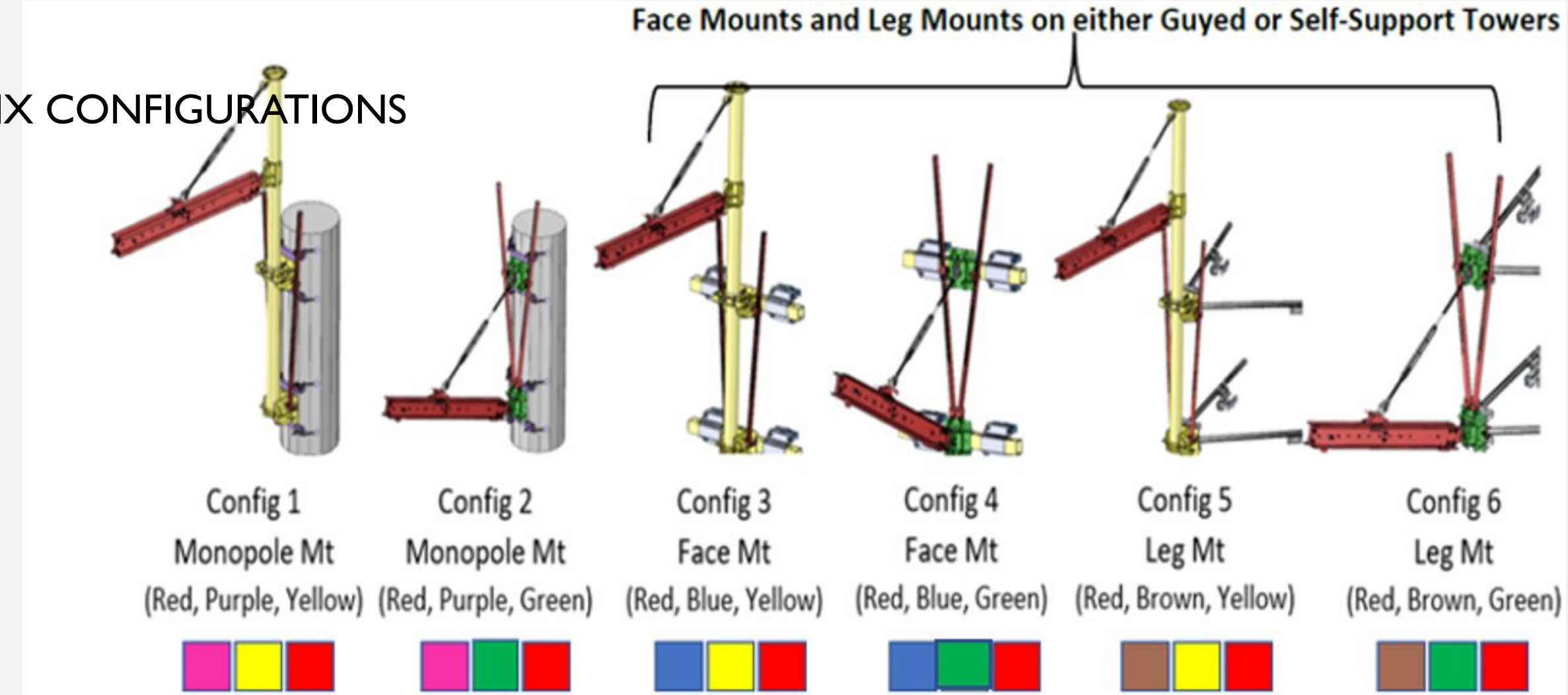
MATT'S ARM
Lifting Solutions

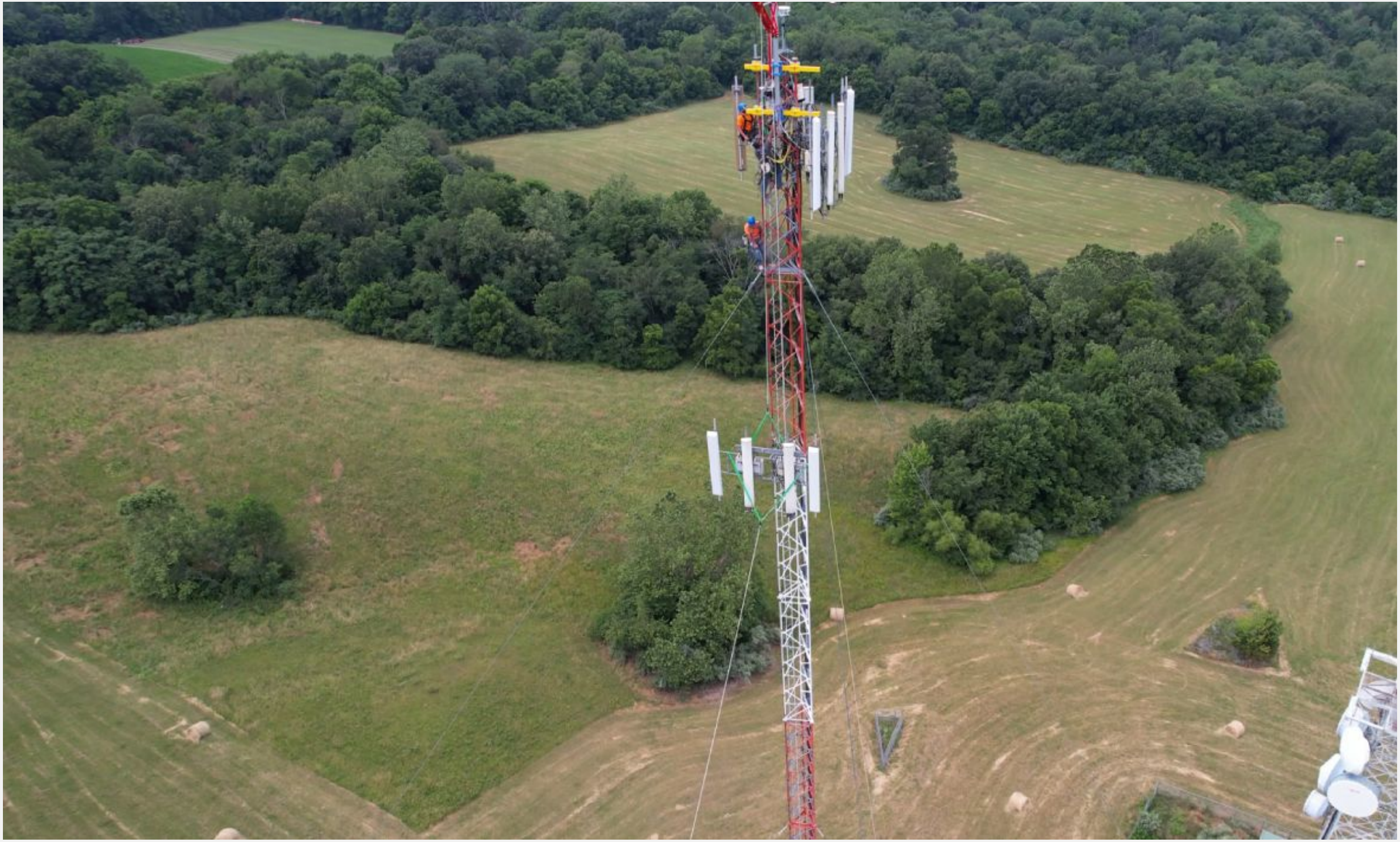
SIX CONFIGURATIONS



Components of Matt's Arm are modular, and color coded. Three colors are always used when using Matt's Arm.

Configurations 1, 3 & 5 have the yellow Mast Pipe; the Beam swings over the top of the tower +/- 180 deg.

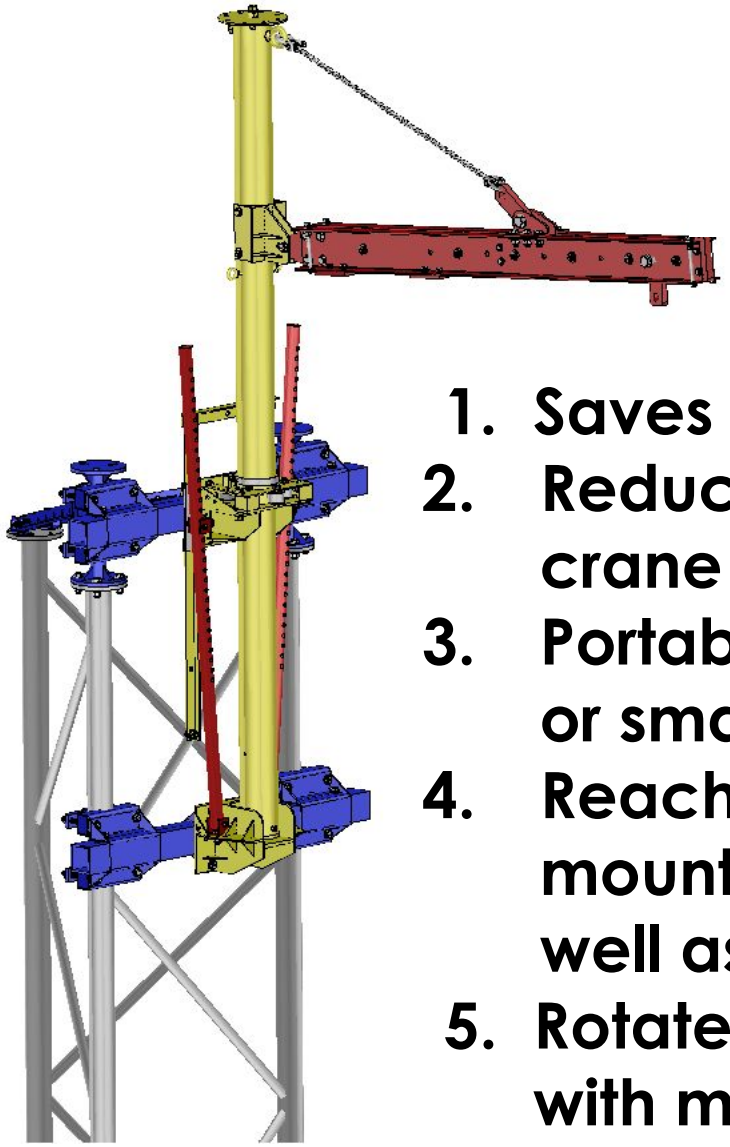
Configurations 2, 4, & 6 have green clamps (no mast pipe); Beam swings below the top of the tower +/- 90 deg.




