

# SPORTS AND STADIUM LIGHTING

Solutions for Amateur and Professional Athletic Venues



**valmont**   
STRUCTURES



# ENGINEERED SUPPORT STRUCTURES



**Now a global network of 50 facilities spanning 15 countries, Valmont Industries consists of Engineered Support Structures, Utility Support Structures, Coatings, Energy and Mining and Irrigation.**

Valmont began in 1946 with the \$5,000 investment and entrepreneurial vision of Robert B. Daugherty after his return home from the war. With the newfound determination to build his "American Dream," Daugherty worked for over a decade with engineers to develop the most reliable agricultural irrigation complete with electric drive systems. By 1959, Valmont's refinement of the manufacturing process for steel pipe and tubing led to growth in other markets requiring durable structures.

Today, our relentless commitment to anticipating new processes, building more plants, and providing complete in-house services for all project stages, has made Valmont Industries the industry-recognized brand for quality and cost effectiveness.

As a respected leader, our trusted engineers are on a variety of national committees designed to implement and govern industry regulations, raising any standards as high as our own.





# unparalleled resources

Incorporating sustainable materials and forward-thinking business practices



A man with a full white beard and glasses is working on a large, rusted metal structure. He is wearing a brown cap with a black and white pattern. He is holding a yellow measuring tape against the metal. The background is a blurred industrial setting with metal beams and a blue and white cloth hanging on a wall.

# delivering diverse resources

We provide the highest level of service

# THE VALMONT PROMISE



**Valmont's structures touch millions of lives around the world, day and night. From stop lights to street lamps, communication towers to utility poles, we provide a sense of safety and connectedness people depend on.**

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Our extensive in-house capabilities, combined with our complete line of engineering and inspection services, allow for superior quality control and the best lead times in the industry.

Valmont demonstrates responsibility at every stage of the process. Our recycling capabilities ensure we reuse 100% of steel, aluminum, and composite materials, as well as the zinc used during galvanizing.



# ENGINEERING CAPABILITIES



**For more than 40 years, Valmont has offered steel and aluminum structures to meet the most demanding sports lighting requirements. Our engineering capabilities are what set us apart from the competition.**

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We have built our reputation on a company-wide commitment to customer service, innovation and cost control. Most importantly, we put our experience, understanding of specifications and standards, and reputation for excellence into everything we design and manufacture. Our customers take comfort in knowing that each structural project is carefully analyzed by our engineers who are certified to stamp drawings anywhere in the United States.

A full-page background image showing a welder in a protective suit and mask working inside a large, dark industrial structure. The welder is positioned in the center, viewed through an octagonal opening. Bright sparks are visible from the welding process. The structure's interior is dark, with light reflecting off the metallic surfaces.

using the best materials wisely

Valmont creates structures for tomorrow's world



## SPORTS AND STADIUM LIGHTING DESIGNS

# ENGINEERED FOR DESIGN PERFORMANCE



**Engineered for design performance, Valmont's sport lighting designs employ a variety of components to configure reliable structures meeting the needs of today's sports and stadium venue installations.**

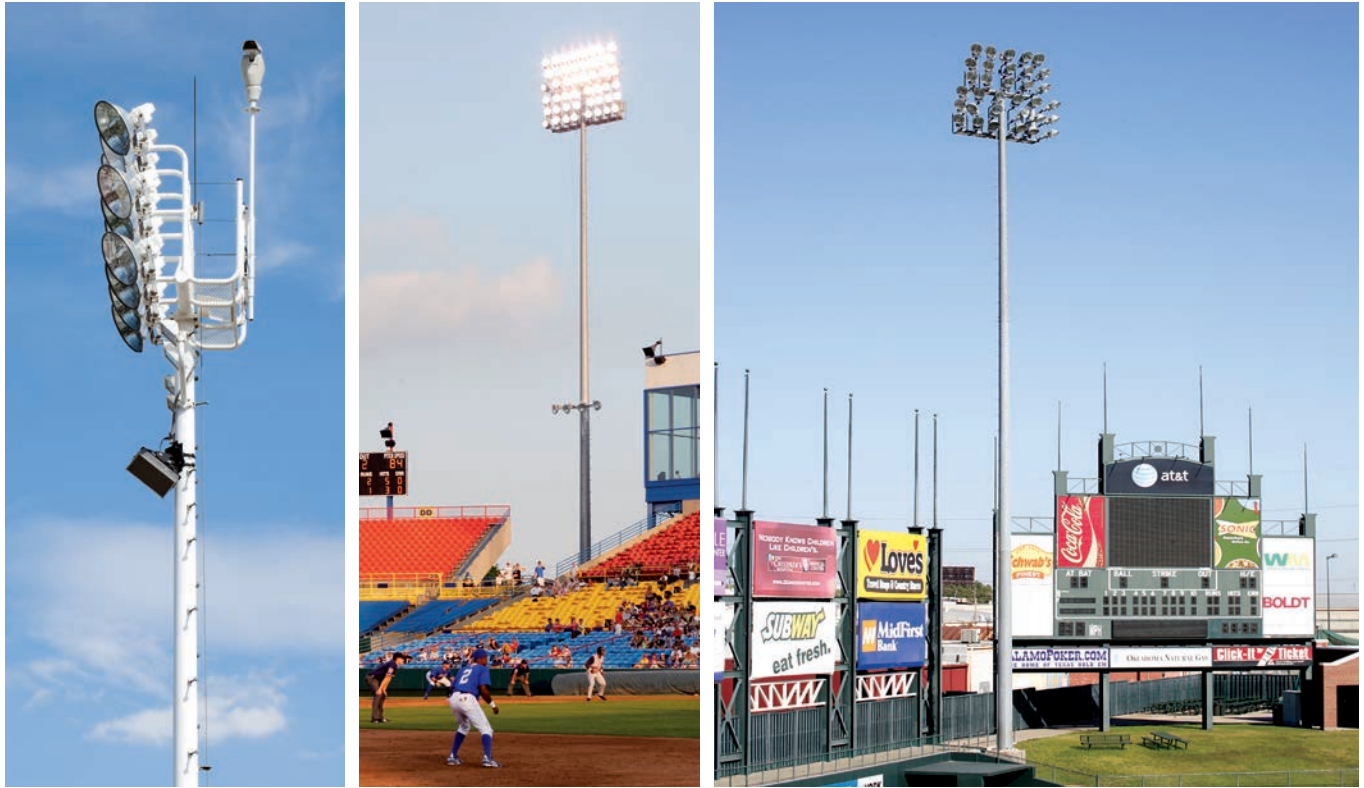
Valmont's unobtrusive tubular cage and crossarm sports lighting designs are a global industry standard. Architects, engineers and contractors from around the world have depended on our standard and custom designs for decades.

Our sports lighting designs are:

- Up to 250 feet in height.
- Offered with a traditional anchor base design or optional embedded design.
- Available pre-wired for cages and crossarms.
- Available with safety cables and steps.
- Galvanized or painted finish. For added durability, choose finish paint over galvanizing.



