LEGAL NOTICE

INVITATION TO SUBMIT QUOTATIONS

The Town of Smyrna will accept quotations on examination and testing of Aerial Devices and Ground Ladders for the Fire Department. Bidders shall submit sealed quotations in the format specified in the Invitation to Submit Quotations no later than **10:30 a.m**. **April 24, 2018** at which time bids will be publicly opened and read aloud. No bid may be withdrawn after the scheduled closing time for a period of 90 days. Bidding documents may be obtained at Smyrna Town Hall during regular business hours or www.townofsmyrna.org. Quotations should be mailed or hand delivered to:

Rex S. Gaither
Smyrna Town Hall
Sealed Bid Annual Fire Department
Aerial Devices & Ladder Testing / April 24 @ 10:30 a.m.
315 South Lowry Street
Smyrna, TN 37167

The Town of Smyrna will not discriminate in the purchase of all goods and services on the basis of race, color, religion, sex, national origin, age, disability or any other lawfully protected classification.

Verbal quotations or quotations received after the closing date will not be accepted. The Town of Smyrna reserves the right to reject any and all bids, to waive technicalities or informalities and to accept any bid deemed to be in the best interest of the Town.

SUBMITTED BY: REX S. GAITHER
FINANCE DIRECTOR

TO BE RUN: April 10, 2018

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COMPANY

TABLE OF CONTENTS

SECTION I - GENERAL INFORMATION

A. The Town of Smyrna desires to obtain quotes on examination and testing of Aerial Devices and Ground Ladders for the Fire Department for the term of July 2018 to June 2020.

Smyrna Town Hall location
315 South Lowry Street
Smyrna, TN 37167

Smyrna Fire Station
145 South Lowry Street
Smyrna, TN 37167

Questions should be directed to Chief Bill Culbertson (615) 459-9735 ext. 7500 or e-mail: bill.culbertson@townofsmyrna.org.

B. The Town of Smyrna reserves the right to reject any and all bids, to waive technicalities or informalities and to accept any bid deemed to be in the best interest of the Town. No bid may be withdrawn after the scheduled closing time for a period of 90 days.

C. The bidder shall abide by and comply with the true intent of the specifications and not take advantage of any unintentional error or omission, but shall fully address the full intent and meaning of each aspect of the specifications.

D. Section III, IV, V and Agreement shall be completed and included as an integral part of each bidders proposal.

E. Freight shall be paid by vendor and should be included in unit price bid.

F. The Town is a tax exempt organization.

G. Mail is delivered after 11:00 a.m. Monday through Friday.

H. Bid quotations must be submitted on the Town's quotation page(s).

I. The Town of Smyrna, in accordance with Title VI of the Civil Rights Act of 1964 and Title 49, Code of Federal Regulations, hereby notifies all Bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, creed, sex, handicap or national origin in consideration for an award.

J. By submission of this bid, each bidder/proposer and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to T.C.A. § 12-12-106 Iran Divestment Act.
https://www.tn.gov/assets/entities/generalservices/cpo/attachments/List_of_persons_pursuant_to_Tenn._Code_Ann._12-12-106,_Iran_Divestment_Act-July.pdf

SECTION II - SPECIFICATIONS FOR AERIAL DEVICE TESTING

AERIAL DEVICE EXAMINATION AND TEST SPECIFICATIONS

GENERAL:

1. The bidder shall submit a complete outline of his certification requirements for evaluation by the Fire Department with his bid. Failure to comply will cause automatic rejection.
2. All exceptions and deviations to the specifications shall be noted. The absence of exceptions and /or deviations shall be interpreted as total compliance to the published specifications.
3. Total exception disqualifies the bidder.
4. The bidder shall not represent nor be a manufacturer or repairer of aerial equipment, no exceptions.
5. The examination and test report provided to the town shall specify the point of inspection and the results of such examinations and test. The test report, as required by NFPA 1911, shall include the following:
   a. When the torque verification of mounting bolts, as required by NFPA 1911, is performed, the bolt size, grade, and torque specification shall be recorded.
   b. When NDT is conducted, the test record will indicate the NDT method used in each area inspected.
   c. Where NFPA 1911 requires measurements be taken such as bearing clearance and backlash, cylinder drift, relief pressure, ladder section twist, hardness readings, baserail thickness, extension brake drift, winch drift, and the like, these measurements shall be recorded in the test record in order that a year-to-year comparison can be made.
6. All test work outlined in NFPA 1911, 2012 edition including nondestructive testing shall be conducted, NO EXCEPTIONS.

BIDDER REQUIREMENTS:

1. Bidder shall be a nationally recognized testing laboratory by OSHA in accordance with the OSHA regulations set forth at 29 Code of Federal Regulations, Section 1910.7, Appendix A, "OSHA Recognition Process for Nationally Recognized Testing Laboratories." NO EXCEPTIONS.
2. Bidder shall comply with the following American Society for Testing and Materials Standards. NO EXCEPTIONS.
   a. ASTM E543, "Standard Practice for Determining the Qualifications for Nondestructive Testing Laboratories"
   b. ASTM E548, "Preparation of Criteria for Use in the Evaluation of Testing Laboratories and Inspection Bodies."
3. The bidder shall have not less than 25 years of fire department equipment safety testing experience.

REFERENCES:

1. The bidder shall submit a list of ten Fire Departments for which the bidder has tested similar aerial devices as the units to be tested.
2. The bidder shall submit a list of a minimum of six aerial apparatus manufacturers for whom testing is currently being conducted on a regular basis. NO EXCEPTION.

PERSONNEL:

1. The inspectors actually performing the test work on the units shall be certified as meeting Level II requirements as outlined in American Society for Nondestructive Testing (ASNT) document CP-189 in all methods used in the aerial inspection. The inspector shall also have had training at various aerial manufacturing locations so as to become familiar with the assembly and operation of aerial devices for fire service use.
2. Prior to award of contract, the actual person(s) performing the inspection may be required to present for review proof of his Level II Certification in the required NDT methods.
3. Prior to submittal to the Fire Department, the final report shall be reviewed by the ASNT Level II and a Registered Professional Engineer both of whom are directly involved with the aerial certification program at their company.

NECESSITY OF REINSPECTIONS:

1. If a unit shall have minor defects and not be repaired before the inspector leaves the area, the town shall make necessary repairs and notify the testing company of the completion of the repairs in writing. No reinspection shall be deemed necessary.
2. If a unit should have major defects the load test shall not be conducted until such time as repairs have made and the repair work is inspected and found to be acceptable by the testing company. Charges for reinspection shall be for actual time spent at the department conducting the required tests.

CERTIFICATION:

1. When the unit successfully meets all NFPA 1911, 2012 requirements, the testing company shall issue a certificate of aerial lift device examination and test stating the unit's compliance with NFPA 1911, 2012 Edition.

NOTIFICATION TO ALL BIDDERS:

In order to comply with this specification, the bidder must have in his possession the following tolerances from the manufacturer. NO EXCEPTIONS. Proof of compliance may be required prior to award of contract.

1. Rotation bearing clearance and backlash.
2. Critical mounting bolt grade and torque.
3. Elevation cylinder drift tolerance.
4. Extension cylinder drift tolerance.
5. Outrigger cylinder drift tolerance.
6. Hydraulic relief pressure.
7. Ladder section twist.
8. Hardness for aluminum devices.
9. Hollow I-beam baserails thickness
10. Rated load of the device.
11. Maximum rated working pressure of water system.

1. The inspectors actually performing the test work on the units shall be certified Level II in the required NDT methods, under the requirements outlined in ASNT document CP-189. The inspector will also have had training at various aerial

manufacturing locations so as to become familiar with the assembly and operation of aerial devices for fire service use.

