OPTIMIZING PERFORMANCE

MOBILITY & SAFETY

MAKING WORK ZONES WORK BETTER

U.S. Department of Transportation
Federal Highway Administration

Mobile Barrier Systems

FACT SHEET

Fall 2017

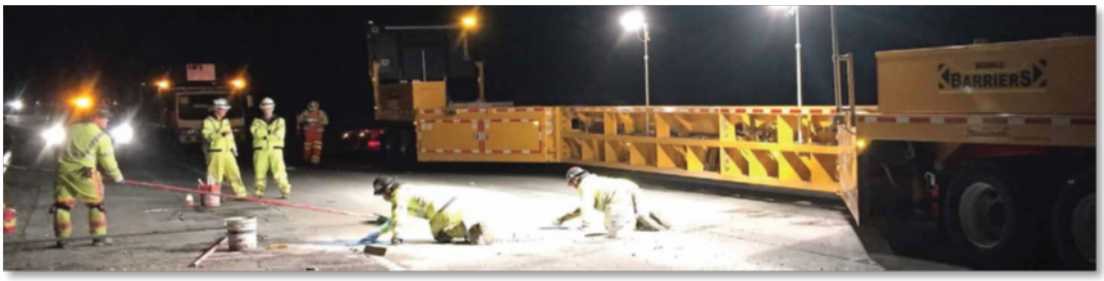
Mobile barrier systems are integrated, rigid-wall, semi-trailers that are used in conjunction with standard semi-tractors to provide improved mobile and safe work environments for personnel at applicable construction sites. They serve as extended, mobile, longitudinal barriers that provide a physical and visual wall between passing traffic and maintenance and construction personnel.

Source: http://www.equipmentworld.com

Designed to provide a self-contained protected work environment, mobile barrier systems are driven into place and occupy the lane in which work is to be performed, providing a positive protection barrier between workers and live traffic. They are designed to remain attached to the tractor unit while in use; this facilitates rapid deployment, removal, and easy repositioning while on-site. As a traffic control device, they provide physical and visual separation from passing traffic. They may be equipped with attached truck-mounted attenuators (TMA) or a separate TMA vehicle may be utilized. The mobile barrier system trailer units may also be configured to incorporate storage space for additional equipment, on-board integrated power, lighting, or signage.

What Are the Benefits?

For passing traffic affected by construction work activities, a mobile barrier helps to reduce distraction, reduce glare, keep more lanes open, and maintain higher, uniform speeds through work zones. The physical and visual separation provided by the device facilitates work activity much closer to active traffic lanes than would be normally acceptable using traditional channelization or positive protection measures. Lanes that would otherwise have been closed for buffer space can remain open. The speed of deployment and takedown maximizes working time where time-of-day lane closure restrictions are in effect. Additional safety benefits to workers are realized by eliminating lengthy exposure during traffic control set-up and take-down periods.



Source: Washington State Department of Transportation

With the barrier, contractors have been able to reduce set-up time and do meaningful work overnight and between rush hours, while reducing the number and duration of lane closures. Buffer lanes are rarely taken when using this system. Many road, bridge, and rail projects involve discrete work areas and mobile barriers are particularly effective for projects where work can be broken down into increments of 100 feet or less.

When Is It Appropriate to Use Mobile Barriers?

Consideration of mobile barrier systems may be applicable in the following situations:

- Where time-of-day restrictions for lane closures limit available work time.
- Where work activity is short-term or can be broken down into a series of short-term closures.
- Where work activity can occur within the protected space provided by the device, either all at once or in phases using the mobile barrier system to reposition the work area during the course of a project.
- Where there is a need for positive protection for exposed work hazards.
- Where the geometry of the work area and surrounding roadway is compatible with the geometry of the unit (not always applicable on curves, near ramps, intersections, etc.).

Other Considerations for Mobile Barrier Deployment

- When the barrier is moved to a work location, additional coordination is needed with the traffic control crews to plan the travel route, identify staging areas, and ensure the logistics of driving it to the work zone as temporary traffic control is taking place. Mobile barrier systems that require offsite assembly to create the desired barrier length may require additional coordination to deliver the unit to the worksite.
- Mobile barrier systems are typically designed to be deployed as a semi-tractor/trailer combination for the duration of use, and are not designed to be dropped off and picked up later. This maximizes the utility for rapid deployment and removal and reduces the introduction of the need to accommodate ingress of a tractor unit to pick up the device for removal.
- A mobile barrier should be stored at a location that is easy to access based on the typical barrier configuration, and where the operations for switching direction, adding a section, and removing a section can be performed without the need to relocate the semi-trailer or require additional lane closures on-site. Also, the storage location should be flat in order to allow for efficient performance of these operations.
- To improve use by maintenance crews, installing a separate camera system mounted on the rear of the mobile barrier will allow operators to observe the work zone and assist in placement at precise locations on a highway. The camera system may be powered directly from the integral power system already plumbed throughout the barrier.

To learn more, contact:

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