



**ACTION SHEET  
ITEM FROM FINANCE COMMITTEE MEETING OF 11/02/15  
FOR CITY COUNCIL MEETING OF 11/10/15**

**ISSUE:**

15. Request for Approval of Fiscal Year 2015-2025 Emergency Apparatus & Vehicle Fleet Plan for Fire Department. (Jan Snyder)

**FINANCE COMMITTEE ACTION:**

Approved as Consent item.

**FUNDING SOURCE: 22836.570500**

**SPECIAL CONDITIONS OR AMENDMENTS**

**STAFF FOLLOW-UP:**

<b>VOTE</b>	<b>FOR</b>	<b>AGAINST</b>	<b>ABSTAIN</b>
COUNCILOR TRUJILLO	X		
COUNCILOR RIVERA	Absent		
COUNCILOR LINDELL	X		
COUNCILOR MAESTAS	X		
CHAIRPERSON DOMINGUEZ			

4-13-15

**ACTION SHEET**  
**ITEM FROM PUBLIC SAFETY COMMITTEE MEETING OF 10/20/15**

<b>ISSUE:</b> Emergency Apparatus & Vehicle Fleet Plan
<b>PUBLIC SAFETY COMMITTEE ACTION:</b> Approved
<b>SPECIAL CONDITIONS OR AMENDMENTS:</b>
<b>STAFF FOLLOW UP:</b>

VOTE	FOR	AGAINST	ABSTAIN
CHAIRPERSON COUNCILOR DIMAS	X		
VICE-CHAIRPERSON HARRIS	X		
MEMBER DR. MIKE MIER	X		
MEMBER DR. NANCY OWEN-LEWIS	X		
MEMBER PETER MIZRAHI	X		
MEMBER MIKE BOWEN	X		
MEMBER ERIC JOHNSON	X		
MEMBER DAVID TRUJILLO	Absent		
MEMBER JOE ARENLLENO	Absent		

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# City of Santa Fe, New Mexico

## memo

**DATE:** October 22, 2015  
**TO:** Finance Committee  
City Council  
**FROM:** Jan M Snyder, Assistant Fire Chief   
**SUBJECT:** City of Santa Fe Fire Department Emergency Apparatus & Vehicle Fleet Plan  
**VIA:** Erik L. Litzenberg, Fire Chief 

The City of Santa Fe Fire Department respectfully requests your approval of our new Emergency Apparatus and Vehicle Fleet Plan.

*This plan will span a ten year period and provide Fire Departments leaders with a definitive tool to calculate the need to replace apparatus as well as a plan to budget needed funds far into the future.*

We look forward to your approval and hope you appreciate what this will provide to you as a City official to help us support our logistical needs.

Attachments: (0)



## **Emergency Apparatus & Vehicle Fleet Plan**

**Fiscal 2015 – 2025**

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## Summary

The City of Santa Fe Fire Department has identified the following apparatus and vehicle replacement plan to help maintain an efficient and effective fleet of emergency apparatus and support vehicles. The Department is committed to provide the most effective and economical apparatus and vehicles to ensure the safety for our employees and the community we serve. This replacement schedule was established using the NFPA 1901: Standard for Automotive Fire Apparatus – 2009 and NFPA 1911: Standard for the Inspection, Maintenance, Testing and Retirement of In-Service Automotive Fire Apparatus – 2007.

The scope of these NFPA standards defines the requirements for new automotive fire apparatus to be used under emergency conditions to transport personnel and equipment and to support fire suppression, emergency medical services and other hazard mitigation. This replacement plan is consistent with organizational priorities intended to ensure that front-line and reserve status apparatus and vehicles remain safe and well maintained.

### **Apparatus and Vehicle Design and Purchasing**

Apparatus and vehicle design, specifications and purchasing will be supervised by the Support Services Division and will include a collaborative effort including input from the Fire Department Fleet Administrator, apparatus committee(s) and other specific end-user input related to the project.

Every vehicle/apparatus purchased will be evaluated for the possibility of carbon emissions reduction and alternative fuel engines. (CNG, Hybrid, etc.)

### **Emergency Response Vehicles**

All fire suppression apparatus will be red with a white over red cab and outfitted with an emergency lighting package, including light bar, LED strobes, Opticom, and white striping in accordance with NFPA 1901.

Emergency medical services apparatus will be white with red striping and be outfitted with an emergency lighting package, including light bar, LED strobes, Opticom, and white striping in accordance with state and federal regulations.

### **Type 1 Engines / Quints**

The City of Santa Fe Fire Department staffs five Type 1 Fire Engines/Quints front-line fire engines on a daily basis. Custom 4 door cab, 1500 gpm fire pumps with 500 gallons of water are the Departments primary fire suppression apparatus. Two of these Engines are Quints which also have a 75 foot aerial ladder and an additional complement of ground ladders.

