

VISTA 96— INSTALLATION INSTRUCTIONS



CAUTION

Wade Antenna assumes no responsibility for damages or personal injury resulting from improper tower assembly or installation. Assembly and installation instructions are meant as guides.

Only persons with proper training and equipment should install and climb towers. Foundation requirements vary according to local conditions. A structural and/or civil engineer should be consulted before installation and site surveys completed on site hazards and soil conditions.

It is recommended to install the tower as a whole with a crane. Assembling by individual sections can be difficult based on the weight of lower sections and puts climbing personal at risk.

Any part of the tower could have sharp edges. Wear gloves when handling and use any required personal protective equipment.

Only a qualified crane operator should attempt lifting and installation of towers.

NOTES

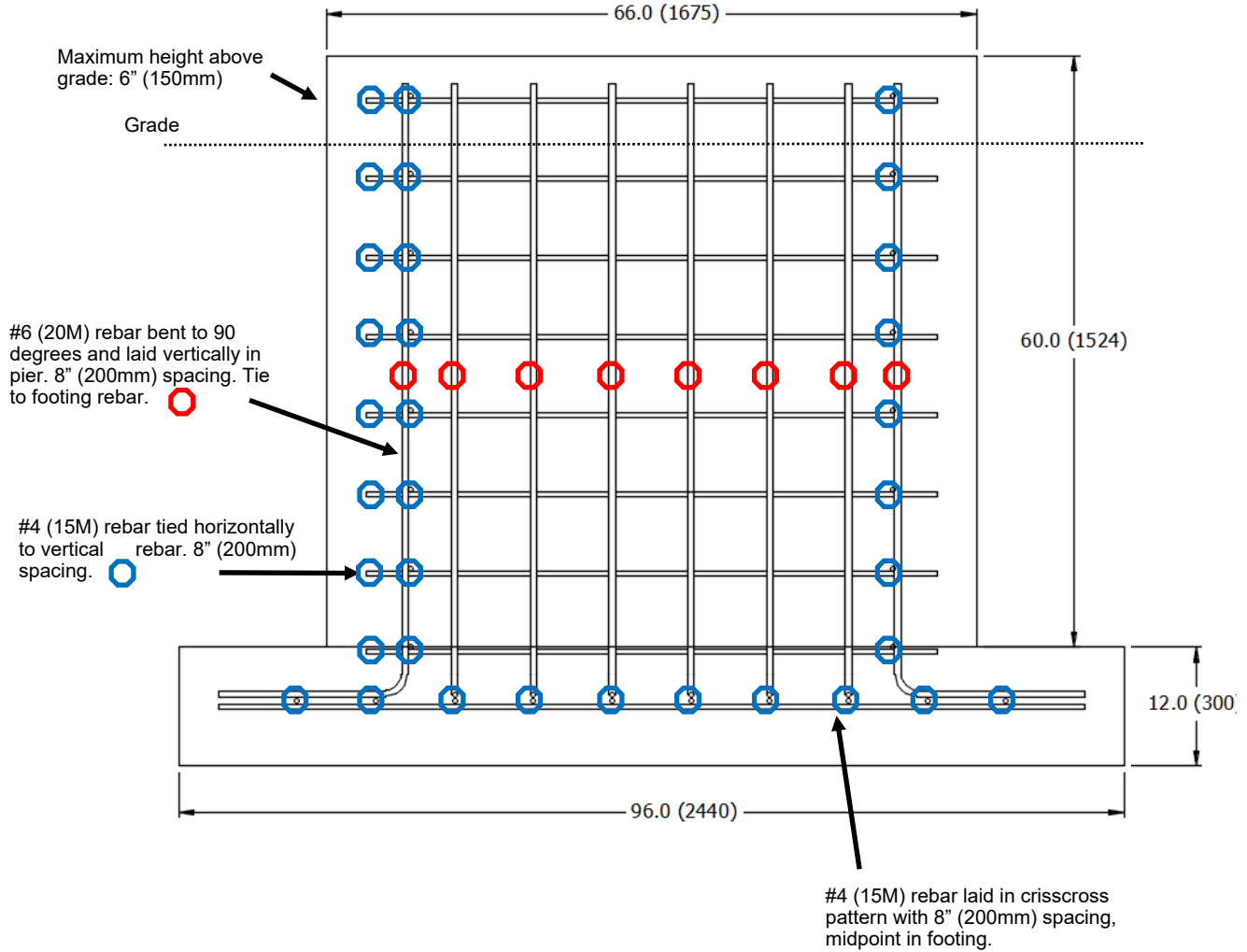
- Refer to the foundation section in this document and plan the installation site accordingly. Wade Antenna does not assume any responsibility for differing soil conditions and installation environments. It is the responsibility of the installer to consult with a certified engineer before installation for recommended foundation size and construction based on local conditions.
- Inspect the shipment before commencing any work for damage.
- Inspect and insure all parts and hardware are accounted for.
- Based on varying installation methods a complete tool list cannot be provided but at a minimum the listed tools are required.
- The lower tower sections are heavy. Installing the tower using gin poles is not recommended. The most efficient and safe way of installing the tower is using a crane.
- Only qualified tower installers with proper training should install this equipment.
- Do not overload the tower above the recommended equipment loading.
- Minimum required tools: Level, 9/16" Wrench and socket, 3/4" wrench and socket, 1/2" drive ratchet, torque wrench, goose-neck connector or bull pins, 1-5/8" wrench or socket and 3/4" ratchet (required for anchor bolts), lever pipe.