CONFIG 3, FACE MOUNT INSIDE THE
TOWER, WITH LINE USING
ALTERNATIVE RETURN SHEAVE.
NO ROOM TO TAG.

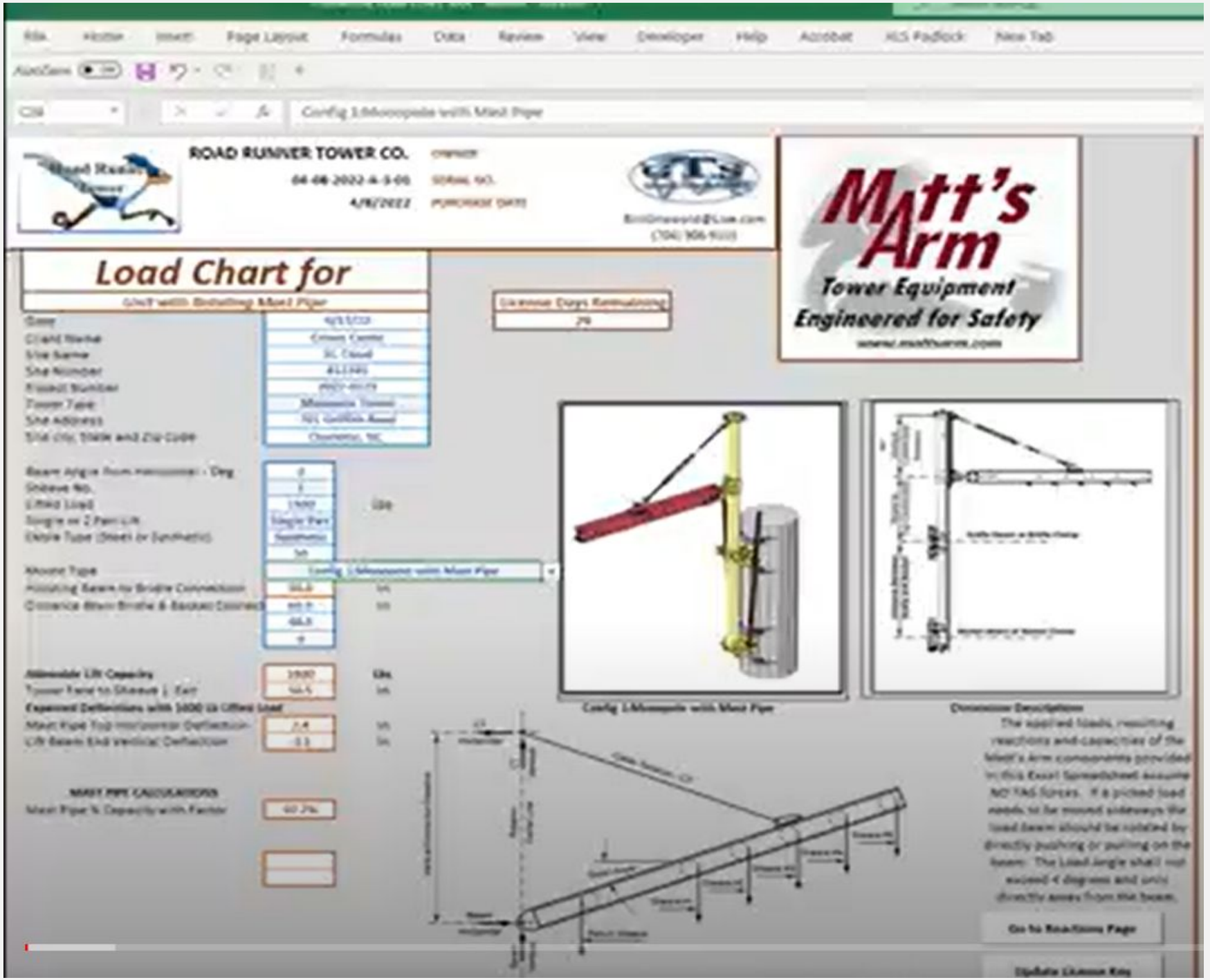
CONFIGURATION 4.

Configuration 4. When the job started the upper and lower antennas were almost touching.



MATT'S ARM
Lifting Solutions

1. Saves time and money
2. Reduces the need to hire a crane or helicopter
3. Portable – fits in a work truck or small work trailer
4. Reaches past lower sector mounts and antennas as well as torque arms.
5. Rotates to land the load with minimal or no tagging.



INTERACTIVE LOAD CHART CALCULATOR

- Designed to help prepare the Class IV Rigging Plan.
- Provides calculations for how Matt's Arm reacts on the tower.
- Provides calculations and drawing for tagging.
- Provides the on-site rigger and project staff accurate calculations for various installation scenarios.

"LIKE HAVING AN ENGINEER IN THE RIGGER'S BACK POCKET"

Matt's Arm Lifting "Solutions"

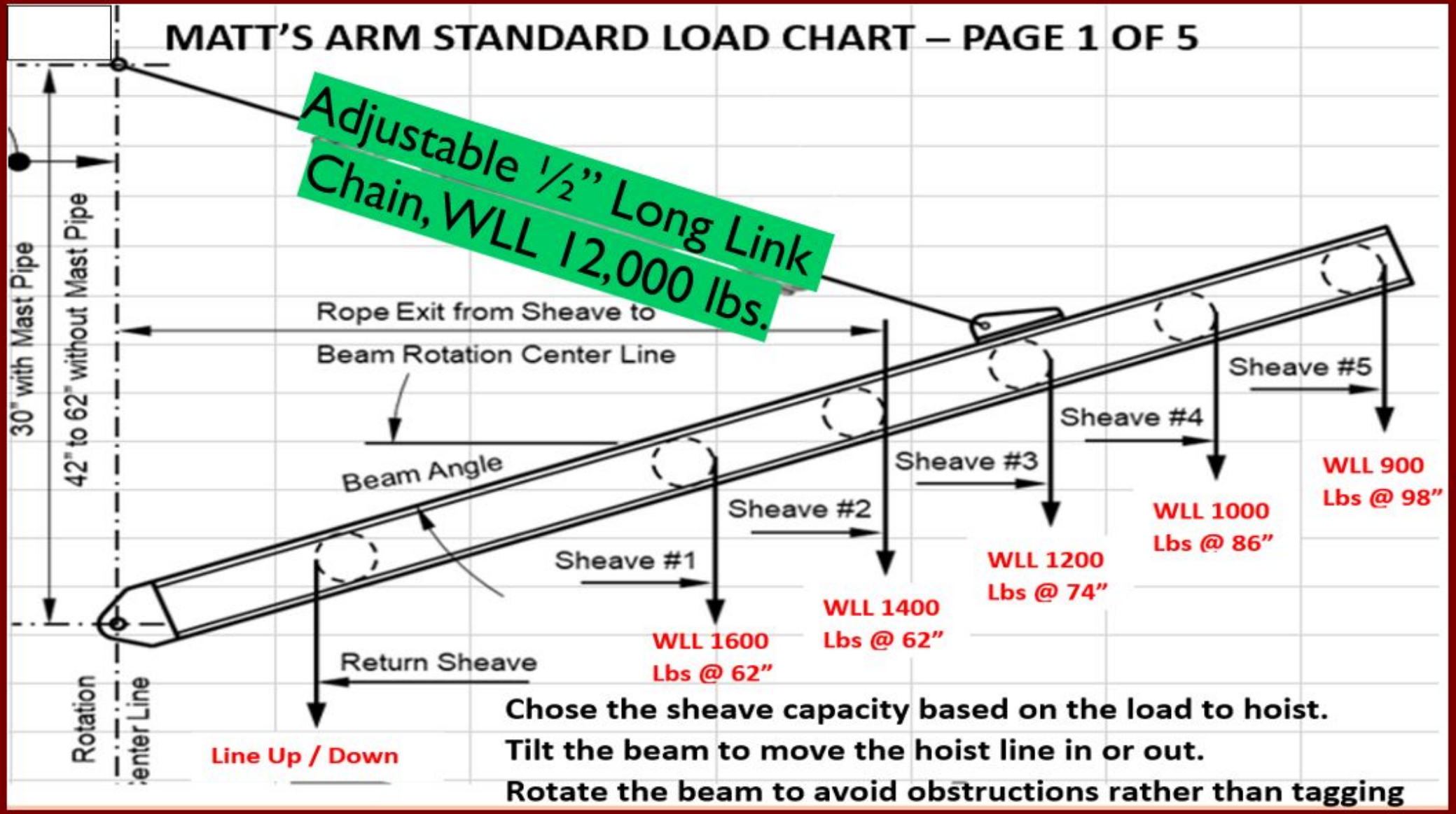
The **versatility** of Matt's Arm is Unique in the Tower Industry.

- Designed, Engineered and fabricated for compliance with ANSI/TIA Standard 322.
- Engineering by PE Griswold, an engineer with over 20 years in the tower industry. In addition to general tower industry work, he is one of a few specialists in gin pole engineering and Rigging Plans.
- The geometry is similar to that observed in tower cranes used for building construction. The attachment hardware is similar to that used to install various antenna mounts
- Designed for efficiency – A tool that can be carried in the work trailer, installed in 2 hours or less, and eliminate the need for a Crane.

