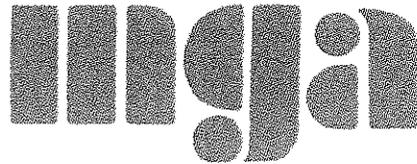




mga research corporation



**30 MPH VEHICLE CRASH TEST
OF AN ARMOR MODEL 890
SURFACE MOUNT CRASH BARRIER**

MGA Reference Number: C03C3-007

Test Date: May 27, 2003

FINAL REPORT

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SIGNATURE APPROVAL PAGE

Procedure Number: MGA 30 mph Frontal Impact Test Checklist
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The results presented in this report relate only to the specified test items.

SECTION 1
SUMMARY OF TEST

The purpose of this test was to verify the structural integrity of the ARMR Model 890 Surface Mount Crash Barrier when subjected to a frontal impact of 30 mph (48.3 kph) by a 4000 lb. vehicle. The test was conducted in accordance to the United States Marshals Service Requirements and Specifications for Special Purposes and Support Space Manual Volume 3.III.B.1 for active barriers.

The barrier supplied by ARMR Services Corporation was installed per instructions supplied by ARMR on a 6 inch thick concrete slab. A total of 73 mounting bolts were used.

The barrier was impacted by a 1989 Pontiac Sunbird ballasted to 4000 lbs at a velocity of 30.5 mph on May 27, 2003. The barrier retained the vehicle with no penetration. The barrier was functional after the test.

The impact was documented by one real time and four high speed cameras. Appendix A contains pre and post test photographs of the barrier.