"Fire apparatus" refers to various types of vehicles with the primary purpose of fire extinguishment, the rescue and care of injured people, and/or salvage operations necessary to reduce property damage. The apparatus in use today have undergone a series of dramatic changes in the last few decades, and important improvements are still being made. These changes bring new flexibility, safety, and efficiency to fire service operations. Next to some of the apparatus classifications is a type number such as Type I or Type III. The typing of apparatus is used to define the minimum capabilities of resources. These type numbers have been developed by Fire Scope and the National Wildfire Coordinating Group (NWCG) so incident commanders can order resources for an incident based on known capabilities.

**TYPES OF APPARATUS**

**Engines - Type 1 Engine**

The main purpose of a fire department “engine” or an "engine company," is to provide adequate pressure for fire streams. The water it pumps may come from its water tank, a fire hydrant, or an impounded supply. The pumper is the main unit of the fire department.

Recognized capacities of pumps for fire department pumpers are 500, 750, 1,000, 1,250, 1,500 and 2,000 GPM. In order for a fire department engine to meet standard requirements, it must deliver its rated GPM capacity at 150 PSI net pump pressure. Also, the pumper must deliver 70 percent of its rated capacity at 200 PSI and 50 percent of its rated capacity at 250 PSI. The unit must be provided with a pump, adequate intake and discharge connections, engine controls, gauges and other instruments.

Most fire department pumpers, and all those in Escondido, are referred to as "triple combination pumpers." To qualify as triple combination, a pumper must have a fire pump, hose compartment, and a water tank. Additionally, a pumper will usually carry an extension ladder, a roof ladder, forcible entry tools, hose appliances and many other tools.

Type 1 engines must at a minimum possess: 300 gallon tank, 1000 GPM pump, 1200 ft. of 2 ½” hose, 500 ft. of 1 ½” hose, ladders and a master stream appliance.

**Trucks**

In the fire service, the term "truck" is used to describe an apparatus with aerial capabilities. There are many types of aerial apparatus but all provide for elevating firefighters and
equipment, rescuing victims, and elevating hose streams and lighting; often above the reach of ground ladders.

The two main types of aerial ladders that exist in the zone are those with a basket or platform and the other a straight ladder without a platform usually configured as a tiller. Each has advantages and disadvantages.

**Tiller Apparatus**

Tiller apparatus utilize a tractor and trailer design. The tractor portion is where the crew rides and it contains the power plant for the apparatus. The trailer portion carries the main ladder and equipment compartments. Additionally it requires a second driver (Tiller Operator) who steers the rear axle wheels. The Tiller Operator is a member of the crew that has completed training on tiller operation.

The main benefit of a tiller apparatus is its mobility. Given its size, it can maneuver better than non-tractor trailer designs. This allows it to access and operate in tighter spaces than its counterparts.

The disadvantages are it cannot support the same ladder weight as a platform and generally doesn’t have the same ability to flow high GPM appliances as a platform.
Elevated Platforms

Platform aerial apparatus usually have a ladder with a platform attached at the end. The chassis utilizes parallel frame rails that run the length of the apparatus. The aerial can be mid mounted as seen below or rear mounted.

The main advantages of platforms is the ability to carry multiple firefighters and the mobility of the platform. Other advantages are larger GPM capability and the weight rating of the aerial.

The disadvantage is the limitations on access because due to the length of the vehicle with the single frame rails.
A truck may also qualify, and be referred to, as a "quint." A quint consists of an aerial ladder or elevated platform, a complement of ground ladders, a fire pump, hose compartment and a water tank, all of which must comply with the specifications set forth in NFPA #1901. This allows the vehicle to secure its own water supply and pump hose lines. Neither of Escondido's Trucks are quints and therefore do not have pumps.

**Brush Engines – Type 3 Engine**

These are fire apparatus that have been specially designed to fight brush and wild land fires. They have the capability of off-road use and are equipped with hose packs and tools that are unique to fighting brush fires. Additionally, our brush units have an auxiliary engine to supply power to the pump. This auxiliary engine allows for a pump-and-roll capability. The minimum requirements of a type 3 engine are: 500 gallon tank, 150 GPM pump, 1000 ft. of 1 ½” hose, 500 ft. of 1” hose, and pump and roll capability.
Patrols – Type 6

Patrols are smaller vehicles that have a smaller pump and hose complement. The minimums for this type of apparatus is 150 gallon tank, minimum of 50 GPM flow, 300 feet of 1 ½" and 1 “ hose and pump and roll capability.

The advantage of this apparatus is the ability to deal with lower severity fire problems thereby keeping the larger more capable units available for larger scale firefighting. It is often used to follow up the fire front dealing with fires in their incipient stage and overhaul operations. Other uses are vehicle fires in parking structures whose height limits engine access.

Water Tenders

Water tenders have limited firefighting capability. In those areas where hydrants are sparse a tender is often used. They can fill pumping apparatus directly or a sump being used for water.