

Job:
Type:
Location:
Notes:

Date:

POLES

P1

(127mm) 5" hinged square steel

The shaft is fabricated using hollow structural steel conforming to CSA G40.21-13 50W. The anchor base flange is fabricated from structural steel conforming to G40.21-44W and is circumferentially welded inside and out to the pole shaft. The hand hole, 12" from the flange plate to the centre of 3" x 5" geometry. One grounding stud is bolted inside the pole shaft on centre across from the hand hole opening. The standard finish recommended for the hinged pole assembly is hot dipped galvanized or paint compiled by 2-Component polyurethane over a cured epoxy primer. All poles include anchor rods, nut covers, hand hole, ground stud and a top cap (if applicable).



PREFIX	HEIGHT	SECTION	MATERIAL	DRILL/ TENON	FINISH	OPTIONS
<input type="text"/>						

If you are aware of the project requirements, please fill out as best you can the above boxes to configure the pole geometry, required finish and interface/ fixture mount options.

PREFIX	HEIGHT	SECTION	MATERIAL	DRILL/ TENON	FINISH	OPTIONS
CE 5SQH	4m / 15' 6m / 20' 7m / 25' 9m / 30' 10m / 35'	5"	0.188"	D1 D2 D290 D3 D4 T2 T2H T2H2 T2H3 T2H4 TC	1x Drill 90 2x Drill 180 2x Drill 90 3x Drill 4x Drill 2" Tenon x 5" Lg. (2.375" O.D.) 2" Tenon x 9" Lg. (2.375" O.D.) Custom diameter & length	Loc "C" Loc "B & D" Loc "C" & "D" Loc "B", "C" & "D" Post Top Loc "C" Loc "B" & "D" Loc "B", "C" & "D" <i>(please specify location)</i>

FINISH	OPTIONS
PP Prime Paint Only BLP Black Paint BRP Bronze Paint DBRP Dark Bronze Paint WP White Paint IMSP Intermix Metallic Silver Paint GP Grey Paint CP Custom Paint (RAL or Paint Chip req.)	B/C 2piece Base Cover, Steel D/R/B Duplex Receptacle Base D/R/T Duplex Receptacle Top A/H/H Additional Hand Hole Top CPL500 1/2" 3000lb Coupling CPL750 3/4" 3000lb Coupling CPL100 1" 3000lb Coupling CPL125 1-1/4" 3000lb Coupling CCTV 3/4" Drill hole de-burred
HDG Hot Dipped Galvanized Only FPHDG Finish Paint over HDG	D/R 3' up from base, Loc. "C" D/R 1' down from top, Loc. "A" <i>(please specify location)</i> <i>(please specify location)</i> <i>(please specify location)</i> <i>(please specify location)</i> <i>(please specify location)</i> <i>(please specify location)</i> CEB-1-90° Single bullhorn bracket, mounts to T2 CEB-2-180° 2 bullhorn bracket, mounts to T2 CEB-3-120° 3 bullhorn bracket in radial configuration, mounts to T2 CEB-3-180° 3 bullhorn bracket in-line, mounts to T2 CEB-4-90° 4 bullhorn bracket in radial configuration, mounts to T2 CEB-4-180° 4 bullhorn bracket in-line, mounts to T2 CE PTA <i>(Require a post top bracket adaptor only? Please describe existing pole geometry).</i>



Base Moments calculated for 161Km/h, 1/50yr gust & pole model max. E.P.A., $q=0.5kPa$

MODEL	SECTION/ MATERIAL	OVERTURNING MOMENT & MAX. ALLOWABLE E.P.A.		SHEAR
CE 5S25	5" X .188" X 20"	16 kN m/	18 sq.ft.	2.8 kN
CE 5S30	5" X .188" X 30"	15 kN m/	11 sq.ft.	2.3 kN
CE 5S35	5" X .188" X 35"	12 kN m/	4 sq.ft.	2.0 kN

The AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) identify Special Wind Regions that suggest that classic regional wind values may need to be increased when considering the pole geometry for your specific project. Flat open terrain, foothills and mountain passes where a funnel effect may be created, would all be considered Special Wind Regions.

