BID NUMBER PA-02205 REBID

TO: CITY OF LONG BEACH
CITY MANAGER
ATTN: CITY CLERK
333 West Ocean Boulevard, Plaza Level
Long Beach, California 90802

INVITATION TO BID

Airport Crash Rig REBID

CONTRACT NO. 29528

1. **COMPLETE CONTRACT:**
This Invitation to Bid, together with THE NOTICE INVITING BIDS, the entire Bid (including Specifications), or any items(s) thereof, the signature page, Instructions to Bidders, General Conditions, Special Conditions, Bid Section, Addendums, and when required, CONTRACTOR'S BOND shall become the Contract upon its acceptance by the City Manager or designee on behalf of the City of Long Beach, Contractor will be provided with a copy of the executed Contract. All materials or services provided by the Contractor shall comply with the City Charter, and all applicable Federal, State and City Laws.

2. **SERVICES TO BE PROVIDED BY THE CONTRACTOR:**
Contractor shall upon acceptance of this bid by the City, furnish the goods and services herein specified according to the terms and conditions set forth herein.

3. **AMOUNT TO BE PAID:**
The City shall pay Contractor for the goods or services as described in the section entitled "PAYMENT" in the Instructions to Bidders.

4. **CHOICE OF ALTERNATE PROVISIONS; OPTIONS; NOTIFICATION:**
When alternative provisions are requested, or options are offered, Contractor will be notified as to which provision, or option, is being accepted at the same time that he is notified that he is the successful Bidder.

5. **DECLARATION OF NON-COLLUSION:**
The undersigned certifies or declares under penalty of perjury that this bid is genuine and not sham or collusive, or made in the interest or on behalf of any person or entity not herein named; that the Bidder has not directly or indirectly induced or solicited any other Bidder to submit a sham bid, or any other person or entity to refrain from bidding, and that the Bidder has not in any manner sought by collusion to secure to himself any advantage over other Bidders.

BIDDER MUST COMPLETE AND SIGN BELOW:
(Signature of Corporate Officers or persons authorized to sign bids and contracts on behalf of the Contractor – refer to page 2 Instructions Concerning Signatures.)

EXECUTED AT: Dallas (CITY) TX (STATE) **ON THE** 19th **DAY OF** January (MONTH), **20**06.

COMPANY NAME: Crash Rescue Equip. Svc., Inc. **TIN:** [redacted] (FEDERAL TAX IDENTIFICATION NUMBER)

STREET ADDRESS: 3912 W. IllinoisAve **CITY:** Dallas **STATE:** TX **ZIP:** 75211

PHONE: (972)243-3307 **FAX:** (972)243-6504

S/ Sharon E Relyea (SIGNATURE) — Chairperson of Board (TITLE)

Sharon E. Relyea (PRINT NAME) — srelyea@crashrescue.com (EMAIL ADDRESS)

S/ [signature] (SIGNATURE) — Vice President (TITLE)

Grady North (PRINT NAME) — gnorth@crashrescue.com (EMAIL ADDRESS)

**ALL SIGNATURES MUST BE NOTARIZED FOR ALL COMPANIES LOCATED OUTSIDE THE STATE OF CALIFORNIA.
NO OUT-OF-STATE BID WILL BE CONSIDERED UNLESS A NOTARIAL ACKNOWLEDGMENT IS ATTACHED.
NOTARIES ARE NOT REQUIRED FOR CALIFORNIA BIDDERS.**

IN WITNESS WHEREOF the City of Long Beach has caused this contract to be executed as required by law as of the date stated below.

THE CITY OF LONG BEACH

BY [signature] Director of Financial Management — 4/20/06 Date

APPROVED AS TO FORM 4/20, 2006.
ROBERT E. SHANNON
CITY ATTORNEY
[signature] Senior Deputy

The City of Long Beach is committed to provide maximum opportunities for Disadvantaged, Minority, Women, Long Beach and Other Business Enterprises (DBEs, MBEs, WBEs, LBBEs and OBEs) to compete successfully in supplying our needs for products and services.

The following information is submitted regarding the bidder:

Legal Form of Bidder:

Corporation State of TX

Partnership State of _____

General Limited

Joint Venture

Individual DBA _____

Limited Liability Company State of _____

Composition of Ownership (more than 51% of ownership of the organization): **OPTIONAL**

Ethnic (Check one):

Black Asian Other Non-white

Hispanic American Indian Caucasian

Non-ethnic Factors of Ownership (check all that apply):

Male Yes - Physically Challenged Under 65

Female No – Physically Challenged Over 65

Is the firm certified as a Disadvantaged Business: Yes No

Has firm previously been certified as a minority-owned and/or woman-owned business enterprise by any other agency?

Yes No

Name of certifying agency: Self certified

BID NUMBER PA-02205 REBID

INSTRUCTIONS CONCERNING SIGNATURES

BID NUMBER PA-02205 REBID

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of Texas

County of Dallas

On 1-9-2006 (DATE) Before me, Cindy Arrington, Notary Public (NAME, TITLE OF OFFICER – E.G. "JANE DOE, NOTARY PUBLIC")

Personally appeared Sharon E Relyea, Grady North (NAME(S) OF SIGNER(S))

☑ personally known to me - **OR** - ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

CINDY ARRINGTON
MY COMMISSION EXPIRES
February 2, 2009

WITNESS my hand and official seal.

Cindy Arrington
SIGNATURE OF NOTARY

OPTIONAL

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

CAPACITY CLAIMED BY SIGNER

☐ INDIVIDUAL
☐ CORPORATE OFFICER

TITLE(S)

☐ PARTNER(S) ☐ LIMITED ☐ GENERAL
☐ ATTORNEY-IN-FACT
☐ TRUSTEE(S)
☐ GUARDIAN/CONSERVATOR
☐ OTHER:

SIGNER IS REPRESENTING:
NAME OF PERSON(S) OR ENTITY(IES):

DESCRIPTION OF ATTACHED DOCUMENT

TITLE OR TYPE OF DOCUMENT

NUMBER OF PAGES

DATE OF DOCUMENT

SIGNER(S) OTHER THAN NAMED ABOVE

INSTRUCTIONS TO BIDDERS

1. PREPARATION OF BID:

The preparation of the bid, including visits to the Site prior to submittal of the bid, shall be at the expense of Bidder. All prices and notations must be typewritten or written in ink. Any markings in pencil shall not form part of the bid and shall be disregarded by the City. Any changes or corrections in the bid must be initialed in ink by the person signing the bid. Bidder shall state brand name or make of each item bid. If not bidding on item as described, the

City's purchases of goods and services are based on the City's actual needs and requirements. The City is obligated under this contract/purchase order to purchase and pay for only those goods and services that the City needs and requires, and that the City actually orders and receives. Any dollar amount identified as a "not to exceed:" amount in any City document is not a guaranteed payment amount to any contractor or service provider. Furthermore, the City may determine that its needs and requirements may be met by City labor or by a second contractor

11. RIGHT TO REJECT:

City reserves the right to reject at any time any or all bids, or parts

SUBMIT TO:

CITY OF LONG BEACH

[redacted]

CONTRACT – GENERAL CONDITIONS

1. Acceptance of the offer contained in this Contract is expressly limited to the terms and conditions of such offer as herein stated.

2. No charges for taxes, transportation, boxing, packaging crating or returnable containers will be allowed and paid by the City unless separately stated hereon. All sales, use excise or similar taxes to be paid by the City must be itemized separately hereon and on invoices. The City is exempt from payment of Federal Excise Tax under Certificate No. 95-73 0502K and none shall be charged to the City.

