC): Install in accordance with NECA 101.
D. Galvanized Steel Intermediate Metal Conduit (IMC): Install in accordance with NECA 101.
E. Galvanized Steel Electrical Metallic Tubing (EMT): Install in accordance with NECA 101.
F. Rigid Polyvinyl Chloride (PVC) Conduit: Install in accordance with NECA 111.
G. Connections and Terminations:
1. Provide insulating bushings, insulated throats, or listed metal fittings with smooth, rounded edges at conduit terminations to protect cables.

DIVISION 28 - ELECTRONIC SAFETY AND SECURITY
SECTION 28 46 00
FIRE DETECTION AND ALARM

- PART 1 GENERAL**
1.01 SUBMITTALS
A. Comply with NFPA 72 chapter "Documentation," including noting names of installers, owners, and system classification information.
B. Design Documents: Submit all information required for plan review and permitting by AHJ, including floor plans, riser diagrams, and description of operation.
1. NFPA 72 "Record of Completion", filled out to extent known at time.
2. Clear and concise description of operation, with input/output matrix similar to that shown in NFPA 72 Appendix A, and complete listing of software required.
C. Shop Drawings: Submit installation documentation required for plan review and permitting by AHJ, including floor plans showing locations of fire alarm system components, enlarged drawn to identified scale plan view, and riser diagrams.
- PART 2 PRODUCTS**
2.01 FIRE ALARM SYSTEM
A. General Requirements:
1. Provide new fire alarm system complying with NFPA 70, NFPA 72, NFPA 90A, and consisting of required equipment, conduit, cabinets, outlet boxes, wiring, connectors, hardware, supports, accessories, components, software, and system programming as necessary for complete operating system that provides functional intent indicated.
2. Comply with the following; where requirements conflict, order of precedence of requirements is as listed:
a. 36 CFR 1191 and ADA Standards.
b. Requirements of AHJ.
c. Applicable local codes.
d. Contract Documents.
e. NFPA 72, "should" is mandatory; where conflicts between requirements require deviation, identify deviations clearly on design documents.
3. Fire Alarm System Products:
a. Listed, classified, and labeled as suitable for purpose intended.
b. Installation Environments: Provide products suitable for their respective indoor and outdoor applications.
4. Fire Alarm System Design Information:
a. Building Code: Comply with applicable building code.
1) Principle Occupancy: As indicated on Architect code summary drawings.
2) Principle Use: As indicated on Architect code summary drawings.
3) Elevators: As indicated on Architect code summary drawings.
a) Emergency Operation: As indicated on Architect code summary drawings.
b. NFPA 72 Fire Alarm System Classification: Protected premises.
c. Smoke and Heat Detector Coverage: Partial or selective coverage in accordance with NFPA 72.
5. Provide fire alarm circuits in accordance with NFPA 70.
a. Comply with methods of interconnecting FACUs in accordance with NFPA 72 and NFPA 70.
b. Power Sources:
1) Comply with requirements for power supplies of emergency systems in accordance with NFPA 70.
2) Primary: Dedicated branch circuits from facility power distribution system.
3) Secondary: Storage batteries with capacity to operate system for period specified by NFPA 72.
c. Wiring and Wiring Methods:
1) General Requirements:
a) Comply with requirements for wiring and wiring methods in accordance with NFPA 70.
b) Conductors and Cables Installed Exposed in Spaces Used for Environmental Air (only where specifically permitted): Plenum-rated, listed and labeled as suitable for use in return air plenums.
c) Special Occupancies: Comply with NFPA 70.
d) Comply with NFPA 70 for wire and cable plenum, riser, general-purpose, limited-use, undercarpet, and underground applications.
2) Fire Alarm Circuits:
a) Comply with NFPA 70 for conditions and types required for multiconductor cable systems.
b) Non-Power-Limited Fire Alarm (NPLFA) Circuits:
(1) Provide dedicated NPLFA non-GFCI branch circuits for fire alarm equipment and marked by red identification in accordance with NFPA 70.
(c) Power-Limited Fire Alarm (PLFA) Circuits:
(1) Provide identification for PLFA circuits in accordance with NFPA 70.
6. Provide pathway class designations and pathway survivability, as defined in NFPA 72.
a. Provide monitoring of conductors and other signaling channels for integrity and circuit performance.
b. Pathway Class Designations:
1) Unless otherwise indicated or required, pathways to meet the following requirements:
(a) SLCS: Class B (star, tee-tap, multi-tap, with no return).
(b) IDCs: Class B (daisy-chain with EoL resistor device installed at end of circuit).
(c) NACs: Class B (daisy-chain with EoL resistor device installed at end of circuit).
B. Fire Alarm System Interfaces and Control Functions:
1. UL 864 listed unless otherwise indicated.
2. Descriptions below are intended to provide means for interface. See project SOOs, narrative, and input/output matrix for execution requirements.
3. Provide initiating devices, interfaces, and control functions for emergency control function interfaces in accordance with NFPA 72.
4. Provide monitoring of interconnected systems. Coordinate notification appliance alternate markings as indicated on drawings.
5. Elevators:
a. Comply with ASME A17.1.
b. Elevator Shutoff:
1) For each elevator, provide output signal to stop elevator via addressable relay module and power isolation relay.
c. Elevator Emergency Recall Operation:
1) In each elevator machine room, provide interface for each elevator car or group of elevator cars as determined by AHJ via separate addressable relay modules for each output signal below, where applicable.
(a) Recall elevator to designated (primary) level.
(b) Recall elevator to alternate level.
(c) Smoke detection in elevator machine room (fire fighter's hat light).
6. Generator Systems:
a. Provide minimum of three monitoring point inputs per system.
7. HVAC Systems:
a. Air Handling Units (AHUs) and Roof Top Units (RTUs):
1) Provide duct smoke detector on supply side of air stream for units over 2,000 cfm.
2) Provide duct smoke detector on return side of air stream for units over 15,000 cfm.
3) Provide remote test station for each duct smoke detector unless explicitly indicated as not required.
4) Provide output signal to shut down units with at least one duct smoke detector via addressable relay module.
5) Where fire/smoke dampers are located downstream of unit, provide monitoring point input to determine that unit is not operational and subsequently provide output signal to close such dampers via addressable relay module and power isolation relay.
8. Fire/Smoke Dampers:
a. Provide output signal to close fire/smoke damper via addressable relay module and power isolation relay.