2. Prior to submittal to the Fire Department, the final Report will be reviewed by an ASNT Level III and a Registered Professional Engineer, both of whom are directly involved with the aerial device certification program at UL.
3. UL will comply with the American Society for Testing and Materials (ASTM) Standard ASTM E543 "Standard Practice for Evaluating Agencies that Perform Nondestructive Testing."

WELDING STANDARDS:

1. All accessible structural weldments on ferrous materials will be inspected for compliance with American Welding Society (AWS) D1.1 "Structural Welding Code – Steel." All structural weldments shall meet the requirements for weld quality as defined in 10.17.1, Visual Inspection.

   The following criteria will apply:

   Cracks

   No cracks of any type (transverse, toe, longitudinal, crater, etc.) are permitted.

   Surface Holes

   The sum of diameters of piping porosity in fillet welds shall not exceed 3/8 in. (10 mm) in any linear inch (25 mm) of weld and shall not exceed ¾ in. (19 mm) of weld in any 12 in. (305 mm) length of weld.

   Complete joint penetration groove welds in butt joints transverse to the direction of computed tensile strength shall have no piping porosity. For all other groove welds, piping porosity shall not exceed 3/8 in (10 mm) in any linear inch (25 mm) of weld and shall not exceed 3.4 in. (19 mm) in any 12 in. (305 mm) length of weld.

   Lack of Fusion

   Thorough fusion shall exist between adjacent layers of weld metal and between weld metal and base metal.

   Undercut

   Undercut shall not exceed 0.01 in. (0.25 mm) deep when its direction is transverse to primary tensile stress in the part that is undercut, nor more than 1/32 in. (1 mm) for all other situations.

   All aluminum structural weldments shall meet the requirements in Paragraph 10.15.1 of the American Welding Society (AWS) Standard AWS D1.2 "Structural Welding Code – Aluminum."

   The following criteria will apply:

   Cracks

No cracks of any type (transverse, toe, longitudinal, crater, etc.) are permitted.

Undercut

Length, each undercut	15% of minimum base metal thickness, maximum. (See chart, below)
Depth	
Distance between undercuts 0.20 in. (5 mm), maximum	

Base Metal Thickness (in.)	Allowable Undercut Depth (in.) 15% of Base Metal
1/16	0.009 (approximately equal to 0)
1/8	0.019 (approximately equal to 1/64)
3/16	0.028 (approximately equal to 1/32)
¼	0.038 (approximately equal to 1/32)
5/16	0.046 (approximately equal to 3/64)
3/8	0.056 (approximately equal to 3/64)
7/16	0.066 (approximately equal to 1/16)
½	0.075 (approximately equal to 1/16)

Scratch or Burn Marks

Depth	15% of minimum base metal thickness, maximum.

1-6 Visual Inspection. A visual inspection, prior to any operation or load testing, will be carried out in a systematic sequence with proper attention to detail. This visual inspection of the equipment will be for the detection of any visible defects, damage, or improperly secured parts.

1-7 Weld Inspection. All accessible structural welds will be visually inspected for fractures. When the nondestructive testing is required by 1-4.2 is performed, all accessible structure welds will be inspected by ASNT Level II NDT technicians certified in the test methods used.

1-7.1 All accessible structural welds on steel will be inspected in accordance with the appropriate provisions of the American Welding Society (AWS) Standard AWS D1.1, Structural Welding Code—Steel. All structural welds will comply with the weld quality as defined in paragraph 10.17.1 (Visual Inspections) of AWS D1.1.

1-7.2 All accessible structural welds on aluminum will be inspected in accordance with the appropriate provisions of the American Welding Society (AWS) Standard AWS D1.2, Structural Welding Code—Aluminum. All structural welds will comply with the weld quality as outlined in Table 10.15.1 of AWS D1.2.

1-7.3 The application of a particular nondestructive weld inspection technique will be as recommended by the American Welding Society (AWS) Standard AWS B1.10, Guide for the Nondestructive Inspection of Welds.

1-8 Bolt, Pin, and Washer Inspection. Bolts and pins subjected to ultrasonic testing shall contain no ultrasonic CRT indications that can be interpreted as cracks or elongated materials. All washers will be inspected for correct installation.

1-9 Nondestructive Testing Procedure.

1-9.1 All ultrasonic inspections will be conducted in accordance with the following American Society for Testing and Materials (ASTM) Standards:

a. ASTM E114, Practice for Ultrasonic Pulse-Echo Straight-Beam Examination by the Contact Method
b. ASTM E797, Standard Practice for Measuring Thickness by Manual Ultrasonic Pulse-Echo Contact Method
c. ASTM E500, Standard Terminology Relating to Ultrasonic Examination

1-9.2 All magnetic particle inspection will be conducted in accordance with the following American Society for Testing and Material (ASTM) Standards:

a. ASTM E709, Practice for Magnetic Particle Examination
b. ASTM E269, Definitions of Terms Relating to Magnetic Particle Examination

1-9.3 All liquid penetrant inspections will be conducted in accordance with the following American Society for Testing and Materials (ASTM) Standards:

a. ASTM E165, Practice for Liquid Penetrant Inspection Method
b. ASTM E270, Definitions of Terms Relating to Liquid Penetrant Inspection

1-9.4 All radiographic inspection will be conducted in accordance with the following American Society for Testing and Materials (ASTM) Standards:

a. ASTM E1032, Method for Radiographic Examination of Weldments
b. ASTM E586, Standard Definitions of Terms Relating to Gamma and X-Radiography

1-9.5 All hardness readings will be conducted in accordance with the following American Society for Testing and Materials (ASTM) Standards:

a. ASTM E6, Standard Definitions of Terms Relating to Methods of Mechanical Testing
b. ASTM EI 0, Test Method for Brinell Hardness of Metallic Materials
c. ASTM EI 8, Test Method for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials
d. ASTM E92, Test Method for Vickers Hardness of Metallic Materials
e. ASTM B647, Test Method for Indentation Hardness of Aluminum Alloys by Means of a Webster Hardness Gauge
f. ASTM B648, Test Method for Indentation Hardness of Aluminum Alloys by Means of a Barcol Impressor

Testing Metal Aerial Ladders

2-1 General. In addition to the manufacturer's recommendations, the inspections detailed below will be performed. An inspection preceded by a plus sign (+) indicates that an appropriate nondestructive test (NDT) shall be conducted as required by 1-4.2 of this standard.

Problems that affect the structural integrity of the aerial ladder will be called immediately to the attention of the manufacturer or the manufacturer's authorized representative. Hydraulic components shall show no signs of hydraulic fluid leakage. A component shall be considered leaking if oil droplets are forming on the component. A film of oil on the component will not be considered severe enough to categorize the component as leaking.

2-2 Service Records. The aerial ladders service records will be checked for any reports that may indicate defective conditions.

2-3 Turntable and Torque Box Inspection and Test. The turntable and torque box components, where applicable, will be inspected on all aerial ladders in accordance with 2-3.1 through 2-3.28.

2-3.1 Rotation Bearing Mounting Bolts. The rotation bearing mounting bolts will be inspected as follows:

a. Inspect all accessible bolts for proper grade and installation as specified by the apparatus manufacturer.
b. Using a properly calibrated torque wrench, verify that the bolt torque on all accessible bolts meets the apparatus manufacturer's specifications.
c. (+) Inspect all accessible bolts for internal flaws.

2-3.2 Torque Box Mounting to Frame. The torque box mounting to frame will be inspected as follows:

a. If the torque box is bolted to the frame, inspect all accessible bolts for proper grade and installation as specified by the apparatus manufacturer.
b. Using a properly calibrated torque wrench, verify that the torque on all accessible bolts meets the apparatus manufacturer's specification, if the torque box is bolted to the frame.
c. If the torque box is welded to the frame, visually inspect all accessible attaching welds for fractures.
d. (+) If the torque box is bolted to the frame, inspect all bolts for internal flaws.
e. (+) if the torque box is welded to the frame, inspect all accessible attaching welds.

