CITY OF HOUSTON

Department of Public Works and Engineering

Annise D. Parker

Mayor

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December 17, 2015

Subject: Letter of Clarification No. 7
Fire Hydrant Certification Notice of
Request for Qualifications Revised

Reference: Invitation to Bid (ITB) No.: Q25429

To All Prospective Bidders:

This Letter of Clarification is issued for the following reasons:

- To revise the above referenced solicitation as follows:

1. Replace "Notice of Request for Qualifications" dated 12/15/2015 with "Revised Notice of Request for Qualifications" dated 12/17/2015.

This Letter of Clarification will be considered part of the solicitation referenced above. All revisions, responses, and answers incorporated into the Letter(s) of Clarification are collaboratively from both the Strategic Procurement Division and the applicable City Department(s).

Furthermore, it is the responsibility of each BIDDER to obtain any previous Letter(s) of Clarification associated with this solicitation.

Ted Hockless
Procurement Specialist
PW&E
2805 McKinney
Houston, Tx 77003
832.395.3644

DM:TH:th
C: file

Council Members: Brenda Stardig Jerry Davis Ellen R. Cohen Dwight A. Boykins Dave Martin Richard Nguyen Oliver Pennington Edward Gonzalez Robert Gallegos Mike Laster Larry V. Green Stephen C. Costello David W. Robinson Michael Kubosh C.O. "Brad" Bradford Jack Christie

Controller: Ronald C. Green

	CITY OF HOUSTON **PUBLIC WORKS & ENGINEERING DEPARTMENT** **2015 Fire Hydrant Certification** **NOTICE OF REQUEST FOR QUALIFICATIONS**	**Material Management** **Contracts** **2nd Floor 2805 McKinney** **Houston Texas 77003**

FIRE HYDRANTS AND PARTS
Q25429

The City of Houston Public Works & Engineering Department is soliciting applications from qualified suppliers capable of providing fire hydrants and parts in accordance with City of Houston Standard Specifications Section 02520.

Please review the application for Certificate of Responsibility below. This application must be submitted by all potential bidders for fire hydrants and parts for approval and certification. This application must be completed, submitted in duplicate, and time stamped in **on or before 5:00 p.m. CST, Thursday, January 14, 2016** to the address listed below. Applications received after this date will not be considered in the certification or the bidding process. Faxed applications will not be accepted. If the application is mailed, the potential bidders are cautioned to ensure the application is received at the place, date and time established.

City of Houston
Attention: Ted Hockless
Public Works and Engineering Department
Material Management / Contracts
2805 McKinney, 2nd Floor
Houston, TX 77003
C.O.B. 5:00 p.m. 01/14/16
ted.hockless@houstontx.gov

SCOPE OF WORK/SERVICES

1.0 Pre-Submittal Meeting:

There will be a follow up (non-mandatory) meeting held at **City of Houston Public Works Department, Engineering Division, 1002 Washington Ave. Houston TX, 77002, 2nd Floor Conference Room 2A at 2:00 p.m. to 2:30 p.m. Thursday, December 10, 2015.** The purpose of this meeting is to explain both the application and subsequent certification processes. Only those questions submitted in writing prior to or during this meeting will be evaluated for clarification.

2.0 General:

2.1 Council Motion 84-77 establishes a "Certification" requirement for fire hydrant vendors pursuant to Article IV, Chapter 15 of the Code of Ordinances. Under this requirement, an unexpired and unrevoked Certificate of Responsibility must have been issued prior to the City's receiving bids for each type, style and manufacturer of fire hydrants to be considered for purchase by the City. Failure of an applicant to secure a Certificate of Responsibility will result in their bid not being considered in the award of the fire hydrants supply for the City of Houston.

2.2 In addition to its applicability with regards to the award of fire hydrants and parts to the City of Houston, a valid Certificate of Responsibility-as secured hereunder-shall be required to supply fire hydrants and parts for use on any project constructed for the City of Houston or within its extra-territorial jurisdiction.