3. The City's obligation to pay the sum herein stated for any one fiscal year shall be contingent upon the City Council of the City appropriating the necessary funds for such payment by the City in each fiscal year during the term of this Contract. For the

	Comply Yes	Comply No	Comments and Exceptions
INSTRUCTIONS: State comments and or exceptions in the blank spaces provided for each section regarding the vehicle or equipment offered corresponding to the specifications set forth. FAILURE TO COMPLETE ALL BLANK SPACES WILL OTHERWISE BE DETERMINED AS VENDOR MEETING SPECIFICATIONS MINIMUMS.	X		
GENERAL: This specification describes a new, unused, latest model Ford F-550 4-wheel drive crew cab vehicle specifically constructed for rapid response to aircraft emergencies at the Long Beach Airport by the City of Long Beach, Fire Department. The Long Beach Airport has an Index "C" rating and shall comply with all FAA regulations for fire protection at the airport.	X		
Cab and chassis manufacturer shall use the newest materials for construction. The Rapid Intervention Vehicle (RIV) shall be completely equipped as specified and be ready for service upon delivery. The unit shall comply will the latest editions of the vehicle and administration code of the State of California, SAE standards, National Fire Protection Administration, Federal Motor Vehicle Safety Standards, provisions of California OSHA and built in accordance with Federal Aviation Regulations, Part 139, and Federal Aviation Administration Advisory Circular 150/5220-19. The omission from the specifications of any standard feature as shown in the manufacturer's brochure shall not alleviate the Contractor from the responsibility of furnishing a complete fire department apparatus with all of the manufacturer's latest improvements in the current production unless specifically deleted in the specifications. The apparatus and all components shall be standard production items unless otherwise specified.	X		

REBID
DETAILED SPECIFICATIONS NO. FS0516
AIRCRAFT, RESCUE, FIREFIGHTING, RAPID INTERVENTION VEHICLE
TRUCK, CREW CAB PICK-UP, EMERGENCY, SERVICE BODY

	Comply Yes	Comply No	Comments and Exceptions
GENERAL: (continued)			
The manufacturer of the vehicle shall have the ability to build a complete Aircraft, Rescue and Firefighting (ARFF) unit with the exception of the cab and chassis.	X		
The manufacturer shall certify in writing that the chassis used for this vehicle is suitable for the intended service. Certification shall include the following components: Agent Tank Pressure Relief Device; Agent Storage Container;	X		

	Comply Yes	Comply No	Comments and Exceptions
equal thereof in every respect.			
DELIVERY: Delivery of the ARFF RIV unit shall be under its own power to allow for "break-in" period. Unit shall be FOB Long Beach Fleet Services, 2600 Temple Ave Long Beach, CA. 90806.	X		
FINAL ACCEPTANCE: The manufacturer shall meet all Quality Assurance requirements specified in FAA Advisory Circular 150/5220-19, Chapter 4, Sections 1 - 4. The City of Long Beach Fire Department representatives and Fleet Services representatives shall perform an acceptance test and a visual inspection of all on-board equipment and vehicle components in addition to conducting a road test of each unit.	X X		
DESCRIPTION: Ford F-550 4-wheel drive crew cab with 176" wheel base (W57). Unit shall include XLT package. (667A) Unit shall be equipped with Ambulance Prep Package (47A).	X		
GROSS VEHICLE WEIGHT: Shall have a minimum GVWR of 17,950 lbs.	X		
AXLES: Front: Shall have a minimum GAWR of 6,000 lbs. Rear: Shall have a minimum GAWR of 13,500 lbs.	X		

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TRUCK, CREW CAB PICK-UP, EMERGENCY, SERVICE BODY

	Comply Yes	Comply No	Comments and Exceptions
AXLE RATIO: Shall be 4.88 to 1 ratio, limited slip.	X		
CAB TO AXLE: Shall be compatible with make and size of body mounted to provide the correct load distribution for maximum legal payload.	X		
WHEELBASE: Wheelbase shall be a minimum of 176".	X		
SUSPENSION: OEM heavy service suspension package (674).		X	Not available for use with ambulance prep package per Ford Motor Co.
SHOCK ABSORBERS: Front: Heavy Duty Gas. Rear: Heavy Duty Gas.	X		
ENGINE: 6.0 Liter DI Power Stroke Diesel engine with 325 HP @ 3300 RPM and 560 Lb. Ft. @ 2000 RPM. (99P)	X		
AUXILLARY IDLE CONTROL: An auxiliary idle control to charge vehicle battery system shall be provided. Auto throttle shall activate when parking brakes are applied and the vehicle is in the "Park" position	X		

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TRUCK, CREW CAB PICK-UP, EMERGENCY, SERVICE BODY

	Comply Yes	Comply No	Comments and Exceptions
Transmission warranty shall be manufacturer's standard. The frame and fasteners shall have a lifetime warranty. Manufacturer shall provide to the City of Long Beach a complete listing of numbers for all belts, filters and hoses upon receipt of delivery.	X		

	Comply Yes	Comply No	Comments and Exceptions
COOLING SYSTEM: Manufacturer's heaviest cooling capacity available option for engine furnished shall be capable of maintaining proper operating temperatures under all conditions in the Long Beach area including extended periods of idling with the air conditioning on.	X		
TRANSMISSION: Shall provide five- (5) speed automatic transmission with over-drive gear (44B). An auxiliary transmission cooler with the largest capacity shall be provided. Provision shall be made for Power Take-off (62R). Transmission reservoir shall have a drain plug for periodic fluid changes. An analog transmission temperature gauge shall be located in the crew cab instrument panel. Location will be determined.	X X X		
FRAME: Shall be pressed alloy steel to provide sufficient rigidity and reserve capacity to support specified G.V.W.R. Frame shall have sufficient number of cross members to provide torsional rigidity strength and to support the frame rails where fuel tanks and rear suspension assemblies will be mounted. Heavy-duty cross members shall be provided for rear spring mounting bolts at the front and rear spring suspension area to preclude stress cracks.	X		
STEERING: Shall be factory power-assisted, standard with tilt wheel.	X		

	Comply Yes	Comply No	Comments and Exceptions
WHEELS:			
Front: Two (2) polished aluminum type 19.5" x 6.0" minimum. (64A)	X		
Rear: Two (2) polished aluminum type 19.5" x 6.0" minimum outer wheels and two (2) inboard steel wheels.	X		
Rim size shall be minimum 19.5" x 6.0" (64A)	X		
TIRES:			
Two (2) front tires Michelin LT225/70/19.5 BSW "All-Season" shall be provided or approved equal. (T9B)	X		
Four (4) rear tires Michelin LT225/70/19.5 BSW "All-Season" or approved equal shall be provided for the rear. (T9B)	X		
BRAKES:			
Service brakes shall be heavy-duty hydraulic with power assist. Emergency brake shall be factory standard. Front disc and rear disc shall be largest available for specified axles as per OEM. Lining shall be non-asbestos. Unit(s) shall be equipped with ABS, front and rear.	X		
ELECTRICAL SYSTEM:			
Shall be a 12-volt negative ground system. All cab and chassis accessories shall be OEM powered (903).	X		
ALTERNATOR:			
Shall be two (2) OEM heavy-duty 12-volt, 130 amp alternators.	X		

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TRUCK, CREW CAB PICK-UP, EMERGENCY, SERVICE BODY

	Comply Yes	Comply No	Comments and Exceptions
WIRING: All wiring must be color-coded and numbered. All exterior wires, wire harnesses, terminals or connectors subject to road, grime, dirt, moisture and rock throw, shall be adequately protected and hermetically sealed. Whenever possible, individual wires shall be grouped into harnesses [illegible]	X		