FOUNDATION

NOTES

1. This document outlines general recommendations for foundation design. It is the responsibility of the installer to contact a certified engineer for final design requirements based on local soil conditions. Wade Antenna assumes no responsibility for final design and installations.
2. The foundation is based on absolute minimum soil bearing capacity of 2000 lbs./sq.ft. (95KPa) Local conditions can vary widely and a site survey should be performed before any work is commenced.
3. The design listed in this document is based on a standard Vista 96' tower with the recommended maximum wind loading.
4. When excavating the site it is recommended to leave the surrounding soil undisturbed.
5. Any back fill should be compacted properly.
6. Refer to the diagrams below for foundation sizing and reinforcing bar recommendations.

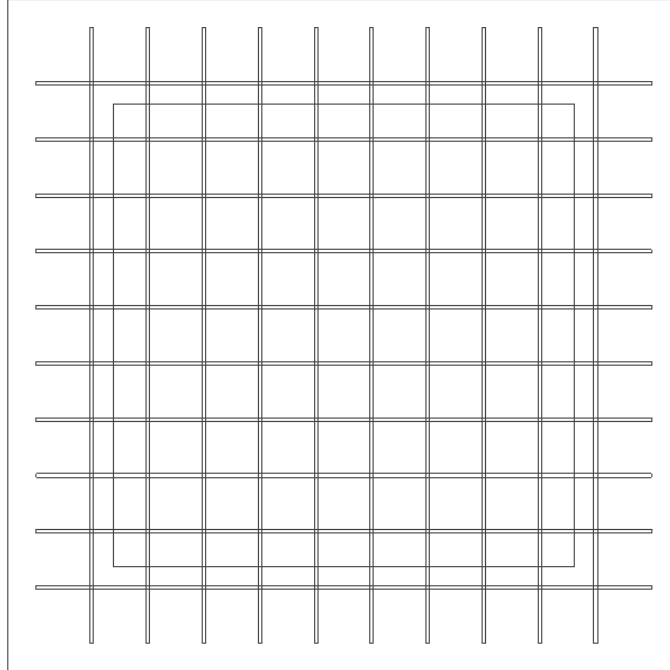
FOUNDATION
(side view)



FOUNDATION
(top view)