The Department keeps three Type 1 Engines in reserve status and 1 Quint in reserve status.

The general replacement schedule for Type 1 Engines/Quints is 10 years as a front-line apparatus and an additional 5 years in reserve status.

### **Type 6 Engines**

At this time the Department operates three Type 6 Engines (wildland firefighting engines) and staffs them full-time periodically during the spring and summer and during wildland fire deployments. These Engines are built off a traditional heavy duty pick-up truck chassis and designed to work on and off road fighting wildland fires and protecting structures.

Replacement Schedule: These vehicles should be replaced every 15 years or as needed.

### **Ladder Trucks (Aerials)**

The City of Santa Fe Fire Department does not currently operate traditional Ladder Truck Companies independent from its Type 1 Engine Companies.

Replacement Schedule: The proposed replacement schedule would be 15 years as a front-line apparatus and an additional 5 in reserve status.

### **Heavy Rescue**

One Heavy Rescue vehicle is staffed every day in the center of the City. This vehicle is responsible for responding to all technical rescue incidents and structure fire within our jurisdiction. Traditionally this unit does not carry water or hose nor does it have a pump for firefighting operations.

Replacement Schedule: This apparatus will be replaced every 15 years or as needed.

### **HazMat Unit**

The Hazardous Materials Unit is only staffed and operated during significant hazardous materials incidents and special events stand-bys. This vehicle is responsible for responding to all hazardous materials incidents within our jurisdiction and within our region of the State.

Replacement Schedule: This apparatus will be replaced every 15 years or as needed.

### **Water Tender**

The Department owns one water Tender at this time and it is only staffed and operated during significant structural and wildland fire incidents and deployments.

Replacement Schedule: This apparatus will be replaced every 15 years or as needed.

### **Med Units (Ambulances)**

The Department currently staffs 7 front-line Advanced Life support (ALS) transport capable Meds with 3 in reserve. All are in compliance with all Federal and State regulations surrounding transport capable EMS apparatus. SFFD's Meds carry the majority of the Department's work load and need to be replaced at a greater frequency than other apparatus.

Replacement Schedule: Our goal is to replace 1 every year in a constant rotation to provide a safe and comfortable environment for our personnel and patients.

### **Battalion Chief Vehicle**

The City of Santa Fe Fire Department owns two SUV style vehicles operated by our operational and administrative Battalion Chiefs. These vehicles can act as a central command post for significant incidents and events.

Replacement Schedule: Due to the daily use and wear and tear on this vehicle it should be evaluated for replacement every 7-10 years or 100,000 miles.

### **Staff Vehicles**

The Department owns and operates various SUV, sedan and pick-up truck staff vehicles operated by the Training, Fleet, Fire Marshal and Chief's staff. The Department strives to purchase and operate staff vehicles that are relevant to the position and usage of that job responsibility.

Replacement Schedule: Staff vehicles will be evaluated for replacement every 10 years or 100,000 miles.

## Replacement Schedule

In general the Department will use the following guidelines for vehicle replacement:

Type 1 Engines/Quints:	10 Years Front-Line – 5 Years in Reserve Status
Ladder Trucks:	15 Years Front-Line – 5 Years in Reserve Status
Meds:	6 Years Front-Line - 3 Years in Reserve Status
BC Vehicles:	7-10 Years or over 100,000 miles
Staff Vehicles:	10 Years or over 100,000 miles
Rescues:	15 Years or As needed
Type 6 Engines:	15 Years or as needed
HazMat:	15 Years or As needed
Tenders:	15 Years or As needed
ARFF:	10 Years or As needed

Apparatus not manufactured to the applicable NFPA fire apparatus standard or that is over 25 years old should be replaced (NFPA 1901). The City of Santa Fe Fire Department may make exceptions to this standard in very limited circumstances with apparatus that has received little use, has been well maintained, and will be safe for use in defined circumstances.

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The replacement schedule for City of Santa Fe Fire Department emergency apparatus and vehicles will be validated based on the following points system:

**Age:** One point for every year of chronological age, based on in-service date.

**Miles/Hours:** One point for each 11,000 miles or 1,000 hours of use

**Type of Service:** One, Three or Five points are assigned based on the type of service the unit is exposed to.

Type 1 Engines	= 5
Meds	= 5
Ladders/Quints	= 5
Reserve Type 1 Engines	= 3
Type 6 Engines	= 3
Rescues	= 3
ARFF	= 3
BC Vehicles	= 3
HazMat	= 1
Tenders	= 1
Staff Vehicles	= 1

**Reliability:** One, Three or Five points depending on the frequency that a vehicle is in the shop for repairs.

2-3 Times a Month	= 5
One a Month	= 3
Once every Three Months	= 1

**Maintenance & Repair Costs**

One to five points assigned based on total life repairs and maintenance costs. (not including costs due to repairs from accidents).