P2

CECO POLES & STRUCTURES INC. is not responsible for site preparation & footings. The information here below provides general guidelines for data in calculating a proper footing size considering variables such as the specific fixture E.P.A., effective projected area, number of fixtures per specified light pole for your project.

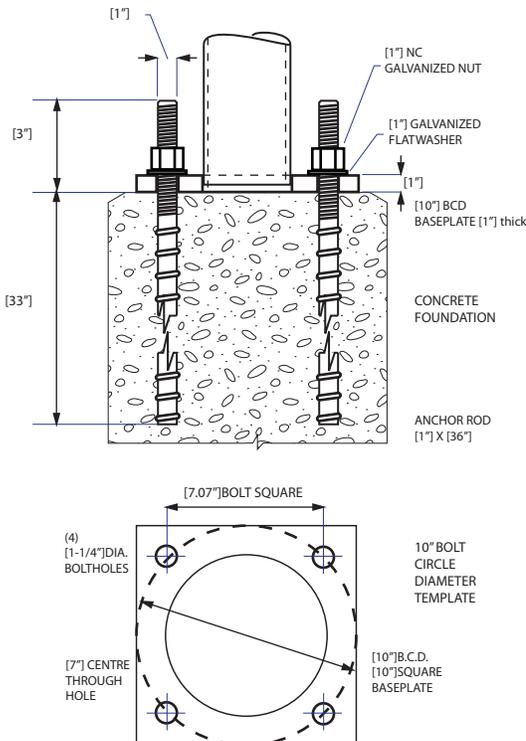
For moment calculations on your specific project please contact us via email or telephone, info@cecopoles.ca and at 403 279 0530.

Installation Procedure for Anchor Rods:

- 1). Prepare footing area as required by local code.
- 2). Apply steel template in accordance to the anchor rod template illustration provided.
- 3). Install anchor rods with flatwasher and nut to accommodate the projection illustrated in your provided anchor rod template.
- 4). CECO POLES & STRUCTURES light standards are designed for this method of installation. All other methods of light standard installation must be approved by CECO POLES & STRUCTURES INC.

Anchor Rod Layout

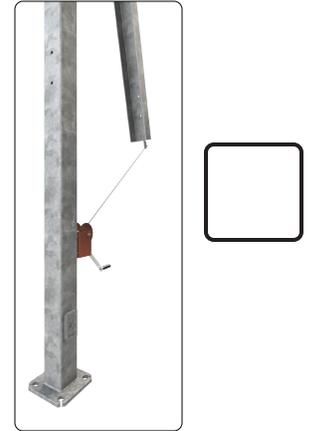
ie: Configuration for CE5SQH30, 5" hinged square steel pole.



REMEMBER, AS INSTALLER OF THIS LIGHT STANDARD:
Recheck the torque of the anchor bolts as the nut connections may loosen slightly after the pole has been subjected to wind loading.

1" UNC 8tpi plain - dry condition sae j429 Gr:2 250 Ft. Lb

(127mm) 5" hinged square steel



Glossary

Bolt Circle Diameter, B.C.D.

When measuring an array of bolt holes located on a given diameter where each bolt hole is equally distant from centre of the circle generating a diameter.

Anchor Rod/ Anchor Bolt, A/R

A structural bolt made from temper-quenched steel or high-tensile strength re-bar of a determined length with a national course thread for a nut application. This item is coated in hot zinc, H.D.G or hot dipped galvanize.

Base Template

A 14 gage laser cut pattern matching the specific bolt circle diameter for your project, and used to properly space and set (4) anchor rods into the rebar cage where concrete will be poured to achieve a level footing with properly projecting anchor rods as well as a conduit run to bring power up to the pre-determined light standard.

CE BA Plate (pile cap for field weld with matching B.C.D.)

A bare mild-steel 44W base plate that matches the base specified for the ordered pole, shipped to site bolted to the pole with the supplied A325 structural grade bolts.

Levelling Shim

A 3mm thick u-shaped steel plate specifically designed to straddle the anchor rod diameter and used between the bottom of the pole baseplate and top of the concrete footing when installing and levelling the pole. *note: Any gap present beyond 3mm between bottom of baseplate to the top of the concrete footing must be grouted. Do not apply more than one levelling shim per corner.

