



City of Danville, Virginia

PO Box 3300
Danville, VA 24543

427 Patton Street, Rm 304
Danville, VA 24541

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INVITATION FOR BID

TITLE: TRUCK SCALE

BID NO: IFB 22-23-039

BID CLOSING DATE: Sealed Bids shall be accepted no later than
Wednesday, November 30, 2022, at 2:00 PM at the Purchasing
Department, 427 Patton Street, Room 304, Danville, VA 24541

DIRECT INQUIRIES TO: Carol Henley, Acting Director of Purchasing
(434) 799-6528, Option #3
purchasing@danvilleva.gov

TABLE OF CONTENTS

1.0	General Conditions
2.0	Scope
3.0	Delivery
4.0	Supplemental General Conditions
5.0	Specifications – Exhibit A
PP1	Required Submittal Pages for Addendums

Truck Scale

1.0 GENERAL CONDITIONS

- 1.1 **Bonds:** 5% Bid Bond, 100% Payment and Performance bonds
- 1.2 **Time of Completion:** 90 calendar days upon approval of start date
- 1.3 **Liquidated Damages:** N/A
- 1.4 **Project Manager for the City:** Chris Goss, Public Works
- 1.5 **Code:** All work performed shall conform to the Virginia Uniform Building Code.
- 1.6 **Retainage:** In making payments, there shall be retained five percent (5%) of the estimated ed amount until final completion and acceptance of the contract work.

2.0 SCOPE

It is the intent of this "Invitation" to secure a vendor to furnish and install one steel deck truck scale and associated electronic controls.

2.1 Submit invoice(s) to:

City of Danville
 Purchasing Department
 PO Box 3300
 Danville, VA 24543
 Attention : Public Works

2.2 Deadline

**Sealed bids shall be submitted no later than Wednesday,
November 30, 2022, at 2:00 PM to:**

City of Danville
 Purchasing Department
 Attn.: Carol Henley, Acting Purchasing Director
 427 Patton Street, Room 304
 Danville, VA 24541

3.0 DELIVERY

3.1 All equipment and Installation shall be performed and delivered to:

City of Danville,
101 Airport Road
Danville, VA 24540

4.0 SUPPLEMENTAL GENERAL CONDITIONS

4.1 Award Criteria

4.1.1 The award will be made to the lowest responsible bidder whose proposal conforming to the invitation will be most advantageous to the City, price and other factors considered such as delivery time, quality, operating and maintenance cost, service, resale value, etc.

4.1.2 The City reserves the right to reject any or all offers and to waive informalities and minor irregularities in offers received.

4.2 Authority

4.2.1 The Director of Purchasing as the designee of the City Manager has the sole responsibility and authority for negotiating, placing, and when necessary, modifying each and every invitation to bid, purchase order or other award issued by the City of Danville. In the discharge of these responsibilities, the Director of Purchasing may be assisted by assigned buyers. No other City officer or employee is authorized to order supplies or services, enter into purchase negotiations, or in any way obligate the government of the City of Danville for an indebtedness. Any purchases contrary to these provisions and authorities shall be void and the City shall not be bound thereby.

4.2.2 This procurement process, including withdrawal of bids and appeals or protests, is governed by the "PROCUREMENT CODE OF THE CITY OF DANVILLE, VIRGINIA". Copies of the Procurement Code may be obtained by writing the City of Danville Purchasing Department, PO Box 3300, Danville, VA 24544.

4.3 Bid Preparation

4.4.1 Bid proposals must be written in ink or typewritten and shall be submitted on the forms issued. Unsigned bids will not be accepted. No bid may be considered if received after the time shown on Title Page. Bidders are expected to examine all instructions and specifications. Failure to do so will be at the Bidder's risk. Erasures or other changes must be initialed by the person signing the bid.

4.4.2 Envelopes containing bids must be sealed and marked in the lower left-hand corner with the invitation number and the words IFB 22-23-039 "Truck Scale" and submitted to the office indicated on the title page.

4.4 Bids Binding 60 Days

Unless otherwise specified all formal bids submitted shall be binding for sixty (60) calendar days following bid-opening date.

4.5 Enforcement

This Agreement and the performance hereof shall be governed by and enforced under the laws of the Commonwealth of Virginia, and if legal action by either party is necessary for or with respect to the enforcement of any or all of the terms and conditions hereof, then exclusive venue therefore shall lie in the City of Danville, Virginia.

