



# Request for Quote

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
 ONE CAPITOL HILL  
 PROVIDENCE RI 02908

BUYER: Hill, Lisa  
 PHONE #: 401-574-8118

CREATION DATE : 27-MAY-16  
 BID NUMBER: 7550654  
 TITLE: ARROWBOARDS - DOT  
 BID CLOSING DATE AND TIME: 21-JUN-2016 10:30:00

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 DOT MAINTENANCE BUSINESS OFFICE  
 360 LINCOLN AVE  
 WARWICK, RI 02888  
 US

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 DOT MAINTENANCE BUSINESS OFFICE  
 360 LINCOLN AVE  
 WARWICK, RI 02888  
 US

Requisition Number: 1462677

Line	Description	Quantity	Unit	Unit Price	Total
1	<p>QUESTIONS CONCERNING THIS BID MUST BE DIRECTED TO LISA HILL AT LISA.HILL@PURCHASING.RI.GOV. QUESTIONS WILL BE ENTERTAINED UNTIL ONE WEEK PRIOR TO BID CLOSING DATE AND TIME. TELEPHONE QUESTIONS WILL NOT BE ACCEPTED.</p> <p>BIDS MUST BE SUBMITTED IN DUPLICATE. THE STATE ISSUED BID SPECIFICATIONS MUST BE RETURNED WITH THE SOLICITATION AND MUST INDICATE COMPLIANCE WITH EACH INDIVIDUAL SPECIFICATION. IF THERE ARE ANY EXCEPTIONS, THE EXCEPTION MUST BE NOTED.</p> <p>ARROWBOARDS, PER ATTACHED BID SPECIFICATIONS            *****</p> <p>ANTICIPATED DELIVERY: _____</p> <p>TWELVE (12) ARROWBOARDS FOR OPERATIONS RELATED TO DRAINAGE CLEARING CREW</p>	12.00	Each		

Delivery: \_\_\_\_\_

Terms of Payment: \_\_\_\_\_

It is the Vendor's responsibility to check and download any and all addenda from the RIVIP. This offer may not be considered unless a signed RIVIP generated Bidder Certification Cover Form is attached and the Unit Price column is completed. The signed Certification Cover Form must be attached to the front of the offer

## ARROWBOARD TRAILERS

### 1. DESCRIPTION

1.1. Description Arrow boards direct traffic by flashing a brightly lit arrow pattern on a large, highly visible display panel. Arrow boards are portable and self-powered, requiring no permanent installation or wiring. Arrows and other patterns are selected by the user.

Comply\_\_\_\_

Folding Arrow Board Trailers features a display panel that pivots up to the vertical position when deployed, and down to the horizontal position for transport. The display is held in place with a single support for ease of use.

Comply\_\_\_\_

Trailer-mounted arrow boards feature technology, a highly efficient power system. With exclusive LED lamps and small, eco-friendly batteries, W|ECO arrow boards are extremely energy-efficient without sacrificing performance.

Comply\_\_\_\_

Power is provided by batteries, which are charged by an automated solar charging system. With sufficient sunlight, arrow boards can run indefinitely without intervention.

Comply\_\_\_\_

1.2. Models

1.2.1. Arrow-board trailer with 15-light display panel

Comply\_\_\_\_

### 2. FEATURES

2.1. Operation

- High-output amber LEDs Comply\_\_\_\_
- Selection of arrow and other display patterns Comply\_\_\_\_
- Easy to operate and maintain Comply\_\_\_\_
- Heavy-duty hand-winch w/ safety brake allows one person to raise board Comply\_\_\_\_
- Single locking device holds arrow board in place while operating and during transport Comply\_\_\_\_
- Controller located safely away from traffic Comply\_\_\_\_
- Weather-resistant control box cover has lockable slam-latch Comply\_\_\_\_
- Control box outputs have short-circuit protection, helping prevent blown transistors Comply\_\_\_\_
- Arrow display has automatic dimming Comply\_\_\_\_
- Stabilizer legs raise tires off the ground to provide stability in high wind Comply\_\_\_\_
- Meets MUTCD Comply\_\_\_\_

