

Better NB

Case Studies of City Initiatives
Making New Braunfels a
Better Community

Squad Vehicles Blaze the Way For Faster, More Efficient Fire Response

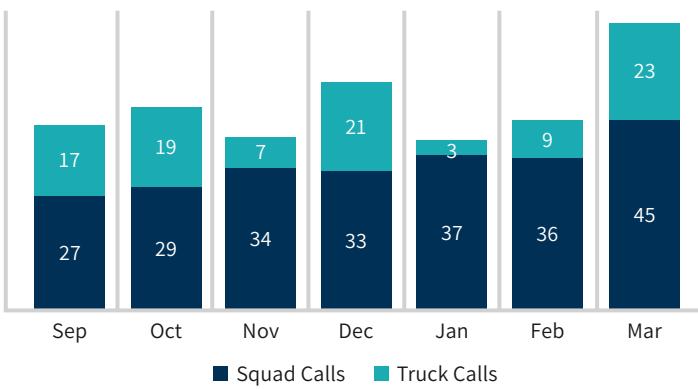
Squad Vehicles



“Engine 3, Medic 3, Squad 3...Make the 3700 Block of I-35 North for a Structure Fire,” announced the robotic voice that is triggered by 911 emergency dispatchers.

On December 13, 2023, at approximately 8:00pm, a structure fire broke out in a home set back about 400 feet from the I-35 frontage road on the north end of New Braunfels. When firefighters arrived on scene, they saw flames already showing outside the residence and realized the home was only accessible by a long, narrow dirt road. Instead of having to squeeze a giant fire truck down that road, they used one of the department’s brand-new Squad vehicles to quickly and easily reach the structure.

Squad Pilot Metrics



Smaller than a fire engine and tougher than an ambulance, these Squad units can be used in place of those more restrictive vehicles, making emergency responses more efficient and cost effective. That night in December proved that it works. The Squad vehicle on this call was first on the scene and allowed crews quick access to put the fire out in a matter of minutes with no injuries to civilians or staff and no damage to equipment.

Squad Truck 7 assumed **72%** of EMS calls for Truck 7

Over the years, the New Braunfels Fire Department has been transitioning, first from its traditional roots as a pure fire suppression department, to incorporating medical response, and now into an all-hazard/emergency department. That includes, but is not limited to fires, EMS, hazardous materials, technical rescues, natural disasters, and terroristic threats.

While the NBFD grew and evolved in its services, just like many fire departments across the country, the department was ever mindful of the escalating cost of equipment and apparatus. At the heart of that issue was that the demand for EMS had outpaced the capacity of ambulances. This has forced departments to use fire trucks to deploy the personnel and equipment necessary when responding to certain EMS and non-fire suppression emergency calls. The net effect has been an increase in wear and tear on large, expensive fire apparatus. It also meant EMS calls were being over-serviced. What would normally only require two paramedics and an ambulance was now getting a response from a fire truck with 3 personnel on board. Sending Squads to non-structure fire responses also makes the fire trucks available for structure fire calls and reduces their response time by avoiding having to send a farther unit.

"That dilemma prompted us to look at the issue with a business lens in an attempt to identify cost saving measures that still meet the risk profile of our calls for service," said New Braunfels Fire Chief Ruy Lozano. "During the FY 2023 budget process, we initially requested one squad vehicle; however, the City Manager's Office felt that the initiative was worthy of further investment, and found the financial resources to purchase and deploy three squad vehicles"



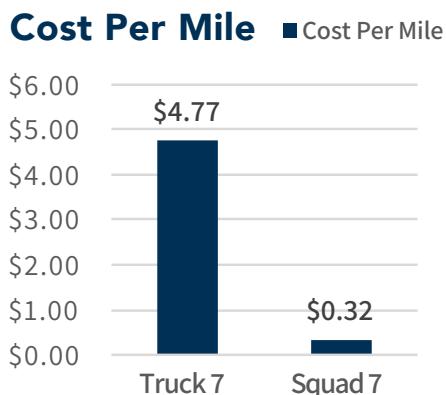
\$225,000
Squad Vehicle



\$1 Million
Fire Truck



\$2 Million
Ladder Truck



Each Squad vehicle costs approximately \$225,000, just a fraction of a \$1-million fire truck or a \$2-million ladder truck. They also extend the life of expensive fire trucks by reducing the miles, wear, and tear. Squad vehicles are built on a commercial pickup truck chassis, with a standard brush truck pump that carries 300 gallons of water. The cab can support 4 firefighters, plus there's plenty of compartment space for equipment.

Squad Vehicle Generate 3 Forms of Savings



Direct Cost:
From lower cost
per mile

Replacement Cost:
By extending the life of the
expensive fire trucks

Maintenance Cost:
Less frequent and expensive
maintenance and repairs

Types of calls Squads respond to in place of heavy apparatus:

- Cardiac Arrest
- Difficulty Breathing
- Drowning
- Gun Shot Victim
- Lockout
- Obstetric
- Stabbing
- Unconscious
- Grass Fire (Wildland)
- Bee Assignment
- Obstetric in Labor

The trucks are considered “all hazard response units” capable of being deployed on a variety of calls, including all non-structure fire calls for service. That includes EMS calls, dumpster or grass fires, and the unit can easily be converted into a flood response vehicle by removing some of the rear equipment and folding down the built-in bench seat to make room for flood rescue victims.

“The idea of Squads has been around for a long time, but now they are being used instead of fire trucks, in particular for non-structure fire incidents,” said Fire Chief Lozano. “With the evolution of electric rescue tools, and by converting the brush truck concept into squad units, crews can bring with them everything they need to respond to a variety of calls for service, including medical calls, motor vehicle accidents, and small open-air fires.”

New Braunfels currently has three Squad vehicles in use today, with those trucks strategically assigned to the busiest stations, Fire Station 1 (Central Station), Fire Station 3 (Hanz Drive), and Fire Station 6 (Stone Gate Drive), in order to make them available to respond to incidents anywhere in the City. Going forward, NBFD will continue to work closely with City management to identify additional cost-saving measures that enhance efficiency, productivity, and safety.

