

JUSTIFICATION FOR NON-COMPETITIVE PROCUREMENT

COMPLETE THIS SECTION IF NEW CONTRACT

For contract(s) in this request, answer applicable questions in each of the 4 major subject areas below in accordance with the Instructions for Preparation of Non-Competitive Procurement Form on the reverse side.

Request that negotiations be conducted only with CDI Marine Company for the product and/or services described herein.
(Name of Person or Firm)

This is a request for _____ (One-Time Contractor Requisition # 36502, copy attached) or _____ Term Agreement or
 _____ Delegate Agency (Check one). If Delegate Agency, this request is for "blanket approval" for all contracts within the
 _____ (Attach List) Pre-Assigned Specification No. _____
 _____ (Program Name) Pre-Assigned Contract No. _____

COMPLETE THIS SECTION IF AMENDMENT OR MODIFICATION TO CONTRACT

Describe in detail the change in terms of dollars, time period, scope of services, etc., its relationship to the original contract and the specific reasons for the change. Indicate both the original and the adjusted contract amount and/or expiration date with this change, as applicable. Attach copy of all supporting documents. Request approval for a contract amendment or modification to the following:

Contract #: _____
 Specification # _____
 Modification #: _____

Company or Agency Name: _____
 Contract or Program Description: _____
 (Attach List, if multiple)

Jean Roberts 745-3681 Chicago Fire Department 1/11/08
 Originator Name Telephone Signature Department Date

Indicate **SEE ATTACHED** in each box below if additional space needed:

<input checked="" type="checkbox"/>	PROCUREMENT HISTORY	
		The City was awarded a 2007 federal Port Security grant to purchase a fire boat within the grant period (36 months). The grant guidelines require the vessel to meet very specific homeland security objectives. Since the City of Chicago has not purchased a new fire boat of this size and capacity in over half a century, both CFD and DFM recognizes the need for outside expertise for the development of a successful fire boat RFP. This sole source request is only for the naval architecture /engineering support starting with the development of the specifications and RFP through to the final warranty testing. It is not for the purchase of the fire boat.
<input checked="" type="checkbox"/>	ESTIMATED COST	
		The cost of the life of the contract will be \$400,000.
<input type="checkbox"/>	SCHEDULE REQUIREMENTS	
		None at this time.
<input checked="" type="checkbox"/>	EXCLUSIVE OR UNIQUE CAPABILITY	

S. S. R. B.
 2/1/08
 RECOMMENDED 4-0
 APPROVED...
 APPROVED...
 APPROVED...

[Signature] 2/1/08

**Sole Source Justification
For Naval Architecture and Marine Engineering Support
For the Acquisition of a Fire Boat for the City of Chicago**

Over the past 30 years CDI Marine – Band Lavis Division (CDIM BLD) has developed world-wide recognition for expertise in early-stage design, requirements studies, and boat acquisition programs. These capabilities give CDIM BLD a unique position in the marine industry.

CDIM BLD has a uniquely qualified and experienced staff that can define the operational and maintenance requirements of an emergency response boat, in particular a fire boat with icebreaking capability, translate those requirements into a design, and produce a user-friendly end product that can be put into service with minimum cost and time.

The corporate and staff qualifications, experience and capabilities of CDIM BLD are unique for eight major reasons:

1. Acquisition and Contracting Experience
2. Requirements Studies Experience
3. Fire Fighting and Fire Boat Design Experience
4. Patrol Boat and Workboat Design Experience
5. Icebreaker Design Experience
6. Knowledge of Regulatory Issues
7. Decontamination Facilities
8. Ship and Boat Construction, Operations and Maintenance

No other single naval architecture or marine engineering firm can provide all of this broad range of experience and knowledge necessary for supporting the Chicago Fire Department's fire boat acquisition project. However, what makes CDI Marine truly unique, justifying a sole-source status, is the combination of four key elements of the eight reasons cited above:

1. Previous fire boat acquisition experience, from requirements definition to final trials and delivery, of four fire boats; Anne Arundel County; Nashville; Broward Sheriff's Office; and Baltimore City Fire Department.
2. Previous experience with icebreaker design.
3. Expertise in hull form design for high-speed response boats as well as conventional hull forms, including icebreakers.
4. Land-based and marine fire fighting experience.

Acquisition and Contracting Experience

CDIM BLD has been assisting clients with their boat acquisition and design needs for 20 years. Their list of clients includes the U.S Park Service, the U.S. Coast Guard, the University of Miami, the State of Delaware Fish and Wildlife Service, the Baltimore City Fire Department, Anne Arundel County Fire Department and the Woodbridge-Occoquan Fire Department. These projects cover a wide spectrum of boat size (from a 25-foot law enforcement RIB to a 110-foot crew supply boat) and capabilities (including fire boats, work boats, patrol boats, fishing boats and research vessels). Many of these projects are single vessel projects while others are for multiple vessels. When combined, the acquisition projects CDIM BLD has been involved with total over 1,100 boats.

Requirements Studies

A core expertise of CDIM BLD is the evaluation of customer's mission's and the development of top level operational requirements and detail design requirements documents. CDIM BLD has been doing this for 30 years. During this time they have developed unique software and processes to support this type of work. CDIM BLD has developed ComPASS, a ship/boat design synthesis model that uses a customer's set of requirements to parametrically assess the cost, powering and size impact of varying any single requirement, or combination of requirements, to assist customers in prioritizing their needs. This is a unique tool that no other firm has. This tool has been used for U.S. Coast Guard projects, Baltimore City fire boat, U.S. Navy projects, National Park Service projects, commercial clients and foreign clients.

Firefighting and Fire Boat Design Experience

CDIM BLD has assisted clients in the development of requirements and specifications, independent reviews of designs and the technical and administrative management of fire boat projects. Most recently CDIM BLD has managed the Baltimore City Fire Department project for a NFPA Class A fire boat with CBRNE and command center capabilities. CDIM BLD has provided a full range of services including condition surveys of the existing boats and AoA studies for the retention and disposal of these boats, requirements definition, concept designs, development of specifications, proposal reviews, construction compliance inspections, acceptance trials, crew training, warranty management and development of maintenance procedures. Their staff includes two former firefighters, one a retired Deputy Chief of Operations for Baltimore City Fire Department, and the other an instructor and author of the book "Shipboard Fire Fighting for Land-Based Firefighters" who is also a naval architect. This provides a very unique capability that cannot be found anywhere else.