2.2. Power system

- Energy-efficient operation results in long run times Comply\_\_\_\_
- Solar panels charge batteries automatically without intervention Comply\_\_\_\_
- System disconnects solar charging system from batteries when they are fully charged, preventing over-charging and damage to batteries Comply\_\_\_\_
- Unique system allows battery charging with solar panels or commercial power Comply\_\_\_\_
- Power system includes reverse polarity protection and low-voltage disconnect circuit Comply\_\_\_\_
- Controller has resettable fuses Comply\_\_\_\_
- Solar charging system features solid state voltage regulator with charge indicator Comply\_\_\_\_

## ARROWBOARD TRAILERS

2.3.	Maintenance	<ul style="list-style-type: none"> <li>• Maintenance-free batteries</li> <li>• Durable powder-coat finish resists the elements</li> <li>• In travel position, unique design supports board without rear braces, reducing possibility of damage during transport or storage</li> <li>• Lamps and visors are easily replaced</li> <li>• Standard trailer tires</li> <li>• Heavy-duty bolt-on steel fenders can be replaced if damaged</li> </ul>	<p>Comply____</p> <p>Comply____</p> <p>Comply____</p> <p>Comply____</p> <p>Comply____</p>
2.4.	Environmental	<ul style="list-style-type: none"> <li>• Consumes 80% less power than traditional solar arrow boards</li> <li>• Smaller batteries have 80% less lead content</li> <li>• Sealed batteries will not leak or spill</li> <li>• Decreased charging time saves energy and downtime</li> <li>• Manufacturing process emits near-zero VOCs</li> <li>• Nearly every component can be recycled</li> </ul>	<p>Comply____</p> <p>Comply____</p> <p>Comply____</p> <p>Comply____</p> <p>Comply____</p>
2.5.	Application	<p>Common applications include:</p> <ul style="list-style-type: none"> <li>• Roadwork zones</li> <li>• Lane, road and bridge closures</li> <li>• Public events</li> </ul>	<p>Comply____</p> <p>Comply____</p> <p>Comply____</p>
<b>3.</b>	<b>DISPLAY</b>		
3.1.	Display panel		
3.1.1.	Description	Weather-resistant cabinet provides a rigid platform for LED lamps	Comply____
3.1.2.	Size	48" x 96" x 3" (122 x 244 x 8cm)	Comply____
3.1.3.	Height	When deployed, 84" (213cm) from ground to bottom of display panel	Comply____
3.1.4.	Construction	Outer frame constructed of aluminum channel, 3" x 1" x 1/8" thick. Two interior channels add strength and prevent distortion of front and rear panels. All channel joints are welded.	Comply____
		Front and rear panels constructed of aluminum sheet, 5052-H32, 0.062" (1.575mm) thick. Panels are riveted and screwed to frame and interior channels.	Comply____
3.1.5.	Finish	Oven-baked, flat-black (10% gloss), powder-coat finish ensures durability and corrosion protection. Panel assembly is high-pressure phosphate-washed prior to finish coat.	Comply____
3.1.6.	Wiring	Weatherproof wiring between solar panel, control box, and display panel is P-clamped to trailer frame	Comply____
3.1.7.	Storage	When lowered for storage and transport, the display panel is held in place without rear braces. As a result, the panel never strikes another surface during transport, eliminating damage that might otherwise occur (such as abrasion, deformation, and warping).	Comply____
3.2.	Front lights		
3.2.1.	Description	Display lights are laid out across the front face of the display panel. The layout allows for a variety of arrows and other patterns to appear depending on which lights are lit. The desired pattern is selected by the operator, using the arrow board controls.	Comply____

