

OVERHEIGHT WARNING SOLUTIONS

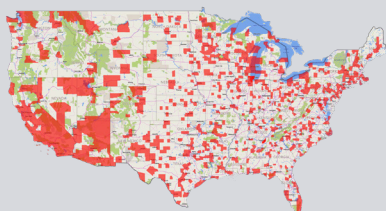




As an industry-leading innovator, TAPCO manufactures, services and distributes a wide portfolio of traffic and parking safety solutions designed to increase safe travels for all. Since 1956, we have set the standard for delivering reliable, cutting-edge traffic safety enhancements. From our world-renowned line of LED-enhanced BlinkerSign® solutions to our pedestrian crossing products and early detection warning systems, safety is at the heart of all TAPCO innovations.

Generations of Expertise

Working alongside traffic professionals for more than 60 years gives our team an exclusive perspective on the past, present and future needs of the traffic and parking safety industry.



A Nationwide Reach

With successful solution installations throughout all 50 states, we understand the safety concerns communities face across the nation.

Innovative, Smart City Technology

Our mission is to continue to lead the industry with an innovative, customer-focused approach that evolves with the technological demands of our customers.



Award-Winning Mindset

As a family-owned company, we take pride in establishing and maintaining our innovative culture.

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Overheight Collisions: One Is Too Many

Every day, overheight vehicles collide with low-clearance structures, such as bridges and underpasses. In fact, an Alaska DOT survey of 29 U.S. states found that 18 consider overheight collisions a significant problem. Some low-clearance structures even average over one collision a month.

Common Overheight Crash Factors



Unfamiliar Routes

Sometimes, drivers following unfamiliar routes encounter low-clearance structures and do not realize their vehicle is overheight in time. Or, they do realize it and must complete a dangerous wrong-way turnaround.



Varying Vehicle Height

Because truck heights may vary based on load weight, inexperienced drivers may be unaware of the fluctuating height of their load. With the false belief their truck will pass under structures, drivers fail to reroute, resulting in preventable collisions.



Distracted, Tired Drivers

Attention is easily diverted in moments of fatigue and extreme stress. Static signs may not sufficiently capture drivers' attention, so by the time they become aware of an impending collision, it may already be too late.

SYSTEM OVERVIEW

OVERHEIGHT WARNING SOLUTION

TAPCO Overheight Warning Systems provide transportation departments with their best chance of avoiding dangerous low-clearance structure collisions.

These collisions cost an average of \$200,000 to \$300,00, according to a Texas Department of Transportation study.

Ideal for low bridges, tunnels, weigh stations, underpasses, parking structures, airports and manufacturing facilities, the TAPCO Overheight Warning System reduces low-clearance hazards by:

- Detecting vehicles that won't clear the structure ahead
- Notifying drivers of height restrictions, commanding situational awareness
- Directing drivers to a safe, alternate route

REDUCES IMPACTS

- Proven to reduce the number of accidents caused by overheight vehicles
- Eliminates unplanned costs associated with overheight incidents

SYSTEM FLEXIBILITY

- Customized to fit any road configuration
- Solar power capability allows for installation in any environment



SYSTEM OVERVIEW

OVERHEIGHT WARNING SOLUTION

1 ACTIVATION SENSORS

Dual-beam overheight sensors mounted on both sides of the road transmit infrared beams to detect overheight vehicles.