	Comply Yes	Comply No	Comments and Exceptions
to the master battery switch. Mobile Data Terminal shall be wired directly to the battery.	X		
CAB INSTRUMENT CONSOLE, ELECTRICAL CONTROL PANEL: All light switches shall be rocker panel type replaceable independently with integral indicator lights to show when lights are energized and recessed in the console. All switches shall be identified with a backlighted panel. There shall be a cab console provided to store all radio equipment, siren control boxes and vehicle intercom systems, unit shall be removable with quick disconnects. Location will be determined.	X X		
FUEL TANK: There shall be a forty (40) gallon fuel tank provided. Fuel fill shall be on the driver's side incorporated into the fire service body. Fuel fill area shall be labeled "Diesel Fuel Only".	X		
CALIFORNIA EMISSIONS STANDARD: This vehicle falls under the exemption for emergency vehicles for government agency (936).	X		
EXHAUST SYSTEM: The exhaust system shall be OEM standard and shall terminate behind the rear axle on the passenger's side away from the fuel fill area.	X		
MODIFIED EXHAUST TAILPIPE: The tailpipe shall be modified to accommodate Plymovent Vehicle Station Exhaust equipment. Location shall be determined at engineering	X		

	Comply Yes	Comply No	Comments and Exceptions
conference.			
MOBILE JUMP START CONNECTOR: A quick connect for mobile jump-starting shall be provided, Brad Harrison model # 49110, or approved equal. Quick connect coupling shall be permanently mounted in the front bumper. Exact location shall be determined at engineering conference.	X		
SEATS: Seating shall be grey in color for five (5) people. Front seats shall be captain chairs. Rear seats shall be 60/40 fold down. All seats shall be on heavy-duty cloth material with high durability.	X		
ADDITIONAL GRAB HANDLE: Grab handles shall be provided at all entry door points. (A & B pillars)	X		
CAB STEPS: Cab steps shall be provided for cab doors to facilitate easy entry and exiting. (18L).	X		
ADDITIONAL CAB & CHASSIS OPTIONS: • Air Dam • Tinted Glass • Grill Insert with chrome surround • Single beam headlights	X		

	Comply Yes	Comply No	Comments and Exceptions
• Class V Trailer Hitch • Air bags • Air conditioning • Auxiliary 12V DC Power Point three (3) • Door Trim with map pockets • Horn (Dual electric) • AM/FM/CD Player with 4 speakers • Windshield Wiper intermittent controls • Ground shall be illuminated when any door is open	X		
FIRE SERVICE BODY: The fire service body shall be designed to mount on a 60" cab to axle chassis. The service body shall be designed to be equal to chassis height. All body standard side compartments shall be 24 inches deep, with a useable depth of 23 inches.	X		hAll body side compartments wwill be 21 inches deep with a useable depth of 20 inches.
The cross members shall extend the full width of the body to support the compartments.	X		
There shall be a minimum of four (4) cross members spaced from front to rear.	X		
The center cargo area floor shall be constructed with aluminum diamond tread plate, and all other compartments shall have smooth aluminum sweep-out type floors.	X		
All body compartments shall be properly vented to keep dirt and water from entering. The compartments shall be made to the largest practical dimensions to provide maximum storage capacity. All seams shall be sealed using a permanent pliable caulking.	X		
Polished aluminum rub rails 1-1/2 inches x 3/8 inch thick shall be furnished below the front and rear compartments doors on both sides of the apparatus body. The rub rails shall be spaced ¾ inch from the body enabling shock absorbency	X		

	Comply Yes	Comply No	Comments and Exceptions
and cleaning ease. Spacers shall be nylon, with counter sunk stainless steel bolt fasteners for easy replacement.	X		
The chassis fenders shall be built integral with the sides of the apparatus body. The fender wells shall be constructed of aluminum diamond tread plate, with a heavy-duty, polished extruded aluminum fenderette.	X		
A circular smooth inner wheel liner shall be furnished for each fender providing ease of cleaning. Sufficient clearance shall be provided when the apparatus is fully loaded.	X		
The body shall be fastened to the chassis frame with two (2) spring-loaded "U" clamps, one on each side at the front to allow for flexing. The body shall be bolted solid at the rear of the frame flange plate utilizing the tow eyes and two (2) "U" bolts.	X		
Two (2) mud flaps shall be supplied and mounted one on each side behind the rear wheels.	X		
The body shall carry a full structural warranty.	X		
REAR TAILBOARD:			
The rear tailboard framework shall be constructed with 1-1/2 inch tubular steel and bolted to the frame rails at the rear of the chassis. The tailboard shall be 8" in depth and run the full width of the body with a 1" space between the body and the tailboard. The framework shall be covered with NFPA approved slip-resistant	X		A rear pull-out/drop down step shall be provided which allows for a high angle of departure. The stepping surface will be approx. 48" long x 7" wide and supported on each end by 3/8" machined aluminum tread plate. The step surface shall be fabricated from "grip strut"

	Comply Yes	Comply No	Comments and Exceptions
2" ball hitch with pintle hook. Trailer wiring with 7-pin connector shall be included.	X		
COMPARTMENT DOORS: Compartment doors shall be constructed of aluminum roll-up type. Roll up doors shall fasten securely to latching mechanisms at the bottom of each door. Roll up doors shall be equipped with an interior compartment lighting mechanism to illuminate the entire, interior compartment automatically when the doors are open. Roll up doors shall be painted finished job color.	X		
LEFT SIDE COMPARTMENTS: There shall be one (1) full height compartment, ahead of the rear chassis wheels. The compartment door opening shall be full height x approximately 29-1/2 inches wide.		X	Compartment L1 will have a door opening of approx. 271/2" wide x 471/2" high x 21" deep.
There shall be one (1) compartment over the rear chassis wheels. The compartment door opening shall be full height x approximately 48 inches wide. A roll-out tray shall be provided for this compartment.		X	Compartment L2 will have a door opening of approx. 40" wide x 24" high x 21" deep.
There shall be one (1) compartment behind the rear chassis wheels. The compartment door opening shall be full height x approximately 29-1/2 inches wide.		X	Compartment L3 will have a door opening of approx. 271/2" wide x 371/2" high x 21" deep.

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TRUCK, CREW CAB PICK-UP, EMERGENCY, SERVICE BODY

	Comply Yes	Comply No	Comments and Exceptions
RIGHT SIDE COMPARTMENTS:			
There shall be one (1) full height compartment ahead of the rear wheels. The compartment door opening shall be full height x approximately 29-1/2 inches wide.		X	Compartment R1 will have a door opening of approx. 271/2" wide x 471/2" high x 21" deep.
There shall be one (1) compartment over the rear chassis wheels. The compartment door opening shall be full height x approximately 48 inches wide. A rollout tray shall be provided in this compartment.		X	Compartment R2 will have a door opening of approx. 40" wide x 24" high x 21" deep.
There shall be one (1) compartment behind the rear chassis wheels. The compartment door opening shall be full height x approximately 29-1/2 inches wide.		X	Compartment R3 will have a door opening of approx. 271/2" wide x 371/2" high x 21" deep.
LADDER STORAGE:			
Mounting for 15', two-section ladder shall be provided. Ladder mounts shall keep the ladder secure and free from any lateral movement. Location of ladder mounting brackets shall be on top of right side of service body compartments.	X		
RIGHT SIDE FOOT STEP INSERTS:			
Two (2) Cast Products Inc.model # SP-3003-1 or approved equal, recessed aluminum foot step shall be located in the right-side fender well to aid in removing and replacing of ladder on the top right compartment.	X		
HANDRAILS:			
Handrails shall be round extruded aluminum with rubber slip resistant inserts. The handrail brackets shall be chrome-plated brass and fastened with stainless steel bolts.	X		
Location of the handrails shall be at the rear of the body, one on each side of the open cargo	X		