APPENDIX A.

This glossary functions as an example of common terminology used in the installation of structural items in or part of a construction site. For any clarification on terms or symbols used on this installation guide call 403 279 0530 for technical assistance or write to info@cecopoles.ca.

APPENDIX B.

Bolt torque provides only an indirect approximation of material stress. It is estimated that only about 10% of the tightening torque actually results in useful bolt tensioning. A common rule-of-thumb is to provide a minimum length of thread engagement equal to the diameter of the anchor. A more conservative rule-of-thumb is to use a thread engagement length of 1-1/2 times the diameter.

Job:
Type:
Location:
Notes:

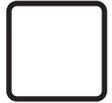
Date:

POLES

P1

(152.4mm) 6" hinged square steel 12m[40']

The shaft is fabricated using hollow structural steel conforming to CSA G40.21-13 50W. The anchor base flange is fabricated from structural steel conforming to G40.21-44W and is circumferentially welded inside and out to the pole shaft. The hand hole, 12" from the flange plate to the centre of 4" x 8" geometry. One grounding stud is bolted inside the pole shaft on centre across from the hand hole opening. The standard finish recommended for the hinged pole assembly is hot dipped galvanized or paint compiled by 2-Component polyurethane over a cured epoxy primer. All poles include anchor rods, nut covers, hand hole, ground stud and a top cap (if applicable).



PREFIX	HEIGHT	SECTION	MATERIAL	DRILL/ TENON	FINISH	OPTIONS
<input type="text"/>						

If you are aware of the project requirements, please fill out as best you can the above boxes to configure the pole geometry, required finish and interface/ fixture mount options.

PREFIX	HEIGHT	SECTION	MATERIAL	DRILL/ TENON	FINISH	OPTIONS
CE 6SQH	12m / 40' 6"	0.250"	D1 D2 D290 D3 D4 T2 T2H T2H2 T2H3 T2H4 TC	1x Drill 90 2x Drill 180 2x Drill 90 3x Drill 4x Drill 2" Tenon x 5" Lg. (2.375" O.D.) 2" Tenon x 9" Lg. (2.375" O.D.) Custom diameter & length		Loc "C" Loc "B & D" Loc "C" & "D" Loc "B", "C" & "D" Post Top Loc "C" Loc "B" & "D" Loc "B", "C" & "D" <i>(please specify location)</i>

FINISH	OPTIONS
PP Prime Paint Only BLP Black Paint BRP Bronze Paint DBRP Dark Bronze Paint WP White Paint IMSP Intermix Metallic Silver Paint GP Grey Paint CP Custom Paint (RAL or Paint Chip req.)	BA14 Bare Steel Pole Cap, field weld by others, shipped bolted to pole D/R/B Duplex Receptacle Base D/R 3' up from base, Loc. "C" D/R/T Duplex Receptacle Top D/R 1' down from top, Loc. "A" A/H/H Additional Hand Hole Top (please specify location) CPL500 1/2" 3000lb Coupling (please specify location) CPL750 3/4" 3000lb Coupling (please specify location) CPL100 1" 3000lb Coupling (please specify location) CPL125 1-1/4" 3000lb Coupling (please specify location) CCTV 3/4" Drill hole de-burred (please specify location)
HDG Hot Dipped Galvanized Only FPHDG Finish Paint over HDG	CEB-1-90° Single bullhorn bracket, mounts to T2 CEB-2-180° 2 bullhorn bracket, mounts to T2 CEB-3-120° 3 bullhorn bracket in radial configuration, mounts to T2 CEB-3-180° 3 bullhorn bracket in-line, mounts to T2 CEB-4-90° 4 bullhorn bracket in radial configuration, mounts to T2 CEB-4-180° 4 bullhorn bracket in-line, mounts to T2
	CE PTA (Require a post top bracket adaptor only? Please describe existing pole geometry).