# SUPPORTING SPORTS LIGHTING LOADS



**For supporting sports lighting loads, Valmont's tapered steel poles provide unparalleled safety from decades of technical design and manufacturing expertise.**

A standard of safety must be upheld given the scale of stadium lighting. Valmont is industry-recognized for providing this guarantee of safety throughout the life of the venue.

Innovations in round and multi-sided shafts, such as a low-drag, internally wired fixture platform, make Valmont a top choice for customers needing sports lighting poles. Our engineers consider lighting load, pole weight, variable wind speeds, local soil conditions and a host of other relevant variables which less experienced suppliers may overlook.



## SPORTS AND STADIUM LIGHTING DESIGNS

# IN-HOUSE CUSTOM-DESIGN INGENUITY



**With a solid foundation of in-house, engineering excellence, Valmont can design and produce structures, which address design challenges in any sports and stadium venue.**

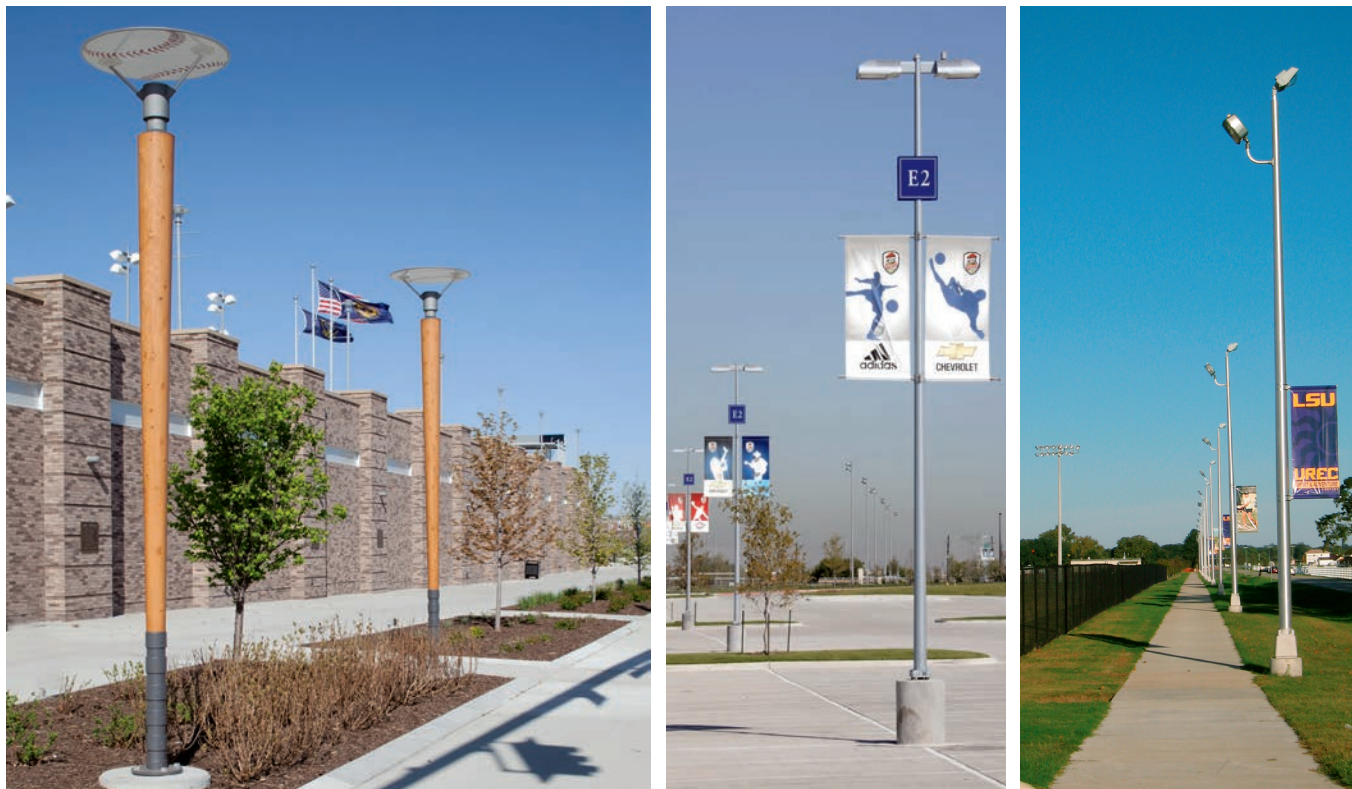
Meeting the needs of you, our customer, is our top priority. No matter how large or small your order, whether it's standard product or specially designed to meet your requirement, our focus is to provide a quality product, to deliver that product on time and per your standards, and ultimately, to be your reliable sports and stadium lighting partner.

Whether you're lighting your neighborhood soccer field or your city's arena, Valmont offers your complete lighting structure solutions.



## SPORTS AND STADIUM AREA LIGHTING

# AN ACCOMPANIMENT FOR YOUR VENUE



**Leveraging Valmont's extensive capabilities, we can provide full lighting concepts for adjacent sports and stadium venue parking and pedestrian areas without the need for a separate vendor.**

Valmont provides area lighting solutions for outdoor sport and stadium lighting needs using the same materials and design criteria found in our sports lighting structures. With our vast catalog of Valmont light poles, we are best positioned to match and or create designs to our customers project specifications.

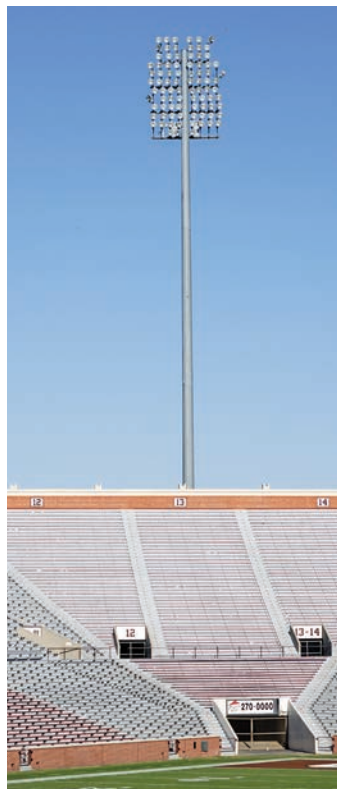
When beginning a custom project, our technical team will carefully consider all project specifications and the surrounding environment. Our recommendations are unique based on local permitting and zoning requirements, pole size and location.

Request information on Valmont area lighting pole solutions. Visit us online at [valmontstructures.com](http://valmontstructures.com).



## SPORTS AND STADIUM LIGHTING ORDER CHECKLIST

# SELECTING THE RIGHT CONFIGURATIONS



### DESIGN DATA

\_\_\_\_\_ Design Criteria\*

\_\_\_\_\_ Design Wind Speed (Specify Ultimate or Nominal)

### FIXTURE MOUNTING DATA CAGE OR CROSSARM TYPE

\_\_\_\_\_ ft. (Cages = Middle Row of Lights; Crossarms = Top Row)

\_\_\_\_\_ Fixture Make and Model

\_\_\_\_\_ Fixture Weight

\_\_\_\_\_ Fixture E.P.A.

