

# ATV

*Portable Truck Scale*

## Assembly Instructions



**RICE LAKE**<sup>™</sup>  
WEIGHING SYSTEMS  
Commitment Beyond Measurement<sup>®</sup>

ISO  
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68982



# Contents

- 1.0 Installation Overview ..... 1**
  - 1.1 Assembly Time Estimates. . . . . 2
  - 1.2 Recommended Equipment and Tools . . . . . 2
  - 1.3 Lifting and Handling . . . . . 2
  - 1.4 Serial Tag . . . . . 3
- 2.0 Assembly..... 4**
  - 2.1 Deck Module Assembly . . . . . 4
  - 2.2 Setup . . . . . 5
  - 2.3 Scale Relocation. . . . . 6
- 3.0 Connecting Electronic Equipment..... 7**
  - 3.1 Indicator to Peripherals. . . . . 7
  - 3.2 Single-Point Ground Conductor . . . . . 7
  - 3.3 J-box Connections. . . . . 7
  - 3.4 Electrical Ground Connections . . . . . 7
  - 3.5 Installing Transient Protection . . . . . 8
- 4.0 Trimming and Calibration..... 10**
  - 4.1 Overview and Equipment Required. . . . . 10
  - 4.2 Trimming Individual Cells . . . . . 10
  - 4.3 Trimming Paired Sections. . . . . 11
  - 4.4 Calibrating with Test Weights . . . . . 11
- 5.0 Load Cell Replacement..... 13**
  - 5.1 Replacement Procedure. . . . . 13
  - 5.2 End Cleanouts . . . . . 13
- 6.0 Vehicle Scale Limited Warranty..... 14**
- 7.0 Assembly and Foundation Drawings ..... 15**



*Technical training seminars are available through Rice Lake Weighing Systems. Course descriptions and dates can be found at [www.ricelake.com](http://www.ricelake.com) or obtained by calling 715-234-9171 and asking for the training department*



# Introduction

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This manual is intended for use by technicians responsible for installing and servicing the SURVIVOR® ATV Series portable truck scale. The ATV truck scale has been designed to significantly reduce installation time. A well-organized, experienced installation crew should be able to install a typical three module 70' x 11' ATV truck scale in less than 4 hours. This estimated time may vary.

*NOTE: This booklet covers ATV portable truck scale installations. Use these instructions as general installation guidelines unless the engineering drawings furnished with your scale differ from the instruction in this booklet. Engineering drawings furnished with your scale always take priority over these general installation guidelines.*

*Refer to the engineering drawings furnished with the scale for all component numbering sequences.*



Authorized distributors and their employees can view or download this manual from the Rice Lake Weighing Systems distributor site at [www.ricelake.com](http://www.ricelake.com).

**Package includes:** Bolt-on backfill ramp bulkheads (removable for concrete approaches); assembled weighbridge modules and weighbridge fasteners; load cells with conduit fitting; load cell mounts; copper transient bypass cables at each load cell; metal conduit on weighbridge for load cell cable runs; flexible conduit from load cell to metal conduit; conduit fittings for flexible to metal conduit; polycarbonate junction box(es); homerun cable to indicator (60' long) and print packages including installation manual.

Package does not include: peripherals; freight charges including material handling/crane; transportation permits and fees; escort(s) charge; or insurance transportation fees.

## 1.0 Installation Overview

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The modular sections of the ATV truck scale are shipped pre-assembled and ready to be placed on a flat surface using a crane. The self-contained modules are positioned on a prepared and level site. The weighbridge is lowered onto the load cells by retracting the shipping stands.

The indicator is connected to one of the two junction boxes (J-boxes). That J-box is then connected to the other J-box via an expansion cable.

You can then back fill material to bulkheads and calibrate to finish the installation.

### General Assembly Order

1. Based on location of the indicator, place the first self-contained module into position on level compacted ground or other flat surface. Asphalt is not recommended.  
*Note: Be sure to arrange module with the J-box positioned toward the indicator.*
2. Install spacer tubes and set the other self-contained module.
3. Place center (bridge module) between end modules.
4. Retract shipping stands.
5. Back fill material.

6. Connect to indicator and calibrate.

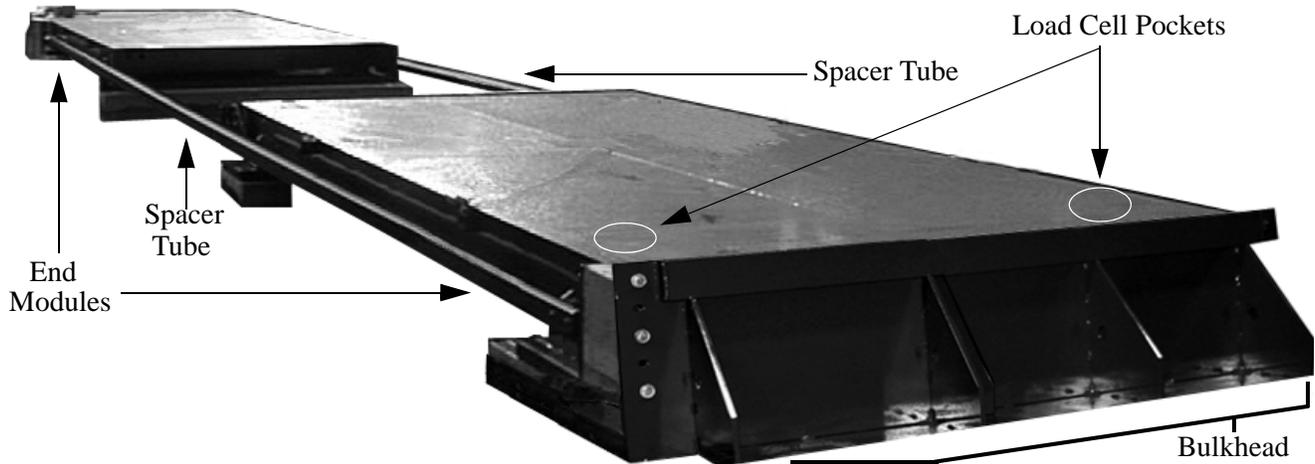


Figure 1-1. Weighbridge with Self-Contained Modules in Place

## 1.1 Assembly Time Estimates

When scheduling installation for a typical three-module, 70' truck scale, plan for a two-hour minimum crane rental to place the modules into position. A two-man crew, aided by a crane operator, can unload modules from the truck and place them into position in approximately one hour.\*

Retracting shipping stands and backfilling material can be done in approximately 1–2 hours.\* Load cells in self-contained modules are pre-wired to the J-box at the factory. Connect expansion and/or homerun cable to complete wiring in approximately 1/2 hour.\*

*\*Note: these estimated times may vary.*

## 1.2 Recommended Equipment and Tools

- Crane – maximum module weight is approximately 12,500 lbs.\*
- Four chains or cables (8' minimum length each) with hooks
- One low-profile 4-ton bottle jack
- 5/16" allen wrench
- Hammers, maul, pry bar
- Socket wrenches to 1-1/2" (drive compatible with torque wrench) Box end wrenches to 1-1/4"
- Open end wrench set (7/16" to 1-1/4")
- 4' bubble level
- Hand tools for pulling and connecting electrical wiring

*\*Typical self-contained module weight of 70' x 11', three module scale.*

## 1.3 Lifting and Handling

Deck modules can be lifted (see Figure 1-2) using four chains or cables attached to the four gussets mounted on the outside of the main beams. The gussets provide balanced lifting of the modules with bulkheads attached.



Figure 1-2. Unloading Modules From Truck

## 1.4 Serial Tag

The serial tag on an ATV Series portable truck scale truck scale is found at the end of the scale near the SURVIVOR logo (see Figure 1-3). A duplicate tag is placed inside of the J-box pocket (see Figure 1-4).

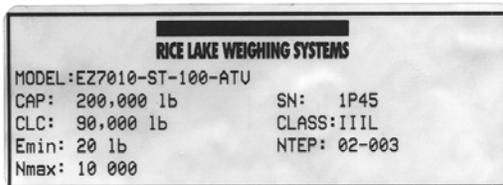


Figure 1-3.