- 2.02 FIRE ALARM SYSTEM INITIATING DEVICES**
A. General Requirements:
1. Addressable Systems:
a. Addressable Devices: Individually identifiable by addressable FACU; suitable for connection to FACU SLCS.
b. Conventional/Nonaddressable Devices: Provide addressable interface modules as indicated or as required for connection to addressable FACU. Unless devices are explicitly permitted to be connected together as one zone, provide separate addressable monitoring point for each device in order to be individually identifiable by addressable FACU.

2. Provide devices and associated accessories suitable for intended application and location to be installed. Unless otherwise indicated, use addressable devices and addressable interface modules only in clean, dry, indoor, nonhazardous locations.
3. Surface-Mounted Devices: Provide manufacturer's accessory surface mount backboxes or suitable outlet/device box.
4. Devices for Outdoor and Damp/Wet Locations: Weatherproof, suitable for outdoor use; provide manufacturer's accessory backboxes or enclosures in accordance with product listing.
5. Devices for Hazardous/Classified Locations: Listed and labeled as suitable for classification of installed location.
B. Manual Fire Alarm Boxes/Pull Stations:
1. Description: Noncoded manual signaling boxes listed and labeled as complying with UL 38.
2. Alarm Initiation: Configured for general alarm initiation unless otherwise indicated; presignal stations (where indicated) require use of key to initiate general alarm.
3. Operation: Dual-action unless otherwise indicated or required.
a. Dual-Action Operation: First requires pushing, pulling, or lifting, then pulling of lever.
4. Color: Red, in accordance with NFPA 72.
5. Station Reset: Requires use of key or tool.

- 2.03 FIRE ALARM SYSTEM NOTIFICATION APPLIANCES**
A. General Requirements:
1. Provide signaling notification appliances listed for fire-protective service and intended operating mode, public or private; suitable for connection to FACU notification appliance circuits.
2. Provide notification appliances and associated accessories suitable for intended application and location to be installed. Use notification appliances only according to listed mounting (e.g. ceiling, wall).
3. Surface-Mounted Notification Appliances: Provide manufacturer's accessory surface mount backboxes or suitable outlet/device box.
4. Concealed Notification Appliances:
a. Upon activation from fire alarm system, expose device for operation; return to concealed position upon system deactivation; motor-driven.
b. Provide door position monitoring system for remote indication of concealed and exposed positions.

- 2.04 ACCESSORIES**
A. Provide components as indicated or as required for connection of fire alarm system to devices and other systems indicated.
B. Provide EoL resistors as required for wiring supervision.

- PART 3 EXECUTION**
3.01 EXAMINATION
A. Verify that mounting surfaces are ready to accept components and equipment, with suitable support frames and anchors installed where required.
B. Verify ratings, configurations, and characteristics of system components.
C. Verify rough-ins for field connections.
D. Verify that work likely to damage fire alarm system has been completed.
E. Verify that interior of building has been protected from weather.
F. Perform preinstallation tests and inspections per manufacturer's instructions and in accordance with NECA 305.
G. Do not energize system until deficiencies have been corrected.
H. Verify that branch circuit wiring installation is completed, tested, and ready for connection to fire alarm system. Overcurrent protection ratings are consistent with circuit voltage and manufacturer's recommendations and nameplate data for equipment.