\_\_\_\_\_ Total Number of Fixtures

\_\_\_\_\_ Number of Fixtures Per Row (Total Forward and Backward Facing)

\* All designs will be checked to AASHTO 2009-13, Fatigue Category 1.

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# MEETING YOUR LIGHTING REQUIREMENTS



## POLE TOP

- ☐ Cages
- ☐ Tubular Crossarms
- ☐ Angle Iron Crossarms
- ☐ Bullhorns

## BASE STYLE

- ☐ Anchor Base
- ☐ Embedded - Depth (if known): \_\_\_\_\_

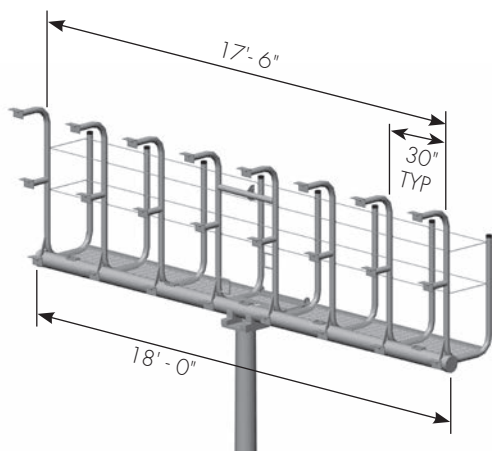
## FINISH

- ☐ Galvanized
  - ☐ Finish Paint
  - ☐ Finish Paint over Galvanized
- Valmont Standard Color: \_\_\_\_\_
- Special Color (provide chip/color number): \_\_\_\_\_

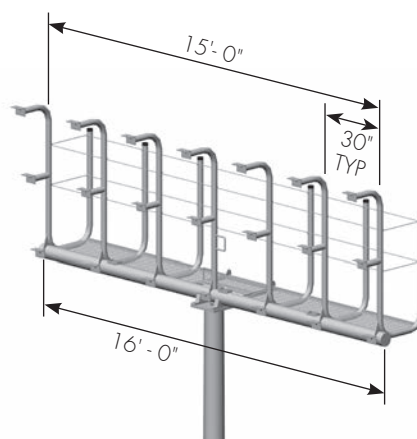
## ACCESSORIES

- ☐ Steps and Safety Cable  
(not recommended for crossarm applications)
- ☐ Personal Safety Harness
- ☐ Pre-Wiring of Cages/Tubular Crossarms
- ☐ Speaker Mounting Plates  
(Please specify requirements)
- ☐ Additional Flood Lighting Mounting  
(Please specify requirements)
- ☐ Couplings  
Size and Location (if known): \_\_\_\_\_
- ☐ Other \_\_\_\_\_

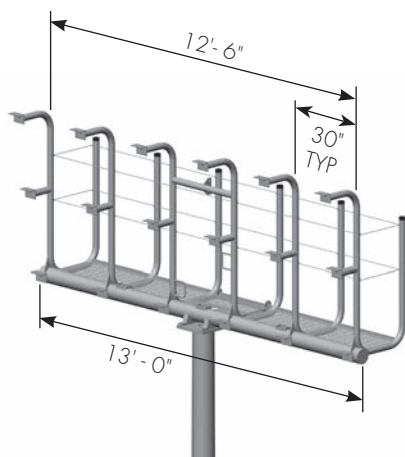
## VALMONT CAGED PLATFORMS



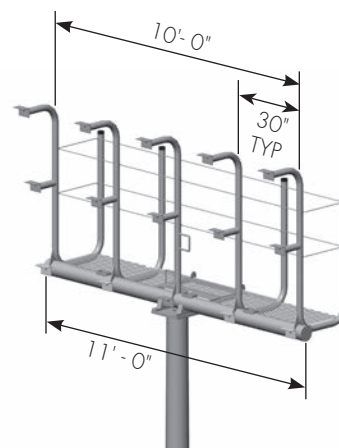
**X24 CAGE**  
(24 Luminaires)



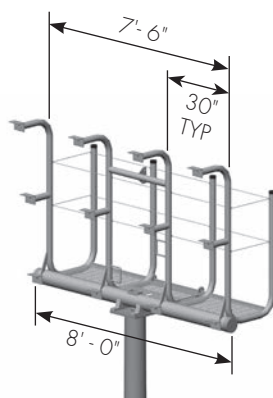
**Y21 CAGE**  
(21 Luminaires)



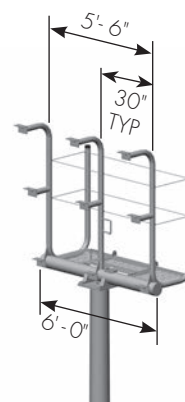
**A18 CAGE**  
(18 Luminaires)



**T15 CAGE**  
(15 Luminaires)



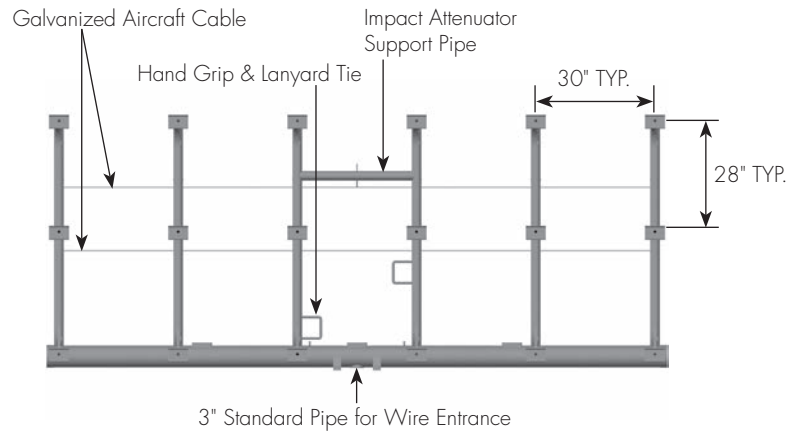
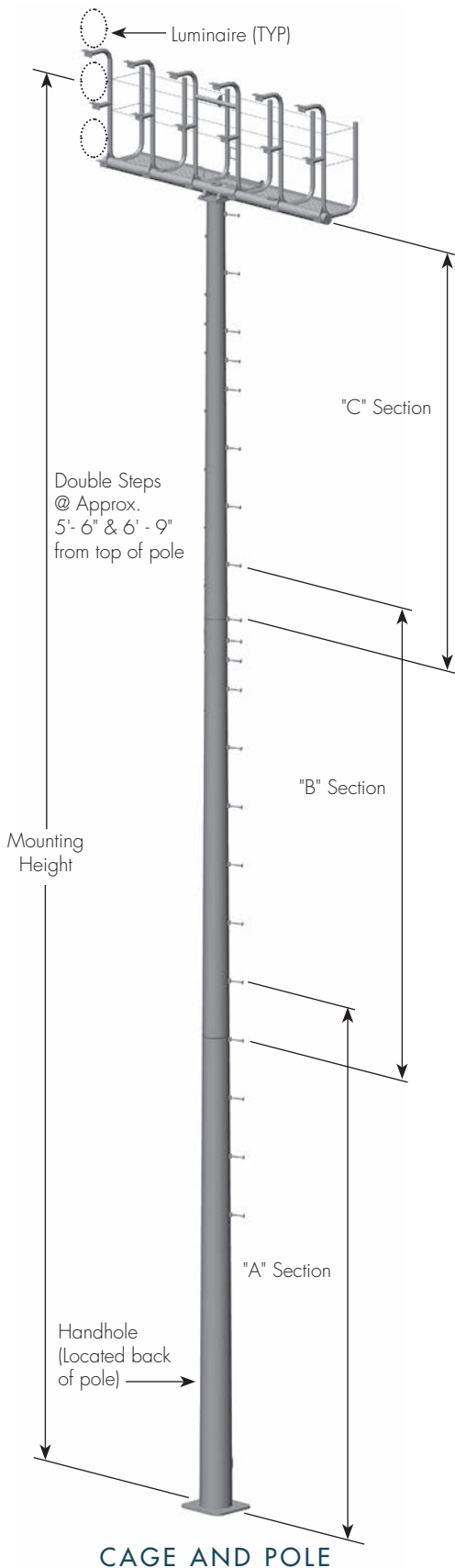
**B12 CAGE**  
(12 Luminaires)



