



Innovative traffic lights system

The Modular Traffic Light System will be extended into a Modular Street Light System utilising the same design features and pole segments to build street light poles. These can be stand alone lights or a traffic signal/street light hybrid.

The street light and traffic light components are interchangeable thereby enabling municipalities to carry universal stock items for both systems. The modular design allows for easy installation of street and pedestrian lights as well as illuminated traffic information, regulatory and advertising boards.

An additional feature will be security and traffic monitoring cameras mounted inside the standard traffic signal head unit.

The Modular Traffic Light System (MTLS) was conceived and developed in response to the high number of serious injuries and fatalities amongst motorists around the world.

30% of all motor accidents worldwide involve vehicles impacting traffic lights and street poles. Of these accidents 2.5% are fatal and many more result in serious injuries.

Instead of offering an impacting vehicle a high level of resistance MRS is designed to collapse on impact. This dramatically reduces the level of damage to the motor vehicle and in turn greatly increases passenger safety.

The steel poles and signal head systems that are used in current traffic light systems are expensive. After being knocked down the entire assembly needs to be replaced. This process is time consuming and costly, typically involving a

large work crew, a heavy truck and construction equipment. The pavement surface is often damaged in the accident and needs to be repaired with a fresh concrete foundation.

An entire MTLS installation is 30% more cost effective than traditional systems saving money both in materials and installation times. MTLS utilises the latest polymers and cutting edge computer design technology to create an integrated modular traffic light system that enables the quick and easy construction of an infinite variety of signal head combinations. The light weight of the components and the ease with which a signal head can be assembled allows a construction team of 2 or 3 people using a small utility van to install a new signal head or replace a damaged signal head in 1 to 2 hours rather than days dramatically reducing dangerous down time.

Where low speed impacts occur only those segments damaged by the car may need to be replaced instead of the entire pole thereby further reducing replacement costs.

Each MTLS component is moulded with highly UV resistant yellow or black pigmentation thereby eliminating the further costs currently incurred by maintenance crews having to repaint the steel poles used in traditional installations. The materials used cannot rust and as they have no scrap value are not vulnerable to pilfering. Old components can however be recycled for use in certain MTLS components.

The Modular Traffic Light System represents the single greatest leap forward in the 90 year

history of traffic lights. It's open architecture and modular format are designed to accommodate future developments in electronic components, wireless communications, LED technology and traffic monitoring systems.

*University of Adelaide, Australia study 1999. The Modular Traffic Light System is built on a pre-cast concrete foundation. This foundation houses not only the anchoring assembly but the electrical and electronic plug points as well, thereby removing these expensive components from harms way.

A steel cable runs through the entire length of the MTLS pole and is tensioned to a specific force making the entire assembly extremely rigid.

The electrical harnessing is plugged into the signal heads and concrete foundation with quick release plugs. If the pole is knocked over, this design feature reduces damage to the foundation and signal heads.

With the components shown here, any combination of signal head system can be quickly and easily constructed and even amended should the need arise. Signal heads can be prepositioned by hand to point in any direction before the assembly is tensioned.

With its beginnings in 2004 the MTLS concept is an entirely South African innovation that has been conceived, designed and developed with the needs of both South African and international transport systems in mind.