Costs equal or greater than original cost of the vehicle = 5  
Costs equal 20% or less than the original cost = 1

**Condition:**

This category takes into consideration body condition, rust, interior condition, accident history, and anticipated repairs. A scale from 1 to 5 with 5 being poor condition.

Excellent Condition – 1 Point

- No known mechanical defects
- Very short downtime and very little operating expenses
- Excellent parts availability
- Very good resale value
- Meets all present NFPA 1911 safety standards

Very Good Condition – 2 Points

- No known mechanical or suspension defects present
- Short downtime and above average operating expenses
- Good parts availability
- Good resale value
- Meets NFPA 1911 safety standards

Good Condition – 3 Points

- Some rust or damage to the body or cab
- Some existing mechanical or suspension repairs necessary
- Downtime and operating costs are beginning to increase but not terribly above average operating expenses
- Parts are still availability but getting difficult to find
- Resale value decreasing
- Meets NFPA 1911 safety standards

Fair Condition – 4 Points

- Rust, corrosion or damage to the body or cab
- Existing mechanical or suspension repairs necessary
- Downtime and operating costs are above the historical average
- Parts are becoming harder to find
- Very little resale value
- Does not meets NFPA 1911 safety standards

Poor Condition – 5 Points

- Rust, corrosion or damage to the body or cab impair apparatus use
- Existing mechanical or suspension repairs impact apparatus use
- Downtime is exceeding in-service time
- Parts are obsolete
- Operational costs exceed original purchase price of vehicle
- Does not meets NFPA 1911 safety standards

<b>Overall</b>	Fewer than 18 Points	Condition 1 – Excellent
<b>Condition Score:</b>	18 to 22 Points	Condition 2 – Good
	23 to 27 Points	Condition 3 – Qualifies for Replacement
	28 Points and Above	Condition 4 – Needs Immediate Consideration

**Sample:**

See attached Score Sheet(s):

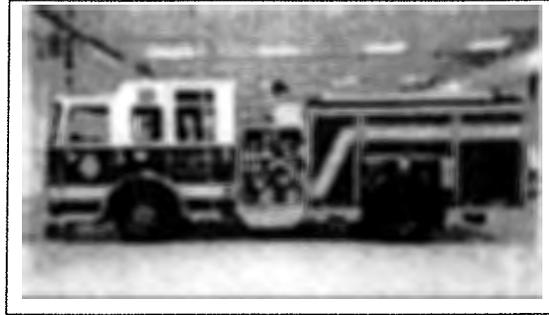


Type 1 Engines

Front-Line

Engine 1 - (55101)

Make: Pierce  
Model: Saber  
Year: 2015  
  
Miles: 5,635  
Hours: 401  
Adjusted Mileage: 13,323  
  
Cost: \$ 423,000  
Replacement Cost: \$ 545,000



Expected Life: 10 years  
Fiscal Year Replacement Schedule: 2024-2025

Breakdowns and Repairs 2014-2015

Number of Breakdowns and Repairs:	
Labor Hours:	
Labor Costs:	
Parts Costs:	
Outsources Repair Costs:	

*Recommendation for Replacement: Overall Condition 1 – Excellent*

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*Comments:*

Engine 1 is a Type 1 pumper that was designed with a side-mount pump panel and shorter wheel base to better accommodate the narrow streets and tight turns of District #1.

**Type 1 Engines**

Front-Line

**Engine 3 – (53824)**

*Make:* Pierce  
*Model:* Saber  
*Year:* 2008  
  
*Miles:* 88,235  
*Hours:* 8172  
*Adjusted Mileage:* 269,676  
  
*Cost:* \$ 407,000  
*Replacement Cost:* \$ 495,000



*Expected Life:* 10 years  
*Fiscal Year Replacement Schedule:* 2017-2018

Breakdowns and Repairs 2014-2015

Number of Breakdowns and Repairs:	
Labor Hours:	
Labor Costs:	
Parts Costs:	
Outsources Repair Costs:	

*Recommendation for Replacement: Overall Condition 3 – Fair, Qualifies for Replacement*

*Comments:*

Engine 3 is a Type 1 pumper that was the Department's second generation of Pierce pumpers that cover District #3.