2-3.3 Rotation Gear and Bearing. The rotation gear and bearing will be inspected as follows:

a. Inspect the rotation gear for missing or damaged teeth, pinion-to-gear alignment, proper lubrication, and backlash.
b. Record the inner bearing race to outer bearing race clearance, if accessible, in accordance with the bearing manufacturer's procedures, and compare the clearance to the bearing manufacturer's specifications.

2-3.4 Rotation Gear Reduction Box Mounting. The rotation gear reduction box mounting will be inspected as follows:

a. If the reduction box is bolted to the turntable, inspect all bolts for proper grade and installation and specified by the apparatus manufacturer.
b. Using a calibrated torque wrench, verify that the torque on all bolts meets the apparatus manufacturer's specification, if the reduction box is bolted to the turntable.

c. Visually inspect all accessible weldments for defects and welds for fractures.
d. (+) If the reduction box is bolted to the turntable, inspect all bolts for internal flaws.
e. (+) If the reduction box is welded to the turntable, inspect all reduction box attaching welds.

2-3.5 Turntable Structural Components. The turntable structural components will be inspected as follows:

a. Visually inspect all accessible turntable structural weldments for defects and welds for fractures.
b. (+) Inspect all accessible turntable structural component welds.

2-3.6 Rotation Hydraulic Swivel. Inspect the swivel for external hydraulic fluid leakage.

2-3.7 Hydraulic Lines and Hoses in Turntable. Inspect all hydraulic lines and hoses for kinks, cuts and abrasions, and hydraulic fluid leakage at connectors and fittings.

2-3.8 Elevation, Extension, and Rotation Lock. The elevation, extension, and rotation lock will be inspected as follows:

a. Inspect the manual valve elevation, extension, and rotation lock for external hydraulic fluid leakage.
b. Test the manual valve elevation lock for proper operation by engaging the lock and then attempting to raise and lower the ladder with the main hydraulic system operating. No detectable movement shall occur as determined by visual inspection.
c. Test the manual valve extension lock for proper operation by engaging the lock and then attempting to extend or retract the ladder with the main hydraulic system operating. No detectable movement shall occur as determined by visual inspection.
d. Test the manual valve rotation lock for proper operation by engaging the lock and attempting to rotate the turntable clockwise and counterclockwise with the main hydraulic system. The movement shall not exceed the manufacturer's specification.

2-3.9 Hydraulic Oil. After the operational tests have been performed, remove a sample of the hydraulic oil from the hydraulic reservoir and subject the sample of the hydraulic oil to spectrochemical analysis.

2-3.10 Power Takeoff. Inspect the power takeoff for external hydraulic fluid leakage and proper operation (engagement and disengagement).

2-3.11 Hydraulic Pump. Inspect the hydraulic pump for external hydraulic fluid leakage.

2-3.12 Collector Rings. The collector rings will be inspected as follows:

a. Inspect the collector rings for foreign material buildup on rings, if accessible.
b. If accessible, inspect the collector ring terminals for damage.
c. Conduct tests to ensure the proper operation of the collector rings by rotating the aerial device while electric-powered devices are in operation.

2-3.13 Elevation Cylinder Anchor Ears and Plates. The elevation cylinder anchor ears and plates will be inspected as follows:

a. Visually inspect the elevation cylinder anchor ears and plates for defects and attaching welds for fractures.
b. (+) Inspect the elevation cylinder anchor ears and plate attaching welds.

2-3.14 Elevation Cylinder Pins. The elevation cylinder pins will be inspected as follows:

a. Inspect cylinder pins for alignment, proper installation, lubrication, operation, and retention.
b. (+) Inspect cylinder pins for internal flaws.

2-3.15 Elevation Cylinders. The elevation cylinders will be inspected as follows:

a. Inspect the cylinder rods for pitting, scoring, and other defects.
b. Inspect the cylinder rod to barrel seal and the end gland seal for excessive external fluid leakage.
c. *With the hydraulic oil at ambient temperature, subject the cylinders to a drift test by placing the aerial device at a 60-degree elevation, full extension, marking the cylinder position, closing manually operated locking valves, and allowing the device to stand for 1 hour with the engine off. The results of such a test shall not exceed the manufacturer's specifications for allowable cylinder drift.

2-3.16 Holding Valves on Elevation Cylinders. Inspect the holding valves for external hydraulic fluid leakage.

2-3.17 Operating Controls. The operating controls will be inspected as follows:

a. Inspect the operating controls for missing or damaged control handles, proper identification, and hydraulic fluid leakage.
b. Verify that the controls operate smoothly, return to neutral position when released, and do not bind during operation.

2-3.18 Load Limit Indicators. Inspect the load limit indicators for proper operation and legibility.

2-3.19 Emergency Hand Crank Controls. Inspect the hand crank control for proper operation.

2-3.20 Auxiliary Hydraulic Power. Inspect the auxiliary hydraulic power for proper operation.

2-3.21 Turntable Alignment Indicator. Verify the presence of a turntable alignment indicator.

2-3.22 Throttle Control. Verify that the throttle control is operable, and record the operating RPM using a tachometer or a revolution counter (if so equipped) and a stopwatch.

2-3.22 Communication System. Inspect the communication system for proper installation and proper operation.

2-3.23 Relief Hydraulic Pressure. Verify that the main pump relief hydraulic pressure does not exceed the manufacturer's specifications.

2-3.25 Unit Main Frame. The unit main frame will be inspected as follows:

a. Visually inspect the main frame for any cracks, bends, dents, twists, or other weldment defects and any welds for fractures.
b. (+) Inspect all main frame welds.

2-3.26 Transmission/Aerial Device Interlocks. If interlocks are provided that prevent operation of the aerial device until the chassis spring brakes have been set and the transmission is properly disengaged, verify that the interlocks are operating properly.

2-3.27 Engine Speed Interlocks. If interlocks are provided that allow operation of the engine speed control only after the spring brakes have been set and the transmission is properly positioned, verify that the interlocks are operating properly.

2-3.28 Breathing Air Systems. If a breathing air system is provided, the system will be inspected as follows:

a. Verify that the breathing air system is properly installed including the integrity of the air cylinder mounting, the regulator, and the air lines from the air cylinder(s) to the top of the aerial device.
b. Verify that all the component parts of the system are present and in serviceable condition.
c. Visually inspect the air cylinder mounting brackets for defects and welds for fractures.
d. (+) Inspect all welds on air cylinder mounting brackets
e. Check that the air pressure regulator is set at the apparatus manufacturer's recommended pressure.

2-4 Stabilizer Examination and Test. The stabilizer components, where applicable, will be inspected on all aerial ladder apparatus in accordance with 2-4.1 through 2-4.14.

2-4.1 Stabilizer Structural Components. The stabilizer structural components will be inspected as follows:

a. Visually inspect all stabilizer components for defects and welds for fractures.
b. (+) Inspect all stabilizer structural component welds.

2-4.2 Stabilizer Pads. Verify that the stabilizer pads are present, of proper construction, and in serviceable condition.

2-4.3 Stabilizer Mounting to Frame or Torque Box. The stabilizer mounting to the frame or torque box will be inspected as follows:

a. Visually inspect the stabilizer to frame or torque or torque box attachment for defects such as weld cracks, dents, and bends.
b. (+) If welded, inspect the stabilizer to frame or torque box mounting welds.
c. If bolted, inspect all bolts for proper fastener grade and installation as specified by the apparatus manufacturer.
d. Verify that the torque on all bolts meets the apparatus manufacturer's specification using a properly calibrated torque wrench.
e. (+) Inspect all bolts for internal flaws.

2-4.4 Hydraulic Lines and Hoses in Stabilizer System. Inspect the hydraulic hose lines for kinks, cuts and abrasions, and leakage at connectors and fittings.