	Comply Yes	Comply No	Comments and Exceptions
area.			
DRI-DEK MATTING: Dri-Dek, or approved equal, interlocking floor matting shall be provided for all compartment floor, all adjustable shelves, all open storage and all rollout trays.	X		
ADJUSTABLE SHELVES: There shall be four (4) adjustable shelves with a 1-½ inch lip bent around the perimeter of the shelf. Each adjustable shelf shall utilize four (4) uni-strut channels, two (2) struts on the forward body wall and two (2) on the rear body wall. Each adjustable shelf shall be adjusted from floor to ceiling. The locations of each shelf are as follows; • One (1) located right side forward compartment • One (1) located left side forward compartment • One (1) located right side rear compartment • One (1) located left side rear compartment	X X		
ROLL-OUT DROP DOWN TRAYS: Two (2) rollout trays shall be constructed with 1-½ inch lip bent around the perimeter of the tray. The trays shall be fully adjustable from floor to ceiling. Shelves shall have the maximum capacity of carrying 300 pounds. Trays shall rollout and drop down to 45-degree angle. The roll out trays shall have heavy-duty grade roller bearings. The rollout trays shall be mounted in the compartments located above the rear chassis wheels.	X		

	Comply Yes	Comply No	Comments and Exceptions
TWIN AGENT SKID UNIT:			
A Twin Agent Skid unit with capacity of carrying 450 pounds of Purple "K" Potassium bi-carbonate extinguishing agent and 150 gallons of AFFF foam concentrate shall be provided. The skid unit shall be permanently mounted into the center cargo area. Mounting shall allow for 2 inch clearance on both sides.	X		
Foam extinguishing agent shall be capable of discharging at a rate of 60 GPM. Potassium bi-carbonate shall be capable of discharging at a rate of six (6) pounds per second.	X		
The skid unit shall be equipped with the following; • 450 pounds of Williams-Hydro-Chem, or approved equal, Purple "K" Potassium bi-carbonate. • 6 gallons of 3% AFFF foam • Two (2) 400 cubic feet nitrogen charged cylinders • 100 feet of dual agent hose with a neoprene jacket • Hannay, or approved equal, steel hose reel with a friction brake and hose roller guides • 12V DC ½ horsepower electric rewind motor and manual hand crank (shipped loose) • One (1) Williams-Hydro-Chem, or approved equal, 1 inch nozzle with pistol grip Model # HCHG-60-1.0 • Nozzle stainless steel cup holder • (2) Spare 400 cubic feet nitrogen cylinders	X		Three(3) 400 cubic ft. nitrogen charged cylinders will be provided.
Dual agent skid unit shall carry a manufacturer's warranty. Warranty period shall start from date of acceptance.	X		

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AIRCRAFT, RESCUE, FIREFIGHTING, RAPID INTERVENTION VEHICLE

TRUCK, CREW CAB PICK-UP, EMERGENCY, SERVICE BODY

	Comply Yes	Comply No	Comments and Exceptions
COMPARTMENT LIGHTING: The fire service body shall be wired to provide illumination of all compartments. ***All compartment lights shall illuminate the entire compartment automatically when***	X		

	Comply Yes	Comply No	Comments and Exceptions
provided. Location shall be on each side of the rear body. Back-up lights shall illuminate with transmission in the reverse gear.	X		
Stop, turn, tail and back-up lights shall be mounted in a CAST3 or approved equal, vertical aluminum cast housing.	X		
CLEARANCE LIGHTS:			
Clearance lights and reflectors shall comply with ICC regulations.	X		
Two (2) rear corner markers with three (3) LED red marker light cluster shall be recessed mounted in the center of the rear tailboard.	X		
LIGHTED LICENSE PLATE BRACKET:			
A lighted license plate bracket shall be mounted on the rear of the apparatus.	X		
BACK-UP ALARM:			
A back-up alarm shall be provided. The back-up alarm shall be audible for up to 25 feet'. Back-up alarm shall be rated for 97 decibels. The alarm shall activate when in the transmission is in the reverse gear.	X		
OPEN CARGO AREA LIGHT:			
A Whelen 600 Series, or approved equal, scene light with flange rings shall be provided to illuminate the cargo area/dual agent skid unit.	X		
An illuminated wide rocker switch located in the cab console shall control light. Location of scene light will be determined.	X		

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EMERGENCY LIGHTS:			
All emergency lights shall meet the requirements of FAA Advisory Circular 150/5210-5, Section 8.	X		
All emergency lights shall be wired into the cab instrument console. The emergency lights shall include: One (1) Whelen Ultra-Freedom Series, or approved equal LED 55" Light bar shall be mounted on the cab roof. Included in the light bar are four (4) corner LED lights at a 45-degree angle, halogen alley lights, and clear "Take-Down" lights located in the middle of the light bar.	X		
Two (2) Whelen 700 series, or approved equal LED chassis grille lights with red lens covers shall be provided. One (1) LED grille lights shall be steady burning red to comply with California	X		

	Comply Yes	Comply No	Comments and Exceptions
Two (2) Whelen 700, or approved equal, LED amber lights shall be located at the lower rear corners of the service body.	X		
One (1) Unitrol Touch master TM-4, or approved equal siren control box shall be provided. Siren shall have horn ring control, noise canceling public address microphone. By-pass switch shall be wired directly from the vehicle battery.	X		
Location of siren control box shall be in the center console in the cab. All emergency lights shall be wired into the siren control box.	X		
Two (2) Whelen, or approved equal, 100 Watt speakers shall be provided for siren and public address. 100 Watt speakers shall be mounted in the chassis grille below the front bumper.	X		
All Whelen, or approved equal, 600/700/900 Series lights shall come with chrome flange rings.	X		
CAB CONSOLE MAP LIGHT: One (1) Federal Litt-lite # LF-12, or approved equal, gooseneck map light shall be provided. Location of map light shall be on officer's side of cab console.	X		
FORWARD FACING INFRARED CAMERA (FLIR): One (1) Night Site 4000 B, or approved equal, infrared camera shall be provided. The FLIR camera shall meet the requirements of FAA Advisory Circular 150/5210-19, Chapter 2, Section 1 "Night Visions Subsystem". The FLIR camera shall be equipped with in cab display monitor. The FLIR camera shall be located on the cab roof mounted on or at a location approved by the fire department.	X		A FLIR Ball brand camera will be provided which meets the FAA A/C 15-/5220-19.

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TRUCK, CREW CAB PICK-UP, EMERGENCY, SERVICE BODY

	Comply Yes	Comply No	Comments and Exceptions
KUSSMAUL AUTO CHARGER: A Kussmaul Auto Charger Model #091-11HO-12, or approved equal, shall be installed and shall be wired to all the batteries. The charger shall receive its power from the shore power receptacle. Vehicle charging system shall have a digital LED bar graph display. Charging unit shall be located where there is adequate ventilation and clearance. Specific location TBA. The charger shall carry a manufacturer's warranty.		X	A Pro XL brand auto charger will be provided.
SHORELINE PLUG RECEPTACLE: One (1) 110-volt 30-amp receptacle shall maintain a charge on the vehicle batteries for constant readiness. Plug receptacle shall have a spring-loaded plug cover and be weather tight. Location shall be in the front driver's side quarter panel.	X		
TELESCOPING 12 VOLT DC LIGHTS: Two (2) Fire Research Optimum Model # H-15, or approved equal, 12 volt DC telescoping lights shall be mounted using a side mount, bottom raise pole. Location shall be on the forward face	X		

and Europe.