Patrol Boat and Workboat Design Experience

Two members of our staff have over 45 years of experience designing work boats and patrol boats for the U.S. Coast Guard and other agencies. Both worked in the Concept Design and Arrangements Section of the U.S. Coast Guard Headquarters Design Branch and together headed that section for 12 years. In this position they were responsible for establishing the design requirements, and developing the designs for conventional cutters, patrol boats, icebreakers and work boats. They were each responsible for the requirements studies, specifications, and hydrodynamic research specific to each type of vessel. Their work also included the development of design specifications as well as the contract design packages and interfacing with the contracting offices at the USCG and, thus, are well versed in the nuances of the marine contracting process.

Icebreaker Design Experience

CDIM BLD staff have over 12 years of experience in the design of icebreakers. The icebreaker types include fresh water ice breaking tugs (USCG WYTM), arctic/Antarctic icebreakers (USCG Polar Class, Healy Class), two Dual-Draft Icebreaker designs designated for both the Great Lakes and the Arctic, and air cushion icebreakers. Their staff has not only conducted numerous designs but also have many hours of experience at ice tanks conducting research. CDIM BLD is one of the very few companies in the U.S. that still have knowledge and experience in the design of icebreakers.

Knowledge of Regulatory Issues

CDIM BLD has extensive knowledge of regulatory issues, specifically U.S. Coast Guard and American Bureau of Shipping (ABS) rules. Two members of their staff worked at U.S. Coast Guard Headquarters in the Marine Safety Center reviewing design packages for compliance during their tours of duty in the U.S. Coast Guard. Another member of their staff formerly worked at ABS where he was responsible for developing the rules for high-speed craft. In addition, many of their staff have completed the American Boat and Yacht Council (ABYC) certification course on rules and standards for the design of boats.

Decontamination Facilities

CDIM SDD has a particular expertise in the design and implementation of both shipboard and land-based decontamination equipment. Staff members who have formerly worked for the U.S. Coast Guard have extensive experience in the design of shipboard decontamination facilities while their mechanical engineering group has been working for the Federal Government for a number of years building, installing and maintaining decontamination facilities around government buildings in Washington, D.C. Most recently CDIM BLD has designed a decontamination/ washdown system for the new Baltimore fire boat John R. Frazier as well as designing and installing a number of land-based units around Baltimore's Inner Harbor.

Ship and Boat Construction, Operations and Maintenance

In addition to their design experience CDIM BLD's staff has extensive shipboard experience operating and maintaining the machinery plants on boats and ships. Three members of CDIM BLD's staff have many years at sea operating and maintaining propulsion and deck machinery on U.S. Coast Guard cutters, and managing overhauls and construction at shore-side repair and maintenance facilities. They also have one member of their staff who worked as a production manager in a commercial boat manufacturing facility. Additionally eight members of their staff have completed the U.S. Navy's Level II Reliability Centered Maintenance course and are currently developing and conducting maintenance procedures on U.S. Coast Guard boats.

IN SUMMARY

CDIM BLD has unique expertise and experience in:

1. The definition of requirements, preparation of specifications, proposal evaluation, construction oversight, delivery trials, crew training and preparation of maintenance and operators' handbooks for four fireboat acquisition projects. CDIM BLD's expertise can best be summed up by the fact that the recently delivered NFPA Class A fire boat John R. Frazier, was delivered ahead of schedule and within 1.3% of budget (due to additions the owner requested during the last two months of construction).
2. The design of icebreakers and analysis of icebreaking performance
3. The design and analysis of high speed hull forms
4. Land-based and marine fire fighting operations

In addition, CDIM BLD staff have a combined 45+ years experience designing USCG boats, icebreakers and cutters; design and installation experience with full US Navy style shipboard decontamination stations; experience that covers a wide range of vessels including fire boats, icebreakers, work barges, construction tenders, buoy tenders, patrol boats and small boats; 60+years experience as USCG officers that have served as shipboard engineers, port engineers, shipyard superintendents; experience as commercial vessel inspectors at the USCG Marine Safety Center and commercial boat production managers; extensive experience with USCG, ABS, ABYC and NFPA rules and regulations; and an engineering staff that does field work and builds prototype hardware.

OTHER

None

APPROVED BY: _____
DEPARTMENT HEAD OR DESIGNEE

DATE

BOARD CHAIRPERSON

DATE



City of Chicago
Richard M. Daley, Mayor

Chicago Fire Department


Raymond Orozco
Commissioner

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10 West 35th Street
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<http://www.cityofchicago.org/fire>

FINANCE / PAYROLL

TO: Montel M Gayles
Chief Procurement Officer
Department of Procurement Services
City Hall Room 403

FROM: Jean Roberts 
Director of Finance
Chicago Fire Department

RE: SPECIFICATION: 62944
VENDOR: CDI Marine Band Lavis Division
REQUISITION: 36502
Sole Source request - Naval Architecture / Marine Engineering Services

DATE: January 11, 2008

The Chicago Fire Department is requesting that requisition 36502 be processed as a Sole Source Professional Services Contract. The City of Chicago was recently awarded a 2007 grant to procure a \$6 million fire boat. In effort to meet the grant deadlines and goals, the Fire Department and the Department of Fleet Management recognize that the city does not have the necessary expertise to develop a performance-based specification package, including specification development, finding qualified shipyards, concept design, and acceptance criteria. We found that CDI Marine Band Lavis Division is unique in their experience working with municipalities from start to finish on grant funded projects. This vendor successfully worked with municipalities, most recently the City of Baltimore, to procure a similar grant-funded project of this size and has experience meeting minority and women business compliance standards.