## ARROWBOARD TRAILERS

3.2.2.	Type	PAR 46 LED lamp, 5¾" (14.5cm) dia.	Comply____	
3.2.3.	Wattage	<1.0W per lamp	Comply____	
3.2.4.	Voltage	8.0Vdc	Comply____	
3.2.5.	Light output	1425 lux per lamp	Comply____	
3.2.6.	Reverse-polarity protection	Protects lamps if control box wiring is connected backwards (which sometimes happens after servicing)	Comply____	
3.2.7.	LEDs	Technology	AllInGaP II (aluminum indium gallium phosphide) technology, T-1¾ size	Comply____
		Color range	Amber, 590 to 593 nm	Comply____
		Forward voltage	2.0 to 2.1Vdc @ 20mA	Comply____
		Temperature limits	Operating temperature, -22 to 185°F (-30 to 85°C)	Comply____
3.2.8.	Lens	Function	Each lamp has an integrated hex lens that enhances the brightness and angularity of each LED while reducing power consumption	Comply____
		Material	Acrylic	Comply____
		Beam angle	Horizontal: 16.8 degrees, ±8.4 degrees Vertical: 9.5 degrees, ± 4.75 degrees	Comply____ Comply____
			Angle determined by 10% of peak candle power (certified by independent testing laboratory)	Comply____
3.2.9.	Visor	Function	Each lamp is shrouded by a visor that enhances visibility by shading the lamp and preventing glare	Comply____
		Material	High-impact ABS plastic	Comply____
		Mounting	Four keyed slots enable visor to be removed from the display panel without removing screws	Comply____
3.2.10.	Visibility	At least 1 mile (1.6km)	Comply____	
3.2.11.	Angularity	26.8 degrees @ 105 ft. (32m)	Comply____	
		54.0 degrees @ 49 ft. (15m)	Comply____	
		Total viewing area, per 2008 NTPEP results	Comply____	
3.2.12.	Auto-dimming	A photocell detects ambient light; the controller adjusts the brightness of the LEDs accordingly, dimming display brightness in darkness, increasing to full brightness in daylight Photocell is located inside control box, facing downward	Comply____	
3.2.13.	Replacement	Lamps can be replaced in less than two minutes. The only tool needed is a Philips screwdriver.	Comply____	
3.3.	Rear lights			
3.3.1.		Description Two indicator lights on the back of the display panel suggest the current arrow board function to an operator located behind the arrow board by flashing a corresponding pattern	Comply____	
3.3.2.	Type	Sealed 2-diode LED light, surface-mount, 2½" x ¾" (6.6 x 1.9cm) lens	Comply____	
		See "Options and Optional Equipment" for rear light options	Comply____	

## ARROWBOARD TRAILERS

3.3.3.	Wattage	0.9W	Comply_____
3.3.4.	Voltage	8.0Vdc	Comply_____
3.4.	Standards	Meets requirements for minimum size, legibility, and number of elements per MUTCD, December 2009 ed., §6F.61, ¶105, Temporary Traffic Control Zone Devices: Arrow Boards Meets specs for MUTCD Type C	Comply_____
<b>4.</b>	<b>CONTROLLER</b>		
4.1.	Function	Allows operator to choose an arrow or other display pattern. Keeps the batteries fully charged while protecting them from deep discharge & overcharging. Maintains display flash-rate and controls automatic dimming.	Comply_____
4.2.	Control box		
4.2.1.	Location	Right (curb-side) upright of trailer frame	Comply_____
4.2.2.	Enclosure	Aluminum sheet construction, brushed aluminum finish	Comply_____
		Hinged weatherproof cover with slam-latch	Comply_____
		Hole in cover accepts customer-supplied padlock	Comply_____
4.2.3.	Cable protection	Molded plastic cover attached to back of control box, protects external wiring connections and can be removed for access to connectors; all wiring has quick-connect plugs	Comply_____
4.2.4.	Serviceability	Entire control box is removable for easy exchange and factory servicing	Comply_____
4.3.	Control panel		
4.3.1.	Display switch	Toggle switch for turning arrow board display on and off	Comply_____
4.3.2.	Display pattern	Rotary switch; operator simply points the switch at the desired display pattern, which is selection silkscreened onto the front of the control panel	Comply_____
4.3.3.	LED indicators	Indicates the following status conditions:	
		Low voltage (battery charging required)	Comply_____
		Low battery voltage detected, power shutdown occurred	Comply_____
		Solar charging system is charging batteries	Comply_____
		Batteries are fully charged	Comply_____
4.4.	Display patterns		
4.4.1.	All models	All arrow boards can display any of the following 7 patterns (for samples, see Exhibit A):	
	Flashing arrow, left or right	10 lights total	Comply_____
		5 lights form arrowhead	Comply_____
		5 lights form stem	Comply_____
	Flashing double arrow	13 lights total	Comply_____
		5 lights form each arrowhead	Comply_____
		3 lights form stem	Comply_____
	Flashing four-corner warning	4 lights total 1 light	Comply_____
		at each corner	Comply_____