Base Moments calculated for 161Km/h, 1/50yr gust & pole model max. E.P.A., q=0.5kPa, non-factored;

MODEL	SECTION/ MATERIAL	OVERTURNING MOMENT & MAX. ALLOWABLE E.P.A.	SHEAR
CE 6SQH40	6" X .250" X 40'	18 kN m/ 5 sq.ft.	3 kN

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POLES

P2

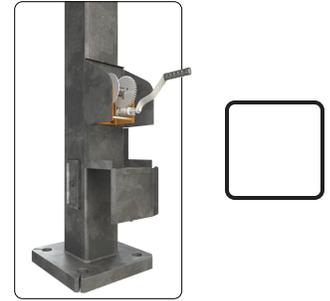
(152.4mm) 6" hinged square steel 12m[40']

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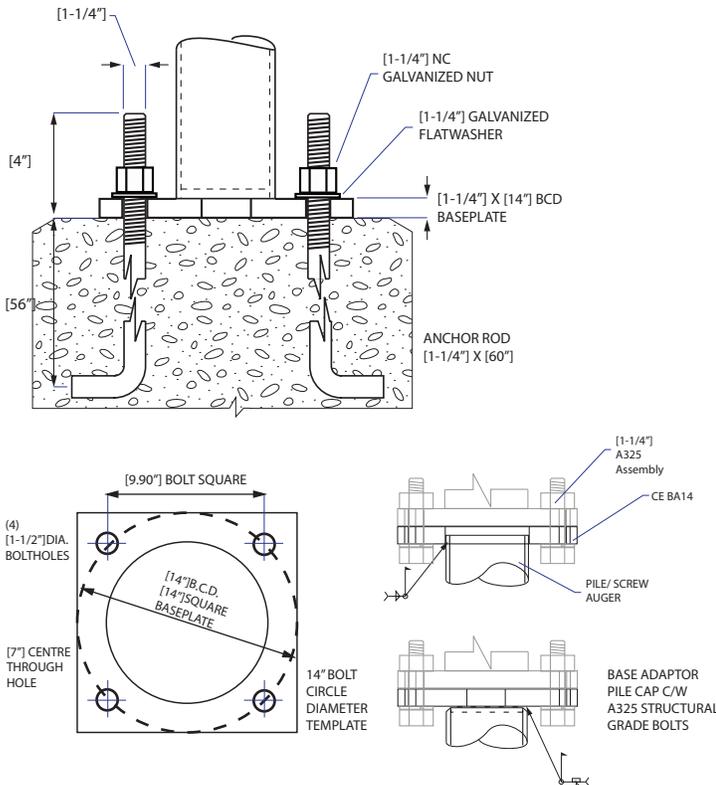
Installation Procedure for Anchor Rods:

- 1). Prepare footing area as required by local code.
- 2). Apply steel template in accordance to the anchor rod template illustration provided.
- 3). Install anchor rods with flatwasher and nut to accommodate the projection illustrated in your provided anchor rod template.
- 4). CECO POLES & STRUCTURES light standards are designed for this method of installation. All other methods of light standard installation must be approved by CECO POLES & STRUCTURES INC.



Anchor Rod Layout

ie: Configuration for CE6SQH40, 6" hinged square steel pole.



Glossary

Bolt Circle Diameter, B.C.D.

When measuring an array of bolt holes located on a given diameter where each bolt hole is equally distant from centre of the circle generating a diameter.

Anchor Rod/ Anchor Bolt, A/R

A structural bolt made from temper-quenched steel or high-tensile strength re-bar of a determined length with a national course thread for a nut application. This item is coated in hot zinc, H.D.G or hot dipped galvanize.

Base Template

A 14 gage laser cut pattern matching the specific bolt circle diameter for your project, and used to properly space and set (4) anchor rods into the rebar cage where concrete will be poured to achieve a level footing with properly projecting anchor rods as well as a conduit run to bring power up to the pre-determined light standard.

CE BA Plate (pile cap for field weld with matching B.C.D.)

A bare mild-steel 44W base plate that matches the base specified for the ordered pole, shipped to site bolted to the pole with the supplied A325 structural grade bolts.

Levelling Shim

A 3mm thick u-shaped steel plate specifically designed to straddle the anchor rod diameter and used between the bottom of the pole baseplate and top of the concrete footing when installing and levelling the pole. *note: Any gap present beyond 3mm between bottom of baseplate to the top of the concrete footing must be grouted. Do not apply more than one levelling shim per corner.