Enclosed with this request are the following attachments:

- 1) DPS Project Checklist.
- 2) Justification for Non-Competitive Procurement
- 3) FMPS requisition
- 4) Vendor quote

Your assistance in this matter is appreciated. If you have any questions or require any further information, please contact me at (312) 745-3681

NEIGHBORHOODS



STATEMENT OF WORK
TO SUPPORT THE ACQUISITION OF A
FIRE BOAT FOR THE CITY OF CHICAGO

Based on discussions held during the 30 October 2007 meeting with the Chicago City Fire Department, the following is offered as a list of possible tasks that CDI Marine believes are pertinent to the needs of Chicago's fire boat acquisition program. After a review of the general information provided to CDI Marine at the meeting it is CDI Marine's opinion that the City would be best served by employing a performance-based specification package which would also include a set of concept-level guidance drawings.

For purposes of this initial statement of work, the estimated cost for each individual task is based on the assumption that the task is awarded on a stand-alone basis. If multiple tasks are awarded many times both the cost, time to perform the work and associated travel can be combined and reduced. Additionally, all ROM costs quoted herein include travel expenses. The travel is based on travel to Chicago to meet with City personnel, where applicable, and to destinations that are within a similar travel radius from Baltimore, Maryland for the yard visits. The travel is also based on full-fare airline tickets and U.S. Government per diem rates. In a formal contract with the City the travel expenses will be offered as a separate line item for each task and CDI Marine will only charge the actual expenses incurred.

Tasks that are marked with an "*" are considered as candidate tasks for woman or minority owned businesses.

Task 1 Requirements Study

CDI will conduct a requirements study to:

1. Define the fireboat requirements of the Chicago Fire Department and express those requirements as performance and engineering design requirements suitable for a request for proposals (RFP) for design and construction. This is the most important step in the procurement process as it defines the responsibilities of the contractor.
2. Define the city, state, and federal regulations and the industry standards that will apply to the design and construction of the fireboat.

Deliverable: A requirements document that, after review and concurrence by the Chicago Fire Department, will state the performance requirements for the fireboat and will become part of the technical specifications.

ROM Cost: \$15,000

Task 2 Yard Search

Based on the requirements study and a conceptual design of the fireboat, CDI will conduct a shipyard survey to assemble a bidders list for the acquisition. It is essential to establish competition to control the cost of the acquisition. It is also essential to survey the products, customers, and financial stability of potential builders to assure that the yard can complete the construction in a timely manner and has the skilled staff and resources to produce a quality product. CDI has had experience with a wide variety of builders in the U.S. and Canada, and can perform this task very efficiently.

Deliverable: A bidder's list of shipyards. These shipyards can then be pre-qualified by the City to streamline and reduce the cost of the acquisition process.

ROM Cost: \$1,600

Task 2a Yard Pre-Qualification (Option)

Based on the requirements document developed in Task 1 a set of qualifications and for potential construction yards will be developed. A ranking scheme for each qualification will be developed and distributed to pertinent City personnel to assist in the pre-qualification of potential construction yards.

Deliverable: CDI will prepare the evaluation documentation based on the established design requirements and provide instruction on the use of the evaluation procedure to City personnel via a teleconference. A review of each pre-qualification package will be made and qualified yards will be identified. CDI will brief the fire department and the selection official(s) on the results and the rationale for selection or elimination.

ROM Cost: \$4,800

Task 3 Website

The support website for the Chicago fireboat will have two main parts. The first part is a public portion of the website that anyone can access. This part can be customized to display Chicago specific information. The public Baltimore fireboat site has a page dedicated to providing updates on the project/construction, a "general information page" describing the new boat's principal characteristics and capabilities, and several additional pages for photos (old fireboat, construction progress, tests, etc). The second part of the website is the "acquisition team" portion, which is password protected. Anyone that the City would like to have access to this portion can be given a user account. This part of the site is dedicated to the design and construction of the boat and allows for easy communication between the City, CDI, the builder, and the designer. Documents and drawings can be uploaded and downloaded allowing a central repository that everyone can access. The site also allows a way to submit, review, track, and approve/decline engineering changes that occur during design and construction. The Baltimore fireboat had 30 engineering changes during the course of its design and construction. The status and associated cost of each of these changes was viewable by the City, CDI, the builder and the designer and allowed for timely decision making. Other features such as contact

lists, warranty issues tracking, and maintenance logs are also available. Any part of the web site can be customized to suit the City's public relations, contract management and technical needs.

Deliverable: A functioning website with a registered domain name (such as "ChicagoFireBoat.com") for the duration of the contract customized to the City's needs.

ROM Cost: \$5,000

Task 4 Monitor Research and Specification

Fireboats recently delivered have been outfitted with large capacity monitors developed for the petroleum industry. They have not provided satisfactory streams for firefighting purposes, requiring modifications to be made after delivery. NFPA Standard 1925 contains total flow requirements for fireboats but does not have any monitor stream characteristic requirements. Procurement of large capacity fire service monitors requires a long lead time.

Deliverables: A list of manufacturers and model numbers of fire service monitors that will produce high capacity, long reaching, solid streams with minimum breakup for inclusion in the technical specifications and a requirements document suitable for inclusion in the boat specification or as a stand alone document.

ROM Cost: \$3,200

Task 4a Fire Monitor and Fire Pump Acquisition (Option)*

If desired, CDI will develop a purchase package and solicit quotes from various manufacturers for the delivery of the monitors and/or pumps. The equipment will be inspected during manufacture and acceptance testing at the manufacturer's facility will be witnessed. Once approved, CDI will take delivery of the equipment and store, if necessary, until the appropriate time to ship it to the builder.

Deliverable: Monitors and/or pumps as required

ROM Cost: \$11,500 plus ODC

Task 5 Specification Development

CDI will produce the technical specifications for the RFP. The technical specifications will include the following sections:

Design – defines the requirements and standards that must be met to assure the boat:

1. Will be stable under all operating conditions, including icing conditions.
2. Meets or exceeds personnel protection standards for noise, vibration and health.
3. Is compliant with city, state and federal regulations related to marine operations.

4. Meets or exceeds the boat speed and fire pump capacity requirements.

Structure - defines the appropriate design standards, material specifications and unique structural requirements of a low freeboard, shallow draft fireboat.

Propulsion – defines the requirements for a marine diesel engine installation including:

1. The rating of the machinery in accordance with ISO standards.
2. The means of controlling vibration and noise of the propulsion system.
3. The requirements for air supply, exhaust and cooling systems.
4. The requirements for seachests and for preventing ice and debris from clogging of strainers.
5. The standards to be met in the design of the marine gear, propulsion shafting, struts, bearings and propellers.
6. The latest emissions standards.