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**ARROWBOARD TRAILERS**

	Flashing caution-bar warning	7 lights form horizontal bar across center of display panel	Comply____
	Sequencing stem arrow, left or right	10 lights total	Comply____
		5 lights form arrowhead	Comply____
		5 lights form full stem	Comply____
		1st pulse: 2 far stem lights	Comply____
		2nd pulse: 5 far stem lights	Comply____
		3rd pulse: full arrow shape	Comply____
		4th pulse: blank display	Comply____
<b>4.5.</b>	<b>Electronics</b>		
4.5.1.	Location	Inside control box	Comply____
4.5.2.	Temperature limits	Operating temperature: -40 to 176°F (-40 to 80°C)	Comply____
4.5.3.	Flash rate	30 to 40 per minute, all display patterns	Comply____
4.5.4.		Positive drive circuit Positive power applied to lamps only when lit Negative is chassis grounded	Comply____
4.5.5.	Fuse protection	Dual PTC resettable fuses	Comply____
4.5.6.	Reverse-polarity protection	Protects the controller if battery cables are connected backwards (which sometimes happens after servicing)	Comply____
4.5.7.	Low-voltage disconnect	Low-voltage-disconnect circuit engages when battery voltage drops to 11.2Vdc, shutting down power to protect batteries from full discharge	Comply____
<b>5.</b>	<b>TRAILER</b>		
5.1.	Frame	All welded structural steel	Comply____
5.2.	Deck	Structural deck adds 350 lb. (159kg) to overall weight, creating a low center of gravity and improving stability when deployed or towed	Comply____
5.3.	Uprights	Two uprights supported display panel, reinforced by 23" structural steel gussets, all welded steel construction	Comply____
5.4.	Fenders	Round, full wheel coverage, bolted to trailer frame Material: 16ga steel	Comply____
5.5.	Tie-downs	One on each front corner of frame, one centered on rear frame	Comply____
5.6.	Finish		
5.6.1.	Prewash	Assemblies are run through a five-stage, high-pressure phosphate-wash prior to finish coat	Comply____
5.6.2.	Coating	Frame is coated with oven-baked, safety-orange powder-coat finish to ensure durability and corrosion protection See "Options and Optional Equipment" for color options	Comply____
5.6.3.	Salt spray resistance	1000 hours (ASTM Method B117) with <1/8" (<3.18mm) creep from scribe	Comply____
5.6.4.	QUV exposure	500 hours QUV-B (ASTM Method D4587-05) >75% gloss retention	Comply____

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### ARROWBOARD TRAILERS

5.7.	Axle assembly	Tubular, 2000 lb. (907.2kg) capacity, 5 on 4.5" B.C. idler hub	Comply____
5.8.	Springs	Double-eye leaf springs, 1200 lb. (544.3kg) capacity for each spring	Comply____
5.9.	Tires	ST205/75D15 steel-belted trailer tires, load rating B	Comply____
5.10.	Drawbar		
5.10.1.	Construction	Telescopes inside receiver sleeve welded under trailer frame. Removable for shipping and for added theft protection if needed. Secures with two 1/2-inch diameter bolts.	Comply____
5.10.2.	Material	3" (7.62cm) square steel tubing, 3/16" (0.476cm) wall	Comply____
5.10.3.	Jack	Top-wind swivel, 2000-lb. (907kg) capacity, steel footpad, 10" (25cm) total travel	Comply____
5.10.4.	Tow hitch	Standard 2-inch ball coupler tow-hitch, SAE Class 2, 3500-lb. (1588kg) capacity. Bolts to drawbar, removable and replaceable. See "Options and Optional Equipment" for tow-hitch options.	Comply____
5.10.5.	Tow chains	Two high-test proof coil chain assemblies, with "latching" S-hooks for towing. Chains attached to drawbar with quick connectors. Material diameter    0.406" (10.3mm) Working load limit    5400 lbs. (2450kg) Breaking force        16,200 lbs. (72kN)	Comply____ Comply____ Comply____
5.11.	Stabilizer legs		
5.11.1.	Description	Four stabilizers, mounted on corners of trailer frame, extend downward from front and rear of trailer at 30-degree angle, increasing length of footprint when deployed	Comply____
5.11.2.	Adjustment	Stabilizers slide up and down in sleeves, adjustable in 1" (2.54cm) increments, held in place by 3/8" (0.95cm) wire lock pin. A lanyard ties each pin to the trailer frame.	Comply____
5.11.3.	Material	Leg            Perforated 1 1/4" sq. steel tube, 12ga wall, zinc plated Footpad 4" x 6" (10 x 15cm) steel, zinc plated, all edges turned up	Comply____
5.12.	Wind resistance	Approx. 57mph (91km/h), calculated maximum sustained wind load before overturning, trailer in deployed position supported by four stabilizer legs and one drawbar jack with tires off the ground	Comply____
5.13.	Wiring		
5.13.1.	Description	Wiring to connect tow vehicle and trailer for trailer taillights is installed inside drawbar, with pigtails and connectors at both ends; no crimping required	Comply____
5.13.2.	Trailer plug	A sealed, molded, 4-square connector plugs into harness under trailer	Comply____
5.13.3.	Tow-vehicle plug	Two-piece assembly with 4-flat molded connector on harness plugs into tow vehicle Meets SAE J1239  See "Options and Optional Equipment" for tow-vehicle plug options	Comply____ Comply____
5.13.4.	Protection	All trailer wiring encased in UV protective loom, and attached with P-clamp riveted to trailer frame; no exposed wires	Comply____
5.14.	Taillights		