FOOTING REBAR LAYOUT
DETAILS

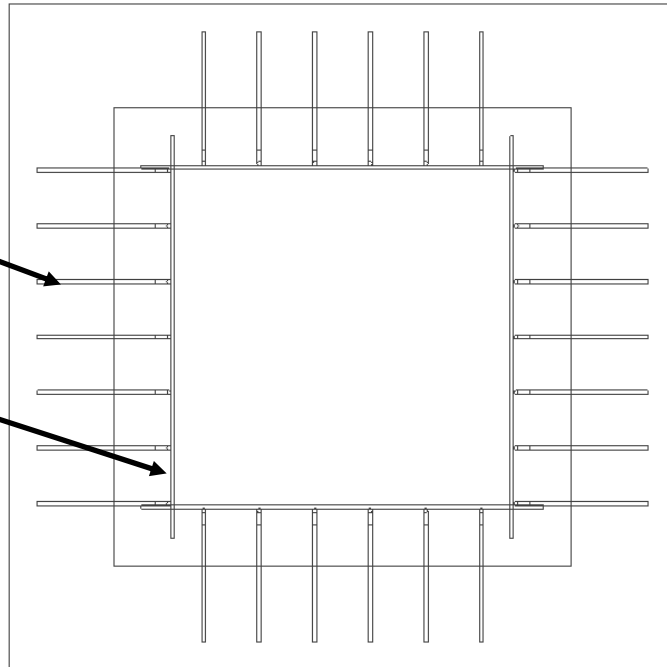
#4 (15M) rebar laid in crisscross pattern with 8" (200mm) spacing, midpoint in footing.



PIER REBAR LAYOUT
DETAILS

#6 (20M) rebar bent to 90 degrees and laid vertically in pier. 8" (200mm) spacing. Tie to footing rebar.

#4 (15M) rebar tied horizontally to vertical rebar. 8" (200mm) spacing.

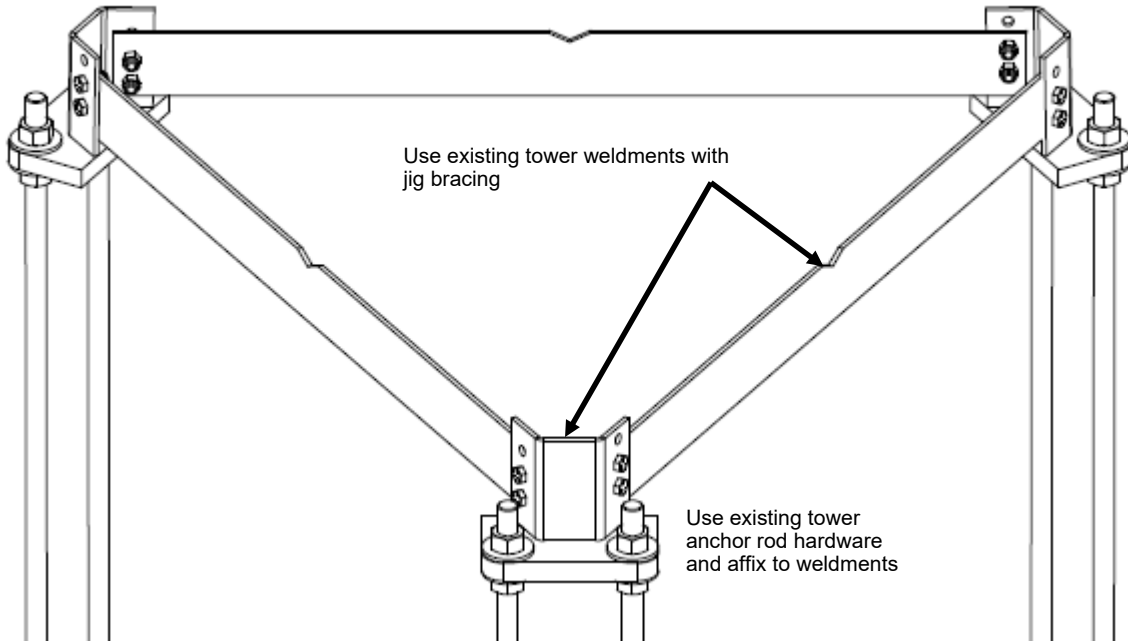


ANCHOR RODS INSTALLATION AND JIG

NOTES

1. Reference the accompanying figures as a reference in assembling the anchor bolt jig and anchor rods.
2. Using anchor rods allows adjustments to tower during and after installation.
3. Use the jig bracing in conjunction with the tower weldments and anchor rod assembly and embed into the foundation concrete.
4. The assembly can be installed before or during pouring of concrete.
5. It is recommended to attach the assembly on the concrete form before pouring concrete keeping the assembly centered in the foundation.
6. After the tower is installed it is advisable to parge the gap under the weldments.
7. If using base stubs instead of weldments the base stubs can be attached to the jig bracing in the same manner.
8. Precise leveling of the base stubs is required and should be verified after pouring concrete and during curing.
9. Nuts on anchor rods should be torqued to a minimum of 314 ft. Lbs.

