Florida Traffic Infraction Detector Equipment and Testing Compliance Matrix

(Derived from December 16, 2010 Equipment and Testing Specifications)

Date: 7/20/20

Manufacturer: FISCAL TECH AMERICA LLC.

Authorized Official Name (print): LAURA FURMAN VARELLA

Item, Model No.: RLES1

Signature: Laura Furman Varella

ID No.	Section	Requirement	Item comply? (Yes/No)	Comments
1	1.3.1	TID defines 'Compliant Vehicle' as a motor vehicle that stops behind the stop bar or clearly marked stop line when facing a traffic control signal steady red indication or traveling over the stop bar or clearly marked stop line when facing traffic control signal steady green or steady yellow indications.	Yes	The TID ignores vehicles that stops behind the clearly marked stop line and vehicles that passes through the equipment when facing the traffic light green or yellow.
2	1.3.2	TID defines 'Event' as when a motor vehicle fails to stop behind the stop bar or clearly marked stop line when facing a traffic control signal steady red indication.	Yes	The TID register as na 'Event' vehicles that fails to stop behind the stop bar or clearly marked stop line when facing a traffic control signal steady red indication.
3	1.3.4	Section 316.003(87), Florida Statutes defines a TID as a vehicle sensor installed to work in conjunction with a traffic control signal and a camera or cameras synchronized to automatically record two or more sequenced photographic or electronic images or streaming video of only the rear of a motor vehicle at the time the vehicle fails to stop behind the stop bar or clearly marked stop line when facing a traffic control signal steady red light.	Yes	The TID uses image recognition techniques, which analyze the position of vehicles while in the capture area, frame by frame.
4	2,1	TID captures an Event with a single vehicle in a single through lane.	Yes	The TID is able to analyse and process single and/or multiple lanes separately each other at the same time.
5	2,2	TID captures an Event with a single vehicle in a single through lane with the presence of multiple compliant vehicles in the same lane.	Yes	The TID is able to analyse and process single and/or multiple lanes separately each other at the same time.
6	2,3	TID captures an Event with a single vehicle in a single through lane with the presence of multiple compliant vehicles in the same and adjacent through lanes.	Yes	The TID is able to analyse and process single and/or multiple lanes separately each other at the same time.
7	2,4	TID captures multiple Events with multiple vehicles in a single through lane.	Yes	The TID is able to analyse and process single and/or multiple lanes separately each other at the same time.
8	2,5	TID captures multiple Events with multiple vehicles in the same and adjacent through lanes.	Yes	The TID is able to analyse and process single and/or multiple lanes separately each other at the same time.
9	2,6	TID meets the requirements of Sections 2.1 – 2.5 for left turn lane Events.	Yes	The system tracks vehicles in all lanes regardless of turning indications.
10	2,7	TID is capable of identifying Events where the speed of a single vehicle or multiple vehicles making a right turn on red is more than a configurable threshold speed. Speed is in miles per hour.	Yes	The system measures the approaching speed of vehicles in MPH and a threshold speed can be configurable in order to register vehicles that make a right turn on red.
11	3,1	TID captures and stores photographic or electronic image of the intersection that includes the rear of the vehicle and license tag at a time the vehicle is in advance of the stop bar or clearly marked stop line with the corresponding traffic control signal steady red light visible in the image.	Yes	The TID captures 2 high resolution digital photograph of every 'Event'. The first when vehicle is with its front wheels clearly behind the stop bar and the second when vehicle is beyond the stop bar or clearly marked stop line, both with the red signal.
12		TID captures and stores photographic or electronic image of the intersection that includes the rear of the vehicle and license tag at a time the vehicle is beyond the stop bar or clearly marked stop line with the corresponding traffic control signal steady red light visible in the image.	Yes	The TID captures 2 high resolution digital photograph of every 'Event'. The first when vehicle is with its front wheels clearly behind the stop bar and the second when vehicle is beyond the stop bar or clearly marked stop line, both with the red signal.
13		If Right Turn on Red events are enforced, TID captures and stores a minimum of 5 seconds of streaming video of the intersection that includes the rear of the vehicle and license tag beginning at a time the vehicle is in advance of the stop bar or clearly marked stop line with the corresponding traffic control signal steady red light and ending at a time after the vehicle is beyond the stop bar or clearly marked stop line with the corresponding traffic control signal steady red light.	Yes	The system captures a minimum of 5 seconds of streaming video for every 'Event' including right turn violations where applicable.
14		At least one of the two photographic or electronic images of the license tag, including license tag state, number and specialty logo (if applicable), is clearly legible. The viewable images have a minimum pixel resolution of 640 by 480.	Yes	At least one of 2 high resolution digital photograph of every 'Event' is clearly legible to recognize the licence plate according to item 14.
15		The video has a minimum pixel resolution of 320 by 200 with a minimum frame rate of 5 frames per second.	Yes	The system captures a minimum of 5 seconds of streaming video for every 'event' including right turn violations where applicable with a minimum of 640x480 pixels of resolution and a minimum of 15 fps