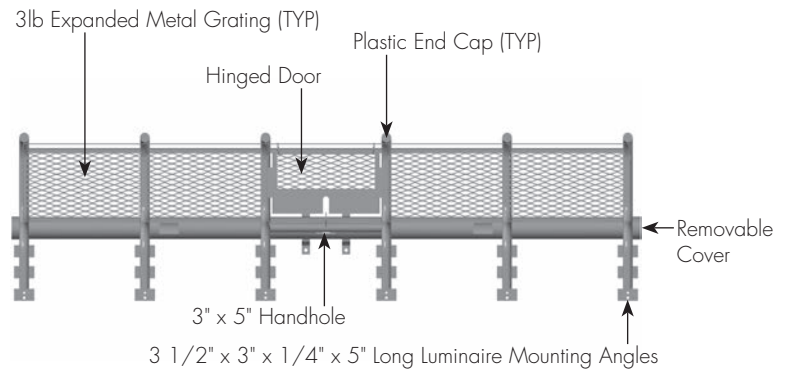
**W9 CAGE**  
(9 Luminaires)



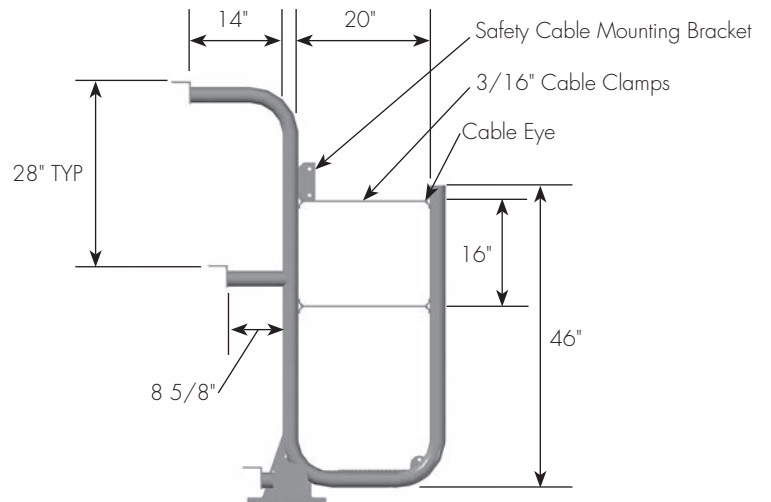
# CAGE AND POLE



FRONT VIEW

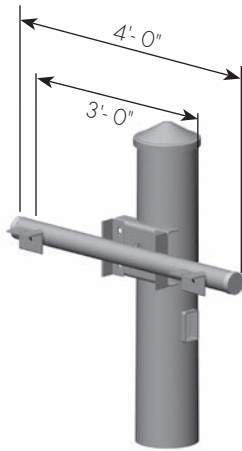


TOP VIEW

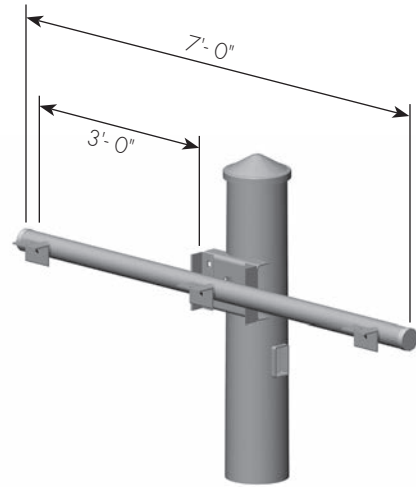


SIDE VIEW

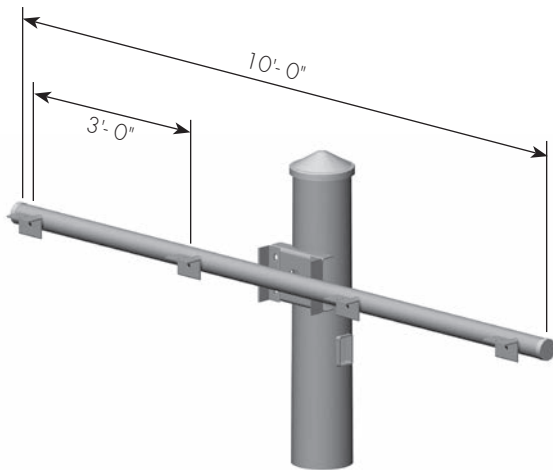
## VALMONT TUBULAR CROSSARMS



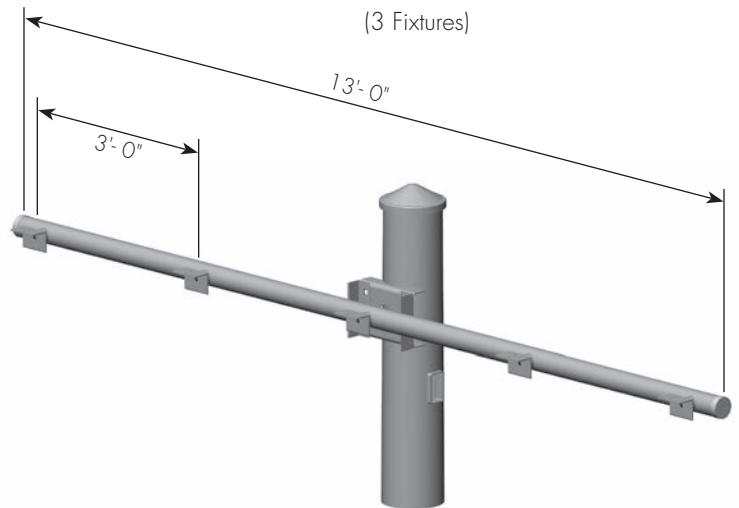
**CR2**  
(2 Fixtures)