2.3 This application for a Certificate of Responsibility must be submitted by all vendors of fire hydrants and parts as noted above or their authorized agent with written certification from the vendor. Applications must include all related test reports, engineering drawings, specifications, and other matters requested in the following documents. Submittal of incomplete information or failure to submit supporting reports and information may results in a denial of a Certificate by the City.

2.4 Performance testing date should be current as of November 1, 2010 thru November 1, 2015.

3.0 Administrative Review:

All incomplete applications for certifications will be returned and will not be considered for this certification cycle.

CITY OF HOUSTON
APPLICATION FOR CERTIFICATE OF RESPONSIBILITY
FOR FIRE HYDRANTS AND PARTS

PART A: GENERAL APPLICATION INFORMATION

Name (or assumed name) and mailing address of Applicant:

_____
_____
_____

1. All names in which Applicant has done business in the preceding five (5) years:

_____
_____
_____
_____

   a. If Applicant is a Partnership, the name and address for each Partner:

   _____
   _____

   b. If Applicant or any Partner of the Applicant is a Corporation:

   _____
   _____

2. The name of the Corporation and State of Corporation:

_____
_____

3. The names and addresses of the three (3) principal officers of the Corporation:

_____
_____
_____

4. The names and addresses of each person controlling 51% or more of the voting rights of the Corporation:

_____
_____

5. If no single person controls 51% or more, the names of each person who controls 20 % or more:

_____
_____

6. If another corporation controls 51% or more, the names of each person or other Corporation who controls 20% or more of the voting rights of such other corporations:

_____
_____

APPLICANT'S NAME: _____

PART B: BIDDER STANDARDS

The following bidder qualifications as established under the City's purchasing policy must be fulfilled. The Applicant must respond to the following items:

1. In order to receive Certificate of Responsibility consideration, an Applicant shall be a fire hydrant manufacturer or the authorized agent with appropriate written proof. The Applicant must have bid, contracted, supplied and provided fire hydrants and fire hydrant repair parts during its normal course of business.

2. The Applicant is an established supplier of fire hydrants. The Applicant has supplied fire hydrants under award(s) in amounts equal to or greater than four hundred and fifty (450) fire hydrants and has filled individual orders of one hundred (100) or more fire hydrants and fire hydrant repair kits.

   Applicant signature below

   Yes _____ No _____
   Signature Signature

3. Financial capacity is part of the criteria for the certification of Applicants. Financial incapacity will be denoted by an affirmative (YES) answer to either of the following questions (i.e. 3.a, 3.b., 3.c., or 3.d.) and shall disqualify an Applicant from further consideration under this process.

   a. Has a voluntary petition for bankruptcy been filed by the Applicant within the last two years?

      Yes _____ No _____
      Signature Signature

   b. Has an adjudication of the Applicant as bankrupt for an assignment for the benefit of creditors that's been approved by a court of competent jurisdiction within the last two (2) years?

      Yes _____ No _____
      Signature Signature

   c. Has an arrangement for reorganization, adjustment or composition of, in respect to the Applicant been approved by a court of competent jurisdiction under the Federal Bankruptcy Act or any similar State or Federal Law within the last two (2) years?

      Yes _____ No _____
      Signature Signature

   d. Has a receiver, trustee or other similar official been appointed by a court of competent jurisdiction for a period greater than sixty (60) days during the last two (2) years?

      Yes _____ No _____
      Signature Signature

APPLICANT'S NAME: _____

4. Each Certificate holder or their local representatives subsequently awarded by the City to supply fire hydrants under the Step No. 2 process shall be required to maintain an adequate stock to fulfill normal City of Houston Requirements. An inspection may be made to determine if the bidder has in his stock those items which he has bid. The inventory must be available for inspection prior to the time of bid award.

   The minimum local inventory shall be as follows:

MINIMUM INVENTORY	DESCRIPTION
10	3' Bury Depth Fire Hydrants
25	4' Bury Depth Fire Hydrants
25	5' Bury Depth Fire Hydrants
15	6' Bury Depth Fire Hydrants

PART C: FIRE HYDRANTS INFORMATION

Please provide separate information for each style or type of fire hydrant which you propose to supply. To obtain a certificate you must offer at least one style or type of fire hydrant which meets the criteria established herein.

