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DEPARTMENT OF
FIRE

CITY OF SACRAMENTO
CALIFORNIA

Phone: (916) 264-5266
FAX: (916) 264-7079

1231 I STREET
SUITE 401
SACRAMENTO, CA
95814-2979

GARY COSTAMAGNA
FIRE CHIEF

December 7, 1992

City Council
Sacramento California

APPROVED
BY THE CITY COUNCIL

DEC 15 1992

OFFICE OF THE
CITY CLERK

Honorable Members in Session:

Subject: ADVANCED LIFE SUPPORT (ALS) AND AMBULANCE TRANSPORTATION PROGRAM

LOCATION AND COUNCIL DISTRICT

City-wide

SUMMARY

This report outlines a program designed to provide pre-hospital care and emergency transportation to the citizens of Sacramento. The program is a full service program providing service from receipt of a 911 call to transportation to a hospital emergency room. The program is to be operated within and administered by the City's Fire Department. A projected fee schedule has been established and the revenue is anticipated to cover operating costs of the program in the first full year of operation, but \$2.6 million is necessary to cover start-up costs during FY 1993-94. Presently the County Board of Supervisors is in the process of determining who will provide Emergency Medical Services within the County. The opportunity for the City to establish an Advanced Life Support and Ambulance Transportation program for the citizens of Sacramento is now. Because of the time and complexity involved in implementation, the commitment to fund the program will be needed prior to the 1993-94 budget process.

STAFF RECOMMENDATION

It is recommended that the City Council approve, by resolution, the establishment of an Advanced Life Support and Ambulance Transportation program within the City's Fire Department with an implementation date of January 1, 1994, and to notify the County Board of Supervisors of this intent and request the Finance and Fire Departments to research funding resources for the first year of implementation.

BACKGROUND

As the nation's population grows older, more and more Americans are concerning themselves with the high cost of health care services. Sacramentans share in this concern. In pursuit of a higher quality of life, the City of Sacramento strives to achieve the highest level of fire protection and emergency medical services affordable to the community. Our quality of life is directly dependent upon the availability of emergency services and the infrastructure that supports those services. In 1991 68% of all calls for service received by the fire department were requests for medical assistance. The future of emergency medical services must be based on developing an effective Advanced Life Support and Ambulance Transportation program to accommodate an expanding and aging population.

When the first fire department responded to save a life threatened by fire, an evolution in public service began. That evolution has continued changing to accommodate the public need. No longer is it simply enough to put out a fire. Rescue, extrication, emergency medical services, and hazardous materials expertise are today common components of a modern fire department. They are also part of a department's evolution, each having once been an innovative addition to the fire service. Fire departments must continue to look for better and more effective methods of saving lives to keep up with the demands imposed by the public. The expansion of fire department delivery of emergency medical services into Advanced Life Support and Ambulance Transportation is a natural evolution for a provider of public health and safety services. It is also a logical expansion of a decentralized work force trained to respond and work under emergency conditions.

Since assuming the first responder responsibilities for medical emergency related incidents, the fire service has adapted well to prehospital emergency response and care. The capability of the fire service to have a flexible labor force in place to respond to either a fire or medical emergencies has saved lives, tax dollars and has been very beneficial to our citizens.

In October of 1989 the Sacramento County Board of Supervisors contracted with J.D.Franz Research to conduct a study of the County's emergency medical services (EMS) system. The "Franz Report" was commissioned to evaluate the county EMS system including

ambulance services. Along with many strong points, deficient services provided by the private ambulance companies were also noted. As stated in the "Franz Report":

"First, ambulance providers are required to have Limited Advanced Life Support (LALS) ambulances available "primary for official calls." It is clear that at least some providers are gambling with this provision and diverting ALS/LALS units to inter-facility transports when they are presumed to be "available." Accordingly, the county does not have an ambulance system strictly dedicated to 9-1-1 responses...."

"Second, the deployment and dispatch of ALS/LALS units is currently structured by "ambulance zones," a configuration that may have had historical value, but no longer appears to serve any useful purpose. Above all, this approach to deploying and dispatching ambulances serves to increase response and travel time unnecessarily."

In reaction to these and other points from the "Franz Report" and the resulting "Request for Proposal for the Provision of Advanced Life Support Emergency Ambulance Service", there has been a massive effort on the part of the private ambulance companies to strengthen those weaknesses identified by:

- (1) aggressive coverage of the ambulance response zones with system status management plan;
- (2) cooperative operations to assure coverage;
- (3) peak level staffing;
- (4) dedicated 9-1-1 ambulances, retained for emergency response only.