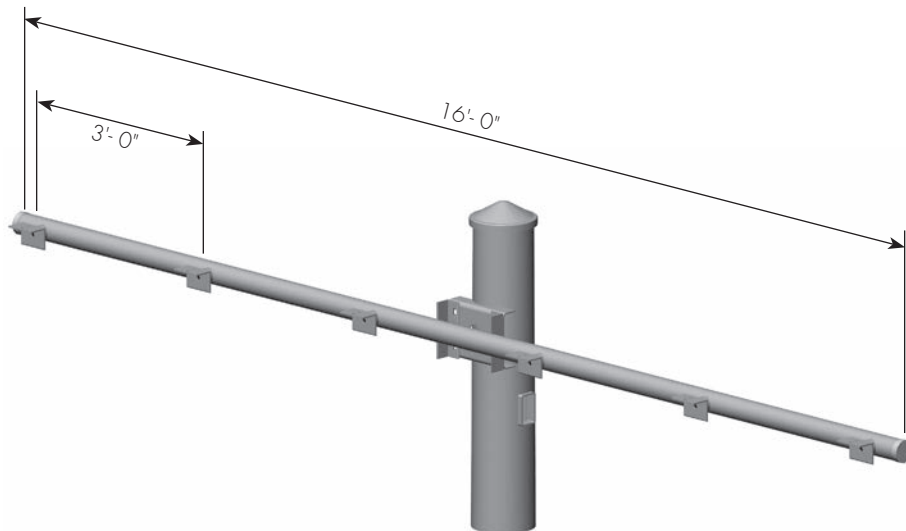
**CR3**  
(3 Fixtures)



**CR4**  
(4 Fixtures)



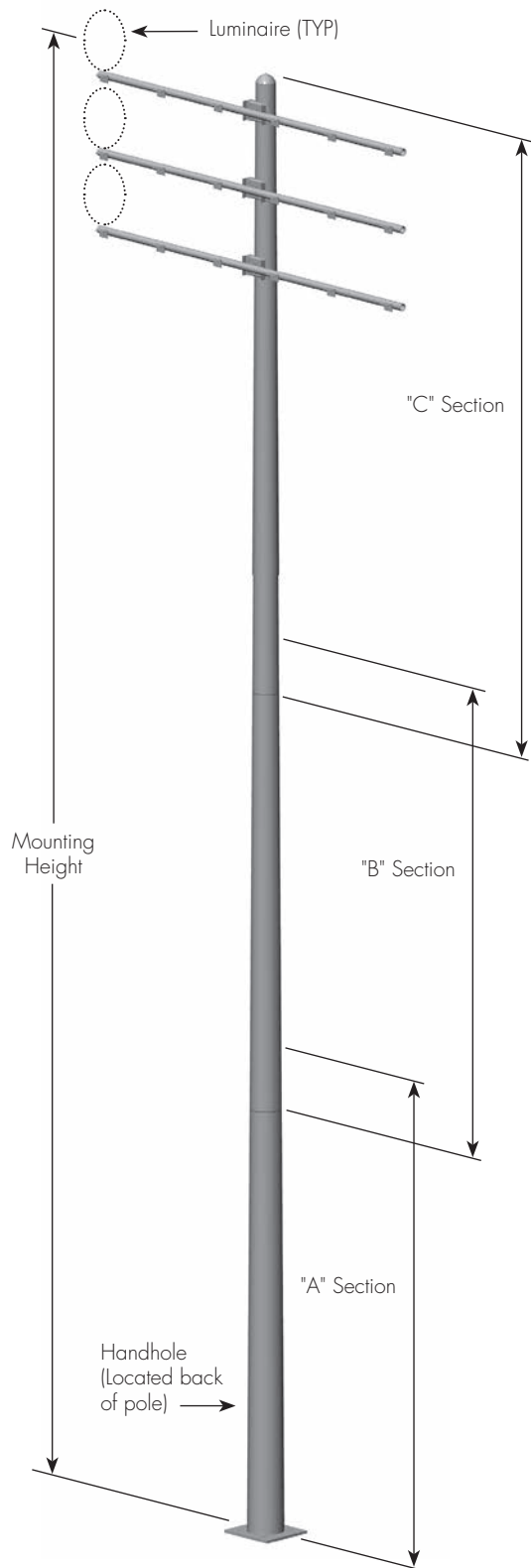
**CR5**  
(5 Fixtures)



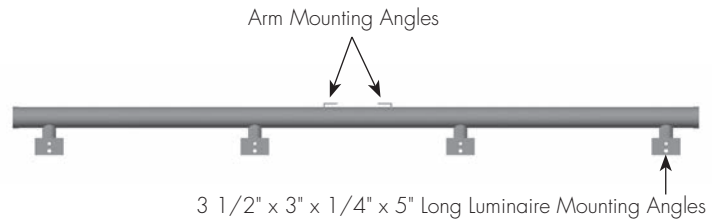
**CR6**  
(6 Fixtures)