1. Hydrant Manufacturer:

_____

_____

2. Place of Manufacturer:

_____

_____

3. Hydrant Name or Style:

_____

_____

4. Catalog Number (s)

_____

_____

_____

5. Number of hydrants manufactured of same of similar design within the past year:

_____

Within the last five (5) years: _____

_____

APPLICANT'S NAME: _____

Engineering Control Drawings:

6. Two (2) copies of detailed engineering drawings including parts list and material specifications for each hydrant offered shall be provided. The engineering drawings shall bear the seal or identification number of a registered professional engineer in responsible charge for the preparation of the engineering drawings and "in the employment of the manufacturer" under the engineering drawings. The engineering drawings shall include a unique drawing number and a descriptive legend identifying the fire hydrant as "Per City of Houston Specifications".

7. Provide by separate attachment, the names and telephone numbers of key representatives of at least three (3) cities with population greater that 100,000 currently using the manufacturer's hydrant of substantially the same design with a minimum total usage of 1,000 in the last ten years. Failure to provide at least three (3) references may be cause for disqualification.

Test Reports:

8. Submit and Affidavit of Compliance from the fire for hydrant manufacturer, certifying that the proposed hydrant and an material used in the construction will conform to the applicable requirements of American Water Works Association (AWWA C502-05) and the City of Houston Specifications and that all tests specified therein (i.e. AWWA C502-05) will be performed and all test requirements will be met on each hydrant provided under this certificate.

PART D: ENGINEERING STANDARDS

[Note: Compliance with each requirement under this part (Part D) is to be clearly identified on the Engineering Control Drawings submitted under Part C.6 of the application.]

Certificated fire hydrants shall conform to the requirements and tests of AWWA Standard C502-05, or latest revision thereof, entitled, "AWWA Standard for Dry-Barrel Fire Hydrants" as to their design, component materials, construction, manufacture and testing except as modified or supplemented hereinafter. Note that the maximum lead content of any material exposed to potable water (under either closed or open hydrant conditions) is to be 8%; maximum zinc content shall be less than 15%; "Natural" rubbers are to formulated to be resistant to microbiological attack. Copper alloys that contain more than 16% zinc shall not be used unless specimens of the alloy tested in accordance with ISO 6509 exhibit dezincification depth of less than 25µm.

1. Outlet Nozzles

Each hydrant shall be equipped with two (2), two and one-half inch (2-1/2") nominal inside diameter hose nozzles and one (1) four inch (4") nominal inside diameter pumper nozzle conforming to National (American) Standard Fire Hose Coupling Screw Threads (per NFPA No.194 and ANSI B26-192S latest revision). Nozzles shall be securely fastened into the upper barrel by mechanical means, and shall be locked in place with a security device. Nozzle caps shall be furnished complete with "Natural" rubber or neoprene gasket and shall be securely attached to the hydrant barrel with chains of not less than one-eighth inch (1/8") diameter. The pumper nozzle shall be so situated as to allow an unobstructed radius of eighteen inches (18") from the threaded surface of the nozzle throughout the path of travel of a wrench or other device used to fasten a hose to the nozzle.

APPLICANT'S NAME: _____

2. Traffic Breakable Features

Each hydrant shall be equipped with an effective breakable hydrant barrel feature with breakable valve and stem and operating mechanism on traffic Impact with main valve to remain closed and tight against leaking.

3. Operating and Hold Down Nuts

The operating and hold down nuts shall be fabricated of stainless steel or of cast or ductile iron with bronze inserts or, in the alternative, a security device shall be provided with each hydrant employing a bronze operating nut to protect this feature of the hydrant from malicious mischief or authorized removal. Any such security devices shall not require special tools for normal off/on operation of the hydrant. Hold down assemblies shall be fabricated of suitable metallic materials for the service intended.

4. Size of Hydrant/Inlet Connection

The inlet shall be designed for connection to nominal six inch (6") push-on, or mechanical joint assembly as specified in the bidding documents. The joints shall conform to ANSI/AWWA C111/A21.11 or AWWA C 110 standards.