2-4.5 Stabilizer Interlock and Warning Device. Verify that the interlock system is operating properly.

2-4.6 Stabilizer Extension Cylinder Pins and Hinge Pins. The extension cylinder pins and hinge pins will be inspected as follows:

a. Inspect all stabilizer cylinder pins and hinge pins for proper installation, lubrication, operation, and retention.
b. (+) Inspect all stabilizer pins and hinge pins for internal flaws.

2-4.7 Stabilizer Extension Cylinder. The stabilizer extension cylinder will be inspected as follows:

a. Inspect the stabilizer extension cylinder rods for pitting and scoring and other defects.
b. Inspect the cylinder rod to barrel seal and the end gland seal for excessive external fluid leakage.
c. With the hydraulic oil at ambient temperature, and with the stabilizer's cylinders properly set, measurements shall be taken to determine the amount of drift present in 1 hour with the engine off. The results shall not exceed the manufacturer's specifications for allowable stabilizer cylinder drift.

2-4.8 Holding Valves on Extension Cylinders. Inspect the holding valves for external leakage of hydraulic fluid.

2-4.9 Operating Controls. Verify that the controls operate smoothly, return to the neutral position (if designed to do so) when released, do not bind during operation, and are free of hydraulic fluid leakage.

2-4.10 Diverter Valve. Inspect the diverter valve for external hydraulic fluid leakage.

2-4.11 Position Stops and Alignment. Inspect the mechanical stabilizers for proper operation of the positive stops to prevent overextension.

2-4.12 Stabilizer Deployment. If the stabilizer system is hydraulically operated, verify that the system can be deployed within the tie frame designated by the aerial device manufacturer.

2-4.13 Manual Spring Locks. Inspect the condition and operation of stabilizer manual spring locks for stowed position.

2-4.14 Tractor Spring Lockout Device. Inspect the spring lockout device for any discontinuities and for proper operation.

2-5 Aerial Ladder Inspection and Test. The aerial ladder will be inspected in accordance with 2-5.1 through 2-5.28.

2-5.1 Aerial Ladder Weldments. All aerial ladder weldments will be inspected as follows:

a. Visually inspect all accessible aerial ladder weldments for defects and welds for fractures.
b. (+) Inspect all accessible welds on the ladder.

2-5.2 Aerial Ladder Fasteners. All aerial ladder structural fasteners and fastened connections will be visually inspected for cracked fasteners and material cracks around the fasteners.

2-5.3 Ladder Section Alignment. Measurements will be taken to determine the amount of ladder section twist or bow in the aerial ladder. Results shall not exceed manufacturer's specifications for allowance ladder section twist or bow.

2-5.4 Hydraulic, Pneumatic, and electrical lines in Ladder Sections. Inspect all lines for proper mounting, wear, cracking, kinks, and abrasions.

2-5.5 Modifications or Unauthorized Repairs. Inspect the aerial ladder for modifications or repairs unauthorized by the manufacturer.

2-5.6 Top Rails. The top rails will be inspected as follows:
a. Inspect the top rails for straightness or any signs of misalignment.
b. (+) Hardness readings shall be taken at intervals of 28 in. (710 mm) or less along the entire length of both top rails of aluminum ladders. Results of this test shall be compared with the manufacturer's specifications for the hardness of the material used for construction of the top rail.

2-5.7 Base Rails. The base rails will be inspected as follows:
a. Inspect the base rail for straightness and any signs of wear, ironing, dents, and corrosion.
b. (+) Inspect the bottom of all hollow I-beam base rails to determine the thickness of the rail. Results shall be not less than the manufacturer's minimum specifications.
c. (+) Hardness readings shall be taken at intervals of 29 in. (710 mm) or less along the entire length of both base rails of aluminum ladders. Results of this test shall be compared with the manufacturer's specifications for the hardness of the material used for construction of the base rail.

2-5.8 Rungs. Inspect all rungs of the aerial ladder for straightness, signs of fly lock damage, damage or loose rung covers and rung cap castings, and signs of cracks or missing rivets, it applicable.

2-5.9 Folding Steps. The folding steps on the ladder will be inspected as follows:
a. Visually inspect the folding steps and folding step mounting brackets for defects and welds for fractures.
b. (+) Inspect all welds on the folding step(s) and folding step mounting brackets.

2-5.10 Rollers. Inspect all rollers for proper lubrication, operation, and any signs of wear.

2-5.11 Guides, Babbits, Wear Strips, Pads, and Slide Blocks. Visually inspect the guides for cracked welds, loose rivets, alignment, and any irregularities. Inspect wear strips, pads, and slide blocks for wear, gouging, and proper mounting.

2-5.12 Extension Sheaves. The extension sheaves will be inspected as follows:

a. Inspect extension sheaves for signs of wear, free movement during operation, proper retainers, and lubrication.
b. Visually inspect all extension sheave mounting brackets for defects and welds for fractures.
c. (+) Inspect all welds of extension sheave mounting brackets.

2-5.13 Extension Cables. Inspect extension cables for compliance with Appendix A of the Society of Automotive Engineers Standard SAE J959, Lifting Crane, Wire-Rope Strength Factors.

2-5.14 Extension/Retraction Motor. Inspect the extension/retraction motor for signs of external hydraulic fluid leakage and, where applicable, brake wear and brake alignment with the shaft.

2-5.15 Cable Separation Guide. During operation of the aerial ladder, visually inspect the cable separation guide for free travel and any signs of misalignment.

2-5.16 Winch Holding Capacity. Inspect the winch for holding capacity by fully elevating the aerial ladder and extending it 10 ft. (3 m). Winch slippage will be measured for a 5-min period. Slippage shall not exceed the manufacturer's specification.

2-5.17 Brake Holding Capacity. Inspect the brake holding capacity of the extension motor by fully elevating the aerial ladder and extending it 10 ft. (3 m). Brake slippage shall be measured for a 5-min period. Slippage shall not exceed the manufacturer's specification.

2-5.18 Extension and Elevation Indicators. Indicate the elevation and extension indicators for legibility, clarity, and accuracy.

2-5.19 Fly Locks. Inspect the fly lock mechanisms for proper mounting, alignment, lubrication, and operation.

2-5.20 Ladder Cradle. Inspect the aerial ladder cradle for wear and proper alignment.

2-5.21 Ladder Bed Lock. Inspect the ladder bed lock mechanism and hydraulic lines for proper mounting, signs of wear, and hydraulic fluid leakage at fittings.

2-5.22 Stop Mechanism. Inspect stop mechanisms to ensure that they prevent overextension or overretraction of the aerial ladder.

2-5.23 Mechanism Extension Warning Device. During operation of the aerial ladder, verify the proper operation of the audible device to warn of the approach of maximum extension.

2-5.24 Ladder Illumination. Inspect the operation of the lights that are used to illuminate the ladder.

2-5.25 Extension Cylinder Anchor Ears and Plates. The extension cylinder anchor ears and plates will be inspected as follows:

a. Visually inspect the extension cylinder anchor ears and plates for defects and the attaching welds for fractures.
b. (+) Inspect the attaching welds of the extension cylinder anchor ears and plates.

2-5.26 Extension Cylinder Pins. The extension cylinder pins will be inspected as follows:

a. Inspect the cylinder pins for proper installation and retention.
b. (+) Inspect the cylinder pins for internal flaws.

2-5.27 Extension Cylinder. The extension cylinders will be inspected as follows:

a. Inspect the cylinder rods for pitting, scoring, and other defects.
b. Inspect the cylinder rod to barrel seal and the end gland seal for excessive external fluid leakage.
c. With the hydraulic oil at ambient temperature, subject the cylinder(s) to drift by placing the aerial device at full elevation, 10 ft. (3 m) extension, marking the cylinder piston or the second section in relation to the base section, and allowing the ladder to stand for 1 hour with the engine off. The results shall not exceed the manufacturer's specifications for allowable cylinder drift.