2 BLINKERBEAM®

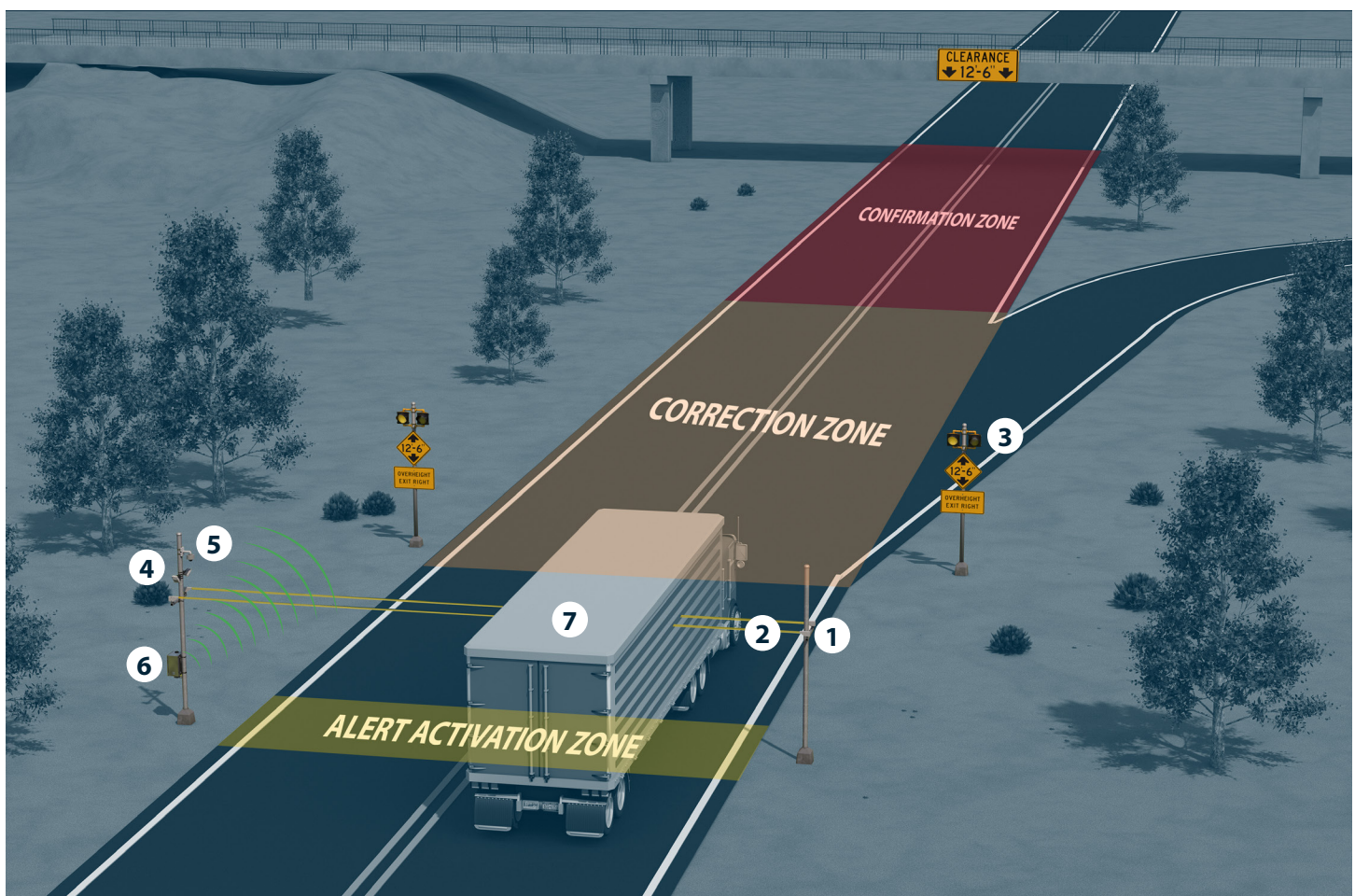
When an overheight vehicle breaks the beams, a wireless signal activates the warning alerts.

3 WARNING ALERTS

BlinkerSign®, BlinkerBeacon™ and audible alerts command overheight drivers' attention and notify them of the potential collision ahead.

4 LED ILLUMINATORS

Illuminators activate with the system at night to increase overheight vehicle visibility for image capture.



5 HIGH-DEFINITION CAMERAS

Cameras capture images of overheight vehicles after detection.

6 BLINKLINK®

The software sends real-time verification of system activation, enabling remote system monitoring and actionable data collection.

7 CONNECTED VEHICLE INTERFACE

TAPCO's Connected Vehicle Interface sends connected motorists in-vehicle alerts, informing them of the low-clearance structure ahead.

SYSTEM CONFIGURATION

OVERHEIGHT DRIVER SOLUTIONS

Overheight Warning Systems feature a three-zone configuration to optimize system accuracy and effectiveness.

ALERT ACTIVATION ZONE

DETECT

Instantly detects any overheight vehicle

ALERT

Immediately flashes LED-enhanced warning alerts to capture the driver's attention



CORRECTION ZONE

CORRECT

Allows for driver self-correction and captures vehicle information



CONFIRMATION ZONE

CONFIRM

Verifies that the vehicle has proceeded in the direction of the low-clearance structure

NOTIFY

Sends notification alerts through BlinkLink® to local authorities

WARN

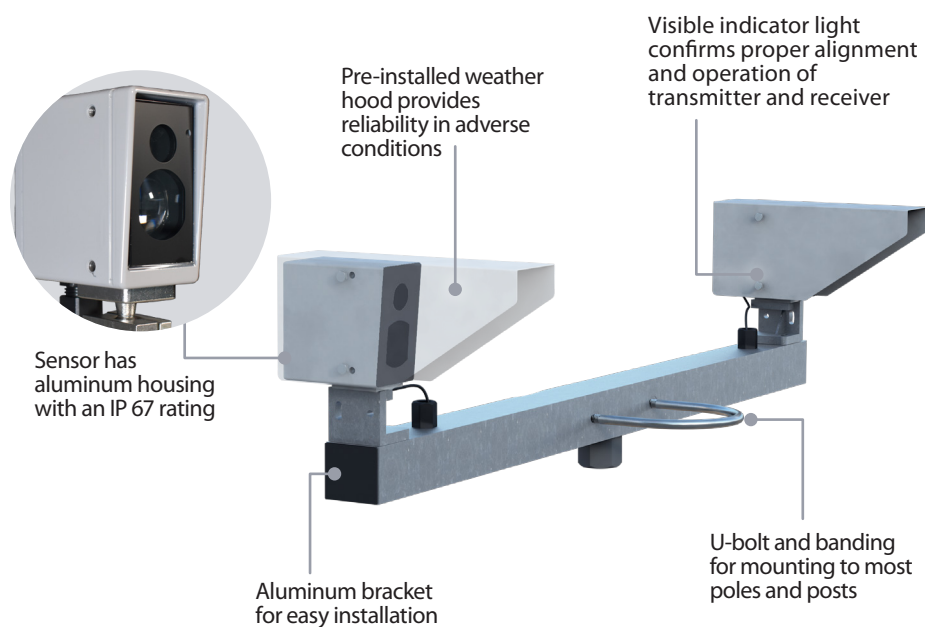
Integrates with Traffic Management Center software to enable activation of dynamic overhead message boards for communication to other drivers



