



**SPECIAL PROVISIONS
FOR
TRAFFIC SIGNALIZATION**

**Johnson County
IM-380-6(404)4--13-52**

**Effective Date
December 17, 2024**

THE STANDARD SPECIFICATIONS, SERIES 2023, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

4189.02 DETECTION. *(replace the entire article with the following)*

- A. Video Detection System:** Miovision TrafficLink with Fisheye Camera and three advance detection cameras per intersection. Install per manufacturer's recommendations.

4189.04 CABINET AND CONTROLLER. *(replace the following articles)*

- A. ATC Controller, Cabinet, and Auxiliary Equipment:** Comply with the latest edition of AASHTO/ ITE/ NEMA Advanced Transportation Controller (ATC) Cabinet Standard, ATC 5301 VO2.02.

1. Controller.

- a.** The controller shall be Cubic / Trafficware Commander Rack Mount ATC Controller.

2. Cabinet.

- a.** Natural finish aluminum cabinet according to NEMA standards and the following
 - 1)** The cabinet shall provide at least 72 input channels and 32 output channels.
 - 2)** The cabinet shall provide 48-volt DC output to signal heads.
 - 3)** The cabinet footprint shall be 340. Rack width shall be 19 inches.
 - 4)** The cabinet shall have front and rear double doors.
- b.** Aluminum cabinet riser with same dimensions as cabinet and 12 inch height.
- c.** Police door with auto/flash switch and on/off power switch, manual/stop time switch, for signal heads only. Controller to remain in full operation regardless of switch positions.
- d.** Maintenance panel on inside of the main door containing the following test switches.
 - 1)** Controller power switch.
 - 2)** Detector test switches.
 - 3)** Stop time switch.
 - 4)** Signal flash switch.

- e. Heavy-duty clear plastic envelope attached to inside wall of cabinet or cabinet door, for cabinet wiring diagrams, 12 inches by 18 inches minimum.
 - f. GFI electrical outlet and lamp in accessible location near the front of the cabinet. GFI outlet fused separately from main AC circuit breaker. Fluorescent or LED cabinet lamp connected and fused with GFI outlet.
 - g. Back panel positions to accommodate phasing and expansibility specified in the contract documents.
 - h. Power protection devices including AC power circuit breakers, radio interference suppressors, and lightning and surge protectors.
 - 1) AC field service single pole, nonadjustable, magnetic breaker rated for 117 VAC operation, NEC approved.
 - 2) Radio interference suppressors (RIS) as required to minimize interference in all broadcast transmission and aircraft frequency bands.
 - 3) Lightning arrestor/surge protector capable of withstanding repeated (minimum of 25) 30,000 ampere surges.
 - i. Neatly train wiring throughout the cabinet and riser. Bundle and attach wiring to interior panels using nonconductive clamps or tie-wraps.
- 3. Auxiliary Equipment:** Conflict monitor/malfunction management unit, flasher, load switches, terminals and facilities, and miscellaneous equipment and materials according to NEMA standards.
- a. The ATC Cabinet Monitor Unit shall be Eberle Design Inc. Model CMUip-2212-LV 32 Channel capability with ethernet for 48 Vdc cabinets.
 - b. The high density switch pack / flasher shall be Eberle Design Inc. Model 2202-LV 2 channel load switch (six outputs) / 2 channel flasher (four outputs), 48 Vdc.
 - c. The Auxiliary Display Unit shall be Eberle Design Inc. Model ADU-2220 ATC Cabinet, powered by 48 Vdc.
 - d. The Video and Radar-Based Vehicle Presence sensor shall consist of FLIR TrafiRadar (US) Part Number 10-6066U and FLIR TI X-STREAM EDGE part number 10-6055.
 - e. The ITS Serial Interface Unit shall be Eberle Design Inc. Model SIU-2218 Standard product with 1.5 inch narrow faceplate.
 - f. The cabinet power supply shall be Eberle Design Inc. Model PS-2216-24-HV 48VDC@1 Amp, 24VDC @5 Amp.
 - f. The Ethernet Switch shall be EtherWan Model EX75964-0VTU 24-port 10/100/1000BASE-T(X) PoE + 4-port 1G/10G SFP+.
- B. Uninterruptible Power Supply Battery Backup System:** Monitors 120VAC input from the electric utility source and automatically switches to/from a system consisting of batteries and electronics.
- 1. The uninterruptible power supply shall be SIGNALSense Model SSDC-1000 1.0 kVa.