4.6 Interpretation

4.6.1 If any person contemplating the submission of a bid on this invitation is in doubt as to the true meaning of any part of the plans, specification, or other document, he should submit a written request for an interpretation thereof to the Director of Purchasing. An interpretation of the bid invitation document will be made only by written addendum issued to each potential bidder. **THE CITY WILL NOT BE RESPONSIBLE FOR EXPLANATIONS OR INTERPRETATIONS OF BID INVITATION DOCUMENTS EXCEPT AS ISSUED IN ACCORDANCE HEREWITH.**

4.6.2 All notices, demands, requests, instructions, approvals, proposals, and claims must be in writing.

4.7 Patents

The Vendor agrees to indemnify and save harmless the City, and all personnel from all suits and actions of every nature and description brought against them or any of them, for or on account of the use of patented appliances, products, or processes, and he shall pay all royalties and charges which are legal and equitable. Evidence of such payment or satisfaction shall be submitted upon request of the City as a necessary requirement in connection with the final execution of any contract in which such patented appliances, products, or processes are used.

4.8 Prices

4.8.1 All prices are based on delivery to the destination designated in the invitation including packing charges. Any discounts for payment (Invoicing Terms) should be entered on the proposal page and will be considered in the evaluation.

4.8.2 Unless lump sum is specifically requested, unit and extended prices should be given. Failure to do so may cause bid to be rejected. In all cases, the unit price shall govern.

4.9 Performance

In case of default by the Vendor, the City may procure the commodity or services from other sources and hold the Vendor responsible for any excess costs occasioned thereby.

4.10 Specifications and Product Description

When brand names, Delivery ARO numbers, trade names, catalog numbers or cuts are listed, they are, unless otherwise specified, included for the purpose of furnishing bidders with information concerning the style, type or kind of article desired and a bidder may offer an article which

they certify to be equal in quality, performance, and other essential characteristics. Any available printed material or literature which describes the product being offered for sale shall be included with the bid. The City shall be the sole judge of suitability of substitutes offered. When a formal numbered specification is referred to in this invitation, no deviation will be permitted, and the bidder will be required to furnish articles in conformity with that specification.

4.11 Taxes

The City is exempt from payment of State Sales and Use Tax on all tangible personal property purchased or leased for its use or consumption. Certificate of Exemption will be furnished upon request.

4.12 Vendor's Relationship to the City

4.12.1 Independent Contractor

It is expressly agreed and understood that the Vendor is in all respects an independent Contractor as to work and is in no respect any agent, servant, or employee of the City. The contract specifies the work to be done by the Vendor, but the method to be employed to accomplish the work shall be the responsibility of the Vendor.

4.12.2 Subcontracting

Vendor may subcontract services to be performed hereunder with the prior approval of the City, which approval shall not be unreasonably withheld. No such approval will be construed as making the City a part of, or to, such subcontract, or subjecting the City to liability of any kind to any subcontractor. No subcontract shall, under any circumstances, relieve the Vendor of its liability and obligation under this contract; and despite any such subcontracting the City shall deal through the Vendor, and subcontractors will be dealt with as representatives of the Vendor.

4.12.3 Payments to Subcontractors

a. The contractor shall take one of the two following actions within seven days after receipt of amounts paid to the contractor by the City of Danville for work performed by the subcontractor.

1. Pay the subcontractor for the proportionate share of the total payment received from the agency attributed to the work performed by the subcontractor under that contract; or

2. Notify the agency and subcontractor, in writing, of his intention to withhold all or a part of the subcontractor's payment with the reason for nonpayment.

b. Individual Contractors shall provide their social security numbers and proprietorships, partnerships, and corporations to provide their federal identification numbers.

c. The contractor shall pay interest to the subcontractor on all amounts owed by the contractor that remain unpaid after seven days following receipt by the contractor of payment from the City of Danville for work performed by the subcontractor, except for amounts withheld as allowed in subdivision 1.

d. Unless otherwise provided under the terms of this contract, interest shall accrue at the rate of one percent per month.

The contractor shall include in each of its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor.

A contractor's obligation to pay an interest charge to a subcontractor pursuant to the payment clause in this section shall not be construed to be an obligation of the City of Danville. A contract modification shall not be made for the purpose of providing reimbursement for the interest charge. A cost reimbursement claim shall not include any amount for reimbursement for the interest charge.