SYSTEM ACTIVATION

DUAL-BEAM OVERHEIGHT SENSORS

Infrared sensors are mounted on both sides of the road in advance of the low-clearance structure, transmitting infrared beams over the road. When an overheight vehicle breaks the infrared beams, it immediately activates the system's warning devices.



RELIABLE DETECTION

- Detects vehicles traveling at low or high speeds
- Determines traffic direction at time of activation

CUSTOM INSTALLATION

- Sensor height tailored to low-clearance structure
- Can be installed up to 150 feet apart
- Single-beam available in select applications



WIRELESS COMMUNICATION

BLINKERBEAM®

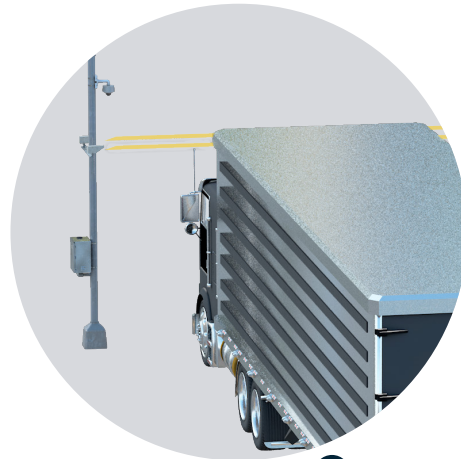
BlinkerBeam® wireless radios communicate system activation to all TAPCO warning alerts.

Placed at the detection or activation location, a transmitter radio sends wireless signals upon system activation to receiver radios located inside the control cabinet of each warning alert, triggering the alert to flash.

- Easy-to-read, backlit LCD display
- Intuitive joystick for in-field control
- Menu-driven diagnostics for quick set-up and configuration
- Three selectable power levels, up to one watt, to increase signal distance
- Range of up to 900 feet; works with multiple antenna options to extend distance
- Utilizes 900 MHz frequency-hopping spread spectrum



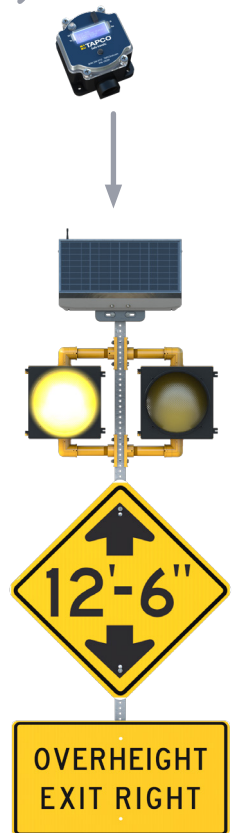
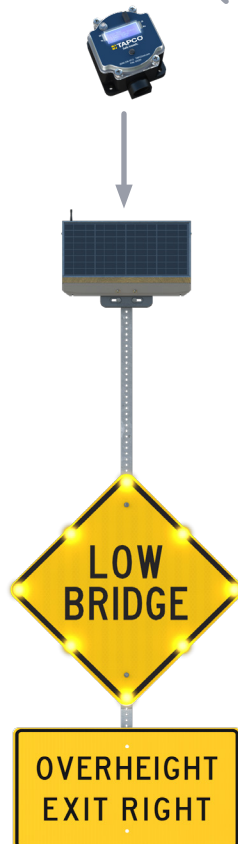
**BLINKERBEAM®
WIRELESS RADIO**