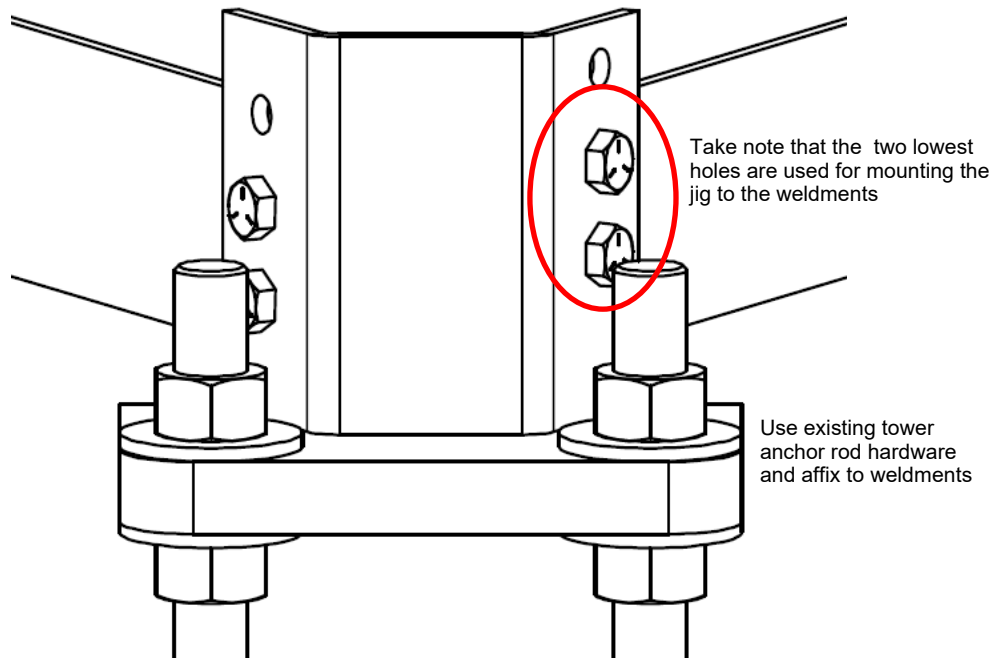
ANCHOR RODS INSTALLATION AND JIG



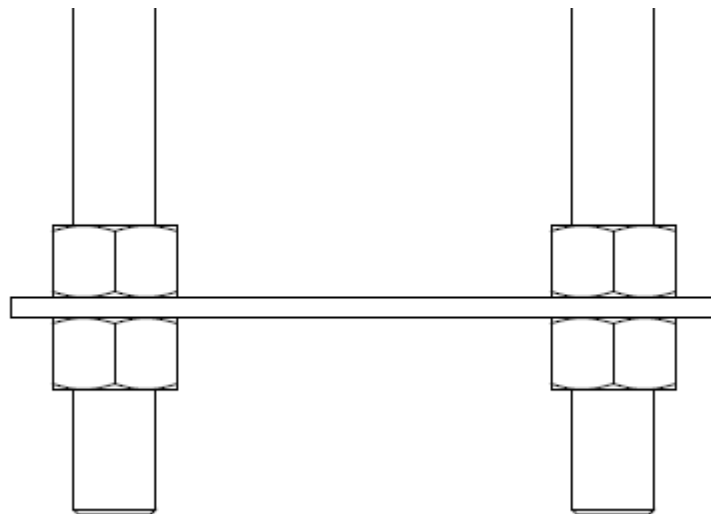
Take note of hole offset on jig bracing and notch. Left side has holes offset higher and the notch is on top.