2-5.28 Holding Valves on Extension Cylinder. Inspect the holding valves for external and internal hydraulic fluid leakage.

2-6 Operating Test.

2-6.1 A complete cycle of aerial ladder operation will be carried out after starting the engine, setting the stabilizers, and transmitting power to the ladder. The ladder shall be fully elevated out of the bed, rotated 90 degrees, and extended to full extension.

2-6.2 The ladder shall complete this test smoothly and without jerking or undue vibration within the time allowed by the standard in effect at the time of the manufacture.

2-6.3 The ladder will be retracted, the turntable rotation completed through 360 degrees, and then the ladder lowered to its bed, after which a thorough inspection shall be made of all moving parts. Special attention will be given to the security and adjustment of the ladder cables or chains.

2-6.4 The test shall demonstrate successful operation of all ladder controls.

2-7 Load Testing.

2-7.1 Tests shall be conducted when wind velocity is less than 10 mph (16 kmph).

2-7.2 A close watch shall be maintained during all load tests. Only those personnel essential to conduct the test will be permitted near the apparatus during the test. If the ladder shows any excessive twist at any time, the test will be discontinued immediately and the aerial ladder will be placed out of service, and the condition will be reported in writing to the manufacturer. The aerial ladder will be repaired in accordance with the manufacturer's written recommendations and fully tested before it is placed back in service.

2-7.3 Horizontal Load Test.

2-7.3.1 The aerial turntable shall be level. The aerial apparatus vehicle will be on a firm level surface or road. All stabilizers shall be down and have a firm footing on the ground.

2-7.3.2 A test cable hanger shall be attached to the top rung of the top ladder section and properly centered. (See Figure A-2-7.3.2.)

2-7.3.3 The maximum rated live load in the horizontal position shall be determined from the manufacturer's load chart or operator's manual. If full extension is not permitted in the horizontal position with a specified live load, then the maximum permissible extension with a specified live load shall be used for the purpose of this test.

2-7.3.4 For single chassis apparatus, the ladder will be rotated, if necessary, until the ladder is positioned over the rear and parallel to the vehicle centerline. For tractor-drawn apparatus, the ladder shall be positioned in the most stable position as recommended by the manufacturer.

2-7.3.5 The ladder will be placed in the horizontal position and extended to full extension or maximum permitted extension as determined to 2-7.3.3. The base section shall not be allowed to rest in the bed.

2-7.3.6 The ladder section locks, either manual pawls or hydraulic holding valves, shall be properly applied.

2-7.3.7 The elevation cylinder integral holding valve or shutoff safety valve shall be properly closed or applied.

2-7.3.8 The ladder section twist shall not exceed the manufacturer's tolerance.

2-7.3.9 A weight equal to the manufacturer's specified rated live load, determined in 2-7.3.3, will be gradually applied to the top rung of the aerial ladder by utilizing the test weight container or other suitable means of applying the weight.

2-7.3.10 The test weight will be sustained by the unsupported aerial ladder for 5 min.

2-7.3.11 The test weight shall hang freely from the tip of the aerial ladder. If the test weight hanger and ladder deflection are such that the test weight comes to rest on the ground, it shall be permissible to raise the ladder elevation slightly above the horizontal position.

2-7.3.12 After removal of the test weight, a complete visual inspection shall be made of all load-supporting elements. Any visually detectable signs of damage, permanent deformation, or twist exceeding the manufacturer's allowance shall constitute noncompliance with the load test requirements. The aerial device shall also meet the requirements of Section 2-6 after the load test.

2-7.4 Maximum Elevation Load Test.

2-7.4.1 The aerial turntable will be level. The aerial apparatus vehicle shall be on a firm, level surface or road. All ground stabilizers shall be down and have a firm footing on the ground.

2-7.4.2 A test cable hander will be attached to the top rung of the top ladder section and properly centered. (See Figure A-2-7.3.2.)

2-7-4.3 The maximum rated live load in the maximum elevated position at full extension will be determined from the manufacturer's load chart or operator's manuals.

2-7.4.4 The ladder shall be rotated, if necessary, until the ladder is positioned over the rear and parallel to the vehicle centerline. Midship mounted devices may have to be rotated slightly off of the vehicle centerline in order to apply the test load without interference with the body of the apparatus.

2-7.4.5 The ladder will be elevated to maximum elevation and fully extended.

2-7.4.6 The ladder section locks, either manual pawls or hydraulic holding valves, will be properly applied.

2-7.4.7 The elevation cylinder integral holding valve or shutoff safety valve will be properly closed or applied.

2-7.4.8 The ladder section twist shall not exceed the manufacturer's tolerance.

2-7.4.9 A weight equal to the manufacturer's specified rated live load, determined in 2-7.4.3, shall be gradually applied to the top rung of the aerial ladder by utilizing a test weight container or other suitable means of applying the weight. The weight will be suspended by cable and shall be not more than 3 ft. (1 m) above the ground.

2-7.4.10 The test weight will be sustained by the unsupported aerial ladder for 5 min.

2-7.4.11 The test weight will hand freely from the tip of the aerial ladder.

2-7.4.12 After removal of the test weight, a complete visual inspection shall be made of all load supporting elements. Any visually detectable signs of damage, permanent deformation, or twist exceeding the manufacturer's allowance shall constitute noncompliance with the load test requirements. The aerial device shall also meet the requirements of Section 2-6 after the load test.

2-8 Water System Test.

2-8.1 The following examination and test will apply only to permanently piped aerial ladder pipes.

2-8.2 The waterway system shall be inspected for proper operation of all components. It shall be free of rust, corrosion, other defects, or blockage.

2-8.3 The waterway attaching brackets will be inspected as follows:

a. Inspect the brackets for loose bolts, weld fractures or other defects.
b. (+) Inspect all attaching welds.

2-8.4 Pressure Test. The water system will be pressure tested.

2-8.4.1 The aerial ladder will be positioned between 0 and 10 degrees elevation and fully retracted. The water system shall be filled with water and the valve at the discharge end closed. If there is not a valve at the discharge end, a valve shall be attached for the purpose of this test.

The pressure on the system will be raised to the water system manufacturer's maximum rated working pressure and maintained for the duration of the test. The aerial ladder will be raised to full elevation and rotated 360 degrees. The water system, including the turntable swivel, will be checked for leaks. Care will be taken not to overheat the water pump.

2-8.4.2 The aerial ladder will be positioned between 0 and 10 degrees elevation and extended to its maximum permissible limit. The water system will be filled with water and the valve at the discharge end closed. If there is not a valve at the discharge end, a valve will be attached for the purpose of this test.

The pressure on the system will be raised to the water system manufacturer's maximum rated working pressure and maintained for the duration of the test. The entire length of the water system will be checked for leaks. Care will be taken to not overheat the water pump.

2-8.4.3 The water system will operate properly and with an absence of leaks during these tests.

2-8.5 If the waterway system is equipped with a flow meter, the flow meter will be checked for accuracy. Flow meters will be tested at the water system manufacturer's maximum rated water system flow. Any meter that reads off by more than 10 percent will be recalibrated or repaired.

2-8.6 If the waterway system is equipped with a water pressure gauge(s), each water pressure gauge will be checked for accuracy. Pressure gauges will be checked at at least 3 points, including 150 psi (1034 kPa), 200 psi (1379 kPa), and 250 psi (1723 kPa). Any gauge that reads off by more than 10 psi shall be replaced.

2-8.7 If the waterway system is equipped with a relief valve, this relief valve will be checked to verify that it is operational at the waterway manufacturer's recommended pressure setting.

2-9 Signs. Endure that all signs are in place and legible.