1 SYSTEM ACTIVATION



**2 Activated
BLINKERBEAM®
TRANSMITTER RADIO
sends wireless
signal to receiver(s)**

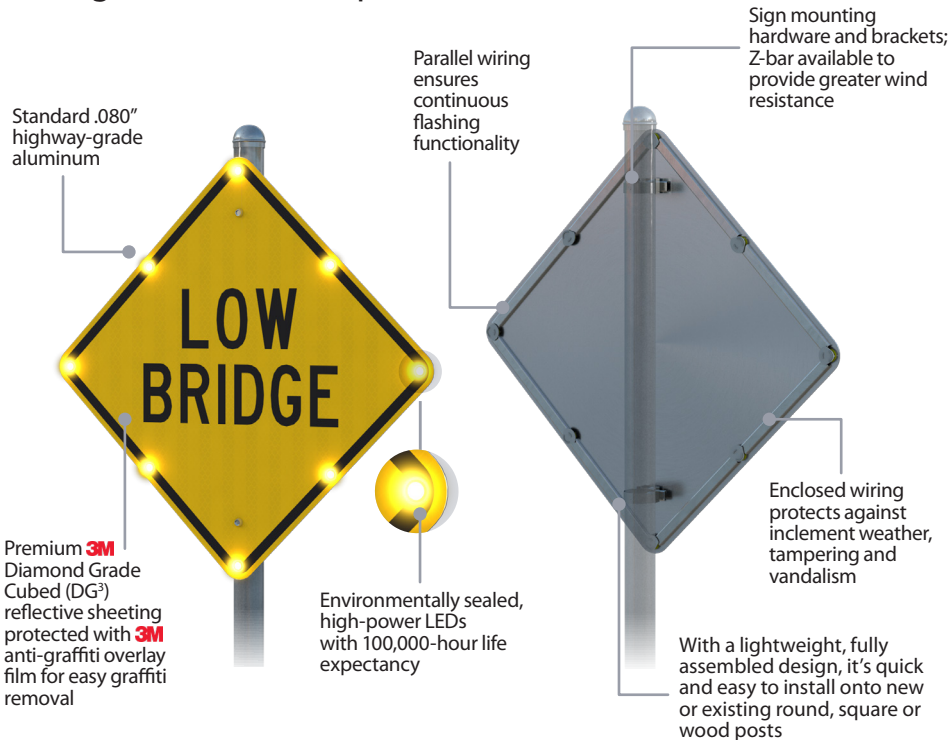


**3 BLINKERBEAM®
RECEIVER RADIO(S)
activate LED-enhanced
warning alerts**

LED-ENHANCED WARNING ALERTS

BLINKERSIGN® FLASHING LED SIGNS

BlinkerSign® Flashing LED-Enhanced Signs are edge-lit signs engineered to capture drivers' attention and decrease the number of overheight collisions. Sign legends can be designed to customer preference.



MUTCD COMPLIANT

- Each BlinkerSign® is MUTCD compliant and flashes in accordance with MUTCD section 2A.07

HIGH QUALITY, MADE IN THE USA

- Manufactured in Brown Deer, Wisconsin, each BlinkerSign® is engineered to withstand the harshest environmental conditions

VARIABLE DIMMING

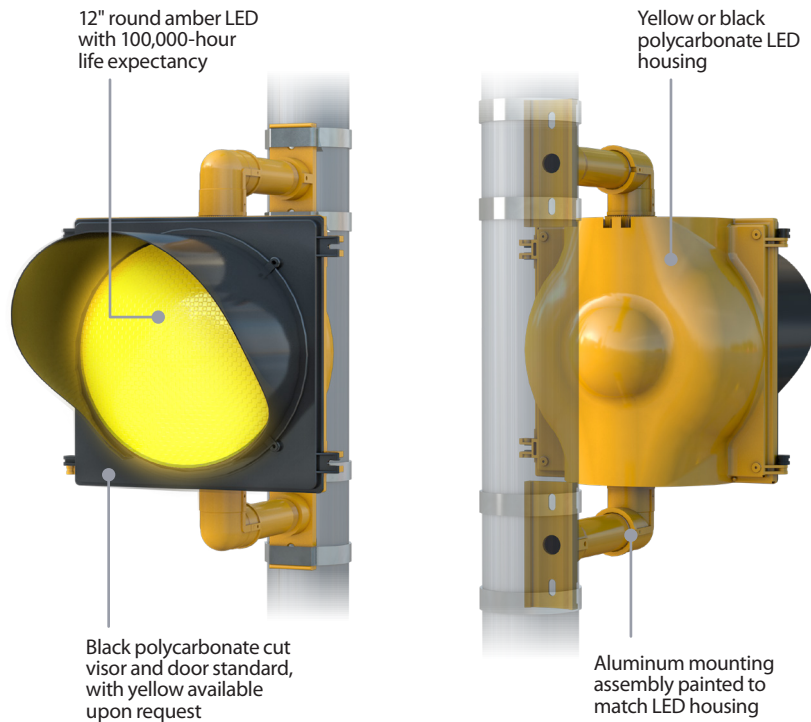
- LEDs automatically dim based on ambient light, maintaining optimal LED output and extending battery life



LED-ENHANCED WARNING ALERTS

BLINKERBEACON™ FLASHING LED BEACONS

BlinkerBeacon™ Flashing LED Beacons provide drivers with real-time warning when their vehicle won't clear the structure ahead.



MUTCD COMPLIANT

- Each BlinkerBeacon™ can flash in accordance with MUTCD section 4L.03

VARIABLE DIMMING

- LEDs automatically dim based on ambient light, maintaining optimal LED output and extending battery life

AVAILABLE OPTIONS

- 8" or 12" LED modules
- ITE-compliant 12V power options
- Cut visor standard, with a tunnel visor available



CRITICAL COMPONENTS

ILLUMINATOR AND CAMERA

Upon overheight vehicle detection, both the illuminator and camera activate to ensure the highest quality visual verification of the overheight event.