Figure 1-4.

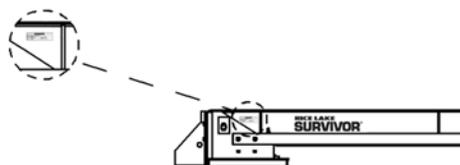


Figure 1-5. Serial Tag Placement (Module)

## 2.0 Assembly

The following sections detail deck module assembly, setting load cell mounts, and scale relocation.

### 2.1 Deck Module Assembly

NOTE: The bridge module is placed on truck last. Set it off to the side when unloading modules at installation site.

1. Considering the location of the indicator, place first self-contained module of the ATV into position on a flat surface. Be sure to arrange module with J-box positioned toward indicator (see Figure 2-1).

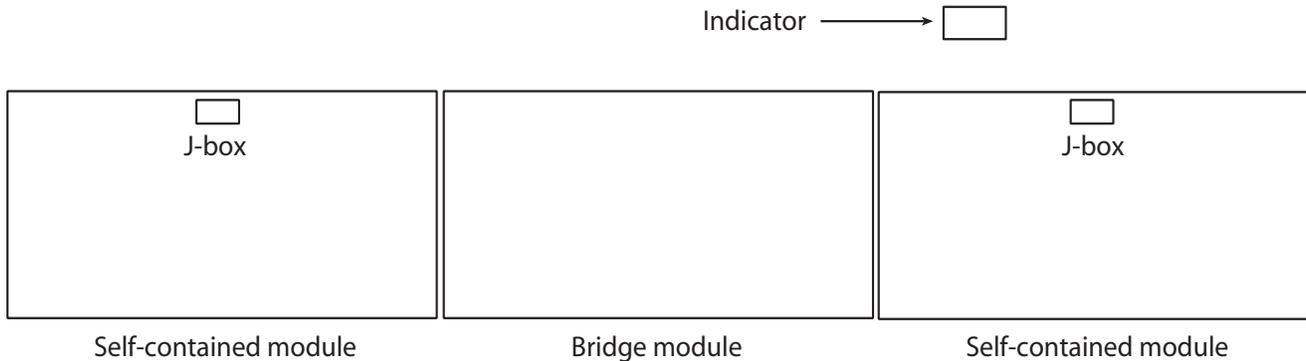


Figure 2-1. Module Placement

2. Install spacer tubes to the first module using the supplied hardware (see Figure 2-2).



Figure 2-2. Spacer Tube Installation

3. Set other self-contained module to other end of spacer tube (spacer tube is used to ensure proper distance between self-contained modules for installation of bridge module). This module should also be arranged with J-box positioned toward indicator.
4. Remove load cell cover plates (requires 5/16" allen wrench) and place bridge module into receptacles on self-contained modules.

NOTES:

- Before installing the bridge module, check for debris that may have fallen into the two pin-connection receptacles.
- If the pins do not seat squarely in the receptacles, raise the module slightly and reset the module. Check the modules for proper alignment.



Figure 2-3. Pin and Receptacle Interface



Figure 2-4. Two Self-Contained Module Connection (No Bridge Module)

## 2.2 Setup

1. Back off shipping bolts located on ends of weighbridges (four for each self-contained module) until each bolt is no longer inserted in the scale (see Figure 2-5).

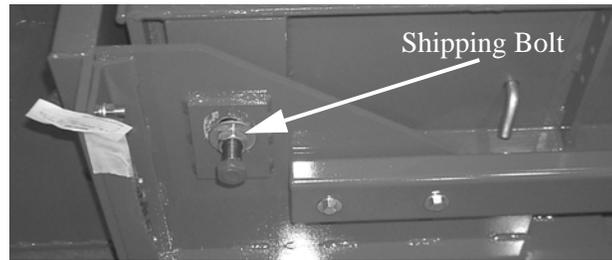


Figure 2-5. Weighbridge Shipping Bolts

2. Remove the bolt which connects the stand to bulkhead base (see Figure 2-6). Re-install this bolt in the bulkhead base after the stand is raised in Step 4.

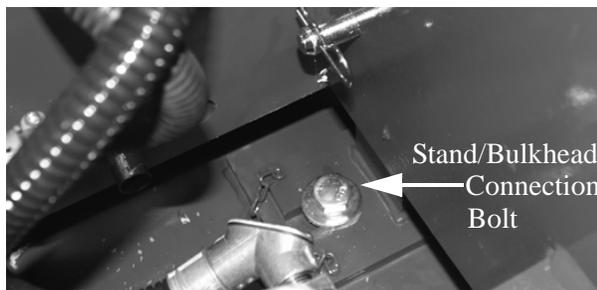


Figure 2-6. Bolt Connecting Stand to Bulkhead

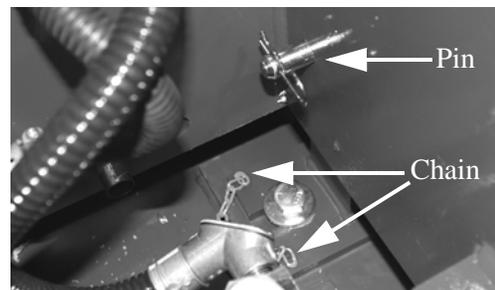


Figure 2-7. Hitch Pin and Chain

3. Install jack under corner of scale and remove weight of scale from stand located in load cell pocket.
4. Remove hitch pin that holds the stand up (see Figure 2-7).  
Lift stand up with chain located inside load cell pocket (See Figure 2-7).  
Re-install the bolt and hitch pin previously removed, and the stand will hold in the retracted position.
5. Slowly lower weighbridge onto load cell link and remove jack.  
Repeat for all load cell pockets.
6. Connect expansion cable between J-boxes on self-contained modules.
7. Wire homerun cable and indicator.
8. Apply anti-sieze compound to bolt threads and install load cell cover plates.
9. Install bolt-on wings (shipped on pallet). See Figure 2-8.

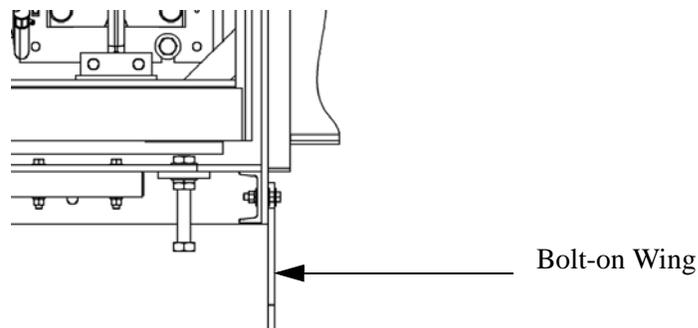


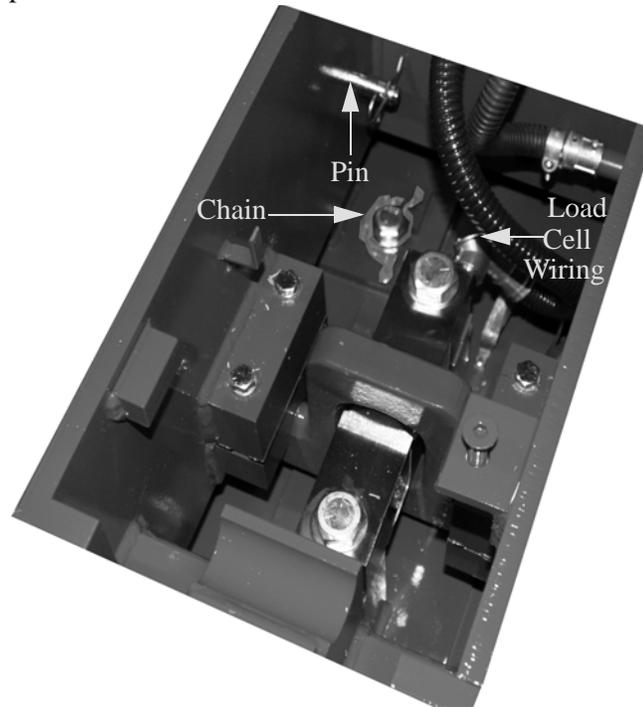
Figure 2-8. Bolt-on Wing

10. Back fill material against bulkheads to establish a ramp and approach as needed.
11. Calibrate the scale (see Section 4.0 on page 10).