4.12.3 Novation

The Vendor shall not assign or transfer, whether by as Assignment or Novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the City; provided, however, that assignments to banks, trust companies, or other financial institutions for the purpose of securing bond may be made without the consent of the City. Assignment or Novation of this Contract shall not be valid unless the Assignment or Novation expressly provides

that the assignment of any of the Vendor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools, and equipment supplied for the

performance of the work under this Contract in favor of all persons, firms, or corporations rendering such labor or services or supplying such materials, tools, and equipment.

4.13 Drug Free Workplace

During the performance of this contract, the vendor agrees to:

- a. Provide a drug-free workplace for the vendor's employees.
- b. Post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the vendor's workplace and specifying the actions that will be taken against employees for violations of such prohibition.
- c. State in all solicitations or advertisements for employees placed by or on behalf of the vendor that the vendor maintains a drug-free workplace.
- d. Include the provisions of the foregoing clauses in every subcontract or purchase order of or over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

"Drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a vendor in accordance with this chapter, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

4.14 Indemnification

The Vendor shall indemnify the City, its agents, officers, and employees, against any damages to property or injuries to or death of any person or persons, including property and employees or agents of the City, and shall defend and indemnify the City, its agents, officers, and employees, from any claims, demands, suits, actions, or proceedings of any kind, including workers' compensation claims, of or by anyone, in any way resulting from or arising out of the operations in connection with the work described in the contract, including operations of subcontractors and acts or omissions of employees or agents of Vendor or Vendor's subcontractors. Vendor shall procure and maintain, at Vendor's own cost and expense, any additional kinds and amount of insurance that, in Vendor's own judgment, may be necessary for Vendor's proper protection in the prosecution of the work.

b. The Vendor shall, at his own expense, appear, defend, and pay all charges of attorney and other expenses arising there from or incurred in connection therewith, and, if any judgment shall be rendered against the City, and/or its officers, agents, and employees, in any such action, the Vendor

shall, at his own expense, satisfy and discharge the same. The Vendor expressly understands and agrees that any performance bond or insurance protection required by this contract, or otherwise provided by the Vendor, shall in no way limit the responsibility to indemnify, keep, and save harmless and defend the City, its agents, officers, and employees as herein provided.

c. The Vendor shall assume all risks and responsibilities for casualties of every description in connection with the work, except that he shall not be held liable or responsible for delays or damage to the work caused by acts of God, acts of Public Enemy, acts of Government, quarantine restrictions, general strikes through the trade, or by freight embargoes not caused or participated in by the Vendor. The Vendor shall have charge and control of the entire work until completion and acceptance of the same by the City.

d. The Vendor shall alone be liable and responsible for, and shall pay, any and all loss or damage sustained by any person or party either during the performance or subsequent to the completion of the work under this agreement, by reason of injuries to persons and damage to property, buildings, and adjacent work, that may occur either during the performance of the work covered by this contract or that may be sustained as a result of or in consequence thereof, irrespective of whether or not such injury or damage be due to negligence or the inherent nature of the work.

e. The Vendor, however, will not be obligated to indemnify the City, its officers, agents, or employees against liability for damage arising out of bodily injury to persons or damage to property caused by or resulting solely from the negligence of the City or its officers, agents, and employees.

4.15 Insurance

The Vendor shall not commence work under any contract until he has obtained all the insurance required hereunder and such insurance has been approved by the City; nor shall the Vendor allow any Subcontractor to commence work on his subcontract until all similar insurance has been so obtained and approved. Approval of the insurance by the City shall not relieve or decrease the liability of the Vendor hereunder.

a. Worker's Compensation including Occupational Disease and Employer's Liability Insurance: The Vendor shall take out and maintain during the life of the Contract, Workers' Compensation and Employer's Liability Insurance for all of his employees to be engaged in work on the project under this Contract in an amount no less than the minimum allowed by the State Corporation Commission, and in case any such work is sublet, the Vendor shall require the Subcontractor similarly to provide Workers' Compensation and Employers' Liability Insurance for all of the latter's employees to be engaged in such work.