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**ARROWBOARD TRAILERS**

5.14.1. Type	Two round, sealed, combination stop, turn and taillights	Comply____
5.14.2. Location	Bottom of rear trailer frame	Comply____
5.14.3. Mounting	Light assembly is bolted to bracket and protected by steel shroud; bracket and shroud are welded to trailer frame	Comply____
5.15. License plate	License plate light holder is mounted below left taillight and lighted by the taillight	Comply____
5.16. Reflectors	Two amber reflectors, one on the side of each upright Two red reflectors on rear trailer frame See "Options and Optional Equipment" for reflective tape	Comply____ Comply____ Comply____
5.17. Winch assembly		
5.17.1. Function	Hand-operated winch raises and lowers display panel	Comply____
5.17.2. Capacity	1500 lbs. (680kg)	Comply____
5.17.3. Brake	Safety friction-brake prevents display panel from falling if operator loses grip on winch handle	Comply____
5.17.4. Cable	1/4" (6.35mm) diameter galvanized aircraft cable	Comply____
5.18. Slide-bar assembly		
5.18.1. Function	Locks display panel in place, ensuring panel cannot fall even if winch or cable were to fail. Slides up and down inside sleeve when winch is operated. Located off-center on upper crossbar between uprights. Sleeve is mounted to crossbar. Slide-bar is mounted to back of display panel.	Comply____ Comply____

**CERTIFICATE OF ORIGIN:**

The Contractor shall furnish a Certificate of Origin to RIDOT  
The Certificate shall be completed as follows:

Name of Purchaser: State of RI/Fleet Operations  
Address of Purchaser: One Capitol Hill Providence, RI 02908

**ALL BIDS SUBMITTED MUST BE IN DUPLICATE**

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5.18.2. Locking pin	One 3/8" (0.95cm) wire lock pin holds slide bar and display panel in deployed or travel position. A lanyard ties the pin to the trailer frame.	Comply_____
5.18.3. Material	Perforated 1 1/4" sq. steel tube, 12ga wall, zinc plated	Comply_____
5.18.4. Sight tube	A sight tube for aiming the arrow board in desired direction is mounted to the left upright	Comply_____
<b>6. POWER SYSTEM</b>		
6.1.	Description Electronics powered by batteries, which are charged automatically with integrated solar charging system	Comply_____
6.2. Battery box		
6.2.1. Function	Holds batteries and optional remote charger	Comply_____
6.2.2. Construction	Riveted all-steel construction, cover is bolted in place Removable panel on side of battery box provides access to optional remote charger All parts powder-coated before assembly	Comply_____ Comply_____
6.2.3. Mounting	Bolted to trailer frame behind deck	Comply_____
6.3. Batteries		
6.3.1. Type	Leak- and spill-proof valve-regulated lead acid (VRLA) See "Options and Optional Equipment" for battery options	Comply_____
6.3.2. Features	100% maintenance-free Sealed and spill-proof Faster recharge and greater freeze resistance than conventional batteries Smaller and lighter-weight than conventional batteries Contains 80% less lead when compared to conventional batteries	Comply_____ Comply_____ Comply_____ Comply_____ Comply_____
6.3.3. Quantity	Two	Comply_____
6.3.4. Voltage	12Vdc each	Comply_____
6.3.5. Weight	12.5 lbs. (6kg) each	Comply_____
6.3.6. Capacity	48 Ah total @ 12Vdc	Comply_____
6.4. Solar		
6.4.1. Panels	One high-efficiency multi-crystal photovoltaic solar module	Comply_____
6.4.2.	Location Above display panel, no shadowing effect on any trailer component. Articulated supports ensure solar array remains flat for continuous charging regardless of display panel position.	Comply_____
6.4.3. Power	50W	Comply_____