2-10 Records. A proper records will be completed for all tests of the aerial ladder by the person responsible for the test. The test record will include the following:

a. When the torque verification of mounting bolts, as required by this standard, is performed, the bolt size, grade, and torque specification shall be recorded.
b. When NDT is conducted, the test record will indicate the NDT method used in each area inspected.
c. Where this standard requires measurements be taken such as bearing clearance and backlash, cylinder drift, relief pressure, ladder section twist, hardness readings, base rail thickness, extension brake drift, winch drift, and the like, these measurements shall be recorded in the test record in order that a year-to-year comparison can be made.

SECTION III - SPECIFICATIONS FOR GROUND LADDER TESTING

GROUND LADDER EXAMINATION AND TEST SPECIFICATIONS

GENERAL:

1. The bidder shall submit a complete outline of his service for evaluation by the Fire Department personnel prior to award of contract. Failure to comply will cause automatic rejection.
2. All exceptions and deviations to the town specifications shall be noted. The absence of exceptions and/or deviations shall be interpreted as total compliance to the published specifications.
3. Total exception disqualifies the bidder.
4. The bidder shall not represent nor be in the manufacturer or repair of ground ladders, NO EXCEPTIONS.
5. The examination and test Report provided to the town shall specify the method used to conduct each test performed on the ground ladder during the day of examination and results of such examinations and tests.
6. Upon successfully meeting the requirements of all test work, as outlined here, the testing company shall issue a Certificate of Ground Ladder Examination and Test stating the total footage that is in compliance with the NFPA 1932, Standard on Use, Maintenance, and Service Testing of Fire Department Ground Ladders, 2010 Edition.

BIDDER REQUIREMENTS:

1. Bidder shall be a nationally recognized testing laboratory recognized by OSHA in accordance with the OSHA regulations set forth at 29 Code of Federal Regulations set forth at 29 Code of Federal Regulations, Section 1910.7, Appendix A, "OSHA Recognition Process for Nationally Recognized Testing Laboratories." NO EXCEPTIONS.
2. Bidder shall comply with the following American Society for Testing Materials Standard. NO EXCEPTIONS.
   a. ASTM E548, "Preparation of Criteria for Use in the Evaluation of Testing Laboratories and Inspection Bodies."
3. The bidder shall have not less than 25 years of fire department equipment safety testing experience.

REFERENCES:

The bidder shall submit a list of ten Fire Department references.

PERSONNEL:

Prior to submittal to the Fire Department, the final Report shall be reviewed by a Registered Professional Engineer both of whom directly involved with the ground ladder certification program at their company.

WELDING STANDARDS:

All aluminum structural weldments shall be inspected for compliance with the AWS Standard D1.2, "Structural Welding Code – Aluminum."

CERTIFICATION:

When the unit successfully meets all requirements outlined below, the testing company shall issue a certificate of ground ladder examination and test stating compliance with NFPA 1932, 1999 Edition.

VISUAL INSPECTION:

METHOD

All heat sensor labels (when provided), rungs, rivets/bolts, welds, beams/rungs, butt spurs, halyards, roof hooks, ladder slide areas, and pawl assemblies, of the ladder are visually inspected for defects and proper installation.

RESULTS

Heat Sensor Labels – No change indicating heat exposure.

Rungs – Must be snug and tight; free of punctures, wavy conditions, worn serrations, or deformation.

Rivets/Bolts – Must be tight; bolts on wood ladders for tightness and snugness without crushing the wood.

Welds – No cracks of any type are permitted; welds should not contain any other apparent defects.

Beams/Rungs – Must contain no cracks, splintering, breaks, gouges, checks, wavy conditions or deformations.

Butt Spurs – No excessive wear or other defects.

Halyards – No fraying or kinking.

Roof Hooks – Must be sharp and operate properly.

Surface Corrosion – No surface corrosion is permitted.

Ladder Slide Areas – No galling or absence of wax.

Loss of Gloss – No damage to gloss on fiberglass and wood ladder beams; no damage to varnish finish on wood ground ladders.

Pawl Assemblies – Must operate properly.

Wire Rope – Must be snug when ladder is in bedded position.

HORIZONTAL BENDING TEST:

Metal and Fiberglass Ladders

METHOD

The ladder is placed in a flat, horizontal position, supported under the first rung from each end of the ladder. The ladder is extended to its maximum extended length, with

pawls engaged, for this test. The test load is applied equally to a center span covering 16 in. each side of the center of the ladder. A 350-lb preload is applied for 1 min. to a flat test surface resting on the beams of the ladder. The preload applied includes the weight of the test surface. After removal of the preload, the distance between the bottom edge of each side rail and the ladder support surface is measured. All measurements are taken as close to the center of the center of the ladder as possible. A 500-lb load is then applied and allowed to remain in place for 5 minutes. The load is then removed. After 5 minutes, the distance between the side rails and the ladder support surface is again measured. See Note below.

RESULTS

Permanent set shall not exceed the following values:

Ladder Length	Set
Up to 25 feet	½ inch
26-34 feet	1 inch
35 feet and up	1-1/2 inch

There shall be no visible permanent change in the ladder or failure of any hardware.

Note – According to NFPA 1932, 2010 Edition, Par. 5-2.1.1, this load is to be applied using free weights or a loading system that does not restrict lateral movement of the ladder during loading. A cable pull from beneath the ladder does not meet the requirements of 1932. However, a weight suspended overhead and lowered onto the ladder does meet this requirement.

Wood Ladders

METHOD

The ladder is placed in a flat, horizontal position, supported under the first rung from each end of the ladder. The ladder is extended to its maximum extended length, pawls are engaged if applicable. The test load is applied equally to a center span covering 16 in. each side of the center of the ladder. The test load is applied to a flat test surface resting on the beams of the ladder. The test load applied includes the weight of the test surface. The ladder is loaded with 500-lb and allowed to remain in place of 5 minutes. The load is then removed. See Note below.

Note – According to NFPA 1932, 2010 Edition, Par. 5-2.1.1, this load is to be applied using free weights or a loading system that does not restrict lateral movement of the ladder during loading. A cable pull from beneath the ladder does not meet the requirements of 1932. However, a weight suspended overhead and lowered onto the ladder does meet this requirement.

RESULTS

The ladder and all components shall show no signs of ultimate failure.

ROOF HOOK TEST – (If equipped)

METHOD

The ladder hook angle relative to the ladder side rail is recorded. A load of 1000-lb is then applied to the hook tip, parallel to the ladder side rails. The test load is maintained for 1 minute. The test load is then removed and the roof hook angle relative to the ladder side rail is again measured.

RESULTS

No visible deformation is permitted.

HARDWARE TEST – (Extension Ladders Only)

METHOD

The ladder is placed in a flat horizontal position, extended a minimum of one rung beyond the bedded position. A test load is placed on the ladder in such a manner as to subject the lock hardware to a 1000-lb load. The test load is applied for a minimum of 1 minute.

RESULTS

The ladder shall sustain this test load with no permanent deformation or other visible weakening of the structure.

POMPIER LADDER STRENGTH TEST:

METHOD

The ladder hook is subjected to a 1000-lb test load parallel to the ladder rail and tangent to the rail handle. The load is maintained for 1 minute.

RESULTS

The ladder shall withstand the test load without ultimate failure.

FOLDING LADDER TEST:

Metal and Fiberglass Ladders

The ladder is placed in a flat, horizontal position, supported under the first rung from each end of the ladder. The test load is applied equally to a center span covering 8 inches each side of the center of the ladder. A 160-lb preload is applied for 1 minute to a flat test surface resting on the beams of the ladder. The preload applied includes the weight of the test surface. After removal of the preload, the distance between the bottom edge of each side rail and the ladder support surface is measured. All measurements are taken as close to the center of the center of the ladder as possible. A 225-lb load is ten applied and allowed to remain in place for 5 minutes. The load is then removed. After 5 minutes, the distance between the bottom of each side rail and the ladder support surface is again measured.

