

**PARSONS**

# Zeus

**Zeus Directed Energy Ordnance  
Neutralization**



Parsons PLUS envision more

# Technology Overview

**Our 25 years of experience in directed energy ordnance neutralization has led to the development of a system that provides precision standoff neutralization of surface mines, unexploded ordnance (UXO), and improvised explosive devices (IEDs). ZEUS has been deployed to Iraq and Afghanistan for area and route clearance missions and IED neutralization.**

## Capabilities

Our capability in this technology area is demonstrated by the development and evolution of ZEUS III, a fifth-generation ordnance neutralization system using a fiber laser. Fiber lasers provide optimum performance, resulting in tactical vehicle portability, high reliability, low power requirements, and affordability.

- Combat Operations: Afghanistan and Iraq
- Safe: 25- to 300-meter Stand-Off Engagement Range Saves Lives on Battlefield
- Effective: Day/Night Operations against Metallic or Plastic-Cased Mines, Mortars, Artillery Projectiles, and General-Purpose Bombs
- Fast: Neutralization Times of 2 seconds to Several Minutes, Depending on Range, Target Type, and Desired Reaction
- Low Operating Costs: No Consumables, Except Generator Fuel
- Mobile: Self-Contained on an Armored Vehicle
- Flexible: Cuts Through Car Doors, Guard Rails, Concrete, Bags, Metal Containers, and Wires

## Sample Missions:

- Counter IED
- Route Clearance
- Clearing Active, Test, and Training Ranges of Exposed UXO
- Clearing UXO from Battlefields, or During Peacekeeping Missions
- Clearing UXO from Formerly Used Defense Sites, and Base Realignment and Closure Sites
- Humanitarian Clearing of Land Mines

## Laser Neutralization of UXO and IEDs

The ZEUS III system has been designed, developed, fabricated, produced, and tested in an operational theater. It consists of a multi-kilowatt-class laser, beam director, operator's station, and all support subsystems that are self-contained on a single vehicle. The system can be integrated with M1114 HMMWV, M-ATV, or other MRAP vehicles. ZEUS has demonstrated capability against more than 50 different types of ordnance (landmines, improved conventional munitions, mortar rounds, rifle grenades, rockets, and artillery projectiles), ranging from small, plastic landmines to large, thick-walled 155-millimeter projectiles and 500-pound general-purpose bombs. More than 2,900 ordnance items have been neutralized to date, with a 99% effectiveness rate. The stand-off engagement range of the systems saves lives on the battlefield.





## Minimizing Collateral Damage And Saving Lives.

While deployed, ZEUS completed more than 2,000 miles of travel on deteriorated roads without failures. The system achieves neutralization by focusing a laser on the outer casing of the target munition. This heats the explosive filler until ignition, resulting in rapid combustion or deflagration of the explosive material, thus neutralizing the target munition, independent of the type of fusing used. The resulting low-order explosion minimizes collateral damage and protects explosive ordnance disposal personnel and equipment.

## Count on Parsons

Parsons is a technology-driven engineering services firm with more than 70 years of experience in the engineering, construction, technical, and professional services industries. The corporation is a leader in many diversified markets with a focus on infrastructure, defense, security, and construction. Parsons delivers design/design-build, program/construction management, systems design/engineering, cyber/converged security, and other professional services packaged in innovative alternative delivery methods to federal, regional, and local government agencies as well as to private industrial customers worldwide.

## Contact Us

Parsons is a leader in technical solutions, continuity of operations, critical infrastructure, and classified facility protection. Together, we create a safer, more secure world. Contact Parsons today to find out how Zeus can solve your enterprise's toughest development and integration facility challenges.

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