b. Comprehensive General Liability Insurance: The Vendor shall maintain during the life of the Contract comprehensive general liability insurance as shall protect him and the City of Danville and its officers, agents and employees from claims for damages for personal injury, including death, as well as from claims for property damage, which may arise from operations under the Contract, whether such operations be by himself or by any Subcontractor, or by anyone directly or indirectly employed by either of them. The amount of such insurance shall be not less than a combined single limit of \$1,000,000.00 per occurrence on bodily injury and property damage and \$1,000,000.00 aggregate on completed operations. The comprehensive general liability insurance shall provide the following coverage:

Comprehensive
 Premises – Operation
 Products/Completed Operations Hazard
 Contractual Insurance
 Underground Hazard
 Explosion & Collapse Hazard
 Independent Contractor and Subcontractor
 Broad Form Property Damage
 Personal Injury
 Builder’s Risk

c. Automobile liability insurance with minimum combined single limits of \$500,000.00 per occurrence. This insurance shall include bodily injury and property damage for the following vehicles:

Owned Vehicles
 Non-owned Vehicles
 Hired Vehicles

d. Umbrella Policy: At the option of the Vendor, primary limits may be less than required, with an umbrella policy providing the additional limits needed. This form of insurance will be acceptable provided that the primary and umbrella policies both provide the insurance coverage herein required. However, any such umbrella policy must have minimum coverage limits of \$2,000,000.00.

4.16 Equal Employment

During the performance of the contract, the vendor agrees as follows:

a. The Vendor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin, except where religion, sex, or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the Vendor. The Vendor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions for this nondiscrimination clause.

b. The Vendor also shall not discriminate against any handicapped person in violation of any state or federal law or regulation and shall also post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this additional nondiscrimination clause.

c. The Vendor, in solicitations or advertisements for employees placed by or on behalf of the Vendor, will state that such vendor is an equal opportunity employer.

d. Notices, advertisements, and solicitations placed in accordance with Federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section

e. The Vendor will include the provisions of the foregoing paragraphs in every subcontract or purchase order over \$10,000 so that the provisions will be binding upon each subcontractor or vendor.

f. The Vendor will otherwise comply with all other applicable provisions of local, State, and Federal law.

g. The contractor does not and shall not during the performance of the contract for goods and services in the Commonwealth, knowingly employ and unauthorized alien as defined in the Federal Immigration Reform and Control Act of 1986.

h. Contractors organized as a stock or nonstick corporation, limited liability company, business trust, or limited partnership or as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Virginia Title 14.1 or Title 50 or as otherwise required by law.

A contractor organized or authorized to transact business in the Commonwealth pursuant to Virginia Title 14.1 or Title 50 shall include in its bid or proposal the identification number issued to it by the State Corporation Commission. Any bidder or offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 14.1 or Title 50 or as otherwise required by law shall include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized.

5.0 Specifications SECTION – **EXHIBIT A**
Attached

ENGINEERING SPECIFICATIONS Steel Platform Truck Scale

1 GENERAL PROVISIONS

- | Yes | No | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 1.1 Furnish and install one steel deck truck scale and associated electronic controls. |
| <input type="checkbox"/> | <input type="checkbox"/> | 1.2 The scale shall have a clear and unobstructed weighing surface of not less than 70 feet long and 11 feet wide. |
| <input type="checkbox"/> | <input type="checkbox"/> | 1.3 The scale shall be fully electronic in design and shall not incorporate any mechanical weighing elements, check rods, or check stays. |
| <input type="checkbox"/> | <input type="checkbox"/> | 1.4 The scale shall be designed to perform as a single weighing platform and shall be of flat-top design. Side rail support beams are not acceptable. |
| <input type="checkbox"/> | <input type="checkbox"/> | 1.5 The scale shall have a gross weighing capacity of 100 tons. |
| <input type="checkbox"/> | <input type="checkbox"/> | 1.6 The scale shall have a Concentrated Load Capacity (CLC) of 80,000 pounds. |
| <input type="checkbox"/> | <input type="checkbox"/> | 1.7 The scale shall be designed to accept vehicles that generate up to 60,000 pounds per tandem axle. |
| <input type="checkbox"/> | <input type="checkbox"/> | 1.8 In order for the bid to be considered, the supplier must provide written confirmation of empirical testing data to validate the design of the weighbridge through actual life-cycle testing. During the testing process the weighbridge must see a minimum of 1 million cycles, with at least 60,000 pounds of test load, applied on the 8 contact points of a standard truck's dual tandem axle tires. This documentation must be provided with the proposal submittal. Failure to provide this information will result in the bid being considered non-responsive. |
| <input type="checkbox"/> | <input type="checkbox"/> | 1.9 The scale shall be calibrated to a minimum of 120,000 pounds by 20-pound increments and not to exceed 200,000 pounds. System configurations with increments greater than 20-pound increments will not be accepted; therefore scales with gross capacities in excess of 200,000 pounds will not be acceptable in order for the scale to meet NTEP Legal-for-Trade regulatory requirements. |
| <input type="checkbox"/> | <input type="checkbox"/> | 1.10 The scale's weighing-related electronics shall consist solely of load cells, load cell cables, and digital weight display. No other devices shall be permitted between the load cell and the digital weight display. Junction boxes, summing boards, gathering boards, gathering boxes, totalizers, external analog-to-digital converter boxes, and sectional controller boxes will not be accepted because of their significant and inherent maintenance issues. |
| <input type="checkbox"/> | <input type="checkbox"/> | 1.11 The load cells and load cell mounting hardware shall be constructed of stainless steel. The cables shall be stainless steel sheathed. Load cells which are not stainless steel and hermetically sealed shall not be acceptable because of their inability to prevent moisture from entering the load cell and causing a premature failure. |