DESIGN

- Mast & Beam made from structural grade aluminum 6061-T6
- Designed for easy installation. The light-weight modular design is easily handled & installed by two men.
- Designed with a low Center of Gravity for safety.
- Designed for Safety – no heavy gin pole over the worker's head.

The Beam – The Heart of the Matt's Arm



The Beam

- Light Weight aluminum, 75 lbs.
- 5 sheaves arranged between 50” and 98” out from tower.
- 5 sheaves allow a WLL between 900 lbs. and 1600 lbs.
- Tilts up to 40 degrees, bringing hoist line closer to tower (a tilt indicator is attached to the side of the beam).

The Beam

- The beam is designed to allow easy rigging of sheaves.
- 2-part line terminations are provided between sheaves.
- Rotates +/- 90 degrees below top of tower (without mast pipe).
- Rotates 180 degrees with the mast pipe over the top of tower.
- The ability to rotate the beam reduces the need for "Tagging out", and it allows the load to navigate around obstructions in the vertical hoisting zone.

Designed for typical cell towers

- Provides 48” of rigging headroom over the top of the tower when the beam is tilted up to 40 degrees.
- Clamp spacing for configurations that use the Mast Pipe may range between 42” & 70” Center-Center. Without the Mast Pipe the clamps may range 30” to 70”.
- Designed for **round** legs 1.75” to 4.5” diameter. (*Custom adapters can be fabricated for angle or unique tower legs.)*
- Designed for GTs & SSTs that have a face width 30” to 72”.
- **Deviations from the engineered design maybe acceptable. Contact: Bill Griswold, Matt’s Arm Design Engineer.**

SAFETY

- Interactive Load Chart Calculator (an Excel program for laptops) allows the Rigger the ability to input "real" data (loads, sheave number, dimensions between clamps in "real" time to calculate safe hoisting operations. This program aids in preparation of the Class IV Rigging Plan.
- Matt's Arm parts are modular and light weight for easy handling. The beam weighs 75 lbs. and the mast weights 100 lbs.
- Matt's arm mounts to tower with tight clamps. The tower connection clamps are similar to various types of antenna mount clamps – unlike typical gin poles which are installed with chokers that may slip.
- Matt's Arm is classified as a ***type of gin pole,*** however, Matt's Arm's unique design and mounting clamps provide secure connections points to the tower legs or monopole.

SAFETY

- Tight connections hold the mast plumb and the beam level – this provides optimum stability for the load.

- Vertical Bracing provides additional stability to mast and beam when the load is rotated.

- The Monopole Mount is notched for the contour of pole. Each chain assembly contains a wire sling that prevents slippage.

- The easy horizontal rotation of the beam allows the load to be moved around obstructions in the hoisting zone, rather than using extreme tagging.

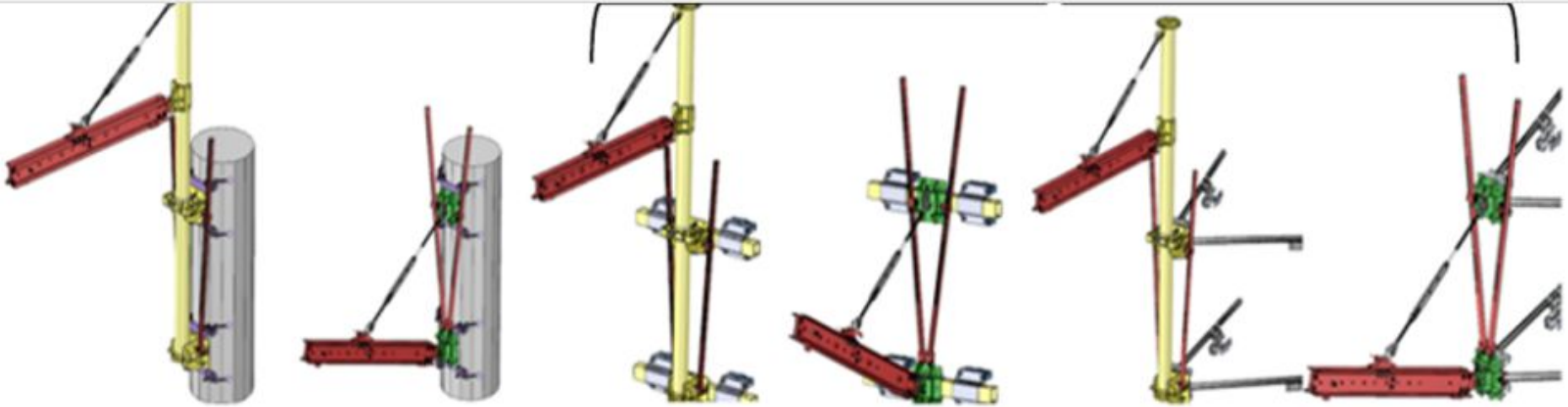
SAFETY

- Training in compliance with ANSI/TIA A10.48.
- All components have an open design for easy inspection.
- The beam is designed for easy rigging.
- Matt's Arm attaches to the **tower structure**, not to the antenna mount.
- The Stabilizer Plate is designed for extra control of the mast pipe.
- The Low Center of Gravity makes for a safer installation.
- Matt's Arm Configurations are **not** rated for 100% tie-off.

MATT'S ARM

Lifting Solutions

CONFIGURATIONS



Config 1	Config 2	Config 3	Config 4	Config 5	Config 6
Monopole Mt	Monopole Mt	Face Mt	Face Mt	Leg Mt	Leg Mt
(Red, Purple, Yellow)	(Red, Purple, Green)	(Red, Blue, Yellow)	(Red, Blue, Green)	(Red, Brown, Yellow)	(Red, Brown, Green)

Components of Matt's Arm are modular, and color coded. Three colors are always used when using Matt's Arm.

Configurations 1, 3 & 5 have the yellow Mast Pipe; the Beam swings over the top of the tower +/- 180 deg.
Configurations 2, 4, & 6 have green clamps (no mast pipe); Beam swings below the top of the tower +/- 90 deg.

Overview of Color Coded Assembles and Order of Installation

Monopole Mount **or**
Face Mount (GT/SST) **or**
Leg Mount (GT/SST)

→

Mast Pipe &
Yellow Clamps **or**

Green Clamps (no
Mast Pipe req'd)

→

Install Beam

1ST STEP: Install Mount Type FIRST on tower **2ND STEP: Install Yellow Mast or Green Clamps** **3RD STEP: Beam**

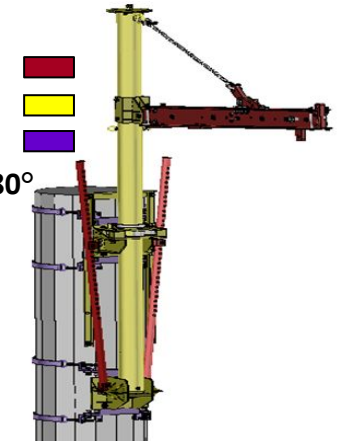
Configurations 1, 3, & 5
Provide Headroom over the top of the tower.

Color Legend Matt's Arm Kit, Configurations 1-6
- Beam Assembly (All Configurations)
- Mast Pipe and Bridle/Basket Clamps (Conf. 1, 3, 5)
- No Mast Pipe Bridle/Basket Clamps (Configurations 2, 4, 6)
- Monopole Mount Assembly
- Face Mount Assembly
- Leg Mount Assembly

Configurations 2, 4, & 6 installs between sectors.

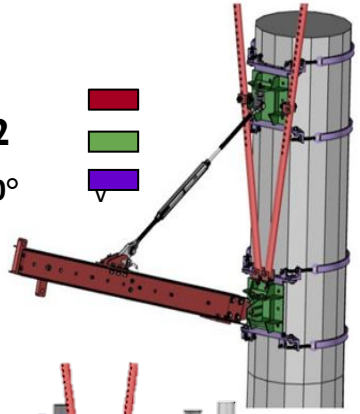
Configuration 1

Beam rotates +/- 180° over the top of the monopole



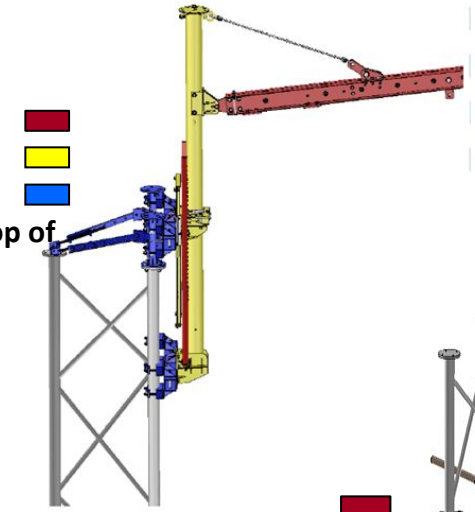
Configuration 2

Beam rotates +/- 90° over the top of the monopole.



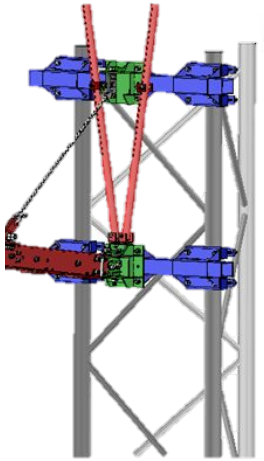
Configuration 3

Beam rotates over the top of a guyed or self-support tower, face-mounted.



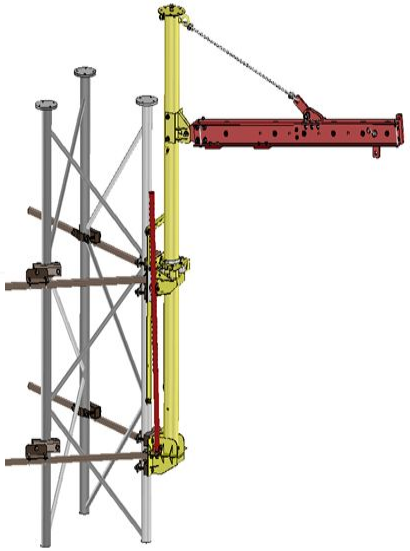
Configuration 4

Beam rotates below the top of guyed or self-support tower, face-mounted.