Electrical – defines the National Electrical Code, National Fire Protection Association, and American Boat and Yacht Council standards to be applied to the fireboat's electrical system. It contains the design standards for the generators, batteries, wiring and overload protection of the electrical system. This section also defines the equipment to be used to protect the boat's electrical system from faults on the shore side of the shore power system.

Electronics – identifies the communications, navigation and surveillance systems to be installed by the builder. It also defines the lighting requirements.

Systems- defines the requirements and standards to be applied to the:

1. Fire fighting systems, including the fire pump engines, gears, fire pumps, firemain piping and valves, gauges, and monitoring systems.
2. Hydraulic systems.
3. Air systems, including boat service and breathing air systems.
4. Heating, ventilation and air conditioning systems.
5. Piping systems, including fresh water, sanitary and bilge systems.
6. Steering system.
7. Boat fire and flooding protection systems.

Outfit – defines the requirements for:

1. Doors, windows and hatches to assure watertightness as well as adequate strength, appropriate materials and dimensions.
2. Deck covering materials, with emphasis on ease of maintenance, abrasion resistance, sound absorption and non-skid qualities.
3. Insulation and interior finish.
4. Exterior coatings.
5. Stowage for firefighting appliances, hose, ladders, tools and personal protective equipment.
6. Control spaces for navigation of the boat, control of the machinery and firefighting system, emergency medical care and command functions.

Delivery and Training – defines the delivery requirements for the boat, the manuals and drawings to be provided to the City, and the training to be provided to fire department personnel.

Inspections and Trials – defines the series of construction inspections, machinery performance trials, stability tests, pump and firemain tests and full power trials that will be performed as a condition of acceptance of the boat by the City.

Deliverable: A complete technical specification for inclusion in the RFP including payment schedules, -spare parts to be delivered with the boat, and response time requirements for warranty issues.

ROM Cost: \$18,500

Task 6 Concept Design

The combination of low overhead clearance, high response speed, high fire flow, and icebreaking requirements for the fireboat is challenging. Writing a specification based on these requirements alone could easily result in an invalid specification, i.e., one that cannot be met. The consequences of doing this include time lost, money expended in a fruitless RFP, and in the worst case, construction of a boat that does not meet critical requirements with consequent legal action by the City and the builder and public embarrassment of City government.

The purpose of a concept design is to produce a design demonstrating one way that the requirements can be satisfied, with an arrangement that is satisfactory to the fire department. The preparation and review of a concept design allows the fire department to see the impact of its requirements and, if necessary, make compromises to achieve the best possible overall performance. It is obviously much better to go through this process on paper than to discover a conflict in requirements in the middle of construction.

The concept design includes the following:

1. An arrangement of the boat showing the layout of the major components, the spaces provided for navigation, machinery, command, decontamination station and EMS functions, the access to all compartments of the boat, the arcs of visibility from the control stations, and the structural midship section.
2. Design of a hull form to enclose the arrangement, providing the high speed and icebreaking performance requested by the fire department. Alternative means of providing both high speed and icebreaking capability will be presented for fire department review.
3. The fire pumps and fire pump engines will be sized and shown on the arrangement drawings. A schematic drawing of the firemain system with all valves, in accordance

with NFPA Standard 1925 will be prepared to demonstrate how piping can be routed to provide access and removal of all valves and major machinery items.

4. A speed and power calculation will define the amount of power required from the engines. A list of commercially available engines that provide the required power will be assembled. The propulsion shaft and propeller size will be calculated to assure that the propellers will not cause excessive draft. Engines and the propulsion train will be included in the arrangement to assure that there is adequate space to maintain the equipment. The speed and power calculation includes calculation of fuel tankage requirements.

5. A preliminary structure design will be done to check the weight of the boat and assure that the draft will not exceed the fire department's requirements.

6. The boat's stability and ability to survive flooding will be calculated and compared to US Coast Guard requirements for similar sized commercial vessels and to the requirements of NFPA standard 1925.

7. One-line diagrams for fuel and bilge piping, hydraulics, electric power distribution and foam systems will be prepared. The components of these diagrams are cross-checked with the specification to assure that the specification is complete.

8. A preliminary weight estimate will be prepared detailing the various system and component weights and locations. The weight estimate will be generated in conjunction with the speed and power calculations and the stability calculations.

At least two design reviews will be conducted with the fire department.

Deliverable: A set of drawings and calculations for the concept design. The specifications will be prepared based on the design, but will place responsibility for the fireboat's performance on the builder. The concept design can be provided to qualified builders as a reference document. This provides the builder with a starting point, and the builder is free to modify and improve upon the concept design, but must meet the performance requirements of the specification. CDI's experience is that most builders will take advantage of the concept design work.

ROM Cost: \$75,000

Task 7 Proposal Evaluation

CDI has developed a process for evaluating the response of multiple bidders to an RFP. The process is computer-based and allows the selection official to see the ranking criteria applied to each element of each bidders response. The process simplifies the task of evaluating multiple responses submitted in multiple formats. It also provides a clear means of defending a selection in case of a protest.

Deliverable: CDI will prepare the process documentation using the requirements of the RFP and the technical specifications and provide instruction to City personnel via a teleconference. A review of each proposal will be made and each of these proposals will be ranked in accordance with the criteria. CDI will brief the fire department and the selection official(s) and review the process and resulting ranking of bidders in support of the contract award by the City.

ROM Cost: \$11,100

Task 7a Industry Day Support (Option)

CDI will attend and support, as required, an industry day held by the City to review the specification requirements and answer questions of potential bidders.

Deliverable: Provide a briefing on the design requirements and the concept design package explaining the rationale for the requirements and design decisions. Provide answers and clarification to contractor questions. A written report of the transactions of the meeting will also be provided.

ROM Cost: \$5,500

Task 8 Pre-Award Surveys

CDI will conduct pre-award visits to the yards with the top proposals. These visits are to assess the different yards to ensure they have the facilities and capabilities necessary to build the boat described in their proposal. This includes sizing of indoor work areas, dock space, assessing lifting capabilities, reviewing employee qualifications, assessing machinery onsite, and assessing overall shop cleanliness, etc. Inspections of current projects the yard is working on will show first hand the yards true quality of workmanship.