5. Shut-off Design

Shut-off valve shall be of the "compression type" design (i.e. closing with the pressure) with center stem construction. The shut-off valve opening shall be circular and shall have a diameter of not less that five and one-quarter inches (5-¼").

6. Opening Direction

The hydrant valve stem shall operate to open by turning to the left (counterclockwise).

7. Valve Mechanism

The valve seat ring shall be constructed of bronze and shall be threaded into a bronze drain ring to provide an all bronze drain way. The seat ring and main valve assembly shall be such that it can be removed from above ground through the upper barrel by means of a light- weight seat removal wrench. The valve seat facing shall be constructed of molded "Natural" rubber having a Shore "A" Scale Durometer rating of 90, + or - 5, and shall have a minimum thickness of one-half inch (1/2"). The valve stem shall be provided with a breakable stem **coupling and or/rod** coupling opposite the barrel breakaway feature. Connecting pins and locking devices shall be constructed of bronze or other corrosion-resistant material. The valve stem shall be provided with a bronze or copper sleeve, suitable O-Ring-seals, and a travel stop (Note: This may be designed either into the hydrant upper stem or inlet shoe.) Operating threads and bearing surfaces shall be fully lubricated when opening or closing the main valve and shall be contained in a lubricating reservoir which is sealed at top and bottom. The operating assembly shall be provided with a thrust bearing or lubricated thrust collar to minimize operating torque. (Note: All lubricants must be food grade. MSDS data sheet to be provided with submittal).

APPLICANT'S NAME: _____

8. Hydrant Barrel

The hydrant barrel must be made of duct iron or gray iron and the lower hydrant barrel shall be fabricated as a single piece, and shall be connected to the upper hydrant barrel by means of a joint coupling that will provide three hundred-sixty degrees (360°) rotation of the upper barrel. If hydrants are made in two or more sections or other joint near the ground line the joint shall be located at least two (2) inches above the round line. The bury length shall be as specified and shall be clearly marked from the bottom of the inlet to the ground line. The ground line shall be clearly marked on the barrel. The Inside diameter wall thickness (with tolerance) is to be indicated for the upper barrel, lower barrel and bonnet section. The requested dimensions are to be shown at minimum sections to demonstrate with Table 3 of AWWA C502-05.

9. Hydrant Barrel Drain Construction

A bronze or corrosion-resistant material lined drain opening shall be provided. Tapping of drain holes is not required.

10. Gaskets and Seals

All dynamic seals shall be of "O-Ring" type not requiring adjustment for water tight seal; shall be of buna "N" or other oil-resistant material; all moving parts in contact with the seal shall be bronze or other corrosion-resistant material. Static seals shall be (with the exception of nozzle cap seals) buna "N or other approved synthetic rubber.

11. Extensions

The hydrant barrel shall be designed to permit the use of one or more standard extensions, which shall be available from the hydrant manufacturer, in lengths of from six inches (6") to sixty inches (60") Height) in six inches (6") increments.

12. Hydrant Painting

Hydrants shall be shop coated as follows. New hydrants and refurbished hydrants shall be shop coated as specified herein.

a. Exterior Above Traffic Flange (Including Bolts & Nuts)

Bolts and nuts (both above and below ground) shall conform to AWWA C-502 Section 4:11 and shall be stainless steel, cadmium plated, or zinc coated.

Surface preparation to be in accordance with SSPC-SP10 (NACE2), near white blast cleaned surface.

Coat with a liquid or powder epoxy primer and two part polyurethane or TGIC polyester top coat system with total dry film thickness (DFT) of not to exceed 20 mils as follows:

i. Prime Coat – Liquid or powder epoxy primer with a total dry film thickness (DFT) of 4-6 mils, or cathodic epoxy electro-coat (e-coat) with a (DFT of 0.5-1.0 mils.

ii. Intermediate Coat – Intermediate coat not required.

APPLICANT'S NAME: _____

iii. Finish Coat – Two part polyurethane enamel to be in general conformance with SSPC Paint Specification No. 36 or TGIC polyester system, with a total dry film thickness (DFT) 1.5-3.0 mils. Install color coded finish coating of bonnet in field.