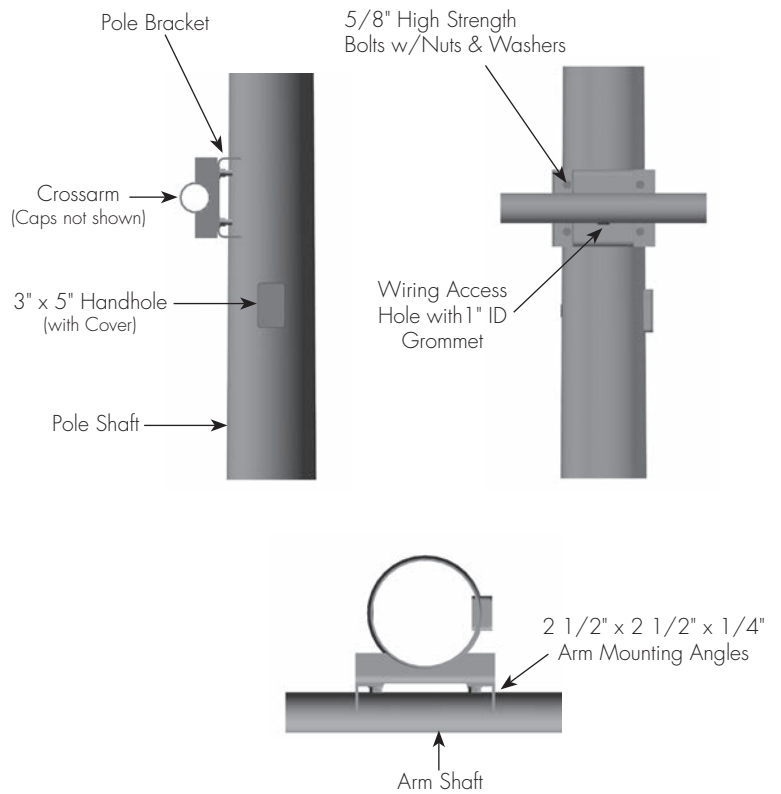
# TUBULAR CROSSARM AND POLE



CROSSARM AND POLE

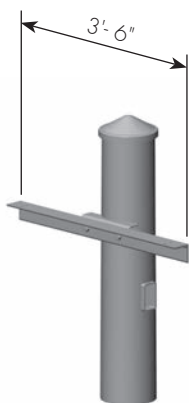


CROSSARM DETAIL  
TOP VIEW

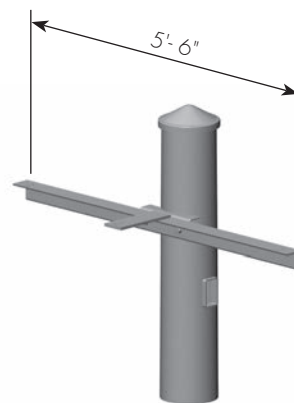


CROSSARM MOUNTING DETAILS

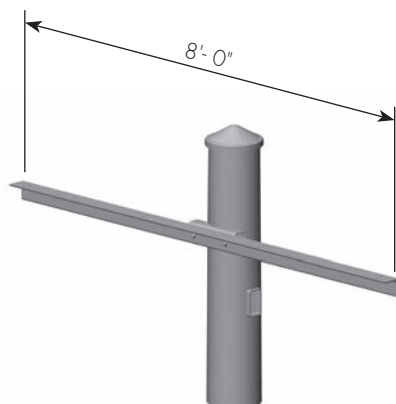
## VALMONT ANGLE IRON CROSSARMS



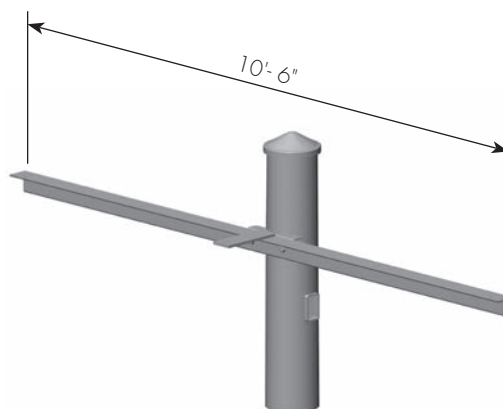
**ACR2**  
(2 Fixtures)



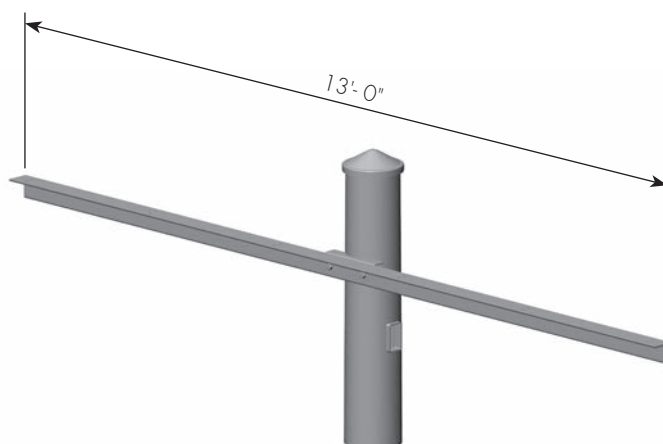
**ACR3**  
(3 Fixtures)



**ACR4**  
(4 Fixtures)



**ACR5**  
(5 Fixtures)

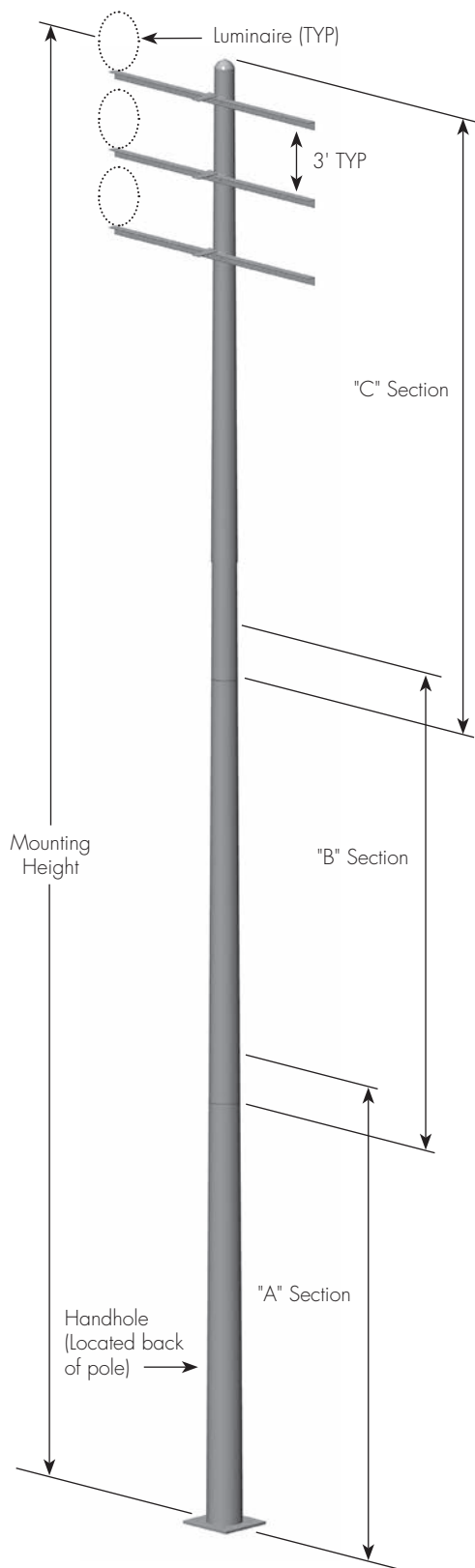


**ACR6**  
(6 Fixtures)

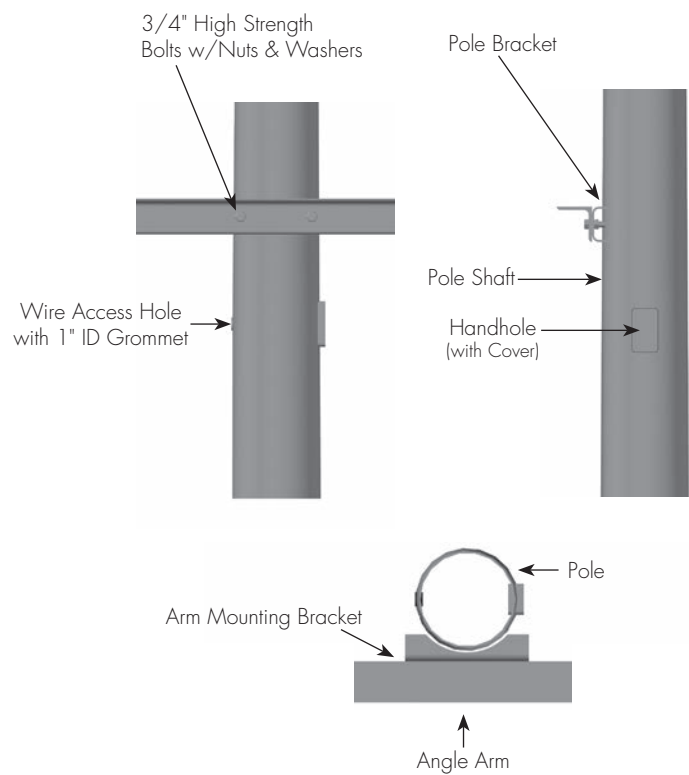
Note: ACR2 Fixture Drillings Spaced 36" on Center  
All Others: Fixture Drillings Spaced 30" on Center