It took the revelations of the "Franz Report" and the very real threat of losing their franchises to stimulate the private entrepreneurs to reevaluate their service.

At the time, and for years prior to the "Franz Report", there were no fewer than five local, separate ambulance companies contracting with the County of Sacramento. Currently the local providers have merged into one company. The local ambulance companies have reorganized with larger ambulance conglomerates based outside of Sacramento County. The "local" ambulance companies, which were of great concern during the review of the first RFP, may no longer be truly local.

The system used for deployment and response of fire department personnel and equipment has been successful in meeting the public health and safety needs of the community with high levels of performance and public confidence. This high level of performance was

recognized in the "Franz Report". Regardless of trends toward merger and consolidation in the private ambulance industry, the fire service in Sacramento County will remain under local control and accountability.

In recent years, during day-to-day operations and interactions, the Sacramento Fire Department has recognized major and continuing deficiencies in the local ambulance service provided by private companies. To compensate for those deficiencies, the fire service initiated early defibrillation programs, monthly training exercises in basic EMS, multi-casualty incident (MCI) drills, and continued upgrading of the department's medical response equipment. The Fire Department continues to assess the system and changes as necessary to meet the needs of patients and the community.

METHODOLOGY

In researching Advanced Life Support systems, it was found that there is no universal standard or blueprint. Community demands and geographical features play a major role in designing an urban pre-hospital care and transportation system. Information from fire, public, and private ambulance providers was compiled, studied and used to develop a system with appropriate staffing and resource usage patterns to provide the most comprehensive and cost effective system for the citizens of this City.

The focus of this proposal is on the delivery of service for 9-1-1 emergency requests for medical assistance. The other services such as inter-facility and non-emergency home to facility transfers will continue to be provided by private providers and do not come under the purview of Sacramento County Emergency Medical Agency.

PERSONNEL

The most important consideration in developing an emergency medical transport program is the personnel. No other single component will have more direct bearing on the quality of the service delivered. During the implementation of this ALS program it is anticipated that entry level requirements would include a current paramedic certification, since considerable training is required for paramedic certification. Working conditions and benefits for these Firefighter/Paramedic (FF/P's) should be commensurate with that of the current firefighter class. Salary enhancement, which is subject to the meet and confer process, must also be considered.

Under this proposal, the personnel staffing these ALS transporting ambulance units, will be dual-role Firefighter/Paramedics (FF/P). The versatility of this classification provides for a better educated and prepared employee. Another advantage to these upgraded positions would include the ability to enhance the level of service on selected fire department

activities such as Urban Search and Rescue and Hazardous Materials responses. These cross-trained employees would possess the necessary skills which would allow them to operate in areas currently not accessible to private ALS providers.

The fire service as a profession has provided a career for many individuals who have an interest in public health and safety service. The dual-role concept offers a structure which reduces the potential for "burn-out" and affords a career ladder for greater assignment flexibility. Today's fire service has recognized the value of keeping their work force fit for service. Through the introduction of a wellness plan that includes such programs as nutrition, physical fitness, and employee assistance today's firefighter is better prepared to deal with an ever-changing work environment.

MEDICAL CONTROL

Medical control is one of the highest priorities of an ALS system. Fire service paramedics work under the direction of the EMS Agency's Medical Director. The Fire Department will work closely with the County of Sacramento EMS Agency to assure strict compliance with standards and guidelines established for excellence in the delivery of prehospital care in all levels of certifications and training. These standards, and compliance with them, are subject to evaluation by any official of the County EMS Office, at any time.

Sacramento Fire Department will work closely with the County EMS office to develop a comprehensive quality improvement system, using the model being developed by the State EMS Authority. This system model is being developed under a grant from the State EMS Authority. It will include suitable templates from which the County of Sacramento can proceed to develop a quality improvement plan.

SYSTEM CONFIGURATION

Under the present system, the Sacramento Fire Department responds to all 9-1-1 requests for emergency medical assistance. This service has resulted in a solid foundation for a fire department prehospital EMS system. Fire Department first-responders significantly reduce the time from onset of symptoms or incident to the initial evaluation of the patient and basic medical interventions. Sacramento City Fire Department's first-responder units have been upgraded to include defibrillation capabilities. When a patient has suffered critical trauma, or cardiac arrest has occurred, or is deemed imminent, the fire department has provided the staffing to assure that patient care is maintained at the highest possible level. For years, the Sacramento Fire Department has supplied additional staffing where needed on the private ambulances.

Under the proposed program, a constant eight (8) ALS transporting ambulance units would be deployed on a twenty-four hour fire suppression schedule. These units would operate from existing fire stations, having the primary responsibility for emergency ALS transportation.