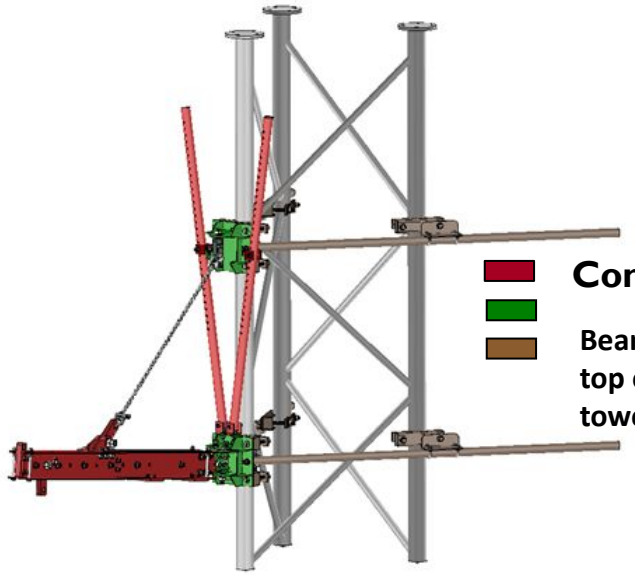
Configuration 5

Beam rotates over the top of a guyed or self-support tower, leg-mounted.



Configuration 6

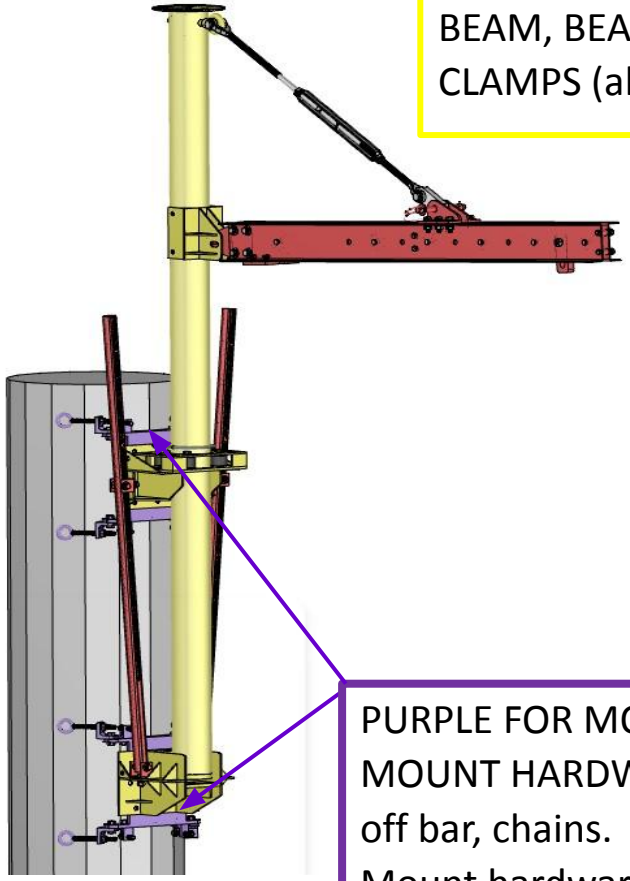
Beam rotates below the top of guyed or self-support tower, leg-mounted.



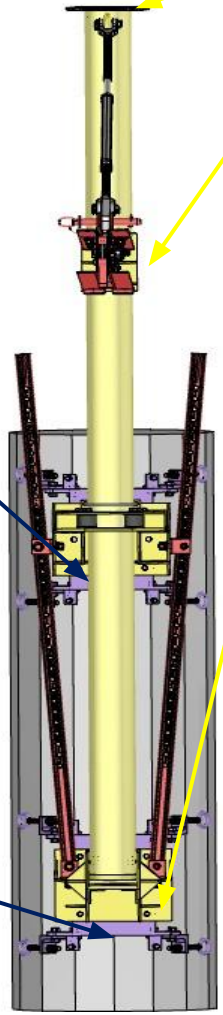
CONFIGURATION 1
MONOPOLE *WITH* MAST PIPE

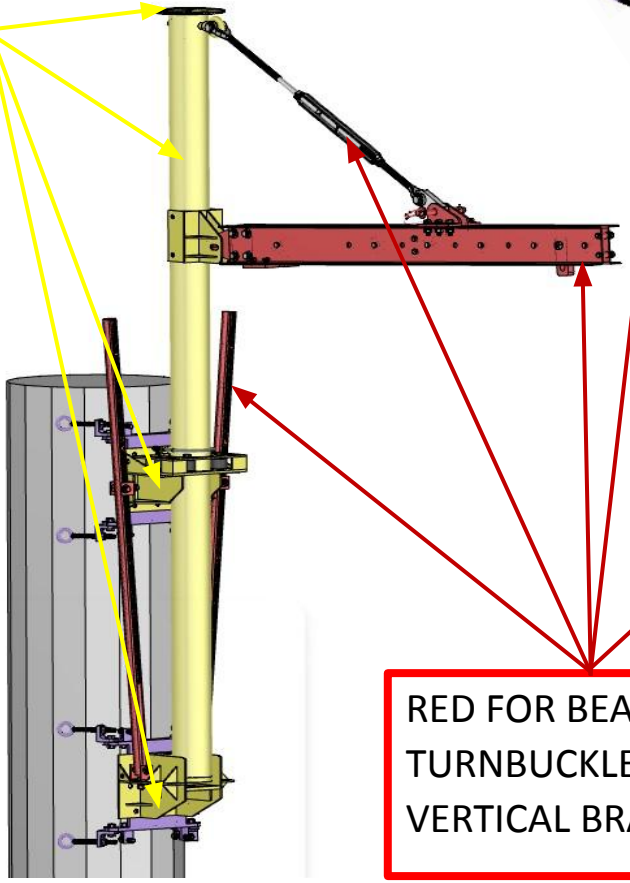
CONFIG 1: MAST WITH BEAM *OVER* TOP OF A MONOPOLE WITH MAST PIPE

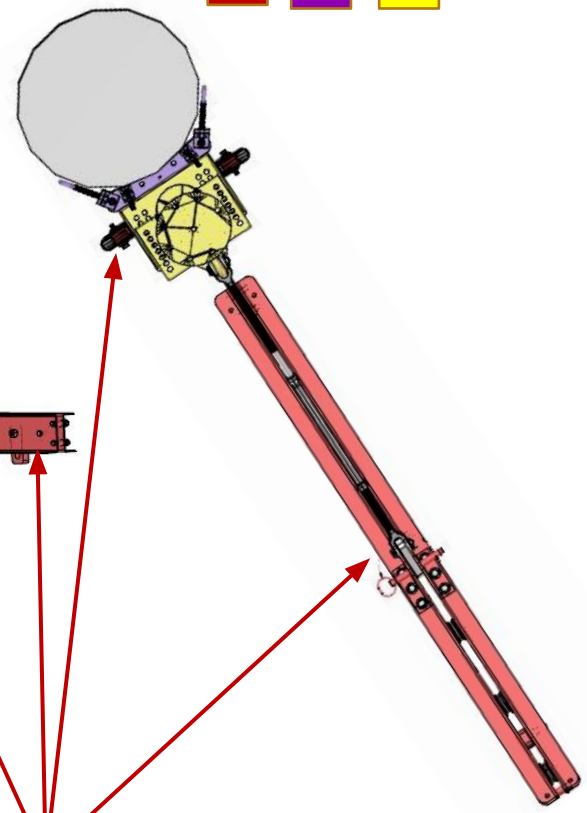
YELLOW FOR MAST PIPE, MAST CONNECTION TO BEAM, BEARING COLLAR AND BRIDLE & BASKET CLAMPS (allows rotation over top of monopole)



PURPLE FOR MONOPOLE MOUNT HARDWARE (pull off bar, chains. Monopole Mount hardware hold either Yellow Bridle & Basket Clamps OR Green Bridle & Basket Clamps)