## 2.3 Scale Relocation

Use the following steps when relocating the ATV portable truck scale series truck scale.

1. Remove load cell cover plates.



*Figure 2-9. Load Cell Cover Plate Removed*

2. Remove hitch pin that holds stand in retracted position (see Figure 2-9).
3. Jack up each corner of module until hitch pin can be re-installed in shipping position.
4. Install bolt connecting stand to bulkhead base (see Figure 2-6 on page 5).
5. Install shipping bolts on end of modules (see Figure 2-5 on page 5).
6. Remove homerun cable and expansion cable.
7. Remove spacer tubes.
8. Remove backfill material.
9. Relocate modules starting with bridge module.

## 3.0 Connecting Electronic Equipment

Sixty feet of six-wire homerun cable is supplied for wiring the J-box to the indicator. It is best to run this in 3/4" galvanized metal or plastic conduit from the J-box to the indicator. Conduit for this purpose and for connecting peripherals is to be obtained locally. A section of flexible conduit with connector is provided where this cable exits the load cell pocket. Do not run any other electrical cables in or near the conduit to the indicator.

### 3.1 Indicator to Peripherals

Conduit runs may be buried in a trench or secured above ground. Use separate conduit runs for AC power and DC data lines to avoid interference. As a general guideline, run AC and DC cables in separate trenches if possible. When DC data cables must run in the same trench as AC power lines, separate cables as much as possible.



Figure 3-1. Conduit Run in Trench

### 3.2 Single-Point Ground Conductor

A bare 10 gauge solid wire is run from the scale frame to the main AC power earth ground. If DC transient protection is included, it must be properly grounded to function correctly.

### 3.3 J-box Connections

Each J-box contains a JB8SPT summing board with DC transient protection devices. A desiccant such as the RLWS Industrial Corrosion Inhibitor (PN 16037) should be added to the J-box before final closure.

Each self-contained module has a single J-box located in the J-box pocket. A summing card mounted within the J-box is used to make all cable terminal connections. All terminal pins are clearly marked as to function.

## 3.4 Electrical Ground Connections



### Caution

*Improper grounding systems on outdoor truck scales often cause corrupted data from ground-loop current flows and costly lightning damage to electronics.*

Always strive for a **single-point grounding** system (see Figure 3-3 on page 9). Do not drive ground rods at the scale location to establish separate earth grounds for the scale. These separate earth grounds do not share the same zero reference as the existing earth ground for the AC power system. This difference in electrical potential invites ground-loop current flow between the separate grounds, often corrupting serial data like RS-232 which depends on a stable zero reference.

In addition, a separate earth ground system at the scale can actually invite lightning or power surge damage:

- A minor powerline surge in the scale house electrical supply should immediately be shunted to ground. If a separate ground system exists at the scale with a lower potential than the main ground, the surge may travel out to the scale ground rod, damaging load cells on its way.
- A nearby lightning ground strike may instantly raise the zero potential of a ground rod at the scale location, while leaving the scale house ground rod unaffected. That lightning surge now takes the easiest path to the lower-potential ground—through the scale wiring and back to the scale house ground, possibly damaging the indicator on its way.

Therefore, the best grounding system for the scale is the same one used for the incoming AC power system. The 120 VAC power source used to power the indicator is connected to an existing earth-grounded rod system at the scale house or other building where the indicator is located. This should consist of a double ground rod system of two 5/8" x 8' copper rods driven 8' deep at the service entrance where the local utility company brings their lines into the building.

The local utility company can test the resistance of the existing ground rods with a clamp-on megohmmeter that measures zero resistance. A reading of 3¾ or less is acceptable as a ground. If the test determines that the grounding system is inadequate, the utility company can suggest methods to improve the system. It is crucial that the scale owner authorize and make the recommended improvements to ensure an adequate electrical ground. Do not connect the scale to the AC power supply until the grounding system is adequate.

Be certain each load cell grounding strap is securely connected to the top plate and bottom plate of each load cell mount. Some models have ground straps included to install between modules. These inter-module straps ensure that the entire scale is connected to the same single-point ground. There should be metal-to-metal contact with no presence of paint or grout. This strap is designed to channel power surges on the deck around—rather than through—the load cell to ground. A thick coating of anti-oxidant grease should be maintained on all ground connections to prevent corrosion.

A separate grounding system conductor must extend uninterrupted from the main service panel ground to the scale to protect load cells and scale wiring from lightning and other transient damage. This ground wire conductor must be an unsheathed #10 copper wire or larger. Run the bare ground wire conductor intact from the AC power ground rod to the scale in a separate trench. Bring the wire up from the trench near the J-box and attach it to the ground lug located in the J-box pocket. This grounds the scale frame to the same single-point ground as the AC power for the indicator.

A ground wire is included to attach the J-box ground lug to the ground lug located in the J-box pocket. Grounding of the J-box is essential for operation of the DC transient protection incorporated into the J-box.

### 3.5 Installing Transient Protection

A two-year lightning protection package comes standard all truck scales. The individual components of this comprehensive package are designed to protect AC and DC portions of the system. The lightning protection package includes:

- DC transient protection included with standard J-box board(s). This DC transient protection handles up to eight load cells. Scales with more than eight load cells require additional J-boxes.
- Self-contained DC transient protection unit in the homerun cable at the indicator.
- A 115 VAC uninterruptible power supply/surge protector in the AC line before the indicator.
- Number 10 bare ground conductor cable buried in earth from scale frame to DC transient board at indicator and finally to the AC power ground lug.

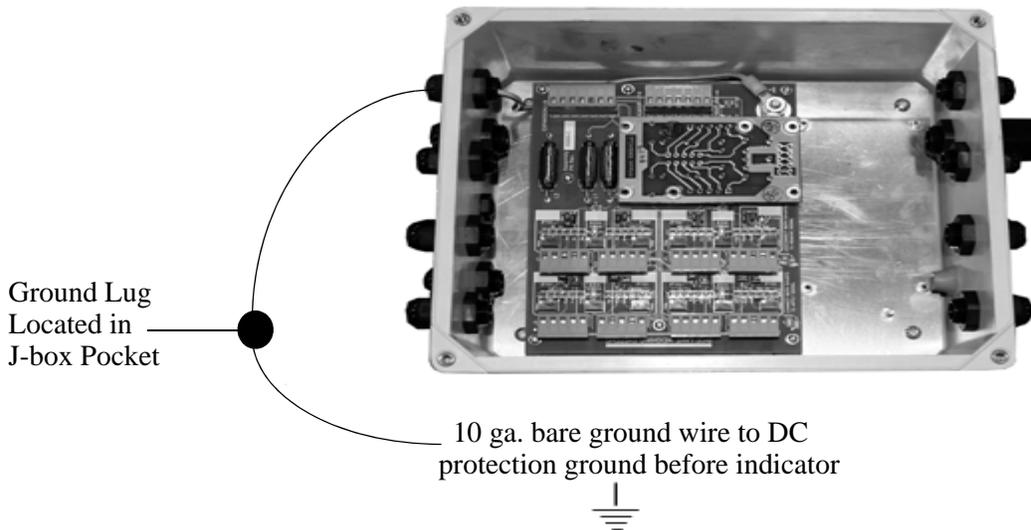


Figure 3-2. Grounding and Transient Protection on ATV Scale

NOTE: Serial communications (if used) may also require transient protection to fully protect entire system. A TP-232 DC Transient Protection is suitable protection for serial communications lines. In addition, printers, remote displays and other devices connected to serial communications should be protected with AC transient protection.