APPENDIX A.

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APPENDIX B.

Bolt torque provides only an indirect approximation of material stress. It is estimated that only about 10% of the tightening torque actually results in useful bolt tensioning. A common rule-of-thumb is to provide a minimum length of thread engagement equal to the diameter of the anchor. A more conservative rule-of-thumb is to use a thread engagement length of 1-1/2 times the diameter.

REMEMBER, AS INSTALLER OF THIS LIGHT STANDARD:

Recheck the torque of the anchor bolts as the nut connections may loosen slightly after the pole has been subjected to wind loading.

1-1/4" UNC 7tpi	plain - dry condition	sae j429 Gr:2	625 Ft. Lb
1-1/4" UNC 7tpi	plain - dry condition	astm a325	740 - 885 Ft. Lb



Job:
Type:
Location:
Notes:

Date:

POLES

P1

(178mm) 7” hinged square steel 15m[50’]

The shaft is fabricated using hollow structural steel conforming to CSA G40.21-13 50W. The anchor base flange is fabricated from structural steel conforming to G40.21-44W and is circumferentially welded inside and out to the pole shaft. The hand hole, 12” from the flange plate to the centre of 4” x 8” geometry. One grounding stud is bolted inside the pole shaft on centre across from the hand hole opening. The standard finish recommended for the hinged pole assembly is hot dipped galvanized or paint compiled by 2-Component polyurethane over a cured epoxy primer. All poles include anchor rods, nut covers, hand hole, ground stud and a top cap (if applicable).



PREFIX	HEIGHT	SECTION	MATERIAL	DRILL/ TENON	FINISH	OPTIONS
<input type="text"/>						

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PREFIX	HEIGHT	SECTION	MATERIAL	DRILL/ TENON	FINISH	OPTIONS
CE 7SQH	15m / 50'	7"	0.250"	D1 D2 D290 D3 D4 T2 T2H T2H2 T2H3 T2H4 TC	1x Drill 90 2x Drill 180 2x Drill 90 3x Drill 4x Drill 2" Tenon x 5" Lg. (2.375" O.D.) 2" Tenon x 9" Lg. (2.375" O.D.) Custom diameter & length	Loc "C" Loc "B & D" Loc "C" & "D" Loc "B", "C" & "D" Post Top Loc "C" Loc "B" & "D" Loc "B", "C" & "D" <i>(please specify location)</i>

FINISH	OPTIONS
PP Prime Paint Only BLP Black Paint BRP Bronze Paint DBRP Dark Bronze Paint WP White Paint IMSP Intermix Metallic Silver Paint GP Grey Paint CP Custom Paint (RAL or Paint Chip req.)	BA16 Bare Steel Pole Cap, field weld by others, shipped bolted to pole D/R/B Duplex Receptacle Base D/R 3' up from base, Loc. "C" D/R/T Duplex Receptacle Top D/R 1' down from top, Loc. "A" A/H/H Additional Hand Hole Top (please specify location) CPL500 1/2" 3000lb Coupling (please specify location) CPL750 3/4" 3000lb Coupling (please specify location) CPL100 1" 3000lb Coupling (please specify location) CPL125 1-1/4" 3000lb Coupling (please specify location) CCTV 3/4" Drill hole de-burred (please specify location)
HDG Hot Dipped Galvanized Only FPHDG Finish Paint over HDG	CEB-1-90° Single bullhorn bracket, mounts to T2 CEB-2-180° 2 bullhorn bracket, mounts to T2 CEB-3-120° 3 bullhorn bracket in radial configuration, mounts to T2 CEB-3-180° 3 bullhorn bracket in-line, mounts to T2 CEB-4-90° 4 bullhorn bracket in radial configuration, mounts to T2 CEB-4-180° 4 bullhorn bracket in-line, mounts to T2
	CE PTA (Require a post top bracket adaptor only? Please describe existing pole geometry).