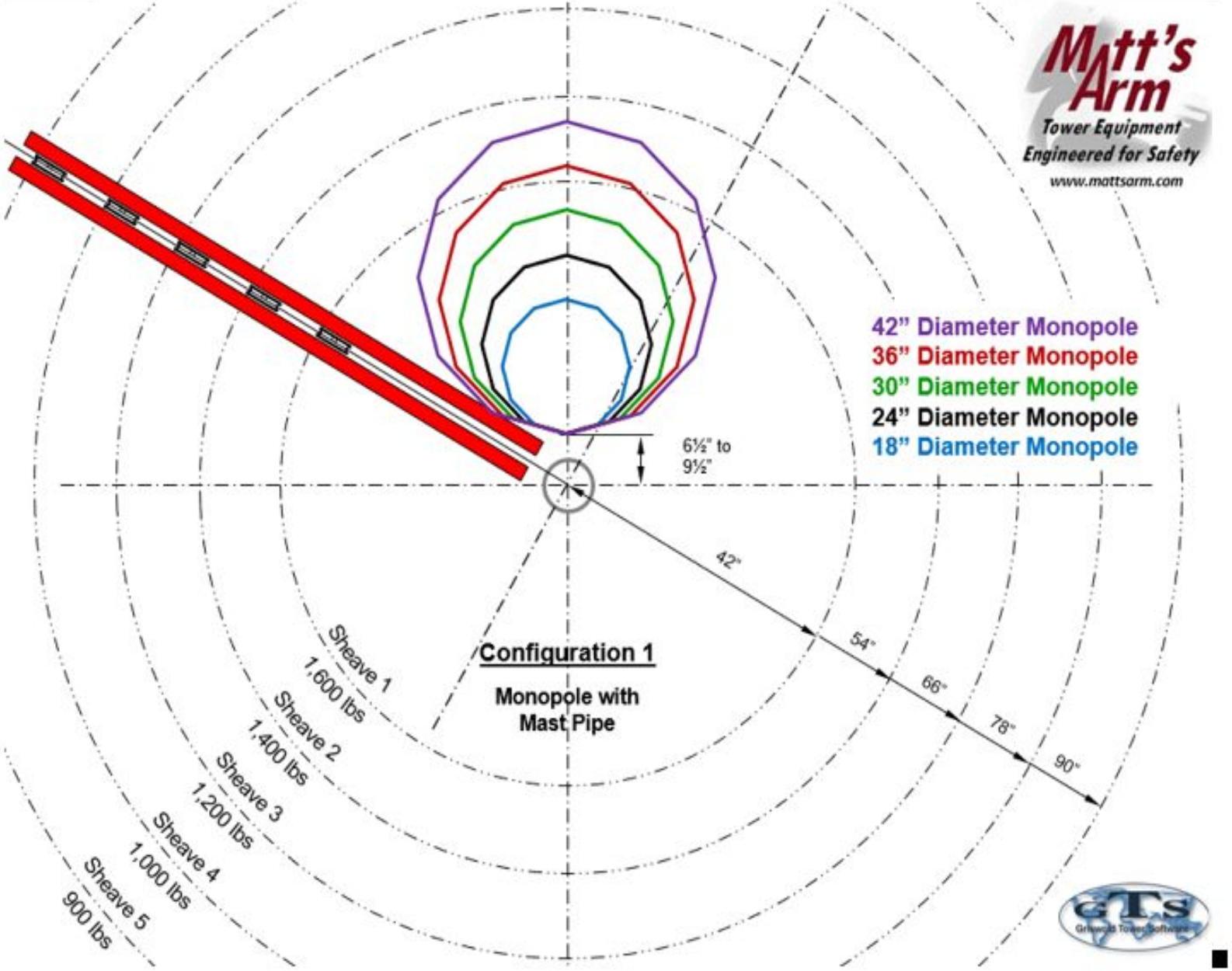






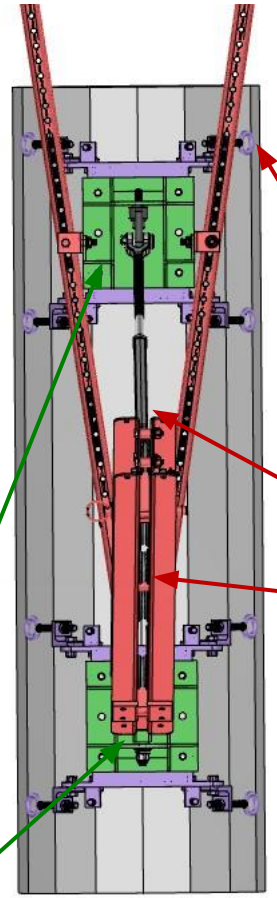
RED FOR BEAM, TURNBUCKLE AND VERTICAL BRACING.

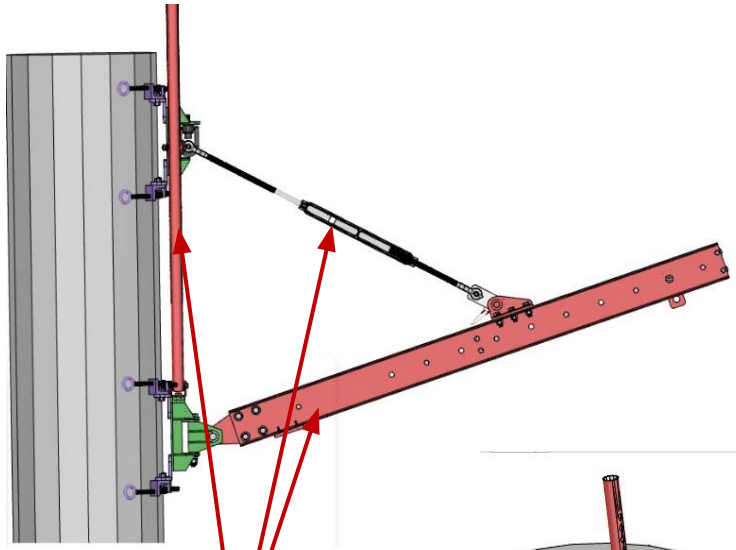
ROTATION OF BEAM 360 DEGREES OVER TOP OF A MONOPOLE

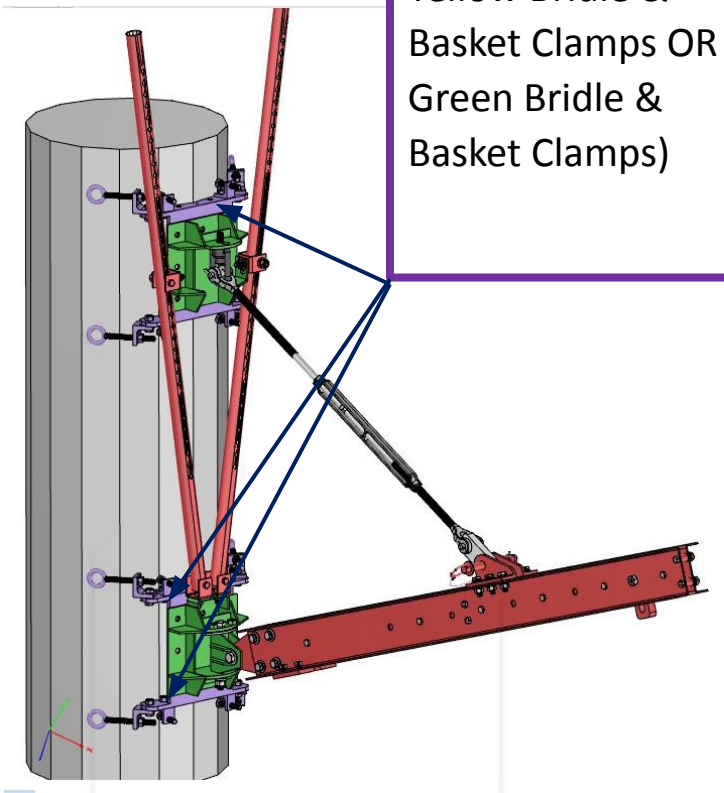


CONFIGURATION 2
MONOPOLE *WITHOUT* MAST PIPE

CONFIG 2: BEAM *BELOW* TOP OF A MONOPOLE (no mast pipe)







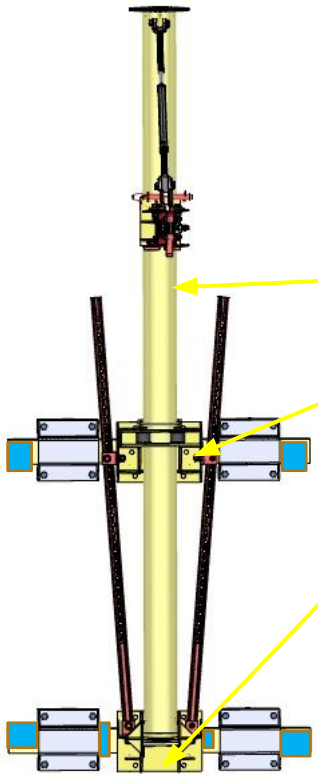
RED FOR BEAM, TURNBUCKLE AND VERTICAL BRACING.

PURPLE FOR MONOPOLE MOUNT HARDWARE (pull off bar, chains. Monopole Mount hardware hold either Yellow Bridle & Basket Clamps OR Green Bridle & Basket Clamps)

GREEN BRIDLE & BASKET CLAMPS (without mast for mounting below top of tower, rotates +/- 90 degrees)

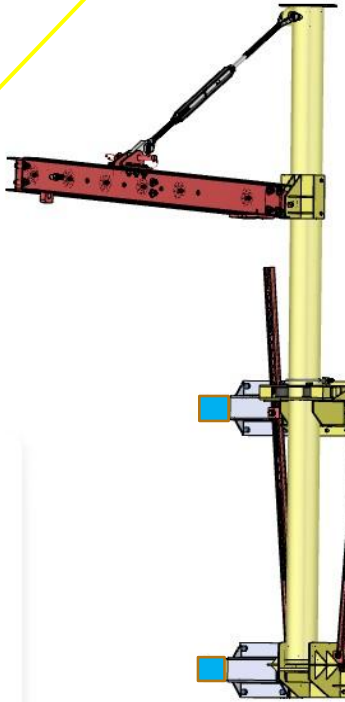
CONFIGURATION 3
FACE MOUNT *WITH* MAST PIPE

CONFIG 3: BEAM *OVER* TOP OF A GUYED TOWER OR SELF-SUPPORT TOWER (with mast)

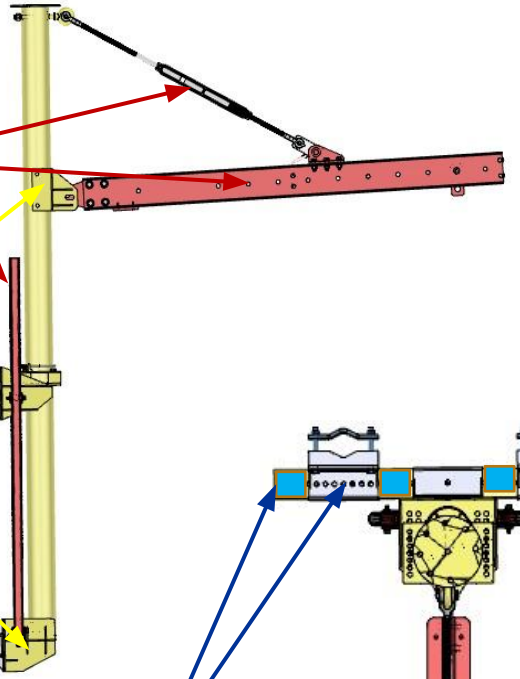


RED FOR BEAM, TURNBUCKLE AND VERTICAL BRACING.

