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|  | FDOT Traffic Engineering Research Laboratory (TERL)  Signal Priority and Preemption System Compliance Matrix | By signing this form, the applicant declares that he/she has read and understands the provisions of Sections 663 and 995 of the FDOT *Standard Specifications for Road and Bridge Construction* and all implemented modifications. The requirements listed on this matrix are derived from Sections 663 and 995, and are the basis for determining a product’s compliance and its acceptability for use on Florida’s roads. |

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| Date: | Click here to enter a date. | Applicant’s  Name (print): |  |
| Manufacturer: |  |  |  |
| Item, Model No.: |  | Signature: |  |

| **ID No** | **Section** | **Requirement** | **Item Comply? (Yes/No/NA)** | **Comments (Applicant must provide information as indicated)** | **TERL Evaluation Method** |
| --- | --- | --- | --- | --- | --- |
| The following compliance matrix criteria are for all signal priority and preemption systems. | | | | | |
| 1 | 995-1.1 | Equipment is permanently marked with manufacturer name or trademark, part number, and date of manufacture or serial number |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 2 | 995-8.1 | Signal priority and preemption system equipment utilizes optical, GPS, or radio frequency technologies. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Physical Inspection |
| *Indicate location of requested information in submittal.* |
| 3 | 995-8.2 | In-vehicle equipment operates without requiring any action from the vehicle operator or occupants once power is applied. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 4 | 995-8.2.1 | System is secure and restrict configuration and operation to authorized users and vehicles only. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 5 | 995-8.2.2 | The system assigns a unique identifier for each authorized vehicle and can associate the identifier with vehicle information such as vehicle classification (e.g., fire, police, rescue, transit), owner/operator, and priority level. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 6 | 995-8.2.3 | System allows authorized local and remote users to set and read all user-programmable features as well as retrieve data collected by the system. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 7 |  | All computer software required to configure, operate, and maintain the system is provided at no cost to the Department. |  | *Provide a statement of conformance in this field.* | Compliance Matrix Review |
| 8 | 995-8.2.4 | Hardware installed in the field cabinet stores a record of events, including time, vehicle ID, class, priority level, and approaching direction for all vehicles detected. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 9 |  | The log operates on a first-in, first out (FIFO) principle with a minimum capacity of 5,000 events. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review |
| *Indicate location of requested information in submittal.* |
| 10 | 995-8.2.5 | The priority and preemption system is capable of detecting and identifying multiple authorized vehicles at various ranges up to 2,500 feet. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 11 |  | The system can determine the approaching direction of authorized vehicles. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 12 |  | The detection range and programming of emergency (high priority) and transit signal (low priority) preemption is adjustable from within the traffic signal cabinet. High priority calls override low priority calls. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 13 |  | The system services preemption calls with equal priority on a first-come, first-served basis. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review |
| *Indicate location of requested information in submittal.* |
| 14 | 995-8.3 | The priority and preemption system is compatible with NEMA TS 1, NEMA TS 2, Type 170, and Type 2070 traffic signal controllers and their respective cabinets. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Physical Inspection |
| *Indicate location of requested information in submittal.* |
| 15 |  | The system provides calls to the controller via the input file and detector rack. |  | *Applicant may provide comments in this field.* | Functional Inspection |
| 16 |  | The system includes two channel or four channel detector card units. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 17 |  | The system includes a shelf mount option. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 18 |  | The system can provide emergency preemption (high priority) and transit signal (low priority) preemption calls to the controller. |  | *Applicant may provide comments in this field.* | Functional Inspection |