Deliverable: A report summarizing the finds at each yard survey including a comparison of the yards and documentation of the facilities.

ROM Cost: \$11,200 per yard

Task 9 Post-Award Specification Read-through

Similar to the read through of the draft specification with City officials and the fire department, this read through is intended make changes to the requirements and design before construction begins. Once construction begins, making even minor changes can be very costly to the City.

Deliverable: A revised specification incorporating any changes that are made. This will be the baseline specification used for compliance inspections.

ROM Cost: \$14,000

Task 10 Engineering Change Proposal Evaluation and Configuration Management

Once construction begins, any changes to the design must be approved by the builder, the designer, and the City and may impact the total project cost. CDI will evaluate any proposed engineering change to ensure that the proposed change keeps the design within the specification, is technically plausible, and cost-effective. CDI will perform its own cost estimate of builder or designer initiated change proposals to prevent artificial inflation of cost impact. If the City decides to change anything in the design, CDI will develop the engineering change with the City and submit it to the builder to negotiate cost.

All change proposals will be entered into the fireboat website and will be accessible to the City, CDI, the builder, and the designer. The website will display the change proposal status, any supporting documents, and any cost impact.

Deliverable: Electronic files with supporting documentation for each change proposal.

ROM Cost: \$18,000 (assumes 20 month duration)

Task 11 Construction Inspections*

During boat construction it is extremely important to make periodic construction inspections to ensure the boat is being built according to the drawings, specification, and applicable standards. During the approximate 12 month construction of the Baltimore fireboat, CDI made 7 construction inspections at 1 ½ to 2 month intervals. Ideally an inspection once a month is preferable as this allows for a thorough inspection of the boat at the many stages of construction. Depending on the stage of construction, CDI will send different subject matter experts on the inspection to provide expert opinions on the installation and quality of work of the systems installed at that time. All inspections are documented extensively with photographs and notes, and an inspection report is submitted to the City following the inspection. Follow up correspondence with the building yard will be conducted after each inspection to ensure any problems discovered during the inspection are corrected properly. During inspections at certain stages of construction, it is beneficial to send one or two of the fire department members assigned to the boat (the operators) along to witness the inspection.

Deliverable: A report documenting all discussions and findings of the inspection. Included in the report will be a list of action items and recommendations for non-compliance items. A complete set of photos will be provided. Photos will also be uploaded to the website.

ROM Cost: \$132,000 (assumes 10 trips)

Task 12 Sea Trials/Dock Trials

When construction is complete, CDI will conduct sea trials and dock trials to test all systems on the boat before it is accepted for delivery. This consists of about a week of tests on the boat at the builder's yard to ensure that all systems operate satisfactorily and document any discrepancies that must be corrected before delivery. During this time the boat is compared to the specification to ensure that every specification requirement has been met. The requirements of the specification will be assembled in a checklist and each requirement will be checked. At the completion of sea trials, the specification checklist, documentation of all tests performed, and a trip report will be submitted to the City.

The delivery trip is a time when training can be conducted and the fire department crew can be acquainted with their new boat. CDI will have a representative on the trip to document any problems encountered and help with crew training.

Delivery Trials is a one or two day abbreviated version of sea trials that will be held in Chicago to test certain systems after the delivery trip to ensure everything is operating properly before the City takes final acceptance of the boat. In the case of the Baltimore fireboat, the delivery trip was nearly 1000 miles making the delivery trials very important to ensure nothing was damaged during the trip.

Deliverable: A report summarizing the independent tests conducted on behalf of the City, a checklist of outstanding items that remain to be completed or fixed and a recommendation as to whether or not the vessel is ready for the delivery trip.

ROM Cost: \$14,400 (delivery trip not included as yard location and duration of trip cannot be estimated at this time)

Warranty Period*

Tasks 13 to 15 cannot be estimated at this time, however, based on the 12-month contract with the Baltimore Fire Department a total price for these three tasks could range from \$50,000 to \$90,000.

Task 13 Warranty Management

After delivery of the boat, CDI will assist the City in handling any failures covered by the builder's warranty. All warranty data will be recorded in the website where it can be accessed by the City, CDI, and the builder. The website will display a description of the failed part, the circumstances under which the failure occurred, and status of the warranty. Having one central repository accessible to all parties facilitates a quick turn-around on warranty repairs or replacements.

Deliverable: A complete electronic file of all supporting documentation regarding each warranty claim issued by the City.

Task 14 Warranty Trials

Approximately 2 months before the builder's warranty period expires, CDI will conduct warranty trials on the fireboat to identify any failed items that the builder is obligated to repair or replace under the warranty terms. CDI will prepare a thorough test/inspection plan and will report any warranted items to the builder so they can be repaired or replaced. The trials will consist of operational tests of all major systems and a thorough inspection of all equipment on the vessel.

Deliverable: A report summarizing the condition of the boat and a list of recommended warranty claims that should be filed before the warranty period expires.

Task 15 Training and Commissioning

The technology on new fireboats is drastically different from the technology on City fireboats built in the 1940's and 1950's. This can be overwhelming to crew members at first. CDI will conduct training with the fireboat crew members to trace out all systems, explain how to operate each system, and explain the reasoning behind the design.

Deliverable: Periodic visits to the vessel to conduct organized and documented training sessions on specific systems as required by the City.

Task 16 Boat Operators Manual*

The development of a boat operators' manual provides a hard copy guide for the crew describing the boat and all the systems on the boat. The manual will include boat information, equipment specifications, general operational procedures and warnings, basic maintenance to be performed, etc. This manual can be created as either a basic reference guide for the crew or a very detailed manual.

Deliverable: An electronic WORD document and two hardbound copies of the Boat Operators' Handbook.