RESULTS

There shall be no more than 0.5 inch difference between measurements. There shall be no signs of visible permanent change or failure of any hardware.

Wood Ladders

METHOD

The ladder is placed in a flat, horizontal position, supported under the first rung from each end of the ladder. The test load is applied equally to a center span covering 8 inches each side of the center of the ladder. A 225-lb load is then applied and allowed to remain in place for 5 minutes. The load is then removed.

RESULTS

The ladder and all components shall not show any signs of permanent damage.

HARDNESS SERVICE TEST:

The tests outlined below shall apply only to metal ground ladders constructed from 6061-T6 aluminum alloy. For other aluminum alloys, the ladder manufacturer shall supply the hardness testing criteria.

NOTE – The ladder shall be service hardness tested only if any ground ladder has been exposed to or is suspected of having been exposed to direct flame contact, or if the heat sensor label has changed to indicate exposure. Hardness service testing does not replace the need for load testing.

METHOD

The hardness service test is performed at test points located between every rung on both beams. For beams of truss construction, the test point is located on both the top chord and the bottom chord of the truss between every rung on both beams. One reading shall be taken at each test point and the results recorded.

RESULTS

The reading obtained at each test point shall not be less than the value given specified below:

Hardness Testing Scale	Minimum Reading
Barber Coleman	76
Brinell	80
Rockwell B	48
Rockwell E	84
Rockwell F	84
Rockwell H	103
Vickers	88

If a reading at a test point is less than the value given above for the respective hardness testing scale, then three reading shall be taken at the test point. The average of the three readings shall not be less than the value specified below:

Hardness Testing Scale	Average of Three Readings Not Less Than	Not One Reading At Or Less Than
Barber Coleman	76	73
Brinell	80	71
Rockwell B	48	33
Rockwell E	84	79
Rockwell F	84	79
Rockwell H	103	100
Vickers	88	76

CERTIFICATION:

When the unit successfully meets all the requirements outlined below, UL will issue a Certificate of Ground Ladder Examination and Test stating compliance with NFPA 1932, 2010 Edition.

THIS ORDER WILL EXPIRE JUNE 30, 2020. Upon mutual agreement of both parties, the bid quotes may be renewed by the Town of Smyrna for a period of one successive two year periods under the same price, terms, and conditions as submitted in this proposal.

Contract Agreement

Successful bidder will be expected to enter into a contract Agreement with the Town of Smyrna. Agreements shall be signed and attested, but not dated, by the proper business representative and **submitted with the bid quotation**. An executed contract will be forwarded to winning vendor after Council approval.

INSURANCE REQUIREMENTS

The Vendor shall purchase and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Vendor, its agents, representatives, employees or subcontractors.

A. MINIMUM SCOPE AND LIMITS OF INSURANCE

1. **Workers Compensation**
   Workers Compensation insurance shall be in compliance with the State of Tennessee and shall be statutory. Employers Liability shall be included with a minimum limit of $500,000 per accident/per disease/per employee.

2. **Commercial General Liability**
   Commercial General Liability insurance shall have a minimum limit per occurrence of $1,000,000 and a minimum general aggregate of $2,000,000. It shall include completed operations, product liability and personal injury liability insurance.

3. **Automobile Liability**
   Automobile Liability Insurance shall have a minimum combined single limit per occurrence of $1,000,000. This insurance shall include third-party bodily injury and property damage liability for owned, hired, borrowed and non-owned automobiles.

4. **Professional Liability**
   Professional E & O Liability shall have a minimum policy limit of $1,000,000.

B. DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductibles or self-insured retentions must be declared to the Town of Smyrna. The Vendor shall be responsible for all deductibles and self-insured retentions.

C. OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain, the following provisions:

1. General Liability and Automobile Liability Coverages

   a. The Town, its elected and appointed officials, agents, employees and volunteers shall be named as an additional insured as regards negligence by the vendor.

   b. The Vendor's insurance shall be primary as respects the Town, its elected and appointed officials, agents, employees and volunteers. Any insurance or self-insurance maintained by the Town of Smyrna shall be excess and non-contributory of the Vendor's insurance.

2. Workers Compensation and Employers Liability Coverage

   The insurer shall agree to waive all rights of subrogation against the Town, its elected and appointed officials, agents, employees and volunteers for losses arising from work performed by the Vendor for the Town of Smyrna.

3. All Coverages

a. Coverage shall not be canceled, suspended, or voided by either party (the Vendor or the insurer) or reduced in coverage or in limits except after 30 days written notice has been given to the Town of Smyrna. Ten-day written notice of cancellation is acceptable for non-payment of premium. Notifications shall comply with the standard cancellation provisions in the Vendor's policy.

b. Neither the acceptance of the completed work nor the payment thereof shall release the Vendor from the obligations of the insurance requirements or indemnification agreement.

c. The insurance companies issuing the policies shall have no recourse against the Town of Smyrna for payment of premiums or for assessments under any form of the policies.

d. Replacement certificates, policies or endorsements shall be provided to the Town for any such insurance expiring prior to the completion of services.

e. Any failure of the Vendor to comply with reporting provisions of the policy shall not affect coverage provided to the Town, its elected and appointed officials, agents, employees and volunteers.

D. ACCEPTABILITY OF INSURERS

All required insurance shall be provided by a company or companies licensed to conduct business in the State of Tennessee. Insurance shall be underwritten by insurers with an A.M. Best Company ratings no less than an A.

E. VERIFICATION OF COVERAGE

The Vendor shall furnish the Town with Certificates of Insurance reflecting proof of required coverage. The Certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. **The Certificates are to be received and approved by the Town before work commences and upon any contract renewal thereafter.**

Upon failure of the Vendor to furnish, deliver and maintain such insurance as requested, this contract, at the election of the Town, may be suspended, discontinued or terminated. Failure of the Vendor to purchase and/or maintain any required insurance shall not relieve the Vendor from any liability or indemnification under the contract.

The Certificate of Insurance naming the "Town of Smyrna" as **Additional Insured** shall be addressed to the attention of:

Town of Smyrna
Department of Safety & Risk Management
ATTN: Kay Charles
315 S Lowry St
Smyrna, TN 37167

The Town reserves the right to request complete certified copies of all required insurance policies at any time.

F. SUBCONTRACTORS

Vendor shall include all subcontractors as insureds under its policies **OR** shall be responsible for verifying and maintaining the Certificates provided by each subcontractor. Subcontractors shall be subject to all of the requirements stated herein. The Town of Smyrna reserves the right to request copies of subcontractor's Certificates at any time.

G. WORKERS' COMPENSATION INDEMNITY

In the event Vendor is not required to provide or is exempt from providing workers' compensation coverage, the parties hereby agree that Vendor, its owners, agents and employees will have no cause of action against, and will not assert a claim against the Town of Smyrna, its elected and appointed officials, agents, employees and volunteers, under any circumstances. The parties also hereby agree that the Town of Smyrna, its elected and appointed officials, agents, employees and volunteers shall in no circumstance be, or considered as, the employer or statutory employer of Vendor, its owners, agents and employees. The parties further agree that Vendor is a wholly independent vendor and is exclusively responsible for its employees, owners, and agents. Vendor hereby agrees to protect, defend, indemnify and hold the Town of Smyrna, its elected and appointed officials, agents, employees and volunteers harmless from any such assertion or claim that may arise from the performance of this contract.