## ANGLE IRON CROSSARM AND POLE

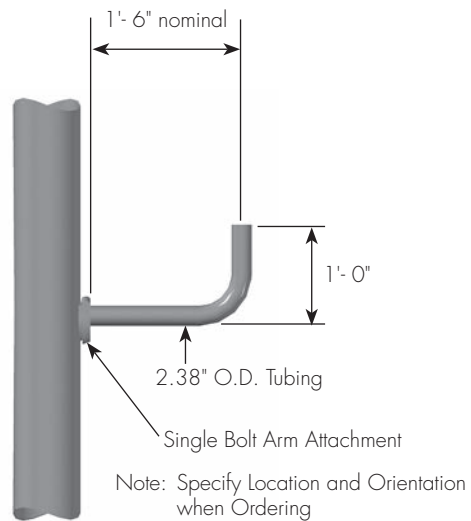
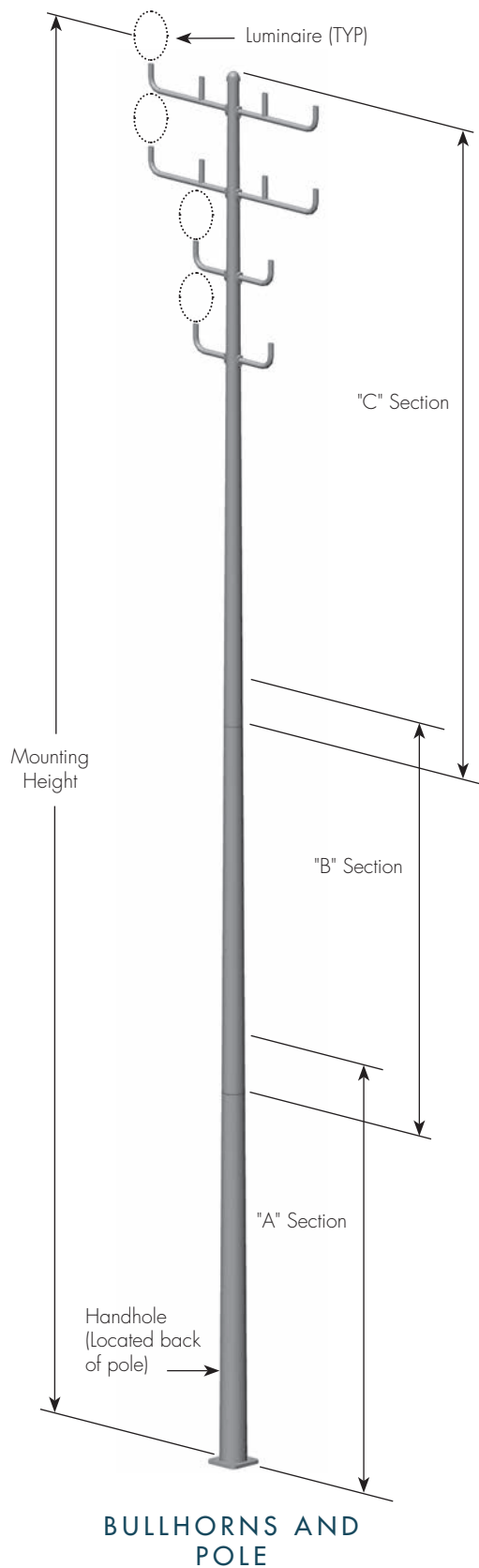


CROSSARM AND POLE

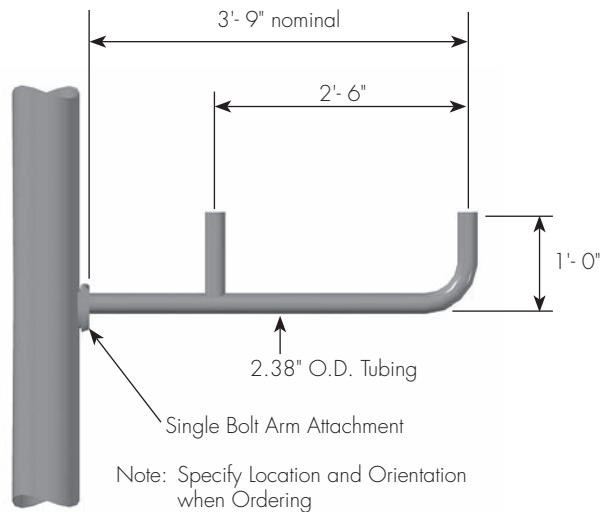


ACR MOUNTING DETAILS

## VALMONT BRACKET ARMS - BULLHORNS



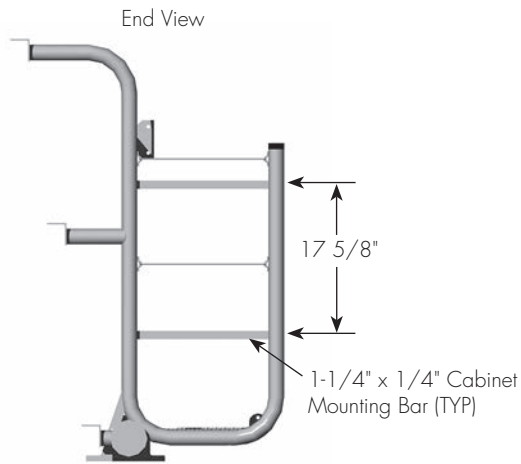
**M080 ARM**



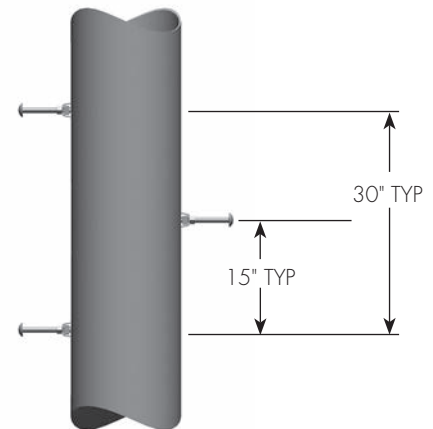
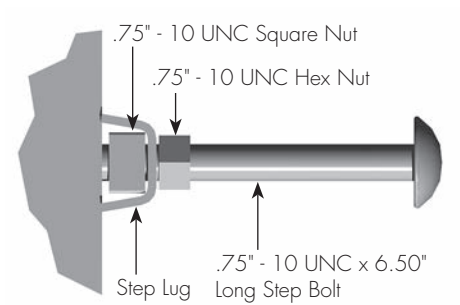
**M082 ARM**