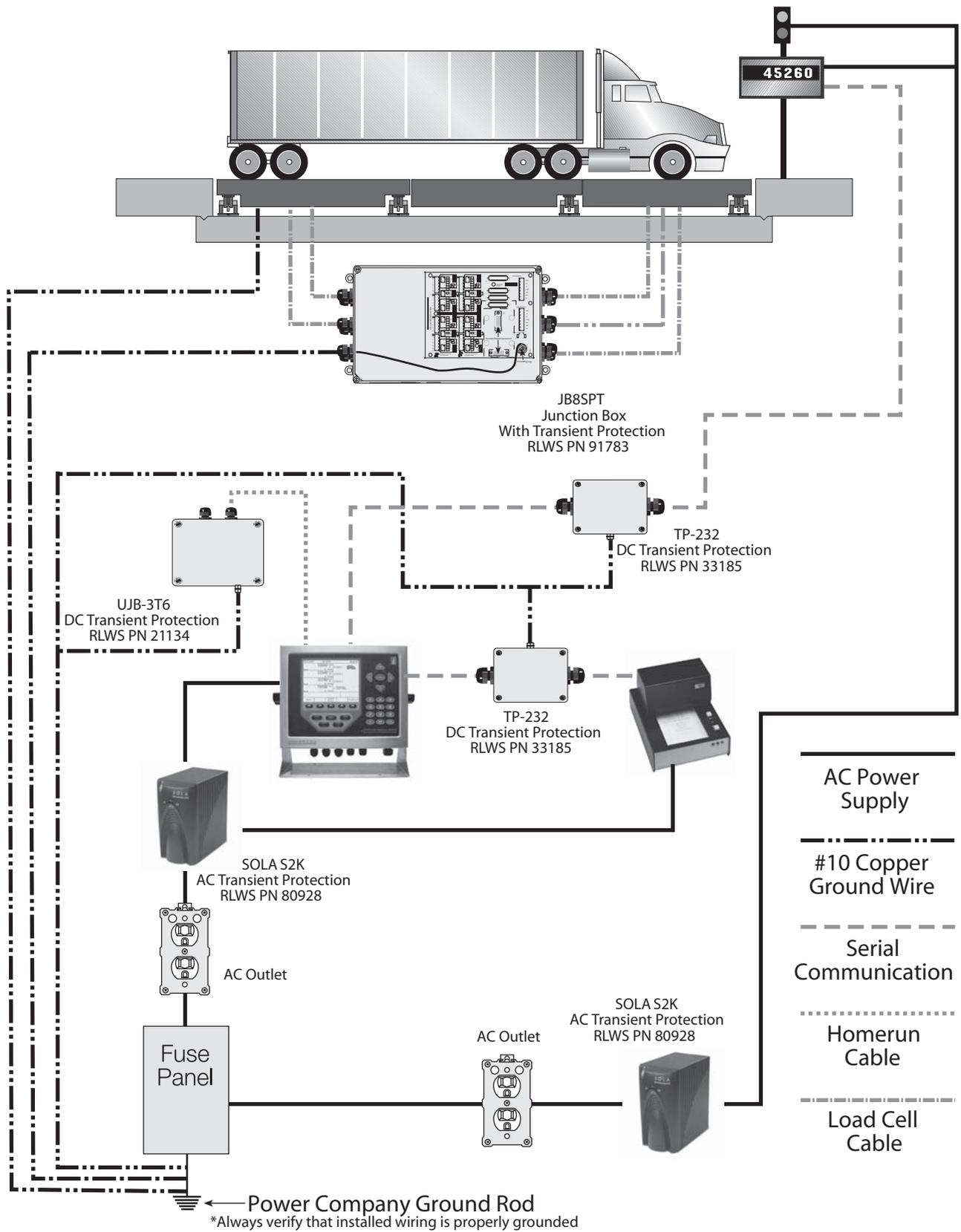


Figure 3-3. Single-Point Grounding Diagram

## 4.0 Trimming and Calibration

The following section describes steps in trimming individual cells and pairs of cells, and calibration of the ATV truck scale. See J-box instructions located in the J-box for details on trimming.

### 4.1 Overview and Equipment Required

#### Load Cell Trimming

*Individual* load cell signal trimming (equalizing the signal output from each load cell) must be done first along each side of the scale so all cells on a side have equal signal output. Adjustments can be interactive, so each side should be done at least twice.

Once that is done, load cell *pairs*—one from each side—are trimmed as paired sections until each sectional output is equal. Adjustments to each section should also be done at least twice.

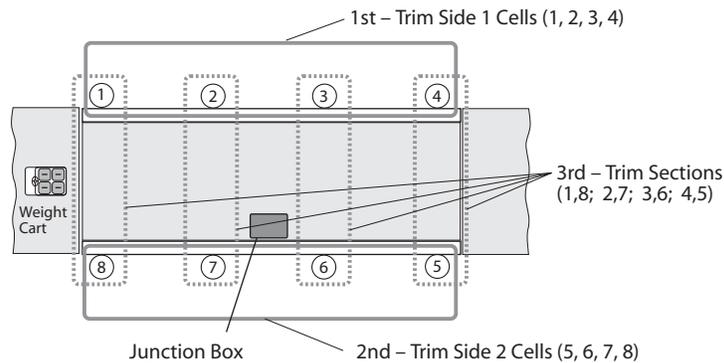


Figure 4-1. Load Cell Trimming Diagram

#### Equipment Required

Both of these trimming operations can be done using a weight cart parked in various locations on the scale. Final verification of equal output trimming, however, requires test weights to be placed on the deck in various locations.

### 4.2 Trimming Individual Cells

Connect all load cells to the summing board terminals in the J-box and connect the main interface cable from the J-box to the indicator. Power up the indicator.

Turn all load cell potentiometers (individual and section) in the J-box clockwise so all signals are at full strength. Refer to the J-box instruction manual for proper set-up of jumpers and dip switches prior to trimming, then proceed to individual cell trimming.

#### Side 1

The first objective is to adjust individual load cells along one side of the scale for equal signal output when equal weight is put on those cells. For convenience, that side of the scale is referred to as side 1. The trimming weight you use is the loaded weight cart.

1. Park the cart as close as possible to side 1 being trimmed with the wheels centered over the end load cell mount (No. 1 in Figure 4-2). Record the indicator reading. Remember that

the scale is still uncalibrated, so the indicator readings are simply raw counts rather than weight units.

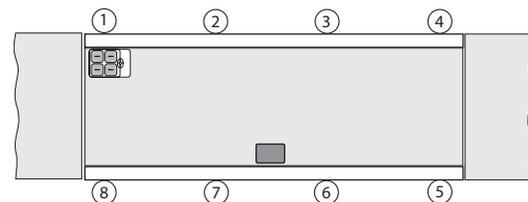


Figure 4-2. Trimming Load Cell Number One

2. Move the cart directly over mount No. 2 and record that reading. Move the cart directly over mount No. 3 and record that reading. Move the cart so the wheels are centered directly over mount No. 4 (you may have to turn the weight cart around so all wheels remain on the scale) and record the reading.

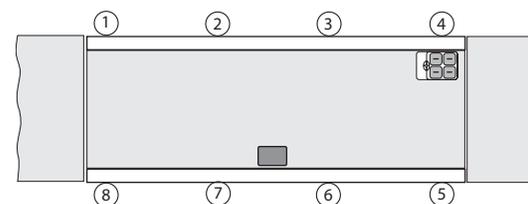


Figure 4-3. Trimming Load Cell Numbers 2, 3, and 4

3. The lowest reading of the four is the reference cell. Do not change that cell's signal. Instead use the individual cell potentiometers for the other three cells to reduce those signals to match your reference cell. Remember that you turned all pots to full signal before starting, so you can not increase the signal from any cell — only decrease signal by trimming with the pots.
4. Note that the best trim is always the least trim. If one of the four readings differs from the others by more than 5% of the displayed counts, there is probably a mechanical problem with that load cell mount causing the large difference. Find it and correct it before going on. Check for binding, an out-of-level or misaligned link, or similar problems with the load cell and mount. *Do not* try to trim down large signal differences with resistance pots — that only adds larger problems later because of interaction between mounts.
5. Park the loaded weight cart over one of the high-reading cells on side 1. Turn that cell's individual potentiometer until the displayed reading equals your recorded reference cell reading. Repeat for the other two high-reading cells on side 1.
6. As adjustments are somewhat interactive, repeat the process in steps 1 – 5 until all four cells on side 1 read within .1% of each other.
7. Repeat steps 1 – 6 for load cells 5 – 8 on side 2 of the scale.