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See "Options and Optional Equipment" for solar options

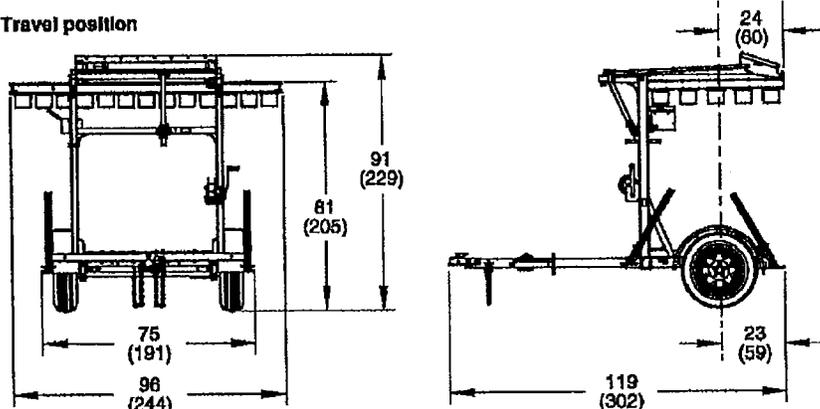
6.4.4.	Current	2.89A max. system current	Comply_____
		3.22A open short-circuit current	Comply_____
6.4.5.	Voltage	17.3Vdc max.	Comply_____
		21.6Vdc open short-circuit voltage	Comply_____
6.4.6.	Regulation	Solar panels regulated by arrow board controller	Comply_____
6.4.7.	Security	Solar panel bolted to mounting frame with security screws and special security nut	Comply_____

**7. DIMENSIONS & WEIGHT**

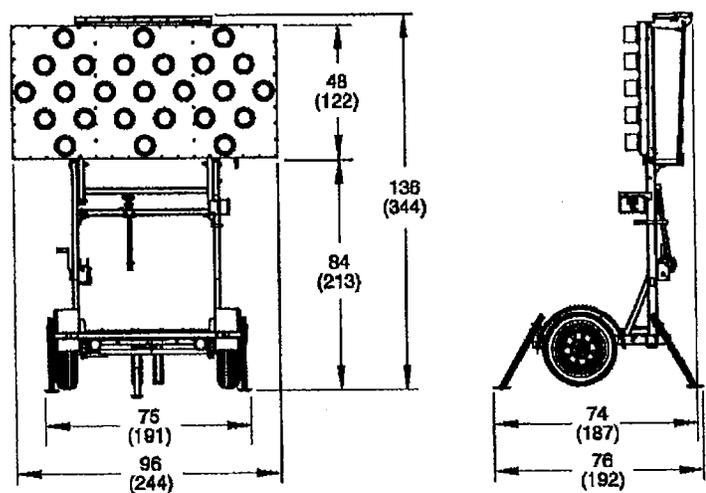
7.1. Dimensions

*Inches  
(cm)*

**Travel position**



**Deployed**



Comply\_\_\_\_\_

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7.2. Weight Approx. 1250 lbs. (567kg) Comply\_\_\_\_

## 8. OPTIONS AND OPTIONAL EQUIPMENT

### 8.1. Tow hitch

8.1.1. Combo hitch Combo-hitch for 2-inch ball and 2 1/2-inch ID x 1-inch cross-section pintle hook Comply\_\_\_\_

8.1.2. Lunette ring Options:  
Standard ring for 2 1/2-inch ID x 1-inch cross-section pintle hook Comply\_\_\_\_  
Heavy-duty ring for 3-inch ID x 1 5/8-inch cross-section pintle hook Comply\_\_\_\_

8.2. **Trailer plug** a variety of adapters are available to allow the standard connector to plug into nearly any tow vehicle receptacle. Contact factory for details. Comply\_\_\_\_

8.3. **Stabilizer jacks** Four swivel jacks replace stabilizer legs, mounted on corners of trailer frame Comply\_\_\_\_