IV. Bonnet Paint – Field apply finish coat of Silicone Alkyd Resin Enamel to be in general conformance with SSPC Paint Specification No. 21. Dry Film thickness 2-3 mils. Bonnet colors are to be as specified in paragraph 3.01 of FH specifications to designate the appropriate size of water supply line.

V. Colors – Primer to be, manufacturer's standard color. Finish coat of hydrant body: Federal Standard Color #15187 (Blue) or equivalent. Bonnet and Connection caps: Finished coated white. Paint white band of finish coat two (2) inches in width on hydrant body approximately six inched (6") above and parallel to traffic flange.

b. Exterior Below Traffic Flange:

Surface preparation in accordance with SSPC-SP10 (NACE2), near white blast cleaned surface.

i) Primer: One or two coats of modified or equal polyamide epoxy primer, to be in general conformance with SSPC Paint Specification No. 42. or approved equal with a total dry film thickness (DFT) 8-20 mils. Exterior below traffic flange should be the same color as the above traffic flange, i.e., blue. (Federal Standard Color #15187 (Blue) or equivalent)

c. Interior Surfaces Above and Below Water Line Valve (including lower barrel extensions)

All material used for internal coating of hydrant interior ferrous surfaces below the main valve must be NSF certified as suitable for contact with potable water as required by Chapter 290, Rules and Regulations for Public Water Systems, Texas Commission on Environmental Quality.

Coating shall be liquid or powder epoxy system in accordance with AWWA Standard C-550 (latest revision). Coating may be applied in two (2) or three (3) coats, according to manufacturer's recommendations, for a total dry film thickness not to exceed 20 mils.

d. General

All coatings shall be applied in strict accordance with manufacturer's recommendation. No requirement of this specification shall cancel or supersede the written directions and recommendations of the specific coating manufacturer so as to jeopardize the integrity of the applied system.

APPLICANT'S NAME: _____

The hydrant supplier shall furnish an affidavit of compliance that all materials and work furnished comply with the requirements of this specification and applicable standards referenced herein.

PART E: PERFORMANCE STANDARDS

It is understood that each Applicant must submit all information, drawings and test reports on all fire hydrants in accordance with all requirements listed in this chapter.

Certificated fire hydrant shall comply with the performance standards as stated below. Compliance shall be determined through actual testing of each type or style of fire hydrant proposed for certification.

All fire hydrants shall be tested under normal operating conditions while undergoing Hydraulic Performance Testing and Traffic Impact Performance Testing. They are to be in an upright position, supplied with a minimum water pressure of 65 psi through a water supply pipe of size six inches (6") or larger to the fire hydrants.

1. Hydraulic Performance

As a point of clarification, the Hydraulic Performance Testing (Part E, Item 1.2, Paragraph 1) and Traffic Impact Performance Testing (Part E, Item 2.2 Paragraph 2) are to be performed and witnessed by a third party of testing laboratory acceptable to the City for the purpose of this application process. The intent of the wording of acceptable to the City is to provide the City with the right to review and to reject laboratories either lacking the independence or expertise or to witness to perform the required work upon City request paid by the manufacturer. A pre-request for approval of an acceptable laboratory or to witness the testing is not required prior to proceeding with the required work.

The testing laboratory must have previous working experience in either hydraulic and/or impact testing performance with their staff Professional Engineer in the civil or mechanical field to design, to witness and to verify the testing to be true. If the testing will be performed by the fire hydrant manufacturer, the testing must be designed, witnessed and verified by a testing laboratory's staff Professional Engineer with experience in either hydraulic and/or impact testing performance.

1.1 Hydraulic Performance Standards:

Certified fire hydrant shall have a demonstrated capability:

1.1.1 To provide a free discharge of 1,500 gpm or greater from the single pumper nozzle at a hydrant inlet static pressure of not exceeding 20 psi as measured at or corrected to the hydrant inlet at its centerline elevation.