With the new requirements of providing a broad range of sophisticated emergency services for airport operations, airport administrators are faced with the challenge of providing a variety of specialized equipment without a corresponding increase in budgets. Crash Rescue recognized the opportunity to

	Comply Yes	Comply No	Comments and Exceptions
PAINTING:			
After the apparatus body and components have been assembled, the apparatus body shall be completely sanded and deburred for removal of any sharp edges. The apparatus and components shall be metal prepped to provide a superior substrate for painting. The apparatus body and components shall undergo a degreasing/cleaning process, starting with a clear, acidic liquid, designed to remove surface soils and oxidation. After cleaning, an epoxy primer shall be applied and sanded prior to the topcoats.	X		
The finish painting process shall consist of applying two (2) coats of high quality, 3.5 VOC polyurethane paint to maintain proper film thickness.	X		
The cab and chassis shall be painted to match the color of the fire service body.	X		
The apparatus body and chassis shall be painted according to the FAA Advisory Circular 150/5210-5, Section 6.b.	X		
Paint color shall be Dupont Imron #7744-U, or approved equal, Lime-Yellow. Color to match existing fleet.	X		
A sample paint chip shall be provided to the City prior to paint approval.	X		
Paint shall carry a ten (10) year warranty.	X		
UNDERBODY COATING:			
The apparatus body shall be sprayed with a protective undercoat prior to the installation of the modular body.	X		

	Comply Yes	Comply No	Comments and Exceptions
INTERIOR BODY COMPARTMENT SPLATTER COAT: Shall have a splatter coat applied to all interior compartments. A clear topcoat shall be applied after the splatter coat has been applied.	X		
GRAPHICS & LETTERING: Simulated gold leaf lettering up to sixty (60) characters, shall be used to identify fire department.	X		
Three (3), 18" high reflective red vinyl graphics shall be used to identify unit designation.	X		
Graphics shall include 12" high, 3-letter airport designation (LGB) utilizing vinyl reflective material, one on each side of vehicle.	X		
Graphics shall include fire department door seal with a banner. City of Long Beach two-inch vehicle identification shall be included.	X		
All markings shall be in accordance with FAA Advisory Circular 150/5210-5, Section 7.b.	X		
REFLECTIVE STRIPPING: A six-inch (6") 3-M, or approved equal white reflective stripping shall be included in the graphics. Stripping shall be affixed to the perimeter of the cab and chassis.	X		

REBID
DETAILED SPECIFICATIONS NO. FS0516
AIRCRAFT, RESCUE, FIREFIGHTING, RAPID INTERVENTION VEHICLE
TRUCK, CREW CAB PICK-UP, EMERGENCY, SERVICE BODY

	Comply Yes	Comply No	Comments and Exceptions
COMMUNICATION EQUIPMENT:			
The following radio and data communication equipment shall be provided to the City of Long Beach:	X		
One (1) Panasonic Toughbook #CF-29, with Windows XP software with 1.3 Pentium "M" processor, 40 GB hard drive, 256 RAM, 802.11G & B, DVD/CDR-W Drive. ***No exceptions***. Mobile Data Terminal shall be wired "hot" directly to the battery.	X		
One (1) Panasonic Toughbook Rack Vehicle Dock	X		

	Comply Yes	Comply No	Comments and Exceptions
equal, vehicle intercom system with radio interface. Vehicle intercom system shall be equipped with four (4) Push-to-talk radio transmit buttons.	X		
Two (2) Set Com "behind the head" headsets with microphone boom.	X		Avcomm SH-30-01 "behind the head" equivalent model will be provided in lieu of Set-Com
LOOSE EQUIPMENT: ***Per the FAA Advisory Circular 150/5220-19,*** the following equipment is a requirement and shall be included to the purchaser: Four (4) small rescue axes One (1) fire resistant blanket One (1) 36" bolt cutter One (1) 36" crow bar Four (4) rechargeable hand lanterns Pelican Laser Pro M-13, or approved equal. Four (4) Shelby, or approved equal ARFF gloves Model # 5200L. Three (3) Harness cutting tools One (1) Grab hook One (1) Hack saw One (1) Side cutting pliers One (1) 10" pliers One (1) set of screwdrivers (various) One (1) TFT skin penetrating nozzle. One (1) Sheet Metal Tin Snips One (1) Partner Saw model K-1250, or approved equal, with 16" diamond cutting blade and Warthog blade. One (1) Adjustable Wrench Four (4) Scott 45 Minute Carbon Fiber spare SCBA cylinders #804722-01, or approved equal. One (1) 36" Large ~~Rescue~~ Axe Four (4) Next Generation Scott Air-Pak Model #200319-58, or approved equal, 4500 PSI with alligator clips, EZ Flo-II regulator, quick disconnect, double EBBS, Pak-Alert SE. Four (4) Scott Next-Gen 45 minute walk-away cylinder brackets, or approved equal	X		

REBID
DETAILED SPECIFICATIONS NO. FS0516
AIRCRAFT, RESCUE, FIREFIGHTING, RAPID INTERVENTION VEHICLE
TRUCK, CREW CAB PICK-UP, EMERGENCY, SERVICE BODY

	Comply Yes	Comply No	Comments and Exceptions
Four (4) Scott AV-3000 #805773-03, or approved equal, CBRN SCBA face pieces. One (1) 1" Cold Chisel One (1) Paratech #40-SC Pneumatic Air Hammer Rescue Kit, or approved equal, air gun with Berylium coated attachments. One (1) 4 pound hammer One (1) Duo-Safety # 300-A, or approved equal 15' Combination "A" Frame ladder One (1) set Tiger Chock-Aircraft model # 3521, or approved equal, aircraft wheel chocks. One (1) 60" Pry Bar One (1) Rope bag with 100' of ½" rope Four (4) Pairs of Lion Apparel "Janesville", or approved equal, ARFF proximity coat and pants as per L.A.F.D. specifications. Four (4) Pairs of Ranger ARFF Special Purpose Boots #6200 or approved equal. Four (4) Bullard AX Fire Helmets with gold coated face shields and proximity shrouds.	X		
EQUIPMENT REQUIRED BY FIRE DEPT TO			

	Comply Yes	Comply No	Comments and Exceptions
Volt AC charging unit.			
One (1) ARFF Aircraft Cable Cutter/Disarming Tool.	X		
One (1) Nupla, or approved equal, 8' Pike Pole with Aluminum "D" handle.	X		
One (1) 13 pound Clean-Guard, or approved equal, Portable Extinguisher with mounting bracket	X		
One (1) 20 pound Ansul Sentry, or approved equal, Purple "K" Extinguisher with mounting bracket. #429001	X		
One (1) 30 pound Amerix Metal-X #570, or approved equal, Flammable Metal Extinguisher with mounting bracket.	X		
One (1) 3A-20BC pressurized water/foam extinguisher with mounting bracket	X		
One (1) CO2 extinguisher with mounting bracket	X		
One (1) Ray-Tek Model #ST-80IS, or approved equal, Infra-Red Non-Contact Temperature Monitor.	X		
One (1) Bullard T3Maxx, or approved equal, Thermal Imager	X		
Two (2) Paratech MaxiForce #KPI-5, or approved equal, Air Bags (small)	X		
Two (2) Paratech MaxiForce #KPI-22, or approved equal, Air Bags (large)	X		
One (1) Paratech #895401, or approved equal, Pressure Regulator	X		
One (1) Paratech # 890300, or approved equal, Control Package	X		

	Comply Yes	Comply No	Comments and Exceptions
One (1) Paratech #890900, or approved equal, Dual Head Controller	X		
One (1) Motorola # WPLN-4108R Multi-Unit Battery Charger, or approved equal (XTS-5000 radios)	X		
Four (4) Motorola XTS-5000 Model-III, or approved equal VHF-Hi portable transceivers with batteries.	X		
Four (4) Motorola XTS-5000 Rugged spare batteries # NTN-8297AR, or approved equal	X		
WARRANTY:			
Manufacturer shall identify a warranty repair facility approved by the City of Long Beach within a 50-mile radius of Long Beach City Hall for servicing the body and it's electrical components and the skid unit. This warranty shall include emergency lighting.	X		
The Contractor shall guarantee the complete apparatus body furnished under these specifications against defects in material and workmanship for a period of 10 years (Cab and Chassis shall be covered under manufacturer's standard warranty).	X		
The Contractor shall repair or replace any such item(s) necessary during the warranty period at its own cost and expense, without cost to the City.	X		
Warranty shall begin on the date the City of Long Beach places the unit in service.	X		
All transportation of vehicles for warranty repairs shall be at the expense of the manufacturer unless prior agreement is approved for each instance with the City of Long Beach.	X		