### 4.3 Trimming Paired Sections

Now that all individual load cells are trimmed for equal output, pairs of load cells on opposite sides of the scale must be trimmed for equal sectional output. This process is called **section trimming**.

1. Park the loaded weight cart in the middle of the scale and directly over an imaginary line connecting an end pair of cells (1 and 8 in Figure 4-4). Record the indicator reading.

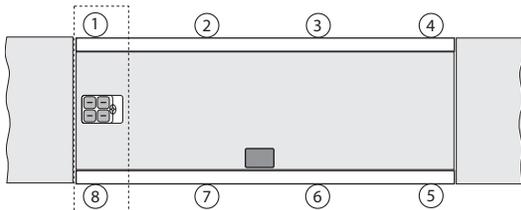


Figure 4-4. Trimming Paired Section 1:8

Move the weight cart directly over the next paired cell section (2, 7 in Figure 4-5) and record the indicator reading. Do the same for the last two paired sections (cells 3, 6 and 4, 5).

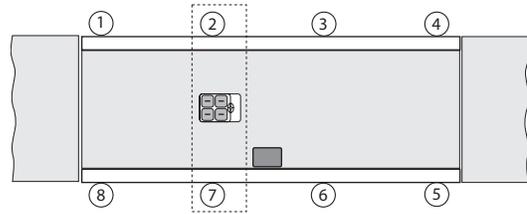


Figure 4-5. Trimming Paired Sections 2:7, 3:6, and 4:5

2. Choose the lowest reading of the four as your reference section, which is not adjusted. Using the *section* potentiometers, reload the other three sections in turn and trim the sections to match the reading of the reference section. Recheck section readings a second time as the adjustment made can be somewhat interactive.
3. As a final verification of the load cell trimming, do a final corner check. Place a 1000 lb weight on one corner of the platform and record the raw-count reading on the indicator. Move the weight to all of the other corners in turn and record those readings. The readings should be within .1% of each other.

### 4.4 Calibrating with Test Weights

The calibration procedure can only be done after all trimming as described above has been completed. A qualified scale technician with a test weight truck and the expertise to access the scale indicator's setup or calibration mode must perform the calibration procedure.

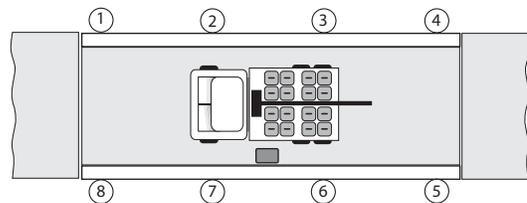


Figure 4-6. Calibration with Test Weights

**Equipment Required**

Truck scales are routinely calibrated using 25% of the capacity weight of the scale. Certified Class F test weights equaling at least 12.5% of the scale's capacity are required for calibrating a commercial legal-for-trade truck scale. In addition, some type of weight for a substitution test of an additional 12.5% of the capacity is required. This can be the test-weight truck, bags of sand, or any convenient items easy to load onto the scale. This total calibration weight of 25% of scale capacity (12.5% test weights, 12.5% substitution weight) is required by weights and measures officials for commercial truck scales in most states. Check with your local weights and measures officials for the requirements in your jurisdiction.

Industrial scales not used for legal-for-trade transactions do not require certified test weights. Weight equal to 25% of scale capacity is recommended for calibrating such scales.

See *NIST Handbook 44* for detailed calibration requirements and procedures.

## 5.0 Load Cell Replacement

### 5.1 Replacement Procedure

1. Position jack beneath one of the weighbridge's main frame members close to the load cell mount. (Allow room for load cell removal and installation.) Raise jack approximately 1/2" and put setting block(s) under the scale deck.



**Caution** As a safety precaution, always use setting blocks when jacking scale module.

2. Disconnect the load cell terminal connections in the junction box.  
Disconnect the flex conduit from the rigid conduit at the frame.

NOTE: Attach a pull cord to the load cell cable at the junction box before pulling the cable through the conduit.

3. Pull the load cell cable out of the conduit.
4. Remove the two load cell bolts and lift out load cell and link assembly.
5. Remove 90° conduit connector and flex cable. Install 90° conduit connector and flex conduit on new load cell in the same position as was removed.
6. Install link over new load cell. Reinstall load cell and link assembly onto the baseplate. Install load cell mount bolts and torque to 50 – 75 ft-lb.

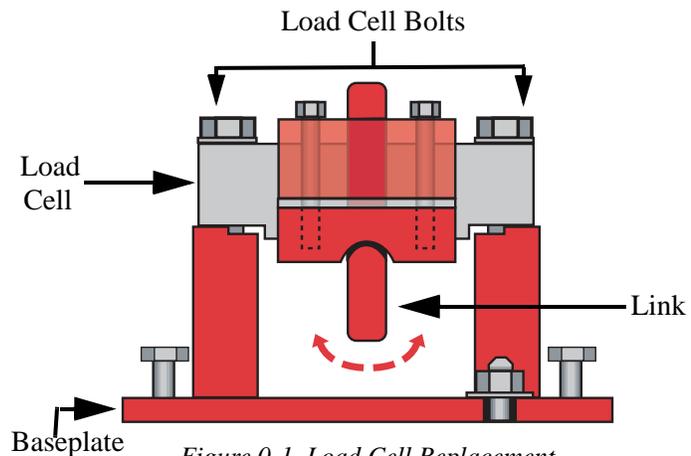


Figure 0-1. Load Cell Replacement

7. Pull load cell cable through conduit using pull cord. Make a loop in flex conduit between the load cell and the rigid conduit. Reconnect flex conduit to rigid conduit.
8. Remove setting blocks and lower scale module so that it rests on the link. Check link to verify that it is centered and plum.
9. Connect wiring to terminals in junction box.

NOTE: RLWS has 1/4" (PN 67293), 1/8" (PN 67294) and 1/16" (PN 67291) shims available to level scale. Do not exceed over 3/4" of shims combined. If more is necessary, contact RLWS for other options.

### 5.2 End Cleanouts

End cleanouts are standard on all ATV truck scales. Simply remove the bolts and cover plate to gain access. Apply anti-seize compound to bolt threads prior to re-installing cover plate.

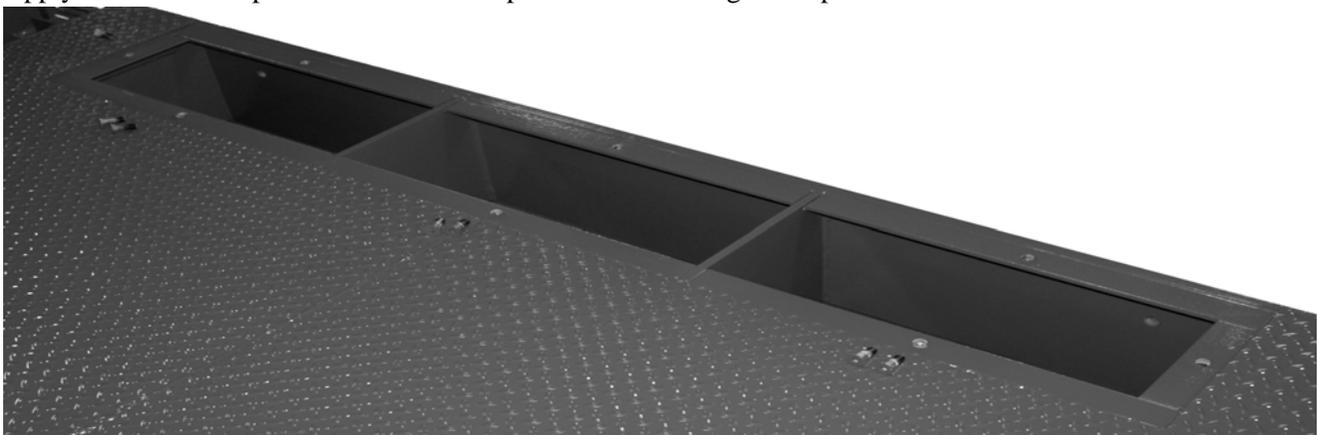


Figure 5-1. End Cleanouts with bolts and cover plate removed

## 6.0 Vehicle Scale Limited Warranty

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Rice Lake Weighing Systems (RLWS) warrants that all RLWS brand equipment and systems properly installed by a Distributor will operate in accordance with written specifications as confirmed by the Distributor and accepted by RLWS. All systems and components are warranted against defects in materials and workmanship for 2 years from date of shipment from the manufacturer. Furthermore, the seller warrants the fabricated weighbridge against faulty workmanship and defective materials for 5 years from date of shipment from the manufacturer.