ROM Cost: \$25,000

DPS PROJECT CHECKLIST

For DPS Use Only	
Date Received	_____
Date Returned	_____
Date Accepted	_____
CA/CN's Name	_____

IMPORTANT: PLEASE READ AND FOLLOW THE INSTRUCTIONS FOR COMPLETING THE PROJECT CHECKLIST AND CONTACT THE APPROPRIATE UNIT MANAGER IF YOU HAVE ANY FURTHER QUESTIONS. ALL INFORMATION SHOULD BE COMPLETED, ATTACH ALL REQUIRED MATERIALS AND SUBMIT FOR HANDLING TO THE DEPARTMENT OF PROCUREMENT SERVICES, ROOM 403, CITY HALL, 121 N. LASALLE STREET, CHICAGO, ILLINOIS 60602.

GENERAL INFORMATION:

Date: Jan. 10, 2008
 REQ No.: 36502

Contact Person: Jean Roberts
 Tel: 5-3681 Fax: 5-3700 E-mail: jeanroberts@cityofchicago.org

PO No.: (if known):

Project Manager: Chief Kehoe / Chief Fox
 Tel: Fax: E-mail: @cityofchicago.org

Modification No.: (if known):

Previous PO No.: (if known):

Project Description: Professional Services contract for Naval Architecture and Engineering Support

FUNDING:

City: Corporate Bond Enterprise Grant* Other
 State: IDOT/Transit IDOT/Highway Grant* Other
 Federal: FHWA FTA FAA Grant* Other

LINE	FY	FUND	DEPT	ORGN	APPR	ACTV	OBJT	PROJECT	RPTG	\$ DOLLAR AMOUNT
1	007	0100	058	4104	0140					400000

Estimated Value \$400000

*IF GRANT FUNDED, A COPY OF THE APPROVED GRANT AND APPLICATION ARE REQUIRED and any other Terms and Conditions that may apply.

SCOPE STATEMENT:

Attached is a Detailed Scope of Services and/or Specification

IMPORTANT: THIS IS A CRITICAL PORTION OF YOUR SUBMITTAL. IN ORDER FOR DPS TO ACCEPT YOUR SUBMITTAL YOU MUST COMPLETE THE SPECIFIC SCOPE REQUIREMENTS AS SET FORTH IN THE SUPPLEMENTAL CHECKLIST FOR THAT UNIT.

The following is a general description of what should be included in a Scope of Services or Specification:

A clear description of all anticipated services and products, including: time frame for completion, special qualifications of prospective vendors, special requirements or needs of the project, locations, anticipated participating user departments, citation of any applicable City ordinance or state/federal regulation or statute.

TYPE OF PROCUREMENT REQUESTED (check all that apply):

NEW REQUEST

Blanket Agreement
 Standard Agreement
 Small Orders

MOD/AMENDMENT

Time Extension
 Vendor Limit Increase
 Scope Change/Price Increase/Additional Line Item(s)
 Other (specify):

FORMS: Requisition Special Approvals Non-Competitive Review Board (NCRB)

CONTRACT TERM: 5 yrs Requested Term (number of months): 60 months

PRE BID/SUBMITTAL REQUIREMENTS:

Requesting Pre Bid/Submittal Conference? Yes No Requesting Site Visit? Yes No

DPS PROJECT CHECKLIST

ARCHITECTURAL/ENGINEERING SUPPLEMENTAL CHECKLIST

Required Attachments: Scope of Services, including location, description of project, services required, deliverables, and other information as required

Risk Management

Will services be performed within 50 feet of CTA train or other railroad property? Yes No

Will services be performed on or near a waterway? Yes No

If applicable, Pre-Qualification Category No. Category Description:

For Pre-Qualification Program, attach list of suggested firms to be solicited

Other Agency Concurrence Required: None State Federal Other (fill in)

AVIATION CONSTRUCTION SUPPLEMENTAL CHECKLIST

DOA sign-off for final design documents: Yes No

Required Attachments:

Copy of Draft Contract Documents and Detailed Specifications.

Risk Management:

Current Insurance Requirements prepared/approved by Risk Management: Yes No

Will work be performed within 50 feet of CTA or ATS structure or property? Yes No

Will work be performed airside? Yes No

***NOTE:** Any non-construction Aviation request, complete the applicable section.

COMMODITIES SUPPLEMENTAL CHECKLIST

Required Attachments: Detailed Specifications (Scope of Services) including detailed description of the product, delivery location, user department contact, price escalation considerations, Bidder's qualification, contract term and extension options, Contractor's qualifications, citation of any applicable City/State/Federal statutes or regulations, citation of any applicable technical standards and Price Lists/Catalogs, technical drawings and other exhibits and attachments as appropriate.

If Modification request, please verify and provide the following:

Contractor's Name:

Contractor's Address:

Contractor's e-mail Address:

Contractor's Phone Number:

Contractor's Contact Person:

CONSTRUCTION SUPPLEMENTAL CHECKLIST

Required attachments:

Copy of Draft (80% Completion), Contract Documents and Detailed Specifications

Risk Management

Will services be performed within 50 feet of CTA train or other railroad property? Yes No

Will services be performed on or near a waterway? Yes No

DPS PROJECT CHECKLIST

VEHICLES/HEAVY EQUIPMENT SUPPLEMENTAL CHECKLIST

Required Attachments:

- Detailed Specifications including detailed description of the vehicle(s) or equipment, mounted equipment, if any, and options/accessories.
- Special Provisions (Delivery, Warranty, Manuals, Training, Additional Unit Purchase Options, Bid Submittal Information, etc.)
- Delivery Location(s)
- Technical Literature
- Drawings, if any
- Part Number List (Manufacturer; or Dealer; or Other Source:)
- Current Price List(s)/Catalog(s)
- Special Approval Form
- Exhibits and Attachments

If Modification request, please verify and provide the following:

Contractor's Name:

Contractor's Address:

Contractor's e-mail Address:

Contractor's Phone Number:

Contractor's Contact Person:

PROFESSIONAL SERVICES SUPPLEMENTAL CHECKLIST

- Detailed description of project listing obligations of each party.
- The Schedule of Compensation
- Deliverables
- Request for individual contract services (if applicable)
- The appropriate EPS form
- ITSC (approved by BIS)
- OBM (approved by Budget form/memo)
- Grant document attached

Attach any documentation indicating any previous purchase activity to assist in the procurement process

TELECOMMUNICATIONS AND UTILITIES SUPPLEMENTAL CHECKLIST

Required Attachments: Detailed Scope of Services/Specification which sets forth all of the anticipated services and products the user department wants provided, including time frame for completion, special qualifications of prospective vendors, special requirements or needs of the project, locations, anticipated participating user departments, citation of any applicable City ordinance or state/federal regulation or statute.