ANCHOR RODS INSTALLATION AND JIG



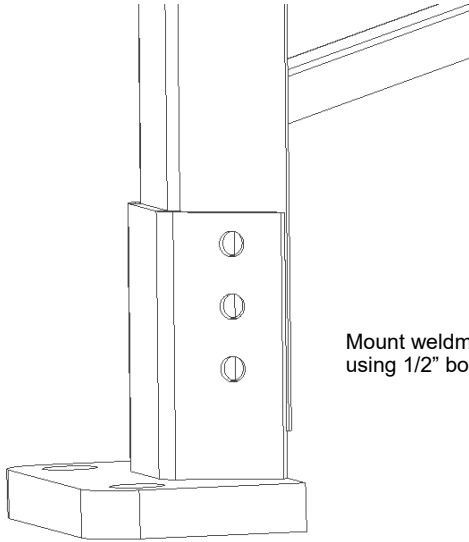
Anchor rod plate. Use 1" nuts attached to plate at bottom of anchors.



MOUNTING

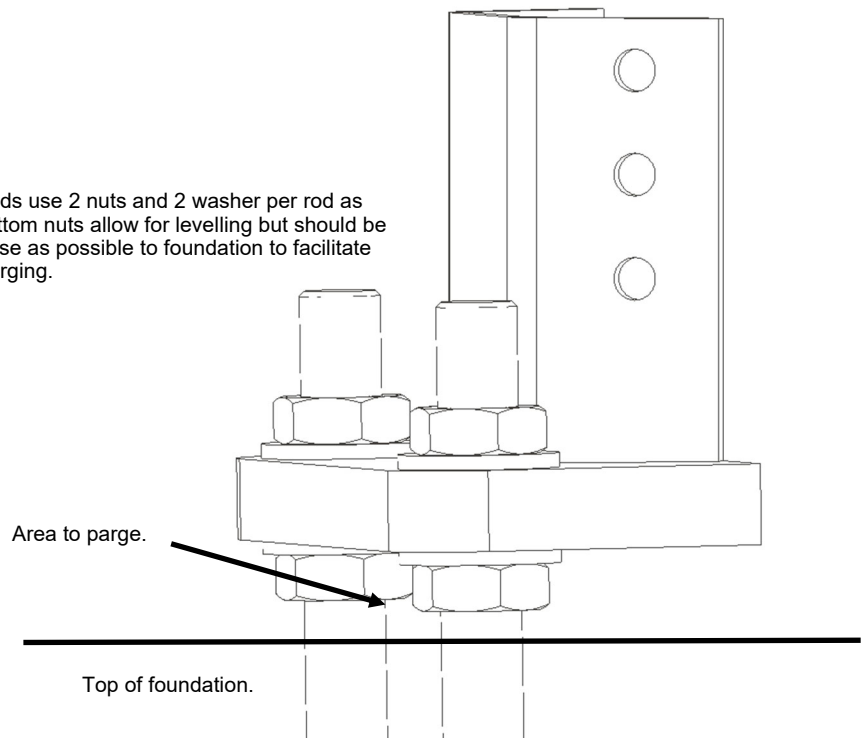
- The tower can be mounted using base stubs or anchor rods and weldments.
- Using anchor rods allows for leveling of the tower after the concrete is poured and is the recommended mounting method.
- If using base stubs it is recommended to construct a jig to position the base stubs during pouring and curing of concrete.
- When using weldments and anchor rods, the gap between the weldment and concrete base should be filled with parging.
- Mounting hardware should be torqued to a minimum of 75 ft.lbs.

MOUNTING



Mount weldments to bottom section using 1/2" bolts supplied, 6 bolts per leg.

