QPL 44: WORKZONE TRAFFIC CONTROL PRODUCTS

SECTION A: DIGITAL SPEED LIMIT SIGN ASSEMBLY

GENERAL

This evaluation procedure outlines the Department's approval process for work zone Digital Speed Limit Signs on interstates and freeways with speed limits greater than 55 MPH or facilities that have significant traffic volumes and impacts. These signs are regulatory speed limit signs with LED displays. The purpose of Digital Speed Limit Signs is to easily lower the speed limits during work zone activities then return the speed limit back to the normal posted speed.

SPECIFICATIONS

- TDOT Standard Specification 712 – Temporary Traffic Control

PROCEDURES

A completed Product Evaluation Form, Safety Data Sheets (if applicable), and product data information must be submitted to the Division of Materials and Tests. The Department bases approval of the product on meeting the following criteria:

Equipment

Digital Speed Limit Signs shall meet the following criteria.

- Have a minimum dimension of 48" wide x 60" high. The speed limit sign (R2-1) shall be black on white with high intensity white prismatic sheeting mounted on aluminum.

- The Digital Speed Limit Signs shall be mounted such that the bottom of the sign is 7' above roadway.

- The LED panel shall be a minimum of 28" wide x 18" high. The display on the LED panel shall be amber or white.

- The LED numbers shall have a minimum 5 wide by 7 high pixel array with a minimum height of 18 inches.

- The LED panel shall have auto brightness/dimming capability.

- A black-on-orange "WORK ZONE" sign shall be mounted above the speed limit sign. It shall be 48" wide x 12" high with high intensity prismatic orange sheeting mounted on aluminum.

- The work zone Digital Speed Limit Signs shall have flashing beacons. Beacons shall be 12" diameter LED circular yellow. They shall be mounted above and below sign assemblies and are to be centered horizontally. The beacons shall alternately flash at rates not less than 50 or more than 60 times per minute.

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- All Digital Speed Limit Signs shall have operational software and wireless communications that allows for remote operation and data monitoring.

- Digital Speed Limit Signs may be trailer-mounted or stationary-mounted. The unit shall be solar-powered and with continuous operation. It shall be supplemented with a battery backup system which includes a 110/120 VAC powered on-board charging system.

- The batteries, when fully charged, shall be capable of powering the display for 20 continuous days with no solar power. The unit shall be capable of being powered by standard 110/120 VAC power source. Store the battery bank and charging system in a lockable, weather and vandal resistant box.

Pay Items

ITEM NO.	PAY ITEM	PAY UNIT
712-08.09	DIGITAL SPEED LIMIT SIGN ASSEMBLY	EACH

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SECTION B: SPEED FEEDBACK SIGN ASSEMBLY

GENERAL

This evaluation procedure outlines the Department's approval process for Digital Speed Feedback Signs on interstates and freeways with speed limits greater than 55 MPH or facilities that have significant traffic volumes and impacts. These devices inform motorists of their current speed and/or advisory messages and collect data to be used in traffic management strategies.

The Digital Speed Feedback Signs are traffic calming devices that provide speed awareness to the motoring public in areas where speed limits are often exceeded and provide real time information to project management regarding speed and traffic volumes.

SPECIFICATIONS

- TDOT Standard Specification 712 – Temporary Traffic Control

PROCEDURES

A completed Product Evaluation Form, Safety Data Sheets (if applicable), and product data information must be submitted to the Division of Materials and Tests. The Department bases approval of the product on meeting the following criteria:

Equipment

Digital Speed Feedback Signs shall meet the following criteria.

- The LED display panel shall be a minimum of 18 inches high and legible at 1000 feet. The display on the LED panel shall be amber or white. A placard shall be mounted above or below the feedback display with the legend: YOUR SPEED.
- The unit shall be radar-operated with operational software and speed recording system.
- The LED panel shall have auto brightness/dimming capability.
- Speed Feedback Signs may be trailer-mounted or stationary-mounted. The unit shall be solar powered with the ability to operate continuously. A battery backup must be provided.
- The batteries, when fully charged, shall be capable of powering the display for 20 continuous days with no solar power. A locking, weatherproof and vandal-resistant box shall be provided for storage of the battery bank and charging system.
- The unit shall have a static speed limit sign attached (R2-1, 30" x 36" minimum).

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Pay Items

ITEM NO.	PAY ITEM	PAY UNIT
712-08.08	SPEED FEEDBACK SIGN ASSEMBLY	EACH

QPL 44: WORKZONE TRAFFIC CONTROL PRODUCTS

SECTION C: TEMPORARY PORTABLE RUMBLE STRIPS

GENERAL

This evaluation procedure outlines the Department's approval process for Temporary Portable Rumble Strips. These devices are used to supplement signs and traffic control devices to make motorists aware of work zones. They are used on short-term projects, resurfacing projects, and other projects where they are considered by the Engineer to be suitable.

SPECIFICATIONS

- TDOT Standard Specification 712 – Temporary Traffic Control

PROCEDURES

A completed Product Evaluation Form, Safety Data Sheets (if applicable), and product data information must be submitted to the Division of Materials and Tests. The Department bases approval of the product on meeting the following criteria:

Equipment

Temporary Portable Rumble Strips shall meet the following criteria.

- Minimum weight of lane-width section of 100 lbs.
- Maximum overall length of 11 feet.
- Minimum width of 12 inches.
- Maximum height of ¾ inch.

Field Evaluation

A field evaluation shall be conducted at the TDOT test site to assess the performance of the device under varying conditions, including:

- Car, pickup truck, and heavy truck at 55 mph 65 mph, and 75 mph
- Car, pickup truck, and heavy truck slowing down while traversing the device
- Car, pickup truck, and heavy truck skidding while traversing the device

Pay Items

ITEM NO.	PAY ITEM	PAY UNIT
712-10.01	TEMPORARY PORTABLE RUMBLE STRIPS	EACH