ENGINEERING SPECIFICATIONS

Steel Platform Truck Scale

- 1.12 The scale shall meet the requirements set forth by the current edition of the National Institute of Standards and Technology Handbook 44 (NIST HB-44). The scale manufacturer shall provide a Certificate of Conformance (NTEP Certification) to these standards upon request.
- 1.13 The design and manufacture of the scale weighbridge, load cells, and digital instrument shall all be of one manufacturer to maximize compatibility and availability of components and to insure maximum benefit from the system's lightning protection capability. Also, the manufacturer shall have a quality system that has been registered to the standards of ISO 9001.
- 1.14 The manufacturer or bidder shall provide with the bid proposal a listing of the total cost (labor, parts, travel time, and mileage) for two service technicians to travel to the scale site with a heavy duty test truck, stay on site for four (4) hours to troubleshoot and replace one load cell in the scale and the main printed circuit board in the weight display. This listing shall be provided for service in the following three timeframes: 6 months after installation, 36 months after installation, and 58 months after installation. Listings of the same costs at these three time periods must also be provided assuming the failure is the result of a lightning strike. The cost of recalibration must be included in each service cost summary. Failure to provide the information required in this section will cause your bid submittal to be considered non-responsive and disqualified from consideration.
- 1.15 The scale shall be a METTLER TOLEDO Model VTS101 or equivalent.

2 SCALE FOUNDATION REQUIREMENTS

- 2.1 The foundation shall meet all local requirements and the minimum specifications as stated in this section.
- 2.2 The minimum soil bearing required shall be 2,500 pounds per square foot (psf) for a variable footer, 1,500 psf for a beam slab, and 2,000 psf for a pit foundation. The buyer shall be responsible for determining whether or not the soil conditions are adequate.
- 2.3 The foundation shall extend the full length and width of the scale platform.
- 2.4 The foundation shall provide a minimum of 3 inches of clearance to the weighbridge along the length of the scale.
- 2.5 The foundation shall be constructed to provide positive drainage away from its center.
- 2.6 The foundation must be higher than the surrounding grade to promote drainage away from the scale.
- 2.7 The foundation shall be poured and constructed of concrete with a minimum strength of 3,000 psi at a 28-day cure with 5 to 7% air entrainment.

ENGINEERING SPECIFICATIONS

Steel Platform Truck Scale

- 2.8 The foundation shall be reinforced in all load-bearing areas.
- 2.9 The foundation shall be designed to include an approach on each end of the scale in accordance with local regulations and the guidelines of NIST HB-44.