In an effort to maximize current resources and improve the level of service to the community, the Sacramento Fire Department would initiate a two (2) tier response system. This would incorporate the current first-responder Basic Life Support (BLS) fire companies and the proposed ALS transporting ambulance units.

To supply the minimum staffing, forty-eight (48) FTE's in the "Firefighter/Paramedic"(FF/P) classification would be needed. These forty-eight positions would be placed on the current fire suppression schedule, sixteen per platoon. Each ambulance unit would be staffed with two FF/P's. These FF/P's would be able to function as dual-role employees.

In order to provide depth of coverage, current vacancies in the firefighter classification should be considered to be filled with FF/P's. Continuous cross-training would benefit both the department's present BLS program as well as increase resources for the ALS program. Using dynamic scheduling of selected ALS personnel, teamed with predetermined fire companies, current first-responder fire companies would be upgraded to an ALS status with the addition of ALS equipment and a FF/P in a firefighter's position. This change would allow for an increase in the level of care to begin expeditiously.

In response to potential paramedic burn-out, these additional FF/P's will provide the ability for a rotational schedule from suppression activities to paramedic services. The financial impact of these replacement employees would be a slight salary adjustment, as they would be filling current budgeted firefighter positions.

Using this program, upon receipt of a 9-1-1 medical aid request, a determination is made as to the nature of the call; subsequently, the nearest first-responder fire company and/or the nearest ALS transporting ambulance unit is dispatched. When both are dispatched, the first unit to arrive on-scene would usually be the first-responder BLS company which would begin initial treatment; then, upon arrival of the ALS transporting ambulance unit, the paramedics would provide upgraded care and transportation. In cases where the first responding company is an upgraded non-transporting ALS unit, advance life support would begin much sooner. In these cases, the ALS transporting ambulance unit would continue to provide transportation.

DEPLOYMENT

The placement of fire station locations throughout the City provide optimum coverage of the service area with available resources. This same strategy will be used for the deployment of fire service ambulances throughout our response area. In both situations, the concern is for the rapid response to emergencies.

To meet peak response periods, additional transporting units will be added for predetermined time frames. This flexible deployment of units will be utilized, based on compiled data from previous years' medical responses. Factors considered in anticipating demand and the need for additional units include traffic patterns, weather, holidays, and local events. This flexible deployment will be reevaluated on a periodic basis to ensure the cost-effectiveness of the temporary additional units. At such time, when the demand increases, permanent units may be added.

The deployment of ALS transporting ambulance units is established under the basic consideration of providing for complete coverage of the entire city with units that will provide for appropriate response times. Like the fire suppression activities, in times of extreme call volume, the depth of the system will provide for a dynamic movement of resources that will ensure a sufficient level of coverage.

CENTRALIZED DISPATCH

Currently, there are two public dispatch points for emergencies in the County of Sacramento. All requests for Police and Fire emergencies (including medical emergencies) that originate within the City of Sacramento, are directed through a City-operated Public Safety Answering Point (PSAP). Upon receipt of a request for medical assistance, a first-responder fire company is dispatched and a request for an ambulance is forwarded by a computer down-linked to Sacramento Regional Fire/EMS Communication. From there, Sacramento Regional Fire/EMS requests an ambulance from one of the private ambulance dispatch companies.

Under the proposed system, when incidents originate within the City of Sacramento, fire and ambulance units will be dispatched simultaneously. This is a true simultaneous dispatch, unlike the current system. Centralized fire ambulance dispatch will eliminate two of the links in the ambulance dispatch chain. This is a significant time reduction for a critically ill or injured patient.

EXHIBIT A includes further detail on Levels of Clinical Sophistication, Facility Requirements, Administration Staffing, Equipment and Public Education and Information.

FINANCIAL CONSIDERATIONS

Cost recovery for providing both Basic Life Support (BLS) and Advanced Life Support (ALS) emergency medical transport service will be recovered either fully or partially by fees for the service. Uniform rates will be in accordance with the rate schedule currently approved by the County of Sacramento.

Using industry standards, in accordance with approved county-wide user fees, a projected annual income of \$5.5 million is projected. This projected income may change based on policies adopted to administer the billing of services. Using a fee for service approach, persons accessing our system would be billed for the services rendered and the cost of the program should be recoverable. The projected revenue is based on data available from other fire agencies. The collection rate was used as if employing a contracted billing service. Contracting out this service improves the percentage of collection as well as lowers the potential FTE cost.

With a projected service starting date of January 1, 1994, \$2.6 million will be needed to cover the cost of personnel, training and supplies for fiscal year 1993-94. Thereafter it is anticipated that the program will be self-supporting.