	Comply Yes	Comply No	Comments and Exceptions
Temple Ave., Long Beach, California 90806. The Contractor shall absorb all expenses for the factory visits, and travel for the Contractor or manufacturer's representative.	X		
FACTORY VISITS: Contractor shall provide for one (1) factory visit with four (4) City of Long Beach employees for final inspection visit.	X		
LEGALS: Contractor shall furnish a certified weight slip with each completed vehicle and any documentation necessary for registration purposes for the Department of Motor Vehicles. Must meet all requirements of the South Coast Air Quality Management District (SCAQMD), at the time of bid award. Must comply with all Federal and State regulations and must meet all standards of safety for this type of equipment.	X		
TRAINING: Contractor shall train operators a minimum three (3) full days and to train mechanics in preventative maintenance and specialized repair of equipment a minimum one full day.	X		
MANUALS: The following manuals shall be supplied at the time of delivery of each unit. Two (2) chassis operator's manuals. One (1) complete service and repair manual. One (1) complete parts/inventory manual Two (2) complete sets of wiring diagrams (per as built). As to where components are located Manuals also on DVD-CD if available.	X		

REBID
DETAILED SPECIFICATIONS NO. FS0516
AIRCRAFT, RESCUE, FIREFIGHTING, RAPID INTERVENTION VEHICLE
TRUCK, CREW CAB PICK-UP, EMERGENCY, SERVICE BODY

	Comply Yes	Comply No	Comments and Exceptions
DIAGNOSTICS: Diagnostic equipment shall be supplied at the		X	Not available for purchase from Ford Motor Co.. You have to be a Ford dealer to purchase

BID SECTION

WE ARE PLEASED TO SUBMIT THIS BID IN ACCORDANCE WITH THE CITY OF LONG BEACH INVITATION TO BID, SPECIFICATIONS AND TERMS AND CONDITIONS TO FURNISH AND DELIVER THE FOLLOWING EQUIPMENT, MATERIAL, SUPPLIES OR SERVICES **FOB DESTINATION** CITY OF LONG BEACH.

SUMMARY OF BID ITEMS

$ 247,464.91

Price to include base price, CA tax, delivery, factory visits, manuals, training and all other requests listed herein.

Any other costs please disclose below

$ 61,875.70

See itemized quote attached for optional equipment.

$

Crash Rescue Equipment Service, Inc.
P.O. Box 211506
Dallas, TX 75211
PH 972-243-3307 Fax 972-243-6504

QUOTE

Bill To:	Ship To:
City of Long Beach City Clerk 333 W. Ocean Blvd/Plaza level Long Beach, CA 90802	City of Long Beach City Clerk 333 W. Ocean Blvd/Plaza level Long Beach, CA 90802

Date:
January 12, 2006
QUOTE VALID FOR:
60 DAYS

YOUR #	OUR #	SALES REP	FOB	SHIP VIA	TERMS	TAX ID
		C. Barnes	Dallas, TX			

QTY	DESCRIPTION	UNIT PR	TOTAL
1	Heart-Start, or approved equal Forerunner AED #EM	$1,875.00	$1,875.00
1	Ram-Fan #GF-165 Positive Pressure Ventilator or approved equal.	$1,687.50	$1,687.50
1	Dewalt, or approved equal, 24V Cordless Drill kit with extra battery and 110 Volt AC charging unit.	$1,562.50	$1,562.50
1	Dewalt, or approved equal, 24V Cordless Reciprocating Saw Kit with extra battery and 110 Volt AC charging unit.	$1,687.50	$1,687.50
1	ARFF Aircraft Cable Cutter/Disarming Tool.	$50.00	$50.00
1	Nuplat, or approved equal, 8' Pike Pole with Aluminum "D" handle.	$75.00	$75.00
1	13 pound Clean-Guard, or approved equal, Portable Extinguisher with mounting bracket.	$898.75	$898.75
1	20 pound Ansul Sentry, or approved equal, Purple "K" Extinguisher with mounting bracket. #429001.	$437.50	$437.50
1	30 pound Amerix Metal-X #570, or approved equal, Flammable Metal Extinguisher with mounting bracket.	$375.00	$375.00

1	3A-20BC pressurized water/foam extinguisher with mounting bracket.	$156.25	$156.25
1	CO2 extinguisher with mounting bracket	$343.75	$343.75
1	Ray-Tek Model #ST-801S, or approved equal, Infra-Red, Non-Contact Temperature Monitor.	$873.75	$873.75
1	Bullard T3Maxx, or approved equal, Thermal Imager.	$13,125.00	$13,125.00
2	Paratech MaxiForce #KPI-5, or approved, Air Bags (small)	$608.75	$1,237.50
2	Paratech MaxiForce #KPI-22, or approved equal, Air Bags (large)	$1,093.75	$2,187.50
1	Paratech #895401, or approved equal, Pressure Regulator.	$500.00	$500.00
1	Paratech #890300, or approved equal, Control Package.	$2,812.50	$2,812.50
1	Paratech #890900, or approved equal, Dual Head Controller.	$593.75	$593.75
1	Motorola #WPLN-4108R Multi-Unit Battery		

WARRANTY

This is to certify that CRASH RESCUE EQUIPMENT SERVICE, INC. (Dallas, Texas) warrants to the original purchaser that each vehicle assembled by our company to be free from defects in material and workmanship under normal use and service for a period of one (1) year after acceptance of delivery.

THIS LIMITED WARRANTY SHALL NOT APPLY TO ANY VEHICLE WHICH HAS BEEN SUBJECT TO ACCIDENT, NEGLIGENCE, ALTERATION, ABUSE AND MISUSE OR REPAIRED OTHER THAN BY CRASH RESCUE EQUIPMENT SERVICE, INC. OR ITS DESIGNEE. ACCESSORIES OR PARTS NOT MANUFACTURED BY CRASH RESCUE EQUIPMENT SERVICE, INC. SHALL BEAR ONLY THE LIMITED WARRANTIES OFFERED BY THEIR RESPECTIVE MANUFACTURERS AND ARE PASSED ON TO THE ORIGINAL PURCHASER.

If a defect in material or workmanship occurs during the applicable warranty period and such defect is verified by CRASH RESCUE EQUIPMENT SERVICE, INC. then CRASH RESCUE EQUIPMENT SERVICE, INC. shall repair or replace the defective part(s) at their expense or, at their option, reimburse the owner for the replacement parts and labor cost that have been approved and incurred. CRASH RESCUE EQUIPMENT SERVICE, INC. shall be notified of such claimed defect within ten (10) days of its discovery. Maintenance adjustments and normal maintenance items such as light bulbs, oil filters, bolts, and hydraulic oil are not warranted beyond completion of pre-delivery inspection.

CRASH RESCUE EQUIPMENT SERVICE, INC. SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES OR CONTINGENT LIABILITIES INCLUDING BUT NOT

PLAS-MAC, INC. LIMITED WARRANTY AND NOTICE OF DISCLAIMER OF EXPRESS AND IMPLIED WARRANTIES

Plas-Mac, Inc. issues this limited warranty to the customer who is the original retail purchaser ("Customer") of a polypropylene tank (the "Tank") (10 to 4000) gallons manufactured or sold by Plas-Mac, Inc. as follows:

1. Subject to the terms hereof, the Tank will be free of defects by reason of improper workmanship, manufacture, material, or structural failure for a period equal to the service life of the vehicle upon which the Tank is originally installed. Plas-Mac, Inc. will repair or replace, at its option

8. This limited warranty gives Customer specific rights. Customer may also have other rights, which may vary, from state to state. For the name of the nearest authorized service center, contact Plas-Mac Inc., 3696 U. S. Hwy 83, Wellington, TX 79095; (800) 687-0128.