HOLD HARMLESS AND INDEMNITY REQUIREMENT:

Vendor shall indemnify and hold harmless, to the maximum extent permitted by law, the Town of Smyrna and its officers, agents, employees, volunteers, from and against any and all liability, damages, losses, (whether in contract or in tort, including personal injury, accidental death or property damage, and regardless, of whether the allegations are false, fraudulent or groundless), and costs (including reasonable attorney's fees, litigation, arbitration, mediation, appeal expenses) which in whole or in part are caused by the negligence, recklessness or intentional wrongful misconduct of the Vendor and persons employed by or utilized by the Vendor in Vendor's performance of this Agreement.

The vendor further agrees to protect, defend, and save the Town, its elected and appointed officials, agents, employees and volunteers while working in the scope of their duties as such, harmless from and against all claims, demands, and causes of action of any kind of character, including the cost of their defense, arising in favor of the vendor's employees or third parties on account of bodily or personal injuries, death or damage to property arising out of services performed or omissions of services or in any way resulting from the acts of omissions of the vendor and/or its agents, employees, subcontractors, representative of the Town under this agreement.

Pursuant to Tennessee Attorney General Opinion 93-01, the Town will not indemnify, defend or hold harmless in any fashion the Vendor from any claims arising from any failure, regardless of any language in any attachment or other document that the Vendor may provide.

APPLICABLE LAW: Any contract resulting from this ISQ shall be governed by and construed under the laws of the State of Tennessee.

SECTION IV - PRICE QUOTATION FOR AERIAL & LADDER TESTING

EXAMINATION AND TESTING OF TWO (2) FIRE DEPARTMENT UNITS FOR AERIAL DEVICES AND GROUND LADDERS MUST BE COMPLETED BY OCTOBER OF EACH YEAR; WITH INITIAL INSPECTION COMPLETED BY OCTOBER 2018.

Equipment	Quantity	Unit Price	Extended Price
1996 Spartan Apparatus with 65 ft. Telesqurt Aerial Ladders	2	$_____	$_____
2009 Spartan Apparatus with 100 ft. Mid-mount Aerial Platform	1	$_____	$_____
Testing All Ground Ladders in Department (Price per foot / 550 ft. minimum)	550	$_____	$_____
TOTAL COST			$_____

AGREEMENT

This Agreement is made and entered into as of this ____ day of _____, 201___, by and between _____, a _____ _____ (the "Bidder") and the Town of Smyrna, Tennessee, a Tennessee municipal corporation (the "Town") for the purpose of _____.

WHEREAS, the Bidder has submitted a quotation for the provision of certain products and/or services to the Town, all in accordance with the terms of the Invitation to Submit Quotations attached hereto and incorporated herein by reference as if set forth at length verbatim as Exhibit A (the "ISQ"), and which Quotation from the Bidder is attached hereto and incorporated herein by reference as if set forth at length verbatim as Exhibit B (the "Quotation"); the ISQ and the Quotation, together with any and all ancillary documents thereto, shall be collectively referred to herein as the "Bid Documents"); and

WHEREAS, the Town now desires to accept the Bidder's quotation, in accordance with the terms set forth in such Bid Documents.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the undersigned do hereby agree as follows:

1. Acceptance of Bid Documents. The terms of the Bid Documents, as incorporated herein by reference, are hereby accepted by the parties hereto. The Bidder hereby agrees to provide the goods and/or services contemplated by such Bid Documents in accordance with the terms set forth therein. The Town hereby accepts the Bidder's quotation to provide the goods and/or services contemplated by such Bid Documents in accordance with the terms set forth therein.

2. Entire Agreement. This Agreement, including the exhibits and any other documents referred to herein or therein, which form a part hereof, contains the entire understanding of the parties with respect to its subject matter. There are no restrictions, agreements, promises, warranties, covenants or undertakings other than those expressly set forth herein or therein. This Agreement supersedes all prior written or oral agreements and understandings between the parties with respect to its subject matter and may not be altered, modified or amended, in whole or in part, except by the express written authorization and consent of the parties hereto.

3. Severability. This agreement constitutes the product of negotiations of the parties hereto and any enforcement of hereof will be interpreted in a neutral manner and not more strongly against any party based upon the source of the draftsmanship of this Agreement. If any provision of this Agreement shall be held invalid or unenforceable by a court of competent jurisdiction, the remaining provisions hereof shall continue to be fully effective.

4. Limitation of Liability. The Town of Smyrna shall not be liable for any loss, claim, expense or damage caused by, contributed to by or arising out of the acts or omission of Bidder or third parties, whether negligent or otherwise.

5. Warranties. The Bidder warrants to the Town that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that all work will be of good quality, free from faults and defects, suitable for the purpose for which the materials and equipment are furnished, and in conformance with the Agreement. All work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective.

6. Indemnification**.** The parties hereto agree that Vendor shall indemnify The Town for any and all claims of negligence, tortious conduct or otherwise unlawful acts committed by Vendor in the performance of their obligations under the terms of the original agreement or this addendum to agreement and Vendor agrees to pay any and all costs associated with the enforcement of the terms of this indemnity agreement by The Town, including but not limited to court costs, civil judgments, assessments or any other reasonable fees associated therewith. This clause shall survive the expiration or termination of the original contract or this addendum to agreement and shall remain in full force and effect until the expiration of any applicable statute of limitation. In addition, The Town is prohibited by Tennessee law, as a political subdivision of the State of Tennessee, to agree to indemnify any private or public Vendor or contracting party and all reference to the local government providing indemnification shall be null and void by attaching signature to this addendum.

7. Attorney Fees**.** The parties hereto agree that The Town shall be in no event liable for any attorney's fees which Vendor may incur due to breach of the original agreement or this addendum agreement by either party; and further, The Town shall not acquiesce to any term of the original contract/agreement that indicates or infers The Town may or shall be responsible for the fees of another party or the Vendor's attorney fees.

8. Mediation. The Town may, at its option, require the attempted resolution of any dispute arising under the original contract or this addendum to agreement by mediation prior to the filing of any lawsuit or other claim. Should any dispute arise, Vendor shall provide the Town notice of any intent to file suit by certified mail. The Town shall notify the Vendor of its intent to exercise its right to mediation within thirty (30) days of receiving such notice. If the Town does not exercise its right to mediation, Vendor may file suit. Any mediator selected under this clause shall be agreed upon by the parties and the costs of such mediation shall be divided and paid equally between the parties.

9. Governing Law. This Agreement shall be deemed to have been executed and delivered within the State of Tennessee, and the rights and obligations of the parties shall be construed and enforced in accordance with, and governed by, the laws of the State of Tennessee.

10. Applicable Law / Choice of Forum and Venue. The parties' choice of forum and venue shall be exclusively in the courts of Rutherford County, Tennessee. Any provision of the Agreement held to violate a law or regulation shall be deemed void, and all remaining provisions shall continue in force.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the date set forth above.

BIDDER

_____

By: _____

Title _____

ATTEST:

_____

TOWN OF SMYRNA, TENNESSEE

By: _____

Name: Mary Esther Reed
Title: Mayor

ATTEST:

_____

Dianne Waldron, Town Clerk

SECTION V - SPECIFICATION COMPLIANCE

Unless otherwise noted, all quotations for the examination and testing of aerial devices and ground ladders shall be in complete accordance with the specifications detailed herein.

Bidders shall note in the space provided below any exceptions or deviations in any way from the specifications of any section of this bid. Bidders should provide complete detail of exceptions or deviations.

Proposal Exceptions

Section	Brief Description
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

By signature below, vendor acknowledges any quotation to be in full compliance with all aspects of each section of the bid not noted above. The undersigned hereby declares that no person or party other than the undersigned have any interest whatever in this proposal, that it is without any connection or collusion with any person or persons making or having made any proposal for the same work and without any previous understanding with such person or persons as to relative prices, obviating competition, and that it is made in good faith.

_____	_____
COMPANY	FAX NUMBER
_____	_____
REPRESENTATIVE NAME & TITLE	TELEPHONE NUMBER
_____	_____
SIGNATURE	E-MAIL ADDRESS