### 8.4. Power

8.4.1. **Additional batteries** For geographic locations with less solar charging potential or colder weather, and for applications that require year-round charging, add batteries for greater capacity Comply\_\_\_\_

Options One additional VRLA 12Vdc battery in standard battery box, 24Ah additional capacity Comply\_\_\_\_

Two additional VRLA 12Vdc batteries in large battery box, 48Ah additional capacity Comply\_\_\_\_

Three additional VRLA 12Vdc batteries in large battery box, 72Ah additional capacity Comply\_\_\_\_

**Large flat battery box** Large, flat battery box is required when the arrow board has more than three batteries; replaces standard battery box Comply\_\_\_\_

Centered over trailer axle, bolted to trailer frame Comply\_\_\_\_

Riveted all-steel construction, cover is bolted in place Comply\_\_\_\_

All parts powder-coated before assembly Comply\_\_\_\_

8.4.2. **Deep-cycle batteries** Replace W|ECO batteries with deep-cycle batteries. Requires replacing standard battery box with larger, deck-mounted box. Comply\_\_\_\_

Options Two Group 24 deep-cycle 6Vdc batteries, wired in parallel and series for a 12-volt system, 315Ah total capacity Comply\_\_\_\_

Four Group 24 deep-cycle 6Vdc batteries, wired in parallel and series for a 12-volt system, 630Ah total capacity Comply\_\_\_\_

Weight Approx. 60 lbs. (26kg) each Comply\_\_\_\_

Large battery Replaces standard battery box Comply\_\_\_\_

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	box	Centered over trailer axle, bolted to trailer frame	Comply____
		Riveted all-steel construction	Comply____
		All parts powder-coated before assembly	Comply____
		Divider panel inside box separates batteries from charger	Comply____
		Louvers provide ventilation	Comply____
		Latches keep cover closed and can accept user-supplied padlocks	Comply____
8.4.3.		Remote charger Function Plugs into a standard commercial power source to recharge batteries if battery voltage drops due to lack of sun for automated solar charging system	Comply____
	Type	12-volt battery charger	Comply____
	Location	Inside battery box	Comply____
	Smart charger	Three-stage smart-charging circuit keeps batteries fully charged, and will not overcharge batteries, which helps to ensure the longest possible battery life	Comply____
	Output capacity	2A	Comply____
	Output voltage	14.4Vdc nominal	Comply____
		13.0Vdc nominal float voltage	Comply____
	Input voltage	90 to 132Vac, standard two-prong plug	Comply____
	Frequency	50 to 60 Hz	Comply____
8.4.4.	Solar	For geographic locations with smaller solar charging potential, and for applications that require a year-round charging system, additional solar power is available	Comply____
		Options include 85W and 100W solar arrays; contact factory for details	Comply____
8.5.	Reflective tape	Reflective red-and-white conspicuity tape across rear trailer frame for increased visibility	Comply____
8.6.	Finish color	Specify power-coat color and, if applicable, color scheme	Comply____
8.7.	Manual dimming	Substitute control box with manual dimming control for standard control box	Comply____
8.8.	Rear lights	Replace standard rear lamps with PAR 36 LED lamps, 4.5" (11.5cm) dia.	Comply____

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## EXHIBIT A: DISPLAY PATTERNS

### Flashing patterns

Pulse 1	Pulse 2	
		Flashing arrow, left or right
		Flashing double arrow
		Flashing four-corner warning
		Flashing caution-bar warning

### Sequential patterns

Pulse 1	Pulse 2	Pulse 3	Pulse 4
			
			
			
			