Has the project been reviewed by DGS? Yes No

Attach copy of DGS Recommendation; Reservation(s); or participate under current contract.

Does the project include software? Yes No

If yes, is signed ITSC form attached? Yes No

Does the location involve:

A public way? Yes No

Any concession in the City's facilities? Yes No

Is it anticipated City Council approval of the project or contract will be required? Yes No

DPS PROJECT CHECKLIST

WORK SERVICES/FACILITY MAINTENANCE SUPPLEMENTAL CHECKLIST

Required Attachments: Detailed Specifications (Scope of Services) including detailed description of the work, locations (with supporting detail), user department contacts, work hours/days, laborer/supervisor mix, compensation and price escalation considerations, Bidder's qualification, contract term and extension options, Contractor's qualifications, citation of any applicable City/State/Federal statutes or regulations, citation of any applicable technical standards and Price Lists/Catalogs, technical drawings and other exhibits and attachments as appropriate.

Risk Management:

Will services be performed within 50 feet (50') of CTA train or other railroad property? Yes No

Will services be performed on or near a waterway? Yes No

Will services require the handling of hazardous/bio-waste material? Yes No

Will services require the blocking of streets or sidewalks which may affect public safety? Yes No

If Modification or Amendment request, please verify and provide the following:

Contractor's Name:

Contractor's Address: .

Contractor's e-mail Address:

Contractor's Phone Number:

Contractor's Contact Person:

**CITY OF CHICAGO
 PURCHASE REQUISITION**

Copy (Department)

DELIVER TO: 059-2005 FIRE DEPT 10 W 35TH ST Chicago, IL 60616	REQUISITION: 36502 PAGE: 1 DEPARTMENT: 59 - FIRE DEPARTMENT PREPARER: Joan L Roberts NEEDED: APPROVED: 1/7/2008
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REQUISITION DESCRIPTION

SOLE SOURCE PROF SERVICES CONTRACT FOR NAVAL ARCHITECTURE AND MARINE ENGINEERING SUPPORT
 SPECIFICATION NUMBER: 02944

COMMODITY INFORMATION

LINE	ITEM	QUANTITY	UOM	UNIT COST	TOTAL COST
1	00609 10	400,000.00	USD	1.00	400,000.00

PROF SERVICES FOR NAVAL ARCHITECT AND MARINE ENGINEERING SUPPORT

SUGGESTED VENDOR:

REQUESTED BY: Jean L Roberts

DIST	BFY	FUND	COST CTR	APPR	ACCNT	ACTV	PROJECT	RPT CAT	GENRL	FUTR	Dist. Amt.
1	007	0100	0594104	0140	220140	9900	00000000	000000	00000	0000	400,000.00
LINE TOTAL:											400,000.00

REQUISITION TOTAL: 400,000.00

CDI Proposal # BL07.055



January 14, 2008

CDI Marine Company
900 Ritchie Highway, Suite 102
Severna Park, MD 21146

Tel : 410.544.2800
Fax : 410.647.3411
www.cdicorp.com

Ms. Jean Roberts
Chicago Fire Department
IIT Tower
14th Floor
10 West 35th Street
Chicago, IL 60616

Dear Ms. Roberts,

CDI Marine Company, Band Lavis Division is pleased to submit a Firm Fixed Price Proposal to provide program acquisition and engineering support services to the City of Chicago for the acquisition of a new fire boat. The total cost for this effort is \$399,530.00.

We have conducted an initial review of the City's M/WBE vendor list and have identified a number of potential M/WBE companies that can participate in this project. Upon notification of the acceptance of our proposal we will begin the interview and selection process to comply with the City's M/WBE regulations.

Enclosed please find our proposed statement of work.

This proposal is valid for a period 60 (sixty) days.

We look forward to the opportunity to support the Chicago Fire Department on this project. If you have any technical questions concerning the services to be provided, please contact Mr. Dan Bagnell, Director, Naval Architecture either by telephone at (410) 544-2800 or via email at dan.bagnell@cdicorp.com. Should you have any fiscal or contractual questions, please contact Ms. Tosha Christopolus, Manager, Administration & Projects at (410) 544-2800 or via email at tosha.christopolus@cdicorp.com.

Sincerely,

CDI MARINE COMPANY
Band Lavis Division

A handwritten signature in black ink that reads "David R. Lavis".

David R. Lavis
Sr. Vice-President, CDI Government Services Group
General Manager, CDIM-BLD

STATEMENT OF WORK
TO SUPPORT THE ACQUISITION OF A
FIRE BOAT FOR THE CITY OF CHICAGO

Task 1 Requirements Study

CDI will conduct a requirements study to:

1. Define the fireboat requirements of the Chicago Fire Department and express those requirements as performance and engineering design specifications suitable for a request for proposals (RFP) for design and construction.
2. Define the city, state, and federal regulations and the industry standards that will apply to the design and construction of the fireboat.

Deliverable: A requirements document that, after review and concurrence by the Chicago Fire Department, will state the performance and engineering design requirements for the fireboat and will become part of the technical specifications.

Task 2 Yard Search

Based on the requirements study CDI will conduct a shipyard survey to assemble a bidders list for the acquisition. It is essential to establish competition to control the cost of the acquisition. This will help to ensure that the yard selected has the capabilities and financial stability to deliver a quality product on schedule. Also, this will broaden the list of potential bidders, ideally, creating competition and a chance to control acquisition costs.

Deliverable: A bidder's list of shipyards. These shipyards can then be pre-qualified by the City to streamline and reduce the cost of the acquisition process.

