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**Title:** EMERGING TECHNOLOGY FOR ROADS, CROSSWALKS AND PEDESTRIAN SAFETY ZONES

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**Abstract:**

Much time and effort has been spent in recent years to protect the safety of the motoring public with less emphasis on pedestrians and motorcycle riders. This paper will discuss three innovative products that are specifically designed with pedestrians and motorcycle riders safety in mind.

**1. Skid Resistant Polymer Surfaces**

Motorcyclists are vulnerable at sharp turns, exit ramps and other areas where slide outs occur. Most sharp ramps, high risk curves and bridge decks do not provide adequate skid resistance and two-wheelers need traction just to maintain balance and remain upright. When traction is compromised accidents happen.

Special Polymer surfacing materials which incorporate skid resistant aggregates help maintain traction in these dangerous areas. An application of a specialized polymer resin developed to withstand the detrimental effects of ultra violet rays and a broadcast of a wear resistant angular aggregate is designed to increase safety for both two and four wheel vehicles. This system is equally effective when applied to either concrete or asphalt surfaces.

**2. Colored Pedestrian Crosswalks using Slip Resistant Polymer Materials**

These new Polymer based coatings can be formulated in a variety of colors and can incorporate glass beads for nighttime retro-reflectivity and increased safety. There is minimal disruption to traffic during application and the product has long term performance. The no trip, skid resistant surfaces are safety enhancements and pedestrian friendly.

They are simple to apply, require no special equipment, rapid curing, durable and result in areas with high visible and safe roadway delineation. Positive demarcation for bike and walking paths, crosswalks and toll lanes can be easily accomplished with a low unit installation costs.

The specific properties of these materials and their appropriate applications for increased public safety will be discussed.

**3. Safety and Work Zone intrusion Alarm**

In 2008, the U.S. FHWA bought 2500 of this Safety Alarm unit and is currently in the process of tallying results for this emerging product.

This alarm which is activated upon impact or upon tilting of 90 degrees is ideal for the protection of pedestrians in a safety zone. It is easily moved and set up making it ideal for temporary or mobile safety needs

The NCHRP 350 accepted alarm mounts on a typical barrier. When impacted or tilted the built-in CO2 powered horn blasts at 125db to signal pedestrians or workers that their protective zone has been violated, allowing them critical reaction time to move out of harms way. Placed on a

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safety cone or any safety barrier the Sonoblaster is set to go and can simply be moved as pedestrian or worker safety indicate.

This system overcomes objections found in other intrusion alarms. It needs no electrical power to require maintenance, recharging or possibly even going dead. Critical unit alignment is not required as with beam and other type devices. No receiver is required since each unit operates independently and there are no false alarms from accidentally walking or driving through an 'invisible' beam.

The following is only a partial list of areas where the alarm can be used:

Pedestrian Crossings, Security zones, Construction Zones, Maintenance Areas, Flagger Protection , Striping & Marking, Site Inspection/Repair, Paving and Grading, Survey Crews, Intra-Work Zones, Patching/Pothole Repair, Sweeping and Cleaning , Breakdown Lanes, RR Grade Crossings, Tree Trimming/Mowing, Equipment Loading, Snow, Removal/Deicing, Water Main Breaks, Runway Crews, Police/Fire Stations, Rescue Operations, Hazmat Scenes, Military Operations, Signal/Light/Sign Repair

Along with the FHWA's preliminary report, this product will be introduced and examined as a product easily incorporated into any safety program to save lives.