RLWS warrants that the equipment sold hereunder will conform to the current written specifications authorized by RLWS. RLWS warrants the equipment against faulty workmanship and defective materials. If any equipment fails to conform to these warranties, RLWS will, at its option, repair or replace such goods returned within the warranty period subject to the following:

- Upon discovery by Buyer of such non-conformity, RLWS will be given prompt written notice with a detailed explanation of the alleged deficiencies.
- Individual electronic components returned to RLWS for warranty purposes must be packaged to prevent electrostatic discharge (ESD) damage in shipment. Packaging requirements are listed in a publication, "Protecting Your Components From Static Damage in Shipment," available from RLWS Equipment Return Department.
- Examination of such equipment by RLWS confirms that the non-conformity actually exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair, or improper testing. RLWS shall be the sole judge of all alleged non-conformities.
- Such equipment has not been modified, altered or changed by any person other than RLWS or its duly authorized repair agents.
- RLWS will have a reasonable time to repair or replace the defective equipment. Buyer is responsible for shipping charges both ways.
- Vehicle scale products are eligible for warranty labor and mileage charges with pre-approval by RLWS Service Department, and only to the limits described in the vehicle scale reimbursement program.
- RLWS will not be liable for the cost of any repairs made by others.

**THESE WARRANTIES EXCLUDE ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEITHER RLWS NOR DISTRIBUTOR WILL BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

**RLWS AND BUYER AGREE THAT RLWS' SOLE AND EXCLUSIVE LIABILITY HEREUNDER IS LIMITED TO REPAIR OR REPLACEMENT OF SUCH GOODS. IN ACCEPTING THIS WARRANTY, THE BUYER WAIVES ALL OTHER CLAIMS TO WARRANTY.**

**SHOULD THE SELLER BE OTHER THAN RLWS, THE BUYER AGREES TO LOOK ONLY TO THE SELLER FOR WARRANTY CLAIMS.**

No terms, conditions, understanding, or agreements purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of RLWS and the Buyer.

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# 7.0 Assembly and Foundation Drawings

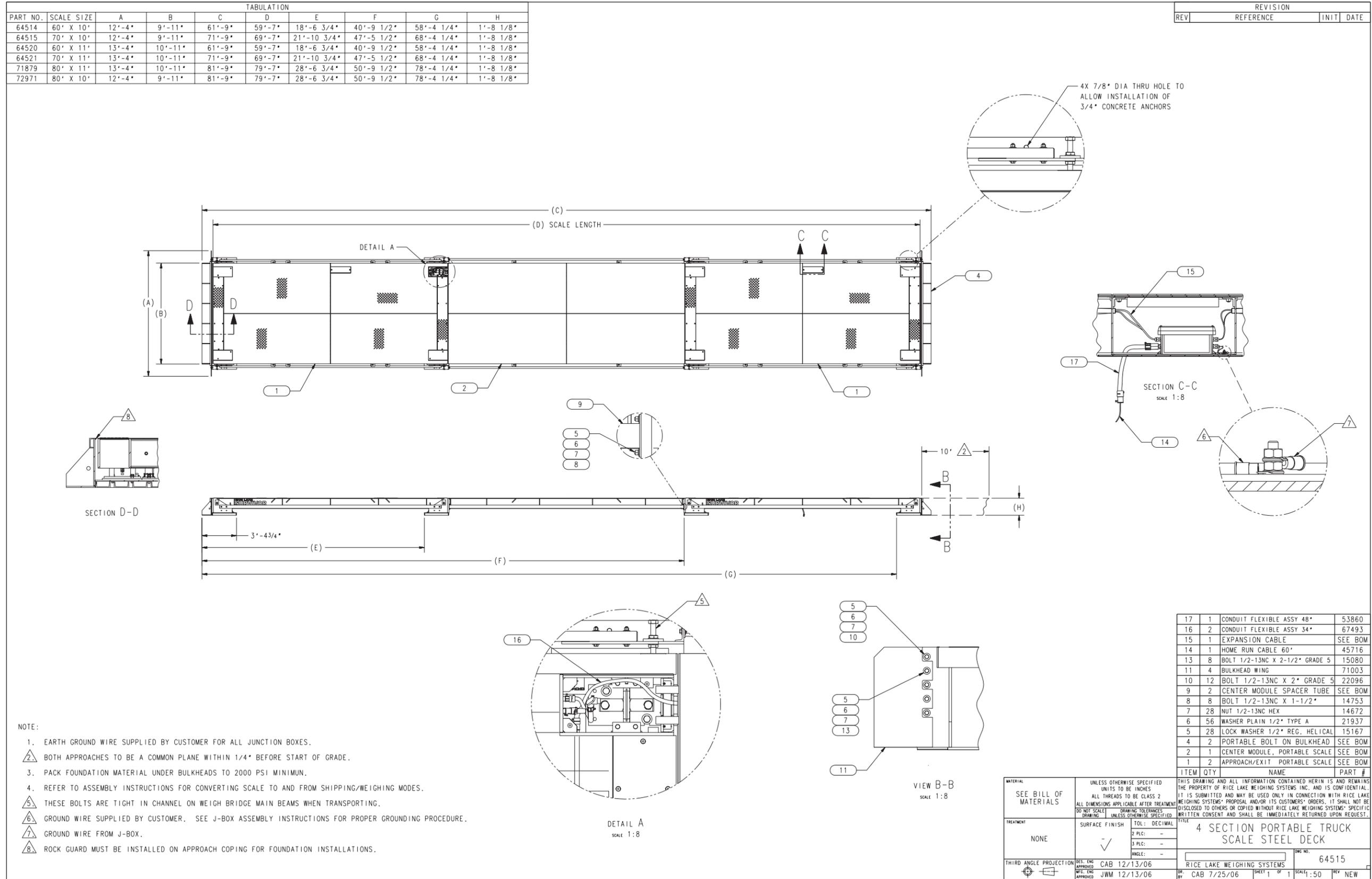
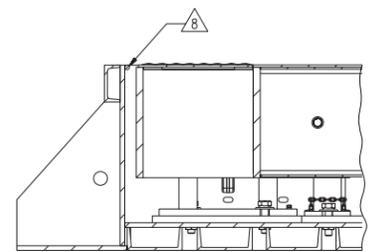
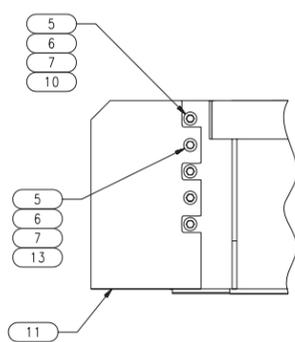
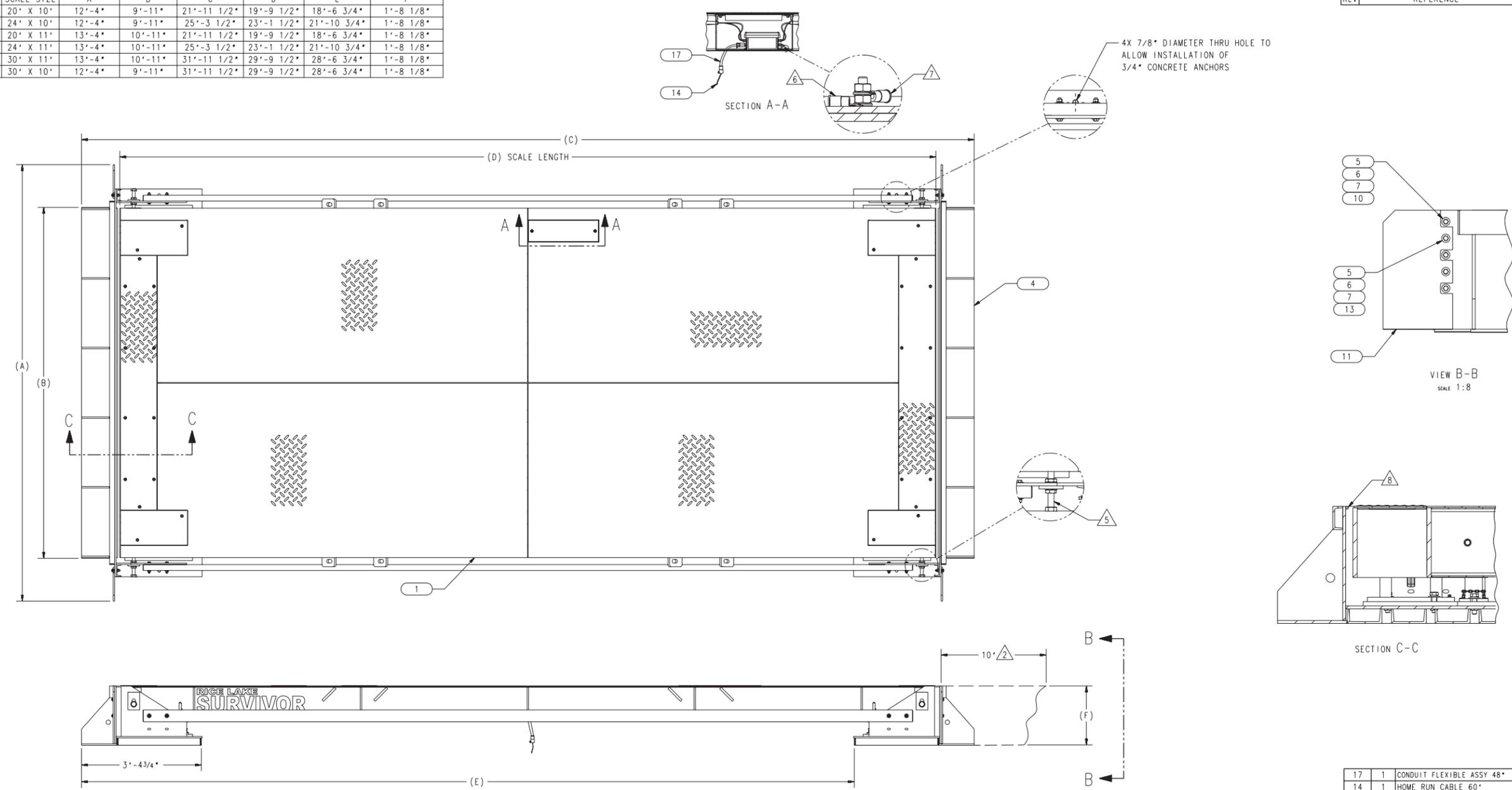