3 WEIGHBRIDGE SPECIFICATIONS

- 3.1 The scale weighbridge shall be constructed of three prefabricated scale modules each with a nominal surface dimension of 11' wide by 23'-4" long.
- 3.2 The scale weighbridge shall be capable of weighing trucks that have dual-tandem axle weights (4 feet minimum between dual axles and at least 10 feet from next axle) of up to 60,000 pounds, and shall have a Concentrated Load Capacity (CLC) of 80,000 pounds.
- 3.3 All welding shall be completed in accordance with the American Welding Society (AWS) D1.1 Structural Welding Code.
- 3.4 All welding shall be performed by welding operators who have been certified to the AWS D1.1 Structural Welding Code.
- 3.5 All welding shall be performed in position 1F to ensure maximum weld integrity.
- 3.6 Longitudinal weighbridge members shall be welded continuously, using a high-penetration, submerged arc welding process. The use of intermittent or stitch welds on longitudinal members or deck tread plate is unacceptable.
- 3.7 The weighbridge and load cell mounting assemblies shall be designed to allow installation or replacement of a load cell with only one additional inch of clearance required between the top of the foundation and the bottom of the weighbridge on pitless installations.
- 3.8 There shall be no bolted connections between the load cell and weighbridge assemblies.
- 3.9 The load cell assembly shall be designed so that when you are at the scale weighbridge with a lifting jack, the load cell can be replaced in less than 5 minutes.
- 3.10 There shall be no field welding required for the installation of the scale.

4 SURFACE PREPARATION AND FINISH

- 4.1 The weighbridge shall be shot blasted to a minimum SSPC-SP6 specification prior to painting.
- 4.2 All enclosed chambers created by joining two steel members must be hermetically sealed to eliminate internal corrosion.
- 4.3 All exterior surfaces of the scale shall have a two-component, high-build epoxy finish, impregnated with aluminum flake for increased corrosion resistance and

ENGINEERING SPECIFICATIONS

Steel Platform Truck Scale

UV protection, providing total Dry Film Thickness of 8-10 mils (International/Akzo Nobel Intergard 7562 or equivalent).

- 4.4 The finish shall be force cured in order to reduce risk of contamination and ensure durability of the surface.

5 LOAD CELL SPECIFICATIONS

- 5.1 Each load cell shall have a minimum capacity of 50 metric tons (110,000 pounds) with 300% ultimate overload rating.
- 5.2 All Load cells shall be certified by NTEP and meet the specifications as set forth by NIST HB-44 for Class III L devices. The manufacturer shall provide a Certificate of Conformance to these standards upon request.
- 5.3 All load cells shall be certified to meet the specifications set forth by the International Organization of Legal Metrology (OIML) in document R60 for C3 load cells, which requires 60% tighter accuracy tolerances than NIST HB-44 for Class III L devices. The manufacturer shall provide a Certificate of Conformance to these standards upon request.
- 5.4 Load cells shall be digital with an integral microprocessor and analog-to-digital conversion function located within the load cell housing.
- 5.5 Load cells shall output only converted digital information without load correction for load position to the scale instrument. Analog output of signals from the load cell is not acceptable due to susceptibility of signal interference.
- 5.6 The load cell assembly shall be constructed so as to perform as a rocker pin and shall have no positive fixed mechanical connectors, such as bolts or links that are required in mounting the load cell to the weighbridge or foundation base plates.
- 5.7 The load cell shall not require check rods, flexures, or chain links for stabilization, as these items are sources of ongoing maintenance requirements.
- 5.8 The load cell shall not require a junction box to communicate between the load cell and scale instrument. No other devices shall be permitted between the load cell and the digital weight display. Junction boxes, summing boards, gathering boards, gathering boxes, totalizers, external analog-to-digital converter boxes, and sectional controller boxes will not be accepted because of their significant and inherent maintenance issues.
- 5.9 The load cell shall be of stainless steel construction and hermetically sealed with a minimum NEMA 6P / IP68 (submersible) and IP60K rating.
- 5.10 The load cell shall contain integral Transient Voltage Surge Suppressors (TVSS) for all input and communication lines. Each TVSS shall contain self-resetting thermal breakers to protect the load cell components from voltage and current surges.