ID No.	Section	Requirement	Item comply? (Yes/No)	Comments
16		TID includes protective measures to prevent modification or unauthorized manipulation of captured and stored photographic or electronic images and video.	Yes	The system uses criptography technology for images and violation data protection.
17		TID does not capture nor store any front photographic or electronic images or videos of vehicle occupants.	Yes	All images and videos captured by TID are from rear and does not show the occupants.
18	3,2	TID captures and stores the following Event information in English text and/or Arabic numerals: 1. Names of intersecting Street and Highways; 2. A unique identifier of the intersection; 3. Lane number; 4. Direction of travel; 5. Month, day and year of the Event; 6. Hour, minute, and second of the photographic or electronic images in the local time; and 7. The difference in time from the beginning of the traffic control signal steady red light to the associated photographic or electronic images in tenths of a second.	Yes	System is configured to capture and store in English text or Arabic numerals as described on Item 18.
19		The time of the photographic or electronic images or video are synchronized to an external source such that it is always within plus or minus one minute of Coordinated Universal Time (UTC).	Yes	The TID time used for 'Event' timestamp is syncronized to an UTC external source plus or minus one minute.
20		The alpha-numeric data and corresponding photographic or electronic image(s) are automatically captured at the same time. The data is associated with the photographic or electronic image without human intervention.	Yes	The equipment is standalone and all of the events are automatically captured by TID without human intervention.
21	4,1	The TID equipment does not interfere with any traffic control signal or other FDOT or Traffic Signal Maintaining Agency equipment. TID equipment that requires regulation by the Federal Communications Commission (FCC) meets the requirements in the 2005 Code of Federal Regulation (CFR), Title 47, Part 15, and is FCC certified. The FCC identification number is externally displayed on the TID equipment.	Yes	The system detects the traffic signal using digital image processing system that does not interfere on third part electronic equipments. If any connection is required, the connection to traffic control signals is passively and has nointerference on traffic signal operation. The TID system meets FCC requirements.
22	4,2	If visible illumination is used, the power of an illuminator (flash) device does not exceed 350 watts/second.	Yes	The flash illumination device does not exceed the threshold according to Item 22.
23	4,2	The illuminator device has the capability of being filtered and/or positioned to limit effects on the drivers' field of vision.	Yes	The flash illumination device can be adjusted to limit effects on the drivers' field of vision according to Item 23.
24	4,3	TID cabinets and camera housings have protective measures against vandalism.	Yes	The cabinet is robust, fully enclosed and protected with double lock.
25	5,0	If the Traffic Signal Maintaining Agency allows access to the traffic control signal cabinet, the TID does not impact operations or maintenance of the traffic control signals, pedestrian signals, or any other traffic control devices.	Yes	The system detects the traffic signal using digital image processing system that does not interfere on third part electronic equipments. If any connection is required, the connection to traffic control signals is passively and has nointerference on traffic signal operation. The TID system meets FCC requirements.
26	5,1	Any attachment to traffic control signal cabinet wiring is electrically isolated from the traffic control signal cabinet. Electrical sensing devices are "donut" current transformers or Hall-effect devices. No other physical or electrical connections to traffic signal control circuits are allowed, including load switch driver control circuits, load switch signal circuits and detection circuits.	Yes	The system detects the traffic signal using digital image processing system that does not interfere on third part electronic equipments. If any connection is required, the connection to traffic control signals is passively and has nointerference on traffic signal operation. The TID system meets FCC requirements.
27	5,2	All TID equipment is electrically isolated from traffic signal equipment. If the Traffic Signal Maintaining Agency allows access to the traffic control signal cabinet, a surge protective device(s) is installed on any conductive bonds between the traffic control signal cabinet equipment and the TID equipment to protect the traffic signal equipment.	Yes	The TID has a circuit breaker and surge protection for all internal devices.
28		If electric power is obtained from an FDOT or Traffic Signal Maintaining Agency power service, a surge protective device(s) is installed between the TID equipment or circuit breaker and the power service. All surge protective devices and grounding systems installed meet the current FDOT Standard Specifications for Road and Bridge Construction.	Yes	The TID has a circuit breaker and surge protection for all internal devices. If any power is obtained from FDOT or Traffic Signal Maintaining Agency power service, the equipment will meet FDOT Standard Specifications for Road and Bridge Construction.
29	6,0	Testing is conducted in accordance with the manufacturer's recommendations or in accordance with the County or City testing requirements, whichever is more stringent. Testing is conducted at regular intervals in accordance with the manufacturer's recommendations or in accordance with the County or City testing requirements, whichever is more frequent.	Yes	The TID has a watchdog that self monitors every device and alerts if any component is operating outside of manufacturer's specifications. In addition, a regular physical inspection is performed periodically.
30		Testing includes, at minimum, System Test Function and Self Test Function.	Yes	The TID has a watchdog that self monitors every device and alerts if any component is operating outside of manufacturer's specifications.
31	6,1	The TID activates and creates Event information consistent with an Event, when artificially activated by a system test function.	Yes	The equipment are able to activate a test mode to create consistent Events artificially.
32	6,2	The TID performs and records the results of a daily internal self test sequence that confirms proper operation of each critical system component.	Yes	The TID sends to the processing software a daily log information about self tests performed.
33	6,2	If the system fails on one or more portions of the internal self test, the system renders itself inoperable until a successful internal self test is recorded.	Yes	When TID detects any malfunction, it send alerts to the processing system and became inoperable until the problem is fixed.

ID No.	Section	Requirement	Item comply? (Yes/No)	Comments
34	7,0	The TID manufacturer provides: • Installation and/or users manual(s) required to install and calibrate all TID equipment; • Operations, maintenance and/or service manual(s) required to operate and maintain all TID equipment; • Testing results in accordance with Section 6.0 (ID numbers 30 throught 33) of the Traffic Infraction Detector Equipment and Testing Specifictaions.	Yes	Manuals described on Item 34 will be provided and updated periodically by the equipment manufacturer.