Figure 7-1. 70' x 11' ATV Assembly Drawing

TABULATION							
PART NO.	SCALE SIZE	A	B	C	D	E	F
64510	20' X 10'	12'-4"	9'-11"	21'-11 1/2"	19'-9 1/2"	18'-6 3/4"	1'-8 1/8"
64511	24' X 10'	12'-4"	9'-11"	25'-3 1/2"	23'-1 1/2"	21'-10 3/4"	1'-8 1/8"
64516	20' X 11'	13'-4"	10'-11"	21'-11 1/2"	19'-9 1/2"	18'-6 3/4"	1'-8 1/8"
64517	24' X 11'	13'-4"	10'-11"	25'-3 1/2"	23'-1 1/2"	21'-10 3/4"	1'-8 1/8"
70940	30' X 11'	13'-4"	10'-11"	31'-11 1/2"	29'-9 1/2"	28'-6 3/4"	1'-8 1/8"
72970	30' X 10'	12'-4"	9'-11"	31'-11 1/2"	29'-9 1/2"	28'-6 3/4"	1'-8 1/8"

REVISION			
REV	REFERENCE	INIT	DATE



ITEM	QTY	NAME	PART #
17	1	CONDUIT FLEXIBLE ASSY 48"	53860
14	1	HOME RUN CABLE 60'	45716
13	8	BOLT 1/2-13NC X 2-1/2" GRADE 5	15080
11	4	BULKHEAD WING	71003
10	12	BOLT 1/2-13NC X 2" GRADE 5	22096
7	20	NUT 1/2-13NC HEX	14672
6	40	WASHER PLAIN 1/2" TYPE A	21937
5	20	LOCK WASHER 1/2" REG. HELICAL	15167
4	2	PORTABLE BOLT ON BULKHEAD	SEE BOM
1	2	APPROACH/EXIT PORTABLE SCALE	SEE BOM

- NOTE:
- EARTH GROUND WIRE SUPPLIED BY CUSTOMER FOR ALL JUNCTION BOXES.
  - BOTH APPROACHES TO BE A COMMON PLANE WITHIN 1/4" BEFORE START OF GRADE.
  - PACK FOUNDATION MATERIAL UNDER BULKHEADS TO 2000 PSI MINIMUM.
  - REFER TO ASSEMBLY INSTRUCTIONS FOR CONVERTING SCALE TO AND FROM SHIPPING/WEIGHING MODES.
  - THESE BOLTS ARE TIGHT IN CHANNEL ON WEIGH BRIDGE MAIN BEAMS WHEN TRANSPORTING.
  - GROUND WIRE SUPPLIED BY CUSTOMER. SEE J-BOX ASSEMBLY INSTRUCTIONS FOR PROPER GROUNDING PROCEDURE.
  - GROUND WIRE FROM J-BOX.
  - ROCK GUARD MUST BE INSTALLED ON APPROACH COPING FOR FOUNDATION INSTALLATIONS.

MATERIAL	SEE BILL OF MATERIALS	UNLESS OTHERWISE SPECIFIED UNITS TO BE INCHES ALL THREADS TO BE CLASS 2 ALL DIMENSIONS APPLICABLE AFTER TREATMENT DO NOT SCALE DRAWING TOLERANCES UNLESS OTHERWISE SPECIFIED	THIS DRAWING AND ALL INFORMATION CONTAINED HEREIN IS AND REMAINS THE PROPERTY OF RICE LAKE WEIGHING SYSTEMS, INC. AND IS CONFIDENTIAL. IT IS SUBMITTED AND MAY BE USED ONLY IN CONNECTION WITH RICE LAKE WEIGHING SYSTEMS' PROPOSAL AND/OR ITS CUSTOMERS' ORDERS. IT SHALL NOT BE DISCLOSED TO OTHERS OR COPIED WITHOUT RICE LAKE WEIGHING SYSTEMS' SPECIFIC WRITTEN CONSENT AND SHALL BE IMMEDIATELY RETURNED UPON REQUEST.
TREATMENT	NONE	SURFACE FINISH: ✓ TOL: DECIMAL 2 PLC: - 3 PLC: - ANGLE: -	TITLE: PORTABLE TRUCK SCALE STEEL DECK
THIRD ANGLE PROJECTION	DES. ENG APPROVED: JWM 12/13/06 MFG. ENG APPROVED: JWM 12/13/06	DR. BY: CAB 11/29/06	RICE LAKE WEIGHING SYSTEMS DWG NO. 64511 SHEET 1 OF 1 SCALE: 1:16 REV: NEW