*\* Available only on 25-light arrow board models*

Sequencing arrow, left or right

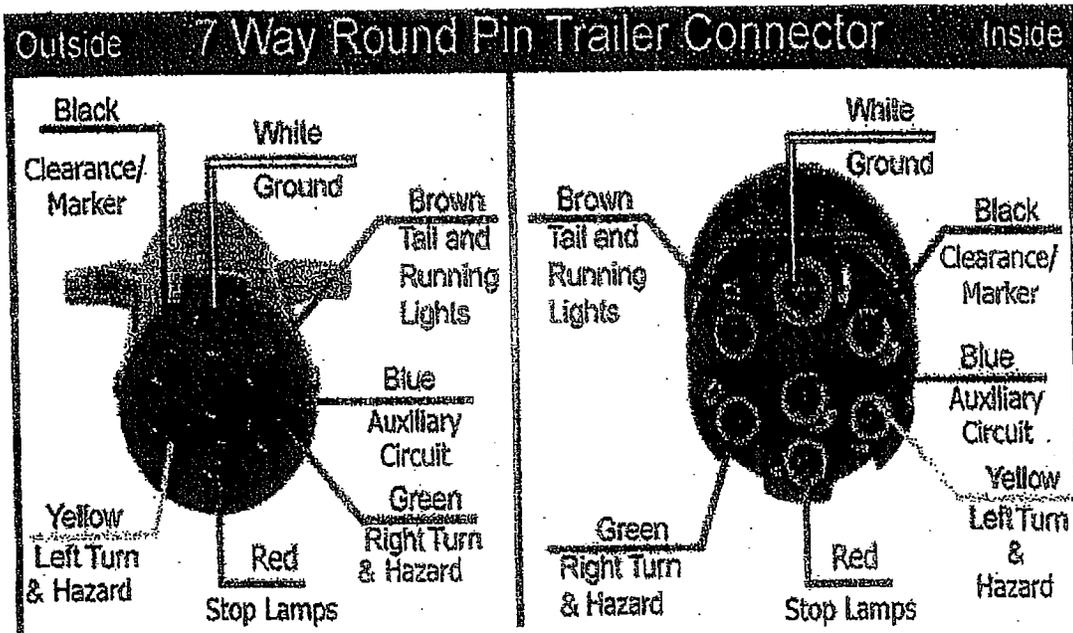
Sequencing stem arrow, left or right\* Sequencing

chevron arrows, left or right\*

Alternating diamonds\*

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RIDOT  
STANDARD TRAILER  
WIRING DIAGRAM



PLASTIC GROTE PLUG

#82-2140

FITS PLASTIC GROTE SOCKET

#82-2145

**Contract Terms and Conditions**

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## Terms and Conditions

### BID STANDARD TERMS AND CONDITIONS

### TERMS AND CONDITIONS FOR THIS BID

#### RIVIP INFO - BID SUBMISSION REQUIREMENTS

It is the Vendor's responsibility to check and download any and all addenda from the RIVIP. This offer may not be considered unless a signed RIVIP generated Bidder Certification Cover Form is attached and the Unit Price column is completed. The signed Certification Cover Form must be attached to the front of the offer. When delivering offers in person to One Capitol Hill, vendors are advised to allow at least one hour additional time for clearance through security checkpoints.

#### MAILING ADDRESS FOR BID PROPOSALS ISSUED BY THE STATE OF RHODE ISLAND, DIVISION OF PURCHASES

All Bid Proposals must be submitted by mail or hand delivered to:

- State of Rhode Island
- Department of Administration
- Division of Purchases, Second floor
- One Capitol Hill
- Providence, RI 02908-5855

#### DIVESTITURE OF INVESTMENTS IN IRAN REQUIREMENT:

**No vendor engaged in investment activities in Iran as described in R.I. Gen. Laws §37-2.5-2(b) may submit a bid proposal to, or renew a contract with, the Division of Purchases. Each vendor submitting a bid proposal or entering into a renewal of a contract is required to certify that the vendor does not appear on the list maintained by the General Treasurer pursuant to R.I. Gen. Laws §37-2.5-3.**

#### PURCHASE AGREEMENT BID

**BIDDING** (a) A single price shall be quoted for each item against which a proposal is submitted. This price will be the maximum in effect during the agreement period. Any price decline at the manufacturer's level shall be reflected in a reduction of the agreement price to the State. (b) Quantities, if any, are estimated only. The agreement shall cover the actual quantities ordered during the period. Deliveries will be billed at the single, firm, awarded unit price quoted regardless of the quantities ordered. (c) Bid price is net F.O.B. destination and shall include inside delivery at no extra cost. (d) Bids for single items and/or a small percentage of total items listed, may, at the State's sole option, be rejected as being non-responsive to the intent of this request. **ORDERING** (a) The User Agency(s) will submit individual orders for the various items and various quantities as may be required during the agreement period. (b) Exception - Regardless of any agreement resulting from this bid, the State reserves the right to solicit prices separately for any extra large requirements for delivery to specific destinations.

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State of Rhode Island  
Department of Administration  
Division of Purchases, 2nd Floor  
One Capitol Hill  
Providence, RI 02908