HIGH-EFFICIENCY LED ILLUMINATORS

High-performance, white visible light improves nighttime camera performance and enhances vehicle visibility for critical feature identification.



HIGH-DEFINITION CAMERAS

High-speed, multi-featured camera captures high-resolution, full-color imagery, confirming overheight event details.

SMART CITY SOFTWARE

BLINKLINK® POWERED BY TAPCO

INTELLIGENT WARNING SYSTEM MONITORING FOR SMART CITY INFRASTRUCTURE

BlinkLink®, powered by TAPCO, is an easy-to-use, cloud-based event management software accessible from any web-enabled device.

Configurable to meet the needs of any agency, BlinkLink® enables authorized personnel to remotely monitor and manage overheight warning systems, collect real-time data and receive voice, email and SMS notifications.

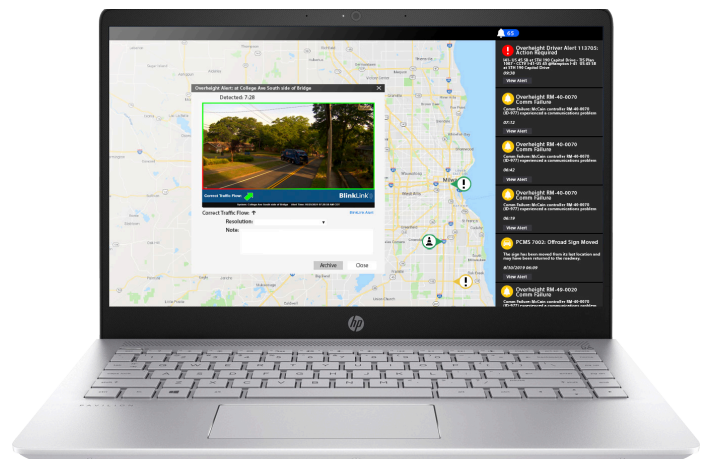
- Integrate with local Traffic Management Center's Advanced Traffic Management System software for additional upstream routing and logical commands
- Focus on high-priority events by analyzing high-resolution images, event video and local system streaming
- Remotely review system health and diagnostics for optimal and reliable operation
- Minimize arterial system overhauls and get a budget-friendly adoption with scalable system architecture



Analyze system activation trends and gain insight into problem areas



Warn drivers on system-integrated overhead dynamic message boards



Convert alert images and data to display in standard API

SMART CITY SOFTWARE

BLINKLINK® POWERED BY TAPCO

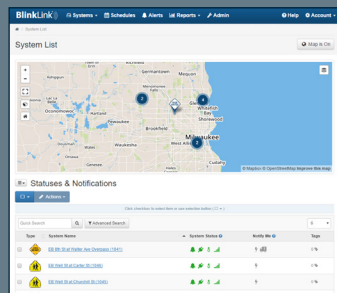
BlinkLink® provides data to finetune deployments, allocate resources and implement best practices.

NOTIFY



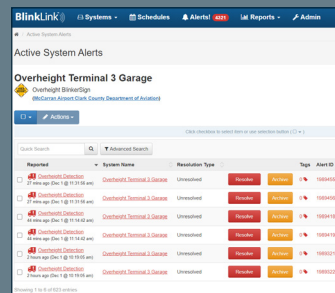
Keep your whole team informed when an overheight vehicle is detected by receiving alert notifications.

MONITOR



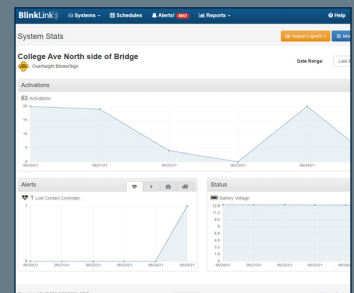
Easily program and view the status of every TAPCO Overheight Warning System with the interactive map view and gather historical data.

MANAGE



Eliminate time-consuming site visits by remotely managing each system anywhere, on any web-enabled device.

REPORT



Configure reporting parameters to develop a holistic view of your system's activity and facilitate the implementation of best practices based on actionable data.



POWER AND CONTROL OPTIONS

FLEX POWER

Flex Power options provide flexible system configuration for multiple applications and power requirements while allowing easy access to control cabinets. Any TAPCO system can be designed to fit your power or environmental need.

AC POWER OPTIONS



120VAC



STREETLIGHT POWER

Tap into existing infrastructure to power TAPCO systems.

POPULAR SOLAR PACKAGES

TAPCO offers many solar packages to choose from. Some of the most popular are listed below, with other options available upon request.



**26-watt solar panel
27Ah battery capacity**

* Compatible with warning alerts only.
Sensors require additional power for continuous operation.



**30-watt solar panel
35Ah battery capacity**

* Compatible with warning alerts only.
Sensors require additional power for continuous operation.