Figure 7-2. ATV Single Module (30') Assembly Drawing

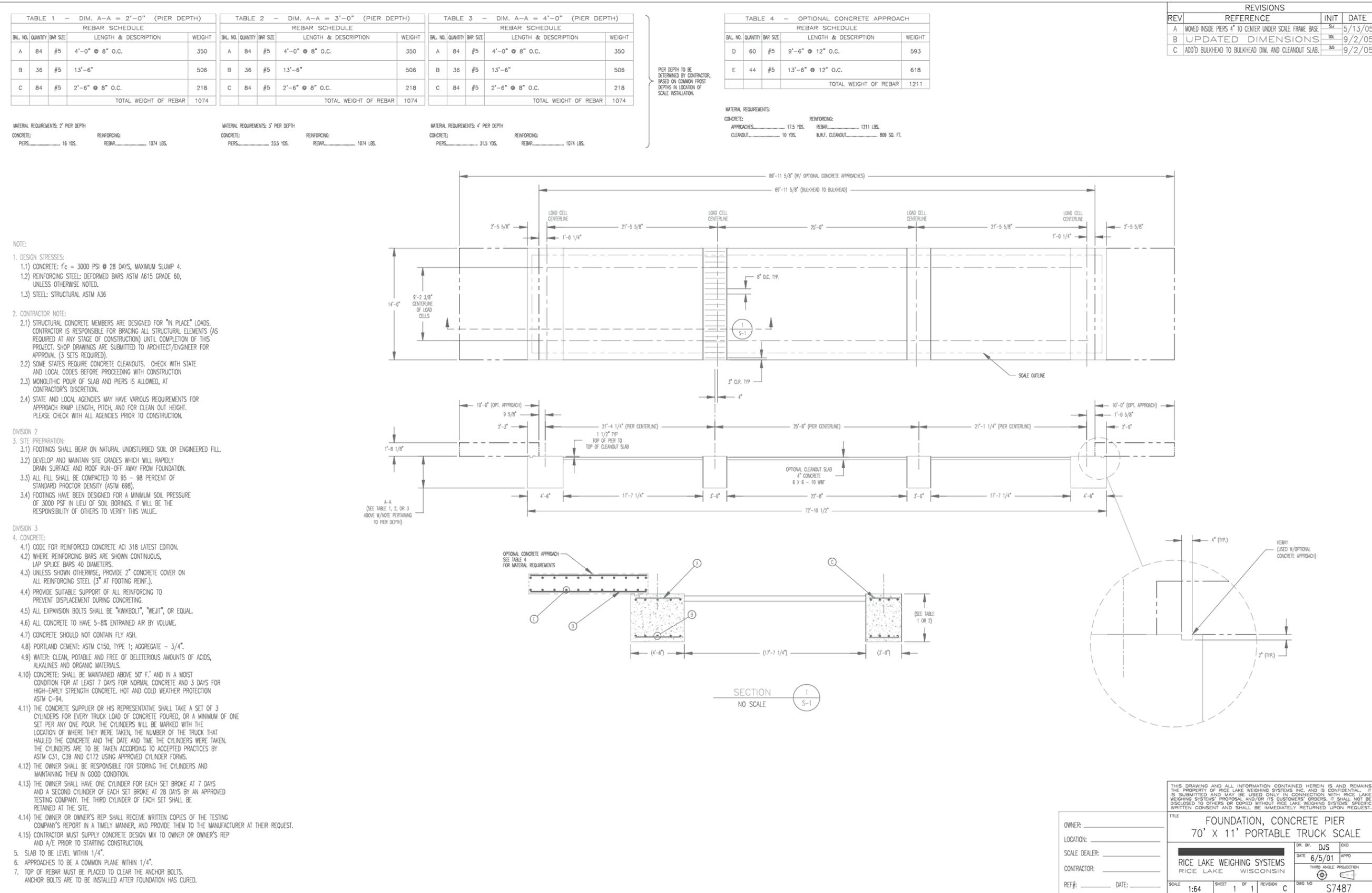
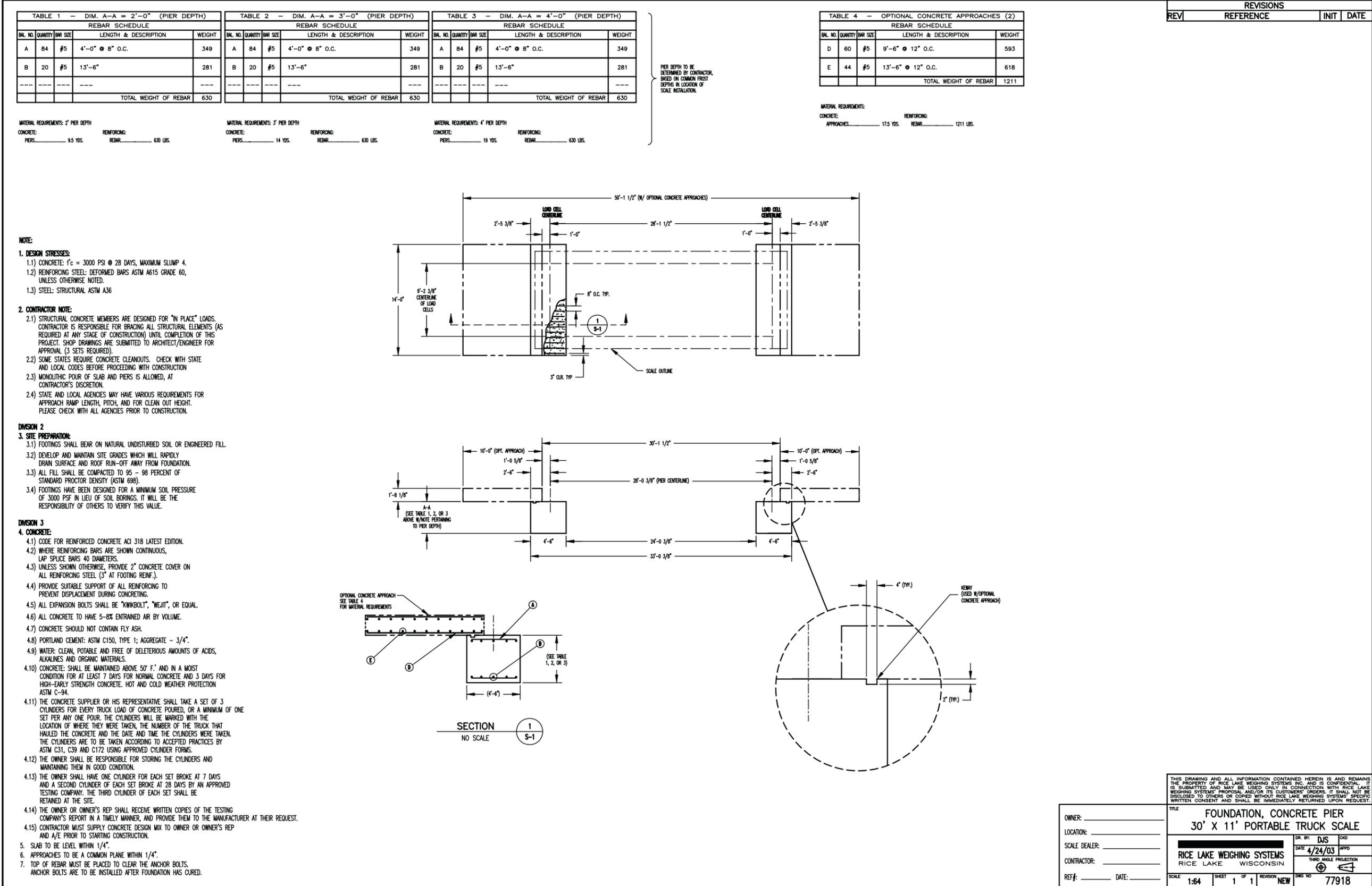


Figure 7-3. 70' x 11' ATV Pier Foundation Print



REVISIONS			
REV	REFERENCE	INIT	DATE

Figure 7-4. 30' ATV Pier Foundation Print