Attachment to the City of Long Beach
For One (1) Airport Crash Rig

General Requirements:
Crash Rescue Equipment Service, Inc., is located conveniently in Dallas, Texas, and currently has 90 full time employees. This includes our traveling service team available for scheduled or emergency service inspections.

Crash Rescue has been manufacturing quick response vehicles since 1992 when we built our first CAV (combined agent vehicle) for Danbury, CT. We have been remanufacturing the larger ARFF vehicles since 1978.

Manufacturer's Service Requirements:
Crash Rescue carries, in stock, all of the vital elements needed to assure the customer their fire fighting equipment will be ready when the need arises. We have over $1,000,000 of inventory available to draw on. The Ford chassis portion of the vehicle can be serviced at any local Ford dealership.

As mentioned above, we do have service technicians available for servicing immediately in a truck down situation.

Also, please see a brief company history attached.

COMPANY HISTORY

CRASH RESCUE EQUIPMENT SERVICE, INC.

Crash Rescue Equipment Service, Inc., began in 1967 as a service company to maintain Aircraft Rescue and Fire Fighting equipment. We now maintain all brands of airport ARFF equipment, including Oshkosh, Walter, and Emergency-One. We will continue to maintain this type of apparatus as long as it is in use in the industry.

In 1978, **Crash Rescue Equipment Service, Inc.**, began remanufacturing all sizes of ARFF vehicles for airport and government agencies throughout the United States as well as the international marketplace. Remanufacturing remains an important aspect of our business today as we currently have long term government contracts.

The expertise that we have gained through the years allows us to specialize in the remanufacture and support of all types and bands of airport firefighting equipment. We have been instrumental in establishing the proper criteria, specifications, and standards for remanufacturing these vehicles.

Our highly skilled technicians travel throughout North America and around the world maintaining ARFF equipment at over 30 airports. **Crash Rescue Equipment Service, Inc.**, is conveniently headquartered in Dallas, Texas where we have immediate global access.

In the 1990's we continued our growth with the addition of several new products. **The Snozzle**, a 50 foot articulating waterway that is adaptable to most all fire vehicles.

We adapted new technology for ARFF applications including a patented cold compressed air foam system, **TRI-MAX** and encapsulated dry chemical agent discharge, **Hydro-Chem**. We continue to find more innovative adaptations of this technology for a variety of fire fighting applications.

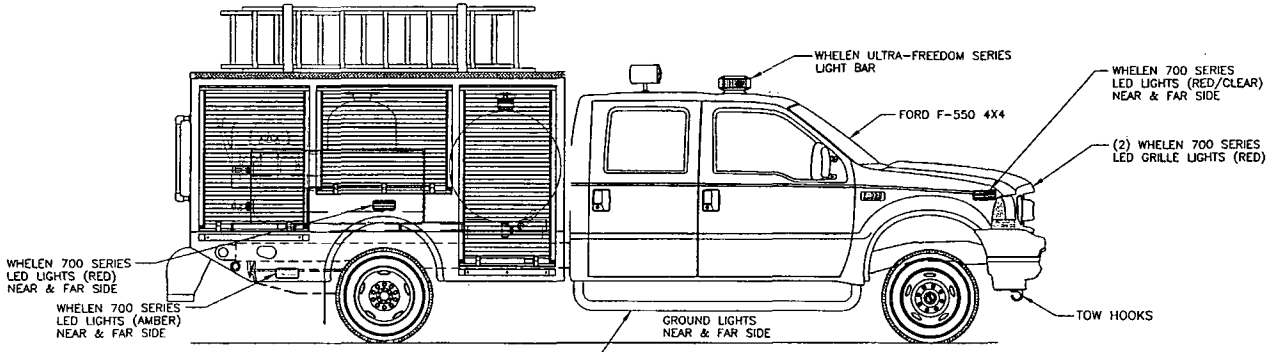
As we move to the 21st century we will be introducing a complete new line of high performance bumper turrets, **RHINO** and an enhanced active/reactive suspension system for ARFF vehicles. Crash Rescue Equipment Service, Inc. is rapidly expanding into the international market. We are delivering various products to South America, Central America, Canada, Pacific Rim, South Africa

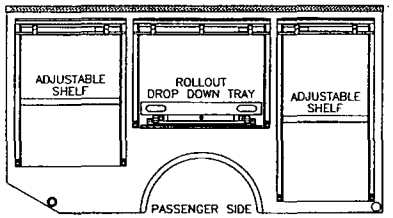
meet this challenge with the acquisition of a new product line – **Fire Wagons**. The Fire Wagons division offers a variety of Command, Haz-Mat, Triage, Decontamination and Foam trailers that provide comprehensive specialized features without the high cost of custom fire apparatus.

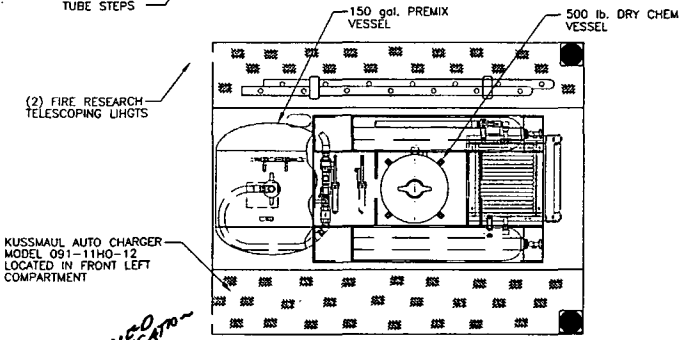
With all this new technology, the newest challenge is how to provide the level of training needed to effectively and safely use this equipment. Sophisticated computer simulators are now available to airports that can afford such systems to effectively train operators on a variety of equipment. Crash Rescue has taken the opportunity to provide a sophisticated driver simulator in a mobile training center that can be taken to the user – instead of the user traveling to or purchasing a costly training system. Our new **"Training Wheels"** program can provide on-site training a few weeks each year at an affordable cost for a variety of scenarios including: standard or independent suspension vehicles; small, medium or large airport environments; urban, rural and off-road driving programs; a variety of weather conditions; high speed response; basic Snozzle operations and much more.

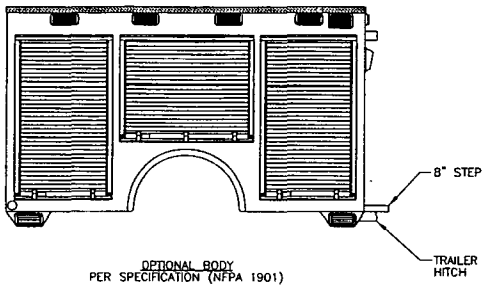
Wherever the future of ARFF leads, we will be there - leading the industry.