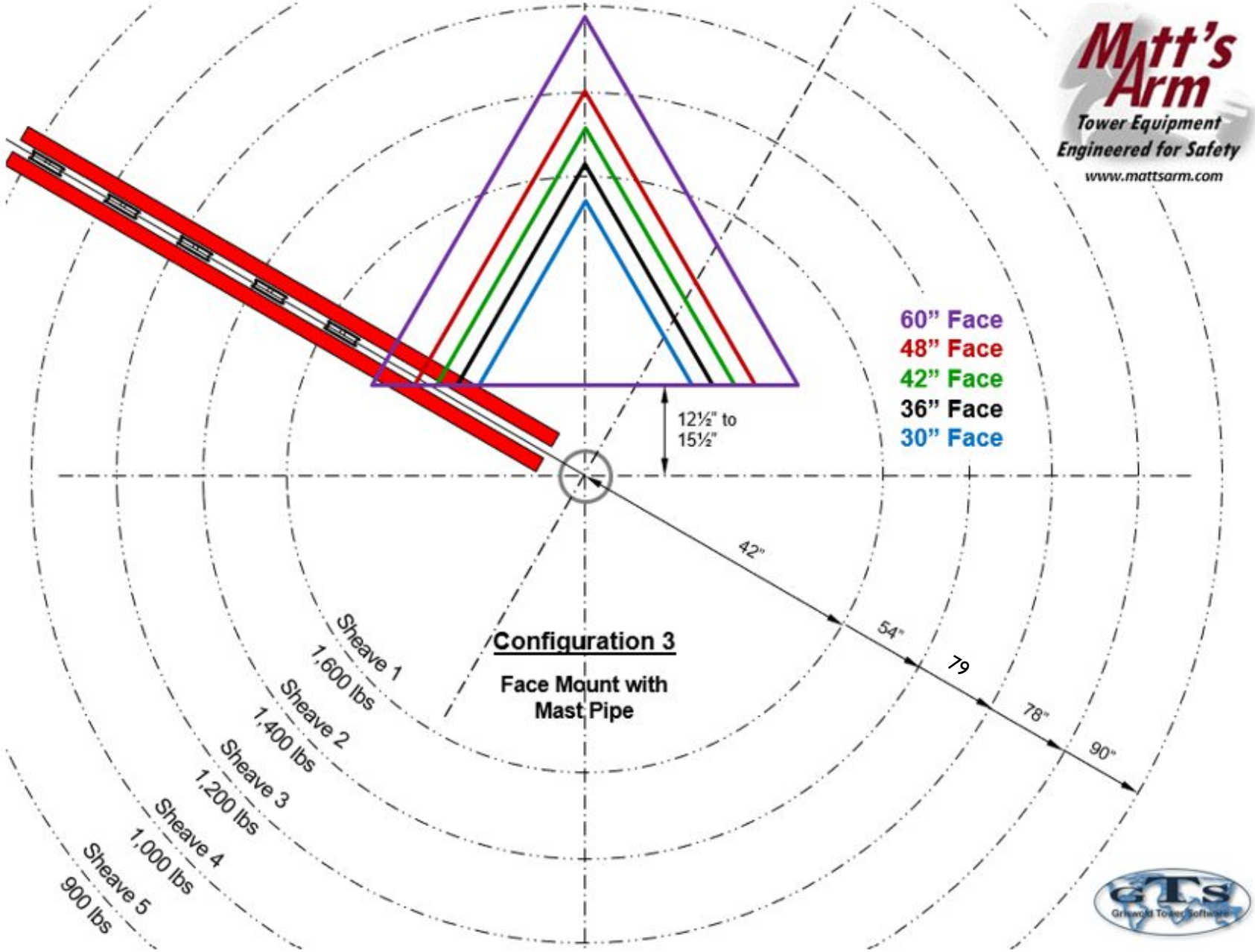
YELLOW FOR MAST PIPE, MAST CONNECTION TO BEAM, BEARING COLLAR AND BRIDLE & BASKET CLAMPS (for rotation over top of tower)



BLUE FOR FACE MOUNTED HARDWARE ON A GT / SST (leg clamps, box beams, box beam connection sleeve at legs, box beam connection sleeve for Yellow Bridle & Basket or Green Bridle & Basket)

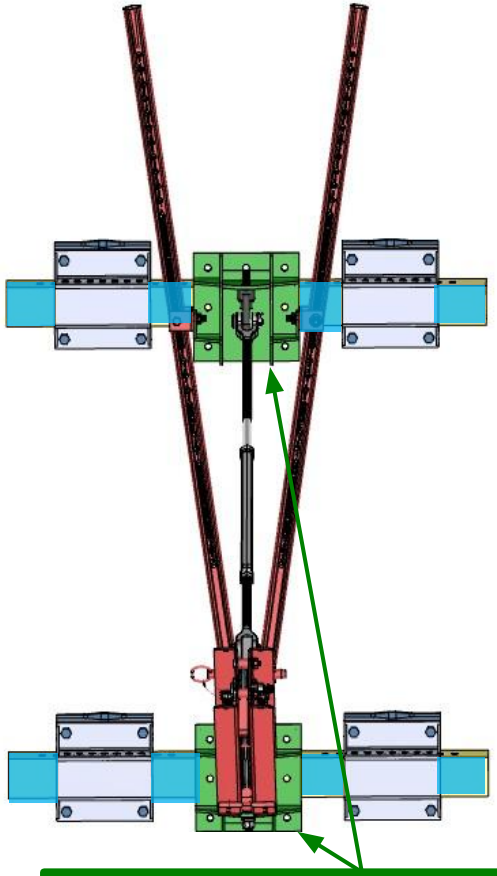


ROTATION OF FACE-MOUNTED BEAM 360 DEGREES OVER TOP OF A GT / SST



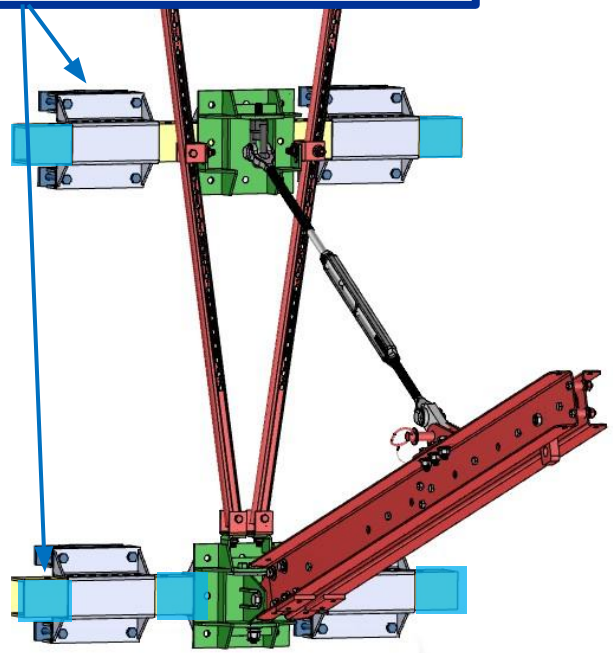
CONFIGURATION 4
FACE MOUNT *WITHOUT* MAST PIPE

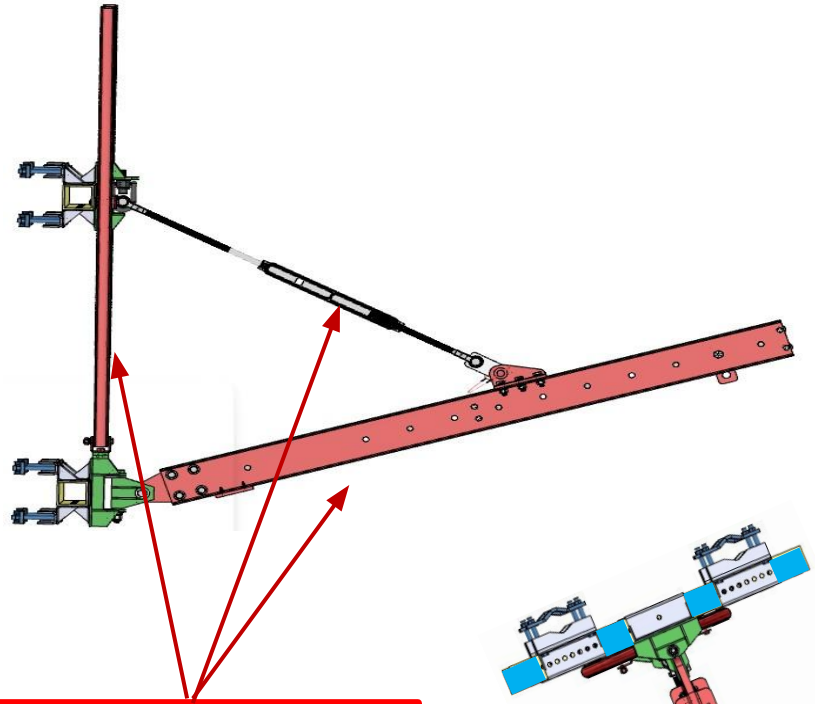
CONFIG 4: BEAM FACE-MOUNTED *BELOW* TOP OF A GT / SST (no mast)



