|  |  |  |  |
| --- | --- | --- | --- |
|  | FDOT Traffic Engineering Research Laboratory (TERL) Portable Radar Speed Display Unit Compliance Matrix | By signing this form, the applicant declares that he/she has read and understands the provisions of Section 990 of the FDOT *Standard Specifications for Road and Bridge Construction* and all implemented modifications. The requirements listed on this matrix are derived from Section 990 and are the basis for determining a product’s compliance and its acceptability for use on Florida’s roads. |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 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** |
| --- | --- | --- | --- | --- | --- |
| 1 | 990-3.1 | Device meets the physical display and operational requirements of the MUTCD. |  | *Provide a statement of conformance in this field.* | Compliance Matrix Review |
| 2 |  | All assembly hardware less than 5/8 inch in diameter is Type 304 or 316 passivated stainless steel. Stainless steel bolts, screws and studs meet ASTM F593 and nuts meet ASTM F594. |  | *Provide statement of conformance from hardware supplier that shows the product meets this requirement.* | Document Review |
| *Indicate location of requested information in submittal.* |
| 3 |  | All assembly hardware greater than or equal to 5/8 inch in diameter is galvanized. Bolts, studs, and threaded rod meet ASTM A307 and structural bolts meet ASTM F3125 Grade A325. |  | *Provide statement of conformance from hardware supplier that shows the product meets this requirement.* | Document Review |
| *Indicate location of requested information in submittal.* |
| 4 |  | The controllers and associated on-board circuitry meet the requirements of the Federal Communications Commission (FCC) Title 47, Subpart B, Section 15 regulations concerning the emission of electronic noise by Class A digital devices. |  | *Provide FCC certificate that shows the product meets this requirement.* | Document Review |
| *Indicate location of requested information in submittal.* |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 5.0 | 02/05/2016 | Updated to reflect latest FA approval date of 8-11-15. | Armelle Burleson | No |