- 3.02 INSTALLATION**
A. Install field-devices, components, FACU and related equipment, and accessories in accordance with the following:
B. Field Locations:
1. Obtain Owner's approval of locations of devices and notification appliances before installation.
2. Arrange equipment to provide minimum operational clearances and required maintenance access in accordance with manufacturer's instructions and NFPA 70.
3. Conceal wiring, conduit, outlet boxes, and supports where installed in finished areas; maintain code-required access.
C. Raceways and Supports:
1. Coordinate locations of outlet boxes as required for installation. Only install boxes and equipment at locations based on application standards indicated in NFPA 72.
2. Secure and support raceways at intervals complying with NFPA 70. Provide supports where vertical rise exceeds permissible limits.
3. Install firestopping to preserve fire resistance rating of partitions and other elements.
D. Wiring and Connections:
1. Maintain separation of Class 1, Class 2, Class 3 remote-control, signaling, fire alarm circuits, and power-limited circuits in accordance with cable insulation class and NFPA 70.
2. Maintain circuit pathway and class designations in accordance with NFPA 72 for configuration, separation, and survivability.
3. Comply with permitted and not permitted installations for wires, cables, cable routing assemblies, communications circuits, and fire alarm circuits in accordance with NFPA 70.
4. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by AHJ. Provide independent support from building structure and suspended ceiling systems. Do not provide support from raceways, piping, ductwork, or other systems.
5. Comply with manufacturer's minimum cable sizes or ratings.
6. Do not exceed manufacturer's recommended maximum power, signal, or network cable lengths between components.
7. Provide network wiring in accordance with NFPA 70.
8. Neatly train and bundle conductors inside boxes, wireways, and cabinets.
9. See manufacturer's instructions for batteries.
E. Fire Alarm System Components:
1. Install field-installed devices, components, relays, notification appliances, accessories, and when applicable EoL resistors.
a. Install wiring to supervisory devices and associated EoL resistors as required for supervision of hardwired connections
2. Install Wall-Mounted Equipment: Assemble component hardware within (e.g., card bays, sub-bays, expansion bays, signal cards, other card frames, networking, signal transmission, application modules, tamper monitoring devices, interconnecting modules, and auxiliary power supplies), including space for required spare capacity, and configure settings.
3. Install Interconnect Wiring: Connect system cabinets, install processor and cards, cabling, connectors, terminations, and bonding.
F. Branch Power:
1. After installation confirmations, follow manufacturer instructions to connect branch circuit power cables to premises fire alarm system components; comply with NFPA 70.
2. Where accessories require auxiliary power, provide control power source and monitoring as indicated or as required to complete installation.
3. Install auxiliary power supplies, including indicated monitoring, and connections necessary for remote equipment.
G. System Identification:
1. Confirm fire alarm system programming meets requirements of SOO and sub-system SOOs.
2. Mark location of disconnecting means for NPFLA circuits.
3. Coordinate to provide red branch power circuit protective devices or identify them accordingly as required by NFPA 72 and NFPA 70.
4. Mark date of batteries installed on inside cover of panels and formal maintenance logs.
H. Troubleshooting and Installer Checks:
1. Field test connectivity periodically during installation process to avoid unexpected troubleshooting.
2. Check system operation for notification, FACU functions, circuit supervision, alarm initiating devices, supervisory initiating devices, dress panels/doors/covers, and programming before performing field tests.
I. Fire Alarm System Tests:
1. Perform required tests of NFPA 72. Record measured values during operational checks.
2. Confirm functional testing of fire alarm system is as indicated in Contract Documents.

- 3.03 FIELD QUALITY CONTROL**
A. Provide services of manufacturer's authorized representation to observe and perform installation and assist in inspection, testing, and adjusting. Include manufacturer's detailed testing procedures and field reports and with submittals.
B. Provide equipment, two-way radios for testing personnel use, tools, and supplies required to accomplish inspection and testing.
C. Notify Owner and Architect at least two weeks prior to scheduled inspections and tests.
D. Inspect and test in accordance with manufacturer's instructions.
E. Inspect wiring and components for damage and defects.
F. Batteries and Power Supplies: Perform inspections and tests listed in manufacturer installation instructions.
G. Perform additional requirements related to testing and inspection during system startup.
H. Test for interface with other systems.
I. Test shunt trips to verify operation.
J. Correct defective work, adjust for operation, and retest until entire system complies with Contract Documents.
K. Submit detailed reports indicated inspection and testing results, corrective actions taken, and as-found and final adjusted settings.

- 3.04 INSPECTION AND TESTING FOR COMPLETION**
A. Perform inspection and testing in accordance with NFPA 72 and requirements of AHJ; document each inspection and test.



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FOR PERMIT & CONSTRUCTION

Revision Schedule		Description
Rev. #	Date	

NEW Arcare MEDICAL OFFICE BUILDING
2709 Massard Rd
FT. SMITH, AR 72903

Arcare
117 S. 2ND ST.
AUGUSTA, AR 72006

DATE	DRAWN BY
06-15-2026	CH
PROJECT #	CHECKED BY
2517	JT

SHEET
E005
ELECTRICAL SPECIFICATIONS

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