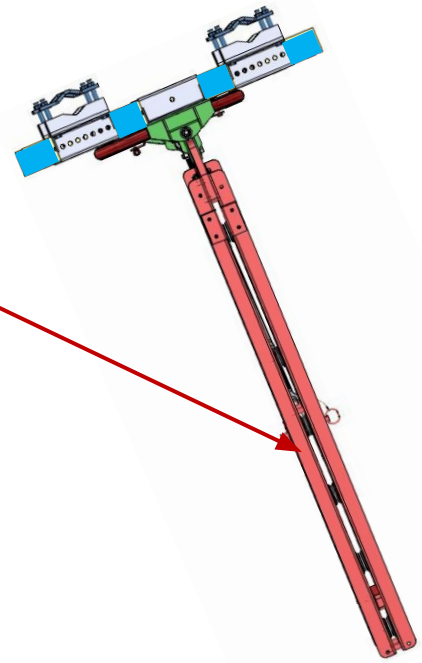
GREEN BRIDLE & BASKET CLAMPS (without mast for mounting below top of tower, rotates +/- 90 degrees)

BLUE FOR FACE MOUNTED HARDWARE ON A GT / SST (leg clamps, box beams, box beam connection sleeve at legs, box beam connection sleeve for Yellow Bridle & Basket or Green Bridle & Basket)



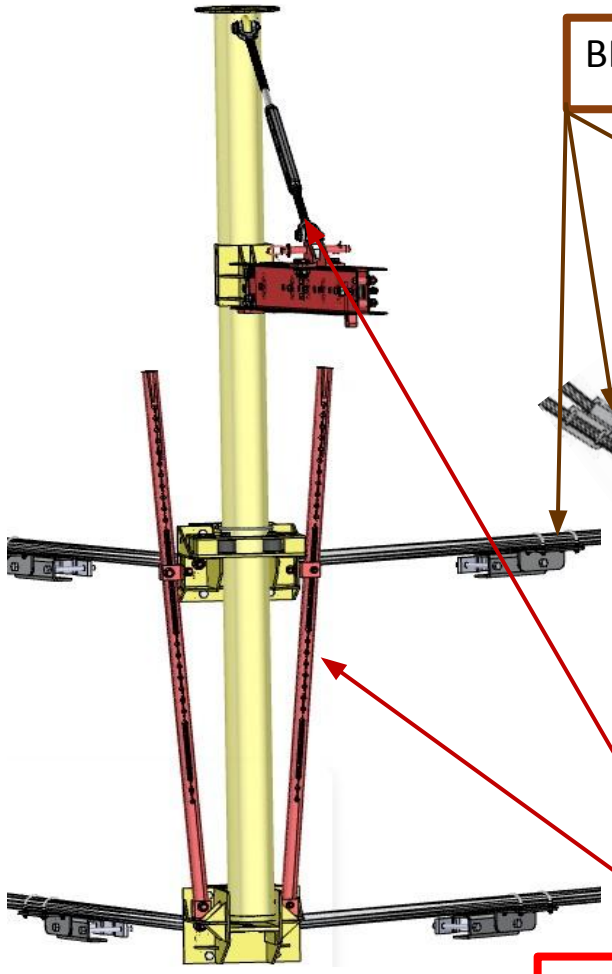


RED FOR BEAM, TURNBUCKLE AND VERTICAL BRACING.

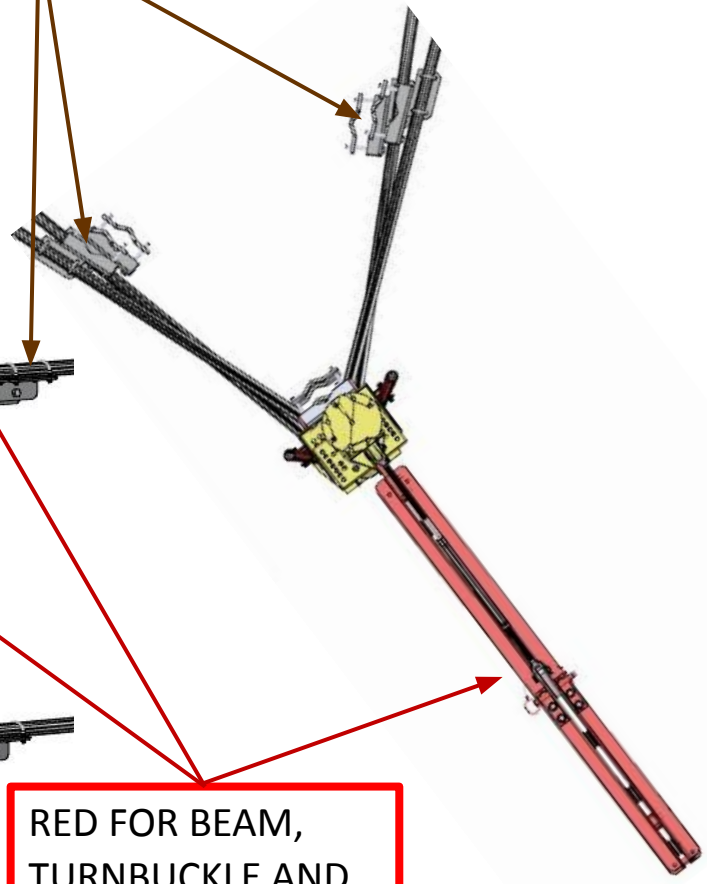


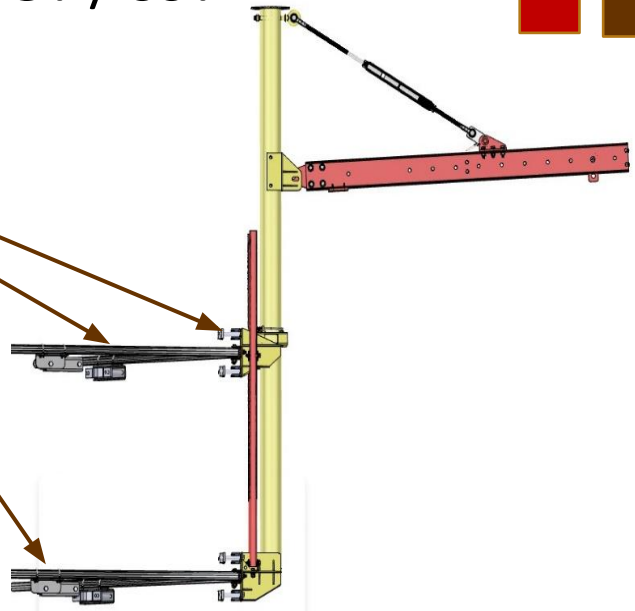
CONFIGURATION 5
LEG MOUNT *WITH* MAST PIPE