1.1.2. To provide a discharge of 1,500 gpm or greater from the single pumper nozzle at a maximum permissible head loss of 8.0 psig (when corrected for inlet an outlet velocity head) for an inlet operating pressure not exceeding of 37 psiq as measured at or corrected to hydrant inlet at its centerline elevation.

APPLICANT'S NAME: _____

1.2 Hydraulic Performance Testing:

A certified pressure loss and quantity of flow test shall be conducted by a qualified and independent testing laboratory acceptable to the City on an exact production models (five-foot bury length) of the hydrant proposed for certification. This testing shall be conducted in strict accordance with this standard. A certified test report shall be submitted, and shall contain the following information.

1.2.1 The date of test which shall be no more than five (5) years prior to the date of application for certification.
1.2.2 The name, catalog number place of manufacture, and date of production of the hydrants tested.

1.2.3 A schematic drawing of the testing apparatus, containing dimensions of all piping elements including:

a. Inside diameter and length of inlet piping.
b. Distance from flow measuring points to pressure measurement point.
c. Distance from flow and pressure monitoring points to hydrant inlet.
d. Distance from pressure monitoring point to nozzles.
e. Inside diameter and length of discharge tubing.

1.2.4 Elevation of all points of measurement, inlet, and outlet.
1.2.5 Reports or certificates documenting accuracy of all measuring devices used in the test.
1.2.6 Raw test data.
1.2.7 Sample hand calculation demonstrating reduction of data and indicating relevant equation, fluids properties, conversion factors and assumptions as appropriate.

1.2.8 The Hydraulic Performance Testing (Part E, Item 1.2 Paragraph 1) and the Traffic Impact Testing (Part E, Item 2.2 Paragraph 2) are to be performed/performed or witnessed by parties acceptable to the City for the purpose of this application process, the intent of this wording (i.e. acceptable to the City is to provide the city with the right to review and reject laboratories or witnesses when either lacks the independence or expertise to perform the required work. A separate request for approval of acceptable laboratory or witness is not require prior to proceeding with the required works. The test shall be conducted on at least three (3) separate hydrants fabricated in accordance with the Approved Engineering Control Drawing. Inlet water temperature shall be 70 ±5 degree Fahrenheit (70°±5° F).

2. Traffic Impact Performance

2.1 Traffic Impact Performance Standards:

Certified fire hydrants shall be equipped with a breakable barrel feature and, breakable valve stem coupling such that a vehicular impact will result in a clean break of the barrel and the valve stem at the breakable feature. Upon impact, the hydrant shut-off valve to remain closed and tight against leakage. The failure of the barrel to cleanly and completely break upon impact shall be cause of rejection of the hydrant.

APPLICANT'S NAME: _____

2.2 Hydrant Replacement Parts and Prices:

Applicants are to submit a replacement parts list along with prices for damage to the hydrant and appurtenances due to the Traffic Impact Performance Test. This replacement parts list along with its prices will be submitted at the same time as the Qualifications Submittal. These prices should not be more than $250.00.

2.3. Traffic Impact Performance Testing:

A certified test report shall be provided which outlines the results of a traffic impact test involving standard production run models (not exceeding a 5-foot bury depth) of the fire hydrant with a breakable barrel of the same in design of that proposed for certification. These hydrants shall be installed in accordance with the requirements of this standard, and shall be struck at a point eighteen inches (18") +/- two inches (2") above the designated ground line. The proximate point of impact on the hydrant barrel shall be within two inches (2") of the line perpendicular to the base and equidistant from the pumper nozzle and one hose nozzle. The intent of the traffic impact test will be to fulfill the following impact scenario through a mechanical impact test procedure approved in writing by the City of Houston and performed or witnessed by an independent third party testing laboratory or registered professional engineer acceptable to the City.

Successive tests shall be conducted to simulate the impact by vehicles with gross weights of 3,500, 5,500 and 10,500 pounds. An impact speed of 35 mph is to be simulated for each vehicle weight.

The test shall be conducted on at least three (3) separate hydrants fabricated in accordance with the Approved Engineering Control Drawing. Inlet water temperature shall be 70 ± 5 degree Fahrenheit (70°±5° F).

