

City of Harrisonburg – Truck Weigh Scale Specifications for the Transfer Station

The contractor will be installing an at-grade truck weigh scale system at the new transfer station on Beery Road that will experience moderate volume of truck traffic. The truck weigh scale will be used in business transactions and will need to be “legal-for-trade.” The scale system will be built to comply with National Institute of Standards and Technology Handbook 44 (NIST H-44), “Specifications, Tolerances, and other Technical Requirements for Weighing and Measuring Devices,” the National Type Evaluation Program (NTEP), and the Virginia Department of Agriculture and Consumer Services – Office of Weights and Measures. The outline below is not all inclusive of the components needed for the truck weigh scale.

- **Foundation design (including geotechnical work)**
- **Foundation**
 - Pit style
 - Drainage
 - Access
- **Weighbridge**
 - Legal for Trade approval
 - Unobstructed Weighing surface of the scale will be 11’ Wide X 70’ Length
 - Full truck scale
 - The scale shall have a full scale capacity of 135 tons (270,000 lbs) with a displayed resolution of 200,000 lbs x 20 lbs in accordance with NIST, Class III-L devices.
 - Each scale module shall be designed with a Concentrated Load Capacity (CLC) of 50 tons (100,000 lbs), as defined by NIST. When the CLC is applied at mid-span on a module, according to NIST regulations, the maximum stress of the steel shall not exceed 26,000 PSI as determined by Finite Element Analysis (FEA) software. The deflection at this loading condition shall not cause the scale to exceed the allowable accuracy tolerance as specified by NIST in Handbook 44.
 - Scale weighbridge shall be designed to accommodate up to 250 trucks per day for a period of 25 years without weighbridge fatigue.
 - The scale shall be NTEP Certified and meet the requirements set forth by the NIST Handbook 44 for Class III-L devices. The bidder will submit a current copy of Certificate of Conformance with bid.
 - Concrete deck
 - Concrete deck shall be field poured at job site and have a maximum cured strength of 4000 PSI at 28 days. Concrete deck shall have a minimum thickness 6" with one mat of #4 reinforcing rod on 12" centers. Concrete decks utilizing fiber mesh additives to concrete will not be allowed. Pre-poured, pre-cast or pre-stressed, concrete decks will not be permitted.
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- **Lightning Protection (Grounding)**
- **Load cells**
 - Stainless Steel Load Cells
 - Hermetically sealed web cavities
 - No junction boxes

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- **Remote displays**
 - Customizable and features stop/go red and green signals
- **Traffic control Lights**
 - Customizable and features stop/go red and green signals
- **Truck Scale Interface and Data Management**
 - Radio Frequency Identification (RFID)
 - Terminals
 - Printers
 - Kiosk
 - Basic and Advance Scale Software
 - Cabling
 - Electrical (including conduit)
- **Lighting around the Scale unit**
- **Approval and certification by VA Dept of Agriculture & Consumer Services, Office of Weights and Measure**
- **Outline Preventative Maintenance**
- **Closest service agent to Transfer station, Emergency Service**
- **Warranty**