5 |  | All electronic assemblies shall meet the requirements of NEMA TS-4-2016 Section 2. |  | *Provide a third party test report that demonstrates compliance with this requirement. The test report must meet the requirements of FDOT Product Certification Handbook (PCH), section 7.2.* | Document Review |
| *Indicate location of requested information in submittal.* |
| 6 |  | The controller and associated on-board circuitry are not affected by mobile radio, or any other radio transmissions. |  | *Provide a statement of conformance in this field.* | Compliance Matrix Review |
| 7 |  | An operator’s manual is furnished with each unit. |  | *Provide a statement of conformance in this field.* | Compliance Matrix Review |
| 8 |  | All portable devices are permanently marked with the APL number, manufacturer’s name or trademark, model/part number, and date of manufacture or serial number. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 9 |  | The trailer is delineated with retroreflective material, known as conspicuity material, in a continuous line on the face of the trailer as seen by oncoming road users. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 10 | 990-3.1.1.1 | The unit provides automatic recharging of power supply batteries to normal operating levels with meters showing charge. |  | *Applicant may provide comments in this field.* | Physical and Functional Inspection |
| 11 | 990-3.1.1.2 | The photovoltaic unit is designed to provide 10 days of continuous operation without sunlight with a minimum of onsite maintenance. |  | *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 battery is equipped with a battery controller to prevent overcharging and over-discharging; an external battery level indicator is provided. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review andPhysical Inspection |
| *Indicate location of requested information in submittal.* |
| 13 |   | The battery, controller, and power panel are protected from the elements and vandalism. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 14 |   | Automatic recharging of power supply batteries is provided with charge indicator meter. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review andFunctional Inspection |
| *Indicate location of requested information in submittal.* |
| 15 |   | An AC/DC battery charger unit is provided. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 16 | 990-3.1.2 | The display housing assembly is weather tight. |  | *Provide a statement of conformance in this field.* | Compliance Matrix Review |
| 17 |   | The display assembly is equipped with an automatic dimming operational mode capable of a minimum of 50 percent dimming and a separate manual dimmer switch. |  | *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.* |
| 18 |   | The display panel background and frame for the display assembly is painted flat black and meets Federal Specification TT-E-489. |  | *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.* |
| 19 |   | The display panel, when raised in the upright position, has a minimum height of 5 feet from the bottom of the panel to the ground. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review andPhysical Inspection |
| *Indicate location of requested information in submittal.* |
| 20 |   | The regulatory speed sign panel, when raised in the upright position, has a minimum height of 7 feet from the bottom of the regulatory sign panel to the ground. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review andPhysical Inspection |
| *Indicate location of requested information in submittal.* |
| 21 |   | The unit has an accessible mechanism to easily raise and lower the display assembly; a locking device is also provided to ensure the display panel will remain in the raised or lowered position. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review andPhysical Inspection |
| *Indicate location of requested information in submittal.* |
| 22 | 990-3.1.3 | Controller and control panel are housed in a weather, dust, and vandal resistant lockable cabinet. |  | *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.* |
| 23 | 990-3.1.4 | The support chassis is self-contained and self-supporting without the use of additional equipment or tools. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 24 |  | The sign, power supply unit and all support systems are mounted on a wheeled trailer. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 25 |  | The trailer is equipped with class-A lights, using a plug adaptor. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review andPhysical Inspection |
| *Indicate location of requested information in submittal.* |
| 26 |  | The trailer is equipped with adjustable outrigger leveling pads, one on each of the four frame corners. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review andPhysical Inspection |
| *Indicate location of requested information in submittal.* |
| 27 |  | The trailer can be set up at the site with its own chassis and outriggers, without being hitched to a vehicle. |  | *Applicant may provide comments in this field.* | Functional Inspection |
| 28 |  | The trailer is equipped with fenders over the tires made from heavy-duty material sufficient to allow a person to stand and operate or perform maintenance on the unit. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 29 |  | The trailer meets all equipment specifications set forth in Chapter 316 of the Florida Statutes, and by such rule, regulation or code that may be adopted by the Department of Highway Safety and Motor Vehicles. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review andPhysical Inspection |
| *Indicate location of requested information in submittal.* |
| 30 | 990-3.5.1 | Unit has the capability to mount a 24 by 30 inches regulatory sign with interchangeable numbers showing the posted speed limit above the message display. |  | *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.* |
| 31 |  | “YOUR SPEED” legend is displayed either above or below the message display. |  | *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.* |
| 32 | 990-3.5.2 | Two-digit speed display is on a flat black background with bright yellow LEDs. |  | *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.* |
| 33 |  | Each digit contains either a seven-segment layout or matrix style design and measures a minimum of 18 inches in height. |  | *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.* |
| 34 |  | Speed display is visible from a distance of at least 1/2 mile and legible from a distance of at least 650 feet under both day and night conditions. |  | *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.* |
| 35 |  | Display adjusts for day and night operation automatically with a photocell. |  | *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.* |
| 36 | 990-3.5.3 | The radar unit is not affected by normal radio transmissions |  | *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.* |
| 37 |  | Radar unit is: 1) approach only; 2) equipped with a low power K-Band transmitter; and 3) meets part 90 FCC acceptance, is 3 amps, operates from 10.8 to 16.6 VDC, and is fuse and reverse polarity protected. |  | *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.* |
| 38 |  | Radar unit has a range of 1,000 feet for mid-size vehicle and is capable of accurately sensing speeds of 10 to 99 mph with over speed function that operates when a vehicle approaches over the posted speed limit. |  | *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.* |

**Document History for:**

**Portable Radar Speed Display Unit Compliance Matrix**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Rev | Description | Authored and Checked | Reviewed | Approved | Approval Date | Rev More Stringent? |
| 1.0 | Conversion from Excel to Word and adding evaluation criteria. Removing vehicle counter information to coincide with latest spec revision. | D. Bremer | C. MorseD. Vollmer | J. Morgan | 01/25/2013 | N/A |
| 2.0 | Modified disclaimer to indicate compliance matrix is governing document and referencing PCH section 7.2 in place of A601-3. | A. Burleson | J. Morgan | J. Morgan | 05/09/2013 | No |
| 3.0 | Replaced FDOT logo with latest approved one and added CM ID # to header. Revised document approver title. | A. BurlesonK. Moser | J. Morgan | J. Morgan | 10/31/2014 | No |
| 4.0 | Updating to latest FHWA. There is a current FHWA review, but the proposed changes do not affect RSDU. | D. Bremer | C. MorseM. DeWitt | J. Morgan | 08/19/2015 | No |
| 5.0 | Updated to reflect latest FA approval date of 8-11-15. | A. Burleson | J. Morgan | J. Morgan | 02/05/2016 | No |
| 6.0 | Updated to reflect latest FA approval date of 10-31-19. | W. Geitz | M. DeWittJ. Morgan | D. Vollmer | 04/03/2020 | No |
| 7.0 | Minor revision to reflect FA date 7-9-2020. | W. Geitz | C. RaimerM. DeWitt | D. Vollmer | 12/08/2020 | No |
| 8.0 | Updated to reflect FA date 2-22-2021. No changes to the CM. | W. Geitz | C. RaimerM. DeWitt | M. DeWitt | 06/03/2022 | No |