**55-watt solar panel
50Ah battery capacity**

POWER AND CONTROL OPTIONS

FLEX POWER



**110-watt solar panel
100Ah battery capacity**

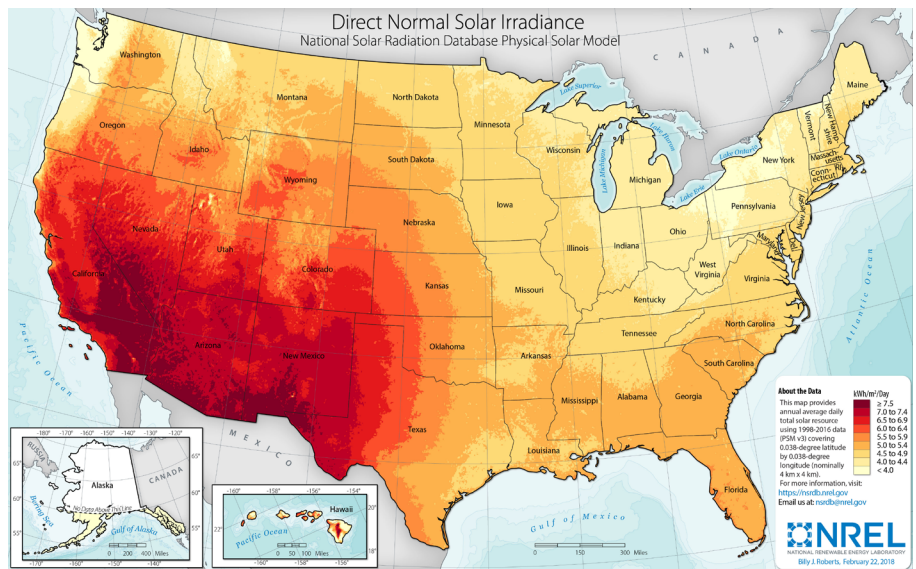


**130-watt solar panel
100Ah battery capacity**

SOLAR REQUIREMENTS

Critical solar factors, such as direct normal irradiance and global horizontal irradiance, vary depending on system location. To ensure the right power configuration, we conduct solar calculations to meet desired system power needs.

Call us today for a free solar consultation! **(800) 236-0112**



POWER AND CONTROL OPTIONS

SELF-CONTAINED SOLAR CABINETS

Uniquely designed using durable polycarbonate, TAPCO's 13-Watt Self-Contained Solar Cabinet is a lightweight option that can power warning alerts.



INCREASED AUTONOMY

- Up to 28Ah of battery power delivers autonomy for up to 30 days

COMPATIBLE

- Supports BlinkerSign® and BlinkerBeacon™ warning alerts without reducing LED and system performance

EASY TO INSTALL

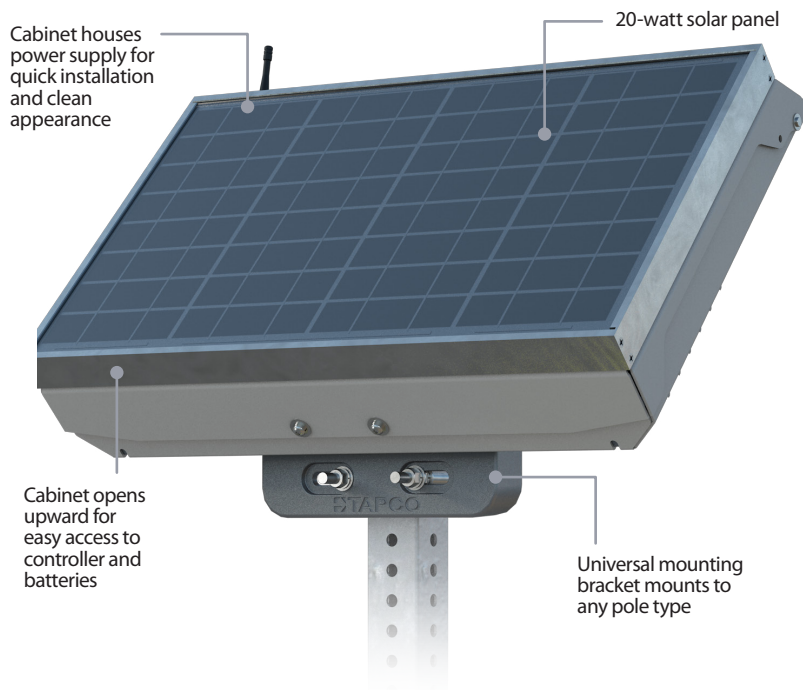
- Weighs one-third as much as traditional cabinets for one-person installation



POWER AND CONTROL OPTIONS

SELF-CONTAINED SOLAR CABINETS

TAPCO's 20-Watt Self-Contained Solar Cabinet provides 44Ah of battery power for warning alerts in a discreet, powder-coated aluminum housing.



INCREASED VOLTAGE

- 12-volt system is engineered to power a larger assortment of warning alert options

EASE OF ACCESS

- Cabinet door opens up for easy access and serviceability

COMPACT DESIGN

- Easily attaches onto new or existing posts and poles



ENHANCEMENTS

CONNECTED VEHICLE INTERFACE

Add another layer of safety to your overheight solution with the Connected Vehicle Interface (CVI), an Ethernet interface for TAPCO Overheight Warning Systems to connect with and communicate information to connected vehicle infrastructure, such as roadside units (RSU).