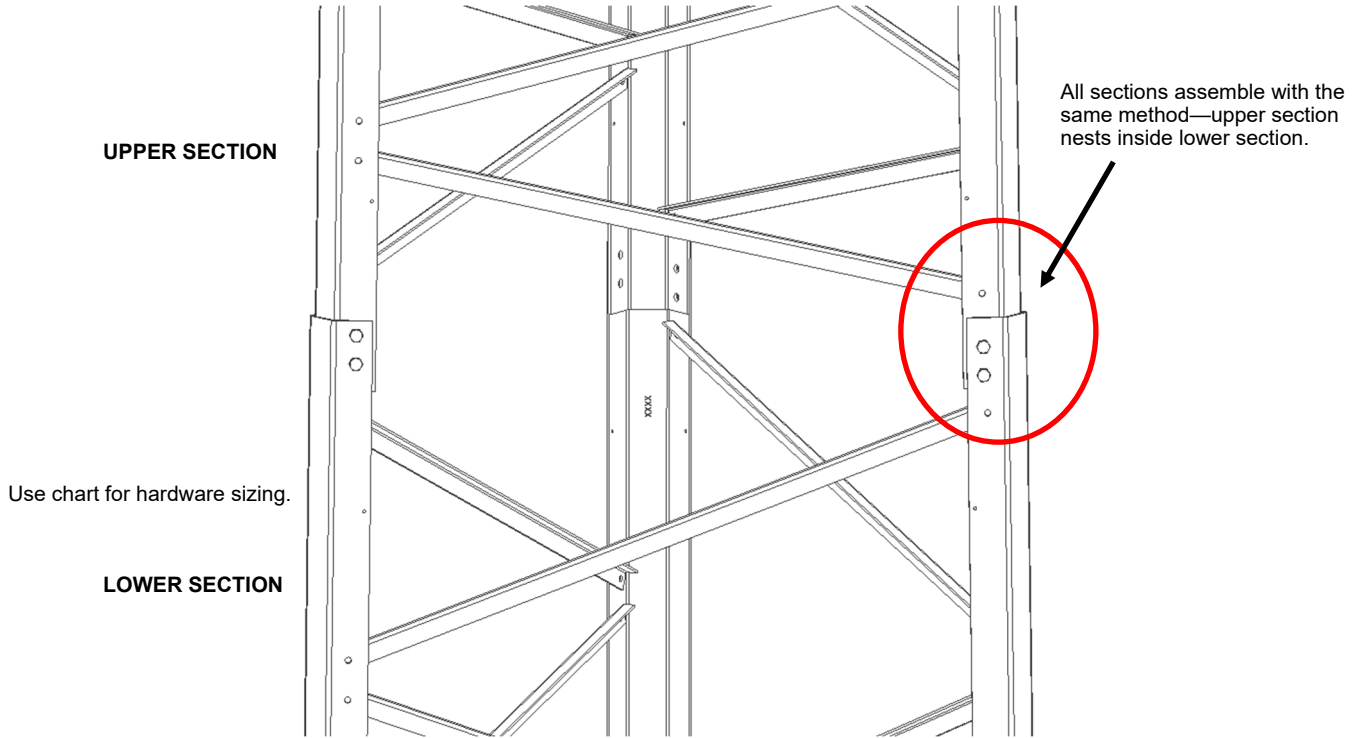
Anchors rods use 2 nuts and 2 washer per rod as shown. Bottom nuts allow for levelling but should be kept as close as possible to foundation to facilitate minimal parging.