At this time, there is no identified funding source to cover the \$2.6 million start-up costs. Finance and Fire will report back in February 1993 with funding options for this program. If Council decides the funding options are not acceptable, the ALS proposal would need to be formally withdrawn.

POLICY CONSIDERATIONS

The fire service in the City of Sacramento has been providing a wide variety of emergency services to the people for years. The commitment to public health and safety in the city has been met with a high performance emergency response system. Under local control and management, the essential services needed by our citizens have consistently been provided.

The responsibility for the health and welfare of the public is the mutual responsibility of all levels of government. The provision of emergency medical service to the public is a public health and safety issue.

Through this ALS program, the City of Sacramento will increase the level of service to its citizens at no additional cost, provide a new source of revenue for the fire department, and serve the public with stable, long-term, career employees.

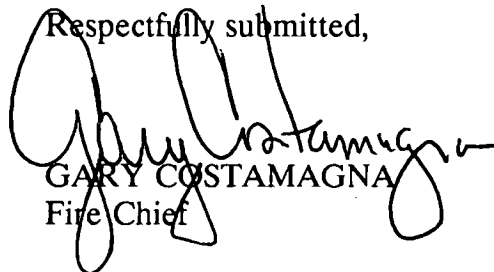
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Under the current system the City Council has no direct authority over the private providers of Advanced Life Support and transportation. This lack of authority prevents any direct intervention by elected officials into decisions that effect the health and safety of city residents. A decision to enter into an Advanced Life Support and Transportation Program will provide tangible benefits to city residents. The current level of pre-hospital care will be greatly enhanced. The number of trained on duty fire department personnel will be increased. The cost of these benefits can be offset by fees generated from the service provided and not create a negative impact on the General Fund.

MBE/WBE

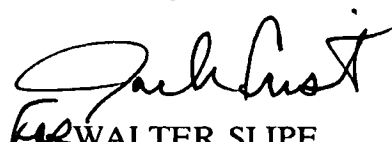
All consideration will be taken to insure MBE/WBE participation

Respectfully submitted,



GARY COSTAMAGNA
Fire Chief

APPROVED:



WALTER SLIPE
City Manager

For Council Meeting of:
December 15, 1992

Contact Person:
Gary Costamagna
246-5268

EXHIBIT A
LEVELS OF CLINICAL SOPHISTICATION

Standards:

The equipment and personnel assigned to fire department ALS emergency medical transport units will comply with regulated standards as defined by the State of California and modified for the specific needs of Sacramento County, by the County EMS Agency. Furthermore, fulfilling the Advanced Cardiac Life Support (ACLS) requirement as mandated in Title 22, Division 9, Article 4, firefighter/paramedics will have supplementary education in Prehospital Trauma Life Support (PTLS), and Pediatric Advanced Life Support (PALS).

In order to maintain proficiency in performance of EMS skills and demonstration of EMS knowledge, all fire service emergency response personnel are required to participate in continuing education classes. In keeping with the training requirements of the State of California, first aid certified personnel are required to recertify every three years, EMT-I certifications are required every two years and the paramedic certifications every two years with testing every four years. Currently, in addition to EMT-I certification, firefighters are given monthly sessions in EMS training, that is over and above the basic requirements. Continuing education guarantees the maintenance of up-to-date knowledge for all levels of emergency medicine.

FACILITY REQUIREMENTS

With respect to the actual placement of additional equipment in fire stations, there is sufficient station accommodations to allow for the increased staffing and apparatus. The program will operate eight to eleven units depending on projected call volume. These units will be strategically located to provide complete coverage to the entire city.

EQUIPMENT

Sophisticated equipment, such as the monitor/defibrillator will be maintained to the manufacturer's specifications by the utilization of service contracts. The equipment will be maintained and serviced in compliance with the manufacturer's recommendation. From the backboards and cervical collars to the monitor/defibrillator, the fire service equipment will be standardized throughout the prehospital setting.

In evaluating vehicle equipment needs, several factors were considered:

- * Gross vehicle weight limitation
- * Interior space to accommodate patient care requirements
- * Exterior dimension that allow for narrow access operation

The recommended transport units are a modular design type III ambulance. The modular construction allows for remounting the patient area (rear box) on a new chassis and also provides a good work area for the paramedics to treat patients. Fourteen (14) transport units are needed, (11) transports housed in fire stations and three (3) in reserve. Two (2) sedans are needed to conduct the administrative responsibilities.