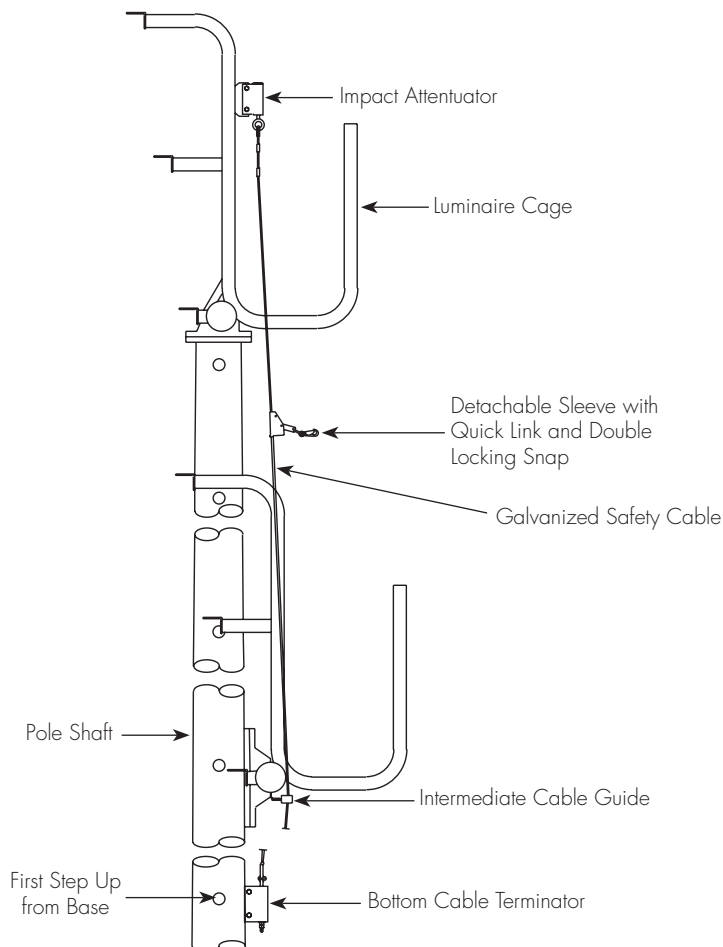
## ACCESSORIES



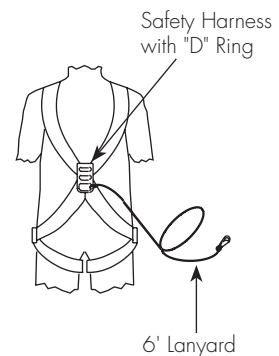
### CONTROL PANEL – CAGE MOUNT



### REMOVABLE POLE STEPS



### SAFETY CABLE CLIMBING DEVICE



### SAFETY HARNESS

# VALMONT SPORTS AND STADIUM LIGHTING SPECIFICATIONS



## CAGED LUMINAIRE SERVICE PLATFORM

Platforms are made of tubular members to effectively reduce the wind drag. The cage consists of at least one horizontal steel supporting member, a minimum of 5½" O.D. 10 gauge material, and vertical luminaire supports of 2" schedule 40 pipe. All angles conform to ASTM designation A36. The vertical luminaire supports are available with horizontal angle luminaire support with holes to accommodate luminaire adapter plates or pipe tenons to accommodate specific size slipfitters. All pipe and tubing components are 36 KSI minimum yield strength.

The platform is a cage with vertical members, minimum 46" in height with two horizontal 3/16" diameter, 7 x 19 galvanized aircraft cables for enclosure and safety support of maintenance person. The floor is expanded metal grating. The floor incorporates a hinged door allowing for access to the cage and is capable of closing prior to uncoupling of climbing safety device.

The entire basket is capable of internal wiring from the pole shaft to the luminaire mounting supports. The pole top mounting bracket has internal drip shielding for wire entrance.

## CROSSARM FOR LUMINAIRES

The crossarms are made of tubular members to effectively reduce wind drag. The crossarm consists of horizontal main members of 3½" O.D. schedule 40 pipe. All angles conform to ASTM designation A36. Horizontal, angle luminaire supports have holes to accommodate luminaire adaptor plates or pipe tenons to accommodate specific size slipfitters. Luminaire mounting angle supports are attached to the main member of 2" schedule 40 pipe. All pipe members and tubing components are 36 KSI minimum yield strength.

The crossarm is bolted to the pole shaft with 2½" x 2½" x ¼" angles. Wire entrance to the pole shaft is (a) standard 1" ID grommeted hole with 3" x 5" handhole, or (b) coupling (specify size) with a 3" x 5" handhole.

## POLE SHAFTS

The cross-section is round or 16-sided with a 4" bend radius. Each pole is a constant tapered hollow steel section and is up to 55' in length with a 1½ times diameter slip joint as standard. The pole shaft sections are high strength steel to ASTM A572, ASTM A595, or weathering steel to ASTM A871 or ASTM A595 GR.C. The plate has a single thickness – no laminations.



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## BASE PLATE

The shaft is supplied with an integrally welded steel base plate. The base plate telescopes the pole shaft and is circumferentially welded top and bottom or has a full penetration butt weld with backing.

## ANCHOR BOLTS

Anchor bolts are provided loose with a checking template as standard. Anchor bolts are galvanized to ASTM A153 for a minimum of 8" on the threaded end. If requested, bolts are shipped in rigid cages at extra cost. Each anchor bolt is supplied with one leveling nut, one hold down nut and two flat washers with strength equal to or exceeding the proof load of the bolt.

## LOADING

Vertical forces due to pole weight, luminaries, attachments and maintenance device are included in the maximum stress at the base. Wind pressures, adjusted for shape and height, are applied to the centroids of all projected areas. Eccentric moments due to deflection under maximum wind and eccentric loads are considered.

## PRE-WIRING

Cages and tubular crossarms are available from the factory pre-wired. Consult with your Valmont sales representative for more information.

## WELDING

All welds are made using welders and procedures qualified in accordance with either the American Welding Society D1.1 Structural Steel Welding Code or the Canadian Welding Bureau as applicable. Additionally, weld inspections are performed in accordance with AWS D1.1.

## FINISH

The finish is primed, painted, galvanized, or weathering steel. Prime painted is either spray or flow painted inside and out. Galvanizing on shafts meet all the requirements of ASTM A123, miscellaneous hardware is galvanized to ASTM A153. Galvanizing is done with a maximum pole section length of 55'. Weathering steel is shot blasted to clean the surface of foreign matter and ensure even oxidizing.

## TESTING

A full scale vertical test facility is available at Valmont to simulate actual full structure loads. Any test required is at customer's expense. Poles can be tested simulating maximum moment due to wind and eccentric forces (loads applied at four points) including, simultaneously, vertical forces.

## VIBRATION DISCLAIMER

Although rare, vibrations severe enough to cause damage can occasionally occur in structures of all types. Because they are influenced by many interacting variables, vibrations are generally unpredictable. The user's maintenance program includes observation for excessive vibration and examination for any structural damage or bolt loosening. The Valmont warranty specifically excludes fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

## SHIPPING

Pole structures are shipped by rail or truck at the option of Valmont. All structures are firmly secured and adequately packed to assure protection to the structures and to finish.

Valmont Industries, Inc. reserves the right to change any portion of this publication without notice in order to promote product improvement and allow for material availability.

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VALMONTSTRUCTURES.COM



Conserving Resources. Improving Life.