ASSEMBLING/INSTALLING

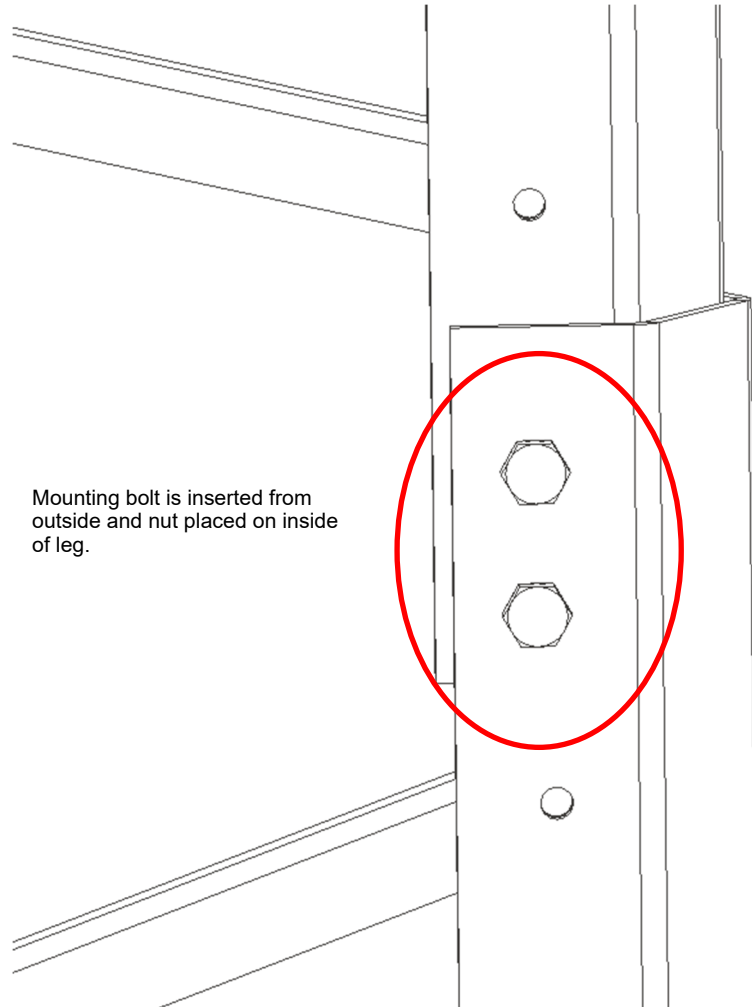
- Pre-assembling the tower and installing with a crane is the preferred method of installation.
- If installing section by section, it is still recommended to use a crane for lifting adjoining sections. Time can be saved by assembling multiple sections and lifting as an assembly.
- The tower is not designed for climbing and it is recommended to work from a crane or articulating boom truck.
- Use the hardware chart as a guide for section to section hardware selection and torque values.
- Feed lines should be run down the inside of a leg and securely fastened.
- Bull pins or gooseneck connector will aid in aligning section mounting holes.

ASSEMBLING/INSTALLING



Sections	Size	Torque
12 thru 6	1/2-13" x 1.25"	75 ft.lb.
6 thru 1	3/8-16" x 1"	31 ft.lb.

ASSEMBLING/INSTALLING



Mounting bolt is inserted from outside and nut placed on inside of leg.

SERVICING

- Tower must be properly maintained and in good condition with no structural defects or deterioration to its members capacities.
- The mounted appurtenances must adhere to the load limits of the tower.
- During the time of servicing there must be no ice on the structure and wind speeds must not exceed 15km/h.
- Although not designed for climbing any personal on the tower must be trained in basic fall protection and proper climbing techniques.
- The climber must be equipped with an E6 type lanyard in accordance with CSA-Z259, and it must be fastened to the tower leg on top of 2 cross braces using a double locking lanyard hook.
- Replace any defective parts only with genuine Wade parts specifically designed for the tower. Contact Wade Antenna.

SPECIFICATIONS

Tower Height (w/o masting)	91.8 ft. (28m)
Tower Base Diameter (#12 section)	53.46" (1357mm) circumscribed circle, 47.52" (1207mm) wide
Tower Weight	1200lbs.(545kg)
Tower Maximum Wind Load (no ice, no antenna)	~ 95mph (152 kph)
Tower Maximum Wind Load (1/2" ice)	~ 80mph (129 kph)
Maximum Antenna Area (no ice, flat) 70mph(113kph) / 85mph(137kph)	12ft ² (1.1m ²) / 6ft ² (0.6m ²)
Maximum Antenna Area (ice, flat) 70mph(113kph)	2ft ² (0.2m ²)
Maximum Antenna Area (no ice, round) 70mph(113kph) / 85mph(137kph)	18ft ² (1.7m ²) / 9ft ² (0.8m ²)
Maximum Antenna Area (ice, round) 70mph(113kph)	3ft ² (0.3m ²)
Tower Material	Grade 50 G90 SS
Masting Height	4ft.(1.2m) above tower, 8ft.(2.4m) total length
Masting Diameter	1.5"(38mm)
Anchor Rod Diameter	1"
Foundation Required Minimum Soil Pressure	2000 lbs/ft ² (95kPa)
Foundation Concrete Requirement (approximate)	8 yd ³ (6 m ³)
Foundation Rebar Length Required (approximate)	300'(92 m) # 4 (15M), 170'(52 m) # 6 (20M)
Concrete Recommended Compressive Strength	25-30 Mpa
All Hardware	Grade 5 Zinc Plated