| 19 |  | Detectors include programmable timers that allow the operator to configure detector call extension as well as limit the length of channel output calls. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 20 |  | Channel outputs deliver a constant signal for high priority preemption activation and a pulsed output for low priority preemption activation. Inputs and outputs are optically isolated. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 21 | 995-8.3.1 | Serial ports support data rates up to 115 kbps; error detection procedures utilizing parity bits (i.e., none, even, and odd); and stop bits (1 or 2). |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 22 |  | Serial interface ports are RJ-45 connectors, D-sub connectors, or screw terminals. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 23 | 995-8.3.2 | Local area network (LAN) connections support the requirements detailed in the Institute of Electrical and Electronics Engineers (IEEE) 802.3 Standard for 10/100 Ethernet connections. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review |
| *Indicate location of requested information in submittal.* |
| 24 |  | LAN connector complies with Telecommunications Industry Association (TIA) requirements. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review |
| *Indicate location of requested information in submittal.* |
| The following compliance matrix criteria are for all Optical Preemption Detectors. | | | | | |
| 25 | 995-8.4 | Optical preemption detector responds to light impulses generated from a visible or infrared light source. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| The following compliance matrix criteria are for all Radio and GPS preemption modules. | | | | | |
| 26 | 995-8.5 | Radio/GPS preemption system includes radio/GPS modules that transmit a beacon signal and receive data transmitted by Radio/GPS vehicle equipment. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| The following compliance matrix criteria are for all Signal Priority and Preemption Systems. | | | | | |
| 27 | 995-8.6 | Every conductive contact surface or pin is gold-plated or made of a noncorrosive, conductive metal. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review |
| *Indicate location of requested information in submittal.* |
| 28 |  | Self-tapping screws are not used on the exterior of the assembly. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review and Physical Inspection |
| *Indicate location of requested information in submittal.* |
| 29 |  | All external parts are made of corrosion-resistant materials, such as plastic, stainless steel, anodized aluminum, brass, or gold-plated metal. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review |
| *Indicate location of requested information in submittal.* |
| 30 |  | Detector cards include indicators for power and vehicle detection as well as a test switch that can be used to manually generate detector calls that the system provides during normal operations. |  | *Applicant may provide comments in this field.* | Physical Inspection and Functional Inspection |
| 31 | 995-8.7 | Equipment operates on a nominal voltage of 120 volts alternating current (VAC). If the device requires operating voltages other than 120 VAC the appropriate voltage converter is supplied. |  | *Applicant may provide comments in this field.* | Functional Inspection |
| 32 | 995-8.8 | Electronics perform all required functions during and after being subjected to the environmental testing procedures described in NEMA TS 2-2021, Sections 2.2.7, 2.2.8, and 2.2.9. |  | *Provide a third party test report that demonstrates compliance with this requirement. The test report must be less than 5 years old and meet the requirements of FDOT Product Certification Handbook, section 7.2.* | Document Review |
| *Indicate location of requested information in submittal.* |
| 33 |  | Detectors and detector connections that are exposed to the elements are weatherproof and designed for outdoor use. |  | *Provide product literature, specifications, user manual,or similar information that shows the product meets this requirement.* | Document Review |
| *Indicate location of requested information in submittal.* |
| 34 | 663-5 | The priority and preemption system has a manufacturer’s warranty covering defects for 5 years from the date of final acceptance. |  | *Provide a statement of conformance in this field.* | Compliance Matrix Review |
| 35 |  | The manufacturer will furnish replacements for any part or equipment found to be defective during the warranty period at no cost to the Department or the maintaining agency within 10 calendar days of notification. |  | *Provide a statement of conformance in this field.* | Compliance Matrix Review |

**Document History for:**

**Signal Priority and Preemption System Compliance Matrix**

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| Rev | Description | Authored and Checked | Reviewed | Approved | Approval Date | Rev More Stringent? |
| 1.0 | New CM | D. Bremer  K. Moser | J. Morgan | J. Morgan | 10/30/2014 | N/A |
| 2.0 | Added warranty information. | A. Burleson | W. Geitz | M. DeWitt | 02/08/2022 | No |
| 3.0 | Moved specification to 995 and updated to most current FA Date 10-24-22. | W. Geitz | P. Blaiklock  M. DeWitt | D. Vollmer | 06/12/2023 | No |
| 4.0 | Updated to latest FA dates of 11-3-23 and 10-6-23 for specs 663 and 995, respectively. | W. Geitz | P. Blaiklock | D. Vollmer | 12/1/2023 | No |