It is anticipated that the unit cost will be approximately \$70,000. The County of Sacramento EMS Agency has established the minimum required medical equipment to be carried on an ALS ambulance. Using their guideline the equipment necessary to fully equipment an ambulance would be approximately \$25,000. In addition, each unit would need to be supplied with a MedNet radio, fire radios, Mobile Data Terminal (MDT), and a cellular phone. The cost of these communication devices would be \$15,000. The budgeted per unit equipment cost would be \$110,000.

ADMINISTRATION

Staff Responsibilities:

Under the proposed program, an administrative unit of nine (9) FTE's would be necessary. The following is a break-down of classifications and responsibilities.

Division Chief

This position will serve as the Division Manager and would assume the overall program implementation as well as ongoing management. Areas of responsibility would include: budget, planning, interagency coordination, and related functions.

Administrative Captain (2)

These positions would be responsible for the daily support of the Division. Responsibilities for the Captains include: communicable disease follow-up, supplies and services, inquiry and complaint investigation, and liaison to other EMS providers. Additionally, this position would assume all of the current EMS Officer responsibilities.

Registered Nurse

This position would be the lead training coordinator and would facilitate the maintenance of established County training requirements. The expansion of our current quality assurance (Q/A) program or the development of a new Q/A program would be coordinated by our staff nurse. By having a staff nurse, the current outside contract for defibrillation training could be eliminated.

Public Education Specialist

The need for public education is vital to the well-being of our community. A clear understanding of how our EMS system operates will reduce some of the unnecessary requests for medical assistance. This position will provide the necessary staff support to educate the general public as well as some of the other consumers of emergency medical services, such as convalescent facilities.

Media Specialist

In an effort to accommodate the necessary training needs of EMS, as well as provide the public with usable educational material, a media specialist would be employed. This position would develop, produce, and maintain the Divisions' multi-media system. It has been proven by other agencies, that through the use of video production the need for additional positions has been minimized.

Fire Service Worker (2)

Currently, the Department employs two Fire Service Workers. Their areas of responsibility are: repair of damaged equipment, central supply for the Suppression Division, maintenance of all non-vehicle fire equipment, such as, chain saws, Hurst tools, and self-contained breathing apparatus. It is anticipated that with the ALS-EMS Division, we would employ a bin or container re-stocking system. In order to keep the maximum number of units available for response, the responsibility for re-supply would fall to the Fire Service Workers. This increased workload will require additional staffing to meet the demands. These additional positions will also allow for an extension in the operational hours of the Utility Shop, thus providing resources seven (7) days a week.

Typist Clerk

This position would provide the necessary clerical support for the EMS Division.

PUBLIC EDUCATION AND INFORMATION

Education and community awareness programs provide the means to promote the EMS system, to help shape public attitudes and to inform citizens about beneficial EMS services, issues and techniques. Currently, the fire service has a very effective public education program which deals with fire and life safety issues. With the adoption of this full service EMS plan, the public education program will be expanded to incorporate emergency medical information, in order to educate the public to effectively utilize the emergency medical system.

Public Education - Public Education Programs teach functional knowledge and/or skills required by the community to effectively utilize the emergency medical system, which

includes such skills as accessing 9-1-1, performing citizen CPR and administering basic first aid. The provision of public education serves a dual purpose, educating the citizenry, as well as, providing positive public relations. An effective medical Public Education Program modifies or changes public behavior in a positive manner.

Public Relations - In addition to generating community awareness, Public Relations Programs, such as follow-up visits to patients after hospital release, school presentations, career day presentations, participation at health fairs, senior check-ups and visits, are designed to create and instill a feeling of confidence in the system. These programs will be coordinated with current health care providers, existing community groups, service organizations, and the Chamber of Commerce, to advance the health of the community.

RESOLUTION NO. 92-919

ADOPTED BY THE SACRAMENTO CITY COUNCIL

ON DATE OF _____

**RESOLUTION AUTHORIZING THE ESTABLISHMENT OF
AN ADVANCED LIFE SUPPORT AND AMBULANCE TRANSPORTATION
PROGRAM IN THE CITY'S FIRE DEPARTMENT**

BE IT RESOLVED THAT:

1. The City Council authorizes the Fire Department to develop an Advanced Life Support and Ambulance Transportation Program with an implementation date of January 1, 1994, and to notify the County Board of Supervisors of this intent.
2. The City Council directs the Finance and Fire Departments to seek methods of funding \$2.6 million for the program in FY 1993-94, with a report back by February 1993.

MAYOR

ATTEST:

CITY CLERK

APPROVED
BY THE CITY COUNCIL

DEC 15 1992

OFFICE OF THE
CITY CLERK

FOR CITY CLERK USE ONLY

RESOLUTION NO.: _____

DATE ADOPTED: _____