Base Moments calculated for 161Km/h, 1/50yr gust & pole model max. E.P.A., q=0.5kPa, non-factored;

MODEL	SECTION/ MATERIAL	OVERTURNING MOMENT & MAX. ALLOWABLE E.P.A	SHEAR
CE 7SQH50	7" X .250" X 50'	50 kN m/ 5 sq.ft.	7 kN

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POLES

P2

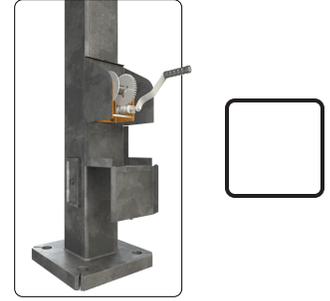
(178mm) 7" hinged pole 15m[50']

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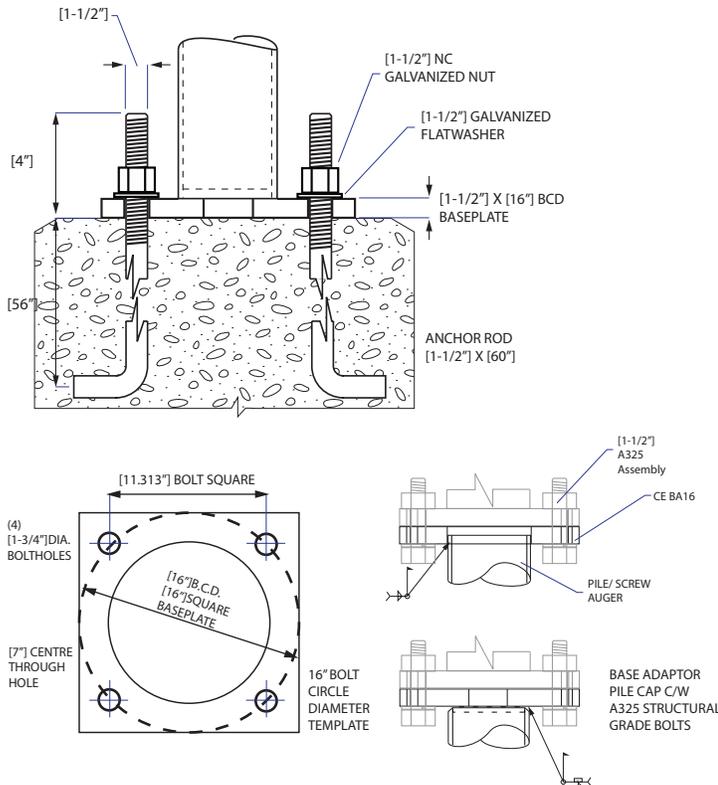
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Anchor Rod Layout

ie: Configuration for CE7SQH50, 7" hinged square steel pole.



Glossary

Bolt Circle Diameter, B.C.D.

When measuring an array of bolt holes located on a given diameter where each bolt hole is equally distant from centre of the circle generating a diameter.

Anchor Rod/ Anchor Bolt, A/R

A structural bolt made from temper-quenched steel or high-tensile strength re-bar of a determined length with a national course thread for a nut application. This item is coated in hot zinc, H.D.G or hot dipped galvanize.

Base Template

A 14 gage laser cut pattern matching the specific bolt circle diameter for your project, and used to properly space and set (4) anchor rods into the rebar cage where concrete will be poured to achieve a level footing with properly projecting anchor rods as well as a conduit run to bring power up to the pre-determined light standard.

CE BA Plate (pile cap for field weld with matching B.C.D.)

A bare mild-steel 44W base plate that matches the base specified for the ordered pole, shipped to site bolted to the pole with the supplied A325 structural grade bolts.

Levelling Shim

A 3mm thick u-shaped steel plate specifically designed to straddle the anchor rod diameter and used between the bottom of the pole baseplate and top of the concrete footing when installing and levelling the pole. *note: Any gap present beyond 3mm between bottom of baseplate to the top of the concrete footing must be grouted. Do not apply more than one levelling shim per corner.

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APPENDIX B.

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REMEMBER, AS INSTALLER OF THIS LIGHT STANDARD:

Recheck the torque of the anchor bolts as the nut connections may loosen slightly after the pole has been subjected to wind loading.

1-1/2" UNC 6tpi	plain - dry condition	sae j429 Gr:2	1088 Ft. Lb
1-1/2" UNC 6tpi	plain - dry condition	astm a325	1290 - 1550 Ft. Lb