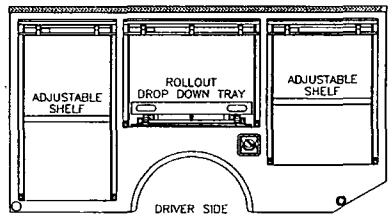
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

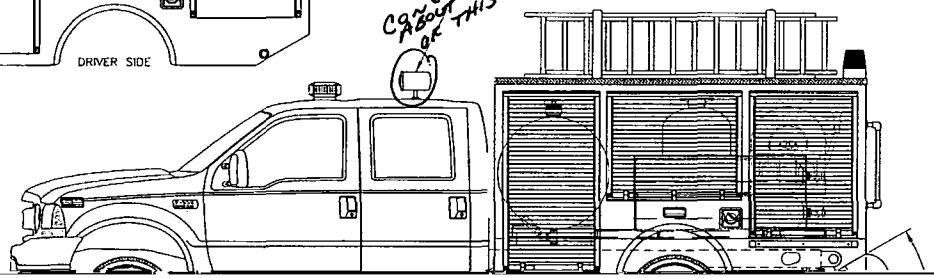


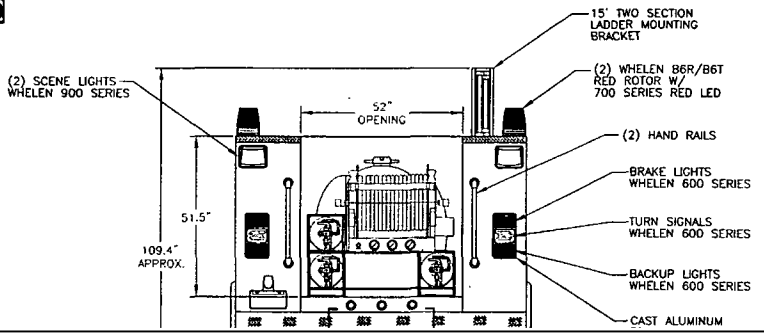


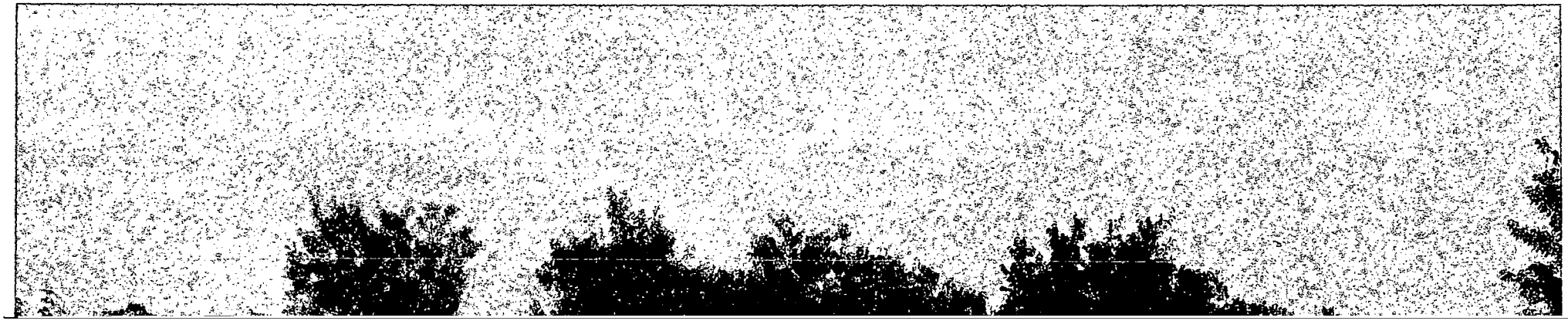


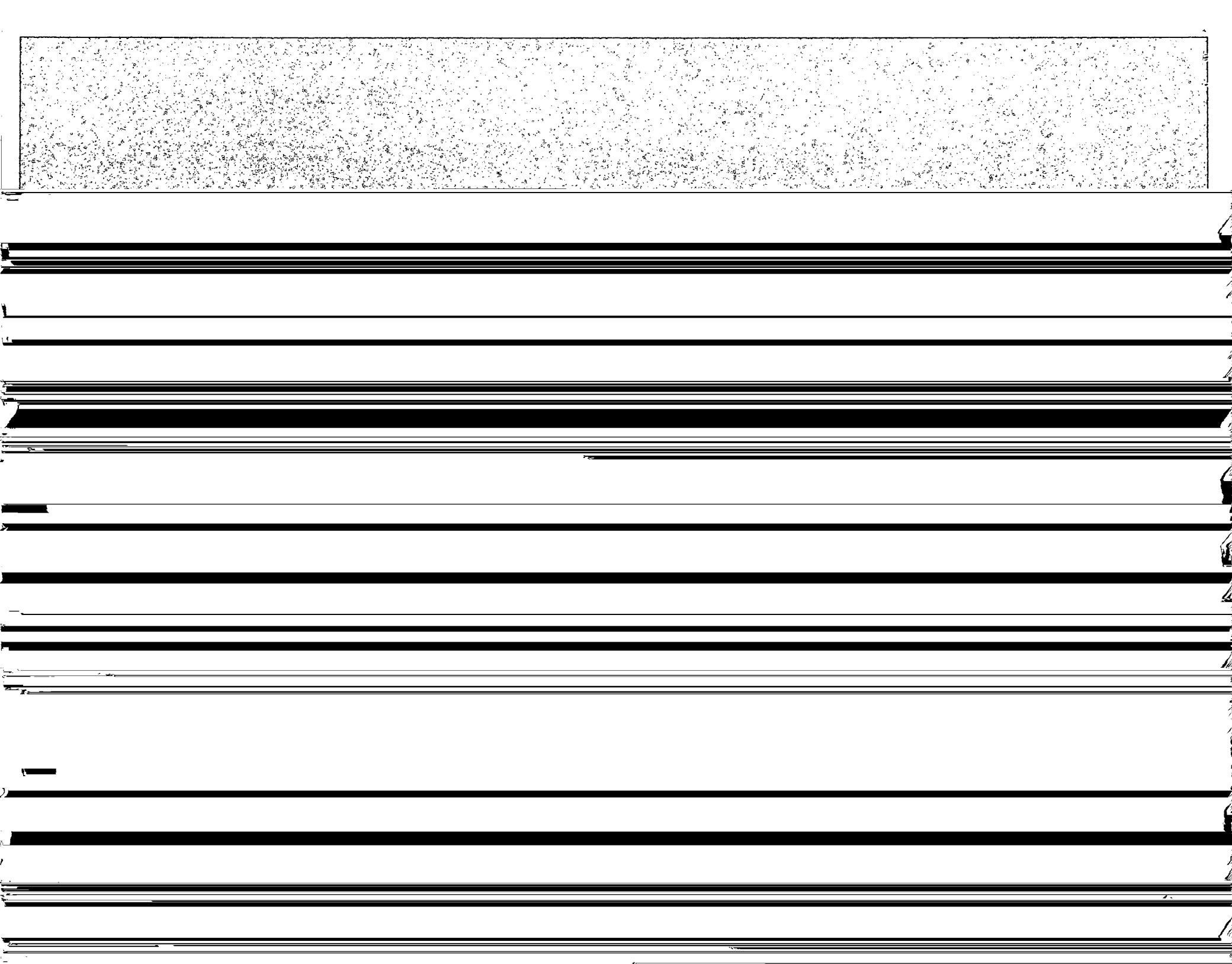








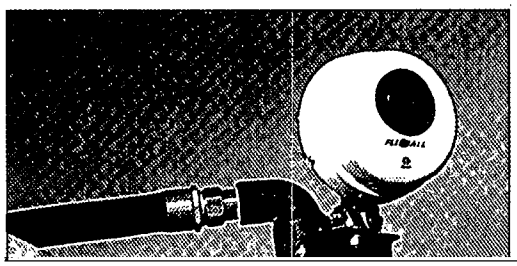




The FLIR BALL

FLIRBALL
INFRARED™

Advanced Infrared Technology In a Down To Earth Package



Features

- *Compact Streamlined Housing*
- *Raytheon Infrared Detector*
- *Meets FAA Enhanced Visibility Requirements (46^0 horizontal field of view)*

ADVANCING AVIATION FIRE FIGHTING TECHNOLOGY
CRASH RESCUE
AROUND THE WORLD
RENEGADE
TWIN AGENT WITH AN ATTITUDE

Renegade Technology

Renegade Twin Agent Trucks

Renegade Combined Agent Vehicles - Pump Driven

Renegade combined agent trucks feature engine driven pumping units and around the pump foam systems. Water and foam tanks are polypropylene.