IN-VEHICLE ALERTS

- Upon system activation, connected vehicles receive notifications through dashboard displays and other onboard devices

NETWORK AGNOSTIC

- Transmits data via Dedicated Short-Range Communication (DSRC) or cellular RSUs

ATMS INTEGRATION

- Connects with Advanced Traffic Management Systems to provide traffic managers with actionable system data

MODULAR

- Can be added to existing or new TAPCO Overheight Warning Systems



ENHANCEMENTS



DYNAMIC MESSAGE BOARD

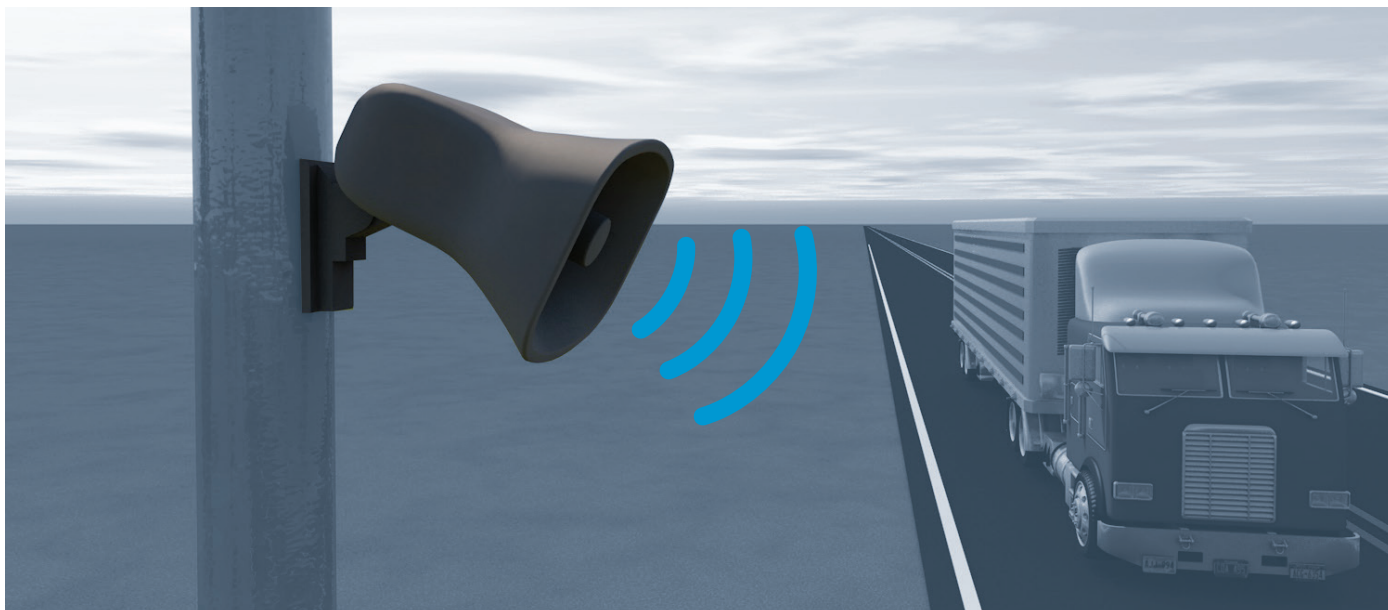
Inform other drivers of an overheight event with an easy-to-change message board.



BLANK-OUT BOARD

Inform other drivers of an overheight event with a message board featuring a fixed warning that can be activated when necessary.

ENHANCEMENTS



AUDIBLE SIRENS

An audible alert at the time of overheight vehicle detection provides additional warning for overheight drivers.



LICENSE PLATE RECOGNITION

License plate recognition technology identifies drivers who strike low-clearance structures and flee the scene.

PREVENTATIVE MAINTENANCE

SERVICE CONTRACTS

Preventative maintenance service contracts provide customers nationwide with the peace of mind that their overheight solutions will perform optimally with the highest system uptime. From routine maintenance to complex diagnostic support, every contract is customized based on your labor and budgetary needs.