ENGINEERING SPECIFICATIONS

Steel Platform Truck Scale

- 5.11 The load cell shall come equipped with a neoprene rubber boot to keep debris from contaminating the lower bearing surface.
- 5.12 The load cell shall have a positive-lock quick connector integral to its housing for connecting and disconnecting the load cell interface cable at the load cell. The connector shall be of glass-to-metal, pin-type construction to maintain a hermetic seal.
- 5.13 System shall be so designed as to permit a load cell cable to be replaced without either splicing the load cell cable or replacing the load cell, either of which will contribute to eventual system failure and unnecessary service costs. System shall be so designed as to permit the replacing the load cell cable without requiring that the scale must be recalibrated, further reducing service and maintenance costs.
- 5.14 The load cell shall have the following specifications:
 - 5.14.1 V_{\min} : 5.0 pounds maximum
 - 5.14.2 Hysteresis: $\pm 0.025\%$ of full scale
 - 5.14.3 Non-Linearity: $\pm 0.015\%$ of full scale
 - 5.14.4 Creep (30 minutes): $\pm 0.017\%$ of applied load
 - 5.14.5 Temperature range: $-10^{\circ}\text{C} + 40^{\circ}\text{C}$
- 5.15 The load cell interface cable shall be stainless steel sheathed for environmental and rodent protection. Neoprene covered load cell cable shall not be permitted.
 - 5.15.1 Load cell cables which are hard wired directly to the load cell are not acceptable due to the failure rates associated with moisture wicking into the load cell from aged cables or damaged cables, and due to the unnecessary expense associated with replacing entire load cells when only a cable has been damaged.
- 5.16 The load cell shall have a minimum 10-year warranty against defects in materials and workmanship and failure resulting from lightning or surge voltages. The warranty shall cover all costs associated with replacement parts, travel, mileage, on-site labor, and recalibration after repair, the full cost of which shall be supported solely by the manufacturer and not in part by any other third party.
- 5.17 Load cells shall be METTLER TOLEDO POWERCELL[®] PDX[®] load cell or equivalent.

6 JUNCTION BOXES AND CABLES

- 6.1 Junction boxes shall not be permitted in the scale, attached to the exterior of the scale, or remotely mounted from the scale. Sectional controllers with encapsulated PCBs shall not be permitted due to the failure rates associated with

ENGINEERING SPECIFICATIONS

Steel Platform Truck Scale

PCBs that have wired connections made within enclosures which are not hermetically sealed.

- 6.2 Load cell cables and scale instrument cables shall be stainless steel sheathed for environmental and rodent protection.
- 6.3 In order to minimize maintenance issues, only a single cable shall be used to transmit data or weight signals between the weighbridge and the digital weight display.

7 LIGHTNING PROTECTION SPECIFICATIONS

- 7.1 A comprehensive lightning protection system shall be provided with the scale.
- 7.2 The system shall not require complicated wiring or devices to provide this protection.
- 7.3 Major scale components including load cells and scale instrument (terminal) shall be included in the lightning protection system.
- 7.4 Grounding of all scale components including load cells, scale instrument, and accessories shall be to one common point. Systems with multiple ground points are not acceptable.
- 7.5 An AC line surge protector shall conveniently plug into a common electrical outlet and have a receptacle.
- 7.6 Each AC line surge protector required shall have one isolated, grounding, hospital-grade duplex receptacle, and an internal 15-amp circuit breaker.
- 7.7 Verification of the lightning protection system's performance shall be available in writing from a third-party verification laboratory upon request. Proposals submitted without confirming the availability of third-party verification that the load cells, cables, and instrument as a system have been able to withstand the equivalent of a lightning strike with 80,000 amperes will be rejected.
- 7.8 The lightning protection system shall be a METTLER TOLEDO StrikeShield™ Lightning Protection System or equivalent.

8 WARRANTY REQUIREMENTS

- 8.1 The scale manufacturer shall warrant the scale assembly including weighbridge structure, scale instrument, and associated cables from failures due to a defect in manufacturing, workmanship, lightning, or surge voltages.
- 8.2 The guarantee will warrant the product for a period of 5 years from date of installation or 62 months from date of shipment to the Buyer, whichever occurs first. Bidder shall promptly correct any such defect appearing within the warranty period.

ENGINEERING SPECIFICATIONS

Steel Platform Truck Scale

- 8.3 The warranty shall support 100% coverage of repair parts, labor, travel time, and mileage from the closest service location, or at the manufacturer's sole discretion, replacement of the product under warranty. The full cost of warranty as specified herein shall be supported solely by the manufacturer and not in part by any other third party or service provider.

The undersigned Bidder acknowledges receipt of the following Addenda, which have been considered in the preparation of this Bid:

No. _____ Dated _____

No. _____ Dated _____

No. _____ Dated _____

DATE _____

COMPANY NAME _____

ADDRESS _____

_____ Zip Code

SIGNATURE _____

AFFIX COMPANY SEAL
(if applicable)

SIGNATURE
(PRINTED) _____

TITLE _____

PHONE _____ FAX _____

EMAIL _____

Commonwealth of Virginia State Corporation Commission Identification Number _____.