Task 3 Website

CDI will develop a support website for the fireboat acquisition. This website will have a public part which can be used for marketing purposes and to heighten public awareness of the project. CDI will consult with City offices to determine specific content. Suggested content includes construction updates and photos, boat designs, and boat characteristics and capabilities. The website will also have an "acquisition team" portion, which is password protected. Anyone that the City would like to have access to this portion can be given a user account. This part of the site is dedicated to the design and construction of the boat and allows for easy communication between the City, CDI, the builder, and the designer. Documents and drawings can be uploaded and downloaded allowing a central repository that everyone can access. The site also allows a way to submit, review, track, and approve/decline engineering changes that occur during design and construction. The status and associated cost of each of these changes will be viewable by the City, CDI, the builder and the designer and will allow for timely decision making. Other features such as contact lists, warranty issues tracking, and maintenance logs are also available. Any part of the web site can be customized to suit the City's public relations, contract management and technical needs.

Deliverable: A functioning website with a registered domain name (such as "ChicagoFireBoat.com") for the duration of the contract customized to the City's needs.

Task 4 Monitor Research and Specification

The majority of current high-capacity monitors have been designed developed for the petroleum industry. However, some do not provide satisfactory stream shape and characteristics for fighting the types of fires found in cities. Monitor specifications from various manufacturers will be reviewed. The specifications for the Chicago fireboat monitors will be written to ensure that the City will get the proper monitors for its applications and also to ensure that there will be suitable competition for the builder's purchasing process.

Deliverables: A list of manufacturers and model numbers of fire service monitors that will produce high capacity, long reaching, solid streams with minimum breakup for inclusion in the technical specifications and a requirements document suitable for inclusion in the boat specification or as a stand alone document.

Task 5 Specification Development

CDI will produce the technical specification for the RFP. The technical specification will include the following sections:

Design – defines the requirements and standards that must be met to assure the boat:

1. Will be stable under all operating conditions, including icing conditions.
2. Meets or exceeds personnel protection standards for noise, vibration and health.
3. Is compliant with city, state and federal regulations related to marine operations.
4. Meets or exceeds the boat speed and fire pump capacity requirements.

Structure - defines the appropriate design standards, material specifications and unique structural requirements of a low freeboard fireboat.

Propulsion – defines the requirements for a marine diesel engine installation including:

1. The rating of the machinery in accordance with ISO standards.
2. The means of controlling vibration and noise of the propulsion system.
3. The requirements for air supply, exhaust and cooling systems.
4. The requirements for seachests and for preventing ice and debris from clogging the strainers.
5. The standards to be met in the design of the marine gear, propulsion shafting, struts, bearings and propellers.
6. The latest emissions standards.

Electrical – defines the National Electrical Code, National Fire Protection Association, and American Boat and Yacht Council standards to be applied to the fireboat's electrical system. It contains the design standards for the generators, batteries, wiring and overload protection of the electrical system. This section also defines the equipment to be used to protect the boat's

electrical system from faults on the shore side of the shore power system. It also defines the lighting requirements.

Electronics – identifies the communications, navigation and surveillance systems to be installed by the builder.

Auxiliary Systems- defines the requirements and standards to be applied to the:

1. Fire fighting systems, including the fire pump engines, gears, fire pumps, firemain piping and valves, gauges, and monitoring systems.
2. Hydraulic systems.
3. Air systems, including boat service and breathing air systems.
4. Heating, ventilation and air conditioning systems.
5. Piping systems, including fresh water, sanitary and bilge systems.
6. Steering system.
7. Boat fire and flooding protection systems.

Outfit – defines the requirements for:

1. Doors, windows and hatches to assure water tightness as well as adequate strength, appropriate materials and dimensions.
2. Deck covering materials, with emphasis on ease of maintenance, abrasion resistance, sound absorption and non-skid qualities.
3. Insulation and interior finish.
4. Exterior coatings.
5. Stowage for firefighting appliances, hose, ladders, tools and personal protective equipment.
6. Control spaces for navigation of the boat, control of the machinery and firefighting system, emergency medical care and command functions.

Delivery and Training – defines the delivery requirements for the boat, the manuals and drawings to be provided to the City, and the training to be provided to fire department personnel.

Inspections and Trials – defines the series of construction inspections, machinery performance trials, stability tests, pump and firemain tests and full power trials that will be performed as a condition of acceptance of the boat by the City.

Deliverable: A complete technical specification for inclusion in the RFP including payment schedules, spare parts to be delivered with the boat, and response time requirements for warranty issues.

Task 6 Concept Design

The purpose of a concept design is to produce a design demonstrating one way that the performance requirements can be satisfied with an arrangement that is satisfactory to the fire department. The preparation and review of a concept design allows the fire department to see the impact of its requirements and, if necessary, make compromises to achieve the best possible overall performance.



City of Chicago
Richard M. Daley, Mayor

Chicago Fire Department

Raymond Orozco
Commissioner


14th Floor
10 West 35th Street
Chicago, Illinois 60616-3799
(312) 745-3705
(312) 745-3880 (FAX)
(312) 747-5047 (TTY)

<http://www.cityofchicago.org/fire>

FINANCE / PAYROLL

TO: Montel M Gayles
Chief Procurement Officer
Department of Procurement Services
City Hall Room 403

ATTN: Non-Competitive Review Board

FROM: Jean Roberts 
Director of Finance
Chicago Fire Department

RE: Specification: 62944
Vendor: CDI Marine Band Lavis Division
Requisition: 36502
Additional Explanation of Vendor's Unique Capabilities

DATE: January 25, 2008

The Chicago Fire Department recently requested a sole source contract for naval architecture and marine engineering services in order to manage our grant-funded project to procure a \$6.3 million fireboat. The large fireboat project will be funded by the 2007 Port Security Grant which was received January 2008 and will extend for 36 months.

We requested the sole source process for this consulting contract because the project itself is very unique and the niche market for these services is small. We believe by choosing the one vendor with the most distinctly comparable experience to our needs will allow us to competitively bid the larger contract for the fireboat and successfully accomplish the project within the funding and time constraints. To meet the grant deadlines, we will need to have a fully executed contract on the fireboat by 2009 since the design, build, testing stages can take two years.

From our research, we determine that the market for experienced vendors offering naval architecture services for fireboats only consists of three possible vendors: CDI Marine, Jensen Maritime Consultants, and Robert Allen, Ltd. All three of these vendors have worked with municipalities to design fireboats, but each situation has subtle differences and we decided to use the vendor that worked with the most similar project under the most similar circumstances and offered the widest scope of services. That vendor is CDI Marine because of

NEIGHBORHOODS