STANDARD SERVICES AND BENEFITS:

- Scheduled visits to perform maintenance, including:
 - Mechanical inspection and validation
 - Electrical inspection and validation
 - Detection / activation inspection and validation
 - Full system testing and recertification
- Complete records documentation after every visit
- System warranty extension

Want to learn more? Call us today to customize your contract! **(800) 236-0112**

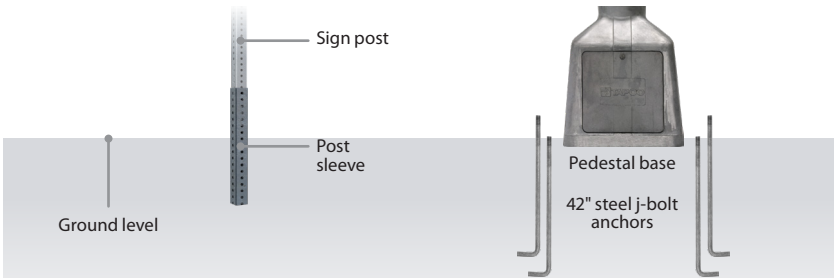
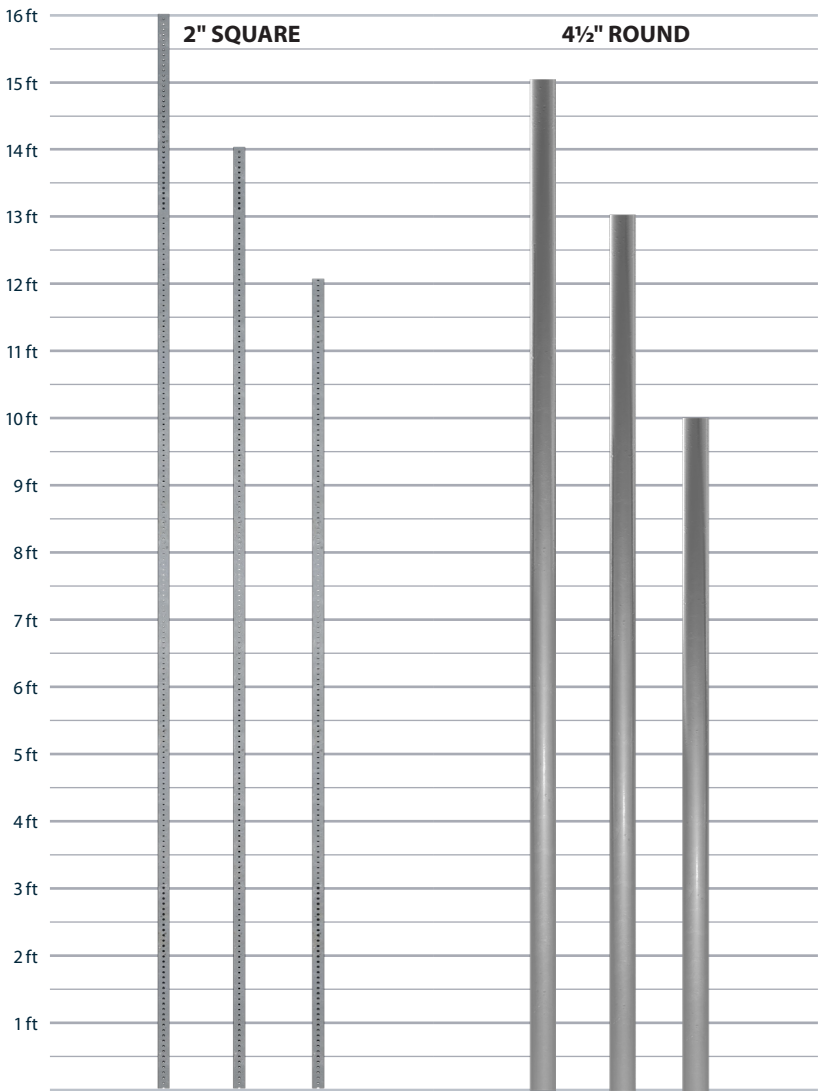


COMMON POLE KITS

POLES & BREAKAWAY ANCHORS

COMMON POLE KITS

Pole configuration plays a crucial role in the design of your Overheight Warning System. Below are some of our most popular options.



2" x 2" Square Post Kits

- Accommodates warning alerts only
- **Include:** post height of choice, sleeve and assembly hardware
- Sign brackets and anchor sold separately

HEIGHT	PART NUMBER
12 ft	114401K
14 ft	138313
16 ft	138314



4 1/2" OD Round Pole Kits

- Accommodates warning alerts and sensors
- **Include:** pole height of choice, pedestal base, 42" steel j-bolt anchors and assembly hardware
- 18" steel j-bolt anchors available
- Sign brackets sold separately

HEIGHT	PART NUMBER
10 ft	107889
13 ft	101919
15 ft	101920



Additional poles, anchors and mounting options are available dependent upon weight loads, including 2 3/8", 2 7/8" and wood posts.

TAPCO SOLUTIONS

INTELLIGENT WARNING SYSTEMS

TAPCO designs comprehensive traffic solutions that improve mobility and safety for all road users.



PEDESTRIAN CROSSWALK



WRONG-WAY ALERT



SPEED AWARENESS



SCHOOL ZONE WARNING



CURVE WARNING



INTERSECTION CONFLICT WARNING



HIGH WATER WARNING



EMERGENCY VEHICLE WARNING

SAVE TIME AND MONEY WITH OMNIA PARTNERS AND TAPCO

Did you know we offer an exclusive discount through our competitively solicited OMNIA Partners, Public Sector contract? Participating government and non-profit agencies that purchase direct from the contract receive the lowest available price on our entire product portfolio.



(800) 236-0112

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