**City of Santa Fe Fire Department**  
**Vehicle/Apparatus Replacement Points Evaluation - Sample**

Apparatus/Vehicle:	<b>Pierce Saber - Engine 1 - (55101)</b>	Cost:	<b>\$423,000</b>
In-Service Date:	<b>2015</b>	Age:	<b>0</b>
	1 point for every year of chronological age.		Points: <b>0</b>
Milage:	<b>5,635</b>	1 point for each 11,000 miles.	Points: <b>1</b>
Engine Hours:	<b>401</b>		
Adjusted Miles:	<b>13,233</b> (miles x 33)		
Type of Service:	<b>5</b>		Points: <b>5</b>
	5 = Front-line Type 1 Engines, Ladders, Rescue and Meds 3 = Reserve Type 1 Engines, Type 6 Engines and BCs Vehicle 1 = HazMat, Tenders, Staff Vehicles		
Reliability:	<b>1</b>		Points: <b>1</b>
	5 = In the shop 2-3 times per month 3 = In the shop once a month 1 = In the shop once every 3 months or less		
Repair & Main. Costs:	<b>1</b>		Points: <b>1</b>
	5 = Life repair and maintenace cost equal to or greater than original cost of vehicle 3 = Life repair and Maintenance costs greater than 20% but less than 90% 1 = Life repair and maintenace costs less than 20% or less than original cost		
Condition:	<b>1</b>		Points: <b>1</b>
	1 = Excellent - No mechanical defects, very short down time and little operating expenses, excellent parts availability and meets the NFPA 1911 safety standard. 2 = Very Good - No known mechanical or suspension defects present, short down time, above average operating expenses, good parts availability and meets NFPA 3 = Good - Some rust or damage to body, some existing mechanical or susepension repairs necessary, increasing down time, above average operating expenses. 4 = Fair - Rust and corrosion on body and cab, exisiting mechanical or suspension repairs needed, down time and operating costs above average, parts harder to find. 5 = Poor - Rust, corrosion or damage impact apparatus use, mechanical and suspension issues limit use, down time more than in-service, does not meet NFPA.		
<b>Total Points:</b>			<b>9</b>
Points Calculator:	Less than 18 Points = Condition 1 - Excellent 18 to 22 Points = Condition 2 - Good 23 to 27 Points = Condition 3 - Fair, Qualifies for Replacement Over 28 Points = Condition 4 - Old, Needs Immediate Consideration		
Recommendation:	<b>Overall Condition 1 - Excellent</b>		

**City of Santa Fe Fire Department**  
**Vehicle/Apparatus Replacement Points Evaluation - Sample**

Apparatus/Vehicle:	<b>Pierce Saber - Engine 3 - (53824)</b>	Cost:	\$407,000
In-Service Date:	2008	Age:	7
	1 point for every year of chronological age.		Points: 7
Milage:	88,235	1 point for each 11,000 miles.	Points: 8
Engine Hours:	8,172		
Adjusted Miles:	269,676 (miles x 33)		
Type of Service:	5		Points: 5
	5 = Front-line Type 1 Engines, Ladders, Rescue and Meds 3 = Reserve Type 1 Engines, Type 6 Engines and BCs Vehicle 1 = HazMat, Tenders, Staff Vehicles		
Reliability:	1		Points: 1
	5 = In the shop 2-3 times per month 3 = In the shop once a month 1 = In the shop once every 3 months or less		
Repair & Main. Costs:	1		Points: 1
	5 = Life repair and maintenace cost equal to or greater than original cost of vehicle 3 = Life repair and Maintenance costs greater than 20% but less than 90% 1 = Life repair and maintenace costs less than 20% or less than original cost		
Condition:	2		Points: 2
	1 = Excellent - No mechanical defects, very short down time and little operating expenses, excellent parts availability and meets the NFPA 1911 safety standard. 2 = Very Good - No known mechanical or suspension defects present, short down time, above average operating expenses, good parts availability and meets NFPA 3 = Good - Some rust or damage to body, some existing mechanical or suspension repairs necessary, increasing down time, above average operating expenses. 4 = Fair - Rust and corrosion on body and cab, existing mechanical or suspension repairs needed, down time and operating costs above average, parts harder to find. 5 = Poor - Rust, corrosion or damage impact apparatus use, mechanical and suspension issues limit use, down time more than in-service, does not meet NFPA.		
		Total Points:	24
Points Calculator:	Less than 18 Points = Condition 1 - Excellent 18 to 22 Points = Condition 2 - Good 23 to 27 Points = Condition 3 - Fair, Qualifies for Replacement Over 28 Points = Condition 4 - Old, Needs Immediate Consideration		
Recommendation:	Overall Condition 3 - Fair, Qualifies for Replacement		