If a vehicle or vehicles with weights other than specified (i.e. 3,500, 5,500 and 10,500 pounds) are proposed for the impact testing, the minimum proposed impact speed is to be established on the basis of maintaining an equivalence of kinetic energy between the test conditions and the desired simulations (i.e. 3,500 pounds at 35 mph, etc.)

Test hydrant to have un-harnessed push-on or mechanical joint inlet shoes and are to be placed with bedding, backfill and thrust blocks simulating City of Houston installations (No surface inertia blocks allowed).

Upper body or nozzle section of each test hydrant to be assembled so that the centerline of the pumper nozzle is positioned 45 degree to the centerline of the inlet side of the hydrant shoe is to be 90 degrees-so that the impact is parallel to the hydrant thrust blocking.

The test report shall include the following elements:

3. Detailed schematic drawings of the test facility.
4. Complete description of mechanical impact testing equipment used.
5. Complete list of hydrant parts and materials damaged in each mechanical impact test and currently published price schedule.

APPLICANT'S NAME: _____

6. Photographs, including scale references as appropriate, are to be provided to show hydrant thrust restraint, bedding and back fill lifts, fabricated impact bumper if used (Note that this is to be parallel to standard vehicle bumper), and to show condition of hydrant before and after impact test to document damage caused by each test. This photo requirement includes but not limited to all items to be verified for damaged as stipulated in Item 7 of this page (10).

7. The size and static pressure of the line to which the hydrant is attached (Note that minimum static pressure in the hydrant at the time of the impact is to be 65 psiq.)

8. An estimate of the amount of water discharged from the hydrant within the 30 minutes immediately following the collision.

9. Hydrants to be inspected and tested for damage after each impact test. The following represent minimum criteria for acceptance.

   a. Perform visual inspection of hydrant assembly for normal operation that are listed.

   b. Verify upper valve rod is straight and true and still meeting manufacturer's published assembly specification limitations (if no limits are available, verify run-out at hydrant shear coupling is less than .002 inches total indicator movement). If limitation is exceeded, part is considered "damaged" for purpose of this test.

   c. Verify hydrant operating and nozzle cap nuts are still fully functional and will accept a standard 1 ½" X 1 7/16" tapered pentagon operating wrench. If a nut will not completely accept the standard wrench, it will be considered "damaged".

   d. Verify hydrant pumper and nozzle locking devices are functional and that threads will still fully accept a hose coupling meeting the minimum coupling dimensions indicated in table A.2 of Appendix A to AWWA Standard C502-95. If locking device in nonfunctional it will be considered "damaged". If nozzle will not fully accept the hose coupling, it will be considered "damaged".

   e. Replace all "damaged" parts and reassemble hydrant on existing lower section. Perform standard Mechanical and Hydrostatic tests in accordance with section 5.1 of AWWA C502-05. Failure to pass either of both of the tests specified in 5.1 will be grounds for rejecting the result of the impact tests.

APPLICANT'S NAME: _____

1. The Applicant desires that any and all notices provided under Article IV Chapter 15 of the Houston Code of Ordinances shall be sent to the person or persons authorized to act on its behalf in connection with the requested Certificate at the telephone number and the address designated below:

_____
(Name of Authorized Person)

_____
(Address)

_____
(City, State & Zip Code)

_____
(Telephone Number)

2. The Applicant has read and understands the provisions of Article IV Chapter 15 of the Houston Code of Ordinances and the provisions of Council Resolution 84-77 as enacted by the Houston City Council. Applicant has completed the foregoing application and has submitted all additional documents and information relating to the qualification as required in this application. All statements made by the Applicant contained in the foregoing are true and correct.

   The Applicant understands and agrees that the City reserves the right to evaluate the qualifications of all Applicants on the basis of the application materials submitted and to disqualify one or more of all such Applicants if they have submitted incomplete information or if they fail to qualify. Applicant acknowledges the provisions of this section and so signifies by affixing his signature to this application.

_____
(Name of Authorized Person)

_____
(Address)

_____
(City, State & Zip Code)

_____
(Telephone Number)