CONFIG 5: MAST WITH BEAM LEG-MOUNTED *OVER* TOP OF A GT / SST



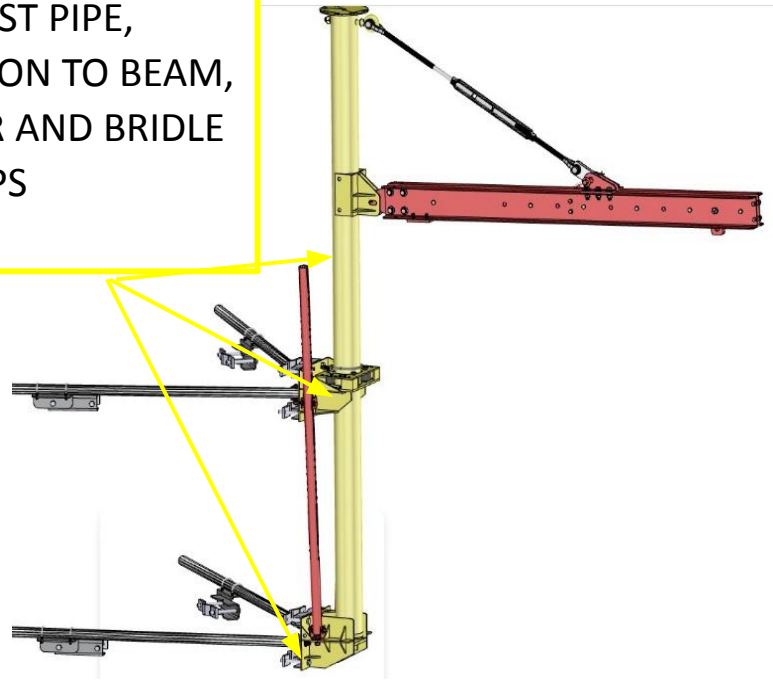
BROWN FOR LEG MOUNT HARDWARE



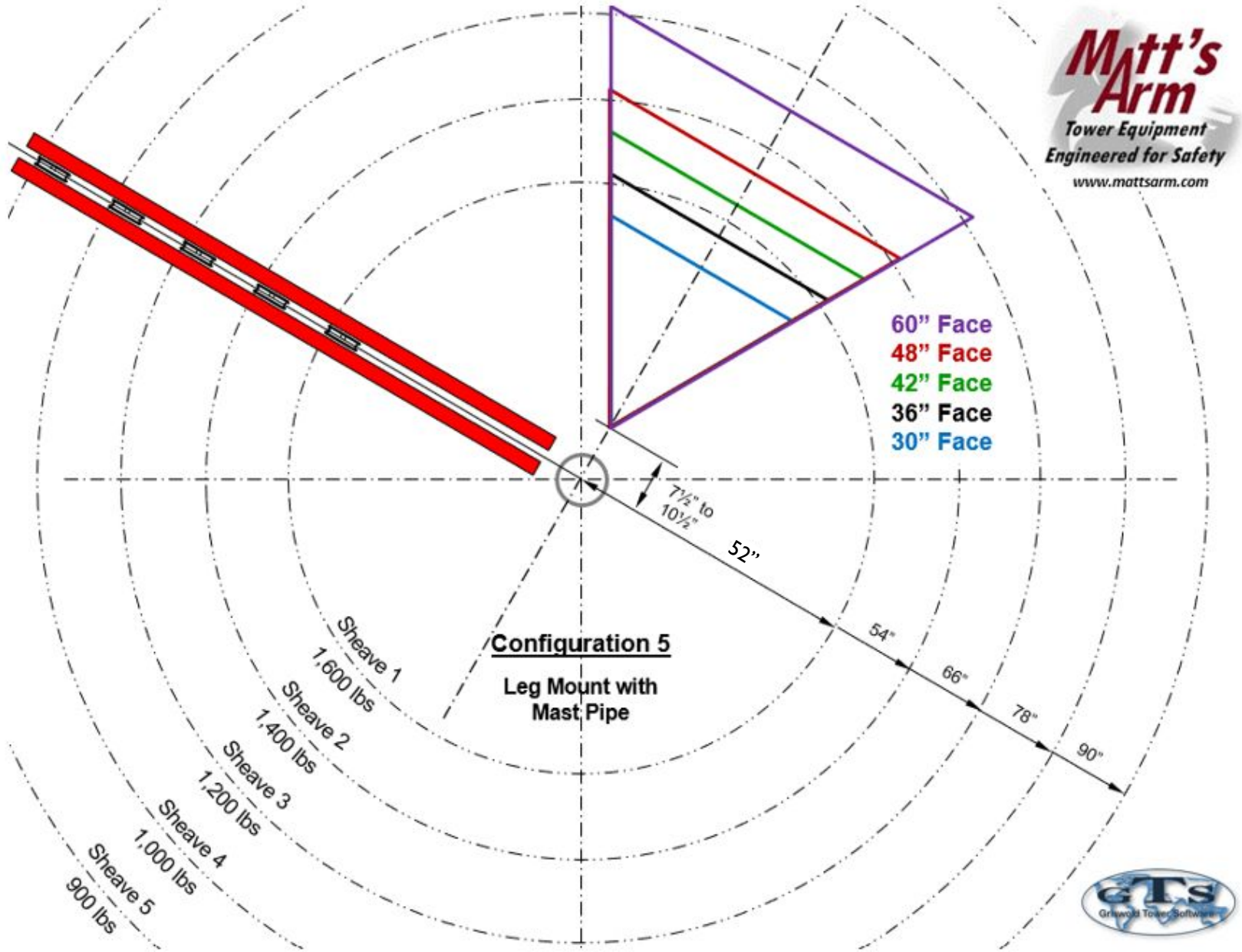


RED FOR BEAM, TURNBUCKLE AND VERTICAL BRACING.

YELLOW FOR MAST PIPE, MAST CONNECTION TO BEAM, BEARING COLLAR AND BRIDLE & BASKET CLAMPS

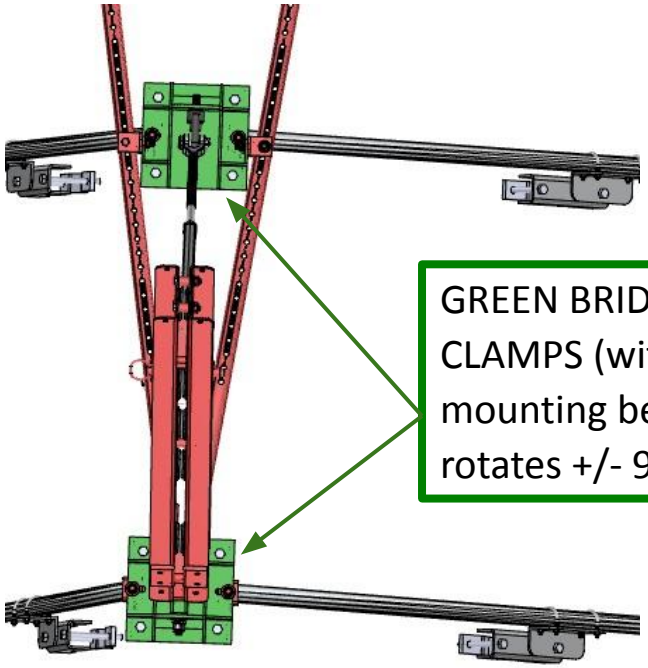


ROTATION OF LEG-MOUNTED BEAM 360 DEGREES OVER TOP OF A GT / SST



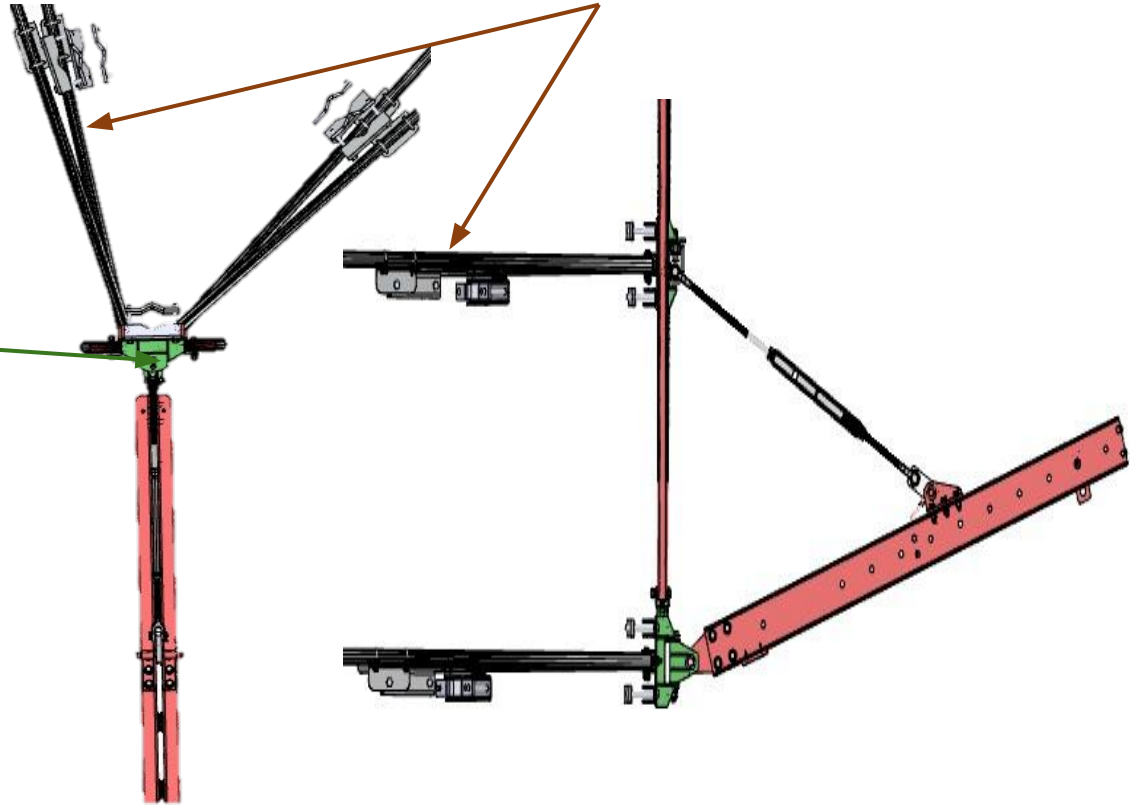
CONFIGURATION 6
LEG MOUNT WITHOUT MAST PIPE

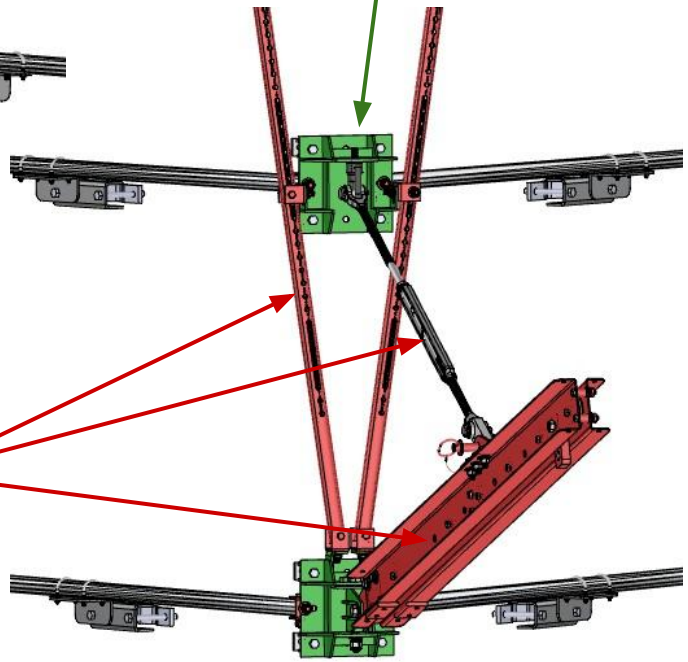
CONFIG 5: MAST WITH BEAM LEG-MOUNTED *OVER* TOP OF A GT / SST



GREEN BRIDLE & BASKET CLAMPS (without mast for mounting below top of tower, rotates +/- 90 degrees)

BROWN FOR LEG MOUNT HARDWARE (Connects to either Yellow Basket & Bridle (carries Mast Pipe) or Green Bridle & Basket (no Mast Pipe)





RED FOR BEAM, TURNBUCKLE AND VERTICAL BRACING.

Configuration 9

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- A beam made of two aluminum channels has 90” of reach.
- 5 working sheave/pulley positions spaced 12” apart.
- Sheave distance from tower varies from 36” to 88”
- The Sheave WLLs range from 900 lbs to 1600 lbs.
- The clamps maybe installed 30” to 50” Center-Center
- The beam reaches all positions of a 12’ sector mount.
- Modular assembly may be hoisted as 1 unit.
- Weight of Clamps ~ 30 lbs. each. Weight of aluminum angle Beam 60 lbs. Total ~ 150 lbs.
- Beam Options: With 6 sheaves between channels or 2 Rock Exotica Pulleys 2.6 hanging below the beam.
- Note: ***Not rated for 100% tie-off***
- Note: A properly rated come-along or chain hoist may be used to tilt the beam. (not included)